# FORCE ®

AUTO & SPECIAL TOOLS V. four



Power you on



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## 1. ENGINE



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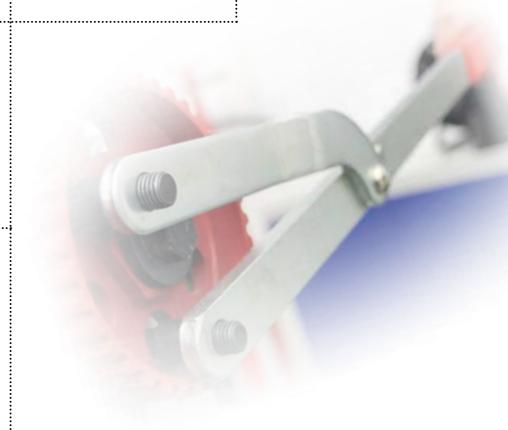
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### 13pc Spark plug maintenance kit

### K913G5



#### Content: 3/8"DR.

8323 1824	2-Torque adapter
	18Nm; 24Nm
802318	1-Flexible ratchet handle
807316M20.6M	2-Magnetic spark plug socket
	16; 20.6 mm
8043150	1-Extension 150mm-6"
61802	1-26 sizes Feeler gauges (SAE & Metric)
63001	1-Spark plug hole thread chaser
63004	1-14mm Spark plug hole rethreader
9U3001	1-Brass & Nylon scrape brushes
9G3101	1-Calibrated ignition tester (HEI system)

1-Calibrated ignition tester (Standard system)

9G0107 1-Spark plug boot pliers

6/16.3/17.3/1.5 ∆¹∆ 2720g

### ■ 10pc 3/8"DR. Spark plug socket set

NEW

9G3102

#### T31010



Part no.	
	Contents: 3/8"DR.
80531E	1-Universal joint (extension type)
832 318324	2-Torque adapter
	18Nm; 24Nm
8073 14M20.6M	4-Megnetic spark plug socket
	14; 16; 18; 20.6mm
8073250 14M20.6M	3-Megnetic spark plug socket (250mmL)
	14; 16; 20.6mm

6/13.7/14.7/0.65' ∆ 2278g

### 2pc Torque adapter (spark plug special)





Content: 3/8"DR.

832 318...324 2-Torque adapter 18Nm; 24Nm

24/12.0/13.0/0.8' ∆ 500g

### 3/8" DR. Preset torques wrench

647...P

1-1



	Capacity	l	$\Delta \Delta$
Part no.	Nm	mm	g
647318P	18	245	1500
647324P	24	245	1500



### ■ 56pc Spark plug rethread kit

#### 956G1



- •Completed set for repairing spark plug thread M10, M12, and M14
- •Contents: Screw-coil:15PC M10-1.0 X 3/8

15PC M12-1.25 X 3/4 15PC M14-1.25 X 7/16

- •Tap:M10-1.0, M12-1.25, M14-1.25
- •Coil installation shank (length: 90mm): M10-1.0, M12-1.25, M14-1.25
- •Coil shielding collar (internal thread): M10-1.0, M12-1.25, M14-1.25
- •1PC Hex key

10/12.8/13.8/2.3 △ 1234.5g

### Spark plug hole rethreader

#### 63001 / 63002 / 63003



• Applying company with 13/16" standard deep socket.







	Thread		
Part no.	mm	packing	g
63001	14&18	100/15.0/16.0/1.5'	150
63002	12&14	100/13.5/14.5/1.5'	135
63003	10&12	100/10.0/11.0/1'	100

### ■ 14mm Spark plug hole rethreader

#### 63004



- Use it to clean and restore the threads on 14mm spark plug hole prior to installation of spark plug.
- Features extra-long neck for access to recessed spark plug cavities.
- Apply it accompanied with 3/8" drive or 5/8" standard socket.







### 5pc Spark plug rethreader set

### 64101



- Repairing stripped or damaged threads in aluminum cylinder heads.
- Solid steel inserts replace damaged threads.



### 1pc 14mm Spark plug rethreader 4pc inserts 3/8"; 7/16"; 1/2"; 3/4" long



72/10.4/11.4/0.9

**Content:** 

∆¹∆ 144g

### ■ 3/8" DR. Universal spark plug socket (ball type)

8073...B



		l	$\Delta \Delta$	
Part no.	Socket	mm	g	pc/box
807316B	16mm	95	114	10
807320.6B	20.6mm	95	150	10

### ■ 3/8" DR. Universal magnetic spark plug socket (ball type)

8073...BM





		l	$\Delta \Delta$	
Part no.	Socket	mm	g	pc/box
807314BM	14mm	95	90	10
807316BM	16mm	95	118	10
807320.6BM	20.6mm	95	154	10

### ■ 3/8" DR. Universal spark plug socket (joint type)

8073...U



		<i>l</i>	$\Delta \Delta$	
Part no.	Socket	mm	g	pc/box
807316U 807320.6U	16mm 20.6mm	95 95	114 150	10 10



### ■ 1/2" DR. Universal spark plug socket (joint type)

8074...U



		l	$\Delta \Delta$	
Part no.	Socket	mm	g	pc/box
807416U 807420.6U	16mm 20.6mm	95 95	102 164	10 10

### ■ 3/8" DR. Universal magnetic spark plug socket (joint type)

8073...UM





		l		
Part no.	Socket	mm	g	pc/box
807314UM	14mm	95	88	10
807316UM	16mm	95	114	10
807320.6UM	20.6mm	95	150	10

### ■ 1/2" DR. Universal magnetic spark plug socket (joint type)

8074...UM





		l		
Part no.	Socket	mm	g	pc/box
807416UM 807420.6UM	16mm 20.6mm	100 100	102 164	10 10

### 3/8" DR. Universal spark T wrench(ball type)



		l		
Part no.	Socket	mm	g	pc/box
807330016B	16mm	300	354	40
807330020.6B	20.6mm	300	392	40
807350016B	16mm	500	552	40
807350020.6B	20.6mm	500	590	40



### ■ 3/8" DR. Universal magnetic spark T wrench (ball type)



		l	$\Delta \Delta$	
Part no.	Socket	mm	g	pc/box
807330016BM	16mm	300	354	40
807330020.6BM	20.6mm	300	392	40
807350016BM	16mm	500	554	40
807350020.6BM	20.6mm	500	592	40

### ■ 3/8" DR. Universal spark T wrench (joint type)





		l		
Part no.	Socket	mm	g	pc/box
807330016U	16mm	300	354	40
807330020.6U	20.6mm	300	392	40
807350016U	16mm	500	552	40
807350020.6U	20.6mm	500	590	40
807380016U	16mm	800	850	15
807380020.6U	20.6mm	800	888	15

### ■ 1/2" DR. Universal spark T wrench (joint type)

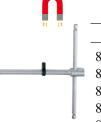
**8074...U** 



		l	$\Delta \Delta$	
Part no.	Socket	mm	g	pc/box
807430016U	16mm	300	646	30
807430020.6U	20.6mm	300	684	30
807450016U	16mm	500	936	30
807450020.6U	20.6mm	500	974	30
807480016U	16mm	800	1150	15
807480020.6U	20.6mm	800	1188	15

### ■ 3/8" DR. Universal magnetic spark T wrench (joint type)





		l		
Part no.	Socket	mm	g	pc/box
807330016UM	16mm	300	356	40
807330020.6UM	20.6mm	300	394	40
807350016UM	16mm	500	554	40
807350020.6UM	20.6mm	500	592	40
807380016UM	16mm	800	852	15
807380020.6UM	20.6mm	800	890	15



### ■ 1/2" DR. Universal magnetic spark T wrench (joint type)

8074...UM



		l	$\Delta \Delta$	
Part no.	Socket	mm	g	pc/box
807430016UM	16mm	300	356	30
807430020.6UM	20.6mm	300	394	30
807450016UM	16mm	500	554	20
807450020.6UM	20.6mm	500	592	20
807480016UM	16mm	800	852	15
807480020.6UM	20.6mm	800	890	15

### ■ 3/8" DR. Magnetic long spark plug socket

8073250...M



		_	l
	Part no.	Socket	
807	7325014M	14mm	
807	7325016M	16mm	

		l	$\Delta \Delta$	
Part no.	Socket	mm	g	pc/box
07325014M	14mm	250	316	10
07325016M	16mm	250	344	10
07325020.6M	20.6mm	250	440	10

### ■ 3/8"DR. Spark plug socket

**8073** 



		l	$\Delta \Delta$	
Part no.	Socket	mm	g	pc/box
807314	14mm	65	65	10
807316	16mm	63	96	10
807318	18mm	63	125	10
807320.6	20.6mm	63	150	10

### ■ 1/2" DR. Spark plug socket

**8074** 



		l		
Part no.	Socket	mm	g	pc/box
807414	14mm	65	65	10
807416	16mm	65	92	10
807418	18mm	65	133	10
807420.6	20.6mm	65	156	10



### ■ 3/8"DR. Magnetic spark plug socket

8073...M





		l		
Part no.	Socket	mm	g	pc/box
807314M	14mm	70	74	10
807316M	16mm	70	80	10
807318M	18mm	70	122	10
807320.6M	20.6mm	70	151	10

### ■ 1/2" DR. Magnetic spark plug socket

8074...M





		l	$\Delta \Delta$	
Part no.	Socket	mm	g	pc/box
807414M	14mm	70	72	10
807416M	16mm	70	86	10
807418M	18mm	70	146	10
807420.6M	20.6mm	70	148	10

### 3/8"DR. Magnetic spark plug socket (Thin wall)

8073...MTH







	Size	Length	Diameter	Weight	
Part no.	mm	mm	mm	g	pc/box
807314MTH	14	70	18	74	10
807316MTH	16	70	19.9	80	10
807318MTH	18	70	23	122	10
807320.6MTH	20.6	70	26	151	10

### Spark plug gauge

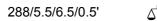
63008



- This popular solid steel spark plug gauge is designed with a tapered edge for gauging spark plugs and with a flanged hole to adjust the side wire of plugs without pressuring center electrode. Marked in standard and metric sizes.
- Size range: 0.020" to 0.100" (0.5mm to 2.53mm)











### Spark plug terminal pliers

#### 9G0101



- Safely remove spark plug cables and prevent cable
- Handles and jaws of the pliers are coated with a heavy-duty plastic for a sure grip.



96/28.8/29.8/2.2'

∆<sup>1</sup>∆ 300g

### 4pc VW, AUDI Ignition coils puller set

#### 904T5



- Use for VW BORA, GOLF, NEW BEETLE, PASSAT, POLO, TOURAN 1.4/1.6L, LUPO 4-ZYI. FSI, PHAETON AND T4, BBY. BKY1.4.
- Use for VW BORA, GOLF, PASSAT, SHARAN, TOUAREG, R32, PHAETON AND T5, V5 2.3, V6 3.2.
- Use for VW 8- and 12 cylinder engines e.g. PHAETON, B5 1.8T,
- This tool can use for most of VW-AUDI injection engines.

10/9.5/10.5/1.1'

∆ 50g

### Ignition coil puller for VAG

#### 9G3103



- •Used for removing "pencil-type" ignition coil on 4-cyl.
- •Application: VW Golf 2013 ~ / Jetta 2011~

Audi - A3 2013 ~

Skoda - Octavia 2013 ~

Seat- Ibiza 2008 ~ / Mii 2011 ~ / Leon 2013 ~

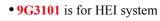
Porsche- Macan 2014 ~



∆¹∆ 116g

### Calibrated ignition tester

### 9G3101 / 9G3102



• 9G3102 is for standard system







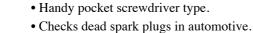






### In-line spark plug tester

#### 88409



- CE approved.





100/9.0/10.0/1.8'



### ■ Top dead center (TDC) indicator set

#### 912G9



- •Application: Diesel and Petrol Engines for cars and Vans.
- •A pneumatic indicator for finding top dead center (TDC) position on Petrol and Diesel engines.
- •The TDC Indicator is located into the spark plug/glow plug hole, and as the engine is rotating, clearly shows when the piston has achieved TDC by visible movement of the
- •Adaptors for 8mm to 18mm spark plug and glow plug holes.
- •Magnetic Attachment for hand free use.



40/7.7/8.7/1.2'



### Diesel fuel pump timing set

#### 911G9





- This precision measuring instrument is designed for resetting the timing position on diesel engines with the following fuel pumps: Bosch, EP/VE Rotory, Kikki, Nippon Denso, Cav Roto Diesel, Top Entry fuel pumps.
- · Applicable diesel engines: Alfa Romeo, Audi, BMW, Daihatsu, Fiat, Ford, Isuzu, Iveco, Lancia, Land Rover, Mazda, Mitsubishi, Nissan, Renault, Rover, Vauxhall and VW etc.
- Reading of gauge:0.01mm



12/11.4/12.4/1.3'







### ■ 13pc Diesel and petrol engine timing kit

#### 913G3



- For use on Audi, Citroen, Peugeot, Volkswagen and Volvo diesel and petrol engined cars and light commercial vehicles.
- After use, remove all setting pins & locking plates. Turn the engine over twice by hand to complete a full cycle. Regain T.D.C. (top dead center) & insert setting tools to re-check the alignment is correct. Remove setting tools and check there is no obstruction by turning the engine over twice by hand again to complete a full cycle.



20/22.1/23.5/1.4



### Camshaft locking tool

#### 9G1201



ECOTEC suitable for 16V 1.8/2.0 liter engines.



36/3.24/4.24/2.6'



### Camshaft locking tool

#### 9G1202



ECOTEC suitable for 16V 1.4/1.6L engines



72/9.36/10.36/1.5'

∆ 130g

### Camshaft locking tool

#### 9G1203

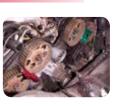


- For use on SAAB & VAUXHALL OPEL
- VAUXHALL CAVALIER 2.5I, CALIBRA 2.5I
- VECTRA 2.50, MEGA 2.5/3LIT, SINTRA 3LIT
- SAAB 900 2.5, 9000 3.0 V6



36/2.52/3.52/2.8







### Camshaft locking tool

#### 9G1204



- For use on SAAB & OPEL
- VAUXHALL CAVALIER 2.5I, CALIBRA 2.5I
- VECTRA 2.5/3, OLIT, SINTRA 3LIT
- SAAB 900 2.5, 9000 3.0 V6
- - 48/3.36/4.36/4.36/1

### Camshaft locking tool

#### 9G1205



- For rover K16 DOHC engines. Locks camshaft during servicing etc.
- Before use refer to the vehicle manufacturers workshop manual





#### 60/3.75/4.75/3.3' △ 63g

### Flywheel holding tool

#### 9G0605



For use on CITROEN, FIAT LDV & PEUGEOT.



120/9.0/10.0/1.5'

#### ∆¹∆ 75g

### Universal twin/4 cam lock (gas and diesel engines)

#### 9G2401

1-11



• It's designed to lock twin camshafts to timing marks during timing belt replacement. Fit onto sprockets and extend to lock in to sprocket teeth adjustable



- To fit various diameters and tooth pitch. Also suitable for locking between cam and diesel injection. pump sprockets.
- One man operation.

32/11.8/12.8/4.2'





### ■ Engine timing tools set for Vauxhall/Opel diesel 1.9 CDTI

#### 905G16



- Suitable for timing belt replacement on Vauxhall/ Opel and Saab vehicles fitted with 1.9CDTi/TiD engines.
- Kit contains camshaft alignment screws, crankshaft pulley alignment tool and tensioner pin.



20/13.4/14.0/0.9

#### △ 670g

### Engine timing Tool set for Vauxhall/Opel

#### 920G2



- Changing the timing belt Suitable for identical engines in e.g. Saab, Renault, etc.
- Locking the camshaft and crankshaft.
- Diesel engine 1.3CDTi 16V, 1.9CDTi, 2.0DTi, 2.2DTi
- Application for Agila, Combo-C, Corsa, Frontera, Omega, Sintra, Tigra Petrol engine 1.0 12V / 1.2 16V(since 97) 1.4 / 1.6 / 1.8 / 2.0 / 2.2 16V (since 95) Application for Agila, Astra, Corsa, Frontera, Omega, Sintra , Speedster, Tigra, Vectra, Zatira

**5/19.0/21.5/1.7** 

∆'∆ 3800g

### Engine timing tool set for Vauxhall/Opel

#### 907G17



- •For checking and adjusting of engine timing.
- •Applications: Adam, Ampera, Astra-J, Aveo, Corsa-D, Insignia, Meriva-B, Mokka, Zafira-C Tourer (1.0, 1.2 and 1.4 petrol engines).



**5/10.5/11.5/0.8**'

△ 2100g

### Engine timing tool set for Vauxhall/Opel

#### 907G18



- •For checking and adjusting of engine timing.
- •Application:Adam, Agila B, Astra J, Cascada, Combo, Corsa - D, Meriva - B, Mokka, Zafira Tourer (1.0, 1.2 and 1.4 petrol engines).





5/7.9/8.9/0.8'

∆ 1580g



ENGINE

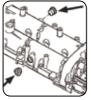


### ■ Timing tool kit (for GM 1.3 CDTI diesel engine)

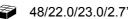
#### 904G5



- This set use for GM 1.3 CDTI diesel engine.
- The kit include flywheel locking pin, camshaft setting tools, tension locking pin.









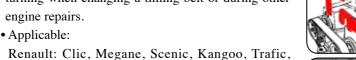
### ■ Diesel engine locking tool set for Opel / Renault / Nissan

Master (99-04).

#### 911G5



• Prevent the belt tensioner of engine camshaft from turning when changing a timing belt or during other engine repairs.



Nissan: Micra, Kubistar, Primastar.

Opel: Vivaro, Movano engine: 1.5, 1.9, 2.2, 2.5 DCI. (K9K G9U).



10/20.4/21.0/1.4'



### Engine timing tool set - Renault

#### 917G1



- This comprehensive timing tool set can correct engine timing when replacing the timing belt.
- Applicable : Renault



5/26.1/27.1/3.5'



∆ 5.2Kg



### Engine timing tool set for Renault

#### 905G20



- •This new camshaft pulley setting tool holds two pulleys in place whilst changing the cam belt and correct engine. timing to be performed when changing the timing belt.
- •Applicable:Renault, 16V & K4J, K4M & F4P, F4R.

1.4 16V K4J.

1.6 16V K4M.

1.8 16V F4P & F4R (lagunaII).



10/22.7/23.7/2.6'



### Diesel engine timing tool set for RENAULT, NISSAN, OPEL

#### 908G12



- This engine timing tool set includes important tools for Chain driven dCi diesel engines.
- This is a Chain driven engine and not considered a service time.
- The Chain will only need replacement or checking if the sprockets or tensioners are dismantled.
- Applicable:RENAULT 2.0 dCi M9R engine OPEL 2.0 CDTi M9R engine NISSAN 2.0 dCi



10/22.0/23.0/1.6'



### ■ Timing locking tools - Renault

#### 902G5

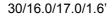


• Can be used for RENAULT LAGUNA 2.0 IDE (2001-2005) F5R engine.











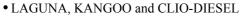


1-13



### Renault timing kit (DCI engines)

#### 903G5



- Crankshaft timing PIN-MOT 1489 1.5 DCI
- Camshaft timing PIN-MOT 1430 1.5 DCI
- Crankshaft timing PIN-MOT 1054 1.9 DCI



60/14.4/15.4/1.1'



### ■ Engine timing tool set for RENAULT 1.8 / 2.0 16V

#### 907G15



- •Specially designed to lock the camshaft sprockets on Renault 1.8/2.0 16v petrol engines.
- •Required for releasing the camshaft sprocket bolts when timing engines, after belt replacement.
- •Applicable:RENAULT 1.8 16V-

F4P 770/722/770/771/772/773/774/775 RENAULT 2.0 16V -

> F4R 700/701/712/713/714/715/720/730/7 32/736/738/740/741/744/746/747/760/761 /762/763/764/765/766/767/770/771/774/7 76/784/786/787/790/792/794/795/797/830



15/15.0/16.0/0.86'



### ■ Timing locking tools for FORD

#### 905G8



- This set is essential for replacing the cam belt on FORD FOCUS/CMAX 1.6 TI-VCT with engine code HXDA (2003-2007) and 2.0 TDCI with engine codes G6DA, G6DB & G6DC 2003-2007.
- Also required flywheel locking tool and adaptors.





10/8.4/9.4/0.8





### Engine timing tool set - Ford, Mazda

#### 922G2



- This comprehensive timing tool set can correct engine timing when replacing the timing belt.
- Applicable : Ford, Mazda





5/16.5/17.5/2'



### Engine timing tool set for FORD

#### 911G6



- •This tool set comes with retention tools and injection pump removal / installation tools for Ford 2.0 and 2.4 Duratorqu diesel engines.
- •Application:Ford Mondeo 2.0 / 2.2 TDdi / TDCi(01 -07); Ford Transit 2.0 / 2.2 / 2.4 TDdi / TDCi (00 - 08); Jaguar X-Type 2.0 / 2.2 D (03 - 08); LDV Convoy 2.4 TD / Tdi (02 - 06)
- •Engine Codes: ABFA, D5BA, D6BA, F3FA, FIFA, FMBA, FMBB, D2FA, D3FA, D4FA, D0FA, F4FA, FXFA, H9FA, HJBA, HJBB, HJBC, HJBE, N7BA, N7BB, QJBA, QJBB, QJBC, SDBA



10/16.0/17.0/1.2'

△ 1864g

### Engine timing tool set for FORD

### 916G5



- •Combination kit of setting and locking tools suitable for a wide range of Ford petrol & diesel engines.
- •Also suitable for these engines fitted in Land Rover, Mazda, PSA, Suzuki and Volvo vehicles.
- •Kit consists of camshaft, crankshaft/flywheel and tensioner locking tools, plus camshaft sprocket remover.
- •Application:Petrol:fiesta 1.25/1.4/1.6 (95-08), focus 1.4/1.6/1.8/2.0 (98-08) 1.6 VCT-Ti (04-09), C-Max 1.8/2.0 (02-08) 1.6 VCT-Ti (04-09), fusion 1.25/1.4/1.6 (02-08), Mondeo 1.8/2.0 (98-08), Puma 1.7 (97-02), Tourneo Connect 1.8 (02-06), Transit Connect 1.8 (02-06)

Diesel:Courier 1.4/1.6/1.8 (00-02), fiesta 1.4/1.6/1.8 (02-09), focus 1.6/1.8/2.0 (98-00), C-Max 1.6/2.0 (03-08), fusion 1.4 (02-08), galaxy 2.0 (06-08), Mondeo 2.0 (07-08), S-Max 2.0 (06-08), Tourneo Connect 1.8 (02-08), Transit Connect 1.8 (02-08)



5/12.3/13.5/1.28



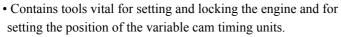




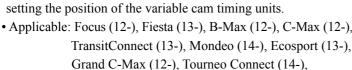
### ■ Engine timing tool set for Ford 1.0 Ecoboost

#### 916G6





Transit Courier (14-)









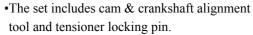
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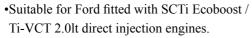


### Engine timing tool set for Ford 2.0 Ecoboost

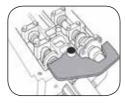
### 905G22







- •Camshaft tool use for vehicles manufactured May 2011 and after May 2011.
- •Application: Galaxy(2010-) / Mondeo(2010-) / S Max(2010-) / Focus(2011-)





### FORD Flywheel locking tool

#### 903G11



- Flywheel locking tool with 2 adaptors
- For FORD diesel and PETROL engines.







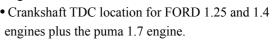


### Camshaft setting bar & TDC timing pins (Ford / Mazda)

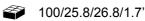
### 9G1211



- Camshaft setting and locking plate.
- Updated set now covers ZETEC engines found in FOCUS, MONDEO and COUGAR from 98 on. Also covers FORD 1.6, 1.8 and twin cam 16V petrol



- TDC pin also suitable for MAZDA 121 1.25LTR petrol engines.
- · Supplied with warning tags.









### FORD Timing tool set

#### 904G6



Applicable: Fiesta / Puma, Fiesta / XR2i, Fiesta / Fusion, RS1800, Mondeo, Cougar, Escort / Orion, Focus, 121, Focus / Cmax Ti-VCT, Focus





48/14.0/15.0/0.8'





### BMW (M52, M54, M56) Timing tool kit

#### 905G1



- BENZ double vanes setup bracket.
- Application: BMW M52, M54, and M56.











### Timing tool kit (BMW MINI)

#### 907G6



- This tool kit can use for BMW MINI 2001~2006, MINI COOPER S 2002~2006 and MINI COOPER 2001~2006.
- Contents:

1pc - Camshaft sporocket holding tool

1set - Engines support bracket

1pc - Tensioner assembly tool





### Engine timing tool set for BMW M41, M51, M47, M57

#### 913G6



- Installation and removal of the camshaft / hydraulic chain tensioner.
- Checking and adjustment of camshaft timing.
- Easily accessible operating instructions including cross references to original part numbers.
- Spare parts optionally available.
- Clear arrangement of tools in high-quality plastic case.
- Application: BMW M41, M51, M47, M57.



5/19.0/20.0/1.4'

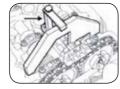


### Engine timing tool set for BMW M47

#### 905G17



- Special design for correcting timing to the marking when servicing BMW M47 2.0 16V Engines.
- Applicable: BMW M47 Engines.



12/15.4/16.0/1.3



∆¹∆ 1283g



### ■ Diesel engine timing tool set for BMW N47/N47S

#### 904G11



- Installing and removal of camshaft & variable camshaft timing unit.
- Applications: BMW N47/N47S 2.0 twin camshaft diesel chain drive engines.
- BMW N47 / N47S 2.0d Diesel Engine in:

1Series: 118d(E81/E87) 120d(E81/E82/E87) 123d(E81/E82/E87) 3Series: 318d (E90/E91) 320d(E90/E91/E92)

X3 2.0d: (E83)

10/9.5/10.5/0.8

5Series: 520d(E60/E61)



### Engine timing tool set for BMW N42, N46, N46T

#### 908G9



- Installing and removal of camshaft/variable camshaft timing unit.
- Checking and adjustment of timing.
- Applicable:E87:118i/120i-N46 E46:316i/316ti/318i-N42 E90/E91:318i/320i-N46 E85:Z4,2.0L-N46





10/23.8/24.8/1.5





### Engine timing tool set for BMW N42/N46

### 918G3



• Suitable for the following applications: Camshaft installation and removal as well as removal and installation of the inlet camshaft and carrier assembly / Valvetronic System.



- Easily accessible operating instructions including cross references to original part numbers
- Spare parts optionally available
- Clear arrangement of tools in high-quality plastic case with soft
- Applicable:E87: 118i / 120i ; N46 engine

E46: 316i / 316ti / 318i / 318ti; N42 engine E90 / E91: 318i / 320i; N46 engine E85: Z4, 2.0L; N46 engine









1-20

# FORGE Professional Tools

### ■ Engine timing tool set for BMW N40/N45/N45T

#### 906G5



• Applications: BMW N40 and N45(T) Twin Camshaft Petrol engine in BMW.

1 series 116. E81/E87.

3 series 316i E46/E90.

316Ci E46.

316ti. E46.

• Contents: VANOS Alignment Plate.

Camshaft Setting Plate (Inlet).

Camshaft Setting Plate (Exhaust).

Timing Chain Tensioner Pre-Load Tool.

Flywheel Locking Pin.

Camshaft Setting Plate Securing Screw.



10/20.0/21.0/1.3'



### ■ Engine timing tool set for BMW N51/N52/N53/N54

#### 912G5



- Special design to locate camshaft in TDC position.
- Applicable: BMW N51/N52/N53/N54 engines
- Applicable models:

135iS.E82(07-08), 323i.E90/91/92/93(04-08), 325i/xi.E90/91/92/93 (04-08), 330i/xi.E90/91/92/93(04-08) 335i/xi.E90/91/92/93(04-08),

523i/Li.E60/61(04-08),X3 2.5/3.0.E83(06-08),

525i/Li/xi.E60/6106-08), 528i/Li/xi.E60/61(06-08),

530i/Li/xi.E60/61(05-08), 535i/xi.E63/64(04-08),

630i. E60/61(04-08), 730i/Li.E65/66(04-08), X5 3.0.E70(06-08),

Z4 2.5/3.0.E85/86(05-08).E90/91/92/93(04-08)



4/24.0/25.0/2.0'

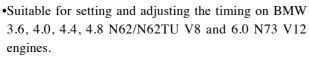


#### ∆∆ 6000g

### Engine timing tool set for BMW N62 / N73

### 905G19





- •Kit includes camshaft setting plates, flywheel locking pin and chain pre-tensioning tool.
- •Application:540i E60/61 (05-10), 545i E60/61 (03-06), 550i E60/61 (05-10), 645i E63/64 (03-06), 650i E63/64 (05-11), 735i E65/66 (02-05), 740i E65/66 (05-08), 745i E65/66 (02-05), 750i E65/66 (05-08), 760i E65/66 (02-08), X5 4.4 E53 (03-07), X5 4.8 E53/E70 (04-10)



5/14/15/1.3'





### ■ Engine timing tool set for BMW M60, M62 (VANOS)

#### 912G12





- •For fixing the camshaft chain tensioner.
- •Applicable: BMW M60, M62 (VANOS)





∆'∆ 7360g

### Engine timing tool set for BMW N63

#### 906G8





- Special design for locating and turning the camshaft in correct TDC position.
- Applicable: BMW N63 engine.



5/14.8/16/1.28'

△ 2987g

### Engine timing tool set for BMW N20

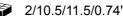
### 908G15





- Designed for fixing the camshaft in TDC position.
- The tool is used to dismantle and assemble intake and exhaust camshaft.
- Applicable: BMW N20, N26 engine









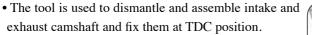


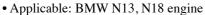
# FORCE Professional Tools

### ■ Engine timing tool set for BMW N13/N18

#### 908G16











10/21/22/1.6'

∆¹∆ 2102g

### Petrol engine twin camshaft setting tool kit For BMW MINI / CITROEN / PEUGEOT

#### 910G8





•Suitable for timing 1.4 & 1.6 16V Valvetronic direct injection petrol, chain drive engines, fitted in BMW Mini, Citroen and Peugeot vehicles.



•Application:BMW MINI: Mini One R56 (07-09), Cooper R55/R56 (06-09), Cooper S R55/R56 (06-09) CITROEN:C4 (08-09), C4 Picasso (08-09) PEUGEOT:207 (06-10), 207CC (07-10), 308 (07-10), 3008 (09-12), 5008 (09-12)



5/11.5/12.5/1.28`

∆ 2300g

### ■ Engine timing tool set for BMW, Mini,Citroen, Peugeot

#### 905G12

1-23



- Required for removal/installation of the timing chain assembly.
- Relevant setting/locking tools for particular vehicles/engines will
- Set contains balance shaft alignment, crankshaft holding and chain tensioner tools.
- Applications: BMW N40/N45/N45T B16, N42/N46 B18, B18A, B20, B20A, B20B, N51/N52/N52K/N53/ N54 Valvetronic, N53/N54 Direct Injection Non-Valvetronic, BMW Mini; N12/N14, Citroen/ Peugeot; EPS(8FS)/EPS.



12/11.4/12.0/1.3'



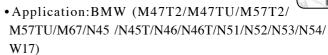


### Fly wheel holder tool for BMW

#### 905G15



- When replacing timing chain, this tool can block
- It helps to release and tighten down central bolts on vibration damper.





20/18.0/19.0/1.2'



### Engine timing tool set for BENZ M271

#### 904G18



- •This retaining device makes it possible to position the camshafts into the installation position.
- •Includes a Retainer to draw in the timing chain and to retain timing chain with camshaft sprockets in mesh.
- •Applicable:CLK 200K (W209), C 180K, C200K, C 230K (W203), C Sportcoupe C 160K, C 180K, C 200K, C 230K, E 200K (W211), SLK 200K (R171), C 180K (W204), CLC 180K, CLC 200K, C 180 CGI, C 200CGI, C 250CGI (W204), E 200CGI, E 250CGI (W212, C207)
- •Engine Codes:E18ML (02-), DE18ML (03-05), E16ML (08-), DE18LA (09-)



6/17.1/18.1/2.6'



### Engine timing tool set for BENZ

#### 9G1218



- •The use of the mounting device allows a single mechanic to replace a timing chain quickly and without any trouble.
- •Application: for the 4-cylinder Mercedes petrol engine M111 C 180/200/220/230;

E 200/230;CLK 200/230;SLK 200/230;ML 230



24/11.5/12.5/2.8'



∆ 480g

# FORGE Professional Tools

### Engine timing tool set for BENZ

#### 906G7



- •A timing tool set which covers a large number of models in the Mercedes range including Petrol and Diesel engines.
- •Set includes Flywheel Plate Locking Tools and Camshaft Locking Pin Set.
- •Application:Benz engine model 102, 103, 104, 111, 112, 113, 119, 137, 155, 156, 272/979, 273, 601, 602, 603, 604, 605, 606, 611, 612, 613, 628, 629, 640, 642.
- •Also suitable for Chrysler PT Cruiser 2.2 CRD and Jeep Grand Cherokee 2.7CRD.







20/22.5/23.5/1.6'



### BENZ flywheel locking tool

#### 9G1215



- Use for BENZ M101, M102, M103, M104, M111, M601, M602.
- Used to fix the flywheel gear to remove & install crankshaft pulley center bolt.





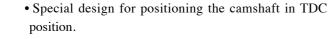
60/13.3/14.3/0.83

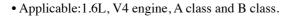


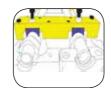
### ■ Engine timing tool set for BENZ M133, M270, M274

#### 915G6















6/27.6/28.6/1.4'







### ■ Engine timing tool set for BENZ M651

#### 903G21



• The retaining device makes it possible to position the camshafts in the installed position.



• Applicable:BENZ M651 VOLUME 2.0D / 2.2D / 2.5D engine (07~)







10/14.8/15.8/1.4'



### Engine timing tool set for BENZ M156

#### 904G19





- Used to fix and align the camshaft in correct timing angle when replacing the timing belt.
- Applicable:BENZ AMG 156.ML 63, S63L, S63, R63, E63, CLS63, and CLK63





**5/8.7/9.7/0.8**'

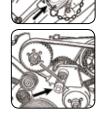
∆¹∆ 1725g

### Engine timing tool set for VW, Audi

#### 908G5



- A dedicated set of setting / locking, support and tensioner adjusting tools for VAG V6 TDI petrol
- Applicable: VW 2.5 V6 diesel engines and AUDI A4, A6, A8, A11 road(97~08)





12/12.5/13.5/1.3











### Engine timing tool set - VW, Audi, Seat and Skoda

#### 928G1



- This comprehensive timing tool set can correct engine timing when replacing the timing belt.
- Applicable : VW, Audi, Seat and Skoda



5/21.5/22.5/1.9'

∆ 4.3Kg

### Timing setting tool set - VW, Audi, Seat and Skoda

#### 929G1



- Use for AUDI, SEAT, SKODA, VW.
- AUDI: A2(01-06), A3(01-07), A4(99-07), A6(98-07) SEAT: AROSA(99-05), IBIZA/CORDOBA(02-07), ALTEA(04-07), LEON(00-07), TOLEDO(04-07), ALHAMBRA(99-07) SKODA: FABIA(00-07), ROOMSTER(07), OCTAVIA(00-07), SUPERB(02-07)
- V W: LUPO(99-05), POLO(99-07), FOX(05-07), GOLF/ BORA(98-07), JETTA(05-07), BEETLE(00-07), PASSAT(98-07), TOURAN(03-07), SHARAN(99-07), CADDY(03-07), TRANSPORTER(03-07)



5/21.5/22.5/2'

∆ d230g

### Engine timing tool set for AUDI

#### 910G5



- Special designed set of tools for alignment camshaft lock and adjusting.
- Applications: VAG A4/A6/A8 3.2 FSI with engine AUK, A6/Quattro 2.4 with engine BDW.





5/14.0/15.0/1.2

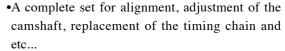


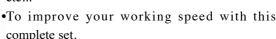


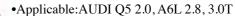


### Engine timing tool set for VW / AUDI

#### 913G7











6/20.0/21.0/2.6'



### Camshaft clamp for VW / AUDI

#### 902G18



- •Special designed to align camshafts when adjusting timing.
- •Applicable: AUDI A6 2005~, Q5 2.0T, A6L 3.0T
- •Engine model: 6-cyl. Petrol direct injection 2.8L 4V engine

20/17.5/18.5/0.26



### Engine timing tool set for VW

### 904G15



- •Installing and removal of camshaft / variable camshaft timing unit;
- •Checking and adjustment of timing;
- •Application:VW:Polo (02-07), Fox (05-08) Seat:Ibiza (02-08), Cordoba (02-08). Skoda:Fabia (02-07).
- •Engine Codes:VW:AWY, BMD, AZQ, BME Seat:AWY, BMD Skoda: AWY, BMD, AZQ, BME



24/17.0/18.0/1.5'







# FORCE Professional Tools

### Engine timing tool set for VW / AUDI

#### 907G13



- •Kit includes camshaft tools, chain tensioner retainer, locking pins and tensioner bolt.
- •For 2.0 FSI petrol engines since 2003.
- •Application:AUDI:A3 2.0 FSI and FSI SOHC

VW:GOLF 2.0 FSI and 2.0 FSI SOHC and Touran 2.0 FSI SOHC

•Engine Codes:AUDI:AWA, BHD, BMB VW:AWA, AXW



20/22.0/23.0/1.7'

∆ 1100g

### Engine timing tool set for VW

#### 906G6



- •Special designed set of tools for camshaft locking, and adjusting.
- •Applicable:VW-Transporter, LT, Crafter 2.4D, 2.5SDI, 2.5TDI, 2.5TDI Common Rail





10/15.0/16.0/1.31 △ 1500g

### Engine timing tool set for VW / AUDI

#### 904G16



- •For checking and adjusting camshaft timing when replacing timing belts or timing chains, or during repairs.
- •Includes TDC adjusting tool, Locking bolt, and Setting gauge for camshaft
- •Applicable:VW-AUDI 1.4L and 1.6L FSI petrol engines:

Audi - A3 (03-10)

Skoda – Ocatvia (04-09), Fabia (07-09), Roomster (06-09), Superb (09-10)

VW - Polo (02-08), Golf (03-09), Golf Plus (05-09), Jetta (06-09), Passat (05-09), Touran (03-09).



10/12.0/13.0/1.2'

∆ 1200g



### Engine timing tool set for VW / AUDI

#### 914G5



- •Comprehensive kit required for service work on timing chain, cylinder head and HP pump, and engine timing applications on VAG 2.7 - 3.0 TDi V6 and 4.0 - 4.2 TDi V8 common rail diesel engines.
- Applications: Audi A4, A5, A6, A6 Allroad, A8, Q5, Q7, VW - Phaeton, Touareg

10/20.0/21.0/1.6'

△ 2000g

### Engine timing tool set for VW

#### 908G13



- •For removing and installing camshaft drive gear and eliminating play in gear train - for locking of both camshafts and crankshaft.
- •Applicable: VW T5 Touareg and Transporter 2.5 TDI PD and 4.9D /
- •Engine codes:BAC, BLK, BPD, AXD, AXE, BLJ, BPC, and AYH

2/15.5/16.5/0.8'

∆ 7750g

### Engine timing tool set for VW, AUDI, SKODA

#### 908G18



- Designed to allow removal and replacement of the timing chain and camshaft sprockets on the 1.8/2.0 TFSi and TSi petrol engines
- Applicable: VW-Tiguan, CC, Golf VI, Passat, Beetle/ Maggiolino, Eos, Scirocco.

AUDI-A4, A4 quattro, A5 Coupe/Cabriolet;, A5 Sportback, Q5, TT

SKODA-Octavia II, Superb, Yeti





10/12.5/13.5/1.3'





1-30

# FORCE Professional Tools

### Engine timing tool set for VW, AUDI

#### 904G20





- For check and adjustment of engine timing.
- Applicable: 1.0L 3-cyl. petrol engines VW up, SKODA Citigo, SEAT Mii since 2011



10/11.5/12.5/1.4'



### Engine timing tool for VW/Skoda/Seat

#### 906G10





•For checking and setting the engine timing suitable for following VAG engines:

1.2 / 1.4 L 4-cylinder direct injection with turbocharger, built in Audi A3/VW Golf from 2013



1.0 L 3-cylinder, built in Seat Mii / Skoda Citigo / VW Up from 2011.





10/16.5/17.5/1.9'



### ■ Engine timing tool set for VAG 1.6 / 2.0TDI

#### 910G9

1-31





- Designed to fit the newest Common Rail diesel engines which are significantly different from the older PD engines.
- These Common Rail engines combine belt and gear drives by using a toothed belt to transfer the drive from the crankshaft to one of the cam shafts then using gears to transfer the drive from one cam to the



Volkswagen: Golf, Golf Plus 1.6 TDI (since 2009)

Tiguan, Passat, Eos, Golf, Golf Plus 2.0 TDI (since 2008)

Audi: A3 1.6 TDI (since 2009)

A3, A4, A6, Q5 2.0 TDI (since 2007)

Seat: Exeo 2.0 TDI (since 2009)



10/18.5/19.5/1.6'



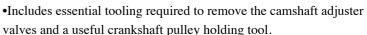


### Engine timing tool set for VW, AUDI, SKODA, SEAT

#### 909G10









•Applicable: Audi - A3, A4, A5, A6, Q3, Q5, TT

VW - Golf, Beetle, Jetta, Scirocco, Eos, Passat, Passat CC, Tiguan, Sharan, Amorok

Skoda - Yeti, Octavia II, Octavia III, Superb Seat - Leon, Toledo, Altea, Altea XL, Exeo, Alhambra





### ■ Timing chain test tool for VW, Audi, Seat, Skoda

#### 904G21





•Application: Checking elongation of timing chain.

•Engine: petrol 1.2L TSI - / 1.4L TFSI



### 3-in-1 Bosch timing tool for VW

#### 904G17



- •Suitable for timing Bosch VE injection pumps.
- •Includes M8, M10, and M12 adapters.
- •Use in conjunction with Dial gauge
- •Applicable:Bosch VE fuel pump, Diesel Kiki, and Nippondenso pumps.



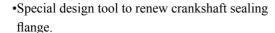


#### Crankshaft seal installer tool for VW / AUDI

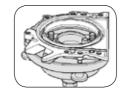
#### 9G0129







•Applicable:16v,1.4,1.6 engine of VW, AUDI, SKODA, SEAT.







6/11.5/12/0.9'

∆ 1621g

### Camshaft central valve tool for VW / AUDI

902G13



- •Assembly Tool for installation and removal 4/3-way central valve for camshaft adjustment.
- •These tools have offset pins.
- •Applicable:Audi A3 (2003up).A4.A5.Q5,

VW Passat (2006 up).Passat CC (2006 up)



50/13.0/14.0/1.2'





9G1210



- •Special groove nut socket to turn the camshaft adjuster into position.
- •Camshaft adjusting socket used to adjust variable valve timing on the exhaust side camshaft to basic position.
- •Applicable: Audi A4, A6 (3.0L V6 5V)



100/9.1/10.1/2'







### Camshaft alignment tool

#### 9G1216



- This tool is used for holding both camshafts at the TDC position when replacing the timing belt.
- Used AUDI & VW models with V8 motors with 5 valves per cylinder (except S4)



10/21.0/22.0/0.46





### Camshaft alignment tool

#### 903G14



- This tool is used to hold both camshafts at the TDC position while replacing the timing belt.
- Used AUDI models with V6 engine, 2 valves per cylinder.



**1**0/23.2/24.2/1.9'

∆ 2220g



### Camshaft alignment plate for VW, AUDI

#### 9G1209



- Specially designed to align the camshafts to proper position when adjusting and assembling.
- Applicable: VW-PASSAT, VR-6



	Material		
Part no.		packing	g
9G1209	PVC	60/5.0/6.0/0.6	50

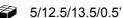
### Camshaft alignment tool

#### 902G6



- For Audi 3.0L, VG SV used in 2002 ~ 2005
- For Audi A4 and 2002 ~ 2004 Audi A6











### Camshaft locking tool for VW

#### 9G1206



- For locking the camshaft pulleys when changing the toothed belt.
- Engine repairs on 4-valve, 4-cylinder injection engines VW LUPO since 1999, POLO since 1995, CADDY since 1996, POLO CLASSIC, VARIANT since 1996, NEW BEETLE 1.4L since 1999 GOLF 1.4L, 1.6L since 1998, BORA 1.4L, 1.6L since 1999.





60/22.5/23.5/1'



### Camshaft locking tool

#### 903G10



- VW: POLO/CLASSIC, GOLF / BORA, BETTLE, CADDY (97-06).
- Enable replacing the timing belt without removing the cylinder head cover.





60/22.8/23.8/0.65



### Engine timing tool set for VW / AUDI

#### 902G15



- •Specially designed to hold and align the camshaft.
- •Applicable:VW Golf 1998~, Bora 1999~, Passat 1997~, Sharan 1996~, Touareg 2003~, Phaeton 2003~, Transporter 1991~ Audi - A8 1994~, Audi TT 1999~



•Engine model:6-cyl. injection engine (4-valve), 8-cyl. injection engine (W8), 12-cyl. injection engine (W12)



24/22/23/1.2'







### Engine timing tool set for VW / AUDI

#### 902G16

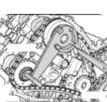


- •Specially designed to install Hall sender screens into crankshaft adjuster when setting the crankshaft
- •Applicable: Audi A6L, A8L 4.2 engine.
- •Engine model: V8 BAT 4.2 engines



20/21.6/22.6/1.1



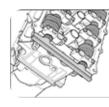


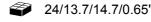
### Engine timing tool set for VW / AUDI

#### 902G17



- •For locking camshafts when checking valve timing
- •Applicable: Audi A6L, A8L 4.2 engine.
- •Engine model: V8 BAT 4.2 engines







### Engine timing tool set for AUDI

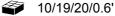
#### 902G19



- •This comprehensive set of tools enables the correct engine timing to be made when replacing the timing belt.
- •Applicable:PORSCHE cayenne 4.5L, 4.8L AUDI Q7.







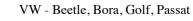


### Engine timing tool for VAG

#### 9G0807



- •Special design to hold the chain and tensioner in position during assembly and disassembly.
- •Applications: Audi A3, S3, A4, A6, TT,



Seat - Ibiza, Cordoba, Leon, Toledo, Alhambra.

Skoda - Octavia



100/5.5/6.5/1.6'









### AUDI Crank locking pin

#### 9G1302



- This pin is used to lock the crankshaft at the TDC position while replacing the timing belt.
- Applicable: AUDI 3.0L V6 5 valve.
- Size: M12x1.5





144/15.0/16.0/1.5'



### VW/AUDI Crank locking pin

#### 9G1303



- This pin is used to lock the crankshaft at the TDC position while replacing the timing belt or removing the crankshaft bolt.
- Applicable: VW/AUDI models with 2.7 & 2.8 liter V6 engines.
- Size: M18 x 1.5



144/18.0/19.0/1.5'



∆ 120g

### Crank locking pin for AUDI

#### 9G1305



- •This pin is used to lock the crankshaft at the TDC position while replacing the timing belt or removing the crankshaft bolt.
- •Size: M14 x 1.5
- •Application: AUDI A6 2005 6 cylinder engine 2.4 liter & 3.2 liter FSI



100/8.5/9.5/1.1



### Crank locking pin for VAG

#### 9G1306





- •This pin is used to lock the crankshaft at the TDC position while replacing the timing belt or removing the crankshaft bolt.
- Applicable: VAG FSI and TFSI 1.4L and 1.6L engines
- Size: M14 x 1.5



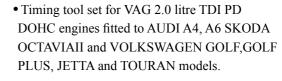


### ■ Timing tool set for VAG 2.0 TDI PD

#### 906G4

















#### 9G1208



• For VOLKSWAGEN, AUDI, SEAT, SKODA, 2.0 TDI engines.





100/20.0/21.0/1.7'

40/19.0/20.0/2.1



△ 415g

### Crankshaft locking tool for VW

#### 9G1301



• For use on VOLKSWAGEN BORA, GOLF, LUPO & POLO TDi's.





100/19.0/20.0/1.7



### Locking tool set for VW, Audi

### 902G2



• For use on AUDI, VOLKSWAGEN, SEAT, SKODA with TDI PD and V6 engines.

#### **Contents:**

Injection pump locking pin tensioner locking tool crankshaft locking tool.



**6/14/15/1.6'** 









# FORCE Professional Tools

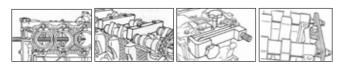
### Engine timing tool set for PORSCHE Boxster, 911

#### 908G17

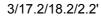




- Comprehensive 8-piece tool kit to establish proper engine timing when performing major engine / valve train service.
- Applicable: Porsche Boxster 2.5, 2.7, 3.2(engine type 986, 987), Porsche 911 Carrera 4S 3.6, 3.4(engine type 996, 997)









### Engine timing tool set for PORSCHE

#### 903G22

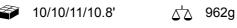




- Special design to align the engine timing on
- Applicable: PORSCHE 997 series.







### Engine timing tool set - Peugeot, Citroen

#### 935G1



- This comprehensive timing tool set can correct engine timing when replacing the timing belt.
- Applicable : Peugeot, Citroen









### Engine timing tool set for CITROEN / PEUGEOT

#### 911G7



- •This comprehensive set of tools enables the correct engine timing to be made when replacing the timing belt.
- •Suitable for use on most of the recent cars with either HPI (petrol) or HDI (diesel) engines.
- •Applicable: Citroen and Peugeot twin cam 16V

Citroen:Xsara / Picasso C4, C5, Evasion / Synergie, C8 , Jumpy / Dispatch

Peugeot:206, 307, 406/Coupe, 607, 806, 807, Expert.

•Engine Codes:EW7J4, EW10J4, EW10J4S, EW10D-Hpi, EW12J4



10/15.0/16.0/1.6'



∆ 1500g

### Engine timing tool set for FIAT

#### 934G1



- Petrol Engines: FIAT Brava, Bravo, Barchetta, Cargo, Coupe, Marea Palio, Weekend, Punto, Multipla, Stilo, Idea Doble Twin Cam Engines 1.2 1.4 1.6 1.8 16V.
- Diesel Engines: FIAT Brava, Bravo, Marea/ Weekend, Palio, Punto, Multipla, Doblo, Ulysse, Ducato, Stili JTD Diesel Engines 1.9D/TD 1.9JTD 2.4TD/JTD.



**5/23.4/24.4/1.7** 



∆ d680g

### Engine timing tool set for FIAT

#### 907G16



- •Kit includes all the diesel timing tools for Fiat Punto, Ducato, Tempra, Tipo and models with an adjustable camshaft timing belt
- •Applicable:FIAT : Punto 1.7D/TD/CAT/EGR (96-97) , Ducato 1.9D/ TD (94-02) ,Tempra 1.9D/TD (94-02) , Tipo 1.9D/ TD (94-02)



10/14.0/15.0/0.9'



∆ 1400g

1-39

# FORCE Professional Tools

### Engine timing tool set for Fiat 1.2 8V & 1.4 16V

#### 910G7



- •Kit consists of crankshaft locking tool, camshaft setting plate and belt tensioner adjuster for the 1.2 engine, and additional sprocket locking tool and alignment fixture for the camshaft on the 1.4 WT
- •Applicable:New 500(07-08) / Idea(04-08) / Linda(07-08) / Grande Punto(07-08) / Doblo(05-08) / Panda EV02(05-08)
- •Engines: 1.2 8V / 169A4.000, 199A4.000 / 1.2 8V / 188A4.000 (EVO2) /1.4 16V /350A1.000

10/10.0/11.0/0.8'



### Engine timing tool set for FIAT

903G23





- Includes camshaft setting tools and flywheel/crankshaft locking pin.
- Applicable: Fiat: 500 (07-08), Doblo/Cargo (04-06), Grande Punto (05-08), Idea (04-08), Linea (07-08), Panda (03-08), Punto (03-08)



50/13/14.5/1.3'



△ 226g

### Engine timing tool for VOLVO

#### 912G10



- •For alignment of the cam and crankshafts.
- •Also enables correct installation of the camshafts with the cam cover.
- •Applicable: VOLVO models 850, 960, S40, S70 and S90.







#### 4/22.0/23.0/1.6' ∆ 5500g

### Crankshaft harmonic balancer holder tool for BMW

G1220



- - Holds vibration damper when loosening and tightening center crankshaft bolt.
  - Application: BMW E39/E46/E60/E61/E81/E83/ E90/E91





10/18/19/1'





### Crankshaft pulley holder tool for BENZ M272/M273

9G1219



- •For removal and replacement of the crankshaft bolt.
- •Application:BENZ M272, M273.



10/20/21/1'

∆¹∆ 1936g

### ■ 11pc Universal pulley holder & fan clutch set

911G1



- This set is designed to remove and install fan lutches & to hold the camshaft pulley.
- Used for most of the cars.
- Contains different taps to fit any cars and pin width
- Can adjust different width from 40m/m to 220m/m.
- Size available:

6mm~10mm, 8mm~11mm, 10mm~12mm, 11mm~16mm



6/19.1/20.1/3.5

∆¹∆ 3180g

### Camshaft & injection pump sprocket holding turning tool

9G0606



Can be used for universal.

- Essential tool called for on many timing belt/engine timing
- Used to counter-hold camshaft or injection pump sprockets to allow release of retaining bolt.



24/24/25/2.5'

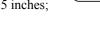
△ 990g

### ■ TOYOTA Cam wrench tool kit

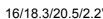
### 915G1



- Universal design fits many different types of pulleys having slots or holes, including camshaft pulleys and crankshaft pulleys.
- Wrench is adjustable from 1-1/4 inch to 5 inches; works with 1/2" ratchet or breaker bar.













### Universal timing gear holder

#### 9G0617

- •Used to hold cam gear while removing cam shaft bolt.
- •Allows adjustment of cam gear once installation is completed
- •Single sliding design makes it quick and easy to adjust.
- •Three positions for wider application range.
- •Range: 50 ~ 150 mm.





20/21/23/2.2'



#### Counter hold tool for VW / AUDI

#### 9G0616



- •This tool is used for stopping the engine crankshaft pulley/vibration damper when center bolt for crankshaft is under installation or disassembly.
- •810mm (32" inches) long, with 4 pins, size 5mm with 42mm pin spacing.
- •Application:Mainly used for car Audi A3 (2004 -up), engine 1.8 liter TFSI (chain drive), also fits Audi A4 / A5 / Q5 (2009 -up), engine 2.0 liter TFSI (chain drive).



6/15.0/16.0/1.1



### ■ VW, AUDI belt pulley holder

#### 9G0607



- Special design to hold the belt pulley on VW, AUDI.
- Applicable: VW:LUPO, POLO/CLASSIC, GOLF, BORA & CADDY.



AUDI:A2



#### 6/12.3/13.3/1.1' △ 2050g

### VW, SEAT Belt pulley holder

### 9G0608

1-43



- Special design to hold the belt pulley on VW.
- Applicable:

VW: LUPO, POLO/CLASSIC, BEETLE, GOLF, BORA & CADDY. SEAT: IBIZA/CORDOBA



6/12.9/13.9/1.1'





### Pulley holder tool (teeth type belt)

#### 9G0708



• Ideal for removing and assembling any type of grooved pulley. This modern tool keeps the grooved pulley firmly locked.



- Enables to tighten or to untighten without any difficulty, the pulley locking screw.
- Has more functions than a standard strap or chain wrench, and will not damage components. Ideal for alternator and water pump pulleys, but also essential for electric motors of compressors, washing machines, tool machines etc. Also suitable to rotate the camshaft when timing the engine and to remove oil and gasoline filters.



36/21/22/2'



△ 586g

### Pulley holder tool (groove type belt)

#### 9G0709



- Ideal for removing and assembling any type of grooved pulley. This modern tool keeps the grooved pulley firmly locked.
- Enables to tighten or to untighten without any difficulty, the pulley
- Has more functions than a standard strap or chain wrench, and will not damage components. Ideal for alternator and water pump pulleys, but also essential for electric motors of compressors, washing machines, tool machines etc. Also suitable to rotate the camshaft when timing the engine and to remove oil and gasoline camshaft filters.



36/21/22/2'



∆ 586g

### 1/2"Dr. Hand impact wrench

### 9G0712



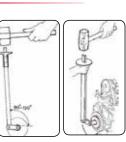
- Special design to replace the harmonic balancer
- It will turn when you try to remove the center nut.
- Applicable: flywheels, pulleys, flanges and etc.



12/18.0/19.0/0.9'









### ■ 7pc BENZ & BMW Fan service wrench set



- Removes lock nuts on thermo-Viscous fans found on FORD BMW ... many vehicles.
- · Removes lock nuts on thermo-Viscous fans found on FORD Mercedes... many vehicles.
- Allows the technician to hold the water pump pulley in place while loosening the radiator fan.
- To allow removal of the visco-coupling on the cooling fan.
- Required to remove the radiator fan hub, the reaction spanner is bolted to the front face of the hub.
- Special open-ended spanner to allow removal and replacement of the radiator fan hub.
- The three-in-one design allows servicing three separate areas of repair. All of which require a specialty tool due to their confined locations.



5/19.3/22.0/2.7



#### ∆∆ 3860g

#### Reaction wrench





- For locking of deep-drawn water-pump pulleys on VW and Audi engines. As they are used when E.G. an air conditioning is also built in.
- Safe locking of the water-pump pulley.
- Easy loosening of stubborn bolts on the water-pump pulley.



36/19.8/20.8/2.1'



### Reaction wrench (1/2" DR.)





- For locking the pulley on the water-pump on VW Polo, Golf, Passat Audi 80/A4.
- The 1/2" drive in the tools handle enables an extension of the tool by E.G. a ratchet.
- Easy loosening of stubborn bolts on the water-pump pulley.



72/21.0/22.0/1.5'







### Power steering pump pulley kit

#### 907G12



- •Thompson & Ford C111, C2 power steering pumps found on Ford, GM & Chrysler vehicles.
- •A disconnect tool to release the power steering line from pump on 1989-current GM pickups 1/2T, 3/4T & 1T.



20/19.0/20.0/2.0'



### Camshaft drive belt pulley puller

#### 905G4



• Special puller designed for pulling camshaft pulley wheels on 4 & 6 cylinder, V6 & V8 engines of VW and AUDI petrol-engined cars.



10/16.4/16.9/1.1'



### **22pc Alternator repair kit set**

### 922G3



- •Removes and installs press-on-type belt drive accessory
- •Applicable: VW, Audi, Seat, Mercedes Benz, Renault, BMW, Ford Renault, Fiat, etc....
- •Specification: A. 17mm HEX Socket ,
  - B. 22mm HEX Socket
  - C. 22\*28mm HEX Socket , D. 21\*28mm HEX Socket
  - E. 19\*28mm HEX Socket , F. 35mm Round W/4pin
  - G. 38mm HEX W/3pin , H. Ø 17.6\*15mm HEX\*33T
  - I. Ø 19.2\*15mm HEX\*33T , J. Ø 19.3\*22mm HEX\*33T
  - K. 3/8" Dr.\* M10x72mmL W/ Ø14\*12mm HEX\*31T
  - L. 1/2" Dr. \* T50x110mmL W/ Ø19.5\*17mm HEXx33T
  - M. 1/2" Dr. \* M10x110mmL W/ Ø19.5\*17mm HEXx33T
  - N. Bit H10 socket w/10mm hex drive end



4/8.7/9.7/0.87







### VW, AUDI V-belt pulley remover

67402



- Special design to stop the pulley and remove the center bolts to remove the V-belt pulley at the generator.
- Use with 17mm wrench.
- Applicable: VW GOLF, VENTO, PASSAT, AUDI A3 and VOLVO







144/5.0/6.0/1.5



#### ∆'∆ 50g

### 2pc M10 Alternator tools

674



- 1pc 1/2"DR. Spline (XZN) socket bit M10x110mmL
- 1pc Reaction corkscrew cap 33 teeth-Ø19mm-17mm hex
- Application: VW-Audi, Skoda, Porsche, BMW, Ford, Mercedes-Benz etc.



100/18.2/19.2/1.5'

**1** 110mm



#### ∆ 182g

### 2pc T50 Alternator tools

678



- 1pc 1/2"DR. Torx socket bit T50x110mmL
- 1pc Reaction corkscrew cap 33 teeth-Ø19mm-17mm hex
- Application: Mercedes A Class.



100/21.2/22.2/1.5'

**1** 110mm



### Universal camshaft sprocket puller





- •Hold the sprocket and undo the retaining bolt or nut and remove
- •This tool enables the removal of the camshaft sprocket on a wide range of vehicles
- •Suitable:45 70mm





### Gear puller

909G2



- Depth: A 68mm, B 90mm
- Outside: A 40-120mm, B 132-195mm





**6/17.0/18.0/1.2**°



### Balancer puller & installer

#### 945G1



- A professional tool set for balancer replacement.
- Built-in bearing makes balancer replacing job easy and damage-free.
- 4-Slot puller plate plus 9 threaded adapters fit to balancers on most engines.





6/14.6/15.6/1.3

∆¹∆ 2430g

### Heavy duty universal & GM harmonic balancer puller

#### 921G1



- Heavy duty forcing screw & bolt kit suits most harmonic balancers, timing gears & pulleys with 2/3" tapped.
- GM forcing screw & bolts suits gm 3.8 l v6 balancer pulleys.
- Bolt sizes: 1/4" UNF x3" (3 pieces) / 10mm x 50mm (3 pieces) 5/16" x 2"(3 pieces) / 80mm x 80mm (3 pieces) 3/8" x2"(3 pieces) / 3/8" x 4" (2 pieces)



5/14.4/15.4/1.5'



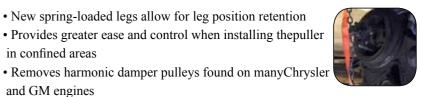
### Puller, Harmonic damper pulley (Chrysler, GM)

#### 906G9





- New spring-loaded legs allow for leg position retention
- Provides greater ease and control when installing thepuller in confined areas



· Used on autos, pickups, SUVs, and vans.



16/23.5/24.5/1.5'









### Dual mass flywheel wear testing tool

#### 922G5



- •Indispensable tool for the quick and professional wear tests of Dual Mass Flywheels (DMF).
- •Tests can be performed directly on the vehicle if the clutch has been removed.
- •The test involves checking the rock allowance (axial play) and the freeplay angle (torsion of the secondary flywheel against the primary flywheel until the tension of the spring can be felt).





5/15.5/16.5/1.6'

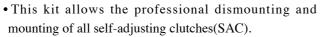


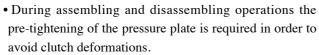
### SAC Clutch alignment tool kit

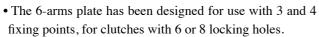
929G2











•Application:VW, Audi, BMW, Ford, Mercedes-Benz, Renault, Vauxhall/Opel, Volvo...etc.



2/19.5/20.5/1.2'



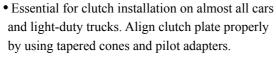
#### ∆ 9343g

### ■ 17pc Clutch alignment tool set



1-49





- Includes seven fractional pilot adapters, one clutch disc centering adapter and one alignment shaft.
- Includes five metric pilot adapters, two clutch disc centering adapters and one alignment shaft.
- Size: 12/12.5, 14/15, 15.5/16, 17/18, 19/20, 15, 16.5, 17,19, 20, 20.5, 25









### Universal clutch aligning tool

#### 903T6





- •Special design aligns and assembles clutch on the workbench for easy installation.
- •Suitable for front wheel drivers that have no pilot bearing in flywheel.
- •Designed for most vehicles up to 5 tons with singleplate clutches.



48/9/10/2.8'

∆ 143g

### Clutch centering disc

#### 902G25



- •For the clutch disc mounted within the fly wheel.
- •Adjustment is not possible without this tool, since the outer diameter of the centering disc is decisive.
- •Application range: Volkswagen, Audi, Seat and Skoda engines.

### Clutch centering mandrel tool

### 902G26





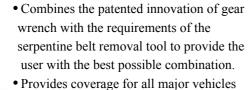
- •For fast and exact clutch plate centering on vehicles with clutch guide bearing.
- •For passenger cars and small commercial vehicles
- •Adjustable from 15-19mm and 20-26.6mm.

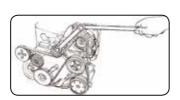




### Serpentine belt service tool set

#### 913T1





- with serpentine belt configuration. CONTRACTOR
  - The versatility and strength of the Gear Wrench allows for unlimited access to serpentine pulley tension arms with added attachments for unlimited coverage.
  - Size:8, 12, 13, 14, 17, 18, 24mm, 5/8 ",3/8", 1/2"



12/19.6/21.0/1.4'



### Belt tensioning adjuster

#### 9G0802

- For GM OPEL engines. Overcomes difficult access.
- Provides high torque without tilt or slip.
- Size: 41mm
- 1.2, 1.3, 1.4, 1.6, 1.6D, 1.8 ('87 onwards).





48/13.9/14.9/2'



### Belt tensioning adjuster

### 9G0803



- For GM OPEL engines. Overcomes difficult access.
- Provides high torque without tilt or slip.
- Size: 46mm
- 1.6(Up to '87), 1.7D, 1.8(Up to '87), 2.0.



48/13.9/14.9/2'





### **■** Engine timing tensioner kit

#### 908G6



- This set can use for ALFA ROMEO, FIAT, CITROEN, PEUGEOT, RENAULT, VOLKSWAGEN.
- A comprehensive range of tension lever and wrenches required for changing the cam belt on most popular petrol and diesel engines.





10/14.0/15.0/1.2



### Adjusting tensioner belt set

#### 903G15



• Application: all VAG group.



36/24.7/25.7/1.5'



∆ 670g

### ■ Belt tension locking pins VW / AUDI / TDi PD engines

#### 903G8



- Timing belt tension PINS-OEM NOS T10115, T40011 AND serpentine tension PIN-T10060/A
- For use on: LUPO. POLO 1.4 TDi PD GOLF, BORA, POLO 1.9 TDi PD BEETLE, SHARAN 1.9 TDi PD PASSAT 1.9 TDi PD AUDI A2/A3 1.4/1.9 TDi PD A4/A6 1.9 TDi PD

A4/A6/A8/ALLROAD 2.5 V6 TDi





1-51



### Tensioner adjusting tool

#### 902G4

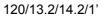
- A set of two cam belt tensioner locking tools.
- Required for use on VOLKSWAGEN 4 cylinder TDI/ PD/ SOHC diesel engines.



• Including:

GOLF /GOLF PLUS/ JUTTA/ PASSAT/ EOS TOURAN/ CADDY /CADDY MAXI.







### PORSCHE Pneumatic chain tensioner

9G0809



- •To adjust tension of chain by pneumatic.
- •To adjust chain of V8 engine.
- •Applicable:PORSCHE cayenne V8 4.5L, 4.8L AUDI Q7.





30/20.3/21.3/0.66'



#### △ 676g

#### Belt tool kit for elastic- ribbed belts

902G9



- Suitable for engines with elastic ribbed belts such as Alfa Romeo, BMW, Chrysler, Fiat, Ford, Mercedes, PSA, Seat, Skoda, Smart, Volvo, VW-Audi...etc
- This tool set provides quick easy removal and installation of the new elastic ribbed belts required.







30/17.0/18.0/1.3







### 3pcs Belt installing tool set

#### 903G20





- •Specially designed set of tools for installing the new belt onto the pulley.
- •Applicable: Ford, Mazda, Volvo, BMW, Chrysler, Citroen, Fiat, Lancia, and so on.



100//19.0/20.0/2.2'





### Stretch belt remover/installer

#### 9G0808





- Unique magnetic faces hold the tool in place on the
- Helps prevent damage to belt or pulley during removal or installation.
- · Compact, one-piece tool can be used on the front or back side of the pulley.



200/20/21/1.3'

∆'∆ 189g



### Universal tensioning gauge for cam belts

### 9G0804



- This tensioning gauge can be used to adjust the tension on the cam belts where the movement of the timing belt is measured by load.
- Suitable for use on cam belts with various belt thickness.
- Easy to use.
- Clear incremental marking with knurled knob for precise measurement.
- Dual scale allows reading from top or bottom of tool. (large and small numbers for compatibility)



48/20.6/21.6/2



∆ 338.5g



### Universal Engine Belt Tension Tester

#### 9G0609



- This tool can be used to confirm tension on the engine belt of cars.
- Simple to check the belt for proper tension.
- Suitable for all common types of engine belt. Including timing.ribbed.tooth and V-belt.



40/10.5/11.5/0.9'

∆ 250g

### 9pc Hose clamp pliers kit

#### 909G3



#### **Contents:**

- Hose clamp pliers
- 2pc Swivel jaw hose clamp pliers
- Angled flat bank hose clamp pliers
- Flat bank hose clamp pliers
- Clic-r collar pliers
- Hose remover pliers
- Screwdriver
- Hose remover



6/15.9/16.9/3.0'

∆ 2650g

# 9pc Hose clamp pliers kit

#### 909G9





#### •Contents:

NEW

1pc Universal hose clamp pliers

1pc CLIC-R Collar pliers

1pc 3/8" DR. Hose clip to

2pc Hose remover set

1pc Slotted anti-slip screwdriver 1.2x6.5x25

3pc 1/4" DR. 6pt. Flank socket 6mm, 7mm 8mm



### Flat band hose clamp pliers

62518

- Removes and installs new style flat band hose clamps.
- Jaws rotate to grip at any angle.





72/18.0/19.0/2.6'



### Angled flat band hose clamp pliers

62522



Designed to remove and install flat band hose clamps in hard-to-reach areas. Pliers feature angled jaws with rotating tips to grip clamps at any angle. Locking latch securely holds clamp in position.





48/10.9/11.9/2.7



### Hose clamp pliers

62530



•For the operation of spring band hose clamps whose three ends are located on tubes, e.g. on fuel lines and tank ventilation lines on VW, AUDI, SEAT, SKODA





72/14.5/15.5/2.8'







### Flexible hose clamp remover

#### 9G0201



- For replacement of fuel, oil and water hose.
- Hose clamp with flexible 630mm wire.
- Convenient for working hidden areas and long distance.



36/22.6/23.6/3.5'

∆ 630g

### ■ Hose clamp pliers (for VW, AUDI 2.0)

#### 9G0208



- Special jaw design for VW, AUDI 2.0 TDI engine lower water hose clamp.
- Max clamp capacity: 55mm.
- Flexible 630mm cable enables user to reach, remove and lock clamp into the open position.





24/20.5/21.5/2.3

#### ∆'∆ 854g

### Universal hose clamp pliers

#### 9G0126



- Special angled jaws designed for most kinds of hose clamps.
- Finger tip "position lock" to keep hose clamp spreading open.
- Capacity: 0mm ~ 65mm

24/10.5/11.5/2'



∆ 416g

### Hose clamp pliers

62528

Deep-slotted Jaws can remove and replace all size spring wire hose clamps and lock them safely in an position.



	1		
Part no.	mm	packing	g
6252807	180	40/14.7/15.7/1.5'	370
6252809	230	30/12.5/13.5/0.82	415



### Hose clamp pliers (angle type)

#### 9G0109



- Designed with angle type to any space.
- Swivel tip designed for refitting and release.
- For CLIC and CLIC-R type hose clamp.



40/11.4/12.4/2.4'





### CLIC-R Collar pliers



- For releasing and refitting reusable hose clips.
- For type CLIC and CLIC-R.



48/12.6/13.6/1.9'

∆'∆ 260g



### Hose clip pliers

#### 9G0117



- For fitting 1-lug or 2-lug hose clips.
- The special arrangement of the jaw allow, the clips to be closed either at the end or at the side, depending on the accessibility of the working area.
- Size: 230 mm





36/15.1/16.1/1.2'





### ■ 3/8" DR. Hose clip tool

### 9G0120



- Designed to fix the hose without removing sensors, duct, hose...etc. that are near the hose clamps.
- The end shape with trapezoidal teeth does not slip and allows various positions. (vertical, horizontal, diagonal...)
- Suits difficult work with pliers type tool of vehicle type.







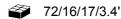
### 2pc Hose remover set

#### 902G22



- •Allows the mechanic to easily free stuck or adhered automotive hoses without fear of hose damage or personal injury.
- •Perfect for use on coolant, vacuum, oil and power steering hoses of all diameters.







### Hose removal pliers

#### 9G0105



For easy removal of 5/32" to 1/2" vacuum and fuel hoses.



72/14.5/15.5/2.4

### Professional hose removal pliers



- For easy removal of 4mm to 21mm vacuum and fuel hoses.
- Special mini anti-slip jaw to avoid pipe slip and to make removal

72/14.0/15.0/2.4



### Fluid hose clamp

### 9G0110



Completely or partially closes flexible brake, fuel, and vacuum, fluid line. All steel construction with adjustable locking collar.



96/5.8/16.8/1.4

∆ 165g





### Hose pinch-off tool (bar type)

#### 9G0111



- Suited for both brake and fuel lines.
- Effective pinch action with rounded clamp section to prevent damage to hose lining.



72/18.5/19.5/0.9'

△ 257g

### 4pc Fluid line clamp set

#### 904G8



- Conveniently pinch off fuel, vacuum, transmission, brake, heater lines and more.
- Sizes: 3/8"(~Ø10mm), 1/2" (~Ø15mm), 1" (~Ø25mm) & 1-3/4" (~Ø45mm)



24/12.0/13.0/1.2

△ 470g

### ■ 3pc Hose pinch-off pliers (8", 10" & 12")

#### 9G0112



• The pinch-off pliers act as a third hand to help you keep hose changed tightly when you are servicing various engine components.



- No need to drain cooling system when changing thermostats and thus can save coolant and time.
- Jaws swivel for parallel clamping.
- Locking ratchet provides tight grip in just about any position.
- Can also be used to pinch- off many other hoses.
- Do not use on wire reinforced radiator hose.

Part no.	inch	
9G0112A 9G0112B 9G0112C	8 10 12	

18/22.5/23.5/1.9'

△ 1.25kg

### Locking pinch-off pliers 280mmL

#### 9G0115

• Pinch off and lock on butane gas lines and copper tubing.











### 3pc Hose pinching pliers

#### 903G12



- Smooth, rounded jaw, edged prevent damage to internal hose reinforcement.
- Quick and simple, one handed use.

Hose clamp for up to 10mm, 15mm, 24mm line diameter



60/18/19/3.6'



### 3pc Hose clamp gripper set 90°

### 903G18



- •Made of heat resistant nylon.
- •Rounded jaw edges prevent damage to internal hose
- •Features locking mechanism for simple one-handed use.
- •Suitable for brake, coolant, fuel & vacuum hoses.



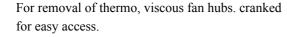


24/9.0/10.0/2.4

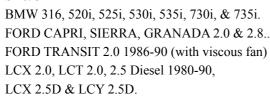


### Viscous fan hub spanner

#### 9G0710









36/21.4/24.5/1.2'







### ■ Viscous fan hub spanner

#### 9G0710A



For removal of thermo, viscous fan hubs. cranked for easy access.

Size: 36mm

FORD GRANADA 2.4 & 2.9. GM CARLTON MANTA & SENATOR.

36/21.4/24.5/2.5'

∆ 595g

### Radiator cap wrench

#### 9U0702



- Quickly and safely removes all standard radiator
- Engage the wrench over the cap and then press down and turn. Easy!

#### Warning:

- 1.Do not open cap if radiator is hot. Hot fluid can erupt and cause burns.
- 2. Always wear ANSI approved safety goggles when working with tools and equipment.



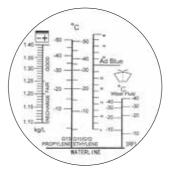
48/18.2/19.2/3.3

∆ 380g

### ■ Battery / anti-freeze cleaning fluid tester

#### 9G0303





•Testing range: Ethylene Glycol:  $-50 \sim 0$  °C Propylene Glycol: -50 ~ 0 °C

Battery Fluid: 1.100 ~ 1.400 sg Cleaner:  $-40 \sim 0$  °C

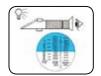
AdBlue: 30 ~ 40 %















#### Anti-freeze tester

#### 9G4001



- •Avoid winter freeze-ups and summer boil-over.
- •Test all permanent (Ethylene Glycol) solutions with radiator hot or cold.
- •Two scales show freeze point of radiator solution and boiling point of summer coolant.



100/13/15.2/5.8'



### ■ Cooling system vacuum purge & refill kit

#### 906G2



- Designed to pump radiator and cooling system
- Simply refill coolant into radiator without air.
- Gauge: 0~76 cm-Hg, 0~30 in-Hg







10/15.0/16.5/3.05

### 1400g

### Cylinder leakage tester

#### 905G10



- This set could test if the wall of cylinder is abrasive.
- The CO2 test liquid is checking volume of CO2 existing in radiator in the car.
- Have blue color of test liquid mixed with stem in the radiator if the liquid become yellow or green then it means that the wall of cylinder is abrasive.
- It offers simple, quick and correct test.
- The CO2 test liquid is recyclable.

10/13.5/14.5/3.05'





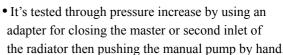


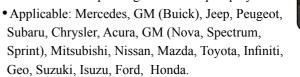
### Cylinder leakage tester

#### 907G8



• This tester kit is used for checking the radiator to see if any water leaked because of the body or the connector not fitted properly or any broken.





• Gauge: 0~35 PSI, 25 bar



4/8.8/9.8/2.16





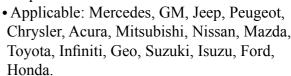


### Cooling system & radiator cap pressure tester

#### 908G2



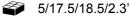
- Designed to test radiator cap relief pressure and seal condition.
- For use with most vehicle radiators, includes hand pump with gauge, universal cooling system adapters, radiator cap adapters.



• Gauge: 0~35 PSI, 25 bar









### Universal radiator pressure tester kit

#### 914G1



- Designed to test the leaks of cooling system.
- Suit for: Suzuki, Isuzu, Lexus, Opel, Peugeot, Jeep, Rover, Citron, Nissan, Mitsubishi, Mazda Subaru, BMW, Renault, Fiat, Alfa Romeo, Toyota, Honda, Ford, GM, Chrysler, VW, Audi, Volvo, Saab, Mercedes Benz, Infiniti, Geo, Truck.
- Gauge: 0~35 PSI, 25 bar



4/15.5/16.5/2.9'





### Cooling system & Radiator cap pressure tester

#### 922G1



- For use with most vehicle radiators, includes hand pump with gauge, universal cooling system adapters, radiator cap adapters.
- Applicable: Mercedes, GM 4 Cylinder (Buick, Chevrolet, Oldsmobile, Pontiac, Cadillac), Jeep, Peugeot, Chrysler, Acura, GM (Nova, Spectrum, Sprint), Mitsubishi, Nissan, Mazda, Toyota, Infiniti, Geo, Suzuki, Isuzu, Ford, Honda, VW, Audi, Opel, Saab, Volvo, Lexus, BMW, Jaguar.
- Gauge: 0~35 PSI, 25 bar



3/15.9/16.9/2.4



∆ 5.3kg

## Universal multi-purpose cooling system test kit

#### 919G3



•Kit provides major tests in the cooling system: Pressure test (leaking test), temperature sensor test, water pump, thermostat and cooling fan condition tests.



- •Suitable for universal vehicles.
- •Including step adapters and hose clamps of various sizes, suitable universal application.
- •Including a high-quality displaying device: (e.g. digital LCD, glass screen and a gauge), helping mechanics detect potential problems in cooling system.
- •Targeted tests can be operated individually.



2/8.5/9.5/2'

∆ 4.25kg

### Image guide scope

#### 9G2203



- Inspects hard-to-reach corners with 18", diameter 4mm flexible cable for easy operations.
- · Equipped with illumination lamp for clear viewing.
- Optional 35°, 45° and 60° mirrors are available.

 Optional mirrors: 9G2203-35 (359) 9G2203-45 (459 9G2203-60 (609





5/10.0/11.0/2.3'





### Mechanic's stethoscope

#### 9G2204



- Provides a fast and easy way to locate noises in engines or bearings and other moving parts.
- Ideal for pinpointing unusual vibrations or suspected leaks (valves, piston rings, gaskets etc.)



40/9.5/10.5/2.7



∆ 200g

### Mechanic's stethoscope

#### 9G2201



- Provides a fast and easy way to locate noises in engines or bearings and other moving parts.
- Plastic earphones shut off outside noises.
- Aluminum alloy probe/needle for finding the exact location of specific noises.
- High quality surgical PVC & rubber parts for increased sound definition.
- Instrument is shockproof.
- Ideal for pinpointing unusual vibrations or suspected leaks (valves, piston rings, gaskets etc.)
- Supplied with a rubber trumpet for checking vacuum & pressure flow.
- Useful for synchronizing multi carburetors.



48/9.6/11.0/4.4'



△ 200g

#### Automotive noise finder

#### 902G11



- •This is a portable automotive noise finder which can quickly detect source or location of noises emanated from bearing, gear, valve, valve body, crankshaft, cylinder, gearbox, car body and so on after starting
- •It helps the serviceman to pinpoint the actual noise part and severity even in severe ambient noise.



40/9.0/10.0/3.1'



△ 225g



### Combination electronic stethoscope kit

#### 9G2202



- To locate & indentify noise and enable road test diagnosis.
- Super sensitive microphone pick up.
- Defect & isolate noisy components.
- Contents: Flexible non- consuctive shaft Cushioned headphones
  - 4 channel sensor selector unit
  - 4 pick up sensors-4.8mm ling cords





6/16.0/17.0/4'



### Vacuum pump / Brake bleeding kit

#### 906G3



- Check vacuum operated components on cars and trucks.
- Allows you to bleed brake fluid without the mess.

#### **Contents:**

- 1. Vacuum pump (0~30 in.Hg)
- 2. Connection hose. (600mm x 2 pcs)
- 3. 200ml fluid reservoir bottle.
- 4. Fluid transfer and storage lids x 2 pcs.
- 5. Connection accessories: (Rubber cupped adapter) (Accessory hoses: 75mm x 2 pcs) (Accessory hoses: 95mm x 2 pcs)



5/7.8/8.8/2.5'



1830g

### Vacuum testing / Brake bleeding kit

#### 908G8



- The kit includes the vacuum pump, complete fittings and accessories for vacuum testing and brake bleeding, plus a detailed owner manual. The vacuum pump is field repairable. Re-place worn O-rings, seals and valves with the vacuum pump repair kit
- Pressure range:  $0 \sim 60 \text{ PSI} / -30 \sim 0 \text{ PSI}$



6/11.0/12.0/2.4'





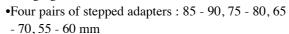


#### Turbo system tester kit

#### 909G7



- •For fast diagnostics of the air charging.
- •Enables time-saving and appropriate determination of leaky intercoolers and invisible cracks in air charging hose.





5/18/19/2.5'



### Turbo system pressure tester kit for commercial vehicles

#### 907G19



- •For fast diagnostics of the air charging.
- •Enables time-saving and appropriate determination of leaky intercoolers and invisible cracks in air charging hose.
- •Three pairs of stepped adapters: 105-110, 115-120,



### ■ Gas cylinder compression tester set

#### 908G1



Gauge: 0~300 PSI, 0~21 kg/cm2

#### **Contents:**

Air gauge with quick coupling & release valve. High-tension connecting pipe with safety lock coupling. Crank shaft type test pipe with rubber plug. Transverse axis test pipe with rubber plug.

M10\*1.0 Adapter

M12\*1.25 Adapter

M14\*1.25 Adapter

M18\*1.5 Adapter



10/11.6/12.6/1.26'



### Petrol engine compression tester set

#### 909G1



- Gauge: 0~300 PSI, 0~21 kg/cm2, 20 bar
- Comprehensive kit based on petrol compression tester for vehicles with M10, M12, M14 and M18 spark plug threads. Complete with extensions (M10, M12, M14, M18), thread chasers (M14&M18, M10&M12)

and service kit.



- Checks condition of valves, piston rings, gaskets & cylinder heads.
- Used on cars, vans & motorcycles.
- Pressure relief valve enables repeated testing of a cylinder without removing the gauge.





### Oil pressure tester set

#### 912G1



- Helps to diagnose worn oil pumps and engines, faulty oil pressure switches and warning indicators.
- Accurately tests oil pump pressure, switch & warning indicators.
- Large clear dual scaled gauge.
- Quick coupling adapters, with shut-off valve, for speed & security.
- Permanently oil primed, long, flexible hose.
- Gauge: Scale: 0~150 PSI,  $0\sim10 \text{ kg/ cm}^2$ ,  $0\sim10 \text{ bar}$ Thread: R/18 Din 2999, 1/8 x 27 Npt, 1/4 x 18 Npt, 3/8x 20 Unf, 1/2 x 20 Unf, M10 x10, M12 x1.5, M14 x1.5, M16x 1.5, M18 x1.5, 90°Elbow





6/11.0/12.0/2.3'



∆¹∆ 1830g

### Power steering tester

#### 915G5



- •For accurate, reliable power steering analysis.
- •Determines if trouble is in front of suspension or steering linkage.
- •Saves valuable time when rebuilding or replacing parts not actually
- •Set contains 2,000 PSI gauge with metering valve, connection hose, 13 adapters and power steering pressure specifications.
- •All packed in a plastic storage case.
- •Applications: American Motors, Chrvsier Corp, Ford Motor.



6/9.0/10.0/1.5'



∆ 1500g

### Transmission pressure gauge set

#### 922G6



- •For all major manufacturer domestic and import vehicles.
- •Contains two gauge assemblies for high and low pressure ranges.
- •Nine adaptors to test a wide variety of domestic and import automatic transmissions.
- •Four special fittings are also included for connection to hard-to-reach test ports in areas requiring a 45° or 90° angle.
- •Applications: Acura/Honda, BMW, Chrysler Corp, AMC/Eagle, Jeep, Ford, General Motors, Saturn, Hyundai, Infiniti, Isuzu, Jaguar, Lexus, Mazda, Mercedes, Mitsubishi, Nissan, Peufeot, Saab, Subaru, Suzuki, Toyota, VW, Volvo.



5/10.0/11.0/1.5'



∆ 2000g



### **■** Gasoline engine injecting pressure tester set

#### 946G1



- Gauge: 0~120 PSI 8 bar
- This tester is an assembly of fuel injection pressure



• The related adaptors are suitable for cars of American, Japanese and European systems.



4/20.7/21.7/4

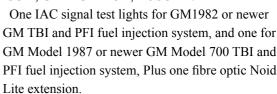


### ■ 11pc Deluxe noid lite / IAC test kit plus one fibre optic noid lite extension

#### 88442



• Set includes eight noid lights for testing GM PFI, FORD TBI, GEO TBI, BOSCH PFI, GM TBI, GM SCPI, GM MULTEC 2, BOSCH 2.





• Kit Comes in a deluxe molded plastic case.



24/11/12/2'





### Fuel injection cleaner & tester kit

#### 940G1



- Universal for all cars
- Cleaning fuel injector
- Cleaning intake valve
- Cleaning combustion chamber
- Cleaning vacuum system
- Cleaning parts and valves
- Test engine system pressure
- Test fuel pump pressure
- Test the sealing condition of return line diaphragm



4/19.2/20.2/2.9'



∆ 4.8kg





### Carburetor synchronize tool set

#### 919G2



- For testing fuel pump carburetor and transmission check auto with 2~4pc carburetors.
- Gauge: Pressure: 0~15 PSI,0~1 kg/cm2 Vocuum:  $0\sim28$  in-Hg ( $0\sim70$  cm-Hg)

4 pc 3-1/2" Synchronizer gauges with fixed plate

4pc Rubber hose 8 X 5 X 750mm

4pc Extension tube 3.9 X 52mm

4pc Extension tube 3.9 X 122mm

8pc Cone type connector 8 X 40mm

4pc Adapters 10 X 53mm (M6 X 0.75)

4pc Adapters 10 X 60mm (M6 X 1.0)



6/20.0/21.0/2.25'



#### ∆ 3.33Kg

#### Professional vacuum & fuel tester set

#### 904G4



- Large 3-1/2" diameter gauge with color-coded easy-reading scales.
- Extra long heavy-duty rubber hose and 14mm/18mm.
- Checks for worn or defective parts in fuel pumps, vacuum system.
- Gauge: Pressure: 0~15 PSI, 0~1 kg/cm<sup>2</sup>

Vocuum:  $0\sim28$  in-Hg ( $0\sim70$  cm-Hg)



20/13.0/14.0/1.85'



### Cylinder leakage tester

#### 902G3

1-71





- 26" extra long hose
- Allow you to accurately diagnose engine problems such as bad valves, worn rings.
- Cracked cylinder walls and blown gaskets.
- Works from shop airline and has 14&18mm adaptor fittings to fit
- Blow-by readings shown in percentages.
- Dual gauges allow mechanic to monitor input line pressure.
- Supplied in plastic blow mold case.
- Gauge: 0~100 PSI 7 bar



10/11.0/11.5/1.4





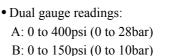


### Transmission & engine oil pressure tester

#### 912G2



- Designed to check engine oil pressure in automatic transmissions and engines in both cars and trucks.
- With two easy to read dual scale gauges. Both of two gauges with quick set-up. Complete with 6ft(1.8m) of oil proof hose, nine adaptor fittings, and instructions.



• Gauge diameter: 2.5"



10/14.0/14.5/1.4









### Diesel engine compression tester set (cars)

#### 913G1



- Comprehensive test kit for both direct and indirect diesel injected cars.
- For use on both direct or indirect injection engines.
- Checks engine compression under cranking conditions.
- Small profile, quick coupling adapters for speed & security.
- Built-in pressure relief valve enables repeat tests without dismantling.
- Flexible hose (355mm) gives access to restricted plug & injector ports.
- Dual scale 80mm Dia gauge 0-1000 PSI & 0-70 bar.



6/16.3/17.3/2



### Diesel engine compression tester set

#### 914G3



- Comprehensive kit for checking compression on both direct and indirectdiesel-injected commercial, marine and industrial engines.
- For commercial, marine & industrial engines.
- Checks engine compression when cranking.
- For use on direct or indirect fuel injection engines.
- Built-in pressure release enables complete tests without dismantling.
- Small-profile, quick-release coupling system.
- Dual scale 80mm dia. gauge 0-1000 PSI & 0-70 bar.
- Flexible hose (355mm) to give access in restricted spaces.



4/20.7/21.7/3.7

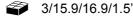


### Diesel compression tester

#### 916G2



- 2-1/2" dial, glycerin filled gauge with glass lens in stainless steel housing 4,500 psi rated nylon jackted pressure hose assembly.
- Dual scale 0-1,000 psip; Metric scale 0-70 bar. 13 piece adapter set (Deere & BMW adapters included)

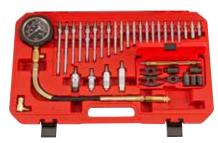






### Diesel engine compression test set

#### 937G1



- •Features 600psi (40bar) gauge with large rubber bumper, straight and right angled quick-connect fittings and an extensive range of glow plug and injector adaptors.
- •This kit will cover most modern car, van, truck, bus, agricultural and
- •Glow plug adaptors: Wide range of Alfa, BMW, Chrysler, Daewoo, Fiat, Ford, Hyundai, Isuzu, Land Rover, LDV, Mazda, Mercedes, Mitsubishi, Nissan, Opel, PSA, Renault, Saab, Suzuki, Toyota, VAG, Vauxhall, Volvo diesel engines.
- •Injector Adaptors: M20, M22, M24 & Ford Stanadyne Injectors plus Clamp-On Injectors..



4/20/21/2.4'



### Diesel engine cylinder leakage test kits

#### 938G1



- •Three diesel engine cylinder leakage test kits that cover the wide range of modern engines ,including HDi, TDCi and Pumpe Duse .
- •This kit covers most popular cars and vans, it has additional glow plug adaptors for increased coverage and with any further, and includes adaptor set for clamp-type injectors to give even wider coverage of car, van, truck and bus, agricultural and marine
- •Glow plug Adaptor: Wide range of Alfa , BMW , Chrysler , Daewoo , Fita, Ford, Hyundai, Isuzu, LandRover, LDV, Mazda, Mercedes , Mitsubishi , Nissan , Opel , PSA , Renault , Saab , Suzuki , Toyota , VAG, Vauxhall, Volvo diesel engines
- •Injector:M20, M22, M24 & Ford Stanadyne injector plus clamp-on injector



### Common rail injector, return flow pressure measurement tester

#### 912G8



•For testing the return flow pressure from common rail injectors of Bosch, VDO/Siemens & Delphi engine system. Suitable for testing the condition of a piezo pass or fail statement.

10/12.6/13.6/1.9'



### Return Fuel Volume Tester for Common Rail Injectors

#### 902G8

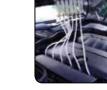


- Designed for checking the amount of fuel that every injector returns to the tank to find out the damaged injector.
- Can simulate 6 injectors at the same time.

10/18.0/19.0/1.5'







### 4pcs Injection nozzle socket

#### 904G13



- •Remove top cap and connector before removing diesel fuel injector.
- •Deep and wide configuration.
- •Fits virtually all standard injectors for recent motor vehicles.
- •1/2" Dr. Socket can use for Siemens & Bosch injectors.
- •Suitable for Peugeot and Citroen with 2.0 engines (110/135HP) HDI engine.
- •Sizes: 25, 27, 29, 30mm.
- •Length:100 mm





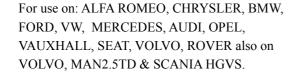


ENGINE



### 4pc Diesel injector socket set

#### 904G3







Size	Description	Length
22mm	injector socket (6 pt)	110mm
22mm	injector socket (12 pt)	75mm
27mm	injector socket (12 pt)	78mm
28mm	injector socket (12pt)	78mm

10/11.4/12.4/0.8'

∆ 1.14Kg

### Diesel injector puller

#### 9G0114



- Assists removal of stubborn BOSCH and LUCAS diesel injectors, saving time and money when injectors are difficult to remove.
- With M8 /M12 / M14 adaptors
- Applicable: VOLVO, SCANIA



40/16.0/18.0/1.8'

∆ d00g

### Diesel injector nozzle extractor set

#### 903G19



- •Extraction injectors without dismantling the engine.
- •Extraction Bosch injectors.
- •For CDI engines 2.1 l and 2.2 l.
- •Application: Vito, Sprinter, Viano, C and E Class, CLC, CLK.





### Diesel injector nozzle extractor set (PSA HDI engines)

#### 910G3



- Common Rail Injector removal tool set for removal of seized Injectors on Peugeot, Citroen, Suzuki diesel HDI engines.
- Pulling bridge that fits perfectly on PSA cylinder head.
- Special screw system that allows a fast and easy nozzles
- Applicable Engines: PSA 2.0 & 2.2 HDI (110, 135 PS), HDI DW10 and DW12 engines.



**6/22.0/23.0/1.4** 



### Diesel injectors remover tool - model FOSI

#### 926G1



- For the extraction of extremely seized injectors.
- With the precisely tailored specification for this job
- Application designed extractor, the injectors can be extracted hydraulically or mechanically.
- Application: Fiat , Lancia , Alfa , Opel , Suzuki , Ford , Iveco , PSA.



2/23.0/24.0/1.05

△ 11500g

### Diesel injectors remover for BMW

#### 908G11



- Complete set for removing BMW CR injectors without dismounting the cylinder head.
- Equipped with a blower adapter to clean the injector seats.
- Bosch injectors: common rail injectors mounted on BMW
- Application: BMW Common Rail: M47TU, M57, M57TU





2/13.0/13.8/0.9





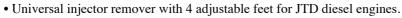






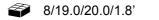
### Diesel injectors remover for JTD

#### 9G0119



- Remover for common rail injectors.
- Application:FIAT, ALFA, OPEL, SAAB, SUZUKI.



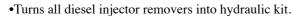




### Diesel injector remover - hydraulic kit

#### 909G8





- •This set enables the controlled extraction very tight fitting or stuck injector nozzles.
- •It is used in conjunction with a injector nozzles puller with extraction bridge, and a hydraulic pump.
- •Hydraulic Cylinder 17t with shoulder nut M16x1.5
- •Contents:

Pull Spindle M14\*1.5(240mm)

Pull Spindle M14\*1.5(315mm)

Pull Spindle M17\*1(240mm)

Pull Spindle M17\*1(315mm)

Pull Spindle M18\*1.5(315mm)

Pull Spindle M25\*1(240mm)

Distance ring

Tooth Cap Nut M16

Bush



2/13.5/14.5/1.24



#### ∆ 6504g

### Injector nozzle extractor with spindle

#### 903G17



- This special-designed diesel injector puller set is ideal for the need to remove stubborn diesel injector.
- · No need to remove cam cover and the use of slide hammer, either.
- Application: Mercedes C-Class, E-class, Sprinter Vehicles and Chrysler Grand Cherokee 27crd (00).



12/15.5/16.5/1.1







### **■** Injector extractor with slide hammer for DB CDI-engines

#### 909G5



- For removing stuck and the seized common-rail injectors without dismount the cylinder head.
- The sturdy construction will enable the swift removal of the most severely seized in injector.
- For Mercedes CDI engines OM 611,612,613 etc and DB CDI-engines.
- Specification:Total length: 350mmL

Slide hammer: 1.75kgs Adaptor: M17x1

Adaptor:M27x1.0 for Bosch injector

nozzle.

Adaptor: Puller w/M12x1.75P



6/20.0/21.0/1.5'



### VW, AUDI Diesel & gas injection remover tool (TDI & FSI)

#### 912G6



- Use "U" sleeve or two jaws hook to fix the injector and then pull out with slide hammer.
- · Special two jaws design to fix the injector and pull out with slide hammer.
- Applicable range: VW, AUDI TDI, AUDI FSI, AUDI, SEAT, SKODA.



6/22.0/23.0/0.9'

### 4pc Diesel injector removal set for Delphi & Bosch

#### 904G9



- Specifically designed for removing Delphi/Bosch diesel injectors using a Slide Hammer with 5/8" UNF thread.
- Adaptors can also be used with an air tool to loosen the injectors by vibration.
- Set of 3 adaptors plus a special tool for removing the internal part of Bosch injectors.



18/18.5/19.0/1.0

△ 1027g

∆ 3666g



### 33 Teeth socket diesel injection pump for Mercedes

#### 9G0121



- •Multipoint socket for installing and removing the pressure valve holder on the MRSF-ERE fuel injection
- •Applications:Mercedes-Benz-diesel engines 601, 602, 603, 605, 606, 615, 616, 617
- •Size:1/2" DR. x 33 teeth





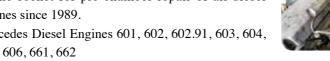
### Diesel pre-chamber collar nut socket for Mercedes

100/14.0/15.0/1.2'

#### 9G0122



- •Spline socket for pre-chamber repair of all diesel engines since 1989.
- •Mercedes Diesel Engines 601, 602, 602.91, 603, 604, 605, 606, 661, 662
- •Size:1/2" DR. x 58 teeth
- 50/15.0/16.0/1.0' △ 223g





## Diesel fuel filter socket (HDi engines)

#### 9G0123



1-79

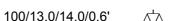
- •Specialist socket required for the removal of diesel fuel filter fitted to 2.0, 2.2 HDi engines.
- •Applications:Citroën:C4 2.0 HDi 16v,C4 Picasso 2.0/2.2 HDi,C5/ C8 2.0/2.2

HDi 16V,Jumpy 2.0/ 2.2 HDi Fiat:Scudo / Ulysse Mk II 2.0 JTD 16V

Ford:Focus/ Focus C-Max/Galaxy/Kuga/S-Max 2.0

Peugeot:307/308/407/607/807/Expert 2.0 HDi 16V Volvo:C30/C70/S40 Mk II/V50 2.0 Diesel(136 HP)

•Size:1/2" Dr x 27mm





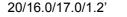
### Diesel injector copper washer removal tool

#### 9G0118

- Collect type easy to hold the copper washer.
- Size: Inner hole ø7mm
- Length: 230mm







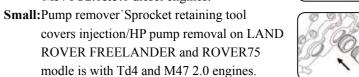


### Diesel injection pump puller (BMW)

#### 904G7



Large: Pump remover & Sprocket retaining tool covers injection/HP pump removal on BMW models with M74/M47TU and M57/ M57TU2.0&3.0 diesel engines.



20/20.0/21.0/0.8





### Diesel injection pump puller (BMW)

#### 9G1501



- This tool is specifically designed for holding the sprocket/chain in place when disassembling the VP44 injection pump and high pressure pump.
- Common rail fitted to BMW engines: 318D/COMPACT(E46), 320D/TD COMPACT(46), 330D(E46) 525D(E39), 525D(E60/E61), 530D(E39), 530D(E60/E61), 535D(E60/E61), 730D(E38), X5 3.0D(E53)



**20/11.0/12.0/0.5**°

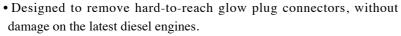




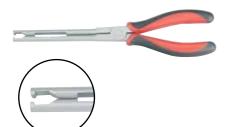


### Glow-plug connector pliers (Straight)

#### 9G1001









36/10.0/11.0/2.05'



### Glow-plug connector pliers (Angled)

#### 9G1002

- · Special angle designed to remove stubborn and hardly accessible glow plug connectors installed on the latestgeneration engines.
- Applicable: BENZ, BMW, VW, Audi... etc.
- Version angled at 90°







36/10.0/11.0/1.19'



## ■ 1/4"DR. Glow plug impact socket set

#### 909G6



- •A torque air impact wrench set and designed for the diesel engine glow plugs which hard to removal.
- •Special long-reach 8 mm, 9 mm 10 mm, 11 mm and 12 mm sockets for ease of access.
- •Also includes:short and long extension, universal joint and special 1/4" air impact wrench.





6/11.1/12.1/1.4'







### 9pc Pre-heater plug tools

#### K909G4



- To ream out and clean the bore between the glow plug and precombustion chamber.
- Size: M12 x 1.25, M10, pre-heater plugs with 10mm across flats.
- Fasten the glow plug with the correct torque
- 1/4" DR. universal socket size: 8, 9, 10, 12 mm

Thread Diameter	Tightening Torque
8mm	8-15Nm(0.8-1.5Kgm)
9mm	15-20Nm(1.5-2.0Kgm)
10mm	15-20Nm(1.5-2.0Kgm)
12mm	20-25Nm(2.0-2.5Kgm)



6/9.9/10.9/0.8



### 3pc Pre-heater plug puller set

#### 903G16



- To ream out and clean the bore between the glow plug and pre-combustion chamber.
- · Application: pre-heater plugs with 10mm, glow plug 6 and 7mm.





24/14.0/15.0/1.6'

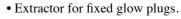
∆ 570g

### Glow plug removal and puller set

#### 916G3



- · Simplifies the assembly and disassembly and professional repair of glow plug thread.
- Suitable for most injectors.
- · Assembly and disassembly of glow plugs and repair glow plug threads.



- Step drill to drill out damaged glow plugs 7 x 5.5 mm and 9 x 5.5 mm.
- Taps M8 x 1.0, M10 x 1.0 and 1/4"-28UNF for repairing glow plug threads.
- Tap holder.
- E10 socket.



10/17.5/18.5/1.6'











### ■ 27pc Glow plug tool set

#### 927G3



- •Designed for removal of damaged/broken glow plugs from cylinder heads.
- •Suitable for glow plugs with M8-M9-N10 thread.
- •Set includes all required adaptors, centering and cleaning tools to safely remove glow plugs without damaging engines.





5/12.5/13.5/1.3'

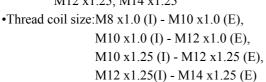
△ 2247g

### 33pc Glow plug thread repair set

#### 933G1



- •Designed to repair the threads of glow plugs .
- •Tap size:M8 x1.0, M10 x1.0, M10 x1.25, M12 x1.0, M12 x1.25, M14 x1.25



•2pcs Thread coil drivers.



10/17/18/1.5'



#### Diesel injector seat cutter set

#### 906G1



- This kit has been specially designed for the clean and re-cutting of injector seats on modern common rail diesel engines.
- The kit includes 4 seat cutting reamers for BOSCH, DELPHI and universal application along with a special angled reamer for IVECO/ FIAT applications.



36/20.0/21.0/1.2'



### Diesel injector seat cutter set

#### 907G7



- This kit has been specially design for cleaning and re-cutting injector seats on modern common rail diesel engines.
- 15mm flat reamer for universal injector.
- 17mm flat reamer for DELPHI / BOSCH injectors (BMW / PSA / RENAULT / FORD )
- 19mm flat reamer for BOSCH injectors (MERCEDES CRD)
- 19mm angled reamer for FIAT / IVECO.
- T handle, Pilot post

**20/19.2/19.7/2'** 

∆ 950g

### ■ Injector sealing seat cleaning & milling set

#### 921G2



- •This is the optimized version of the cleaning and milling
- •The advantages are clearly obvious.
- •Can be used with HDI engines, diesel direct injection and common rail engines with BOSCH and DELPHI injectors.
- •Shaft cleaning by brushes with machine drive, sealing seat cleaning with cutter 120° Ø21mm; 17mm stepped, miller 0° Ø17mm continuous, miller 0° Ø19mm; 17.0mm; 15.0mm stepped.



10/17/18/2.5'



∆ 1700g

#### Valve spring compressor

#### 62101



- For large engines, most suitable for commercial vehicles and general garage use.
- Jaw opening 70-200mm, Throat clearance 250mm



8/26.4/27.4/1.7

∆ 3.3Kg





### ■ Valve spring compressor

#### **62102**



- For overhead cam engines, specially designed for O.H.C. engines.
- Jaw opening 60-155mm, Throat clearance 150mm.





12/19.6/20.6/1



### Valve spring compressor

#### 62103



- For small and medium engines.
- Jaw opening 68-130mm, Throat clearance 150mm.



10/12.2/13.2/0.5'

∆ 1220g

### ■ Valve spring compressor

#### 62104



- For multi-valve petrol and diesel engines, specially designed for difficult access and deep-seated multi-valve cylinder heads.
- Jaw opening 45-145mm, Throat clearance 240mm.



**6/15/16/0.9**°

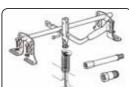
△ 2650g

### ■ Valve spring compressor





Universal overhead cam Applying for most popular cars engines, including AUDI, CHRYSLER, INFINITI, HONDA, HYUNDAI, LEXUS, MAZDA, MITSUBISHI, NISSAN, PORSCHE, SATURN, TOYOTA, VOLVO and VOLKSWAGEN.





5/17.5/18.5/2'



#### ∆ 3.5Kg

# FORGE Professional Tools

### Valve spring compressor repair kit

#### 62113



- Completes service tool kit for OHV & OHC petrol or diesel engines.
- Use on AUDI, NISSAN, TOYOTA, CHRYSLER, HONDA, MAZDA, MITSUBISHI, PORSCHE, VOLVO, VW.



5/20.5/21.5/2.4'

### Universal valve-spring compressor tool

#### 908G7



- Suitable for the replacement of valve springs and valve stem oil seals without the need to remove the cylinder head
- Application: Opel, BMW, Seat, VW, Audi, Hyundai, Toyota, Ford 16V, Renault 19 and Clio.



10/18.0/19.0/1.7

∆ 1600g

### Valve spring compressor

#### 62106



- Compresses overhead valve springs with rocker arm studs.
- This tool can be used with the head either on or off the engine.
- Jaws adjust to fit most overhead valve engines.
- · Adjustable handle allows for clearance in tight areas.



24/17.8/18.8/2.1

∆ 740g

### Valve spring compressor

#### 62107



- Capacity 55-175mm, throat clearance 165mm designed for use on Multi-Valve Petrol and diesel engines with deep Seated valves.
- Collet release adapters:

Restricted access adapter, 25mm, 30mm

- Suitable for general use on a wide
- Range of OHC, OHV, and CVH engines. Universal model with unique
- Dual cam-action, parallel lift, and Automatic locking. reversible Jaw/ Adaptor.



10/16.5/17.5/1.2





### Valve spring compressor

#### 62108



- For large engines & diesel engines
- Unique 'Direct Action' compressor lever gives improved visibility &

ease of use in areas of difficult access.

- · Collet release adapters: Restricted access adapter, 25mm, 30mm
- Jaw opening 35-142mm, Throat clearance 150mm.



10/19.8/20.8/1.2'



### Overhead valve spring compressor

62109



- For use on a wide range of OHV OHC and CVH engines but not suitable for use on engines with deep seated valves.
- Allows valve springs and valve stem oil seals to be replaced with the cylinder head.
- Features a reversible JAW/ADAPTOR and an automatic cam-action locking to a pre-determined setting.



20/17.5/18.5/2.1'



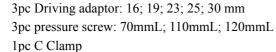


### Valve spring compressor

62110



• These tools are designed to compress and release valve spring after removing the collets. Pantograph-type levers ensure a consistent coaxial contact with the valve.





10/21.5/22.5/2.2'





### Valve spring compressor

62112



- Remove and install valve springs with the heads on or off the engine.
- Fits 3/8" and 7/16" rocker studs.
- Handles springs of 1" -2" diameter.
- Press down to compress coil spring, then remove valve keepers and release slowly.



**24/29.0/30.0/1.8**°







### ■ Valve pressure spring installer/remover for BMW N20, N55

9G0405



- Special design to remove and install the pressure spring on intermediate lever.
- Applicable: BMW N13, N20, N26, N55.





6/12.9/13.9/1.6'





9G0406





- Special design for removing and installing pressure spring on intermediate lever.
- Applicable:BMW engine model: N51, N52, N52K





10/9/10.6/1.7'











### 3pc Valve keeper installing & pick-up tool set

#### 903G1



- This tool holds the valve keepers in its magnetic jaws so you can easily maneuver the keepers into the valve stem grooves for installation.
- Easily reaches into recessed spring pocket to retrieve released valvekeepers.
- Retrieves small parts from any recessed or hidden area.

#### **Contents:**

3 pcs valve keeper installing tool Flexible magnetic pick-up tool



48/15.4/16.4/0.6'



#### ■ Valve seal removal & installer kit

#### 911G2



- Work on valves still seated or removed.
- Precision-machined seal driving adapters guide the seal for proper setting.

#### **Contents:**

1pc Valve stem seal pliers

1pc Drive handle 6" (150mm)

2pc Deep seal driving sockets for seals O.D. 10.8-14.8mm.

7pc Seal driving adapters fit seals 5mm, 5.5mm, 6mm, 6.6mm, 7mm, 8mm, 3/8"





10/17.4/18.4/2.1'



### Valve stem seal ring pliers

#### 9G0102



- Long neck designed to reach into confined area of the seal to grip it for removal.
- Gripping serration allows them to grasp both original equipment & aftermarket seals regardless of the configuration.





72/27.4/28.4/2.6'







### Extra long valve stem seal ring pliers

#### 9G0103

- For removing valve stem seals in multi-valve engines.
- Jaw longitudinal-toothed avoiding slipping down.
- For deeply levelled valve stem seals.



**72/27.6/28.6/2.6**°



∆'∆ 380g

### Valve refacing and seating tools

#### 915G3



- •Precision-machined Tungsten carbide blades produce valve seats with: Accurate seat angle / Superior seat surface / True, Flat seal / Seats concentric with valve guide
- •Application:Cutter Ø52-Ø65 75° and 60°

Cutter Ø46-Ø60 45° and 30°

Cutter Ø44-Ø52 75° and 30°

Cutter Ø37-Ø46 60° and 45°

Cutter Ø37-Ø44 75° and 30°

Cutter Ø28-Ø37 75° and 45°

5pcs Expandable pilot Ø5.5-Ø12.5 "T" handle drive

10/18/19/1.5'



#### Vacuum cup valve grinder

#### 902G7



- For grinding flat head, un-slotted valves.
- 1-1/8" and 1-3/8" diameter cups for larger valves.
- 5/8" and 13/16" diameter cups for smaller valves.





108/16.0/17.0/2.9'







### Air valve lapper

#### 62114



1pc Air valve body 1pc 40mm suction rubber cap 1pc 35mm suction rubber cap 1pc 30mm suction rubber cap 1pc 20mm suction rubber cap



- Apply five or six droplets oil or motor oil to the air valve lapper through its air inlet port. (It is recommended to apply oil from time to time to the valve lapper even during the operation, if the lapper is used continuously for an extended period of time.)
- It's advisable to set air pressure at 6 to 8 kg/cm2. (85 psi to 100 psi)



12/17.0/18.0/1.2'



### 9pc Offset feeler gauge

#### 61803



- Size: 0.009"; 0.015"; 0.016"; 0.017"; 0.018"; 0.019"; 0.020"; 0.021"; 0.026"
- Decimal sizes and metric equivalents on each blades.
- Blades LxW: 4" x 1/2" (100 x 13mm)



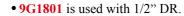


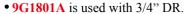
100/10.4/11.4/1.1'

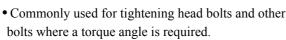


### Torque angle meter (clip)

### 9G1801 / 9G1801A











24/12.1/13.1/2.1'







### ■ Torque angle meter (magnetic)

#### 9G1802 / 9G1802A



- 9G1802 is used with 1/2"DR.
- 9G1802A is used with 3/4"DR.
- Commonly used for tightening head bolts and other bolts where a torque angle is required.



**24/11.3/12.3/2.1**°



### ■ 1/2"DR.100mm Cylinder head bolt tool (M9,M9.5,M10,M12,M14)

348100...

- Size: M9, M9.5, M10, M12, M14
- 1/2" DR. 100mm.
- For cylinder head bolts.



	0	l	$\Delta \Delta$	
Part no.	Size	mm	g	Applications
34810009	M9	100 mm	95	VW Golf / Jetta / Audi A4 , TT ,
				A8 / Mercedes Benz M102, 103,
				104, 110, 116, 117, 119, 120, 615,
				616, 617 / TOYOTA MR2
348100095	M9.5	100 mm	102	FIAT
34810010	M10	100 mm	108	VW / Audi / Vauxhall / Opel /
				Mercedes vans / Ford
34810012	M12	100 mm	151	TOYOTA Tercel / Mercedes-
				Benz / New Beetle / Ford / GM /
				Volkswagen Audi Group
34810014	M14	100 mm	187	Volkswagen / Ford / Chrysler /
				Rover

### M10S Cylinder head bolt tool

#### 34914010V



- 1/2" Drive, 140mm.
- Special for Audi engines, and VW-PASSAT cylinder head screws.







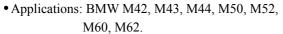
∆ 134g



### ■ 1/2" DR. 150mm Cylinder head bolt tool (E12)

#### 54615012B





• For BMW cylinder head bolts.

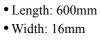


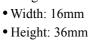
		l	$\Delta \Delta$	
Part no.	socket	mm	g	pc/box
54615012B	E12	150	152	10

### Cylinder base surface rectifier

#### 9G0610

• Straight edge works for precision check the cylinder damage or not.









#### 904U1



• This set includes a select of multi-purpose scrapers ideal for a variety of general automotive applications.



- Contains 2pc 3M imperial wetordry paper A Wt.
- Short blades ideal for scraping hard-to-reach carbon deposits.
- Long blade used to scrape engine blocks and heads.
- Rigid carbon scrapers.



12/10.5/11.5/1.55'

### ■ 5pc Scraper set



- 1 pc 12"(305mm) multi-purpose scraper, blade 1" (25.4mm) wide.
- 1 pc 12"(305mm) multi-purpose scraper, blade 3/4"(19mm) wide.
- 1 pc 7-1/2"(195mm) multi-purpose scraper, blade 1" (25.4mm) wide.
- 1 pc 7-1/2"(195mm) multi-purpose scraper, blade 5/8" angled.
- 1 pc 7-1/2"(195mm) multi-purpose scraper, blade 9/16" angled





### 4pc Scraper set

#### 904M4

- 1 pc 12"(305mm) multi-purpose scraper, blade 1" (25.4mm) wide.
- 1 pc 12"(305mm) multi-purpose scraper, blade 1/2"(12.7mm) wide.
- 1 pc 12"(305mm) multi-purpose scraper, blade 1/4" (6.35mm) wide.
- 1 pc 7-1/2"(195mm) multi-purpose scraper, blade 1" (25.4mm) wide.



12/9.5/10.5/1.55'

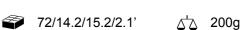


### 3pc Scraper knife set

#### 903M1



- Size 15, 20, 30 mm
- Stainless steel, heat treatment of knife
- High grade wooden grip
- Sharp tip



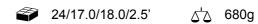


## Engine cylinder hone

#### 9G0901



- Flexible shaft with an adjustable honing tension capacity: 2"~ 7"
- Stone size: 100 x 10 x 8mm (3pc) Stone item number: 9G0901S(#220grit)
- Sleeve makes insertion in cylinder easy and protects stones when not in use.
- Collar prevents stone breakage.
- Fine surface stones: **9G0901SF**(#320 grit )
- Coarse surface stones: 9G0901SC(#120 grit )

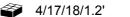


### Engine cylinder hone – four Stone

#### 9G0903



- •A rigid cylinder hone has four stones, or blades, each mounted in a
- •Carrier can be expanded by a turning nut at the top of the hone.
- •Adjustable honing tension capacity: 75~110 mm.
- •Stones item number: **9G0903S** (#320 grit )
- Fine surface stones: 9G0903SF (#400 grit)
- Coarse surface stones: 9G0903SC (#120 grit)









### ■ Brake / Engine cylinder hone

#### 9G0902



- Flexible shaft with an adjustable honing tension capacity: 3/4" ~2-1/2"
- Stone size: 28.5 x 5 x 3mm (3pc) (Stone item number : **9G0902S**) (#220 grit )
- Sleeve makes insertion in cylinder easy and protects stones when not in use.
- Collar prevents stone breakage.
- Fine surface stones: **9G0902SF**. (#320 grit)
- Coarse surface stones: 9G0902SC. (#120 grit )



72/8.5/9.5/1.6'



### Piston ring service tool set

#### 911G3



- Piston ring compressor w/ratchet key H:3"(53-125mm), H:3-1/2"(90-175mm), H:4"(90-175mm)
- Piston ring tool capacity: 50-100mm
- Piston ring groove cleaning Fits: 2"-5"(51 to 127mm)

Blade 1 size: 1/16" to 3/16"

Blade 2 size: 2.0mm to 4.5mm, 1/4" Blade 3 size: 1.2mm to 5.5mm

Offset screwdrivers: ⊕ ○



6/15.8/16.8/2.9'







### ■ Piston ring compressor

#### 62001



- Install pistons from 2-7/8" to 4-3/8" (73-111mm)
- Ratcheting lock allows the bands to compress in small increments.
- Can be used parallel or perpendicular to the cylinder block.
- Set includes pliers and 6 bands.

#### • Contents :

1pc Ratchet pliers

1pc Band size 2-7/8" to 3-1/8"

1pc Band size 3-1/8" to 3-3/8"

1pc Band size 3-3/8" to 3-5/8"

1pc Band size 3-5/8" to 3-7/8"

1pc Band size 3-7/8" to 4-1/8"

1pc Band size 4-1/8" to 4-3/8"







### ■ Piston ring compressor

#### 62006

- •Install pistons from 2-7/8" to 4-3/8" (73 111mm) and 4-7/8" to 5-1/8" (124 - 130mm)
- •Ratcheting lock allows the bands to compress in small increments.
- •Can be used parallel vertically perpendicular horizontally.
- •Set includes pliers and 7 bands.

#### •Contents:

1pc Ratchet pliers

1pc Band size 2-7/8" to 3-1/8"

1pc Band size 3-1/8" to 3-3/8"

1pc Band size 3-3/8" to 3-5/8"

1pc Band size 3-5/8" to 3-7/8"

1pc Band size 3-7/8" to 4-1/8"

1pc Band size 4-1/8" to 4-3/8"

1pc Band size 4-7/8" to 5-1/8"

**8/11.4/12.4/1'** 



∆ 1425g

### Piston groove cleaner

#### 62003



- Designed for cleaning the piston slots.
- Piston slot size: 2, 2.5, 3, 3.5 mm

40/24.4/25.4/2.1

∆ 570g

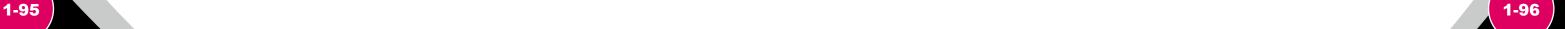
### Piston ring compressor

#### **620**



		l		
Part no.	mm	inch	Packing	g
6202080	40-80	2	50/7.8/8.8/1'	156
6203125	53-125	3	50/15.5/16.5/1.3'	310
6203175	90-175	3	50/17.9/18.9/1.3'	365
6204125	90-125	4	50/16.7/17.7/1.3'	335
6204175	90-175	4	50/18.9/19.9/1.3'	380
6206175	90-175	6	20/12.0/13.0/1.6'	600





## Piston ring pliers

**623** 

• 62302 is applied to truck.



		W	1	
Part no.	Packing	mm	inch	g
62301 62302 62303	50/15.0/16.0/2.2' 50/18.5/19.5/3' 50/8.5/9.5/2.2'	55-100 110-160 80-120	3 3 2.5	330 420 170



### Piston ring installer

**62002** 



- Save by reducing ring breakage.
- Tapered jaws to remove and install most passenger car and light truck rings from 3/64" to 1/4" (1.2mm ~6.3mm)



144/18.0/19.0/2' ∆ d 135g

## ■ Chain oil filter wrench (1/2" DR.)

61901



- 1/2" sq. driver or 13/16"(21mm) open end spanner.
- Suitable for filters up to 120mm diameter.



72/18.9/19.9/2.6' ∆'∆ 262g

## Chain locking pliers

61901A



- Cr-Mo jaw and handle
- Welded with a 18" chain
- 20/16.5/17.5/1.1



#### ∆ 825g



### Filter chain wrench

61911



- Suitable for filter up to 40mm 120mm diameter.
- 60/22.0/23.0/0.82' ∆ 410g

### 20" Chain wrench

61914



• 20" chain



### Oil filter strap wrench

619



It can match with various tools for use 1/2" driver, pliers and screwdriver.



		1	$\Delta \Delta$
Part no.	Packing	mm	g
619	60/18.7/19.7/3'	150	310

### ■ Truck strap oil filter wrench

61902



- The heavy-duty strap can handle any filter up to 6"(150mm) diameter.
- The support pad helps the grip of the filter without crushing it.
- The more leverage applied, the tighter it grips.
- Use with any 1/2" power bar.
- Capacity: 6"(150mm).









### Strap oil filter wrench (1/2" DR. & 3/8" DR.)

#### 61903



This robust quality strap wrench is capable of removing filters up to 300mm diameter on cars, vans and trucks.

- The design of this wrench makes it ideal for areas where clearance is
- The dual drive allows you more flexibility. Besides, the wrench can be used in conjunction with a 13/16"(21mm) open spanner.

40/16.3/17.3/2.8

### Three-legged oil filter wrench

#### 61904



- Removes all oil filters from 2-1/2" to 4-5/16" (65mm to 110mm) in diameter.
- Used with 3/8" square drive tools.





36/21.3/22.3/1.2'

### ■ Three-legged two way oil filter spiral wrench

#### 61904A



- Fits 1/2" & 3/8" Square Drive Ratchet Handle
- Operated By 21 mm Hex Adaptor: 1/2" Sq. X 3/8" Sq.
- All Chrome Plated. 3-Leg Two Way Operated Range: 63 ~ 102 mm.





36/15.0/16.0/1.2'

∆ 415g

### Filter wrench

#### 9B0701 / 9B0702



- Steel jaw grips filter without slipping.
- Use with 3/8"drive.
- The large range enables 9B0701 to fit most standard size filters from 2-1/2" to 3-1/8"(60m/m-80m/m)
- The large range enables 9B0702 to fit most standard size filters from 3-1/8"to 3-7/8"(80m/m-98m/m)

		$\Delta \Delta$
Part no.	Packing	g
9B0701	48/18.1/19.1/1.7	380
9B0702	48/18.7/19.7/1.7	380



#### Filter wrench

#### 9B0703 / 9B0703A / 9B0703B



- The tool with serrated design for better grip on oil filter during removal / installation.
- Use with 1/2" DR. or 21mm wrench.



	Range		$\triangle_{\Gamma}$
Part no.	mm	Packing	g
9B0703	60-80	30/14.3/15.3/0.55'	475
9B0703A	80-120	15/13.7/14.7/0.48'	913
9B0703B	110-140	15/13.7/14.7/0.58'	913

### Self-griping oil filter wrench

#### 9B0704



- 1/2" DR.
- Suitable for filter 95-165 mm.



10/14.0/15.0/0.81





### ■ Three-legged oil filter wrench

#### 61913



- 3-leg, 1-way, fit 1/2" square drive
- Capacity 75 ~ 130mm (3" to 5-1/8")



24/24.0/25.0/1.1'





### Strap oil filter wrench

#### 61908

- With non-slip rubber-fabric strap
- Especially suitable for plastic pipes
- Strap length: 420 mm
- Capacity: 130 mm diameter



48/16.2/17.2/2.2



### Strap wrench

#### 61912

- 12" Aluminum handle
- 34" Strap



**50/16/17/1.6**°



### Adjustable oil filter wrench

#### 61909

• Capacity: 80-110 mm diameter



50/17.5/18.5/4.83'



### Heavy-duty oil filter wrench

#### 61905

- Wide steel bank designed to meet the high torque requirement of truck, bus, RV and heavy duty equipment filters.
- Used with 1/2" square drive tools.



		l	$\Delta \Delta$
Part no.	Packing	mm	g
61905120	36/24.8/25.8/3.0'	4-1/8" to 4-3/4" (105mm - 120mm)	690
61905135	36/25.2/26.2/3.0'	4-1/2" to 5-1/4" (115mm - 135mm)	700
61905145	36/25.6/26.6/3.0'	5" to 5-3/4" (125mm - 145mm)	710



### Swivel handle oil filter wrench

#### 61906





		l	$\Delta \Delta$
Part no.	Packing	mm	g
61906073	36/12.0/13.0/2.6'	2-3/8"" to 2-7/8"" (60mm - 73mm)	335
61906085	36/13.4/14.4/2.6'	2-7/8" to 3-3/8" (73mm - 85mm)	372
61906095	36/14.0/15.0/2.6'	3-3/8" to 3-3/4" (85mm - 95mm)	389
61906111	36/14.7/15.7/2.6	3-3/4" to 4-3/8" (95mm – 111mm)	408

### Oil filter wrench

#### 61910



- Spring steel strip
- Aluminium diecast



	Capacity	
part no.	mm	g
61910	65-110	210
61910L	110-155	230

<sup>\*</sup> Spare diecast (band) available,61910-D/61910L-D

### Oil filter pliers

#### 639



	Size		1	
Part no.	mm	Packing	inch	g
639250 639300	60-90 85-115	60/21.2/22/2.1' 60/22.7/23.7/2.5'	10 12	354 379
639365	100-140	20/11/12/1.1'	14	550

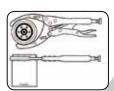


### Oil filter master pliers

#### 639230



	Size		l	$\Delta \Delta$
Part no.	mm	Packing	mm	g
639230	53-118mm	40/19.5/20.5/1.7'	230	480







### Oil filter wrench -27mm

61927



- •This oil filter housing removal for the removal and installation of the specified difficult to access oil filter covers.
- •Application:

FORD / PSA 2.0 L Durotorq TDCI / HDI (DW10C) and 2.2 L Durotorq TDCI / HDI (DW12C) diesel engines - S Max, Mondeo, Galaxy, Euro 6 compliant engines from 2010 onwards.

30/19/20/1.5

∆¹∆ 680g

### Oil filter wrench

631



• Can operate with 1/2" drive.





	l	Pt.	A1:
part no. 6316514	mm 64	14	Application TOYOTA, NISSAN
6316714	67		FORD, MAZDA
6317314	73	14	TOYOTA, NISSAN
6317330	73	30	GM, FORD
6317315	73	15	GM, FORD, MITSUBISHI
6317414	74	14	BMW, AUDI, WOLKSWAGEN, OPEL, AUSTIN
6317408	74	8	FIAT
6317415	74	15	GM, CHRYSLER, ROVER
6317515	75	15	GM, CHRYSLER
6317612	76	12	FORD, MAZDA
6317815	78	15	NISSAN, TOYOTA, HONDA ACCORD
6317915	79	15	DAIHATSU, FORD
6318418	84	18	PEUGEOT, CITROEN, RENAULT
6318614	86	14	MAZDA, MITSUBISHI
6318915	89	15	HONDA, MITSUBISHI
6319115	91	15	TOYOTA, NISSAN
6319112	91	12	CITROEN, PEUGEOT, RENAULT
6319115B	91	15	GM, FORD, CHRYSLER, LANCIA, FIAT
6319215	92	15	HONDA, TOYOTA
6319515	95	15	GM, FORD , CHRYSLER, ALFA
63110115	101	15	DAIHATSU, MAZDA, MITSUBISHI, TOYOTA



### ■ Cup type oil filter wrench set

#### 61915 / 61916 / 61917

61915



6/18.5/19.5/2'

∆¹∆ 3200g





5/18.2/19.2/2.4'







3/21/22/3.2'





3200	g		$\Delta^{\mathbf{I}}$	∆ 3940g
61915	61916	61917	SPCS	Applicate
	•	•	66mm/6P	Flat (Punto, 1.2) Renault (Clio 1.2 Express, Kangoo, Twingo) etc
•		•	65mm/14P	Fits Champ, Hastings. GM/AC, Wix, Napa, Purolator, Diahatsu, Toyota, Nissan, etc
			65~67mm/14P	Fits same filters as made in Canada including PH4386, PH4967, PH6017, PH6018.
•		•		Daihatsu. etc
			68mm/14P	Fits Hastings, Mazda, Ford Escort, Capri, Subaru, Fran PH6607 (those fram filters made
•		•		in Korea, motorcraft FL816 etc
•		•	73mm/14P	Fits Toyota / Lexus, etc
		•	74mm/15P	Fits MF, Audi, #056-115-561g, GM, Rover, Chrysler. etc
•	•	•	74~76mm/15P	Fits Fram, AC, Saturm, etc
•		•	75~77mm/15P	Fits VW, Audi, Casite, GM / AC, Hastings, Wix, NAPA Ford. Isuzu Mercedes, Opel, etc
	•	•	76mm/12P	Fiat (z.B. Ducato, Scudo, Ulysee), Renault, (Megane, Laguna, Espace III) etc
			76mm/14P	Fits Champion, Champ Lee, Purolator, Mopar, VW, Porsche, Mercedes Benz, BMW,
•	•	•		Audi, (I.B.A3TD) Opel. etc
•		•	76mm/30P	Fits Motorcraft only-FL400A, Ford. etc
	•	•	76mm/8P	Fiat (z.B.Marea), Lancia (z.B.Delta) etc
		•	78mm/15P	Fits Nissan # 15208H8991, Ford, Toyota, Accord, etc
			80mm/15P	Fits Hastings, Fram, Purolator, Nissan, Honda, Motorcraft, Mazda, Isuzu, Subaru, Opel,
•		•		Toyota, etc
•		•	80~82mm/15P	Fits Wix filters. Branded for: Mazda, Subaru, Toyota, Honda, Acura, Nissan, NAPA, etc
	•	•	86mm/16P	Volvo (C40, S60, S70, S80) etc
			86mm/18P	VW, Golf (MKIII, Tdi, Passat Tdi), Audi A6 Tdi, Renault (Clio, Rapid 1.9D Laguna,
	•	•		Safrane, Espace 2.1D), Cifroen, Peugeot, Renault, etc
•		•	90mm/15P	Fits Honda Accord, Mitsubishi, Mopar, Isuzu etc
		_	92mm/10P	Fiat, Cinquedento, Coupe, Croma, Fiat, Panda, Regata, Ritmo Fiat, Seicento, Tempra, Tipo
	•	•		Lancia (Beta, Dedra, Kappa, Monte, Carlo, Prisma, Thema, Trevi) etc
			93mm/15P	Fits Casite, Champ, Champion, GM, Fram, Hastings, Opel, Mazda, Volvo, Mitsubishi,
•	•	•		Purolator, Wix, Nissan, VW, Porsche, Renault Ford, Honda, Audi, etc
•		•	93mm/36P	Fits Motorcraft only-FL1A, FLA1B, FL300, FL820, Ford, etc
	•	•	93mm/45P	VW-Audi. (Tdi 2.4,2.6,2.8L) etc
		•	95mm/15P	Toyota # 15600-41010, Alfa, GM, Ford, ALFA, Chrysler, etc
	_	_	96mm/18P	Audi (A4, A6. Tdi), VW(Passat 97 Tdi) Renault(Laguna 2.2d, Safrane 2.2D.) Espace
	•	•		2.2D, R19, Rapid, Megane 1.9 / 2.1D.TDi ) etc
•		•	100mm/15P	Fits fram, Motorcraft, wix, Isuzu and Mitsubishi, etc
	•	•	106mm/15P	Fiat (Ducato 2.5D. Td) etc
	•	•	108mm/15P	Volvo (C70, S70, V70. Tdi. TD) (Turbo. Diesel. 850 Tdi. Diesel) etc
	•	•	108mm/18P	Renault (Espace, Laguna, Master, Safrane, Traffic 2.4, 2.5, 2.8D,TD) etc
			Two way oil	
	•	•	filter wrench	
•	•	•	Adaptor	





### Oil filter wrench for Toyota / Lexus

### 631B02



- •Special design for plastic oil filter cap of Toyota and Lexus
- •Size: 3/8"DR., 64.5 mm, 14PT
- •Applicable: Allion, Auris, Corolla axio, Corolla fielder, Corolla rumion, Isis, Ist, Noah, Premio, Prius, Wish, RAV4, Yaris, ES350, GS300, GS350, GS450h, IS250, IS350, LS460, LS600h, RX350





100/16.3/17.3/1.9'

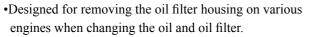


## Oil Filter Wrench for Mercedes Dodge Jeep

61935



•Size: 84mm x 14 point x 1/2"Dr.





•Application: 2007 Dodge sprinter, 2007 Mercedes Benz E320, 2007 Jeep Cherokee with 3.0L V6 diesel engine



20/15/16/0.65'



### 4pc Oil filter cap wrench set

61920A



- 3/8" Square drive.
- Size: 27mm, 32mm, 36mm, 38mm
- Applicable: MERCEDES, VAUXHALL/ OPEL, BMW, FORD.





20/15/16/0.65







### ■ 5pc Oil filter cap wrench set

#### 61920B



- 3/8" Square drive.
- Size: 24mm, 27mm, 32mm, 36mm, 38mm
- Applicable: CADILLAC, MERCEDES, VAUXHAI OPEL, BMW, FORD.



20/16/17/0.65



### 3pc Cap oil filter wrench

#### 61920



- 3/8" Square drive.
- Size: 27mm, 32mm, 36mm
- Applicable: MERCEDES, VAUXHALL/ OPEL, BMW, FORD.



20/12/13/0.65



### 8 & 10mm Oil service wrench

#### 9U0706



Chrome-vanadium, chrome-plated with 8 and 10 mm outside square drive for various French passenger cars, oil drain plug on oil pan, gearbox, differential.





50/17.3/18.3/1.84





### 8 & 8mm Oil service wrench

#### 9U0710



Chrome-vanadium, chrome-plated with 8 and 8 mm outside square drive for various French passenger cars, oil drain plug on oil pan, gearbox and differential.



50/12.8/14.6/1.6'

△ 255g

#### Oil service wrench

#### 9U0711



- •For the oil filter and oil drain plug gear box, differential oil pan on various French passenger cars.
- •Length: 245 mm
- •Size: M10 female X 10mm square male

### Composite drain key

#### 890220



- Size: 8.7mm, 9.5 mm, 10.5 mm, 11.5 mm, 13 mm, 6.8 mm, 15.2 mm, 16.5 mm, 19.7 mm
- Length: 220mm



20/8.8/9.8/0.56'



### ■ 5pc Fill / Drain plug key set

#### **5051**



#### **Contents:**

	5-Fill / drain plug key		
5051-1	17mmHex - 14mmHex		
5051-2	10mmHex - 12mmHex		
5051-3	9mmHex - 5/16"Hex		
5051-4	8mmSq 13mmSq.		
5051-5	3/8"Sa 11mmSa.		

25/11.5/12.5/0.64'







### ■ 6pc Fill / Drain plug key set

#### **5061**



#### **Contents:**

	6-Fill / Drain plug key
5061-1	5/16"Hex - 3/8"Hex
5061-2	8mmSq 3/8"Sq.
5061-3	11mmSq 12mmHex
5061-4	13mmSq 14mmHex
5061-5	17mmHex - 1/2"Hex
5061-6	8mmHex - 10mmHex

25/17.9/18.9/0.64'

### ■ 12pc Auto kit set

#### **5122**



#### **Contents:**

6	- Fill / Drain plug key
5061-1	5/16"Hex - 3/8"Hex
5061-2	8mmSq 3/8"mmSq.
5061-3	11mmSq 12mmHex
5061-4	13mmSq 14mmHex
5061-5	17mmHex - 1/2"Hex
5061-6	8mmHex - 10mmHex
8074 16M20.6M	1/2"DR. Magnetic spark plug socket 16mm; 20.6mm
810421	Plug key holder 1/2"(F)x21mm(F)

m(F) Telescope mirror stick / magnetic pick-up 618 20pc feeler gauges 0.05mm to 1mm

619 Oil filter strap wrench

6/11.8/12.8/0.9'

∆ 1970g

### ■ 15pc 3/8"DR. Drain nut

#### 915G2



The drain nut set has different external shape to fit different requirements.

We offer also the drain nut set without driver.



**9**.5mm

10mm

**(** 8, 9.5, 11, 12, 13 mm

8, 9, 9.5, 10, 12, 14, 17 mm



10/20.0/21.0/1.3'



1-107



### ■ 1/2" DR. Drain nut socket bit (M16H)

#### 348...T



	0	l		
Part no.	size	mm	g	pc/box
34805516T 34810016T	M16H M16H	55 100	142 270	10 10



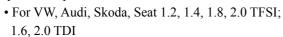
• For removal and replacement of the gear box drain plug Audi A3, A4, A6; VW Golf IV, LT.

## Assembly tool for plastic oil drain plug (VAG group)

61930



•Required for proper removing and installing of the special plastic oil drain plug (M14 x 1.5 x 22) at plastic oil pan.







72/6.5/7.5/1.4'



## Magnetic oil drain plier

61933

- •Drain old and hot engine oil, transmission fluid, and gear oil without danger.
- •High-power magnet grips oil plug well.
- •Pleasant oil changing work.
- •Patented handle provides comfortable gripping.
- Universal application.





### ■ 64pc Oil drain repair kit

#### 964G1



- Renew the diameter and replace a new oil drain plug.
- Four popular sizes fit nearly all applications.
- Specification: M13x1.5P, M15x1.5P, M17x1.5P, M20x1.5P
- Tap: 1 piece / size, material: SKS3
- Oil drain plug: 5 pieces / size, material: 1015
- Washer: 10 pieces / size, material: Copper



12/18.0/19.0/2.2'





### Oil filter drain tool (Toyota & Lexus)

61923



- Provide a professional and clean work when changing oil filter.
- Available for many Toyota & Lexus (2006~) 4cyl and 8cyl vehicles.





40/11.2/12.2/2.9'



∆ 280g

### Oil filter drain tool (VW)

61925



- Provide a professional and clean work when changing oil filter.
- Available for many VW 2.0 vehicles.

Golf V 2.0T 2.5

Golf V (all) 2.5T

Jetta V (all) 2.0T

Passat B6 (all) 2.0T





40/7.4/8.4/3.6





1-109



### Flexible / Moldable funnel

61926



- Flexible funnel provides easy job for draining or refilling wide kinds of fluid and oil.
- Suitable application: engine oil, coolant, brake oil, auto transmission oil...etc.
- Easy to take anywhere, use to limited space, and easy storage.
- Size:372mm x 170mm



50/11.5/12.5/1.0'







### Oil funnel with piercer

61928



- •Oil spill eliminator, no more unpleasant spills.
- •Efficiently improves oil-changing process.
- •Transparent lower chamber design clearly show oil flow
- •Hand free design of piercer securely holds bottles.
- •Pierces bottle seals and prevents seals from falling into engine.
- •Piercing function saves time and prevents engine oil or transmission fluid additives from spilling.
- •Special filter mesh efficiently blocks impurities without extending oil-changing time.
- •Connect thread-good fitting with thread funnel & current M37 x P3.0 funnels on market.
- •Application:Lexus, Toyota, Scion, VW, Audi, BMW, Mercedes, Benz, Porsche, Chevrolet, Geo, Volvo



10/3.0/4.0/1.57



#### ∆ 340g

### Oil funnel with piercer

61929



- •Oil spill eliminator, no more unpleasant spills.
- •Efficiently improves oil-changing process.
- •Transparent lower chamber design clearly show oil flow process.
- •Hand free design of piercer securely holds bottles.
- •Pierces bottle seals and prevents seals from falling into engine.
- •Piercing function saves time and prevents engine oil or transmission fluid additives from spilling.
- •Special filter mesh efficiently blocks impurities without extending
- •Connect thread-good fitting with thread funnel & current M32 x P3.5 funnels on market.
- •Application: Acura, Chevrolet, Chrysler, Dodge, Eagle, Ford, Geo, Hyundai, Honds, Isuzu, Infiniti, Jeep, Kia



10/2.6/3.6/1.57









902G23

FORGE Professional Tools



- The width of the clamp is automatically adjustable 28mm-74mm (1.1in-2.9in).
- The funnel has a thread that fits perfectly in the clamp.
- The funnel has a special transparent design in the lower chamber to see the passage of the oil.
- No need to hold the funnel with your hand when refilling the oil.



12/7.3/8.3/4.1'





#### Transmission oil gauge

9G1803 / 9G1804



• Dipstick for determining oil level

• Transmission 722.6

100/16.5/17.5/1.9



9G1803

- Dipstick for determining oil level
- Transmission 716.5, 722.7

100/11.6/13.0/1.9

△ 116g

### Oil gauge

9G1805 / 9G1806



#### 9G1805

• Dipstick for determining oil level and inspecting length of dipstick guide tube

100/5.4/6.4/1.4

∆ 54g

• Measuring rod for measuring oil level and for checking length of oil pipe.



100/5.2/6.2/1.4'



∆¹∆ 52g





### Oil cooler line pliers

#### 9G0717



- •Release the hydraulic cooling lines that connect to the transmission.
- •Front clips fixed by screw can be adjusted at different angle for the convenience of use.
- •Applicable:BMW E46, E53, E60, E61, E63, E64, E65, E66, E70, E81, E83, E85, E86, E87, E90, E91, E92, E93, R50, R52, R53, Rr1



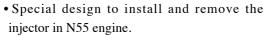
48/18.0/19.0/2.1'

∆ 375g

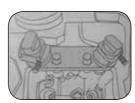
### Fuel injector remover/installer tool for BMW N55

#### 9G0127











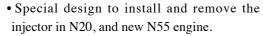
20/12/12.4/0.67'

△ 525g

### ■ Fuel injector remover/installer tool for BMW N20/N55

#### 9G0128





• Applicable: BMW N22&N55 engine.







10/6.5/7.5/0.64'



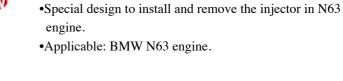
#### ∆ 536g



### ■ Fuel injector remover/installer tool for BMW N63

#### 9G0130

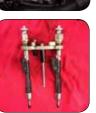






72/17.5/18.5/0.94



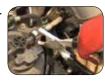


### Fuel feed pipe pliers

#### 9G0715



- •For undoing quick-release connections on fuel feed pipe lines
- •Application:Opel/Vauxhall, Fiat, GM, VW etc.



72/17.5/18.5/0.94





## ■ Fuel line pliers

#### 9G0716



- •Quick and easy fuel connector removal and replacement
- •For use on fuel filter connectors during replacement
- •Prevents fuel leakage from damaged fuel connectors
- •Applications: Audi, VW, GM, Mercedes including M-class, Toyota, Fiat, Opel.



48/16.0/17.0/2.4'





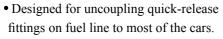


1-116



### 3pc Fuel line disconnect set

903G2





#### **Contains:**

- 1. 1/4" 5/16" (Ø8mm), for: Ford-Mercury, Dodge-Chrysler, Renault
- 2. 3/8" (Ø10mm), for: Ford-Mercury, Dodge-Chrysler, Renault
- 3. For: G.M., Chevrolet, Buick-Pontiac, Renault/Fiat Ford / Opel



60/7.3/8.3/4.8'



### Adjustable fuel tank lid remover

9G0713



- •Jaw adjustable range:122~199mm,suitable for different fuel tank lid.
- •Special jaws designed to remove & install the tank closely.
- •Use with 3/8"DR. wrench





24/16.0/17.0/1.2'

∆¹∆ 497g

### Ford fuel pump wrench

**9G0706** 

1-115



- For removal and installation of the fuel pumps with a plastic retaining nut.
- Suits all Ford falcon models XE, XF to current.
- Diameter: 6-1/8" (155mm)



36/15.3/16.3/3.1



#### ∆ d25g

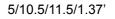


### 3pc Benz fuel tank cap wrench

903U2 9U0707 **Contents:** 9U0708

9U0707: Benz W210 Fuel tank cup wrench 9U0708: BENZ-W202 Fuel tank cap wrench 9U0709: BENZ Fuel tank lid dissembler wrench









### Fuel tank lid remover/installer for BENZ(W211/W203)/ BMW(E36/E46)

9G0725





- •For removing the tank lid while fixing or replacing the fuel
- •The tool will help you remove the tank lid easily.
- •Application:BMW (E36 / E46), BENZ (W211 / W203) .

18/19.5/20.5/0.8'

∆ 1146g

### ■ Fuel tank lid wrench for BENZ(W164/W166/W251)

9G0720



- •Used to remove the plastic fuel tank lid.
- •Size: Dr.1/2"x 22 points
- •Application:BENZ W164,W166,W251.



∆ 1115g

### Fuel tank locking ring tool for VW/AUDI

9G0721





- •Designed to remove and install the fuel tank locking
- •120mm internal diameter with 3 slotted teeth to grip
- •Application: Audi A3, A4, A6, A7, A8, Q3, Q5, Q7, R8, TT.

VW - Polo, Beetle, Golf, Golf Plus, Golf Cab, Jetta, Eos, Scirocco, Passat, Passat CC, CC, Sharan, Touran, Tiguan, Touareg, Phaeton, Caddy, Transporter including LCV models.





#### 24/18.1/18.6/0.96'

### Fuel tank locking ring tool for BMW/MINI/PORSCHE

9G0722





- This tool is designed to remove and install the fuel tank
- •Application:BMW-E31, E34, E36, E38, E39, E46, E53 E60, E63, E64, E65, E83, E85, E90 Mini-R50 / R52 / R53 / R55 / R56 / R57 Porsche-Boxster, Cayman (986). 911 Carrera, Turbo / GT2 / GT3 (997)



24/12/13/2'



#### ∆ 480g

#### Fuel Filter Wrench 108mm

9G0727



- •For removing and refitting fuel filter cap when replacing
- •Application: Citroen, Peugeot and Renault with HDI diesel engines.





### ■ Fuel filter cover mounting tool for VW, Audi, Skoda and Seat

9G0726





- •The fuel filter cover mounting tool is designed to press the fuel filter cover evenly and in a torsionfree manner into the seal seat in the fuel filter
- •Application: VW, Audi, Skoda and Seat diesel vehicles with UFI fuel filter housing. (2.0L TDI



### Diesel fuel filter removal tool

9G0723





- •Filter housing fits into the plastic holder using a vice, so the key can be used to unscrew the housing cap without causing damage.
- •Designed to remove the fuel filter on diesel 1.3, 1.9, 2.0, 2.2, 2.3, 2.8, 3.0 engine..
- •Application:Fiat, Lancia, Alfa Romeo, Opel, Vauxhall Holden, Chevrolet, Citroen, Peugeot, Suzuki and Saab





24/15.2/15.7/2'



### Fuel pump wrench

9G0711



- Wrench for removal and installation of the fuel
- Applications: VW Passat (1998-2005) AUDI A4(2000-2004), A6(1999-2004)





**30/12.8/13.8/2**°







### Fuel transfer tool

63302



- Transferring fuel from car to car.
- Pumping fuel into the heater.
- Extracting fluid from tank.
- Can be used to prime FORD, MONDEO diesel engines.



50/15.3/16.3/2.6



### Diesel injection priming tool

63303



- •A Suitable tool for Vauxhall 2.2Di and 2.0Di diesel engines with engine codes X20DTL / X20DTH / X22DTH.
- •For the introduction of fuel into the fuel pump after replacement of the fuel filter.





#### ■ Fuel & transmission line disconnect set

912G3



• A complete set of disconnect tools.

36/19.0/20.0/2.5'

• With aluminum disconnect tool (1/4", 5/16", 3/8", 1/2"), two ends disconnect tool (5/16"~3/8"), long disconnect tool (1/2"), round disconnect tool (1/2"), two point disconnect tool & rubber cap x 4.

∆ 520g







### ■ A/C Fuel line spring lock coupling tool set

902G21



- •Tools service most types of quick-disconnecting fittings used on Ford, GM & Chrysler vehicles.
- •1pc Ford/Chrysler/GM fuel line disconnect tool 5/16'
- •1pc A/C & fuel line spring lock coupling tool 3/8", 1/2", 5/8" & 3/4"



#### BMW line disconnect tool

#### 9G0718



- •Removes covers for both power steering and transmission oil cooler line.
- •Made of red anodized aluminum.
- •Applicable:1999-2005 BMW 3-Series and X5.





144/5.0/6.0/1.0'



### BMW line disconnect tool

#### 9G0719



- •Removes covers for both power steering and transmission oil cooler line.
- •Made of blue anodized aluminum.
- •Applicable:2006-2011 BMW 3-Series and 2006-2009 X3(E90 & E83).





288/7.5/8.5/1.8'









### A/C spring lock coupling tools

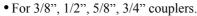
#### 904G10











- Designed for separating air conditioning refrigerant pressure lines on these vehicles.
- Used for Ford, Chrysler and Jeep vehicles.







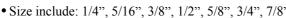
#### ∆ 80g

### A/C, fuel line disconnect tool set

#### 907G10



· Easily disconnects air conditioning lines, quick connect fuel lines or can be used as push lock connectors on radiator and transmission lines.









72/9.5/10.5/2.7



#### △ 120g

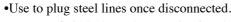
### Oil & fuel pipe stopper

#### 904G12









- •Prevents fluid leaks and contamination during service.
- •Use with any automotive fluid.
- •Spring loaded design installs in seconds.
- •Specifications: Banjo, 3/8", 5/16", 1/2"











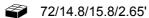


### Universal steel line stopper

#### 9G4301



- •Suitable for clamping and sealing steel line on braking system, cooling system, fuel line, A/C line etc.
- •Provides an effective seal to steel lines when disconnected.
- •Prevents fluid loss and contamination in the work area.
- •5/16",3/8",1/2" and banjo(10.4mm&18mm)







### Universal oxygen sensor socket

#### 9G1401



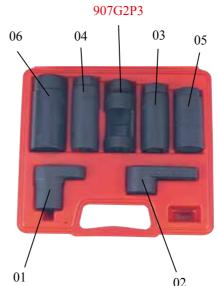
- Works on most vehicle oxygen sensors.
- A slot provided in the side of the socket allows wire clearance.
- Outside rib provides added strength.
- 1/2" SQ. DR., 1" Male Hex DR
- 7/8" 6PT. Hex socket

**36/16.7/17.7/1.5**'



### ■ 7pc Sensor & sending unit socket set

#### 907G2



• Designed for removing oxygen sensor.

01-22mm (7/8") Heated oxygen sensor socket (1/2" DR. x 7/8" x 50mmL) 02-22mm (7/8") Low profile offset socket (3/8"DR. x 7/8" x 30mmL) 03-22mm (7/8") Oxygen sensor socket (3/8" DR.x 7/8"x 6pt.x 80mmL)

04-22mm (7/8") Universal vacuum Pvs, Tvs valve & oxygen sensor socket (3/8" DR.x 7/8"x 6pt.x 90mmL)

05-1" &1-1/16" Oil pressure sending socket (3/8" DR.x 1"x 1-1/16"x 74mmL) 06-1-3/16" Oil pressure sending socket (1/2" DR.x 29mm x 6pt. x 90mmL) 907G2P3 -1-1/16" (27mm) GM Thermal sensor switch socket (1/2" DR.x 27mm x 12pt. x 78mmL)

10/21.4/22.4/1.2'



### Oxygen sensor socket

#### 9G1403



- Applicable: FORD, TOYOTA, NISSAN, BENZ, BMW and most of European cars, also GM vehicles.
- Flare nut for vacuum switch & oxygen sensor service on the computer-controlled engines.
- Features: 3/8" of the double square DR. 7/8"(22mm) 12 point & 22mm 6 point.



120/21.8/22.8/2.4











### ■ 1/2" DR. Extra long oxygen sensor socket

44315022

- For removing and install lambda sensors with a deep-seated hexagon.
- Size:1/2"DR. 22mm x 6PT x 150L.
- Application: MERCEDES-BENZ C/E, 602, 605, 606 VW/AUDI/ SKODA/SEAT, BMW. FORD, OPEL, ROVER, VOLVOL.



48/17.4/18.4/1.51'



### Oxygen sensor rethread tool

63007



- Cleans threads in oxygen sensor holes.
- Use with 3/4" hex socket or 3/8" square drive.
- M18x1.5 also works on M18x1.5 spark plug threads.



144/14.0/15.0/1.6'



#### ∆'∆ 90g

### Air bag removal tool

907G5



- Airbag removal tool is used to remove driver's airbag from steering wheel on 1999-04 new bodystyle VW Passat, Jetta, Golf and Beetle.
- Mercedes-Benz, BMW (neue Modelle)



20/11.6/12.6/2'





### VW Air bag removal tool

9G0301

1-123



Air bag removal tool is used to remove driver's air bag from steering wheel on 1999-04 new bodystyle VW PASSAT, JETTA, GOLF AND BEETLE.





120/3.1/3.2/1.4'





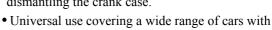


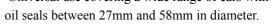
### Crank seal remover & installer kit

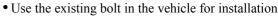
#### 920G1



• Allows the crank seal to be replaced without dismantling the crank case.







- Screw-type adapter to fit the centering.
- The blue seal adapters are made of aluminum to prevent the damage of crank.

Note: Some cam seals have screws to prevent remove. Do not attempt to use this tool by power.



10/18.0/19.0/1.8'



∆ 1750g

#### Crankshaft & camshaft seal remover and installer set

927G1



- Ideal for both crankshaft and camshaft seal.
- · Quick and easy work for both removal and installation work.
- Provided with 2 seal removers with different length and angle fits wide applications.
- Master kit includes wide size seal installers.
- Angled blade seal remover is ideal for removing seals in limited space.



### 3pc Seal puller

903G13



- Quickly and easily remove O-Ring or grease and oil seal.
- Special angle on the tool head provides a better work than traditional seal pullers.
- 3 different lengths and tips fit nearly all seal applications.
- Simple insert the tool tips, press and pull.
- Length: 165, 117, 150mm



40/10/11/1.4'









### Seal puller

#### 9G0113



- Use to remove oil and grease seals.
- Two different size tips enables this tool to accommodate most applications.



60/22.2/23.2/3'

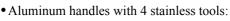
△ 375g

### 5pc Mini pick and hook set

#### 905G6



- Miniature pick set.
- Removes O-rings in line connections and inside compressors.



- 1.awl end
- 2.hook end
- 3.45° bent tip
- 4.90° bent tip



192/8.4/9.6/1.2'









#### 904U4



#### **Contents:**

904U4P1 1-Full hook 904U4P2 1-90° hook 904U4P3 1-Angel hook 904U4P4 1-Straight pick



60/18.5/19.5/2.5'



∆ 309g



### ■ 7pc Universal hook & pick set

#### 907U1



- Tools for household use, repair garages, and factories.
- For punching, marking and line-up work.
- Ideal for separating wires.
- Removing small fuses, stuck parts.
- Pull "O" rings, seals, cotter pins and brushes quickly and easily.
- Remove spring from oil burner relay boxes.
- Retrieve lost nuts, bolts, washers and tools from tight areas.
- Brake spring puller, heavy-duty spring hook.
- Heavy-duty hook and cotter pin extractor.



**10/9.7/10.7/1.3**°



∆¹∆ 970g

### 4pc Cup rocket set

#### 904T2



- This tool enables cups to be installed smoothly without scratching damage to O ring cylinders
- Available Size:

(Ø14.4mm - Ø16.0mm)(Ø15.9mm - Ø17.5mm)11/16" (Ø17.5mm – Ø19.1mm) 13/16" (Ø20.7mm – Ø22.4mm)



144/16/17.5/1.5'

∆¹∆ 11g

### ■ 7pc Cup rocket set

#### 907T1



- This tool enables cups to be installed smoothly without scratching damage to O ring cylinders
- Available Size:

9/16" (Ø14.4mm - Ø16.0mm)(Ø15.9mm - Ø17.5mm)11/16" (Ø17.5mm – Ø19.1mm) 13/16" (Ø20.7mm – Ø22.4mm) 15/16" (Ø24.0mm – Ø26.0mm) (Ø25.5mm – Ø27.5mm) 1 3/16" (Ø30.3mm – Ø32.3mm)



60/20.2/22/2.3'



1-128

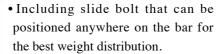


### Transverse engine supports - for General engines

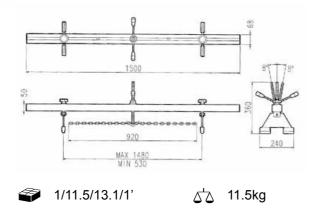
#### 9G0612



- Stradding the inner fender walls and acting as a bridge to support engines.
- Adjustable in height and width to bridge various vehicle fender walls and securely hold engine in place.



Capacity:500 kg



### Transverse engine supports - for general engines and bigger engines, multi-way

#### 9G0613



- •Special new design for 5 fixing point to be a bridge to support the engine.
- •Adjustable in height, position, width, and angle to bridge various vehicle fender walls and securely hold engine in place.
- •Total length of middle part 1510mm, width 40x40mm



1/15.5/17.0/1.1



△ 15.5kg

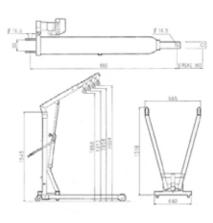


### Engine crane 1 ton

#### 9G0615



- Four position telescopic boom with forged steel grab hook.
- Quick foldable legs save shop space and prepare crane for transportation or storage within seconds.
- Four full swivel casters provide easy manoeuvering and positioning.
- New 5 ton capacity long stroke ram is designed with swivel handle to provide fast engine removal and replacement from any direction.
- Capacity:1000 kg





1/91.0/106.0/14.0



### Engine lift chain

#### 9G1511



- For removal of car and light commercial vehicle engines.
- Unique self balancing and securing link lock feature, ensures safe and non-slip lifting.
- Never exceed the maximum load of 450 kg.
- Do not attach ends more than 510mm (20") apart.



12/14.0/15.0/0.7



∆ 1080g





### Brass R12, R22 A/C & refrigeration manifold gauge (with 60" hose 1/4" SAE)



- R-12, R22 sight glass manifold with three 60" 1/4" SAE color-coded hoses.
- With sight glasses.
- High pressure:0~500 psi

0~3400 Kpa

• Low pressure:0~250 psi

0~1700 Kpa

• Vacuum:0~76 in/Hg



10/13.4/14.4/2.4

△ 1344g

### ■ Aluminum R12, R22, R134a Auto A/C manifold gauge set (with 60" hose 1/4" SAE and 2 couplers)

#### 9G4102



- R-12, R22, R134a sight glass manifold with three 60" 1/4" SAE color-coded hoses and 2 couplers.
- · With sight glasses.
- High pressure:0~500 psi

0~3400 Kpa

• Low pressure:0~250 psi

0~1700 Kpa

• Vacuum:0~76 in/Hg



10/18.9/19.9/2.4'

△ 1885g

## Aluminum R404A, R407C, R507A A/C & refrigeration manifold gauge (with 60" hose 1/4" SAE)

#### 9G4106



1-129

- R404A, R407C, R507A sight glass manifold with three 60" 1/4" SAE color-coded hoses.
- · With sight glasses.
- High pressure:0~500psi

 $0\sim35$ kg/cm<sup>2</sup>

• Low pressure:0~350psi

 $-1\sim25$ kg/cm<sup>2</sup>

• Vacuum:0~76 in/Hg



16/26.0/27.0/3.9'





### ■ Aluminum 4-way R134a Auto A/C manifold 80mm gauge set (with 60" hose 1/4" SAE and 2 couplers)



- R134a 4-way sight glass manifold with three 60" 1/4" SAE color-coded hoses and 2 couplers.
- With sight glasses.
- High pressure:0~500psi

 $0\sim35$ kg/cm<sup>2</sup>

• Low pressure:0~350psi

 $-1\sim25$ kg/cm<sup>2</sup>

• Vacuum:0~76 in/Hg

8/24.0/26.0/2.3

∆ 3000g

### Aluminum 4-way R410 A/C & refrigeration manifold 80mm gauge set (with 60" hose 5/16" SAE and 2 connector)

#### 9G4107



- R410 4-way sight glass manifold with four 60" 5/16" SAE color-coded hoses and 2 connector (1/4" SAE)
- With sight glasses.
- High pressure:0~800psi

 $0\sim55$ kg/cm<sup>2</sup>

• Low pressure:0~500psi

 $-1\sim35$ kg/cm<sup>2</sup>

• Vacuum:0~76 in/Hg

8/23.0/27.0/4.85

△ 2875g

### ■ Valve core remover & installer tool kit

#### 911G8



- •Service valve cores without losing the system charge.
- •Unique design offers a locking device that holds the shaft in place while removing or installing the valve cores.
- •Contents:
- 1. Valve assembly
- 2. Standard valve core remover / installer
- 3. GM large bore valve core remover / installer
- 4. JRA R134a valve core remover / installer
- 5. Volvo and 8mm
- 6. 2 side valve core remover / installer
- 7. 1/4" FL swivel connect
- 8. 16mm high side quick connector
- 9. 13mm low side quick connector
- 10. 1/4" x 3/16" adapter
- 11. 1/4" x 1/2" adapter
- 12. M12x1.75 FL swivel connector
- 13. H14 Wrench



Standard



JRA





### ■ Universal A/C system testing adapter

#### 958G1



- •All brass fittings.
- •All HNBR gaskets.
- •Special universal design for all systems.
- •For leak testing & flush fittings.



6/15/16/2.3'



### Scale injector

9G4111

- •Special design with scale to inject the dye and pack oil for R134a and R12 system.
- •Capacity: 1/4 oz.(7.5ml) to 2 oz.(60ml).





20/15.2/16.2/1.9'



### ■ 5pcs Auto A/C swivel adaptor kit

#### 9G4121







- •All the adaptors have been combined into a kit ideal for accessing R12 vehicle A/C system, as well as other types of system
- •Eight different adaptors are included with 1/4" fittings.
- •Two flexible adaptors: 1/4"x3/16", 1/4"x1/8"
- •Three 90° brass adaptors:1/4"x1/4", 1/4"x3/16", 1/4"x1/8"



100/25.0/26.0/1.6'







### A/C Adapters (GM)

#### 9G4122



•Applicable: The joint for GM model and most American cars.

100/4.0/4.5/0.2



### R-134a Quick coupler set

#### 9G4123



- •Including the high-side and low-side coupler.
- •Straight design suitable for confined space.



100/19.0/20.0/1.3'



### R-134a Adjustable quick coupler set

#### 9G4125



- •Inclosed the high side and low side coupler.
- •The valve core puller is adjustable to fit the different valve core.



48/19.2/20.2/1.2'



∆'∆ 400g





### A/C compressor clutch remover kit

#### 912G11

- •Replace clutches found on FS6, C171, 6P & 148 computer.
- •Also GM R4 & R6, HR-6, DA-6 & V5 A/C compressors.
- •Works on compressors of Sanden SD505, 507, 508, 510, 575, 708 and
- •2 & 3 hole puller plate fits most clutches and the mechanical force generated pulls it out.



12/15.0/16.0/1.28



### Flush kit

#### 902G20

- •Volume:1L
- •Flush solvent performs all mechanical actions required to clean out contaminated systems.
- •The cylinder is equipped with a top inlet fitting and a side outlet for connecting to compressed air lines.
- •With a gun to control on /off.



10/7/8/1.6'



### 12 Volt UV detection light

#### 902G10



- •For air condition leakage check.
- •High intensity 12 volt UV lamp.
- •Long cord for easy access .
- •Detects all dyes.
- •UV Safety Glasses Included.



20/10.4/11.0/2



# 2. Electrical / Cable



**Terminal release tool** Page 2-1 ~ 2-1



**Terminal pliers** Page 2-11 ~ 2-14



**Circuit tester tool** (AC) Page 2-21 ~ 2-22



Radio removal tool Page 2-1 ~ 2-2



Wire stripper tool Page 2-14 ~ 2-14



Cable cutter tool Page 2-23 ~ 2-24



**Battery tool** Page 2-3 ~ 2-5



**Cable stripper tool** Page 2-14 ~ 2-15



**Terminal crimping tool** Page 2-24 ~ 2-26



Circuit tester tool (DC) Page 2-6 ~ 2-11



Insulated tool Page 2-15 ~ 2-19



### 12pc Universal terminal release tool set

#### 912C1



- Easy, quick and professional repair of malfunctions due to loose contacts.
- Basic set for about 80% all plug-type connections in passenger cars for damage-free releasing of plug-type connectors, e.g. flat and round connectors.
- Universal application in the field of car electricity.
- 2-coloured plastic handles with foldable caps protecting the blades from damage and avoiding the risk of injury.
- Application: FORD, BMW, MERCEDES BENZ, OPEL, VW, FIAT, MAN, SAAB, RENAULT, DIAMLERCHRYLER, PORSCHE, PSA, SKODA, AUDI, MAZDA, TOYOTA.



10/7.7/8.7/1.1'



#### Terminal release tool set

923C1



- •Designed especially to release terminals from the plastic connectors without damaging them.
- •Release terminals on most of the body wiring connectors.
- •Applicable:suitable for most vehicles.



12/19.0/20.0/4.0'



∆ 1583g

### 10pc Radio removal tool set

#### 910C1



For: FORD/VW/AUDI;BMW; NEW BEETLE/AUDI; MERCEDES-BENZ; VW;BMW





100/10.2/11.2/0.58'





### ■ 18pc Radio removal tool set

#### 918C1



- Designed to remove radio easily without damage.
- For VW, FORD, AUDI, GRUNDIG, BLAUPUNKT, BMW, BECKER, MERCEDES-BENZ, PORSCHE, OPEL, SKODA.



100/15.4/16.4 /1.2



### 20pc Radio removal tool set

#### 920C1



- Designed to remove radio easily without damage.
- For ALFA, FIAT, VW, FORD, RENAULT, AUDI, GRUNDIG, BLAUPUNKT, BMW, BECKER, MERCEDES-BENZ, PORSCHE, OPEL, SKODA, PEUGEOT.
- For JVC, PIONEER, CLARION.



100/17.5/18.5/1.2



### 10pc Mercedes-Benz Dashboard service tool set

#### 910C3



- Removal hooks for instrument cluster on models W107, W116, W123, W124, W126, W140, and W201.
- · Removal tools for ignition lock on models W126, W124 & W201.
- Radio removal tool on model W129, W140, W202, and W210.



48/17.9/18.9/3.5'

∆ 373g



# Bulbs pliers

#### 9G0302



- Special pliers for mounting and dismounting wedge
- Use for most of the car.



120/5/6/2'





# **Battery terminal & wiper pick-up tool**

#### 9C2001



- To work for battery terminals and windshield wipers
- The tight terminals will be lifted off without damage to the battery case or posts because the sharp jaws are able to engage either below or on the sides of
- The center screw swivel also makes this puller very effective on the alternator bearings.



72/22.9/23.9/2'



# Battery terminal / alternator bearing puller

#### 9C2002



- The tight terminals will be lifted off without damage to the battery case or posts because the sharp jaws are able to engage either below or on the sides of terminals.
- The center screw swivel also makes this puller very effective on the alternator bearings.



60/23.6/24.6/1.8' ∆<sup>1</sup>∆ 393g FORGE Professional Tools

# Battery brush

#### 9U3002





- Designed for cleaning the battery terminals.
- There are two sides for using.

120/9.7/10.7/1.7'





# Battery holder

#### 9C2005



- Self locking design with rubber grip pads provide a secure grip on batteries 4-1/2" to 7" width.
- Suitable for top and side terminal batteries.
- Allow one handed lifting of battery in awkward location.
- Heavy duty zinc-plated steel construction for long life.



24/13.0/14.0/1.9



∆¹∆ 81g



# Auto memory saving kit

#### 9C2008



- Maintains the memory of car radios, clocks and computer functions when battery is disconnected.
- Simply attach a 9-volt battery and plug into cigarette
- Will retain settings up to 4 hours.
- Will not power any lights or other accessories.



144/10.0/11.0/2.1







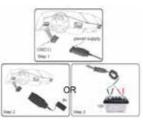
# Power backup supply

#### 903C1





- Special adapter to prevent lose any data from replacing car battery.
- Connect adapter from battery 9V Battery (not Included) or 12V Battery (not included) to OBD II Plug for Continue Power Supply.
- High visibility: LEDs display.





# **■ VW** cigarette lighter release tool

#### 9C2009





- •Used for removing 12 volt socket.
- •Application:Audi A4 2001 / Audi A4 2008/ Audi Q5 2008/ Audi A6 2005/ Audi Q7 2007.

# Battery hydrometer tester

#### 9G4005

2-5



- •Avoid dead battery and thus help to extend battery life.
- •Test battery life hot or cold, and thus help to prevent
- •Applicable: 6,12,24 volts system.





100/13/15.2/5.8"





#### Vehicle actuator tester

#### 88435







- Test electronic components by magnetic field or electronic magnetic
- Like actuator, ignition coil, AC generator, indoor air blower, spark plug, relay and hall effect sensor.
- Description: 1. Positive and Negative sensor
  - 2.Two Sensitive Level Indicator: RED LED —Strong;

Yellow LED- Weak

3. LED and buzzer indication

# Dualite high and low voltage trouble shooter

#### 88421



- Checks 6 and 12 volt system, circuit tester & spark plugs tester (two testers in one.)
- On secondary or high voltage circuits check out spark plugs.
- Checks breaks in radio resistant hook ups.
- Pin point minute cracks in distributor caps.
- Use as a continuity tester and check on low voltage circuits.
- Extra long 48-in leads.



100/5.9/6.9/2.5



∆ 59g

# Car light tester

#### 88422



- Checks 6-24V system
- Solid brass body with a test light.
- Prod tip is covered with a brass protective screw cap
- 850mm cable with an alligator clip on the end.



100/3.6/4.6/2.5







# Car light tester

88423



- Checks 6-24V system
- Solid brass body with a test light.
- Prod tip is covered with a brass protective screw cap.
- 850mm cable with an alligator clip on the end.

100/7.9/8.9/2.5'



∆ 79g

# FORGE Professional Tools

#### Automotive multi-tester

88426



- Voltage, battery, alternator multi-checker for all 12V DC systems.
- With a"Magnetic board" on the back side to fix on suitable metal sheet of car easily.
- 6 LED indicators to show battery charge situation and high or low output of alternator.



48/4.1/5.1/1.3'





# Auto battery and charging system analyzer

88424



- Checks 12 volt system
- Auto battery analyzer checks batteries, regulators and alternators.
- With LED indicator that helps pinpoint problems for fast troubleshooting.









#### Auto tester

88427



- Checks 3-48V
- Circuit tester with test lead for either passenger car or trucks.
- Checks circuit between 3~48 volt.
- LED display shows polarity.



100/8.4/9.4/3.2





# Cordless circuit tester

88425



- Detects from 3 to 28 volts.
- Safe with ECMs, sensors, transducers, airbags, etc...
- No ground wire or clip required.
- Replaceable long-life alkaline batteries included.



60/3.8/4.8/0.78'



∆ 63g



# Heavy duty circuit tester

88431



- Checks voltage 6-12-24 V system.
- 5-ft cable with spring relief.
- Tough plastic handle lights up if circuit is good.
- Heavy duty insulated alligator clip.



60/13.4/14.4/3.4'



∆ 223g







#### Circuit tester

88432

- Checks 6-12-24V
- 48-in cable with insulated alligator clip.
- Tough plastic handle lights up if circuit is good.





100/9.3/10.3/2'

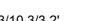


# Circuit tester for general & hybrid car

88433



- Compatible with current 12V system plus newer 42V system.
- Safe for low current circuits since tester only draws 3 milliamps at 12V.
- · Automatic voltage identification with blue for 12V and red for 42V systems.
- Two super-bright LED's for visibility under all
- New crystal-clear handle provides 360° visibility, even in bright light.







100/9.3/10.3/3.2'

#### ∆¹∆ 220g

### Terminal test kit

919C1

2-9



- Terminals include Weather-Pack, Metri-Pack, and Micro-Pack
- Use this tester to check high and low voltages ( power and ground) on 6~24 Volt system.
- Contents:

1pc Circuit Tester, wire length 12 ft.

14pc terminal adapter kit.

1pc Banana socket.

1pc Testing needle.

2pc Alligator.



20/13.0/14.0/1.62'







# Multi-functional auto circuit tester with LCD display

88444

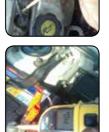


- Checks from 6V to 24V system with LCD indicator and LED illumination.
- Four modes can be selected by depressing the mode button and cycling through each one.
- Voltage meter
- Locate missing cylinders.
- Measuring rotational speed (Measuring the frequency of the high-tension ignition pulses).
- Peak Detection
- Include a Cigarette lighter adapter, a Hook-up clip, and extension 20ft lead.
- Extension Probe (85mm) included.
- Instruction manual included.



10/11.0/12.0/1.7'





# Multi-purpose connector set

#### 990C1



- When checking the parts, it could connect the back of terminal directly, would not to damage the circuit or cut the electric wires, reduce the circuit rust and avoid adding impedance.
- Apply to any Automotive Multi-meter, the extended line of prove for oscilloscope. More convenient connection and checking rapidly.
- Variable Resister can simulate the pretend signal of coolant temperature sensor, throttle valve sensor and send the pretend signal to computer.
- Equip 2 sets LED light. It can supervise hall effect, photoelectric signal, nozzle, electromagnetic valve, electromagnetic valve of transmission shift gear... and control signals.
- SRS Connector can simulate airbag and routed contracting device of safety belt to avoid accident or miss-judgment



4/11.2/12.2/2.9'









# 13pc Probe and test adaptor set

#### 913C1



- •Apply to any Automotive Multi-meter, the extended line of probe for oscilloscope.
- •More convenient connection and quicker checking .
- •When checking the electric current, only use the lines to connect the circuit, do not need to cut the electric wires.
- •Various wires in this box, it is suitable for the Europe, America and Japan terminal.
- 20/10.3/11.3/1.2' ∆ 515g

# 2pc Insulator pierce-through clip

#### 902C1



- •Applicative wire diameter: Ø  $1.5 \sim Ø 4.5$
- •Voltage range :  $0V \sim 30V$
- •Current load: Max. 5 A





- 48/5.1/6.1/2'
- ∆ 107g

#### Ratchet terminal tool kit

#### 68013



- 1pc Terminal pliers.
- 4pc Die nests.
- 1pc Wire stripper.
- 1pc Hex key wrench.
- Crimps insulation, non-insulation & open barrel terminals.
- Built-in ratchet with safety release assures uniform crimp every time.
- It releases and opens automatically when crimping is done.
- Applicable:Insulated Terminal

 $(0.5-1.0 / 1.5-2.5 / 4.0-6.0 \text{ mm}^2)$ 

**Non-Insulated Terminal** 

 $(1/2/4/6-10 \text{ mm}^2)$ 

**Open Barrel Non-Insulated Terminal** 

 $(0.5-1.0 / 1.1-2.5 / 4.0-6.0 \text{ mm}^2)$ 

**Cord-End Insulated Terminal** 

 $(0.5 / 0.75 / 1.0 / 1.5 / 2.5 / 4.0 \text{ mm}^2)$ 



# Terminal pliers red, blue, yellow



# Terminal pliers 0.5; 0.75; 1.0; 1.5; 2.5; 4



# Terminal pliers 0.5-1; 1.1-2.5; 4-6



### Crimp lever pliers

#### 6807



- Suitable for RG58, RG59/62, BNC/TNC coaxial
- Size: 0.256(6.48mm), 0.319(8.13mm), 0.068(1.73mm), 0.213(5.41mm)



30/16.5/17.5/1.5'







# ■ Terminal pliers 1; 2; 4; 6-10

68015



(The terminals are not included.)





# **Stripper pliers**

6804



Two functions:

A cutter & a stripper for electrical cables of 0.2mm<sup>2</sup> to 3.5mm<sup>2</sup> in diameter.





# Heavy duty stripper pliers

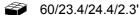
**6805** 

- Cut and strip 10-24 AWG copper or aluminum wire, solid or stranded
- Crimp 10-22 AWG insulated terminals
- Crimp 10-22 AWG non-insulated terminals
- Crimp 7-8 mm ignition terminals

60/14.3/15.5/1.7'







∆ 390g

∆ 220g

# **Multi-function stripper pliers**





- •Remove the layer and cut off the wire of AWG 10~AWG 24 (02  $\sim$  6.0 mm<sup>2</sup>), the tool will not hurt the internal lines and keep the terminal
- •Crimp 10-22 AWG ( $0.5 \sim 6.0 \text{ mm}^2$ ) insulated terminals.
- •Crimp 10-22 AWG (05  $\sim$  6.0 mm<sup>2</sup>) non-insulated terminals.
- Crimp 7-8 mm ignition terminals.



# Multi-purpose crimping tool

6806

#### **Function:**

- Wire cutter
- Crimps insulated terminals
- Bolt cutter
- Crimps non-insulated terminals (open barrel)
- Wire stripper



**40/11.7/12.7/1** 





# Cable, wire stripper

#### 68011



- Remove the layer and cut off the electrical cable
- For wire 0.8~2.6 mm
- Cable stripper for the wire under 9.5mm







# **Cable Stripper**

#### 6808



• Able to strip cable up to 4mm - 28mm(dia.).



100/10.0/11.0/1.8'



# Cable Stripper

#### 6809



• Able to strip cable up to 8mm - 28mm(dia.).



**100/11.0/12.0/2.1** 



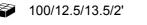


# Cable Stripper

#### 68010

• Able to strip cable up to 4.5mm - 25mm(dia.).







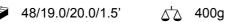
# Telecrimper

#### 68012



- Cuts, strips & crimps integral in one tool.
- With built-in length stop for precisely length
- 2 crimp functions with a single tool without changing dies.
- · Advanced ratchet system.
- Precision CNC grounded crimping teeth.
- Crimp RJ45 & RJ11 Modular plugs.





# ■ 31pc 3/8" DR. Insulated combination set

#### 3313N



#### **Contents:**

- 12pt. Flank insulated socket 6; 7; 8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 18; 19 mm
- Insulated combination wrench

7; 8; 10; 12; 14 mm

Insulated extension 150, 250 mm

Insulated ratchet handle

Screwdriver probe voltage tester 110~250V AC

Insulated combination pliers 7"

Insulated long nose pliers 6"

Insulated diagonal cutting pliers 6"

Insulated Phillips screwdriver PH.1(80mmL); PH.2(100mmL)

Insulated Slotted screwdriver 2.5(75mmL); 4(100mmL); 5.5(125mmL)









# 17pc Insulated socket set

#### 3173N



• 12pt socket

6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 mm

- Extension 150, 250 mm
- Ratchet handle



10/21.0/21.8/1.8'

∆ 2100g

# 3/8" DR. Insulated torque wrench

6473268N

• 6473268N:3/8"DR.5-25Nm



12/20.4/21.2/1.12'

∆ 1700g

# ■ 3/8"DR. 12pt. Flank insulated socket

#### 539N



		Size	1	$\Delta^{L}$
P	art no.	mm	mm	g
53	3906N	6	43	28
53	3907N	7	43	30
53	3908N	8	43	30
53	3909N	9	43	30
53	3910N	10	43	30
53	3911N	11	43	30
53	3912N	12	44	30
53	3913N	13	44	31
53	3914N	14	44	38
53	3915N	15	44	47
53	3916N	16	46	47
53	3917N	17	46	54
53	3918N	18	46	58
53	3919N	19	46	61

#### 3/8" DR. Insulated extension

#### 8043N



	l	
Part no.	mm-inch	g
8043150N 8043250N	150-6" 250-10"	160 260



# ■ 3/8"DR. Insulated ratchet handle(45 teeth)

802320N

- Length:200mm
- Weight:354g



# ■ 3/8"DR. Insulated extension T handle

7743200N



- Drive:3/8"
- Length:207mm
- Weight:400g

# Insulated open end wrench

**829** 



	Size	l	$\triangle \triangle$
Part no.	mm	mm	g
82907 82908 82910 82912 82914 82917	7 8 10 12 14	89 99 114 134 155 190	20 26 40 61 96 147

# Insulated 75° offset ring wrench

829A



	Size	l	$\Delta \Delta$	
Part no.	mm	mm	g	
829A07	7	147	52	
829A08	8	156	62	
829A10	10	167	73	
829A12	12	188	90	
829A14	14	199	135	



# **■** Fully insulated adjustable wrench

649M



		1	
Part no.	packing	mm	g
649M200 649M250 649M300	40/13.6/16.5/1.2' 24/15.4/16.9/1.1' 16/16/17.5/1.05'	200 250 300	320 640 980

# Insulated adjustable wrench

649N



		l	$\triangle$	
Part no.	packing	mm	g	
649N200 649N250 649N300	64/18.2/19.2/0.81' 32/16.6/17.6/0.7' 16/15.4/16.9/1.1'	200 250 300	285 520 920	

# Insulated knife

830



83001

		l	$\Delta \Delta$
Part no.	Shape	mm	g
83001 83002	Straight Curved	150 150	145 148



83002

2-18



#### 2182N

#### 18pc Insulated screwdriver & pliers set

♠ Insulated Phillips screwdriver PH.0(60mmL); PH.1(80mmL); PH.2(100mmL); PH.3(150mmL)

■ Insulated slotted screwdriver

2.5mm(75mmL); 3mm(100mmL); 3.5mm(100mmL); 4mm(100mmL); 5.5mm(125mmL); 6.5mm(150mmL); 8mm(175mmL)

Insulated combination pliers 7"

Insulated long nose pliers 8"

Insulated diagonal pliers 8"

Insulated wire stripper pliers 6"

Insulated cable cutter 6"

Multi-purpose crimping tool

Universal voltage tester Testing range: 6~400V AC/DC



#### 3262

#### 26pc 3/8" DR. Insulated socket set

• 12pt. Flank insulated socket

6; 7; 8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 18; 19 mm

- Insulated combination wrench
- 7; 8; 10; 12; 14 mm

Insulated extension 150, 250 mm

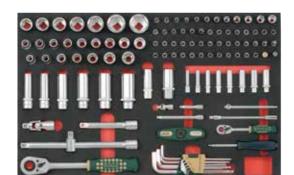
Insulated ratchet handle

Insulated T-handle

Insulated torque wrench 5~25 Nm

Insulated cable knife (straight)

Insulated cable knife (curve)



#### 41161

#### 116pc 1/4" & 1/2" DR. Socket set

Contents: 1/4" & 3/8" & 1/2"DR.

- 1/4" part
- for the first of t

4; 4.5; 5; 5.5; 6; 7; 8; 9; 10; 11; 12; 13 mm

fopt. Flank deep socket (50mmL) 6; 7; 8; 9; 10; 11; 12; 13 mm

Star socket E4; E5; E6; E7; E8; E10

- Socket bit (32mmL)
- Phillips PH.0; PH.1; PH.2; PH.3
- Pozidriv PZ.0; PZ.1; PZ.2; PZ.3
- Slotted 3; 4; 5.5; 6.5 mm
- O Hex 3; 4; 5; 6; 7; 8; 10 mm
- Star T8; T10; T15; T20; T25; T27; T30; T40
- **②** Star tamper T-8H; T-10H; T-15H; T-20H; T-25H; T-27H; T-30H; T-40H

20 teeth ratchet handle

48 teeth T mini ratchet handle

Sliding T handle

Extension 2" & 4"

Flexible extension 145mmL Spinner

Universal joint

- Magnetic socket pick-up
- 1/2" part fot. Flank socket

10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22; 24; 27; 30; 32 mm

- for the first firs
- 14; 15; 17; 19; 22; 24 mm

Star socket

E12; E14; E16; E18; E20; E22; E24 36 teeth ratchet handle

Extension 5" & 10"

Universal joint Adaptor for ext. 3/8"(F)x1/2"(M)

- Spark plug socket 16; 20.6mm
- Others:
- O Hex ball point long key

1.27; 1.5; 2; 2.5; 3; 4; 5; 6; 8; 10mm

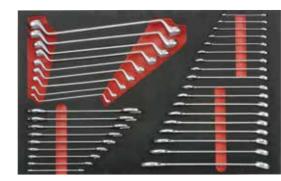


**10217A-266** 

**10217B-266** 

■ 10217R-266





#### 5363

#### 36pc Automotive essential wrench set

• Double open end wrench

6x7; 8x9; 10x11; 12x13; 14x15; 16x17; 18x19; 20x22; 21x23 mm

- · Combination wrench
- 6; 7; 8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 20; 21; 22; 24 mm
- 75° offset ring wrench

6x7; 8x9; 10x11; 12x13; 14x15; 16x17; 18x19; 20x22; 21x23 mm



#### 5212

#### 21pc Utility set

Utility knife (3pcs blade incl.)

5m measuring tape

Chisel 12mm (150mmL)

Ribbed chisel 21mm (150mmL); 26mm (200mmL)

Cape chisel (150mmL)

Pin punch 2mm (140mmL); 3mm (150mmL); 4mm (190mmL)

5mm (200mmL); 6mm (210mmL); 8mm (215mmL)

Tape punch 3mm (185mmL)

Center pinch 4(185mmL)

Engineer hammer 300gw Rubber hammer 400gw

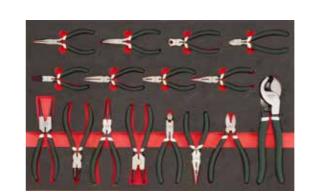
3-in-1 Magnetic fl exible pickup tool

26 sizes Feeler gauges (SAE & Metric)

LED white light, clip-type (360° rotation)

Technician's scissors 145mmL

Gasket scraper



# 51610

#### 16pc Pliers set Round nose pliers 5"

Flat nose pliers 5" Combination pliers 5" Long nose pliers 5" Needle nose pliers 6" Bent nose pliers 6" Cutter pliers 6" Diagonal pliers 6" Circlip pliers External straight tip 1.8mm for opening Internal straight tip 1.8mm for closing External 90° Bent tip 1.8mm for opening Internal 90° bent tip 1.8mm for closing 4-in-1 Electrical pliers 6" Diagonal cutting pliers 6" Cable cutter 10" Plastic cutting pliers 6"



#### 4341

#### 34pc 1/2" DR. Impact socket & Wheel nut tools

6pt. Flank impact socket

10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22; 23; 24 mm

6pt. Flank impact deep socket

10; 12; 13; 14; 16; 17; 19; 21; 22; 24 mm Wheel nut 6pt. Flank impact socket (colored)

17; 19; 21; 22 mm Impact wrench

Impact extension 5"

Universal joint (ball type) 1/2" Torque wrench

Foldable cross-handle socket wrench

17; 19; 21; 1/2" square (16"L; 400mmL) Wheel balancing weight tool

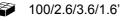


# Induction circuit tester

2125P1

• Non-contact wire tracer







# Screwdriver probe voltage tester

88401

- Testing range: 110~250V AC.
- Length:140mm









# Screwdriver probe voltage tester

88402

- Testing range: 110~250V AC.
- Length: 190mm



200/9.6/10.6/4.6



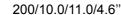
# Screwdriver probe voltage tester

88403

- Testing range: 110~250V AC.
- Length:155mm













# Screwdriver probe voltage tester

88404

• Testing range: 110~250V AC.

• Length:190mm





100/6.8/7.8/4.6"





# Adjustable non-contact wire tracer

88407



- Testing range: 12~600V AC 50~60HZ.
- Locates breaks along live, insulated wires and power cords.
- Adjustable sensitivity allows tracing of wires behind walls, around switches or receptacle.
- Easy to recognize by audio signal and LED indicator.
- Operates by two LR44, 1.5V batteries included.



# Universal voltage tester

88408



• Testing range: 6~400V AC / DC.

100/5.4/6.4/1.3

- This voltage tester is designed for industrial purposes and hobbyists and is suitable for domestic voltage and heavy current circuits.
- Display: ± 6, 12, 24, 50, 120, 220 400V AC / DC=LED (ED): 30sec I max: 30mA



60/8.5/9.5/2.7









#### Cable cutter

6926315

- •For cutting copper and aluminum cable up to 100 mm<sup>2</sup>.
- •Length: 315 mm.



**20/14/15.5/1.4'** 

∆ 700g

### Cable cutter

6926600

- •For cutting copper and aluminum cable up to 250 mm<sup>2</sup>.
- •Length: 600 mm.



10/17/20.5/2.2'

∆¹∆ 1700g

# **Cable cutter**

6926800

- •For cutting copper and aluminum cable up to 500 mm<sup>2</sup>.
- •Length: 800 mm.



5/14.5/17/1.66'

∆ 2900g

# Ratcheting cable cutter

6926R255

- •For cutting copper and aluminum cable up to 325 mm<sup>2</sup>.
- ·Length: 255 mm.





30/20/21.7/2'



∆ 667g



# Ratcheting cable cutter

6926R280

- •For cutting copper and aluminum cable up to 500 mm<sup>2</sup>.
- •Length: 280 mm.



20/19.6/21.6/1.2'

∆ 980g

# Ratcheting cable cutter

6926R400

- •For cutting copper and aluminum cable up to 500 mm<sup>2</sup>.
- •Length: 400 mm.



15/18.4/19.4/1.86'

∆ 1227g

# Terminal crimping tool

68051

- •Copper tube terminal range: 1.5,2.5,6,10 mm<sup>2</sup>. (DIN)
- •Non-insulated terminal range: 1.25, 2, 5.5, 8 mm<sup>2</sup>. (JIS)
- ·Length: 270 mm.



30/14.4/18/1.4'

∆¹∆ 480g

# Terminal crimping tool

68052

- •Copper tube terminal range: 1.5, 2.5, 6, 10, 16 mm<sup>2</sup>. (DIN)
- •Non-insulated terminal range: 1.25, 2, 5.5, 8, 14 mm<sup>2</sup>. (JIS)
- ·Length: 298 mm.





30/15.6/19.4/1.4'

∆ 520g

# Terminal crimping tool

68053

- •Copper tube terminal range: 6, 10, 16, 25 mm<sup>2</sup>. (DIN)
- •Non-insulated terminal range: 5.5, 8, 14, 22 mm<sup>2</sup>. (JIS)
- •Length: 354 mm.





30/23/28/1.66'



# Terminal crimping tool

68055

- •Copper tube terminal range: 6, 10, 16, 25, 38 mm<sup>2</sup>. (DIN)
- •Non-insulated terminal range: 5.5, 8, 14, 22, 50 mm<sup>2</sup>. (JIS)
- ·Length: 375 mm.





25/22/26/2.1'



# Terminal crimping tool

68056

- •Copper tube terminal range: 16,25,50,70,95 mm<sup>2</sup>. (DIN)
- •Non-insulated terminal range:14,22,38,60,80 mm<sup>2</sup>. (JIS)
- •Length:660 mm.



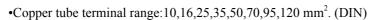


5/17.7/19.4/1.14'



# **Terminal crimping tool**





- •Non-insulated terminal range:8,14,22,38,60,70,80,100 mm<sup>2</sup>. ( JIS)
- ·Length: 573 mm.



5/15/16.4/0.64'





# Terminal hexagonal crimping tool

68071

•Copper tube terminal range:10,16,25,35,50,70,95,120 mm<sup>2</sup>. (DIN)

•Length:650 mm.



5/15.5/17.5/1.9'



∆ 3100g

# Terminal hexagonal crimping tool

**68072** 

•Copper tube terminal range: 25,35,50,70,95,120,150 mm<sup>2</sup>. (DIN)

•Length:650 mm.





5/15.5/17.5/1.9'



# Hydraulic terminal crimping tool

### 68081



- •Designed to accommodate hexagonal, dies of hydraulic tools for applying compression fittings to copper conductors.
- •Copper tube terminal range:50 ~ 400 mm<sup>2</sup>
- •Accessories:50,70,95,120,150,185,240,300,400 mm<sup>2</sup>.
- Crimping force:12T









# 3. Brake / Transmission



**Brake tool** Page 3-1 ~ 3-15



Axle puller tool
Page 3-34 ~ 3-35



Shock absorber tool Page 3-47 ~ 3-52



Wheel tool
Page 3-16 ~ 3-26



Vibro chisel tool Page 3-36 ~ 3-36



Propeller shaft tool Page 3-53 ~ 3-57



Axle bush/wheel hub tool Page 3-26 ~ 3-32



**Ball joint tool** Page 3-36 ~ 3-45



Oil drain machine / tank Page 3-58 ~ 3-63



Bearing race / Seal driver tool Page 3-32 ~ 3-33



**Tie rod tool** Page 3-45 ~ 3-46



**Tailpipe tool** Page 3-64 ~ 3-65



Camber adjustment tool Page 3-65 ~ 3-65



**Transmission tool** Page 3-66 ~ 3-68



**Jack**Page 3-69 ~ 3-69



# 6pc Brake spanner set

#### 50612



#### **Contents:**

	o-brake spanner
6080610	1/4"Sq 10mmSq.
6080608	1/4"Sq 5/16"OE
6080810	8mmHex - 10mmHex
6080911	9mmHex - 11mmHex
6080607	1/4"Hex - 7mmHex

7/16"OE - 11/32"Sq.

6081109

30/17.8/18.8/1.3

∆¹∆ 593g

1 1 1

# Brake spanner

#### 608



		l	$\triangle \triangle$	
Part no.	Size	mm	g	pc/box
6080610	1/4"Sq10mmSq.	175	82	10
6080608	1/4"Sq5/16"OE.	175	84	10
6080810	8mmHex10mmHex.	175	82	10
6080911	9mmHex11mmHex.	175	87	10
6080607	1/4"Hex7mmHex.	175	84	10
6081109	7/16"OE11/32"Sq.	175	85	10
6081114	7/16"OE9/16"OE.	175	102	10
6081113	11mmOE13mmOE.	175	103	10
6081011	10mmOE11mmOE.	175	92	10

# **Drum brake spring pliers**

### 9B0101



- One end hooks on the spring, the floating cap with hooks grips.
- On the lining fastened to the brake shoe.
- Use for two brake return spring system.
- Can use for most of the commercial and industrial vehicles.



36/18.0/19.0/2.5'



#### ∆ 500g

# **Brake spring pliers**

#### 9B0102



- Designed by professional mechanics to remove and replace springs.
- Thin narrow points with "Straight-In-Line" pull on spring.
- Includes special socket for application on all hydraulic brakes.



**24/9.8/10.8/1.6**°





# Handbrake cable spring pliers

# 9B0104



- For compression of the retaining spring on the handbrake cable.
- This tool allows quick and problem-free removal and installation of the handbrake cable.
- Application: VW, AUDI, BMW, CITROEN, NISSAN, PEUGEOT, RENAULT, ROVER, SEAT





72/16.4/17.4/1.6



# Drum brake spring pliers

#### 9B0105



• Designed to remove the brake return spring. One end grips on the brake lining and the other hooks on the spring.



72/20.0/21.0/1.2





# Headlight adjusting and brake spring hook

# 9B0304



• This tool made from heat-treated alloy steel is especially designed for removing and installing hard-to-reach headlight adjusting and brake springs.





120/9.0/10.0/1.7







# Brake spring washer pliers

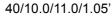
#### 9B0107



- Universal application for nearly all drum brakes.
- Special neck angle provides easy removal and installation of brake spring washer.
- Length:180.5mm.
- Heat treatment:HRC43°~46°.
- Max Angle:50°.









# **Brake spring pliers**

#### 9B0109





- To remove or install the brake shoes, the brake shoe retaining spring must be pre-tensioned.
- •Suitable for Mercedes A-Class, Citroen, Renault, Peugeot with Lucas drum brake on the rear axle. Also used on Land Rover, Ford, Honda, etc.





72/18.5/19.5/1.6'



# Brake spring tool

#### 9B0108



- Universal application of both removal and installation for nearly all drum brakes.
- Wide angle application.
- Length:310mm.
- Heat treatment:HRC42°~45°.



#### 20/9.5/10.5/2.0'

#### ∆¹∆ 375g

# Retainer spring compressor

#### **9T0202**

• Allow fast & easy removal & replacement of brake shoe hold-down springs.





96/17.0/18.0/2'





# Retainer spring tool

#### **9T0203**



- For removal and installation of retaining springs on such drum brakes where the brake pads are not fixed onto the anchor plate.
- Therefore the retaining spring will be inserted into the hook head of the tool and will be tightened by winding the handle.
- The installation happens by pulling the retaining spring with the tool into the correct position.



**72/7.3/8.3/1.3**°





# **4pc Drum brake piston locking pliers set**

#### 904B1



- Set of four pliers for locking drum brake pistons.
- Both ends hold pistons in cylinders, making it easier
- When the drum brake is taken off, it can prevent the piston oil from returning and thus avoid the piston damage.



48/16.5/17.5/3





# Brake shoe adjustor tool

# 9B1701



- Can be used for most of cars.
- Make adjusting easy even for strong springs.





100/19.0/20.0/2'





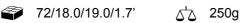


# 8pc Manual brake gauge set

#### 908B2



- The brake gauge tool is designed to give customers an accurate measurement of how much brake lining is left without guess work.
- Most state agencies require that the customer be notified of how much brake lining is left in order to suggest that the lining should be replaced.
- The technician must refer to the OEM manufacturer specifications to determine if the lining is worn below minimum specifications.
- · Size including: Red (Bad): 2mm (0.0787"); 3mm (0.1181") Yellow (Dangerous): 4mm (0.1575"); 5mm (0.1969"); 6mm (0.2362") Green(Good): 8mm (0.3150"); 10mm (0.3937"); 12mm (0.4724")



# **Brake lining gauge**

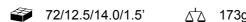
#### 9B1801



• Measures brake lining from o to 1/2" in 1/64" graduations.

#### **Instructions:**

- Apply jaws to brake shoe. Keeping jaws on shoe, move the indicator arrow to "O". This will automatically subtract the shoe thickness from the total measurement.
- · Apply jaws to shoe and lining. The arrow will indicate the amount of lining remaining.

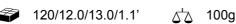


# Tire tread and brake lining gauge

#### 9B1802



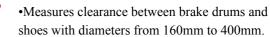
- Used to measure the amount of lining remaining on riveted and bonded drum shoes and disc brake pads.
- Measures tire tread depth up to 9/16" in graduations of 1/64".
- Checks pads without having to remove caliper completely.



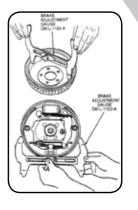
# Brake shoe adjustment gauge

#### **9T0107**





- •Works on most small cars with drum brake prior
- •Inside calipers measure drum diameter.
- •Outside Calipers transfer measurement to brake





96/17.0/18.0/2



# Gauge for brake disc depth & tire tread

#### 9T0106



- · Handy, easy to use.
- Special device to fix the value you obtain while measuring the thickness of brake disc.
- Brake disc measure range:  $0 \sim 60$ mm.
- Measure tyre depth.
- Aluminum made.



48/12.0/13.0/1.2



# Tire tread depth gauge with led buzzer reminder

#### 9B1803



- •This is a new design tire tread depth gauge, it has indicator bar that calibrated for measurement.
- •The contact tip is profiled to work in narrow spaces between tread.



- That can warning the tire tread depth is not enough to keep using this tire and you'll hear the "beep" and led will light, so you can easy to know the tire tread depth is good or not.
- •You can set the gauge that you'd like to measuring calibration, then put the tip to tire tread, it's easier to know the tire tread depth, and you don't stoop and read the gauge hard.



48/12.0/13.0/1.2'









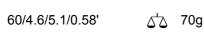
# Brake air-leaking valve

#### 9B3501



• Designed to release air bubbles inside slave cylinder after replacement to make safe, efficient braking.







#### Brake fluid tester and bleeder tool set

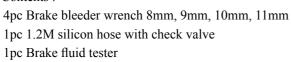
#### 906T7





•Ideal for bleeding brake system and hydraulic clutch system without removing the wheels.







#### **Brake fluid tester**

#### 88502



- 5 LED to indicate percentage of water in the brake fluid
- Application:Brake fluid DOT 4
- LED display:

Green: Battery OK/NO water is detected.

Green/Yellow: Less than 1% of water.

Green/Yellow/Yellow: Approx 2% of water.

Green/Yellow/Yellow/Red: Approx 3% of water.

Green/Yellow/Yellow/Red/Red: At least 4% of water.



100/7.0/8.0/1.5'



Brake fluid tester

- •To check the quality of brake fluid.
- •5 LED to indicate percentage of water in the brake fluid.
- •Suitable for DOT3, DOT4, DOT5.1 and 5 different brands: AC Delco, PENNZOILI, Prestone, Motorcraft, TOYOTA.
- •LED display: Green: Battery OK/NO water is detected. Green/Yellow: Less than 1% of water.

Green/Yellow/Yellow: Approx 2% of water. Green/Yellow/Yellow/Red: Approx 3% of water.

Green/Yellow/Yellow/Red/Red: At least 4% of water.

# Master cylinder pressure test kit (brake & clutch)

#### 914B2

88503



- · Verify master cylinder operation.
- You can check the following problems: bypassing and internal leaks, restricted compensating ports, improper push rod adjustment and power booster problems.
- One 0-3,000 PSI gauge, 11pc adaptors, one 90° elbow fitting, one 45° elbow fitting.



6/8.7/9.7/2.6





# Deluxe brake pressure test kit

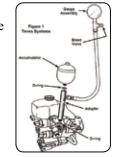
#### 924B2



- Kit contains a complete set of fittings and gauges for pressure testing ABS and conventional brake systems on Chrysler, Ford, GM, Jeep, and import
- Dual scale dial-standard scale 0-3,000 psi and metric scale 0-200 kg/cm2. 4,500 psi rated pressure hose assembly.
- Includes 20-piece adaptor, one 90° elbow fitting, one 45° elbow fitting.











# Brake calliper guidance thread repair set

#### 914B1



- For repairing the guide pin threads in the wheel bearing housing.
- With disassembly of guide pins while changing the brake pads the internal threads are frequently



- The defective threads are repaired professionally and quickly with a heavy duty rustproof high-grade steel threaded bush.
- Applicable: VW, AUDI

36/17.0/18.0/1.2'

∆ 470g

# 5pc T-handle with reamer for ABS sensor

905T9



• A specifically-designed reamer set complete with 1/4" Drive T-bar handle and complete with 4 popular-sized reamers.



14 x 42.5L BMW E38/E39/E52/E60/E61/E63/E64/E65/ E66/ E67/E70/E71

15 x 33.5L Mercedes Benz A-class, Mazda ,TOYOTA and Ford

18 x 31.5L VW, AUDI, SEAT, SKODA, BMW E36+E46 18 x 42.5L VAG and NFZ



48/12.0/13.0/1.2'



# 3pc 1/2"DR. Pentagon socket set

4036

3-9



- •1-Pentagon socket bit 10mm (55mmL)(65001)
- •2-Pentagon socket:14; 19 mm(65014, 65019)
- •For using on grling and bendix brake systems.
- •Application:Opel / Vauxhall (Astra G, Zafira), Smart , Ford, Mazda, Peugeot, Renault



60/14.8/15.8/0.5'



△ 246g

# 1/2"DR. Pentagon socket 14mm / 19mm

#### 65014 / 65019





- 14mm : for pentagon brakes on rear brake, Opel Astra G, Zafira, Smart
- 19mm : for Bendix brakes, Citroën, Peugeot, Renault

# 1/2" Pentagon socket bit 10mm side

#### 65001



• Application on girling brakes.

		l	$\triangle$	
Part no.	bit	mm	g	pc/box
65001	0	55	94	10

# Calipers brake pad screw socket for PORSCHE & AUDI

#### 9B0402



- 1/2" DR x 16mm x 38mm L (10 point)
  - For removal of the calipers brake pad screw for Porsche Cayenne/Audi Q7



∆ 50g

### Brake caliper file

#### 65816



- •For removing dust, rust and dirt from brake Calliper groove.
- •width:10 mm
- •Length: 270 mm





# Disc brake pad spreader

#### 9B0401



- Designed for quick and easy changing of disc brake
- Spreader will compress inner pad and reset piston for easy pad replacement in heavy-duty construction.



#### 24/7/8/2'

# Disc brake adjuster

#### 62901



Fits in brake caliper to push back pistons for new brake pads installation.



20/22.1/23.1/1.3'

∆ 1100g

∆ 245g

# Disc brake piston compressor (4 pistons)

#### 62902



- Special wider pusher design to use on 4 pistons vehicle.
- Max. working range: 88mm
- Applicable: BENZ, BMW, and 4 pistons vehicle.



8/13.4/14.4/1.1

∆ 1675g

# Brake piston wind back pads

#### 903B1



- •Brake pad range:  $0 \sim 100$  mm.
- •The pad open jaw:  $10 \sim 90$  mm.



24/7/8/2'

∆ 245g

# 2&3 Pin brake piston rewind tool (clockwise/counterclockwise)

#### 907B1





- This tool kit allows you to rewind the pistons in brake
- It does this by allowing the rotation of the piston at the same time as pushing the piston back into the caliper.
- Spindle Spanner for right and left according to the Factory
- The correct parts to fit nearly all cars including Alfa Romeo, Audi, Citroen, Ford, Honda, Jaguar, Land Rover, Mazda, Mercedes, Mini, Mitsubishi, Nissan, Lancer, TOYOTA, VW, VOLVO, VAUXHALL and others!

# 3pc Brake adaptor set (adjustable)

#### 65821



- •Two adjustable brake caliper rewind adaptors 2 pin
- Includes magnetic 2 pin drive to 3/8"DR. adaptor.
- Adjustable 2 pin adaptor fits 100s of cars.
- Adjustable 3 pin adaptor only to be used with Electronic Park Brake (EPB) tools.
- Applications include: Audi, BMW, Iveco Daily, Renault, Range Rover Evoque, Seat, Volkswagen, Volvo





48/15.2/16.2/0.84'



# Brake caliper rewind tool kit

#### 909T6





- Professional reset of the rear axle and front axle brake pistons.
- •Contents:
- 1pc Two ways speedy brake adaptor driver
- 1pc 3 pins adjustable brake adaptor (rear axle)
- 1pc 2 pins adjustable brake adaptor (rear axle)
- 1pc Pressure turn device
- 1pc Reaction plant
- 1pc Brake adaptor (front axle)
- 3pc Brake caliper pin punch 4; 5; 6 mm









#### Disc brake service kit

#### 912T6







#### •Contents:

1pc Two ways speedy brake adaptor driver

1pc 3 pins adjustable brake adaptor (rear axle)

1pc 2 pins adjustable brake adaptor (rear axle)

1pc Pressure turn device

1pc Reaction plant

1pc Brake adaptor (front axle)

3pc Brake caliper pin punch 4; 5; 6 mm

1pc Flat file for brakes

1pc Magnetic base

1pc Dial gauge

1pc Gauge for brake disc depth



# 27pc Brake piston wind-back set

#### 927B1



- This tool has been designed to drastically reduce the time taken when dismantling brakes.
- Will not mark or damage the working part of piston.
- Removes frozen pistons with ease.
- Applicable: ALFA ROMEO, CITROEN, FIAT, VW, AUDI, FORD, ROVER, LINCOLN, NISSAN, SUBARU, HONDA, BMW, MITSUBISHI, TOYOTA, PEUGEOT, OPEL, RENAULT, JAGUAR, MAZDA, VOLVO, VAUXHALL, SAAB, LANCIA



6/26/27/1.7



# 7pc Brake caliper piston tools set

#### 658





- Kit comprises main body, screw assembly, special locating plate and 5 adaptors covering wind-back.
- Applicable: VW, AUDI, FORD, PEUGEOT, ROVER, NISSAN, SUBARU, HONDA, BMW, MITSUBISHI, TOYOTA, JAGUAR, MERCEDES, MAZDA.



12/16.3/17.3/1.3'





# 13pc Disc brake park caliper tools set

#### 65802



• For rotating pistons back into the caliper to provide clearance for new pads. Include 11 adaptors (available individually) for use in both 2 and 4-wheel rear disc brake assemblies of most domestic and import cars. The tool may be used "on" and "off" the car.



- Suitable for: MERCEDES, BMW, VW, GM, AUDI, FORD, HONDA, SUBARU, MAZDA, NISSAN, MITSUBISHI, TOYOTA, ROVER, 4WD, OPEL, RENAULT.

10/20.1/21.1/1.8



 $\triangle^{\dagger}$  2kg

# 18pc Universal caliper wind back kit

#### 65805



- Two bodies with postive thread and negative thread for different vehicles.
- With one plate and fifteen adaptors to fit most of the cars.
- Applicable: Citroen, AUDI, FIAT, FORD, ISUZU, HONDA, JAGUAR, BMW, NISSAN, MITSUBISHI, VW, SAAB, MAZDA, TOYOTA...etc.



10/25.5/26.5/1.87



# 16pc Air powered brake caliper wind back tool set

#### 65815



- Air Pressure: The range of normal using pressure is  $5 \sim 8 \text{ kg/m}^2$ ; maximal using pressure is  $14 \text{ kg/m}^2$
- Applicable: Citroen, AUDI, FIAT, FORD, ISUZU, HONDA, JAGUAR, BMW, NISSAN, MITSUBISHI, VW, SAAB, MAZDA,. TOYOTA...etc.





**5/15.7/16.7/2**°







# Brake caliper tool

#### 65803



- For rewinding the piston in all collets type disc brake calipers with built-in parking mechanism.
- Essential for fast and easy pad replacement and caliper servicing.
- Suitable for: FORD, HONDA, JAGUAR, MAZDA, MITSUBISHI, NISSAN, ROVER, SUBARU, TOYOTA, with ABS.



30/21/22/0.9'

∆ 700g

# Disc brake park caliper tool

#### 65804



- This tool set is a "must" when installing new brake pads on vehicles with 4 wheel disc brakes.
- Rotate the tool on the parking brake actuator to retract the piston.
- Works on most GM vehicles with 1 1/2" brake pistons, most Ford vehicles, Pontiac Fiero, and imported vehicles.



24/16.6/17.6/3'

∆ 691g

# Universal caliper piston remover

# 907T3



- Quick change design for 3 sizes of adapter
- Rang from 25mm to 35 mm
- Adapter a. range from 35mm to 45mm.
- Adapter b. range from 45mm to 55mm.
- You can easily take out the piston with assistant handle.



18/18.0/19.0/1.8'



∆ 1000g

# Rim wrench

#### **677**



		l			O.D.
Part no.	Size	mm	g	pc/box	mm
6771921	19x21	300	1000	5	16
6771924	19x24	300	1020	5	16
6772123	21x23	300	1100	5	16
6772224	22x24	400	1300	5	19
6772427	24x27	400	1320	5	19
6772432S	15/16x1-1/4	400	1330	5	19
6772730	27x30	400	1330	5	19
6772732	27x32	400	1380	5	19
6772733	27x33	400	1400	5	19
6772833	28x33	400	1410	5	-
6773032	30x32	400	1440	5	19
6773033	30x33	400	1440	5	19
6773233	32x33	400	1495	5	19
6773238	32x38	400	1535	5	19
6773821	38x21sq.	400	1520	5	25
6773822	38x22sq.	400	1520	5	25
6774121	41x21sq.	400	1550	2	25
6774121L	41x21sq.	450	1800	1	25

#### Wrench bar

**677** 

		l		
Part no.	O.D.	mm	g	packing
67701	19mm	630	1400	15/21/22/0.32'
67702	25mm	630	2420	10/24/25/0.32'
67701400	19mm	400	890	25/22/23/0.2'
67703	16mm	400	630	30/18.9/19.9/0.2'

# Foldable cross-handle socket wrench

**681** 



Socket size: 17mm; 19mm; 21mm; 1/2" square

Folded	
C	

		1	
Part no.	packing	length	g
681400 681500	12/17.9/18.9/1.2' 10/17.6/18.6/1.1'	16"(400mm) 20"(500mm)	1490 1760



# Assembly wheel nut wrench

#### 681A300



- 17mm; 19mm; 13/16"; 1/2"DR. (300mmL)
- Chrome vanadium alloy steel
- For most car wheel nuts in metric
- Polished, chrome plated



20/22.2/23.2/0.63

∆ 1110g

#### Wheel nut wrench

#### 681B400



- 17; 19; 21; 22 mm with 1/2"DR. Adapter (400mmL)
- Chrome vanadium alloy steel
- For most car wheel nuts in metric
- Polished, chrome plated





12/18.6/19.6/0.97



# 1/2"DR. Quick power wheel nut ratchet handle

#### 681D515



- •Removes stubborn wheel nuts quickly and easily.
- •Torque multiplier increases torque by 3.5 by using the lever arm.
- •The lever arm should never be used to tighten nuts due to the possibility of over tightening.
- •Length:515 mm





10/23.0/24.01.1



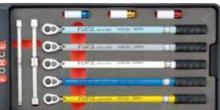
# **9pc Wheel specialized torque tool set**

#### 64707

Content: 1/2" DR.

6474 088N...190N 5- Torque wrench

88; 108; 135; 163; 190 Nm



44585 17C...21C 3-Wheel nut 6pt. flank impact socket (85mmL)

17; 19; 21 mm

681A300

1-Assembly wheel nut wrench

17; 19; 13/16"; 1/2"DR. (300mmL)

1/12.4/13.4/0.85'



∆ 12.4kg

# 1/2"DR. Wheel nut 6pt. Flank impact socket w/plug

#### 445120...





		l			
Part no.	Size	mm	g	pc/box	
44512017	17	120	264	10	
44512019	19	120	306	10	
44512021	21	120	348	10	

# 3pc 1/2"DR. Wheel nut impact socket set

#### 4032



Contents: 1/2"DR.

44585 17C...21C

3-Wheel nut 6pt. flank impact socket 17; 19; 21mm (85mmL)

Socket

24/22.3/23.3/1.1

△ 930g

# 3pc 1/2" DR. 6pt. Flank impact thin-wall deep socket set

#### 4032TH



Contents: 1/2"DR.

44585 17TH...21TH

3-6pt. Flank impact thin-wall deep socket

17, 19, 21 mm









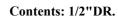




# 1/2"DR. Wheel nut 6pt. Flank impact socket w/plug

4037





3-Wheel nut 6pt. flank impact socket 17; 19; 21mm (120mmL)







# 3pc 1/2"DR. Wheel nut impact deep socket set

4033



Contents: 1/2"DR.

445150 17C...21C

3-Wheel nut 6pt. flank impact socket 17; 19; 21mm (150mmL)





20/25/26/1.3'

∆ 1250g

# 3pc 1/2" DR. Hydraulic dual torque impact socket set

4035



• Designed for fastening the lug nut quickly and securely.

- It includes 1/2" DR. 17, 19 and 21mm for ultra thin type.
- Torque range: 115Nm±6% (85ft/lbs±6%) Set up the working air pressure at 90 Psi. (6.2 bar; 6.3kg/cm<sup>2</sup>; 62pa), and ensure the power deliver of the impact wrench between 190~210 Nm. (140~155ft/lbs)



Loosen







**24/30/31/1.1**°

∆ 1250g

# 4pc 1/2" DR. Hydraulic dual torque impact socket set

4045



- Designed for fastening the lug nut quickly and securely.
- It includes 1/2" DR. 17, 19, 21 and 22mm for ultra thin type.
- Torque range: 115Nm±6% (85ft/lbs±6%)
- Set up the working air pressure at 90 Psi. (6.2 bar; 6.3kg/cm<sup>2</sup>; 62pa), and ensure the power deliver of the impact wrench between 190~210 Nm. (140~155ft/lbs)













12/19.0/20.0/0.75'



∆<sup>1</sup>∆ 1583g

# 4pc 1/2" DR. Wheel nut 6pt. flank impact socket set

#### 4046



Content: 1/2"DR.

44585 17C...22C 4-Wheel nut 6pt. flank impact socket

17, 19, 21, 22mm

Socket



12/13.8/14.8/0.75

∆ 1150g

# 4pc 1/2" DR. Wheel nut 6pt. flank impact socket set

#### 4046A



Content: 1/2"DR.

44585 15C...21C

4-Wheel nut 6pt. flank impact socket 15, 17, 19, 21mm

Socket



12/13.7/14.7/0.75

∆ 1141g

# 4pc 1/2" DR. Wheel nut 6pt. flank impact socket set

#### 4046B



Content: 1/2"DR.

44585 17C...23C

4-Wheel nut 6pt. flank impact socket 17, 19, 21, 23mm





12/16/17/0.87





# 11pc 3/4"DR. Truck wheel impact socket set

#### 6113



#### Content: 3/4" DR.

46190 17...21 46190 13.16 465100 33...41

2- Square impact deep socket 17; 21mm

1- Square impact deep socket 13/16" 4- 6pt. Flank impact deep socket

33; 35; 38; 41 mm

465100 1.1.16...1.1.2 4- 6pt. Flank impact deep socket 1-1/16; 1-1/8; 1-1/4"; 1-1/2"

3/27.5/28.5/1.5'

∆ 9150g

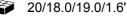
# 7PC 1/2" DR. Wheel lug nut removal socket set

#### 907U5



- For removal of wheel locking nuts.
- May also be used on fixings too damaged or corroded for standard sockets.
- Suitable for use with impact wrenches.
- Size: 1/2" DR X 38mm(L) X 17mm, 18.5mm, 20mm, 21.5mm, 23mm, 24.5mm, 26mm









### Wheel nut socket for Mercedes-Benz

#### 9T0206



- •17mm wheel nut socket with convex for Mercedes Benz
- •Application: Mercedes Benz 221(S Class) and later CL Class and Maybach



# Reverse action wheel stud thread restorer kit

#### 906T5



3-21



- Unique design allows the two halves of the thread restorer to be fitted on the good thread and wound back over the damaged thread ,normally at the end of the stud.
- Traditional thread restorers rely on luck for the restored and undamaged threads to align.
- Three sizes of product a set of capacity: M12 X 1.25; M12 X 1.5; M14 X 1.5







# Wheel balancing weight tool

#### 6821



- Easily removes and replaces wheel weights, as well as cutting and
- Made of heat-strengthened steel. Included comfortable vinyl handle grips.
- With self-open function spring on the handle for easier operation.

30/12.6/13.6/1.3

**1** 245mm

∆ 420g

# Wheel balancing weight tool

#### 9T0302



- Use to install, remove, trim and tighten clip on wheel weights.
- Includes plastic hammer head for protection of specially coated wheel weights.



48/24.0/25.0/2.7







### Tyre lever

#### **750**



		<i>l</i>	
Part no.	packing	length	g
750200	100/14.6/15.6/0.56	200	162
750300	120/31.6/32.6/0.6'	300	370
750380	60/22.9/23.9/0.5'	380	556
750380B	60/22.9/23.9/1.2'	380	382
750500	30/22.0/23.0/0.69'	500	732
750525B	30/24.0/25.0/0.69'	525	800
750650	20/23.2/24.2/0.54	650	1160
750650B	20/21.8/22.8/0.7	650	1160





# Snap in tire valve installer

#### 9B0301 / 9B0302



Steel constructed tool with deep threaded head for positive sealing of all snap-in type passenger car tire

		$\Delta \Delta$
Part no.	packing	g
9B0301	48/16.8/17.8/0.87	350
9B0302	48/17.1/18.1/3	356



# **TPMS Service pack tool set**

#### 911T1





- Used to install/change TPMS sensor and tire valve.
- Content: 1ps 1/4" DR. Torque driver 1~5Nm.

1ps 1/4" DR. Torque wrench 3~15Nm.

1ps Extension 2" (50mm).

2ps 1/4" DR. Deep socket 11mm, 12mm.

3ps 1/4" DR. Star socket bit T10, T15, T20.

1ps Grommet/spacer ring tool.

2ps Valve core torque tool Red 0.25Nm.

Black 0.45Nm.



6/8.5/9.5/1.4'



# 3 Function tire pressure gauge

#### **9T0401**



#### Advantages:

- Measure the tire pressure precisely, telerance 3%.
- Release unnecessary pressure.

12/7.0/8.0/1.8'

- Inflate the tire quickly.
- Specification: 1/4"PT / Max pressure: 14kgf/cm<sup>2</sup> ( 200 PSI) / Nozzle length: 30cm



# 3 Function digital tire pressure gauge

#### 9T0401D



- •2-1/2" Digital pressure gauge
- •Air line inflator with deflator-highly accurate.
- •Easy to read. Gauge completed with heavy rubber bumper, includes a 2 feet hose with clip-on chuck.
- •Power supply: Lithium battery operated with auto off function
- •Operating temperature: 0~50°C
- •Accuracy: +/-(F.S.x1%)+0.5 PSI at 2-100PSI +/-(F.S.x2%)+0.5 PSI at 101-150PSI
- •Pressure range: 2-150 PSI

∆ 620g

#### **Dual check**

#### 9T0402 / 9T0403



	1	<b>3</b>	$\Delta \Delta$
Part no.	length	packing	g
9T0402	5"	100/7.0/8.0/1.1'	75
9T0403	12"	100/17.0/18.0/2.5'	140

# 2pc Tire valve torque driver set

### 902U3





- Tools have internal torque limiting mechanism to prevent over- torquing of tire pressure monitoring system valve cores.
- A must for the tire pressure monitoring system valves to maintain proper tire pressure.
- Each tool is set for a specific maximum torque: Red-25 Ncm (2.2 IN. LB) Black-45 Ncm (4 IN. LB)



100/12.0/13.0/1.8



# 4pc T-handle disclosed tire repair tool set

904T4



For steel belted redial tire. T-handle disclosed tire repair tool is for inserting plugging material typically in the form of rubber coated strands, into a tire puncture. The plugging material is threaded into the open eye of a needle forming a part of the tool and inserted into the puncture. The inserting motion is limited by a stop free to rotate on the needle's shank so that the ends of the strand are not drawn into the puncture and the stop also limits the withdrawal of the needle.





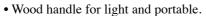


72/25.5/26.5/2.7'



### Roller stitcher

**9T0407** 



• Bearing inside for easier using.



60/7.4/8.4/0.9'



# 2pc Wheel stud alignment guide tool set

902B1



- Assists when mounting wheels, especially late models with long lug bolts.
- Applicable: all Mercedes models with lug bolts.
- Size: 12mm x 1.5







# 2pc Wheel stud alignment guide tool set

902B2



- Assists when mounting wheels, especially late models with long lug bolts.
- Applicable : all Mercedes models with lug bolts.
- Size: M14X 1.5

72/8.4/9.4/1.5

∆ 116g

# **8pc Wheel stud alignment guide tool set**

#### 908B3



- Assists when mounting wheels, especially late models with long lug bolts.
- Applicable: all Mercedes models with lug bolts.
- Size: 12mm X 1.5

12mm X 1.25

12mm X 1.75

14mm X 1.5

24/19.0/20.0/0.8'

∆ 790g

# **BENZ** Bush remover / installer

### **9T0307**



- Removal and replacement tool for metallic bushes on rear axles Mercedes type 201/124/202/140/129/210.
- The Tool incorporates an axial bearing and also incorporates a pressure piece which guarantees the correct position of the new metallic bushes when replaced.



10/19.5/20.5/1.5'



∆ 11.7kg



# BENZ Axles wheel bearing extractor / installer

#### 9T0311



- A great tool used to replace front wheel bearings without removing the steering knuckle & strut assembly.
- As the spindle assembly isn't removed, there is no need to align front end after the job is done. It saves a lot of time.
- · Application: Mercedes Benz, BMW, TOYOTA, VW, MARCH,



2/18.4/19.4/0.6



# Rear suspension tool for GM VECTRA

#### 908T6



Removing and replacing those stubborn upper and lower rear trailing arm bushes on GM VECTRA'S.



10/17.7/18.2/1.2





# BMW swing arm sleeve

#### 903T5



- •No need to take off the swing arm
- •Easy operation saves time
- •Aluminum adapter prevents sleeve damage
- •Aluminum circumference adapter can be switched when needed.





2/8/9/0.9'

∆ 3420g

### Rear axle bush installation/removal tool set for Vauxhall / Opel Vectra

#### 908T7



- Suitable for use in situ without removing the rear axle assembly from the vehicle.
- Intended for rapid removal/installation of Vauxhall / Opel Vectra (95-02) upper and lower rear trailing arm bushes.





12/14.7/15.7/1.1





# **Sub frame bush remover (Ford Mondeo)**

#### 905T5



3-27



A specially designed tool for removing and installing the bushes on the rear sub frame on Ford Mondeo.

A Bridge / B Double headed nut / C Cup / D Bolt / E Dome Washer



20/21.1/22.1/1.4'



∆ 1050g

# 5pc VW, AUDI Rear suspension tool

#### 905T4



- Special design for replacing the rear axle mounting bushes, while sit in the vehicle and without the need for removing the rear axle assembly.
- Its fine thread and thrust bearing allow the bush to be fitted quickly and easily without causing damage.
- Applicable: Audi A3/ VW Golf IV/ Bora 1.4/ 1.6/ 1.8/ 2.0 and 1.9d (2001~2003)



36/21.0/22.0/1.8



∆ 580g

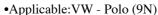


#### Bush remover / installer for VW

#### 907T6



- •Suitable for VW Polo (9N) front-axle bracket wishbone
- •The removal and replacement of the silent bloc placed in dir bracket is easily and safely carried out directly on the vehicle by using the extractor.



SEAT - Ibiza IV, Cordoba (ab Bj. 02) Altea

Skoda - Fabia, Roomster

AUDI - A2.



6/18.0/19.0/1.5'



# 21pc Compact wheel hub/bearing kit, Ø 62mm, Ø 66mm, Ø 72mm

921T1



- Professional fitting direct on the vehicle (removal with existing wheel hub extractor or universal sliding
- Minimum working effort and maximum time saving.
- Simple and safe handling.
- Only for installation.
- Can also be optionally used with a workshop press.
- Possible extensions for bearing unit Ø 62+66+72 mm due to the modular system
- Application: Audi A2 , Audi A2 1.2L , VW LUPO , VW Polo FOX, Seat Ibiza, Skoda Fabia



1/12.6/13.8/1.0'



# Wheel hub and wheel bearing extraction & installation set for VW-T5

917T3



- •For removing and installing the wheel hub or wheel bearings of built-in parts on cars.
- •Suitable for cars with Ø 85mm wheel bearings.
- •The design can prevent damage to the new wheel bearing because it provides safe and accurate centering and alignment when changing wheel bearings.
- •Application:VW T5 (front axle) and Touareg with 16 -inch chassis



2/16.3/16.8/1.0'



∆ 8150g



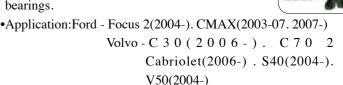
# Wheel hub and wheel bearing extraction & installation set for Ford / Volvo / Mazda

913T2



- •For removing and installing the wheel hub or wheel bearings of built-in parts on cars.
- •Suitable for cars with Ø 78mm wheel bearings.
- •The design can prevent damage to the new wheel bearing because it provides safe and accurate centering and alignment when changing wheel bearings.





Mazda - M3 1.4,1.6, 1.6D TURBO(2003-)



**2/17.5/18.5/1.2**'



# Professional wheel bearing tool set for BENZ

927T1



- •This tool can make safe, quick and professional replacement and removal of wheel bearing.
- •Adaptor ring:Centring Rings 42, 45, 49, 50, 54, 6 . 80mm



Pressure Rings - 66, 70, 73, 75, 79, 83, 84, 85, 87, 88,90,93mm

•Application:190 series (W201), A-Class (W168; W169), B-Class (W245; W124)C-Class (W202; W203), E-Class (W210) , M-Class (W163; W164)S-Class (W140) , V-Class (W639)



1/14.6/15.6/1.3

∆ 14480g

# Professional wheel bearing tool set For Peugeot / Citroen / Renault

920T2



- •This tool can make safe, quick and professional replacement and removal of wheel bearing.
- •Adaptor ring:Centring Rings 35, 37, 42, 45, 60, 75 mm Pressure Rings - 65, 72, 82, 83 mm
- •Application:Peugeot, Citroen, Renault





1/12.0/13.0/1.3







#### Universal bush remove and install sleeve

#### 933T1



- •Universal application of step discs for bearing bush, silent bearing, hydraulic bearing, and rubber bearing on many kinds of different vehicles.
- •20pcs sleeves: IDφ34~φ72mm( in 2mm increment)
- •2pcs step discs: use with sleeves.
- •4pcs bolts: M10, M12, M14, M16;
- •Length:450mm



1/18.0/19.0/1.1'



# Front wheel driver puller

#### 920T1



- A great tool used to replace front wheel bearing without removing the steering knuckle & strut assembly.
- · As the spindle assemble isn't removed, there is no need to align front end after the job is done.
- 3pc M12 x P1.5 screws 3pc M14 x P1.5 screws



2/16.7/17.7/1.1



#### Remove



Install



# **4WD Front wheel bearing tool**

#### 924T1

3-31



- 21pc Bearing cup size: 38, 50, 55, 59, 63.5, 66.5, 70.5, 71.5, 73, 73.5, 74.5,
- 76, 77.5, 81.5, 83.5, 86, 86, 88.5, 91, 102, 102mm 1pc Nut
- 1pc Screw
- 1pc Washer



 $\Delta$  10.5kg





# Hydraulic steering system pull tool set

#### 949T1



- This set could disassemble damaged bushing and replace new one except the bushing without the hole.
- There is no effect when the control arm is on the
- Hydraulic cylinder max. load: 18.2t
- 4 spindle size: Ø 10mm; Ø 12 mm; Ø 14 mm; Ø 16 mm



1/20.6/21.6/2.9'

∆ 20.6kg

Remove





# Manual steering system pull tool set

#### 950T1



- This set could disassemble damaged bushing and replace new one except the bushing without the
- 4 spindles are especially designed for small bushes and they are available when the control arm is still on the car.
- Hydraulic cylinder: 10 t
- Four pull spindles: M10X1.5P ; M12X1.75P; M14X2.0P; M16X2.0P







Remove

Remove

1/30.6/31.6/2.9'

△ 30.6kg

# 10pc Bearing race and seal driver set

#### 66603



Makes it easier to insert wheel bearing race and seals without damage to race and axle housing. The set includes 9 disc sizes to fit most standard wheel bearing. Turn discs over to drive seals.



10/17.8/18.7/2.3







# 14pc Master bushing driver, seal, and bearing installer set

#### 915U2



- Set includes four drive handles and 11 adapters (most adapters have 3 or 4 size each)
- Works in any industry, automotive.
- · Makes it easier to insert wheel bearing race and bushing seals without damage.





2/16.0/17.0/ 0.78'



# 17pc Metric bushing driver set

#### 917T1



- · Adaptors held on drivers with knurled nut.
- Fit all remaining bushing.
- Size: 10mm-42mm.







24/17.7/18.7/2'

∆¹∆ 737g

# Universal adjustable bearing race and seal driver

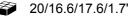
#### 9U0301





- •Aluminum all-in-one self-contained precision driver with rotating handle and expanding jaws to seat races / bearings or seals with ease.
- •Variable Jaws cover a range of 18.5 89 mm or 0.72 - 3.50 inches.







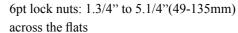


# 8pc Adjustable wheel bearing lock nut wrench

#### 908T1



- Adjustable jaws with locking feature to suit both hexagon & octagon wheel bearing lock nuts.
- Includes three sets of pins to suit lock nuts with pin holes.
- Capacity:



8pt lock nuts: 1.3/4" to 5.5/8"(49-143mm)

across the flats Pin diameters: 1/4"(6mm), 5/16"(8mm),

3/8"(10mm).



6/14.8/15.8/1'



∆ 2466g





# 17pc Slide hammer puller set

#### 664



- Designed for removing hub, dent...etc.
- With most popular joints and 3-jaw puller to fulfill most vehicles.
- Contemt: T-bar, hammer, axle puller, adaptor, 2-jaw head, 3-jaw head, hook and accessories.



2/14/15/1.1'





# Slide hammer puller set

#### 664A



Slide hammer puller set has several pulling attachments to give the user various methods for pulling, maintenance and repair applications; the slide hammer exerts force when needed.

2/19/20/1.9'















# 2pc Axle puller

#### 66401



- Central hole to screw hole 130mm
- Drop forged



2/2/2.5/0.2'

∆ 1170g

# 3pc Axle puller

#### 66402

- Central hole to screw hole 130mm
- Drop forged





2/8/8.5/0.6'

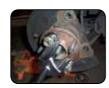
∆ 4150g

# 2pc Axle puller

#### 66403



- Central hole to screw hole 110mm
- Drop forged



2/2.5/3/0.12'

∆ 1260g

# 3pc Axle puller

### 66404

- Central hole to screw hole 110mm
- Drop forged



2/8/9/0.43'

∆¹∆ 4375g

# 6pc Air hammer drift set



- •7" (177mm) long parallel shaft design won't get stuck in deep holes.
- •Offers the extra driving force of an air hammer where needed.
- •Air hammer drift set takes care of rusted shock and strut bolts.
- •Sizes Included: 3/16" (5.2mm), 1/4" (6.5mm), 9/32" (6.9mm),

5/16" (7.7mm), 3/8" (9.3mm), 1/2" (12.7mm)



# 13pc Special Vibro Chisel Set

#### 912T5







1pc 1/2"D Adaptor Hammer.

1pc 25mm Hammer.

1pc Track Rod Hammer.

2pc 7" X 20mm, 7" X 24mm Impact ball joint separator.

1pc 20mm Flat Chisel.

1pc Point Chisel

1pc Air Hammer.

4pc Drift punch 1/4" (6.5mm), 5/16" (7.7mm), 3/8" (9.3mm), 1/2" (12.7mm)



# **Ball joint separator**

#### 62801



- Heat treated drop forged steel body & bolt for long
- Spread ball joints easily where space prevents use of direct action method.
- Jaws open: 19mm



20/24.4/25.4/1.3



∆ 1220g

# **Ball joint separator**

#### 62802



- For splitting track-rod ends, anti-roll bar mountings, ball joints, etc.
- Jaw open: 20mm





20/21/22/1





# **Ball joint separator**



- For splitting track-rod ends, anti-roll bar mountings, ball joints, etc.
- Jaw open: 20mm



20/21.2/22.2/0.97

∆ 1060g

# **Ball joint separator**





- Special design 2-stange operating suits most cars and light trucks ball joints in steering & suspension.
- Offset lever permits maximum jaw opening in 30mm & 56mm.
- Jaw open: 22mm



20/24.3/25.3/0.97

∆ 1218g

# **Ball joint separator**

62805



- This universal tie rod end remover will work on most cars and light trucks.
- The necessary force needed to remove tie rod end is easily applied through the center pivot action.
- Fork opening: 20mm
- Reach: 20mm-50mm
- Suitable for: VW-AUDI, BMW, FIAT, FORD, MERCEDES, NISSAN, OPEL, PEUGEOT, RENAULT, ROVER, SAAB, TOYOTA, VOLVO.



20/26.2/27.2/1.1'

△ ∆ 1310g

### **Ball Joint extractor**

62806

3-37



- For splitting track-rod ends, anti-roll bar mountings, wheel-hub ball joints, etc.
- Jaw open: 22mm
- 2-Stage, 50-80mm.





# Universal ball joint extractor

6281532 / 6281545

 $\begin{tabular}{ll} 6281518 \ / \ 6281522 \\ \bullet \ \mbox{For splitting track-rod ends, anti-roll bar mountings, ball joints, etc.} \end{tabular}$ 



	size		$\Delta \Delta$
Part no.	mm	packing	g
6281518	18	20/13.9/14.9/0.46'	695
6281522	22	15/10.7/11.7/0.6'	715
6281532	32	10/23.6/24.6/1.4'	2360
6281545	45	10/25.5/26.5/1.4'	2550

# Hydraulic HGV ball joint separator

#### 903T2



- For separating HGV ball-joint. Strengthened fork and lever allows for greater force to be applied.
- Remove ball joints easily where space prevents use of direct action method.
- Jaw opening capacity 70 mm; Jaw width 36 mm
- Patented Hydraulic ram provides max. 12 tons.
- SCM 440 material

2/14.0/15.0/1

 $\Delta$  7kg

# Quick-change ball joint remover

#### 905T8



- Innovative quick change and simple action for
- Enable operator to select correct jaw size without taking entire extractor to the vehicle.
- Adjustable opening angle.
- Jaw opening: 20, 22, 24, 27, 30 mm.
- Thrust Screw Length: 100 mm.
- Pivot Rod Length: 125 mm.



3/18.0/19.0/1.0'





# **Ball joint extractor**

#### 6280723 / 6280728



- For splitting track-rod ends, anti-roll bar mountings, ball joints, etc., especially in small space conditions.
- 6280723 is for Audi VW, BMW, Ford, Mercedes (W170, W202, ETC), Opel / Vauxhall, etc.
- 6280728 is for Audi A4, A6, A8, VW Passat and Mercedes W203 etc.



	Jaws open	Jaws deep		
art no.	mm	mm	packing	g
6280723	23	25	30/24.8/25.8/0.99'	826
6280728	28	25	30/24.1/25.1/0.99'	800

# Universal ball joint puller

 $6280817 \; / \; 6280820 \quad \text{Special steel for removing the ball pivots on steering arms, steering}$ tie rocks, steering knuckles etc.



		l	$\Delta \Delta$
Part no.	packing	jawopen	g
6280817 6280820	20/20.4/21.4/1.5' 20/23.4/24.4/2.1'	17mm 20mm	1020 1170

# Universal ball joint separator



- Special steel for removing the ball pivots on steering arms, steering tie rocks, steering knuckles, etc.
- Jaws open: 30mm



10/ 9.0/10.0/0.49

# Four-way ball joint remover tool



3-39



- Heat treated drop forged steel body & bolt for long rough usage.
- Spread ball joints easily where space prevents use of direct action method.

Total length: 165mm

Opening angle: 24mm ~ 45mm

Jaw opening: 22mm Body material: SCM440



10/16/17/0.5'



#### Front end service set

#### 906T3



- This versatile set allows for easy removal of the most popular types of pitman arms, tie rods and ball joints.
- Press type ball joint separator allows for ball joint removal without damage to boots and other parts that fork type removers may cause.



3/15.6/16.6/1.25



△ 5.2kg

# Tie rod end & pitman arm puller for compact cars

#### 62811



- For the safe easy removal of pitman arm assembly from compact automobiles.
- Forged, heat-treated yoke with extra heavy center screw
- Opening: 1-1/16"(27mm)
- Pull: 1-3/4"(45mm)



20/8.9/9.9/0.46'



△ 445g



# Tie rod end & pitman arm puller

# 62812

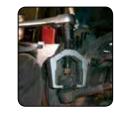
- Redesigned heavy duty tool to be used to remove pitman arns from late model cars and light trucks
- Yoke is forged from high grade alloy steel and heat-treated.
- Opening: 1-5/16"(33mm)
- Pull: 2-1/2"(64mm)



24/19.1/20.1/0.79



∆¹∆ 795g



# Pitman arm puller

#### 62813



- Designed to handle the toughet Pitman arm pulling jobs on passenger cars and light trucks.
- Features special forged jaws shaped to fit the job.
- To use, simply remove the retaining nut, place the puller jaws behind the pitman arm and tighten the forcing screw.
- Mechanical power does the rest.
- Opening: 1-5/16" (33mm)

20/22.7/23.7/1.1

• Pull: 2-1/2" (64mm)







#### Outer tie rod remover

62814



- Two adjustable jaws special designed for removing outer tie rods of most models.
- Works on imports and domestics; front or rear wheel drives and castors stamped steel steering knuckles.
- Spread: 2-1/2" (64mm)
- Reach: 2-1/4" (57mm)



15/16.4/17.4/0.59

∆∆ 1090g

# Twin-arm bearing pullers

#### 666B



- With clamping bridge and pushing adaptor especially for extracting the inner bearing ring at VW-AUDI cars.
- Size: 90mm X 100 mm





10/11.4/12.4/1.3'

∆ 1140g

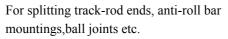
# **Ball joint extractor**

**628E** 









	Open		$\Delta \Delta$
Part no.	size	packing	g
628E18	18mm	60/19.0/20.0/1.2'	316
628E23	23mm	30/16.0/17.0/0.99'	533
628E29	29mm	20/17.6/18.6/0.9'	880
628E40	40mm	12/18.6/19.6/0.97'	1550
628E46	46mm	12/21.0/22.0/1.1'	1750



# Universal tie rod end tool





- Heat treated drop forged steel body & thrust bolt.
- Fits most cars, simply insert tool between spindle arm and tie rod, turn thrust bolt with 3/4"(19mm) socket or spanner to spead tie rod easily.
- Fork 18mm(11/16").

30/13.5/14.5/0.4





# Ball joint puller bell vibro-impact

62818 / 6281830 6281832 / 6281839



	Size		
Part no.	mm	packing	g
62818	25	15/19.4/20.4/0.6'	1290
6281830	30	15/19.5/20.5/0.8'	1950
6281832	32	8/22.6/23.6/0.8'	2820
6281839	39	8/27.2/28.2/1.2'	3400



# 5pc Tie rod ball joint separator set

#### 905T2



Made from heat treated drop forged steel.

#### **Contents:**

- 1pc Tie rod separator Opening: 17mm (11/16")
- 1pc Ball joint separator Opening: 24mm(15/16")
- 1pc Pitman arm wedge Opening: 28mm(1-1/8")
- 1pc Handle with lock nut 8"(200mm)
- 1pc Pneumatic handle 7"(180mm)



10/20.0/21.0/1.46





# **Ball joint separator**

628



- Tempered drop forged steel one piece construction for long & rough usage.
- · Replacing worn out ball joints easily with a hammer striking.



- 628300 also can separate shock absorber links.
- 628400 also can remove CV drive shafts on FWD vehicles
- Material:SCM440.

	Open	1		$\Delta \Delta$
Part no.	size	mm	packing	g
628300 628400	15/16" 21/32"	300 400	25/17.0/18.0/0.38' 20/19.0/20.0/0.38'	680 950

### Ball joint spanner wrench

# 9T1404



- Designed for removal and installation of ball joint adjusting sleeves on 1/2-, 3/4- and 1-ton Dana open yoke front axles found on Ford, GM, Chrysler, IHC, and Jeep 4WD vehicles.
- Tool permits easy torquing with 1" socket for proper upper ball joint preload.











# 5pc 1/2"DR. Drive tooth socket for Mercedes

#### 905T7

• Tooth socket for Mercedes Benz axle drive flange.



ID	Length	Tooth width	Usage	
905T7-A	70 mm	8 mm	Mercedes Gearbox.	
905T7-B	70 mm	6 mm	Mercedes Differential flange.	
905T7-C	70 mm	6 mm	Mercedes G-class(W460/W461/	
			W463) Front Axle-wheel bearing.	
905T7-D	70 mm	6 mm	Mercedes W114,W115,W116	
			Models with constant velocity	
			joint axles.	
905T7-E	80 mm	8 mm	Mercedes W116,W123,W126 Rear	
			Axle drive flange.	



10/17.0/18.0/1.5' ∆ 1700g

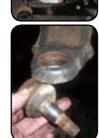
# 6pc Ball joint anchor pin press set

#### 906T4



- Special designed for the removal and installation of press fit parts, such as ball joints, universal joints and truck break anchor pins, without having to resort to makeshift methods.
- It contains heavy-duty C frame press, receiver tubes, and installation and removing adapters.





# 9pc Ball joint anchor pin press set

#### 909T2



• Special designed for the removal and installation of press fit parts, such as ball joints, universal joints and truck break anchor pins, without having to resort to makeshift methods.

 $\triangle^{\dagger}$  6.5kg

• It contains heavy-duty C frame press, receiver tubes, and installation and removing adapters.



2/14.5/15.5/0.7

∆ 7250g

# Ball-joint installer/ remover for BENZ (W220/W211/W230)

#### 905T10



- •Special design for removing and installing the ball joint on car without removing any parts.
- •Applicable: Mercedes Benz W220, W211, W230



3/16.5/17.0/1.1'

∆ 5500g

# Multi-steering knuckle spreader tool kit

#### 912T3



- Spreads the steering knuckle.
- This enables the removal and refitting of the shock absorbers without the risk of darnaging to the aluminum or cast iron knuckle.
- Fully adjustable and is suitable for steering knuckles with either a centralized or eccentric slot.
- Wide range of vehicle applications.



**12/13.0/14.0/1.0**°



# Audi ball joint tool

62821



- •Required for releasing the lower ball joint to free corrosion
- •Effectively a converter to allow the ball joint to be turned after releasing the pinch bolt.
- •1/2" Dr. x H27mm x L36mm with 18mm diameter hole.
- •Application: Audi A4 2007~ / A5 2009~ / A6 2011~ / A7 2010~/Q5 2010~



# 1/2" DR. BENZ (W163/W164) Pin wrench socket

#### 62820



- Used for Secure the retaining ring during R&R of ball
- Applicable: MERCEDS-BENZ M-CLASS (W163/ W164) lower ball joint of front & rear axles.















# Lower ball joint socket for Peugeot/Citroen

9T1482





- •Allows fast and simple removal & installation of screw type lower ball joints.
- •Suitable for Citroen and Peugeot 405 lower ball joints.



72/16.8/17.5/1.2

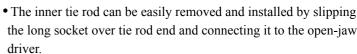
∆'∆ 233g

# 12pc Inner tie rod tool

#### 912T2



- These tools are specially designed for the inner tie rods that are inaccessible to adjust.
- The long socket can be easily used with eleven openjaw drivers, size 1-3/16", 1-1/4", 1-5/16", 1-7/16", 14mm, 17mm, 19mm, 22mm, 26mm, 27mm & 33.6mm to most application.





6/16.0/17.0/0.6



# 5pc Tie rod adjusting tools

905T1



Unique design permits 360° rotation of the adjusting sleeve. 1/2"sq. drive allows use of ratchet or breaker bar.

#### **Specification:**

- Tie rod adjusting tool for compact cars with 3/4" dia. adjusting sleeves.
- Tie rod adjusting tool for compact cars with 7/8" dia. adjusting sleeves.
- Tie rod adjusting tool for compact cars with 1-1/8" dia. adjusting sleeves.
- Tie rod adjusting tool for compact cars with 1-7/16" dia. adjusting sleeves.
- Tie rod adjusting tool for compact cars with 1-13/16" dia. adjusting sleeves.



12/16.0/17.0/1.4'



△ 1330g

### Track rod end remover and installer

Multi-purpose inner tie rod tool

#### 9T0204 / 9T0204B

• Designed for remove and install axial joint





	Application	1	<b>3</b>	$\Delta \Delta$
Part no.	mm	mm	packing	kg
9T0204	Ø35~ Ø45	400	10/22.5/23.5/2.2'	2.25
9T0204B	Ø28~ Ø35	400	10/21.5/22.5/1.6'	2.15

# **Combination wheel alignment wrench**

**9T0701** 



- This special double-ended extended length wrench was developed to be utilized when adjusting the front tie rods on most ASIAN, EUROPEAN AND DOMESTIC automobiles which includes over 29 different automobile manufacturers.
- Size:21mmX22mm





- The master tie rod tools easily replaces inner tie rod ends without removing the rack & pinion.
- Capacity: 33-42mm





32/12.3/13.3/0.5'





3-45



### 4pc Steering wheel holder & pedal depressor kit

904B2

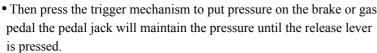
#### **Steering wheel:**

- Firmly holds steering wheel in position when setting
- Has a trigger-controlled mechanism and a thumb



#### Pedal depressor (brake gas):

- This brake and gas depressor is designed to use in the front seat of the car to obtain lever age.
- Place the point end of depressor on the pedal and use the small release lever above the spring to free the trigger mechanism in order to place the jack in place againt the seat.



∆ 2250g



6/13.5/14.5/3.1'

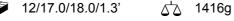
### Coil spring compressor

62701



- Use tool to remove and install automotive coil springs up to 5-5/8" OD. designed to grasp a maximum 3/4" wire diameter spring.
- Compress can be used on straight or curved coil spring.
- Forged alloy steel.





### Coil spring compressor

**627** 



- Coil spring compressor made by forging and
- Sold and packed in pair.



	<b>3</b>	1	
Part no.	packing	mm	g
627270 627370	10/18.3/19.3/1' 10/21.7/22.7/1.5'	270 370	1830 2170

### Universal spring compressor

627200 / 627320

#### 627200

- Allows the compressing of the spring at the car, so the strut can be taken out without dismounting the bearing housing.
- This is important at the front axle of VW cars and at rear axle of Ford Mondeo etc.



#### 627320

- For use with all Macpherson.
- The spindles are equipped with contra-rotating threads which eliminate the risk of slipping round the spring.

	Compression length	<b>3</b>	
Part no.	mm	packing	g
627200	65-200	10/24.1/25.1/0.86'	2410
627320	65-320	5/14.4/15.4/0.7'	2880

### Universal spring compressor

627170



- For replacement of self leveling shock absorbers.
- Particularly for rear axles on Mercedes and Fords.
- Compression length: 85-170mm
- Hex drive situated in the centre of the spindle permitting easy use in confined spaces where other spring compressors can not be used.
- 10/23.5/24.5/0.7 △ 2350g

### Heavy duty coil spring compressor

627280



- Hooks engage spring which can be compressed by turning hex nut.
- Jaws capacity: 23mm ~ 280mm
- Length 280mm



6/19.5/21.5/0.5





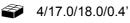


### Heavy duty coil spring compressor with jaws & holder

#### 627280U



- No need extra systematic jaw installation / removal
- High security coil spring compressor with 1200kg maximum capacity per pair and adjustable safety bar for additional security
- Jaws capacity: 23 mm ~ 280 mm
- Length 280mm







### Spring compressor for Mercedes

#### 905T3



- Types 116/123/124/126/129/140/201/202 and 4-matic includes.
- Advantage: Newly developed automatic 3-point safety interlockand automatic freewheel at end of stroke.



5/28.5/29.5/2.46



 $\triangle^{\dagger}$  5.7kg

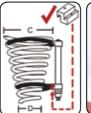
### Professional coil spring compressor

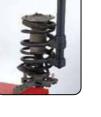
#### 908T5

3-49



- Safety yokes carefully shaped to prevent coil spring from bowing.
- Wide availability of spare yokes.
- Main axle length: 453mm
- Small jaw use range: 80-115mm
- Medium jaw use rang: 110-150mm
- Large jaw use range: 140-195mm







1/13.8/14.8/1.25'



#### ∆ 13.8kg

### Professional coil spring compressor (with cover)

#### 908T8



- Application : BMW, TOYOTA, FORD, MITSUBISHI, VW, AUDI, SAAB, NISSAN, HONDA, SUBARU, VOLVO, OPEL, PORSCHE.
- Main axle length: 453mm
- Small jaw use range: 80-115mm
- Medium jaw use rang: 110-150mm
- Large jaw use range: 140-195mm
- Max. Load: 10200 N
- Additional yellow plastic covers could protect the surface of shock



1/13.7/14.6/1.25



∆ 13.7kg

### Spring compressor stand

#### 9T3403



- Compress the coil spring quickly and easily.
- The opening of attachment shoes can be adjusted according to the diameter of the spring.
- Designed for strong, safe and reliable use.

1/26.4/28.3/3'



∆ 26.4kg

### Strut nut socket for VW/AUDI

#### 9T1481



- Used for removing and installing the top shock retaining nut on most FWD; VW; AUDI.
- Fits into slot in the top of the strut retaining nut
- 22mm (7/8") hex for use with a wrench.



200/15.9/16.9/1.2'







#### **Drive nut set**

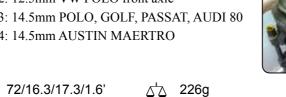
#### 904T1





#### **Contents:**

- No.1: 10.5mm VW GOLF rear axle
- No.2: 12.5mm VW POLO front axle
- No.3: 14.5mm POLO, GOLF, PASSAT, AUDI 80
- No.4: 14.5mm AUSTIN MAERTRO

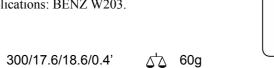


### BENZ (W203) Strut nut socket

#### 9T1401



- Use for removing and installing the top shock retaining nut.
- Applications: BENZ W203.





### **BENZ (W220) Strut nut socket**

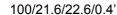
#### 9T1402



- Use for removing and installing the top shock retaining nut.
- Applications: BENZ W220.









### BENZ W220 Shock absorber service tool set

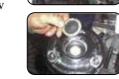
#### **9T0304**





- This tool is for changing the top seal in air suspension.
- Fix suspension strut to a vise. Set 3 legs onto stub bolts in strut. Drive the control forcing screw to compress the seal cup and replace the seal.
- Application: Benz W220

5/8.7/9.7/0.6





### 39pc Turnbuckle for shock absorber's top lid

#### 939T1



- The complete sizes for using of most kinds of cars. **Contents:**
- 5pc external sockets 10.5, 12.5, 14, 14.5, 14.5mm
- 9pc external sockets 1022-14, 16, 1022-17, 18, 19, 1022-21, 22, 24, 27mm
- (a) 9pc central sockets 4, 5.2, 6, 6.3, 7, 1022-39, 9, 10, 12mm
- 2pc central sockets 5, 10mm
- (a) 4pc central sockets 8, 1022-59, 10, 11mm
- 4pc central sockets 5, 6, 7, 8mm
- = 3pc central sockets 3, 3.5, 4mm
- 1pc central socket M12
- 2pc central sockets T50, T60
- Apply to: VW, AUDI, M-BENZ, AUSTIN MAESTRO, HONDA, NISSAN, SEAT, FIAT, FORD, ROVER, OPEL, PEUGEOT, RENAULT, CITROEN, TOYOTA, CHRYSLER, BMW, VOLVO.



4/25.0/26.0/2.75



### 9pc 1/2"DR. Drive shaft socket

#### 40912



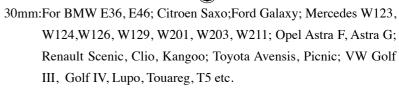
• 1/2"Dr. 14,17,19 mm Hex

H14:VW Passat 1996-2001, Audi A4; front and rear axle bolts (AWD). H17:1998-2005 VW Passat, 1999-2004 Audi A6, 2002-2005 Audi A4; front and rear axle bolts (AWD).

H19:VW T4,T5,Skoda Fabia.

• 1/2"Dr. 12pt 27,30,32,34,35,36 mm

27mm:Ford Powerstroke; Volvo 480



32mm:For Fiat Punto; Ford Escort, Mondeo; Mercedes W140; Nissan Almera; Opel Astra H, Vivaro; Subaru Outback etc.

34mm:GM Motors.

35mm:MADZA.

36mm:For Audi; BMW E36, E39, X5; Ford Transit; Seat Lbiza, Cordoba; Nissan Primera; VW Polo, Golf V, Touareg etc.



6/22.6/23.6/1.54









### **Axle spindle rethreading set**

#### 909T5



- •9pcs Tread restoring die set used to clean or repair axle thread on spindles of M24X2.0; M24X1.5; M22X1.5; M22X1.0; M20X1.5; M20X1.25; 13/16X20; 3/4X20.
- •Use with 32 mm socket or wrench.

10/16/17/1.2'

∆ 1430g

### 4 pc C.V. boot service kit

#### 904T8



#### •Contents:

1pc CV Boot clamp pliers

1pc CV Joint boot clamp pliers

1pc C.V. joint banding tool (with cutter)

1pc Drive shaft circlip squeezing pliers





10/16/17/1.2'

∆ 1430g

### CV Boot clamp pliers

62519



A sturdy tool, works on earless-type clamps including those found on GM inboard CV joint.



72/24.7/25.7/2.6'





### CV Joint boot clamp pliers

#### 62520



For ear type clamps, fits late model GM CV joint boots, also installs PERMA-QUICK type clamps quickly and easily use for filter, cooling system and vacuum lines.



48/18.2/19.2/1.5'





### CV Dust boot clamp installer with cutter

#### 62521



- Use 1/2" socket wrench to wind and crimp by hand tool is easily disengaged from the band after the band is tightened.
- Cut off easily with built in cutting arm without any other tool.



36/18.3/19.3/1.8'



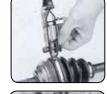


### C.V. joint banding tool (with cutter)

### 62525



• Tool is easily removed by sliding sideways after winding has been completed.



72/20.5/21.5/2.5' ∆ 285g



3-53

### Bent type C.V. boot hose clamp cutter

#### **9T0501**



- Designed to cut the stainless steel clamp easily.
- Avoid to harm C.V. boot
- With hardest material SKS III
- Use capacity for hose clamp: Width: Under 10mm Thickness: 0.5mm-0.7mm





48/16.8/17.8/2'

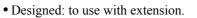


### CV boot clamp pliers

62526



- For all ear-type clamps.
- Application: for AUDI, BMW, CHRYSLER, FORD GM, HONDA, MAZDA, MERCEDES, NISSAN, OPEL/VAUXHALL, VW etc.



- Handle or torque wrench.

36/20.5/21.5/2.1'





### Heavy duty CV boot band pliers (with torque drive)

62527

3-55



- For assembly of new stainless steel clamp-bands on drive-shafts where a torque setting is required.
- The 3/8" torque wrench is ideal to provide the drive.
- Application: VW, Audi, Seat, Skoda, Opel / Vauxhall, Ford, etc.





20/12.9/13.9/1.8'



### CV boot installer set (cone, boot installer)

#### 903T1



- Squeeze the arm of the installer and place the large end of the boot over. Press in the small end of the boot. Spray the surface of cone & boot with lubricant.
- Place the cone on the ground and center the boot over the cone.
- Holding the boot to the installer use a firm and fluent motion to press the boot to the base of the cone.
- Place the installer & cone over the joint. Drive the boot over the joint by striking the base of the installer and greasing the joint. And don't stretch over the joint until a tight fit is formed.



**12/16.5/17.5/3.5**°



∆ 1375g

### Air powered CV boot installation tool

#### 9T0502



- •Innovative tool saves time, money and frustration.
- •Installs flexible steering and CVJ boots without removing axle from the vehicle or the CV joint from the axle.



- •No effort-wasting and no mess.
- •Save labour time by up to 70% and prevent damage to CV joint.
- •Composite body with simple control valve works from standard workshop air supply.
- •Suitable for cars, small vans, light commercial vehicles.
- •Material:Aluminum steel
- •Capacity:Ø20-110mm



4/12.0/13.0/1.3'

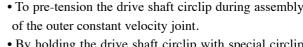


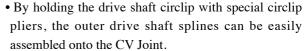
### Drive shaft circlip squeezing pliers

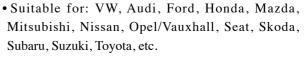
#### 62531





















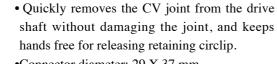


∆ 350g

### CV joint assembly removal tool

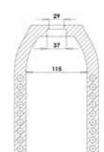
#### **9T0505**





- •Connector diameter: 29 X 37 mm
- •Maximum axle diameter: 37 mm
- •Maximum CV joint diameter: 115 mm







10/21.8/22.8/1.2'



### Fender extending tool

#### **9T0503**



- Use for fender collision repair or fender flaring or to increase fender clearance.
- Fit most cars and light trucks with 4 or 5 lugs.
- Roller works on fender from inside wheel well.





2/17/18/2'



### Transmission axle holder wrench

### **9T0201**



• This tool use for 2005 & LATER LAND ROVER with V-8 engines.







16/16.8/17.8/1.6'



△ 1050g

### Waste oil drain

#### 9T3621



- ·Capacity: 80L.
- •Special designed for no switch beneath of the hopper, and that sis not spray any oil absolutely.
- •There is a filling net in the hopper that can be removed any dirty
- •Use ordinary shop air to move out the waste oil.

1/30/33/7.6'

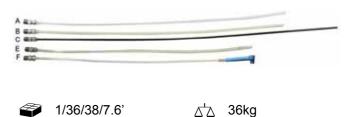


## Vacuum oil extracting & draining machine

#### 9T3622



- •Capacity: 80L.
- •Perform dual functions oil extracting and draining
- •Uses compressed air to create a powerful vacuum to extract any kinds of oil, gasoline, diesel, water. (There are some limitations to extract the liquid.).
- •Tube size:A:ø6 x L750 ; B:ø7 x L750 ; C:ø6 x L920 ; E:ø3/8" x L650; F: Braking oil tube.



### Vacuum oil extracting machine & brake bleeder

### 9T3623



- •Capacity:12L.
- •Uses compressed air to create a powerful vacuum to extract any kinds of oil, gasoline, diesel, water, and other anytime.
- •With limpid cup to check the flow anytime.
- •Tube size: A:ø6 x L750 ; B:ø7 x L750 ; C:ø6 x L920 ; E:ø3/8" x L650; F: Braking oil tube.





1/13/14/1.9'



∆ 13kg



### Pneumatic oil filling machine

#### 9T3624



- •Capacity:25L.
- •Enlarged 45 mm oil filler hole for easier to refill oil.
- •With oil dispensing gun to easily control the oil filling rate.
- •With a dehumidify valve to filter the water from the air compressor.
- •Compressed air could be stored in the tank and use for filling oil at
- •A clock or digital meter can be attached to measure the volume of the refilled oil. (optional part)



1/18/19/2.9'



∆'∆ 18kg

#### Glass covered fluid extractor

#### 9T3625



- •To suck liquid by vacuum.
- •Append many suction tubes and applicable to oil, transmission oil,
- •12L the design of visible glass storing oil box ,it can see storing oil.
- •Dual oil reservoir tank design increases the storing capacity(80L+12L).
- •Capacity of the tank below:80L.
- •Tube size:A:ø6 x L750 ; B:ø7 x L750 ; C:ø6 x L920 ; E:ø3/8" x L650; F: Braking oil tube.





1/37/40/9'



### Air lubricator for grease

#### 9T3609



- Uses air as power to suck grease into lubrication points.
- Suitable for 00#~2# grease.
- Capacity: 20L.
- Max. pressure that pump could with stand: 7~9 kgs
- Shrink rate: 1/45~1/50
- Volume output: 2L/min
- Hose: 1/4" x 2W x 3M
- Grease output pressure: 180 ~ 405kgs/cm
- Deliver rate: 30cc/sec.



1/21.0/23.0/4.2'



△ 21kg

### Hand lubricator for grease

#### 9T3610



- With reservoir capacity 25L
- It is suitable for general lubricant and gear oil.
- 4c.c. / each cycle
- Hose: 1/4" x 1W x 2M



1/7.0/9.0/2.2'



 $\triangle \Box$  7kg

#### Hand lubricator for oil

#### 9T3611



- With reservoir capacity 25L
- It is suitable for general lubricant and gear oil.
- 70c.c. / each cycle
- Hose: 1/2" x 2M PVC yarn pipe



1/7.0/9.0/2.2



<u>∆</u> 7kg

## 9 Liters manual / pneumatic fluid extractor

### 9T3606



- A large 9.0 Liter (2.35gallon) capacity of manual & pneumatic fluid extractor, can be used to extract many kinds of non-explosive liquids.
- Completely automatic using normal shop air, or using hand pump without shop air.
- New safety design, when the tank is full of liquid, air inlet mechanism will be shut off automatically.
- Working Pressure: 70~170 PSI / 4.9~11.9 BAR
- Air inlet: 1/4"
- Air Consumption: 5 CFM



2/9.5/11.5/4.3



△ 4.75kg



### 9 Liters pneumatic fluid extractor

#### 9T3606P



- A large 9.0 Liter (2.35gallon) capacity Pneumatic fluid extractor, can be used to extract many kinds of non-explosive liquids.
- Completely automatic using normal shop air, no electric spark, safety for workshop.
- New safety design, when the tank is full of liquid, air inlet mechanism will be shut off automatically.
- Working Pressure: 70~170 PSI/ 4.9~11.9 BAR
- Air inlet: 1/4"
- Air Consumption: 5 CFM

3/12.0/13.0/4.5'



 $\triangle$  4kg

#### 9 Liters manual fluid extractor

#### 9T3606M



- A large 9.0 Liter (2.35gallon) capacity Manual fluid extractor, can be used to extract many kinds of non-explosive liquids.
- Completely using hand pump when you stay out of door.
- New safety design, when the tank is full of liquid, the unit will be shut off automatically.



2/9.5/11.0/4.3

∆ 4.75kg

### 5.5 Liters pneumatic fluid extractor

#### 9T3607

3-61



- A versatile, portable, air operated fluid extractor for extracting fluids from crankcases, transmission cases, cooling systems and power steering reservoirs.
- This ideal tool designed to be used with many kinds of nonexplosive liquids.
- Completely automatic using normal shop air.
- New safety design, when the tank is full of liquid, air inlet mechanism will be shut off automatically.
- Working Pressure: 70~170 PSI / 4.9~11.9 BAR
- Air inlet: 1/4"
- Tank Capacity: 5.5 L
- Air Consumption: 5 CFM



4/9.5/10.5/3.7'



### 9-Liter pneumatic oil & liquid dispenser

#### 9T3612





- New safety design, with the dual-safety protection device, when tank pressure reaches the set level, the devices will start the pressure release automatically.
- Unique design, with the one-touch convert button device, simple and easy function converting between extracting and
- Working pressure: 70~170 PSI/ 4.9~11.9 BAR
- Air inlet: 1/4"
- Tank capacity: 9.0 Liter
- Air consumption: 5 CFM

2/6.6/7.6/3.3'



∆¹∆ 3460g

#### Pneumatic brake fluid extractor / refilled kit

#### 9T3608



- The unit creates a powerful vacuum that is used to bleed and flush hydraulic brakes and clutches.
- Large, stable base so it won't tip, requires no special adaptors.
- Automatic refilling of the master cylinder reservoir while bleeding.
- Universal drain valve fits to most standard recycling system.
- Working Pressure 70~170 PSI / 4.9~11.9 BAR
- Air inlet: 1/4"
- Air Consumption: 5.0 CFM
- Extracting Tank Capacity: 2.0 L
- Refilling Bottle: 1.0 L

**2/5.0/5.8/2.3**°



△ 2.6kg

### Oil drain tank

#### 9T3701



- The most capacity is 30L.
- The safety capacity is 20L in any positions without splitting.



1/16.0/17.0/3.1





### Oil drain tray

#### 9T3706 / 9T3707

- Material: PE
- Dish to save the slop oil.
- Special design on rim for prevent the oil comes out.
- And the producing hole also has special design to pour out the oil.
- Molded handles and 45° spout permit easy handling and pouring.



	Volume		
Part no.	L	packing	g
9T3706	8	10/5.4/6.4/3.2'	540
9T3707	16	10/9.5/11/5'	950

### Oil drain tray

**9T3708** 

• Volume: 24L

• material: PE



5/9/11/5.6



## Oil draion tray

#### 9T3709 / 9T3710



	Volume		$\Delta \Delta$
Part no.	L	packing	g
9T3709	6	10/6.5/8.5/6.3	665
9T3710	10	10/10/12/9°	1000

### Replaceable oil pan separator and clean set

#### 919T1



- Breaks gasket seals on engine sumps, transmissions or any difficult to separate gasket joints.
- The copper blade could avoid damage on gasket or oil pan connection joint surface.
- Clean up wheel tool helps use to clean all small spaces on cylinder head.





50/18.5/19.5/1.42



## **Exhaust spring clamp remover / installer**

#### 9T0301



- Essential for safe, controlled removal of clamps attaching exhaust to manifold.
- Special design provides "LEVERAGE" required to expand the strong spring clamps.
- For Volkswagen.

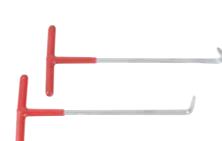


48/21.5/22.5/2'



### 2pc Rubber ring hook tool set

#### 902T1



- Essential for safe, controlled removal of clamps attaching exhaust to manifold.
- · Special design provides "LEVERAGE" required to expand the strong spring clamps.
- For Volkswagen.



**72/18.5/19.5/6**°



### Exhaust hanger removal tool

### 9T0316



- Easily remove exhaust rubber hanger for a wide range of applications.
- ∆ 710g





### 3pc Tailpipe expanders set

#### 903T3



- · Heavy-duty tools flare and expand in mufflers and tailpipes. Features exist long hex bar.
- Three sizes fit all automotive applications.
- Capacity:

**903T3A**: 1-1/8"-1-3/4" (29-44mm) 903T3B: 1-1/2"-2-7/16" (38-62mm) **903T3C**: 2-1/8"-3-7/16" (54-87mm)







### Magnetic adjustable camber gauge

#### 688



- It has a simple leveling adjustment of +/-3°. Housed in a durable, non-magnetic casing with a magnetic head that attaches firmly to rotors or spindles.
- Time/money saving device.
- Return a strut to its original camber after repair or replacement.
- Measure camber change before reinstalling alignment heads during camber kit installation.
- Check the amount of camber change before reinstalling tire and wheel assemblies on trucks receiving offset alignment bushings.



12/6.1/7.1/1.3'



## Magnetic adjustable camber gauge

#### 68801



- It has a simple leveling adjustment of +/-3°. Housed in a durable, non-magnetic casing with a magnetic head that attaches firmly to rotors or spindles.
- Time/money saving device
- Return a strut to its original camber after repair or replacement.
- Measure camber change before reinstalling alignment heads during camber kit installation.
- Check the amount of camber change before reinstalling tire and wheel assemblies on trucks receiving offset alignment bushings.



30/15.0/16.5/1.8'



∆ 500g

### Camber adjustment tool for BMW rear axles

#### 902T2





- •Ideally suited for adjusting the camber on the rear axle.
- •The rear wishbones can moved with this therefore setting the camber.
- •Without this tool the correct and exact adjustment of the camber is
- •Application range: BMW 3 series, (E36, E46) .

### **VW** Automatic transmissions socket

#### 9T0205



- Used for loosening and tightening the nut on the drive shaft.
- M6-speed manual gearbox 0A3, 4-wheel drive.
- Application:VW



20/20.0/21.0/0.44

∆ 1000g

## **Transmission clutch spring compressor**

#### 9T0317



- •For removing and installing the transmission rear clutch piston snap ring.
- •Adjustable, for most models of American cars and light trucks.





12/16.0/17.0/1.8'



∆ 800g



### VW Audi 7 Speed DSG clutch installer and remover

#### 905T11





- This tool is designed to install and remove the clutch of
- Application :VW Golf 2004 present,

VW Golf Plus 2005 - present,

Audi A3 2004 - present with 7-speed gearbox (code 0AM)

VW Touareg 2003 - present with 6-speed gearbox (code 08D)





### 7-Speed DSG mechatronic unit remover for VW, AUDI, SEAT

#### 9G4601





- · Specially designed to remove load from plungers of mechatronic unit when you insert the tool between clutch lever and gear housing.
- Applicable: VW, AUDI, SEAT 7-speed dual clutch gearbox.







### **8pc Auto transmission filling system**

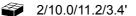
#### 908T9



- •The unit is designed to fill fluid into the transmission, differentials and transfer cases.
- •Capacity: 7.5L
- •Outlet: 80cc/ cycle
- •Viscosity Range: up to SAE 140
- •Application:Suits Honda, Nissan, BMW, Audi VW, DSG, Porsche, Mini Cooper, Mercedes Benz, etc.









### 1/2" DR. 7 PC Wheel bearing locknut sockets set

#### 907T5



- •1PC 55mm Hex locknut Socket:
- For use on front wheel adjusting nuts found on Toyota FJ. Ln, and RN models
- •1PC 2-3/8" Hex locknut Socket:
- Works on 1984-92 Ford Rangers & Bronco lls with automatic locking hubs
- •1PC 2-1/2" Hex locknut Socket:
- Found on rear axles and various front axle applications on light-duty trucks.
- •1PC 2-1/2" Rounded Hex locknut Socket:
- Works on 1995-96 Ford F/150 trucks and full-sized Broncos with automatic locking hubs.
- •1PC 2-3/4" Rounded Hex locknut Socket:
- Works on 3/4" and 1-ton Ford F-250 and F-350 trucks with automatic locking hubs.
- •1PC 2-9/18" Rounded Hex locknut Socket:
- Works on 1990, 1993 Dodde trucks with Dana 60 manual hubs.
- •1PC 2-3/8" Rounded Hex locknut Socket:
- Works on 1990- recent Ford Rangers, Bronco lls, and Explorers with automatic locking hubs.



3/16.0/17.0/1.4 '



### Toyota Hub nut spanner 54mm (1/2"DR.)

#### 9T1450





- •Wheel bearing lock nuts are easy to remove or install with these specially designed sockets.
- •High-grade truck wheel bearing lock nut socket is made of high-strength steel.
- •Measure from flat to flat to determine size of lock nut.
- •Size: 1/2"DR. 54 mm hex socket



24/13/13.5/1.5'



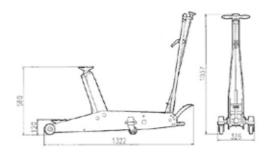
∆ 526g

### Service jack 3 Ton

#### 9U3921



- Ideally suited for all automotive, agriculture and light truck repair
- Pump is operated by both activating foot pedal to provide speed to contact the load, and activating "T" handle to lift it.
- Hydraulic power unit with dust seals to prevent oil contamination.
- Large heavy duty rear swivel caster wheels provide easy maneuvering and positioning of jack.





1/67.0/71.0/4.6



### **Jack stands**

9U39...



- These models incorporate a lever and ratchet assembly for adjusting the height.
- Same as Model 9U3902 but these models are newly designed with rubber pads which can prevent the auto body from damage.

Part No.	Capacity	Height range	Base Size	Packing	g
	(ton)	(mm)	(mm)		
9U3901(one pair)	3 ton	270-420	177 x 194	1/6.0/6.6/0.66	6000
9U3902(one pair)	3 ton	290-440	177 x 194	1/6.6/7.2/0.66	6600

### **Jack stands**

9U39...



• These models are designed for use with trucks, height adjustment is made using the knurled nut and threaded stud.

Part No.	Capacity Height range		Base Size	Packing	g
	(ton)	(mm)	(mm)		
9U3903	12 ton	456-710	ψ467	1/18.5/19.5/0.7	18500
9U3904	12 ton	614-868	ψ590	1/21.0/22.0/1.0	21000
9U3905	12 ton	710-1065	ψ670	1/25.0/26.0/1.0	25000

## 4. Truck



**IVECO truck tool** 

Page 4-1 ~ 4-1



**SCANIA** truck tool

Page 4-9 ~ 4-12



**BENZ truck tool** 

Page 4-1 ~ 4-3



**VOLVO truck tool** 

Page 4-13 ~ 4-16



**MAN truck tool** 

Page 4-3 ~ 4-6



**General truck tool** 

Page 4-17 ~ 4-28



**BPW truck tool** 

Page 4-6 ~ 4-9





### ■ IVECO Axle nut socket 110mm

#### 9T1405



- Six sided drive H 36.
- Positive drive of the axle nut.
- Any extensive slipping is avoided.
- Milled out profile.
- Robust execution.
- Can be used with an impact wrench or torque wrench.
- Special steel.
- Application range: Iveco Eurotech Cursor HA, etc.

SW(mm)	H(mm)	Outer ø(mm)	L(mm)
110	36.0	134.0	118.0



8/19.0/20.0/1.37



#### ∆ 2375g

### IVECO Axle nut socket 98 mm

#### 9T1406



- Six sided drive H 36.
- Positive drive of the axle nut.
- Any extensive slipping is avoided.
- Milled out profile.
- Robust execution.
- Can be used with an impact wrench or torque wrench.
- Special steel.
- Application range: Iveco Euro Cargo, etc.

SW(mm)	H(mm)	Outer ø(mm)	L(mm)
98.0	36.0	122.0	117.0





∆ 2250g

### 8/18.0/19.0/1.37'

### BENZ Axle nut socket 95mm

#### 9T1407



- Six sided drive H 36.
- Positive drive of the axle nut.
- Any extensive slipping is avoided.
- Milled out profile.
- Robust execution.
- Can be used with an impact wrench or torque wrench.
- Application range: Mercedes Benz axle trailers.

SW(mm)	H(mm)	Outer ø(mm)	L(mm)
95.0	36.0	118.0	157.0



8/21.0/22.0/1.42





#### BENZ Rear axle nut socket 105-125 mm

#### 9T1408



- Rigid locating tube.
- · High accuracy of fit.
- Extremely robust execution.
- Suitable for high tightening and loosening torque.
- Special steel.
- Application range: Mercedes Benz Actros rear axle, HL/HL 8 (Hypoid),

Inner ømm	Outer ømm	L mm	Stud ømm	Stud	Stud width mm
105.0	125.0	180.0	116.0	6	10.0



6/17.8/18.8/0.9'



∆ 2965g

### BENZ & MAN Rear axle nut socket 80-95 mm

#### 9T1426



- · Rigid locating tube.
- •Optional with expander sleeve(bayonet locking system).
- · High accuracy of fit.
- Extremely robust execution.
- Suitable for high tightening and loosening torque.
- Application range: Mercedes Benz Atego Rear axle on Vitaro 814 and MAN, etc.

Inner ømm	Outer ømm	L mm	Stud ømm	Stud	Locating tube ømm	Stud width mm
80.0	95.0	175.0	87.0	6	49.0	10.0



12/19.6/20.6/1.1'

∆ 1630g

### Benz & Man Rear axle nut socket 95-115 mm

#### 9T1427



- Optional with sleeve locating tube.
- · High accuracy of fit.
- Extremely robust execution.
- Suitable for high tightening and loosening torque.
- Application range: Mercedes Benz and MAN 10+13t Reduction axle, Hypoid and Trailer axle NR7/4,Omnibus 0305G + 0405G, etc.

Inner ømm	Outer ømm	L mm	Stud ømm	Stud	Stud width mm	
95.0	115.0	110.0	101.0	6	11.5	



**8/23.0/24.0/0.7**'

∆ 2875g

## ■ BENZ & MAN Clamp nut socket 56 mm

#### 9T1424



- For professional loosening and tightening.
- Extremely versatile.
- Rectangular form.
- Usable with rectangular clamp nuts on the axle stub.
- Suitable for exact torque with a 3/4" square drive.
- Milled-out profile.
- For machinery usage.
- Application range: DAF, MAN trucks / BENZ trucks / BENZ buses / KASSBOHRER / SETRA.

SW mm	DR.	H mm
56.0	3/4"	53.0



20/18.5/19.5/0.36'



### BENZ & MAN Clamp nut socket 60 mm

#### 9T1425



- For professional loosening and tightening.
- Extremely versatile.
- Rectangular form.
- Usable with rectangular clamp nuts on the axle stub.
- Suitable for exact torque with a 3/4" square drive.
- Milled-out profile.
- For machinery usage.
- · Special steel.
- Application range: BENZ SK, Actros / MAN 9 tons strengthen / DAF / KASSBOHERE / SETRA

SW mm	DR.	H mm
60.0	3/4"	53.0



20/16.3/17.3/0.36



∆'∆ 815g

### 3/4" DR. BENZ & MAN Pitman arm puller 42mm

#### 6281842



- Pressure pieces in the spindle rotating mounted.
- Save time and labor.
- No need to destroy the pitman arm.
- Cast forged execution.
- · Special steel.
- Size:3/4" DR. 63(A) x 42(B) mm
- Application: Benz Actros & MAN 414



6/22.0/23.0/0.66'







### MAN TGA Drive axle nut socket 133-145mm

#### 9T1410



- Six sided drive H 60.
- Optional with sleeve Locating tube.
- High accuracy of fit.
- Extremely robust execution.
- Suitable for high tightening and loosening torque.
- Application range: MAN TGA 460drive axle, V9-82L-01(Disk brake/ABS), etc.

Inner ømm	Outer ømm	L mm	Stud ømm	Stud	Stud width mm
133.0	147.0	160.0	118.0	6	12.0



4/18.6/19.6/1.3'

△ 4650g

### ■ MAN TGA Front axle nut socket 133-145mm

#### 9T1409



- Six sided drive H 60.
- Optional with sleeve Locating tube.
- High accuracy of fit.
- Extremely robust execution.
- Suitable for high tightening and loosening torque.
- Application range: MAN TGA Front axle, V9-82L-01(Disk brake/ ABS), etc.

Innar	Outon		Ctud		Ctdidth
Inner	Outer	L	Stud	Stud	Stud width
ømm	ømm	mm	ømm	Otaa	mm
133.0	147.0	110.0	118.0	6	12.0



4/15.3/16.3/0.7'

∆ 3825g

#### MAN TGA Front axle nut socket 101-110mm

#### 9T1411



- Six sided drive H 60
- High accuracy of fit.
- Extremely robust execution.
- Suitable for high tightening and loosening torque.
- Application range: MAN TGA Front axle, V9-82L-01 (Disk brake/ ABS),etc.

Inner ømm	Outer ømm	L mm	Stud ømm	Stud	Stud width mm
101.0	110.0	80.0	93.0	6	7.2



8/21.5/22.5/0.5

∆ 2687g



### ■ MAN truck transmission socket 53.5mm

#### 9T1412



• This special socket removes, transmission nut on MAN trucks.

1 1	Inner ømm	Outer ømm	L mm	DR.	Stud ømm
	53.5	72.0	75.0	3/4"	4



12/16.8/17.8/0.35'



#### MAN Front wheel hub extractor tool 115mm

#### 9T1429



- The tool is used to remove the front-wheel hub.
- Use this axle with spanner to spin the screw.
- Extremely robust execution.
- Flat oval form.
- European truck repair tool.
- Special steel.
- Specification:M115\*P1.5
- Application: MAN truck



4/16.0/17.0/1.1'

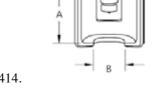


### 3/4" DR. MAN Pitman arm puller 67mm

#### 6281867



- The tool is designed for extracting pitman arm of MAN.
- It's different from traditional puller that prevents pitman arm from damage.
- Use H6,70mm socket to remove the fixed nut on the pitman arm before using this tool.
- Cast forged execution.
- · Special steel.
- Size:3/4" DR. 75(A) x 67(B) mm
- Application: MAN Tractor Trailer FE410A/FE414.





4/18.4/19.4/0.66'







### ■ 3/4" DR. MAN Star impact socket for HGV Cylinder head bolt (E18, E20, E24)

#### 466110

- Size: E18, E20, E24
- 3/4" DR. 110mm.
- For HGV cylinder head bolts.



		1	$\Box$	
Part no.	Size	mm	g	Applications
46611018	E18	110 mm	520	For MAN commercial vehicles
	<b>3</b> 3	80/15/16/0.4	<b>L</b> '	M2000 and MAN buses with D0 engines.
46611020	E20	110 mm	540	For MAN commercial vehicles
	<b>3</b> 3	80/16.2/17.2	2/0.4'	F2000, F90, F8 and MAN buses with D25 and D28 engines.
46611024	E24	110 mm	591	For MAN commercial vehicles
	<b>3</b> 3	0/17.7/18.7	7/0.4'	with D20 engines.

### BPW Rear hubcap nut socket 111mm

#### 9T1417



- Special heavy duty oval shape socket with two flats on the side to suit BPW rear axle hub retaining cap nuts fount on later model Japanese commercial trucks, tractors and other automotive industrial equipment.
- For extracting the rear axle cover.
- Male Hex Drive: 1-5/8" (41mm)
- Size: 4-3/8" (111mm) Across the flats.
- Application range: BPW 12 tons

Inner	Outer	L	Н
ømm	ømm	mm	mm
111.0	132.0	94.0	41.0



6/17.0/18.0/0.6

∆'∆ 2833g

### BPW Rear hubcap nut socket 95mm

#### 9T1420



- For extracting the rear axle cover.
- Application: BPW 6.5~9 tons truck.



6/15.0/16.0/0.6'







### ■ BPW Rear hubcap nut socket 120mm

#### 9T1416



• Special heavy duty eight point socket to suit BPW rear axle hub retaining cap nuts fount on later model Japanese commercial trucks, tractors and other automotive industrial equipment.

• Male hex drive: 1-5/8" (41mm)

• Size: 4-3/4" (120mm) 8 Point opening

• Application range: BPW former 16 tons

Inner	Outer	L	H
mm	ømm	mm	mm
120.0	143.0	95.0	41.0



6/18.0/19.0/0.6'

∆ 3000g

### BPW Rear hubcap nut socket 109mm

#### 9T1418



• Special heavy duty eight point socket to suit BPW rear axle hub retaining cap nuts fount on later model Japanese commercial trucks, tractors and other automotive industrial equipment.

• Socket for the rear axle cover.

• Male Hex drive: 1-5/8" (41mm)

• Size: 4-5/16" (109mm) 8 Point opening

• Application range: BPW 12 tons

Inner	Outer	L	Н
ømm	ømm	mm	mm
109.0	129.0	94.0	41.0



6/15.0/16.0/0.6

△ 2500g

### BPW Axle nut socket 65mm

#### 9T1419

4-7



- For the dismantling and assembly of BPW axle nuts
- Extremely versatile
- Flat oval form
- Suitable for exact torque with a 3/4" square drive
- For machinery usage
- Special steel
- Application range:6.5~9 tons trucks

Inner	Outer	L	Н
ømm	ømm	mm	mm
65.0	82.0	66.0	36.0



4/15.5/16.5/0.5'

∆ 3875g



#### BPW Axle extractor 135mm

#### 9T1430



- Use this tool on axle with spanner to spin the screw.
- Extremely robust execution.
- Flat oval form.
- European truck repair tool.
- Special steel.
- Specification:M135\*P2.0.
- Application:BPW ECO 10~12 tons old model.



2/13.5/14.5/0.6'

△ 6750g

#### BPW Axle extractor 136mm

#### 9T1431



- Use this tool on axle with spanner to spin the screw.
- Extremely robust execution.
- Flat oval form.
- European truck repair tool.
- Special steel.
- Specification:M136\*P2.5.
- Application: BPW ECO Plus 8~12 tons , BPW ECO 10 tons new model..



2/13.5/14.5/0.6'

∆ 6750g

#### BPW Axle extractor 155mm

#### 9T1432



- Use this tool on axle with spanner to spin the screw.
- Extremely robust execution.
- Flat oval form.
- European truck repair tool.
- Special steel.
- Specification:M155\*P3.0.
- Application: For former model of 16 tons truck.



2/13.5/14.5/0.6'



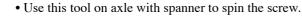
∆ 6750g





### ■ BPW Axle extractor 125mm

#### 9T1433



- Extremely robust execution.
- Flat oval form.
- European truck repair tool.
- Special steel.
- Specification:M125\*P2.0.
- Application:For former 12 tons trailer.



**4/16.0/17.0/1.1** 

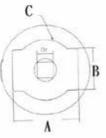


### ■ 3/4" DR. Wheel capsule and axle nut socket

#### 9T1435



- For clean, easy loosening and tightening of flat oval wheel capsules and axle nuts for BPW axles.
- For the dismantling and assembly of grease capsule on BPW axles.



Part no.	A mm	B mm	C mm	DR.	g	packing
9T1435A	65	40	60	3/4"	1000	16/16.0/17.0/0.65
9T1435B	80	50	72	3/4"	1187	16/19.0/20.0/0.65
9T1435C	85	50	80	3/4"	1062	16/17.0/18.0/0.65
9T1435D	95	40	68	3/4"	1583	12/19.0/20.0/1.2'
9T1435E	110	45	107	3/4"	2000	10/20.0/21.0/1.0'
9T1435F	120	48.5	115	3/4"	2500	8/20.0/21.01.1

### SCANIA Front wheel nut socket 80mm

#### 9T1422



- This eight sided 80mm socket is specifically for front-wheel nut sockets on SCANIA trucks.
- SCANIA front-wheel nut socket.

Inner	Outer	L	Н
ømm	ım ømm mm		mm
80.0	100.0	102.0	41.0



12/21.6/22.6/0.65'



∆∆ 1800g



### SCANIA Front wheel nut socket 100mm

#### 9T1423



- Control the nut with slide rod to adjust bearing.
- This eight sided 100mm socket is designed specifically for rear wheel nut sockets on Scania trucks.

Inner ømm	Outer ømm	L mm	DR.
100.0	123.0	84.0	3/4"

**6/17.0/18.0/0.5** 

∆ 2833g

### SCANIA Transmission clutch front main shaft socket

#### 9T1421



- This special socket removes.
- European truck repair tool.

Inner ømm	L mm	Stud ømm	Stud	Stud width mm	DR.
80.8	76.1	72.5	4	6.75	3/4"

10/18.5/19.5/0.8'

∆ 1850g

### ■ 3/4" DR. SCANIA Front - wheel shock absorber spring socket

### 9T1436



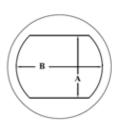
- To apply for SCANIA front-wheel shock absorber spring screws removal / installation.
- European truck repair tool.
- Size:3/4" DR. 28.5(A) x 37.4(B) mm
- Application: SCANIA



36/16.0/17.0/0.61'

∆ 444g

∆ 625g



### 3/4" DR. SCANIA Rear axles damper rod socket

#### 9T1437



- To apply for SCANIA rear axles damper rod screws removal / installation.
- European truck repair tool.
- Size:3/4" DR. 34.5(A) x 47.5(B) mm
- Application: SCANIA



24/15.0/16.0/0.42'





TRUCK

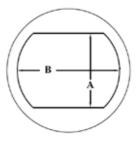


## ■ 3/4" DR. SCANIA Rear wheel shock absorber spring socket

#### 9T1438



- To apply for SCANIA rear wheel shock absorber spring screws remove / install.
- European truck repair tool.
- Size:3/4" DR. 34.5(A)x 56(B) mm
- Application:SCANIA



24/15.0/16.0/1.0'

∆ 625g

### 3/4" DR. SCANIA pitman arm puller 58mm

6281858



- To use on pitman arm of European trucks. No need to destroy the pitman arm.
- Cast forged execution.
- Special steel.
- Size:3/4" DR. 75(A) x 58(B) mm
- Application: European Truck, such as SCANIA.

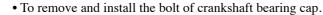


4/18.4/19.4/0.53'

∆ d600g

### 3/4" DR. SCANIA Star impact socket (E28)

46611028



• Applicable: SCANIA Ti engine.





		l
Part no.	Size	mm
46611028	E28	110 mm



30/17.6/18.6/0.4





### 1/2"DR. SCANIA Truck camshaft rotator tool

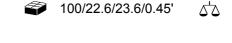
#### 9K0101



- •This tool is designed to rotate the camshaft for timing on SCANIA truck engines.
- •Size:Spline Tooth x 1/2"Drive..







### Caliper adjuster socket 24mm

#### 9T1439



- Size:H24, 5 teeth, 46mm L.
- · Barreled round shape
- Material:SCM440.
- Application: Most European trucks, such as SCANIA, VOLVO... etc.

100/17.0/18.0/2.0'

∆ 170g

### Axle nut socket 140mm

#### 9T1428



- Positive drive of the axle nut.
- · Robust execution.
- Can be used with an impact wrench or torque wrench.
- Ideally suited for brake restoration working.
- Forward tension with SW 32mm is at 150 N-m.
- Angle of rotation 20-30 with SW 46.
- · Special steel.
- Application range: SAF Euro axle, etc

Inner ømm	L mm	H mm
140.0	135.0	32,46



4/17.5/18.5/1.36'

∆ d375g



### ■ 1/2"DR. VOLVO Camshaft rotator tool

#### 9K0102



- •Special 1/2" drive tool for rotating the engine and camshaft for the setting the timing on Volvo diesel truck engines.
- •Applicable: Volvo engines D9A, D12, D16C..
- 20/16.0/17.0/0.9
- ∆ 744g

### VOLVO Flywheel turning tool

9K0103



- Special design to rotate the flywheel of crankshaft for correcting the timing position.
  - Applications: Volvo/Renault MP8, MP10 engines.





### VOLVO / SCANIA Wheel shaft cover socket 115 mm

9T1440



- •For Dismantling The Front / real Wheel Axle Cover Of VOLVO
- •Size: 3/4"Dr., 8 Point, 115mm







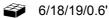


### ■ VOLVO Truck axle nut socket 105mm

#### 9T1441

- Fix bearing while removing or installing the truck nut.
- Use the air wrench or rod to control the nut to tighten or loosen
- Size: 1"Dr., 6 Point, 105mm







### ■ VOLVO Truck axle nut socket 95mm

### 9T1442



- •Fix bearing while removing or installing the truck nut.
- •Use the air wrench or rod to control the nut to tighten or loosen bearing.
- •Size:1"Dr., 6 Point, 95mm
- 6/17.5/18.5/0.6'
- ∆ 2916g

### ■ VOLVO King pin upper cover socket 80 mm

#### 9T1443



- •To remove king pin upper cover.
- •Size:3/4"Dr., 6 Points, 80mm
- •Applicable: VOLVO FM12



10/15/16/1'





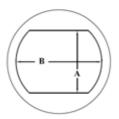
### ■ VOLVO Rear wheel shock absorber spring washer removal socket

#### 9T1445



- •Use for VOLVO rear wheel shock absorber spring washer removal socket.
- •Size:3/4"Dr., 28.5(A) x 43.5(B) mm, height 60mm
- •Applicable: VOLVO rear axle e.g. FH, for removal and installation of leaf spring bolts on the springs.

∆ 800g



24/19.2/20.2/0.86'

### VOLVO Front wheel shock absorber spring washer removal socket

#### 9T1446



- •Special two pin socket for removal and replacement of spring washer holding the front wheel shock absorber on Volvo trucks.
- •Pin Diameter: 8.73 mm
- •Circle diameter:37 mm
- •Drive Size:27 mm Hexagon
- •Applicable:VOLVO e.g. FL6 / F10 / F12

60/10.8/11.8/0.55

∆ 180g

### VOLVO Truck shock absorber upper base nut extractor / installer

### 9T1447



4-15

- •For extracting and installing the shock absorber upper base nut of VOLVO Truck.
- •Size:3/4"Dr., 53mm Dia x 4 lugs.

30/22/23/1.23'

∆ 733g



### VOLVO Truck front / rear brake shoe lining inside calipe

#### 9T1448



- •Extend wider and hold open brake shoe steel by locking A1169 inside caliper closer. Take out the bolts and change new brake
- •Applicable: All kinds of VOLVO trucks.

10/19.5/20.5/1.76

### VOLVO Truck fan bearing base socket

#### 9T1449



- •This special four lug socket is used to remove the fan base bearing on engines fitted to Volvo trucks.
- Applicable: All kinds of VOLVO trucks.

24/19.5/20.5/0.8'

∆¹∆ 812g

### Sleeve locating tube 60-67 mm

#### 9T1413



- Practical connector system with fixing screw.
- Usable for different groove socket nuts(module systems).
- Enables stable work position.
- Prevents slippage of the socket.
- Extremely robust execution.
- Change through loosening of the grub screw on the hexagon.
- · Special steel.

Inner ømm	Outer ømm	L mm
60.0	67.0	140.0

20/16.6/17.6/1.03'





### ■ Sleeve locating tube 54-60 mm

### 9T1414



- Practical connector system with fixing screw.
- Usable for different groove socket nuts(module systems).
- Enables stable work position.
- prevents slippage of the socket.
- Extremely robust execution.
- Change through loosening of the grub screw on the hexagon.
- · Special steel.

Inner ømm	Outer ømm	L mm
54.0	60.0	140.0



20/13.8/14.8/1.03'



△ 690g

### Sleeve locating tube 46-52 mm

#### 9T1415



- Practical connector system with fixing screw.
- Usable for different groove socket nuts(module systems).
- Enables stable work position.
- Prevents slippage of the socket.
- Extremely robust execution.
- Change through loosening of the grub screw on the hexagon.
- · Special steel.

Inner ømm	Outer ømm	L mm	
46.0	52.0	140.0	



20/10.0/11.0/1.03'



### 9pc Sockets for ball bearing nuts (outer teeth)

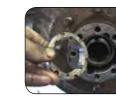
#### 909T3

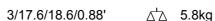
4-17



- •Outer-teeth sockets for ball bearing nuts.
- •1/2":KM4,5,6,7
- •3/4":KM8,9,10,11,12

Size         ⊚         Nut slot         Length           KM4         Ø32         4         55           KM5         Ø38         5         55           KM6         Ø45         5         55           KM7         Ø52         5         55           KM8         Ø58         6         68           KM9         Ø65         6         68           KM10         Ø70         6         68           KM11         Ø75         7         68           KM12         Ø80         7         68				
KM5         Ø38         5         55           KM6         Ø45         5         55           KM7         Ø52         5         55           KM8         Ø58         6         68           KM9         Ø65         6         68           KM10         Ø70         6         68           KM11         Ø75         7         68	Size	0	Nut slot	Length
KM6         Ø45         5         55           KM7         Ø52         5         55           KM8         Ø58         6         68           KM9         Ø65         6         68           KM10         Ø70         6         68           KM11         Ø75         7         68	KM4	Ø32	4	55
KM7         Ø52         5         55           KM8         Ø58         6         68           KM9         Ø65         6         68           KM10         Ø70         6         68           KM11         Ø75         7         68	KM5	Ø38	5	55
KM8         Ø58         6         68           KM9         Ø65         6         68           KM10         Ø70         6         68           KM11         Ø75         7         68	KM6	Ø45	5	55
KM9         Ø65         6         68           KM10         Ø70         6         68           KM11         Ø75         7         68	KM7	Ø52	5	55
KM10         Ø70         6         68           KM11         Ø75         7         68	KM8	Ø58	6	68
KM11 Ø75 7 68	KM9	Ø65	6	68
	KM10	Ø70	6	68
KM12   Ø80   7   68	KM11	Ø75	7	68
14112 200 1 00	KM12	Ø80	7	68







### ■ Pickup truck & bus ball Joint extractor 30mm

#### 6281830



- For removing the truck rod end from the drag link.
- The best tool for removal light truck ball joint.
- Size:60(A) x 30(B) mm
- Application: All light trucks. Such as BMW (E39), Benz(W203/W210/W211/W220/ W221), Mitsubishi Delica, Canter, Toyota Dyna



15/5/6/0.6'

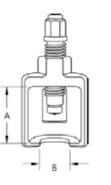
∆ 980g

### Medium sized wagon ball Joint extractor 32mm

#### 6281832



- The best tool for removal truck ball joint.
- No damage to ball joint and related parts.
- Size:92(A) x 32(B) mm
- Application: 3.5 tons~8.8 tons trucks.
  - 8/22.6/23.6/0.69' ∆ 2820g

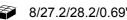


### Truck ball Joint extractor 39mm

### 6281839



- The best tool for removal truck ball joint.
- No damage to ball joint and related parts.
- Size:60(A) x 39(B) mm
- Application: over 4 tons and European trucks HINO Special for MAN 414 drag link.







### ■ 3/4" DR. Ball joint puller 47mm

#### 6281847



- Pressure pieces in the spindle rotating mounted.
- · Spindle suitable for impact wrenches.
- Less space required.
- Cast forged execution.
- Special steel.
- Size:3/4" DR. 63(A) x 47(B) mm
- Application: HINO, ISUZU, UD, FUSO, 8.8 tons~10.5 tons truck.



6/22.8/23.8/0.66'

∆ 3800g



### ■ 3/4" DR. Ball joint puller 62mm

#### 6281862



- Pressure pieces in the spindle rotating mounted.
- Spindle suitable for impact wrenches.
- Put is on steering mechanism pitman arm,then take pitman arm apart.
- Cast forged execution.
- · Special steel.
- Size:3/4" DR. 75(A) x 62(B) mm
- Application:15 tons~35 tons of HINO, ISUZU , NISSAN, FUSO truck and bus.



4/18.4/19.4/0.53'



### Reverse action wheel stud thread restorer kit –Truck

#### 905K1



4-19

- Unique design allows the two halves of the thread restorer to be fitted on the good thread and wound back over the damaged thread ,normally at the end of the stud.
- Traditional thread restorers rely on luck for the restored and undamaged threads to align.
- Three sizes of product a set of capacity: M18 X 1.5 , M20 X 1.5 , M22 X1.5, 7/8"-11 BSFI
- Applications:

M18 X 1.5 - DAF, IVECO, MAN, RENAULT, VOLVO 1

M20 X 1.5 - MERCEDES, SCANIA1

M22 X1.5 - DAF, FORD, MAN, RENAULT, VOLVO, MERCEDES, **SCANIAI** 

7/8"-11 - SCANIA

20/16.5/17.5/1.1'







### Hydraulic HGV ball joint separator

#### 903T2



- For separating HGV ball-joint. Strengthened fork and lever allows for greater force to be applied.
- Remove ball joints easily where space prevents use of direct action method.
- Jaw opening capacity 70 mm; Jaw width 36 mm.
- Patented Hydraulic ram provides max. 12 tons.
- SCM 440 material.



2/14.0/15.0/1.0'



### ■ 11pc 3/4"DR. Truck wheel impact socket set

#### 6113



• Content: 3/4" DR.

46190 17...21 46190 13.16

2pc- Square impact deep socket 17; 21mm 1pc- Square impact deep socket 13/16"

465100 33...41

4pc-6pt. Flank impact deep socket

33; 35; 38; 41 mm

465100 1.1.16...1.1.2 4pc- 6pt. Flank impact deep socket 1-1/16; 1-1/8; 1-1/4"; 1-1/2"

3/27.5/28.5/1.5'

∆ 9150g

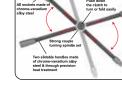
### Double power lug wrench

#### 681600



- Foldable: easy to carry and store.
- Sliding: increase power.
- Deep sockets.
- Socket size:24/27/32mm & 3/4"SQ.DR.

Length: 600 mm





6/20.0/20.5/0.84







TRUCK



### 9pcs Center sleeve pin set

#### 909K1



- Designed to protect the wheel threads when taking off the
- Center sleeves kit with inner thread for exactly mounting on truck wheels.

Each kit includes 3 sleeves.

Applications:

M18 X1.5 - DAF, IVECO, MAN, RENAULT, VOLVO M20 X1.5 - DAF, FORD, MAN, RENAULT, VOLVO . MERCEDES , SCANIA

 $M22\ X1.5$  - Alloy wheels MAN , MERCEDES





10/17.0/18.0/1.5'



### Dual head truck tire gauge

#### **9T0405**



- Measures from 10 to 150 PSI
- Accuracy: +/- 2PSI



100/18.0/20.0/3.0'



### Dual head truck tire gauge (Straight-on)

#### 9T0405B





- Measures from 10 to 150 PSI
- Accuracy: +/- 2PSI



100/20.0/22.4/3.1'



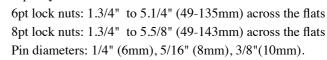


### ■ 8pc Adjustable wheel bearing lock nut wrench

#### 908T1

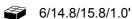


- Adjustable jaws with locking feature to suit both hexagon & octagon wheel bearing lock nuts.
- Includes three sets of pins to suit lock nuts with pin holes.









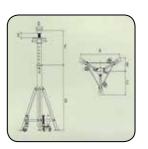
∆ 2466g

### Truck jack stands

#### 9U39...



- The jack stands are of heavy-duty designand high strength legs for truck & bus support.
- 9U3911 &9U3912 are designed with rubber pad which can prevent the truck & bus body from damage.



Item No.	Capacity (ton)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	W (kgw)	Packing	g
9U3911	6.8	803	235.5	445	127	0	540	870	47	1/43.5/46.0/3.27	43500
9U3912	6.8	803	235.5	445	127	70	670	1426.5	59	1/56.0/59.0/4.67	56000
9U3913	15	948.5	308.5	513	127	70	700	1389	98	2/196.0/211.0/58.3	98000

### ISUZU Crankshaft rear oil seal installer

#### 902K1



- This tool is specially designed for preventing the oil seal from damage when installing it .
- Oil seal genuine no: BZ4962-E, 3-97071561.
- Application:ISUZU 3.5tons (4JB1,4JG2) (130HP / 150HP).



8/17.0/18.0/1.1'





### 4pc Injector socket set

#### 904K1



- For removal replacement of the pressure nut injector holder.
- Applicable: BENZ truck, MAN, NEOPLAN, SETRA, IVECO, SCANIA, RANAULT...etc.



#### △ 1055g

### ■ HGV Diesel Injector nozzle Socket

#### 9G0125



- •The especially-designed toothed socket is for installing and removing the diesel injection nozzle on BENZ, MAN and SCANIA commercial vehicles.
- •Specially-designed with window, toothed end and M14 pulling force



40/20/21/0.8'



### 4pc Diesel injector socket set

#### 904G3



- 1/2" DR. socket for diesel injector removal and installation.
- Applicable: ALFA ROMEO FORD, VW, OPEL, VAUXI ROVER also o & SCANIA HO

O, CHRYSLER, BMW,	Ø.
MERCEDES, AUDI,	
HALL, SEAT, VOLVO,	
on VOLVO, MAN2.5TD	
GVS.	

Diameter	Description	Length	Proof torque
22 mm	injector socket (6 pt )	110 mm	215 N-m
22 mm	injector socket (12 pt)	75 mm	215 N-m
27 mm	injector socket (12 pt)	78 mm	390 N-m
28 mm	injector socket (12 pt )	78 mm	430 N-m



10/11.4/12.4/0.8'



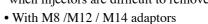


### Diesel injector puller

#### 9G0114



· Assists removal of stubborn BOSCH and LUCAS Diesel injectorssaves time and money when injectors are difficult to remove.



• Applicable: VOLVO, SCANIA.







40/16.018.0/1.8'

∆ d00g

### Diesel injector seat cutter set

#### 907G7



- This kit has been specially design for cleaning and re-cutting injector seats on modern common rail diesel engines.
- 15mm flat reamer for universal injector.
- 17mm flat reamer for DELPHI / BOSCH injectors (BMW / PSA / RENAULT / FORD )
- 19mm flat reamer for BOSCH injectors (MERCEDES CRD)
- 19mm angled reamer for FIAT / IVECO.
- T handle, Pilot post

20/19.2/19.7/2.0'

∆ 950g

### Diesel engine nozzle tester & cleaner

#### 905G13



- For all diesel engine cars & trucks.
- For Testing injection nozzle opening pressure, leakage spray pattern, Atomization & Chatter Characteristic & Cleaner.
- Pressure Gauge: 70mm.
- Pump: 11mm.
- Stroke: 20mm.
- Discharge Amount: 2.0 cc.
- Weight: 8 kg.
- Simple & Easy to Operate by Hands.
- Follow New International Standard.
- Clean the Nozzle if used with 3M Cleaning Solution.
- Capacity Gauge: 9000 PSI (640 kg/cm<sup>2</sup>)

Adapters: M-12 x P1. 5, M-14 x P1. 5, M-16 x P1. 5



**2/15.7/16.7/1.27**'







### 9pc Pre-heater plug tools

#### K909G4



- To ream out and clean the bore between the glow plug and precombustion chamber.
- Size: M12 x 1.25, M10, pre-heater plugs with 10mm across flats.
- Fasten the glow plug with the correct torque.
- 1/4" DR. Universal socket size: 8, 9, 10, 12 mm.

Thread Diameter	Tightening Torque
8 mm	8-15Nm(0.8-1.5Kgm)
9 mm	15-20Nm(1.5-2.0Kgm)
10 mm	15-20Nm(1.5-2.0Kgm)
12 mm	20-25Nm(2.0-2.5Kgm)

6/9.9/10.9/0.78'

∆ 1650g

### Diesel compression tester

#### 916G2



- 2-1/2" dial, glycerin filled gauge with glass lens in stainless steel housing 4,500 psi rated nylon jackted pressure hose assembly.
- Dual scale 0-1,000 psi; Metric scale 0-70 bar. 13 piece adapter set (Deere & BMW adapters included).



4/21.6/22.6/2.24'

∆ 5400g

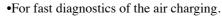
### Turbo system pressure tester kit for commercial vehicles

907G19

4-25







- •Enables time-saving and appropriate determination of leaky intercoolers and invisible cracks in air charging hose.
- •Three pairs of stepped adapters: 105-110, 115-120, 125-130





### ■ Valve seal remover and installer kit for truck

#### 902K2



- •Two valve keeper removers and installers operate much quicker than standard compressors.
- •Valve retention tools hold multiple valves in place at a time.
- •Special deep-reach access valve seal pliers.
- •All-in-one valve service kit with valve spring keeper removers installers, valve retention tools and valve seal pliers.
- Applicable: Trucks only.



20/14.5/15.5/0.76'



△ 1316g

### Piston ring pliers

#### 62302



- Removes or installs piston rings easily and fast without risk of breakage or distortion.
- Capacity:110mm-160mm pistons in diameter.



50/18.5/19.5/3'





### Self-griping oil filter wrench

#### 9B0704



- Removes all oil filters from 95-165 mm.
- Used with 1/2" square drive tools.



10/14.0/15.0/0.81'

∆ 1400g

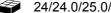


### Three-legged oil filter wrench

#### 61913



- 3-leg, 1-way, fit 1/2" square drive
- Capacity  $75 \sim 130$ mm ( 3" to 5-1/8")



24/24.0/25.0/0.79'



### Heavy-duty oil filter wrench

#### 61905



- Wide steel bank designed to meet the high torque requirement of truck, bus, RV and heavy duty equipment filters.
- Used with 1/2" square drive tools.

Part no.	Packing	Capacity	g
61905120	36/24.8/25.8/4.5'	4-1/8" to 4-3/4"	690
		(105mm - 120mm)	
61905135	36/25.2/26.2/4.5'	4-1/2" to 5-1/4"	700
		(115mm - 135mm)	
61905145	36/25.6/26.6/4.5'	5" to 5-3/4"	700
		(125mm - 145mm)	

### Oil filter master pliers

#### 639230



- These multi-purpose locking pliers will lock and grip oil filters or any irregular shaped object for quick positive tightening or removal.
- They can be adjusted and fastened for applications at any angle.
- Capacity:2.1/8" to 4.1/2"(55mm to 120mm).
- Length:230 mm.



40/19.5/20.5/1.7'



#### ∆ 480g

### Axle oil drain tray for HGV

### 9T3711



- •For clean and simple removal of the drive shaft
- •Suitable for different wheel diameters.
- •Volume: 3L
- •Material: PE





20/7.8/9.3/5.2'





### Hand lubricator for gear oil

### 9T3611



- With reservoir capacity 25L.
- It is suitable for general lubricant and gear oil.
- 70c.c. / each cycle.
- Hose: 1/2" x 2M PVC yarn pipe.

1/8/9.5/2.21'



∆ 7000g

### Hand lubricator for grease

#### 9T3610



- With reservoir capacity 25L
- It is suitable for general lubricant and grease.
- 4c.c. / each cycle
- Hose: 1/4" x 1W x 2M

1/8.5/10/2.2'

∆ 7000g

### Lever type grease gun

#### 88704



- Electric-plated finish for long service life.
- Short stroke "lever action" for easy use.
- Vented head cap for easy filling.
- Used standard 14 oz. Grease cartridge.
- 3-way loading: Standard 14 oz. Cartridge, pressure filler and bulk 400 c.c.



20/23.0/26.9/2.3'



∆ 1300g







# 5. Auto Body



**Body dent puller tool** Page 5-1 ~ 5-2



**Body pull clamp** Page 5-14 ~ 5-20



Wiper arm removal tool Page 5-30 ~ 8-31



**Body repair tool** Page 5-3 ~ 5-7



**Body filler tool** Page 5-20 ~ 5-21



**Dent repair tool** Page 5-8 ~ 5-8



Clip tool Page 5-21~ 5-24





Weld / Bending pliers Page 5-9 ~ 5-14



**Glass maintenance** tool Page 5-25 ~ 5-29





### 6pc Extra large sliding hammer set

#### 906M2



#### **Contents:**

- 1- Hammer and shaft
- 1- Plate (9\*120mm)
- 1- Plate (9\*130mm)
- 1- Plate (9\*140mm)
- 1- Plate (9\*210mm)
- 1- Plate (9\*220mm)
- For different extent of indentation, it has five hooks attached.
- The hooks will completely fit kinds of plate to your problem.
- It is durable and made by steel.



2/18.0/19.0/0.91'



### ■ 10pc 12LBS Knocker set

#### 910M1



For those hard to reach places on unit-sized body reconstruction, when working on fenders, rocker panels, door edges, bumper ends, aligning doors, hoods, trunks etc. hammers both ways without reversing. Solid 5/8" steel slide shaft, pipe end nose adapter is machined and plated.







2/20.0/21.0/1.3'



 $\Delta \Delta$  10kg

### 11pc 10LBS Dent puller set

### 665B



#### **Contents:**

1pc Pipe (Diameter 22.5mm x 590mmL)

1pc Pipe (Diameter 22.5mm x 200mmL)

1pc 2 Hole pipe (Diameter 29mm x 40mmL)

1pc Hammer (10lbs.)

1pc Plate (6mm x 170mm) / 1pc Plate (6mm x 120mm)

1pc Plate (6mm x 120mm) / 1pc Plate (6mm x 200mm)

1pc Plate (3mm x 100mm)

1pc Chain & hook

1pc Hex nut (29mm)

2/16.8/17.8/1.1'



∆ 8420g



### 9pc Body pry bars and body wedge tools set

#### 909M1



These pry bars are manufactured from special steel and are particularly suitable for:

- Dismantling stubborn components.
- Positioning components.
- Holding components in required position.
- Spreading clamp-fixtures, etc.

2/23.0/24.0/1.52

∆ 11.5kg

### 13pc Body pry bars and body wedge tools set

#### 913M2



These pry bars are manufactured from special steel and are particularly suitable for:

- Dismantling stubborn components.
- Positioning components.
- · Holding components in required position.
- Spreading clamp-fixtures, etc.

2/23.0/24.0/1.52'

∆ 11.5kg

### 4pc Body and fender dent puller set

#### 904M2



Often, the biggest time-consuming part of dent removal is the removal and installation of interior panels and upholstery. This tool eliminates those steps. Simply drill a hole at the base of the dent and thread in the tool's self-tapping screw. A few sharp blows of the slide hammer will pull the dent out.



12/18.6/19.6/1.4'



### Air suction dent puller

#### 905M4



- With 120mm & 150mm pad
- With 3LB(1.36kgs) sliding hammer
- With brass shut off valve
- With 13" length inlet hose
- Air exhaust from the handle
- With 1/4" air plug
- Optional pad: 60mm(905M4-60)



4/17.0/18.0/3.3'



 $\Delta^{\dagger}\Delta$  3.8kg



**AUTO BODY** 



### 11pc Auto body repair set (interchangeable)

#### 911M1



- Material: Main hammer made from drop forged tool steel; all bits made from Chrome-Vanadium
- Double locking device holding tight
- Save space / weight
- Save money / time
- Create high efficiency

Warning: Form hitter hits shank has to be inserted to the hole's bottom.

10/23.0/24.5/1.8' ∆ 2300g

### 7pc Auto body repair tool set

#### 50713B



#### **Contents:**

62602 1-Pick & finishing hammer 1-Light shrinking hammer 1-Standard bumping hammer 1-Utitity dolly 68301 1-Curved dolly 68303 1-Heel dolly

3/22.0/23.0/1.51'

68304 1-Toe dolly

∆ 7300g

### 7pc Auto body repair tool set

#### 50719



#### **Contents:**

1-Standard bumping hammer 62604 62602 1-Pick & finishing hammer 68305 1-Grid toe dolly 68306 1-Double end hand dolly 68302 1-Curved dolly 68353 1-Drip molding spoon 68354 1-Light dinging spoon

3/22.4/23.4/1.5'

∆ 7460g



### 7pc Auto body repair tool set

#### 50720



#### **Contents:**

- 1-Rubber heel dolly (size: 2-1/2" x 3" x 1-1/2")
- 1-Large rubber heel dolly (size: 5" x 3" x 1-1/2")
- 1-Rubber double end hand dolly
- 1-Rubber general purpose dolly
- 1-Rubber wedge dolly
- 1-Rubber toe dolly
- 1-Rubber drip molding spoon

2/22.0/23.0/1.5'



### Twist & shrinking hammer

#### 62601



Specially designed hammer surface profile has a good performance of expanding and making convex on sheet board.

40/20.3/21.3/2.6'

△ 510g

<u>∆</u>'∆ 11kg

### Pick & finishing hammer

#### 62602



Crowned face, with round point head to remove low spots when metal finishing.

Round face:Φ40mm

382g  $\nabla \Delta$ 

### Light & shrinking hammer

#### 62603



Flat face+milled square face Round face:Φ40.5mm Square face:38mm

∆¹∆ 438g

### Standard bumping hammer

#### 62604



Flat face

Round face:Φ40.5mm Square face:38mm

∆ 440g

## Angle and flat double spoon

68351



- Length: 510 mm
- Width: 59mm
- Head material: 1055 medium carbon steel
- Head polished: mirror polished

8/19.4/20.4/1.2'

∆ 2425g

### Angle and flat short double spoon

68352



- Length: 401 mm
- Width: 58mm
- Head material: 1055 medium carbon steel

8/14.3/15.3/1.2'

∆¹∆ 1787g

### Drip molding spoon

68353

- Length: 236 mm
- Width: 49mm
- Head material: medium carbon steel

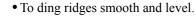


12/15.1/16.1/0.53'

∆ 1258g

### Light dinging spoon

68354



- When held against ridge and struck with hammer, spreads blow
- Making smooth job and preventing damages to metal or finish.
- Length: 250 mm
- Width: 50.8 X 109mm
- Head material: medium carbon steel



50/18.9/19.9/0.52'



∆¹∆ 378g



### Short single spoon (light duty type)

68355

• Length: 286mm

• Width: 51mm

• Head material: 1055 medium carbon steel



20/17.0/18.0/0.45'



∆ 850g

### Utitity dolly

68301



Provides convenient hand holding during heaviest blows and seal different crowned working face.

Length: 61mm

Width: 70mm Depth: 69mm

∆ 1240g

## Curved dolly

68302



Length: 132mm Width: 70mm Depth: 69mm

∆¹∆ 1132g

### Heel dolly

68303



Designed to reach easily into sharp corners and wide radii.

Length: 79mm Width: 60mm Depth: 30mm

∆¹∆ 870g

**AUTO BODY** 



### Toe dolly

68304



The large flat face is frequently used in shrinking and dinging flat

Length: 120mm Width: 58mm Depth: 29mm

∆¹∆ 1308g

### Grid toe dolly

68305



• To use for shrinking metal stretched by dents.

• Length: 122mm • Width: 59mm • Depth: 29mm

• Head material: 1055 medium carbon steel

20/27.7/28.7/0.46' ∆ 1385g

### Double end hand dolly

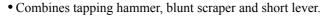
68306

- Length: 66mm
- Width: 61mm
- Depth: 74mm
- Head material: 1055 medium carbon steel

20/23.5/24.5/0.5' ∆ 1175g

### Corrosion assessment tool

9M1501



- · For checking bodywork and structural corrosion.
- Designed for the vehicle inspectorate.

100 / 11.0 / 12.0 / 2' ∆ 110g

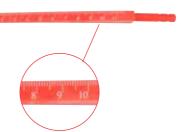




### Body gap gauge tool

#### **9M0107**





- · A simple and perfect tool for correcting body / interior alignment (the gaps on hoods, deck lids, doors...).
- · Very useful tool, especially for bearing work and for gauging slots.



## Paintless dent repair line board

#### 902M5





- Great visual aid for PDR (Paintless Dent Repair), it allows you to locate your tool tip as well as to see the distortion of dent on the panel.
- 240mm x 200mm board with suction cup, can be positioned at any angle.
- · White board with black lines for medium to dark coloured vehicles.



24/10.3/11.3/3.5'



∆ d00g

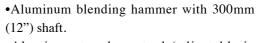


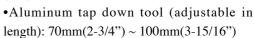
### Blending hammer and tap down tool set

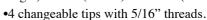
#### 905M7











•Tips conveniently store in the comfortable handle.



### Dent repair Kit

#### 915M1



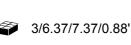


- Ideal for repairing the vehicle body small damage or minor dents.
- Content: 1ps Dent puller set.

1ps Glue gun 100V-240V 60W with 2 glue sticks..

1ps Plastic razor blade.

10ps Glue pads.









### ■ 7pc Locking pliers & clamp set

#### 50721



**Content:** 

2-Locking pliers 5"; 10" 614 125...250

1-Locking pliers (straight jaw) 7" 614A175 615150 1-Long nose locking pliers 6"

66011 1-Locking "C" clamp 11" with easy release

66101 1-Sheet metal tool 1-Welding clamp 66201

3/14.0/15.0/1.5' ∆ d650g

### Locking "C" clamp with easy release

660

- Cr-mo drop forged jaws
- Bodily heat-treated
- Welding brazed
- Nickel plated



g

245

772

1175

1438



			$\Box$
Part no.	size	packing	g
66006	6"	72/17.6/18.6/0.76	245
66011	11"	30/22.5/23.5/1.2'	750
66018	18"	20/22.8/23.8/1.1'	1140
66024	24"	20/23/24/1.5'	1150

### Locking "C" clamp with pad

#### 660...D



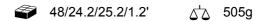
Part no.	Size	Packing
66006D	6"	72/17.5/18.5/0.67
66011D	11"	36/23.2/24.2/1.2'
66018D	18"	20/23.5/24.5/1.1'
66024D	24"	16/23.1/24.1/1.6'



### Sheet metal tool

#### 66101

- Size: 8"
- Cr-mo jaws
- · Bodily heat-treated
- Welding brazed
- Nickel plated
- Function: U-shaped jaws allow access and perfect visibility when



### Sheet metal bending pliers

### 9M0301 / 9M0302 / 9M0303



• Easy to do the automobile body work

Part No.	Description	Length	Packing	g
9M0301	Straight	280mm (11")	20/13/14/0.96'	650
9M0302	45 Degrees	280mm (11")	20/13/14/0.96'	650
9M0303	90 Degrees	280mm (11")	20/16/17/0.96'	800



9M0302

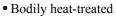
### Welding clamp

### 66201













• Function: clips things by the two flat pieces in front of the clamp.



40/24.8/25.8/1.4'







**AUTO BODY** 

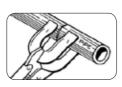


### Welder's Flat Grip Wrench

65203



- Especially designed for the pipe welding.
- Length: 11" / 270mm





## ■ 6pc Self-locking multi-grip pliers set

50635



#### **Contents:**

67901	Wide flat jaws
67902	Double curved jaws
67903	Wide curved jaws
67904	Angled jaws
67905	Straight jaws
67906	Mini straight jaws

4520g 3/13.5/14.5/1.5'

### Self-locking multi-grip pliers Wide flat jaws

67901



- Chrome-plated
- For spot welding
- Length:200mm



36/21.6/22.6/1.9'

∆ 620g

### Self-locking multi-grip pliers Double curved jaws

67902



- Chrome-plated
- For assembling angular shapes
- Length:200mm



36/21.1/22.1/1.1'





## Self-locking multi-grip pliers Wide curved jaws

67903



- Chrome-plated
- For spot welding of metal sheets with 90° angled edges
- Length: 200mm



### Self-locking multi-grip pliers Angled jaws

#### 67904



- Chrome-plated
- For 90° edged metal sheets
- Length:210mm



36/18.2/19.2/0.97

∆ 505g

### Self-locking multi-grip pliers Straight jaws

#### 67905



- Chrome-plated
- For flat metal sheets
- Length: 200mm



36/17.2/18.2/0.97



### Mini straight jaw

#### 67906



- Chrome-plated
- Clamp two sheet metal pieces of equal thickness at 90°.
- Jaw adjustment: 0-12mm
- Length: 200mm







**AUTO BODY** 



### Plug weld pliers

#### 9U0101



• Copper alloy backing plate prevents burning through. (Weld will not stick to the copper alloy)

Warning: Always wear ANSI approved safety goggles when working with tools and





48/24.2/25.2/1.7'



## Air spot weld drill kit

#### 910M5



Ideal for speedy removal of spot welds on vehicle bodywork.

- Two-tier planetary gear system triples the output torque to meet the requirement of drilling high-strength body material BTR, BOR and USIBOR etc.
- Control collar (feeding adjustable ring) allows precise setting of drilling depth.
- The Brace & Feeder Assembly can be rotated 360 degree and removed, and also prevent side-slipping of drill when working.
- With one piece of HSS drilling bit (8mm shank x 8.0mm)
- Contents :
- 1pc Air spot weld drill with 8mm drill bit.
- 5pc HSS-Co Drill bits:3pc 8mm and 2pc 6.5mm.
- 1pc -2mm Hex key
- 1pc Oil pot
- 1pc Air regulator
- 1pc 1/4" Air nipple



6/15.7/16.7/1.54'



∆ 2617g

### **Punch tool**

### 9M0105

5-13



• Punch hole: 5mm diameter

• Steel thickness 1.1mm

16/19.0/20.0/1.1





### Flanger / Punch combo tool

#### 9M0106



- Punch hole: 6mm diameter
- Steel thickness 1.1mm



16/18.0/20.0/1.1'

∆ 1150g



### Auto body repair pull clamp

#### 62501



- Single direction action
- Capacity: 5 tons





10/19.4/20.4/0.6'

∆ 1940g

### Auto body repair pull clamp (two way)

#### 62502



- Two direction action
- Cross capacity: 2 tons
- Longitudinal capacity: 5 tons



10/21.0/22.0/0.6'

∆ 2100g

### Auto body repair pull clamp

#### 62503



- Single direction action
- Capacity: 3 tons



10/20.1/21.1/0.65'





### Auto body repair pull clamp

62504



- Single direction action
- The two side heights of jaw surface are not even, most suitable for narrow space application.
- Capacity: 3 ton



10/20.1/21.1/0.88'



### Auto body repair pull clamp (two way)

62505



- Two direction action
- The two side heights of jaw surgace are not even, most suitable for narrow space application.
- Cross capacity: 2 ton
- Longitudinal capacity: 3 ton



10/20.1/21.1/0.94'



### Auto body repair pull clamp

62506



- Single direction action
- Capacity: 5 ton



6/13.4/14.4/0.71'



### Auto body repair pull clamp (tight opening)

62529





- New design tight opening clamp.
- Single direction action.
- Capacity: 3 tons.
- Jaw open: 35 mm.

10/12.0/13.0/0.5'





### Auto body repair pull clamp (C type)

62507



- Multi-direction action
- The jaw surface can be extended about 3" (75mm).
- Capacity: 4 ton



5/15.2/16.2/1.1

∆¹∆ 3017g

### Auto body repair pull clamp (C type)

62508



- Multi-direction action
- The jaw surface can be extended about 6" (150mm).
- Capacity: 4 ton
- 4/19.5/20.5/1.4'
- △ 4875g

### Long nose pull clamp

62509



- Single direction action.
- Long jaw mouth is most suitable for narrow space application.
- Capacity: 1 ton



10/16.6/17.6/0.67



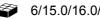
△ 1660g

### Scissor pull clamp

62510



- Single direction action.
- No need screw for locking.
- During operation it will lock as well as tightly.
- Capacity: 3 ton



6/15.0/16.0/0.71



**AUTO BODY** 



### Auto body repair pull clamp

#### 62511



- Single direction action.
- The jaw surface is 120mm long, most suitable for thin sheet
- Capacity: 5 ton

6/15.1/16.1/0.71'

△ 2520g

### Auto body repair pull clamp (two way)

#### 62512



- Two direction action.
- The jaw surface is long 120mm, most suitable for thin sheet application.
- Cross capacity: 3 ton
- Longitudinal capacity: 5 ton

6/17.3/18.3/0.71'

△ 2880g

## Auto body repair pull clamp (three way)

### 62513



- Universal direction action
- The jaw surface is 120mm long, most suitable for thin sheet application.
- Cross capacity: 3 ton
- Longitudinal capacity: 5 ton
- Multi-direction capacity: 3 ton



6/19.6/20.6/0.71'

∆∆ 3260g

### Utility claw hook





- Applying for connecting and shortening the chain.
- (3/8" and 5/16" chain applicatory)
- Capacity: 6 ton



20/24.4/25.4/0.6'



△ 1220g



### Twin pull hook

#### 62515



- Applying for two clamps are connected by a chain and make a two sides action. (3/8" and 5/16" chain applicatory)
- Capacity: 6 ton



10/10.8/11.8/0.32'



∆ 1080g

### Body jig chain connector link

#### 62516



- Applying for connecting and shortening the chain. (3/8" and 5/16" chain applicatory)
- Capacity: 6 ton



10/6.3/7.3/0.32

∆¹∆ 630g

### Self-tightening clamp

#### 9M1601



- Minimum size, maximum capability for tight places.
- Responsive, spring-loaded, one-handed application for fast
- Round wedge allows chain to be pulled free of twists.
- Aggressive cross-hatched tooth design.
- Capacity: 5 ton

15/16.5/17.5/0.59'

∆ 1100g

### Self-tightening clamp

#### 9M1602



- Self-tightening clamp; grips tighter as it is pulled.
- Compact and lightweight for pulling from many places.



- Minimum of 1-1/2" reach-around for flanges, cowls, pinch welds, and lips.
- Butts against panels where only narrow bite available.
- 1-1/4"(31.8mm) jaws give added grip.
- Capacity: 6 ton



8/18.0/19.0/0.56'

∆ 2250g

# Self-tightening clamp

#### 9M1603



- Self-tightening: The harder it's pulled, the tighter
- · Heat-treated steel clamp is positioned on work with wedge forward and nut just finger tight.
- Easy to attach no special wrench needed.
- 2-1/4" (57.2mm) jaws
- Capacity: 6 ton



6/18.7/19.7/0.56'



∆ 3120g

# Right angle clamp & yoke

#### 9M1604



- Capacity: 6 ton on straight way 3 ton on cross way
- Two-way pull operation
- Serrate width: 100 mm

You can make straight and right angle pulls with this clamp. Replaceable hardened steel jaws com as standard.



4/16.0/17.0/0.49'



∆ 4000g

# Right angle clamp & yoke

#### 9M1605



- Capacity: 6 ton on straight way
  - 3 ton on cross way
- Two-way pull operation
- Serrate width: 100 mm

You can make straight and right anble pulls with this clamp. Replaceable hardened steel jaws com as standard.



4/16.3/17.3/0.49'



△ 4075g

# **Pull clamp**

#### **9M1606**



- Capacity: 6 ton on straight way
- Single-way pull operation
- Serrate width: 100 mm

You can make straight and right angle pulls with this clamp. Replaceable hardened steel jaws com as standard.



4/13.0/14.0/0.6'



∆ 3250g



# Pull clamp

#### 9M1607



- Capacity: 6 ton on straight way
- Single-way pull operation
- Serrate width: 100 mm

You can make straight and right angle pulls with this clamp. Replaceable hardened steel jaws com as standard.



5/16.2/17.2/0.46

∆ 3240g

# 1 ton Portable puller

#### 88201



- Detachable Handle with ergonomic design.
- Stores in a handy case and easily under a pick-up seat or straps to a luggage carrier.
- Capacity: 1 ton (2000 lbs)
- Cable: 5mm x 10ft with 2 hooks



6/20.4/21.9/2.0'

∆¹∆ 3400g

# 3-in-1 Super duty orbital air sander

#### 82603



- Machine description:3-in-1
- Paper size:6" (152 mm)
- Free speed: 10000 R.P.M
- Orbit option: 5.0 mm
- Overall length:8-55/64"(225 mm)
- Air inlet: 1/4" P.T.
- Air hose:3/8 I.D
- Avg. air consumption:7.5cfm (212 L/min)
- Net weight: 1.8 Lbs (0.82 kgs)



12/9.0/13.0/2.5'



∆ 815g

#### Adjustable body file blade holder

#### 65701



Application: for 14" (350mm) flexible file adjustable frame.



20/15.7/16.7/2.1



∆ 785g





# Body file blade

#### 65714



		l		$\triangle$
Part no.	teeth per inch	inch	Packing	g
6571409 6571412	9 12	14 14	60/18.6/19.6/0.5' 60/21/22/0.5'	310 350

# 4pc Body filler applicator set

#### 904M7



- Flexible spring steel blades
- Ergonomic composite handles with rubber comfort grips
- Perfect for application of body fillers in automotive restoration.
- Set includes: 2", 3", 4" & 6" blade sizes.

40/9.0/10.0/2.8'



# 5pc Needle file set

#### 50513

Set of 5pcs needle files with different shapes. Smooth cut. Needle files shapes round, square, half-round, triangular, and flat.

120/10.8/11.8/0.9'

∆ 90g

#### 5pc Auto body tools

#### T905M2

5-21



#### **Contents:**

905M2P1 1-Trim pad remover (big) 905M2P2 1-Trim pad remover (small) 905M2P3 1-Gasket scraper

905M2P4 1-Radiator hose remover

905M2P5 1-Cotter pin puller

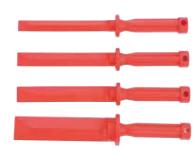
6/5.0/6.0/0.65'





## 4pc Composite scraper set

#### 904M6



- Ideal for removing trim, badges and decals from bodywork.
- Also suitable for removing residue from alloy wheels.
- Polypropylene edges will not scratch or mark paint or panel work and can be re-sharpened with a file when required.
- Length: 270mm
- Blade Size: 19mm(3/4"), 22mm(7/8"), 25mm(1"), 38mm(1-1/2")



20/10.0/11.0/3.6'



#### Plastic riveter set

#### 67803



- Rivet sizes:10pcs each 5mm×15.8mm / 5mm×17.2mm / 6mm×17.2mm / 6.3mm×25.2mm.
- Save time:set different sizes of rivets without changing nose pieces.
- Wide range application:perfect for working on automotive plastic bumpers, wheel wells, etc.
- Set plastic rivets perfectly in a single stroke by using this tool which has
- Avoid damaging painted and delicate surfaces by using this specialty tool.
- Provides extra access to hard to reach areas.



20/15.5/17/2.2'



#### 4pc Door service tool set

#### 904M1



- A handy tool set which includes a door handle tool, two door panel removers and a GM door trim pad remover.
- Together they handle a wide range of service applications.



24/13.4/14.9/2.7'









#### 5pc Handy remover set

#### 905M1



- · For plastic upholstery fastener.
- Place tool under edge of door panel and insert into fastener as far as possible and then simply pull up.



48/19.3/20.3/3'

∆ d00g

# 4pc Trim Removal set

#### 904M3



- The most versatile body/interior tool set we have ever carried. Nearly indestructible, non-marring composite construction.
- Great for technicians, body shops, upholstery shops.



72/6.9/7.9/1'



# ■ BENZ Wedge set

#### 9M0203



- Used to safely remove the wood & plastic pieces on the door panels as well as on the dashboard, without damage it.
- Application: All Mercedes Benz.





200/10.7/11.7/0.3'



# Clip removal pliers

#### 9M0101



For removal of door inner-linings and other trim items held in place by plastic rivets.







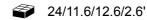
# FORGE Professional Tools

#### Clip removal pliers

#### 9M0102



- Designed to remove broken rivets (plastic), used under care cover or door pannet.
- Can adjust the angle from  $0^{\circ} \sim 90^{\circ}$ .







## 2pc Clip removal pliers set

#### 902M1



- Removal for all types of clips
- The front ends of the tool are angled and tapered to fit easily under a clip.





48/18.0/19.0/3'

∆ 375g

∆ 480g



#### 2pc Clip remover

#### 902U1



- Engage the tool tip behind the connector clip.
- Push or pull to disconnect.
- Works on Weather Pack and other automotive electrical connectors.

96/14.4/15.4/1.7'

∆ 150g

# Mini clip pliers

# 902M3



- Special design to use on small space
- Size: 20mm x 100 mm 26mm x 100mm



96/14.4/15.4/1.7





# 44pc Auto glass maintenance set

#### 944M1



1pc Wire piercing tool

1pc Square cutting wire

1pc Cutting wire

1pc Cutting wire (golden color)

2pc Wire handle

1pc Window clip molding remover

2pc Double suction cup (dia. 12cm) swiveling heads

1pc Window molding remover

1pc Wide pinch weld scraper

1pc Sharpening stone

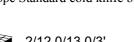
1pc 18" Urethane cutting knife & blade

1pc Gasket scraper

1pc Door cover clip remover

1pc Standard cold knife

28pc Standard cold knife blade











2/12.0/13.0/3'

#### ∆¹∆ 6kg

# 13pc Auto glass maintenance kit

#### K913M1



#### **Contents:**

9M0503 Windshield cut-out wire (stainless steel, square) 9M2901 Wire guide

902M2

2pc Wire gripping handles (Quick release)

9M2902 Wire starter

9M2903 Music wire piercing tool

5055P401 Utility knife

5055P401-P 5pc Spare blades for 5055P401

9U2102 Scraper with dual-material grip (12mm blade)

9U2102-12 5pc Blade 12mm

9U2102-16 5pc Blade 16mm

9U2102-16A 5pc Blade bevelled 16mm

9U2102-20 5pc Blade

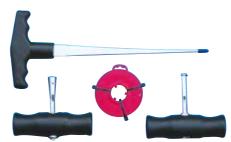
6/12.2/13.2/1.5'

△ 2035g



#### 4pc Windshield removal kit

#### 904M5



It is ideal and essential kit for removing the vinyl adhesive compound around windshield.

#### **Contents:**

#### • Wire feeder tool (Length: 205mm)

Designed for easy and flexible insertion of wire through polyurethane, allowing speedy removal of bonded windshield.

#### • 2pc Wire gripping handles

Feed the wire through the hole in the wedge shaft. Loop it through the hole at the top of the shaft. Then back into the handle. Pressing the wedge back into the handle, the wire is held.

#### • 72 feet Square wire

Material: Stainless



32/14.0/15.0/2'



∆ 437g

# 7pc Windshield removal kit

#### 907M1

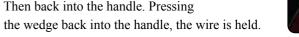


• Wire

Material: stainless

#### • 2pc Wire gripping handles

Feed the wire through the hole in the wedge shaft. Loop it through the hole at the top of the shaft. Then back into the handle. Pressing



#### • Windshield removal tool

Cuts the vinyl adhesive compound around windshield.

#### Wire feeder tool

Designed for easy and flexible insertion of wire through olyurethane, allowing speedy removal of bonded windshield.

#### • Trim pad remover

Place the tool under the edge of the door upholstery panel and insert it into the fastener as far as possible, then simple pry up.

#### • Windshield molding release tool <for GM>

Use for removal of windshield molding on rubberless installation.



6/6.5/7.5/1.5'



△ 1083g



5-25

5-26



# ■ 10pc Windshield installation kit

#### 910M3



Rope insert tool

Use this tool to insert the rope into rubber gaskets. The handle feeds rope through its stem as you pull it around the gasket.



For inserting locking strip into windshield seal. Different shaped heads interchangeable for most types of locking strip.

#### Curved hook tool

Curved hook tool used for inserting and cleaning rubber gaskets.

#### • Straight hook tool

Straight hook tool used for inserting and cleaning rubber gaskets.

#### Cleaning tool

Designed for the removal of broken glass for the side runners without removing them.



6/5.4/6.4/0.75'



∆'∆ 895g

# Windshield cut-out wire (stainless steel, square)

#### 9M0503



- Designed to provide the fast cutting action possible.
- Each wire acts like a cutting saw tooth.
- Made of stainless steel 50m per roll.



96/18.3/19.3/1.5

# Windshield cut-out wire (stainless steel braided)

#### 9M0505

5-27



- Designed to provide the fast cutting action possible.
- Each wire acts like a cutting saw tooth.
- Made of stainless steel 50m per roll.



96/20.0/21.0/1.5



∆ 125g



#### Windshield removal tool

#### 9M2904



- Cable action makes cutting out windshields fast and
- A strong tempered steel blade, sharpened to a find cutting edge, with a large durable aluminum handle, combined with a steel cable pull handle assures the easiest and fastest way of cutting the caulking compound around the windshield.



• The steel cutting blade can be re-sharpened and after many uses is easily replaced with a new blade.



48/14.0/15.0/1.4'

∆ 290g

# Window scraper

#### 9U2101



- Special handle design for easier grip when operation
- Replaceable blade design to change the blade quickly and easily.
- Blade width: 40mm



144/17.2/18.7/2.3



# Multi-function powerful suction cup

#### 634



- To pull up the plating notched part.
- To fix the windows while maintaining.
- To assemble the front and rear wind broken glasses





			Capacity	$\nabla \nabla$
Part no.	Application	Packing	Kgs	g
63401 63404	On flat object Fixed 2 sucker	20/7.9/5.9/1.6' 20/24.3/25.3/4'	50 80	395 1215

5-28



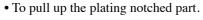
# Multi-function powerful suction cup (Aluminum)

#### 634..A









- To fix the windows while maintaining.
- To assemble the front and rear wind broken glasses.

9	
63405A	

			Capacity	$\Delta \Delta$
Part no.	Application	Packing	Kgs	g
63401A	On flat object	20/10.9/11.9/1.6'	30	480
63403A	Fixed 2 sucker	20/20.1/21.1/4'	50	780
63404A	Flexible 2 sucker	20/24.4/25.4/4'	35	1180
63405A	Fixed 3 sucker	10/14.1/15.1/3.1'	100	1410

#### ■ 33pcs Paintless dent repair kit

#### 933M1



• Hail damage, door dings and other cosmetic damage are quickly massaged out with this extensive 33pc tool profit center.





∆ 8.5kg

# Air inflator for unlocking car door (vehicle)





• This inflation design easily and safely to separate the door frame from the vehicle body.



- 20/4.8/5.8/2.4'
- ∆ 200g



# Windshield stand (folding type)

#### 9M3401



• The most common complaint about windshield stands is the amount of space they take up.



- To collapse the stand, pull each of the legs apart and fold them toward the center.
- Each leg is held together by a steel rod that gives the stand greater strength than it would have if it did not have the rods.
- Size:24"



1/9.0/10.0/1.3'



# ■ 5pc Wiper arm puller set

#### 905M5



- Universal applications
- Provide 4 adjustable removers & one high versatility puller fits nearly all difficult wiper arm removing





10/11.7/12.7/1.27'





# Easy lock wiper arm remover tool

#### 9M0207



- •Easy lock action allows a fast snap to wiper ar saving huge amounts of time.
- •Can be used on a variety of applications.
- •Suitable for use on 99% of vehicles.
- •Capacity: 0~30mm







# Windscreen wiper arm removal tool

#### **9M0201**



- The compact design offers easy access in confined spaces and eliminates the risk of damage to the wiper arm or surrounding paintwork.
- A simple, effective tool allowing easy removal of those stubborn wiper arms. Suitable for both taper and taper spline spigots.
- Size:16mm×32mm



48/6.8/7.8/1'



# Windshield wiper arm removal tool

**9M0202** 



- Tool removes wiper arms for most of the vehicles.
- Protective pad on bottom jaw will not scratch painted surfaces. Place jaws between wiper arm and shaft and squeeze handles to remove.





72/20/21/3.6'



∆ 278g

# Locking cylinder assembly sleeve

**9M0108** 



- •Suitable for the quick and exact repair of the door lock.
- •For inside track closure with internal spring.
- •Application range: Volkswagen Passat, Vento, Beetle, Lupo, Golf 4 (not Cabrio), Seat, Škoda etc.





48/6.8/7.8/1'



∆ 140g



# 6. Motorcycle



Flywheel puller tool Page 6-1 ~ 6-3



Valve / Piston / Oil filter tool Page 6-8 ~ 6-10



Page 6-13 ~ 6-18



**Clutch holder tool** Page 6-4 ~ 6-4



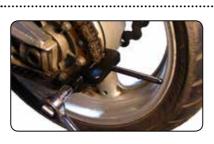
**Timing tool** Page 6-10 ~ 6-11



**Motorcycle fork** / Carburetor tool Page 6-4 ~ 6-6



Wheel nut tool Page 6-11 ~ 6-12



Chain / Belt tool Page 6-6 ~ 6-7



**Brake tool** Page 6-12 ~ 6-13



# ■ 10pcs Motorcycle flywheel drive puller set

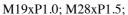
#### 909Y1



•Thread Sizes:

85mmL

M14xP1.5; M16xP1.5; M18xP1.5 65mmL



M20xP1.0 / M27xP1.25; M22xP1.0 / M25xP1.5; M22xP1.5 / M26xP1.5; M24xP1.0 / M27xP1.0L; M26xP1.0 / M28xP1.0

• Application:

YAMAHA, SUZUKI, HONDA, BOSCH, DUCAN, GLERA, SAM, CAGIVA, SFERA, KYMCO, MBK, PEUGEOT, KIMOO, MOTOPLATT, KAWASAKI, KOKUSAN, MINARELLI, DUCATI.





#### 10/17.8/18.8/1.15' △ 1780g

# Motorcycle flywheel puller M27x1.5

#### 9Y0182



- Designed to remove the motorcycle flywheels.
- Puller includes M27x1.5 right hand internal threads, M12x1.25 crankshaft protector cap.

Honda: CG125 / ML / BIZ100 / POP100



60/20/21/1.1'



# Motorcycle flywheel puller M30x1.0

#### 9Y0183



- Designed to remove the motorcycle flywheels.
- Puller includes M30x1.0 right hand internal threads, M12x1.25 crankshaft protector cap.
- Application:

Yamaha:WR 250F 2003 - 2008 and WR 450F 2003



60/25.5/26.5/1.1'





#### ■ Motorcycle flywheel puller M30x1.25

#### 9Y0185



- Designed to remove the motorcycle flywheels.
- Puller includes M30x1.25 right hand internal threads, M12x1.25 crankshaft protector cap.
- Application:

Honda: CRF450X, CRF450X8



60/25.8/26.8/1.1



# Motorcycle flywheel puller M30x1.5

#### 9Y0186



- Designed to remove the motorcycle flywheels.
- Puller includes M30x1.5 right hand internal threads, M12x1.25 crankshaft protector cap.
- Application:

Honda: Most 1989-1990 FL400R pilot models.

Kawasaki: Some KLF300 quad models.

Suzuki: Most LT160/230/250, TM125/250/400, 1970's TS250, 2004-2009 DR200 enduro models and most early PE, TS

Other: European CZ MX and enduro models.



60/25.4/26.4/1.1'



# Motorcycle flywheel puller M28x1.0

#### 9Y0188



- Designed to remove the motorcycle flywheels.
- Puller includes M28x1.0 right hand internal threads, M12x1.25 crankshaft protector cap.
- Application:

Honda: CRF450X 2004-2008, TRX450R/ER 2006-2007

Kawasaki: 2008 KLX450R

Suzuki: 2008 RMZ450



60/17.2/18.2/1.1'



∆¹∆ 287g





# ■ Motorcycle flywheel puller M26x1.0

#### 9Y0187



- Designed to remove the motorcycle flywheels.
- Puller includes M26x1.0 right hand internal threads, 12mm shaft protector cap.
- Application: KTM: 250 RFS, 250SX-F, 400, 450, 520, 525
- 60/12.8/13.8/1.1'

#### Motorcycle flywheel puller T bar M27x1.0

#### 9Y0181



- Designed to remove the motorcycle flywheels.
- Size: M27x1.0.
- Applicable:

Honda: CR80R/125R/250R/450R/480R/500R, XL80/100/100S/170, XR100/100R, XR50/CRF50 00-04, FL250, ATC70/110 (CDI ONLY), ATC185/250R, TRX250R 86-89, TRX90 93-00, TRX70/125 & EARLY 50cc

∆ 213g

Suzuki: 125/160EK/250R, DR100/125/200, DS80, ALT185

Yamaha: 1968 & later, BW80, RIVA50, PW50, RZ350, TT500, XT500, YFM80/100/200/225, YFS200, YFZ350, YSR50, YT125/175 & YZ400F, YZ450F

Kawasaki: KD/KX/KDX80, KM100, KS100, KS125

KTM: 65SX 99-04, 85SX 04, 105SX 04, 200 EXC/MXC 98-05, 125/250 SX/EXC/MXC 98-05 & 250/300/380 SX/EXC/MXC 97-05

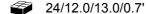
60/15.0/16.0/1.0' ∆ 250g

# Flywheel puller for DUCATI

#### 902Y1



- Designed to remove the motorcycle flywheels.
- Applications: Ducati 250/350/450 and most later bevel single wide-







# Clutch holding tool

#### 9Y0101



- Made from medium carbon steel with hardened jaws
- Holds clutch hubs, flywheels, gears, sprockets, etc..
- Features spanner pins
- Jaws open to 5" wide







## Rotor and sprocket holder



- Keeps flywheels, rotors and sprockets from rotating during removal and installation.
- Holds sprockets and rotors with holes center-to-center at a minimum distance of 1/2" (13mm) and a maximum distance of 9"(230mm).
- Features 5mm and 9mm pins.
- Adjustable stop screw keeps tool open at set distance.



36/20.5/22.0/2.1'







#### Universal fork seal driver

#### 903Y1



- Designed for easy installation of most fork seals.
- Works on either conventional or inverted forks.
- Unique adjustable insert will work on dia. 26 to 45mm.



20/22.0/23.0/0.7'





# Motorcycle fork cap wrench (46x50)

#### 9Y0121



- For removing the fork caps on late-model RMs & CRs
- · Can be used for removal of a compression stack on late-model RMs
- Replaces Suzuki OEM 09941-53630
- One end is 46mm, the other is 50mm
- Also fits 2010 Honda CRF250R



48/16/17/0.74'





6-3



# Fork compression valve removal tool

#### 9Y0122



- Ideal tool to remove the compression valve from cartridge.
- 19mm drive hex with 36 mm octagon.
- Made of 6061-T6 aluminum.
- Applications:

Honda:CRF250R 2010-2012, CRF450R 2009-2012,

Kawasaki:KX 450F 2009-2012

Yamaha: YZ 125/250 2005-2012, YZ 250F/450F 2006-2012



144/7.5/9.0/1.5'



#### Twin chamber KYB compression valve wrench

#### 9Y0146



- This tool removes the Compression Body from the cartridge on twin-Chamber KYB forks.
- Applications: Yamaha: YZ 125/250 05-09, YZ250F/450F 06-09





144/17.0/18.5/1.0'



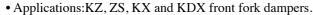
#### ∆ 118g

# 3/8"DR. Fork damper rod holder

#### 9Y0123



- Ideal tool to hold damper rod when disassembling and assembling front forks.
- It provides a secure method of holding the inner damper rod while removing the bolt from the bottom of the fork leg on Kawasaki models.





96/14.5/16.0/1.3'



# Angle driver for motorcycle carburetor

#### 910Y1





- Deep-access tool particularly suited to adjustment of motorcycle carburetor.
- One turn of handle equals one turn of blade.
- 90° and straight gear-boxes.
- Furnished with set of driver bits.



12/11.0/12.0/2.1'





# Carburetor synchronize tool set

#### 919G2



- For testing fuel pump carburetor and transmission check auto with 2~4pc carburetors.
- Gauge: Pressure: 0~15 PSI:0~1 kg/cm2 Vocuum:  $0 \sim 28$  in-Hg ( $0 \sim 70$  cm-Hg)

4pc 3-1/2" Synchronizer gauges with fixed plate

4pc Rubber hose 8 X 5 x 750mm

4pc Extension tube 3.9 x 52mm

4pc Extension tube 3.9 x 122mm

8pc Cone type connector 8 x 40mm

4pc Adapters 10 X 53mm (M6 x 0.75)

4pc Adapters 10 X 60mm (M6 x 1.0)



6/20.0/21.0/2.25'



# All purpose chain separating tool

#### 9Y0135

• For pressing rivets out of the chains.



24/18.5/19.5/1.6'



# Chain breaker and riveting tool set

#### 913Y1



- Versatile 3-in-1 tool can be used on both cam chains and drive chains.
- The kit supplied with adequate components to break chains from #35 to #630.
- Includes three pin sizes for compatibility with most chains (2.2 mm, 2.9 mm & 3.8 mm).
- Also includes tools and plates needed to rivet hollow nose master links.



20/16.5/17.5/1.5'







# Chain link pliers

#### 9Y0131



· Designed to simplify installation or removal of cliptype master chain links.



48/16.9/7.9/2.3'

∆ 143g

#### Chain puller tool

#### 9Y0132



- This chain puller is made for work on drive chains found on motorcycles and all-terrain vehicles (ATVs).
- Tightening the forcing screw pulls the jaws together to hold the chain for easy removal or installation of the chain connector or master link.



48/12.0/13.0/2'

∆ 252g

# Motorcycle chain brush

#### 9Y0133



- · Composite, angled chain brush features adjustable brush adaptors to fit various size chains.
- Suitable for use on all chain types.



72/8.5/10.0/3.6'

# Motorcycles belt tension gauge

#### 9Y0141



- This tool can be used to adjust belt tension on most motorcycles equipped with a secondary drive belt.
- This tool provides a simple way to firm the belt for proper tension.



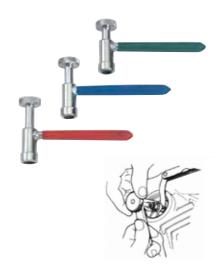
240/18.0/19.5/1.6'





## ■ Tappet adjusting tool set

#### 9Y0142



- Set contains three wrenches (8, 9 & 10mm) and three adjusters (screw type and 3 & 4mm square type).
- Interchangeable adjusters and wrenches provide nine different
- Ideal for most marks and models of motorcycles, ATVs and ATCs.

HONDA: All ATC's and motorcycles with 4-cycle engines and screw type adjusters.

YAMAHA: SR 185/250, XT/TT250, XS400, ST185

SUZUKI: All 4-cycle ATV's and motorcycles with screw-type adjusters.

Any tappet adjuster with 8, 9 or 10mm adjusting nut and 3 or 4mm squart slotted adjuster.

48/12.5/13.5/0.6'



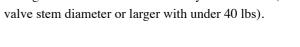
△ 260g

# Large tools work on valves of 4-valve-per-cylinder heads

#### 9Y0143



- Used to install valve spring keepers.
- Replaces the large cumbersome valve spring compressor.
- These tools are aimed at saving time when replacing valves in modern 16 to 20 valve head.
- Designed to fit the valves of 4 -cylinder heads (5.5 mm





36/13.0/14.0/0.6'



# Small tools work on valves of 4-valve-per-cylinder heads

#### 9Y0143B



- Used to install valve spring keepers.
- Replaces the large cumbersome valve spring compressor.
- This tool is designed to save time in replacing valves of modern 16 to 20 valve heads.
- This tool works on valves of 4- or 5- valve-per-cylinder heads. (Valve stem diameter of 5mm or smaller)



36/15.0/16.0/0.6'



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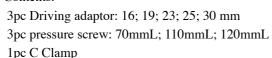


#### ■ Valve spring compressor

#### 62110



- These tools are designed to compress and release valve spring after removing the collets. Pantograph-type levers ensure a consistent coaxial contact with the valve.
- Contents:





10/21.5/22.5/2.2'

∆ 2150g

# Piston ring pliers

#### **62002**



- Save by reducing ring breakage.
- Tapered jaws to remove and install most passenger car and light truck rings from 3/64" to 1/4" (1.2mm  $\sim$ 6.3mm).



144/18.0/19.0/2.15'

△ \( \) 135g

#### Piston ring compressor tool

#### 62005



- Designed to prevent ring breakage during cylinder
- It can easily be removed after cylinder is in position.
- Tool supplied with 6 rings to be applicable to most engine sizes.
- Fits 35-73 mm

60/16.23/17.23/2'

△ 270.5g

#### Piston ring compressor for Motorcycle





- For easy insertion of piston into cylinder bore and even compression over full ring length.
- Ratchet mechanism.
- Capacity: 40 80 mm diameter.

50/7.0/8.0/0.89

∆ 140g



# Oil filter wrench

#### 9B0701



- Steel jaw grips filter without slipping.
- Use with 3/8"drive.
- Suitable for filter 2-1/2" to 3-1/8" (60m/m-80m/m).



48/18.1/19.1/1.7'

∆'∆ 380g

# Timing and crankshaft turning tool for DUCATI

#### 9Y0301



- Ideal tool to turn timing mark on the degree wheel for perfect valve adjustments.
- It makes ignition timing work to be performed well.
- Applications: DUCATI Monster | Multistrada 600 / 620 / 748 / 750 / 800 / 848 / 851 / 888 / 900 / 916 / 996 / 998 / 999 / 1000 / 1098 / 1198.



36/18.0/19.5/1.9'



△ 500g

## Engine rotating tool for DUCATI

#### 9Y0302



- It allows you to rotate your engine easily and safely while checking the valve clearances or setting the timing.
- Applications: DUCATI Monster /748/996/999/SS.



96/12.5/13.5/0.6'





# Timing and crankshaft turning tool for DUCATI

#### 9Y0303



- It allows you to attach through the primary cover access hole and fit into the crankshaft notch for ignition timing work accuracy.
- It is also suitable for mounting most available degree
- Applications:Ducati 250/350/450/750



36/14.5/16.0/1.1'



6-10



#### Cam holder for DUCATI

#### 9Y0305



- This tool helps you to loosen the cam gear nut easily.
- Applications: DUCATI 250 350 450 750 single twin bevel.
- 20/19.2/20.2/0.43'

#### ∆'∆ 960g

#### Spark plug cap removal tool for BMW

#### 9Y0306



- This tool works on R and F series coil-over bikes.
- It is designed to slip onto the cap from the front and that allows you to remove the spark plug cap without damaging it.
- If the cap is very difficult to remove, choose a proper bar, slip it through the 1/4" hole on the tool and then you can pry the cap loose easily.
- Applications:

All R1150 from Dec 2002 production R1200C, R1200C I/M, R1200 Montauk from October 2002 production All R1200 from model year 2003 and newer

R1100S from December 2002 production

All F Twins

All G Thumpers

All new style K1200/1300s



144/7.5/9.0/1.8'



#### 4-in-1 Hex axle tool

#### 9Y0151



6-11

- Fits internal hex on many late-model sport-bike axles and some dirt bikes.
- Four metric hex sizes: 17, 19, 22 and 24mm.
- 3/8 in. square drive on both ends.
- Applications:

BMW: 1200GS, R1200 RT

Buell: XB9R, XB9S, XB12R, XB12S (2003-2004)

Honda: CBR600RR, CBR1000RR

Kawasaki: ZX6R, ZX6RR, ZX600E/K, ZX7R, ZX9R, Z1000 Suzuki: GSXR 2000-2004, DL 1000 V-Strom (all), SV1000

Yamaha: R1, R6



100/17.0/18.0/0.6'



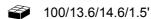


# ■ Motorcycle spindle tool

#### 9T1403



- Use a socket on the free end to remove spindle.
- 24mm for SUZUKI / HONDA
- 22mm for KAWASAKI
- 19mm for YAMAHA









#### Front and Rear wheel nut tool set

#### 909Y2



- The combined socket is two sizes in one, a 55mm 12pt for the rear and a 28mm 6pt for the front.
- The other sockets size as follow: 41mm/46mm 6/12pt for the rear wheel 25mm/30mm 6pt and 28mm 12pt for the front wheel
- All sockets with 1/2" drive.



15/16.5/18.5/1.4'





# Brake piston detaching tool for motorcycle

#### 9Y0201



- To detach a piston from the disc brake base of a motorcycle
- Ratcheting handle allows the operator to replace a piston conveniently



• Length:240 mm.



10/13.5/17.6/2.1





# Parking brake piston socket for YAMAHA

#### 9Y0202



- Material: Heavy duty Cr-Mo steel construction

YAMAHA:MAJESTY (07~11), MAXAM (05~10), GRAND MAJESTY 400 (05~09), GRAND MAJESTY 250 (04~07), TMAX (05~10)



240/16.0/18.0/1.8'







MOTORCYCLE

# Parking brake piston socket for HONDA / SUZUKI

#### 9Y0203



- Material: Heavy duty Cr-Mo steel construction
- SUZUKI:SKYWAVE250 (07~11), SKYWAVE400 (07~11) HONDA:FORZA (00~03)
- 240/14.0/16.0/1.8'

#### Brake fluid bleeder bottle

#### 9Y0161



• Bleeder Bottle Capacity: 0.5 L



50/10.0/11.0/3.0'



# ■ Honda oil filter and clutch hub spanner

#### 9Y0145



- Designed for oil filter and clutch hub on many Honda models (singlecylinder and twin-cylinder machines).
- 3/8" driver and 24mm inside diameter.
- Applications:most pre-1978CB, CL, CT, SL and XL models, XR200 1980-1984, XR200R 1981-1994, XR250L 1991-1994, XR250R 1986-1995.
- Replaces large end of 077160020100 OEM tool.



240/12.5/14.5/1.6'

△ 52g

# Adjustable spanner wrench





- For use on slotted retaining rings.
- Adjustable from 1/2" to 2-3/4".



48/16.1/17.1/1.1'





# Fixed type adjustable hook wrench

#### 823





• For use on slotted retaining rings.
---------------------------------------

			4
Part no.	Size	Packimg	g
823035	15-35 mm	60/6.6/7.6/1'	110
823050	35-50 mm	60/12.6/13.6/1'	210
823080	50-80 mm	40/17.0/18.0/0.9'	425
823120	80-120 mm	20/15/16/0.92'	750
823180	120-180mm	12/17/18/1'	1400

# Pin type adjustable hook wrench

#### 823A



• For use on slotted retaining rings.

Part no.	Size	Packimg	g
823A035	15-35 mm	60/6.6/7.6/1'	110
823A050	35-50 mm	60/12.6/13.6/1'	210
823A080	50-80 mm	40/17.0/18.0/0.9'	425
823A120	80-120 mm	20/15/16/0.92'	750
823A180	120-180mm	12/17/18/1'	1400

#### Internal snap ring pliers (long arm)

#### 9U0102



- Special design for the retaining ring in the deep hole.
- The most deep size: 56mm.



48/9.5/11/2'

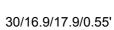
∆¹∆ 198g

#### Stud extractor

#### 818A



- Socket 1/2" DR. Stud Extractor.
- For remove threaded, stripped, rusted, broken and smooth studs.
- Stud range: 6 19mm (1/4" 3/4")











# ■ Hex nut driver T handle

# 774..A



		l	1		
Part no.	Tip	blade	over	g	pc/box
77406A	6	300	200	220	10
77407A	7	300	200	220	10
77408A	8	300	200	279	10
77409A	9	300	200	285	10
77410A	10	300	200	294	10
774 11 A	11	300	200	318	10
77412 A	12	300	200	432	10
77413 A	13	300	200	346	10
77414 A	14	300	200	422	10
77415 A	15	300	200	480	10
77416 A	16	300	200	510	10
77417 A	17	300	200	542	10
77418 A	18	300	200	600	10
77419 A	19	300	200	620	5
77420 A	20	300	200	650	5
77421 A	21	300	200	715	5
77422 A	22	300	200	715	5
77424 A I N	24	300	200	702	5
7741.4A	1/4"	300	200	220	10
7745.16 A	5/16"	300	200	279	10
7743.8A	3/8"	300	200	294	10
7747.16 A	7/16"	300	200	318	10
7741.2A	1/2"	300	200	342	10
7749.16 A	9/16"	300	200	422	10
7745.8A	5/8"	300	200	510	10
7743.4A	3/4"	300	200	620	5

# Hex nut driver adjustable T handle

# 774..B

6-15



		$\mid \boldsymbol{l} \mid$	l	$\Delta \Delta$	
Part no.	Tip	blade	over	g	pc/box
77407B	7	220	200	190	10
77408B	8	240	200	195	10
77410B	10	260	200	265	10
77412B	12	260	200	380	10
77413B	13	260	200	380	10
77414B	14	260	200	385	10
77417B	17	290	250	500	5
77419B 🐠	19	290	250	580	5
77422B	22	315	250	715	5
	I				



# **■** Tire lever

# **750**



		1	\[ \sqrt{\sq}}}}}}}}}} \sqrt{\sq}}}}}}}}}} \sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sq}}}}}}}}}} \sqrt{\sqrt{\sintitex{\sqrt{\sqrt{\sqrt{\sq}}}}}}}}} \end{\sqrt{\sqrt{\sqrt{\sq}}}}}}}} \end{\sqrt{\sqrt{\sqrt{\sq}}}}}}}} \end{\sqrt{\sqrt{\sintit{\sqrt{\sqrt{\sqrt{\sqrt{\sq}}}}}}}}} \end{\sqrt{\sqrt{\sq}}
Part no.	Packimg	Length	g
750200	100/14.6/15.60.56'	200	162
750300	120/31.6/32.6/0.6'	300	370
750380	60/22.9/23.9/0.5'	380	556
750380B	60/22.9/23.9/1.2'	380	560

# ■ 12pc 3/8"DR. Impact socket set

# 3126



Part no.	
	Content:
82431	1-Impact wrench
8043 075150 MPB	2-Impact extension 75, 150 mm
80531MPB	1- Universal joint (ball type)
80934MPB	1-Adaptor 3/8"(F)x1/2"(M)(ball type
435 819	7-6pt. Flank impact socket
	8, 10, 12, 13, 14, 17, 19 mm

6/15.6/16.6/1.54'





# ■ 3-Drawer chest with 97pcs tools(Motorcycle)





4	14.111	
4nc	• inn	ty set
TPU		ty out

Part no.	
	Content:
6044190	1-Pin punch 4mm (190mmL)
6046210	1-Safe pin punch 6(210mm)
610B160	1-Long nose pliers
611B200	1-Combination pliers 8"
612B160	1-Diagonal pliers 6"
616200	1-Engineer hammer 200gw
61702	1-Flexible magnet pick-up tool
618	1-20pcs Feeler gauge set
6983	1-Technician's scissors 145mmL
750 300380	2-Tyre lever 300mmL; 380mmL
88001	1-Round magnetic tray
88423	1-Car light tester Checks 6-24V system
9U3001	1-Brass & Nylon scrape brushes





#### 60pc Combination set

Part no.	
	Content: 1/4" & 3/8" DR.
535 0824	16-6pt. Flank socket (MM)
	8; 9; 10; 11; 12; 13; 14; 15;
	16; 17; 18; 19; 20; 21; 22; 24 mm
53546 0814	5-6pt. Flank socket (MM)
	8; 10; 12; 13; 14 mm
12125 03	4-Phillips bit PH.0; PH.1; PH.2; PH.3
12225 03	4-Pozidriv bit PZ.0; PZ.1; PZ.2; PZ.3
12425 0308	6-Hex bit 3; 4; 5; 6; 7; 8 mm
5071	7-Star key
766 1040	T10; T15; T20; T25; T27; T30; T40
5072	7-Hex key
764 02510	2.5; 3; 4; 5; 6; 8; 10 mm
8013215	1-Swivel handle
802214	1-Mini bit ratchet
80233	1-Ratchet handle 24th
8033165	1-Sliding T bar
8043044150	3-Extension
	44mm(1.75")& 75mm(3") &
	150mm(6")
80531	1-Universal joint
8073 16M	2-Mag. Spark plug socket
20.6M	16 & 20.6 mm
81022M	1-Magnetic bit holder
	1/4"(F)x1/4"inhex



#### 10pc Waterpump pliers & Screwdriver set

	Part no.	
_		Content:
	613B250	1-Waterpump pliers 10"
	711 1B3B	3-Phillips screwdriver
ım		PH.1x80mmL; PH.2x100mmL;
		PH. 3x150mmL
	7112BS	1-Stubby Phillips screwdriver
H.3		PH.2x25mmL
Z.3	713 04B08B	4-Slotted screwdriver
		4mmx100mmL; 5.5mmx125mmL;
		6.5mmx150mmL; 8mmx175mmL
740	713065BS	1-Stubby slotted screwdriver
		6.5mmx25mmL



# 13pc wrench set

Part no.	
	Content:
754 06070810	2-Double open end wrench
	6x7; 8x10 mm
755 0817	7-Combination wrench
	8; 10; 11; 12; 13; 14; 17 mm
758 10122427	4-45° Offset ring wrench
	10x12; 14x17; 19x22; 24x27 mm













# 7. Torque wrench / Puller



**Torque wrench** Page 7-1 ~ 7-9



Torque handle fittings/ Torque driver

Page 7-9 ~ 7-13



**Torque multiplier** Page 7-15 ~ 7-16



Puller tool (bearing / gear separator)



# 9pc Wheel specialized torque tool set

64707



Content: 1/2" DR.

6474 088N...190N 5- Torque wrench

88; 108; 135; 163; 190 Nm

44585 17C...21C 3-Wheel nut 6pt. flank impact socket (85mmL)

17; 19; 21 mm

681A300 1-Assembly wheel nut wrench

17; 19; 13/16"; 1/2"DR. (300mmL)

1/12.4/13.4/0.85



# 3/8" DR. Preset torques wrench

647...P



	Capacity	l	$\Delta^{-}\Delta$
Part no.	Nm	mm	g
647318P 647324P	18 24	245 245	1500 1500

# ■ 11pc Torque wrench set

64701L



Content: 3/8" DR.

6473380 1-3/8"DR. Lock torque wrench

535 10...21 6-3/8"DR. 6pt. Flank socket

10; 12; 14; 17; 19; 21mm

334050 04...08 4- 3/8"DR. Hex socket bit

4; 5; 6; 8mm (50mmL)

12/20.4/21.4/0.85

∆ 1.7kg

# ■ 11pc Torque wrench set

64702L



Content: 1/2" DR.

6474535 1- 1/2"DR. Lock torque wrench

545 17...27 6- 1/2"DR. 6pt. Flank socket

17; 19; 21; 22; 24; 27 mm

344055 06...12 4- 1/2"DR. Hex socket bit

6; 8; 10; 12 mm (55mmL)

**6/18.1/19.1/1** 

∆ 3016g



# ■ Tone control torques wrench



	Capacity		1	Δ'ζ
Part no.	Nm	Packing	mm	g
	1 /4"DD	_		
6472270	1/4"DR. 5-25	20/15.4/16.4/1.19'	270	770
04/22/0	3-23	20/13.4/10.4/1.19	270	770
	3/8"DR.			
6473270	5-25	20/15.5/16.5/1.19'	270	775
6473365	20-110	20/21.5/22.5/1.46'	365	107:
	1/2"DR.			
6474470	42-210	12/19.8/20.8/1.1'	470	1650
6474630	70-350	10/28.7/29.7/1.4'	630	2870
	3/4"DR.			
6476850	65-450	4/18.1/19.1/1.7'	850	4523
64761030	140-700	4/30.3/31.3/1.67'	1030	757
64761215	140-980	2/16.2/17.2/1.13'	1215	810
	1"DR.			
64781215	140-980	2/16.3/17.3/1.13'	1215	8150
Part no.	Inch-lb	Packing	mm	g
	1/4"DR.			
6472270S	20-200	20/14.4/15.4/1.14'	270	720
04722705		20/11:1/13:1/1:11	270	/20
	3/8"DR.			
6473270S	20-200	20/14.8/15.8/1.14'	270	740
Part no.	Ft-lb	Packing	mm	g
(4522(50	3/8"DR.	20/21 0/22 0/1 14	265	105
6473365S	5-80	20/21.0/22.0/1.14'	365	1050
	1/2"DR.			
6474470S	10-150	12/20.2/21.2/1.1'	470	1685
6474630S	25-250	4/11.2/12.2/0.92'	630	2800
	2/4"DD			
6476850S	3/4"DR. 50-300	4/19.0/20.0/1.7'	850	4750
64761030S	100-600	4/30.0/31.0/1.67'	1030	7500
64761215S	100-700	2/15.0/16.0/0.8'	1215	7500
	1"DR.			
64781215S	100-700	2/15.0/16.0/0.8'	1215	7500









# ■ Lock torques wrench (tone control)

**647** 

















	Capacity		<i>l</i>	
Part no.	Nm	Packing	mm	g
	1/4"DR.			
6472295	6-30	20/19.0/20.0/1.12'	295	950
	3/8"DR.			
6473295	6-30	20/18.1/19.1/1.12'	295	905
6473380	20-110	12/13.7/14.7/1.57'	380	1140
6474200	1/2"DR.	10/15/16/1	200	1250
6474380 6474535	20-110 40-210	12/15/16/1.3' 10/21.0/22.0/1.31'	380 535	1250 2100
6474660	70-350	6/17.9/18.9/0.92'	660	2980
0474000		0/17.5/10.5/0.52	000	2700
(47(000	3/4"DR.	4/10 7/10 7/1 07!	000	1675
6476880 64761095	100-500 140-700	4/18.7/19.7/1.07' 4/31.0/32.0/1.93'	880 1095	4675 7750
64761240	140-700	4/30.3/31.1/1.93'	1093	7575
04701240	140-900	7/30.3/31.1/1.93	1240	1313
	1"DR.			
64781240	140-980	2/16.2/17/1.13'	1240	8100
64781700	300-1500	1/12.0/13.0/0.9'	1700	11580
Part no.	Inch-lb	Packing	mm	g
	1/4"DR.			
6472295S	40-250	20/17.2/18.2/1.63'	295	860
	3/8"DR.			
6473295S	3/8 DR. 40-250	20/17.2/18.2/1.63'	295	860
04732733	40-230	20/17.2/10.2/1.03	273	800
Part no.	Ft-Ib	Packing	mm	g
	3/8"DR.			
6473380S	15-80	8/9.1/10.1/0.76'	380	1140
	1/2"DR.			
6474535S	30-150	6/12.6/13.6/1.31'	535	2100
6474660S	50-250	6/17.7/18.7/0.92'	660	2950
	3/4"DR.			
6476880S	50-300	5/23.7/24.7/1.7'	880	4740
64761095S	100-600	4/30.0/31.0/1.8'	1095	7500
64761240S	100-700	2/16.0/17.0/1'	1240	8000
	1"DR.			
64781240S	100-700	2/16.0/17.0/1'	1240	8000
64781700S	200-1000	1/12.0/13.0/0.9'	1700	11580

<sup>•</sup> Spare part available









# ■ Lock torques wrench (tone control)

**647** 













	Capacity			<u> </u>
Part no.	Nm	Packing	mm	g
	3/8" DR.			
6473383	15-80	12/12.5/13.1/0.76'	383	740
6473385	20-110	12/14.0/15.0/0.76'	383	960
	1/2" DR.			
6474536	40-210	10/20.6/21.2/1.3'	535	1070
6474645	70-350	6/18.4/19.0/0.92'	645	2540
	3/4" DR.			
6476865	100-500	4/19.5/20.5/1.1'	865	3660
64761088	140-700	4/30.0/31.0/1.9'	1088	5940
64761230	140-980	2/16.0/17.0/1.1'	1230	6460
	1"DR.			
64781230	140-980	2/16.0/17.0/1.1'	1230	6460
Part no.	Ft-lb	Packing	mm	g
	3/8" DR.			
6473383S	10-60	12/12.5/13.1/0.76'	383	740
6473385S	15-80	12/14.0/15.0/0.76'	383	960
	1/2" DR.			
6474536S	30-150	10/20.6/21.2/1.3'	535	1070
6474645S	50-250	6/18.4/19.0/0.92'	645	2540
	3/4" DR.			
6476865S	50-300	4/19.5/20.5/1.1'	865	3660
64761088S	100-600	4/30.0/31.0/1.9'	1088	5940
64761230S	100-700	2/16.0/17.0/1.1'	1230	6460
	1"DR.			
64781230S	100-700	2/16.0/17.0/1.1'	1230	6460
	I		I	I

Capacity

• Spare part available





Clock wise click for right thread nut



Anti-clock wise click for left thread nut

# ■ Lock torque wrench - window display (tone control)

647...W



			1	$\Delta \Delta$
Part no.	Capacity	Packing	mm	g
6472300W	1/4"DR. 6-30Nm 40-250in-lb	20/16.0/17.0/1.63'	300	800
6473420W	3/8"DR. 20-100Nm 15-75ft-lb	12/16.8/17.8/1.57'	420	1400
6474530W	1/2"DR. 40-200Nm 30-150ft-lb	10/16.0/17.0/1.31'	530	1600



# Lock torque wrench - window display

647...W







	Capacity	1	\[ \sigma' \sqrt{\sq}}}}}}}}}}}}} \simptintiles \sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sq}}}}}}}}}}} \signatiles \sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sq}}}}}}}}}} \sqrt{\sqrt{\sqrt{\sqrt{\sq}}}}}}}} \end{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sq}}}}}}}} \end{\sqrt{\sqrt{\sq}}}}}}} \end{\sqrt{\sq}}}}} \end{\sqrt{\sqrt{\sq}}}}}} \sqrt{
Part no.	Nm	mm	g
	1/4" DR.		
6472290W	1-25	290	420
	3/8" DR.		
6473360W	5~50	360	920
	1/2" DR.		
6474405W	10-100	405	1020
6474500W	20-200	500	1200
6474595W	60-300	595	1330
6474680W	80-400	680	1820
	3/4" DR.		
6476970W	100-550	970	3700
64761150W	150-750	1150	5600
	1" DR.		
64781250W	200-1000	1250	7200





# Double click torque wrench

647A



		1	
Part no.	Capacity	mm	kg
647A602 647A602S 647A802	3/4"DR. 300-1500Nm 200-1000Ft-lb 1"DR. 300-1500Nm	1720 1720 1720	12 12 12
647A802S	<b>200-1000</b> Ft-lb	1720	12
647A803 647A803S	1" DR. 400-2000Nm 300-1500Ft-1b	2176 2176	13 13
	1-1/2"DR.		

600-3000Nm

400-2000Ft-1b

647A1201 / 647A1201S

• Spare part available

647A1201

647A1201S



2780

2780

15

# Lock torques wrench-window display (tone control)

6472195W



• **6472195W** : 1/4"DR. 3-15Nm (195mm)

20x28.5

• Nm in display only.

# ■ Interchangeable torque handle (Adjustable torque)





		lorque	l l	
Part no.	mm	Nm	mm	g
647B005D	9x12	1-5Nm	195	340
647B030D	9x12	6-30Nm	220	420
647B110D	9x12	20-110Nm	403	970
647B210D	14x18	40-210Nm	460	1160
647B350D	14x18	70-350Nm	525	1310
647B450D	14x18	75-450Nm	775	2220
		T	T	
		Torque	l	$\Box$
Part no.	mm	Nm	mm	g
647B800D	20x28.5	100-800Nm	960	5750

300-1500Nm

1786





# ■ 1/4"DR. torque driver

#### 6472160



	Capacity	<b>3</b>	
Part no.	Nm	packing	g
64721602	0.4-2	100/18/18.8/1.02'	130
64721605	1-5	30/11.7/12.3/1'	280
64721608	2-8	30/13.21/13.81/1'	280
64721610	2-10	30/13.6/14/0.96'	452

# 8pc Head-interchangeable torque wrench & spanner set

#### 64709



- **647B210** :40~210Nm Torque wrench (14×18)
- Ø 43, 60, 72, 50, 63.2, 82, 32 mm



4/15.7/16.7/0.78

∆∆ 3925g

# 10pc Head-interchangeable torque wrench & spanner set

#### 64710



- 647B030 :6~30 Nm Torque wrench
- 647H209:1/4" DR. 9 X 12 Ratchet head
- 9 X 12 Spanner head: 7, 8, 9, 10, 11, 12, 13, 14mm



10/15.2/15.8/1.29'

△ 1.52kg

# 12pc Head-interchangeable torque wrench & spanner set

#### 64711





- 647B110 :20~110 Nm Torque wrench
- 647H309 :3/8" DR. 9 X 12 Ratchet head
- 9 X 12 Spanner head: 10, 11, 12, 13, 14, 15, 16, 17, 18, 19mm
- 647A201 :1-1/2" DR. 600~3000Nm, L:2180, 15kg
- 647A201S:1-1/2" DR. 400~2000Nm, L:2180, 15kg



10/21.6/22.4/1.68'

△ 2.16kg



# 11pc Head-interchangeable torque wrench & spanner set

#### 64712

- **647B015** :3~15 Nm Torque wrench
- 647H209:1/4" DR. 9 X 12 Ratchet head
- 9 X 12 Spanner head: 5.1mm, 5.8mm, 6.1mm, 6.3mm, 6.4mm, 6.5mm, 6.7mm, 6.9mm; 6 PT. Spline



30/23.0/24.0/0.74

∆ 765g

## ■ 10pc Head-interchangeable torque wrench & spanner set

#### 64713



- **647B030W** :6~30 Nm Torque wrench
- 647H309A:3/8" DR. 9 X 12 Ratchet head
- 9 X 12 Spanner head: 7, 8, 9, 10, 11, 12, 13, 14mm



**1**0/15.2/16.2/1.29'

∆ 1.52kg

# 12pc Head-interchangeable torque wrench & spanner set

#### 64714



- **647B060W** :10~60 Nm Torque wrench
- 647H409:1/2" DR. 9 X 12 Ratchet head
- 9 X 12 Spanner head: 10, 11, 12, 13, 14, 15, 16, 17, 18, 19mm



10/18.1/18.7/1.68



# 12pc Head-interchangeable torque wrench & spanner set

#### 64715



- **647B100W** :20~100 Nm Torque wrench
- 647H409:1/2" DR. 9 X 12 Ratchet head
- 9 X 12 Spanner head: 10, 11, 12, 13, 14, 15, 16, 17, 18, 19mm



10/21.6/22.4/1.68



# ■ 8pc Head-interchangeable torque wrench & spanner set

64704



**Contents:** 647B080

1- 15~80Nm Torque wrench(14mm x 18mm)

647H414A 1- 1/2"DR. Ratchet head (24 teeth)

14mm x 18mm small, width 36mm

68514 17...29 6- Spanner head (14mm x 18mm)

17; 22; 24; 26; 27; 29 mm

6/19.5/20.5/1.2'

# ■ 11pc Head-interchangeable torque wrench & spanner set

64705

**Contents:** 

647B210 1-40~210Nm Torque wrench(14mm x 18mm)

647H414 1- 1/2"DR. Ratchet head (24 teeth)(14mm x 18mm)

68514 13...30 9- Spanner head (14mm x 18mm)

13; 14; 15; 17; 19; 22; 24; 27; 30 mm

4/17.7/18.7/0.96

∆¹∆ 4425g

# ■ Torque handle fittings

647H

24 Teeth Ratchet head (9 X 12 mm)



Part No.	DR.
647H209	1/4"
647H309	3/8"
647H309A	3/8" (small, width 27mm)
647H409	1/2"

#### 647H...-72

72 Teeth round ratchet head (9 X 12 mm)



Part No.	DR.
647H209-72	1/4"
647H309-72	3/8"
647H409-72	1/2"



#### Torque handle fittings

68509

Open end wrench head (9x 12mm)



Part No.	Size (mm)
6850907	7
6850908	8
6850909	9
6850910	10
6850911	11
6850912	12
6850913	13
6850914	14
6850915	15
6850916	16
6850917	17
6850918	18
6850919	19

#### 685A09

Box end wrench head (9 X 12 mm)



Part No.	Size (mm)
685A0907	7
685A0908	8
685A0910	10
685A0911	11
685A0912	12
685A0913	13
685A0914	14
685A0915	15
685A0916	16
685A0917	17
685A0918	18
685A0919	19
685A0921	21
685A0922	22

#### 685B09

Flare nut wrench head (9 X 12 mm)



Part No.	Size (mm)
685B0910	10
685B0911	11
685B0912	12
685B0913	13
685B0914	14
685B0916	16
685B0917	17
685B0918	18
685B0919	19
685B0921	21
685B0922	22

# ■ Torque handle fittings

#### 647H

24 Teeth Ratchet head (14 X 18 mm)



Part No.	DR.
647H314	3/8"
647H414	1/2"
647H414A	1/2" (small, width 36 mm)

647H...-72

72 Teeth round ratchet head (14 X 18 mm)



Part No.	DR.
647H414-72	1/2"
647H314-72	3/8"

#### 68514

Open end wrench head (14 X 18 mm)



Part No.	Size (mm)	Part No.	Size (mm)
6851413	13	6851429	29
6851414	14	6851430	30
6851415	15	6851432	32
6851416	16	6851434	34
6851417	17	6851436	36
6851418	18	6851438	38
6851419	19	6851440	40
6851421	21	6851441	41
6851422	22	6851442	42
6851424	24	6851444	44
6851426	26	6851446	46
6851427	27		



# **■** Torque handle fittings

#### 685A14

Box end wrench head (14 X 18 mm)



Part No.	Size (mm)	Part No.	Size (mm)
685A1413	13	685A1427	27
685A1414	14	685A1429	29
685A1415	15	685A1430	30
685A1416	16	685A1432	32
685A1417	17	685A1434	34
685A1418	18	685A1436	36
685A1419	19	685A1438	38
685A1421	21	685A1440	40
685A1422	22	685A1441	41
685A1424	24	685A1442	42
685A1426	26	685A1444	44
		685A1446	46
		ı	ı

# 685C14

Single hook spanner head (14 X 18 mm)



Part No.	Size (mm)
685C1443	43±5mm
685C1460	60±5mm
685C1472	72±5mm
685C1450	50±5mm
685C1463	63.2±5mm
685C1482	82±5mm
685C1432	32±5mm (strong type)

#### 685D14

Double hook spanner head (14 X 18 mm)



Part No.	Size (mm)
685D1432	31.6±5mm
685D1435	34.9±5mm
685D1442	41.9±5mm
685D1450	50±5mm
685D1463	62.9±5mm



# Open end wrench head (20 x 28.5 mm)

68520



Part No.	Size (mm)
6852032	32
6852036	36
6852041	41
6852046	46
6852050	50
6852055	55
6852060	60
6852065	65

#### Box end wrench head (20 x 28.5 mm)

685A20



Part No.	Size (mm)
685A2050	50
685A2055	55
685A2060	60
685A2065	65

# 2pc Torque driver set

64703 / 64703A





Content: 1/4" DR.

64721605 1- 1/4"DR. Torque driver (1-5Nm) 1- Bit holder 1/4"(F)x1/4" inhex

64703A Changed item

64721608 1-Torque driver (2-8Nm)

40/15.7/16.7/0.5' ∆<sup>1</sup>∆ 393g



#### ■ 47pc Torque driver set

# K64706 / K64706S Content: 1/4"DR.



64721605 1- Torque driver (1~5Nm) 81022 1- Bit holder 1/4"(F)x1/4"inhex 8042100 1- Extension 4" 12125 0...3 4- Phillips bit (25mmL)

PH.0; PH.1; PH.2; PH.3 12223 0...3 4- Pozidriv bit (25mmL) PZ.0; PZ.1; PZ.2; PZ.3

12325 03...065 5- Slotted bit

3; 4; 5; 5.5; 6.5 mm

12425 015...06 6- Hex bit

1.5; 2; 3; 4; 5; 6 mm

124R25 1...3 3- Square bit 1; 2; 3 mm

12625 06...40 11- Star bit

T6; T7; T8; T9; T10; T15; T20; T25;

T27; T30; T40

12725 06...40 11- Star tamperproof bit

T-6H; T-7H; T-8H; T-9H; T-10H; T-15H;T-20H; T-25H; T-27H; T-30H; T-40H

∆<sup>1</sup>∆ 905g

**K64706S** Changed item

1- Torque driver (10~50 Inch-lb)

24/21.7/22.7/1.5'

# ■ 49 pc Torque driver set

#### K64708



Contents: 1/4"DR.

64721605 1-Torque driver 1/4"inhex(1~5Nm) 8092225 1-Bit adaptor 1/4"Hex-1/4"Sq 81260 1-Magnetic inhex extension 60mmL 12125 0...3 4-Philips bit (25mmL) PH.0; PH.1; PH.2; PH.3 12225 0...3 4-Pozidriv bit (25mmL) PZ.0; PZ.1; PZ.2; PZ.3 12225 03...065 5-Slotted bit 3; 4; 5.5; 6.5 mm 12425 015...06 6-Hex bit 1.5; 2; 3; 4; 5; 6 mm 124R25 1...3 3-Square bit 1; 2; 3 mm 12625 04...40 13-Star bit T4; T5; T6; T7; T8; T9;T10

T15; T20; T25; T27; T30; T40

12725 06...40 13-Star tamperproof bit

T-6H; T-7H; T-8H; T-9H; T-10H; T-15H T-20H; T-25H; T-27H; T-30H; T-40H

24/16.4/17.4/1.5' ∆¹∆ 684g PULLER/ TORQUE WRENCH

# ■ Torque multiplier set

#### 65111L



#### **Contents:**

65111	2-Torque multiplier head & 380mm reaction bar	r
	1/2"(F)x3/4"(M) Max Output 1500 Nm	

65111L-1 1-90° Reaction bar 65111L-2 1-90° Reaction Base 65111L-3 2-Break-Away adapter

• Always apply the break-away adapter in order to protect the torque multiplier from damage.

• The break-away adapter is expendable.

3/10.5/11.5/1.2'

∆¹∆ 3500g

# ■ Torque multiplier set

#### 65112L



#### **Contents:**

65112 2-Torque multiplier head & 380mm reaction bar 1/2"(F)x1"(M) Max Output 2000 Nm

65112L-1 1-90° Reaction bar 65112L-2 1-90° Reaction Base 65112L-3 2-Break-Away adapter

• Always apply the break-away adapter in order to protect the torque multiplier from damage.

• The break-away adapter is expendable.

3/10.5/11.5/1.2'

#### ∆ 3500g

# ■ Torque multiplier set

#### 65113L



#### **Contents:**

65113 2-Torque multiplier head & 380mm reaction bar 3/4"(F)x1"(M) Max Output 2500 Nm

65113L-1 1-90° Reaction bar 65113L-2 1-90° Reaction Base

65113L-3 2-Break Away adapter

3/10.5/11.5/1.2'

∆ 3500g



# Mechanical torque multipliers

#### **651**





	Max. Output   Square D		Ratio
Part no.	Nm / Ft-lb	size	
65101	1500/1100	1/2" to 3/4"	1:3
65102	3000/2200	3/4" to 1"	1:3
	Max. Input	<b>3</b>	Δ'Δ
Part no.	Max. Input Nm / Ft-lb	Packing	Δ <sup>'</sup> Δ g
Part no. 65101		Packing 4/14.4/15.4/0.75'	∆ ∆ g g 3600
	Nm / Ft-lb		

- Spare part available
- Impact use is prohibited
- 65101L / 65102L: Supplied with the reaction bar styles for maximum

#### Torque multiplier

#### 65103 / 65104



D = = 4 = = =	Deixa	Detic		Max Output	$\Delta \Delta$
Part no.	Drive	Ratio	Nm / Ft-lb	Nm / Ft-lb	g
65103	1/2"(F)x3/4"(M)	1:10	150/110	1500/1100	3400
65104	1/2"(F)x1-1/2"(M)	1:10	400/290	4000/2900	16000
				l	

• Impact use is prohibited

# **Mechanical Torque Multipliers**



Part no.	Drive	Torque Ratio	Max. input	Max. output	$\Delta \Delta$
65106	1/2"(F)x3/4"(M)	1:5	260Nm	1300Nm	8.8kg
65107	3/4"(F)x1"(M)	1:5	540Nm	2700Nm	8.7kg

- \*Material: SCM440 (4140)
- \*Finish: Manganese phosphate

# Open ended pre-set torque wrench

#### 647C



	Spanner size	Torque	l	$\Delta \Delta$
Part no.	mm	Nm	mm	g
647C1817	17	18	220	410
647C4222	22	42	230	450
647C5526	26	55	290	600
647C6529	29	65	295	620

#### Pipe torque wrench

#### 647P



	Torque	l	$\Delta \Delta$
Part no.	Nm	mm	kg
647P210	40-210	590	3
647P350	70-350	825	3.7
647P500	100-500	920	4.3
647P350	70-350	825	3.7

<sup>\*</sup>Accuracy:+-6%

# Hydraulic bearing separator puller set

#### 66601



1pc Hydraulic ram (SCM415 Diameter 37.7mm x 160mmL x 16t) 1set Bearing separator & bolts, SCM415, capacity 75-105mm 2pc Main rod (8"x1.75p) 2pc Extension rod (8"x1.75p)

1pc Beam



2/15.2/16.2/0.53'



#### Pressure screw separator puller set

#### 66602





#### **Contents:**

1pc Central bolt

1set Bearing separator & bolts, SCM415, capacity 75-105mm

2pc Main rod (8"x1.75p)

2pc Extension rod (8"x1.75p)

1pc Beam

1pc Nut



2/17.3/18.3/1'



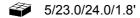


# Two sets bearing separator kit

#### 66610



- 2 sets Bearing separator & bolts (SCM415 Drop forged HRC 42-45) Capacity: 30-50mm
- Capacity: 50-75mm • 4pc Main/Extension rod (Hex bar 17mm x 127mmL x 3/8" - 16T)
- 4pc Main/Extension rod (Hex bar 14mm x 102mmL x 3/8" - 16T)
- 1pc Beam (S45C)
- 1pc Forcing screw (Φ9/16" 10T/inch x 175mmL S45C)
- Packing: Blow mold case





#### $\triangle \triangle$ 4.6kg

# Pressure screw separator puller set

#### 66612



- 1 set Bearing separator & bolts (SCM415 Drop forged HRC 42-45) Capacity: 75-105mm
- 2pc Main rod (Hex bar 19mm x 8"L xΦ15.24mm - 1.75P)
- 2pc Extension rod (Hex bar 19mm x 8"L xΦ15.24mm - 1.75P)
- 1pc Beam (S45C)
- 1pc Forcing screw (Φ18.65 - 10T/inch x 292mmL S45C)
- 1pc Central nut
- Packing: Metal case







#### 66613



- 1pc Hydraulic ram (SCM420 Φ37.7mm)
- 1 set Bearing separator & bolts (SCM415 Drop forged HRC 42-45) Capacity: 105-150mm
- 2pc Main rod

(Hex bar 21mm x 10"L  $x\Phi 5/8$ " - 11 NC)

- 2pc Extension rod (Hex bar 21mm x 10"L xΦ5/8" - 11 NC)
- 1pc Beam (Ductile)
- 1pc Adaptor (Carbon steel)
- Packing: Metal case







# Mini bearing separator assembly

#### 66614



Bearing separator inside:

- Capacity 3/8"- 1 1/4" (10mm to 30mm)
- Bolt (6.3mm x 83mmL x 1/4" x 20UNC)
- Body thread 3/8" x 20UNC

Pull out the bearing with the H-type beam and bolts.



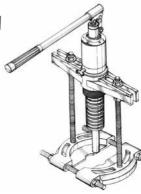
20/12.7/13.7/0.8

∆'∆ 636g

# Hydraulic bearing separator puller set

#### 666





					\\ \_{\sqrt{\sq}}\sqrt{\sq}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}
Part no.	Capacity	Reach(mm)	Spread(mm)	Stroke	kg
66605	6 tons	300/190	235/90	82	16
66606	8 tons	300/245	235/90	82	17
66607	10 tons	300/190	235/90	82	16
66608	12 tons	300/245	235/90	82	17
	'	'	1	•	•

# Bearing separator

#### 666



	Item No. Capacity		Bolt	Hole	
	666050		9.5 mm x 125 mmL x 3/8" x 24t	8.2 mm x 3/8" x 16t	
•	666075	2-1/4" to 3-1/2" (50 - 70mm)	12.7m m x 135mmL x 1/2" x 20t	8.2 mm x 3/8" x 16t	
	666105	3" to 4-1/2" (75-105m m)	16m m x 165 mm L x 5/8" x 18t	11.2m m x 1/2" x 12	
	666150 4" to 6" (105 -150mm)		19mm x 260 mm L x 3/4" x 16t	14.6mm x 5/8" x 11t	
	666225 35-225		20m m x 255 mm L	5/8" x 11P	
	666300	35-300	26m m x 355 mm L	3/4" x 10P	



# Bearing Separator

#### 666140



• Capacity 1.5" to 6" (35-140mm)

4/30.0/31.0/1'

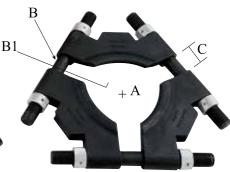
∆ 7.5Kg

# K3 Series

#### 666T







Item No.	A	В	B1	C	Weight (kg)
666T050	50	90	70	32	0.43
666T100	100	172	139	64	2.27
666T160	160	250	205	95	6.07
666T260	260	400	335	146	19.40
666T380	380	542	457	206	48.21

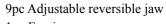
# Locking jaw puller set

#### 664P



With several pulling attachments to give the user various methods for pulling, maintenance and repair applications.

#### **Contents:**



1pc Forcing screw

1pc Two-way yoke 1pc Three-way yoke

1pc Reversible adjusting nut

3pc Screw & nut







6/13.6/14.6/1.33'





# Internal & external puller set

66431



• Drop forged chrome vanadium steel

#### **Contents:**

1-Internal small (Capacity: 15-30mm) 1-Internal large (Capacity: 30-80mm) 1-External (Capacity: 15-80mm)



3/16.0/17.0/1.5'



# ■ Rear Axle puller & external rearing puller set

66432



- Chrome molybdenum steel external bearing puller with chrome plated & black finish.
- Suitable for rear axle puller & external bearing puller.

- 1-Slide screw: 5/8" 16T X 22-1/2" (16mm 16T X 57cm)
- 1-External bearing puller capacity from 15-80mm (9/16" 3-1/2")
- 1-Axle yoke
- 1-Bearing adaptor
- 1-Slide hammer 3-3/4 LB (1.75kg)
- 1-Lock nut 5/8" (16mm)
- 1-Bearing hook



**3/16.0/17.0/1.5**'



∆ 5300g

# Blind hole bearing puller set

905T6



- One slide hammer shaft & 4 clamps.
- Adjustable collets make easy removal of bearing or bushings form blind holes. Clamps: 1/2" (10-14mm), 5/8" (15-19mm), 13/16"(20-24mm), 1-1/8" (25-32mm)











# ■ Blind hole bearing puller

#### 910T1



- Two function bearing remover for puller and slide hammer.
- One slide hammer, 62mm tailpipe expanders and pullers for 8mm~32mm.



5/16.5/17.5/1.66







#### 2-in-1 Bearing Puller (2 Jaws)

#### 66621



- Inside diameter 38mm ~ 120mm
- 2/10.7/11.7/0.62'
- ∆∆ 5400g

# 2-in-1 Bearing Puller (3 Jaws)

#### 66620



- Inside diameter 12mm ~ 38mm
- 4/12.4/13.4/1.17







5/17.5/18.5/1.25'



# Pilot bearing puller

#### 66619



• Capacity: inside diameter 12mm-38mm, 1/2"~1-1/2"

20/18.3/19/0.8' ∆¹∆ 920g

#### Thick jaws gear puller

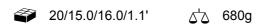
#### 65910



• Jaws thickness: 1.5 mm

• Depth: 100mm

• Bearing dimension: 40-90mm



# Bearing puller



	Capacity	△ △	
Part no.	mm	g	packing
666A035	19 - 35	280	40/11.2/12.2/1'
666A055	24 - 55	783	24/18.8/19.8/1.4'
666A080	35 - 80	600	20/12.0/13.0/1'



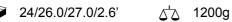
# Long jaw bearing puller

#### 66616

7-23



- For long distance pulling jobs
- Capacity 10-50mm
- Alloy steel
- Jaw long 300mm (SCM415 drop forged HRC 40-42)
- Drop forged hardened 48°-50°
- Forcing screw (SCM415)
- Stopper cone (S45C)
- Connector (SCM415)





# Bearing separator

#### 66618



- This kit is different from other bearing separators. When obstruction is round external dia. and internal dia. of bearing, it can be used on the confined space to damage the protecting cover of bearing and easily remove bearings.
- Adjust range: 20 ~ 95 mm
- Bearing range:

 $6004 \sim 6010$  (Jaw size: Ø 6 / 8)  $6201 \sim 6206$  (Jaw size: Ø 5.5 / 6 / 8); 6300 ~ 6304 (Jaw size: Ø 6 / 8)

20/17.0/18.0/1.5 ∆ 800g

# Bearing separator

#### 66618M



- This kit is different from other bearing separators. When obstruction is round external dia. and internal dia. of bearing, it can be used on the confined space to damage the protecting cover of bearing and easily remove bearings.
- Adjust range: 35 ~ 120 mm
- Bearing range:

6207 ~ 6211 (Jaw size: Ø 11 / 12.5 / 15)  $6305 \sim 6308$  (Jaw size: Ø 11 / 12.5); 6403 ~ 6405 (Jaw size: Ø 11 / 12.5 / 15)

12/22.0/23.0/1.3

∆ 1700g

# Unique bearing removal kit

#### 66618MA



- Three-way operation allows use with traditional bearing separator, internal or external legs or bearing race separator. Bearing race separator application makes this kit ideal for use on "blind" mounted bearings where rear of bearing is not accessible.
- Adjust range: 35 ~ 120 mm

• Bearing range: 6207 ~ 6211 (Jaw size: Ø 11 / 12.5 / 15)  $6305 \sim 6308$  (Jaw size: Ø 11 / 12.5);

6403 ~ 6405 (Jaw size: Ø 11 / 12.5 / 15)

• Beam: 30~50 mm • Legs: 30~90 mm

**5/17.0/18.0/1.2**°

∆ 2700g

#### Differential side bearing puller

#### 666A01



- Used to removing differential side carrier bearing. Works on a wide variety of cars and light-duty trucks.
- Includes four step plate adapters to fit carrier bearings.



10/22.5/23.5/1.46'



#### A/C Clutch puller set

#### 666A02



- Versatile 2-jaw puller designed to remove stubborn A/C clutch pulleys.
- Features two sets of jaws, a crossbar with three settings for correct spread, and an adjustable yoke to keep jaws tight.
- Spread of jaws:3" to 5". Reach of jaws:1" to 2-1/4".



10/22.0/23.0/1.46'



#### ∆ 2200g

# 21pc Go-through ratchet socket set (SAE&MM)

#### 666A03



- For a wide range of pulling jobs, including: bearings, alternators, generators, power steering and crankshaft pulleys, timing gears, and harmonic balancers.
- Spread: 2-3/8" to 3-3/8" & 3-1/2" to 5-1/2"
- Reach: 1-5/8" & 1-3/4"
- Set includes drop-forged components, which can be used in a variety of combinations.



5/20.6/21.6/1.3'





#### Hydraulic gear puller set

#### 66622

For agriculture/ Machine/ Garage/ Industry use

- Hydraulic ram (SCM420 Ø37.7mm)
- Twin Head 1pc
- Triple head 1pc
- Ram nut (SCM415 HRC 42-45)
- Beam (S45C)
- 4" Leg 3 pcs (SCM415 HRC 42-45)
- 6" Leg 3 pcs (SCM415 HRC 42-45)
- 8" Leg 3 pcs (SCM415 HRC 42-45)
- Sent pop (Ø1" × L30mm S45C)
- Ram extension rod (Ø1" × L2" S45C)
- Ram extension rod (Ø1" × L2" S45C)
- Main rod 2 pc (Hex bar 19mm × L8" × Ø15.24mm-1.75P)
- Extension rod 2pc (Hex bar 19mm × L8" × Ø15.24mm-1.75P)
- Bearing separator Spread range 75-150mm (SCM415 Drop forged HRC 42-45)



1/16.5/17.5/1.2



△ 16.5kg

# 6 ways multi purpose hydraulic gear puller

#### 66623



- Hydraulic ram (SCM420 Ø 37.7mm)
- Combination cross head (S45C)
- Combination leg 3pcs (SCM415 Drop forged HRC 42-45)
- Steel Plate 6 pcs
- Screw/ Nut /Washer 6pcs
- Sent pop (Ø 1" × L30mm S45C)
- Ram Extension rod (Ø1"× L2"S45C)



5/24.0/25.0/1.3



# Micro 3" jaw lock puller

#### 66617



- Forcing screw (SCM415)
- Chuck (SCM415)
- 3" Jaw 3pieces (SCM415)



12/12.0/13.0/0.7



∆ 1420g



# Hydraulic 6" jaw lock puller

#### 66617A

- Hydraulic ram (SCM420)
- Chuck (SCM415)
- 6" Jaw 3pieces (SCM415)



- 4/14.0/15.0/0.7'
- ∆ 5500g

∆ 1600g

# Inside puller

#### 66624



- Spread: 23-130 mm
- Depth: 140 mm
- **12/19.0/20.0/2**°

# Outside puller

#### 66625



- Spread: 7-140 mm
- Depth: 147 mm
- 12/22.0/23.0/1.6'
  - ∆ 1.8kg

# Universal puller set

# 66626



- 1 beam 2-arm
- 1 beam 3-arm
- 9 pulling legs, length 100 / 200 / 250 mm
- 2 spindle
- 3/20.5/21.3/1.2'
- ∆ 7200g



# Universal puller set

#### 66627

- 1 beam 2-arm
  - 1 beam 3-arm
  - $\bullet$  9 pulling legs, length 150 / 220 / 300 mm
  - 1 spindle



**2/25.0/26.0/1.25**°



# ■ 2&3 Jaws gear puller set

#### 66628



- 1 beam with 2-arm and 3-arm
- 6 pulling legs, length 130 / 200 mm
- 1 spindle (219mm)

6/16.5/17.5/0.93

∆ 12.4kg

# Separate hydraulic puller

#### 6590825



			⊐€ <sub>mm</sub> I		$\Delta \Delta$
Part no.	Capacity	Reach(mm)	Spread(mm)	Stroke(mm)	kg
6590825	25 tons	375-15"	540	110	30

# Hydraulic puller with hydraulic pump



			⇒£_ïI		
Part no.	Capacity	Reach(mm)	Spread(mm)	Stroke(mm)	kg
6590850	50 tons	405-16"	800	250	45
6590850L	50 tons	635-25"	1200	250	49

# Hydraulic puller

# 65911



			⊃{ <sup>™</sup> I		
Part no.	Capacity	Reach(mm)	Spread(mm)	Stroke(mm)	kg
6591106	6 tons	300-12"	95/235	82	6
6591108	8 tons	300-12"	95/235	82	7
6591110	10 tons	330-13"	95/235	82	6
6591112	12 tons	330-13"	95/235	82	7

# Hydraulic puller

# 65912



			<b>⇒</b> §		$\Delta \Delta$
Part no.	Capacity	Reach(mm)	Spread(mm)	Stroke(mm)	kg
6591206	6 tons	170-7"	95/210	82	6.5
6591208	8 tons	220-9"	95/220	82	7.5
6591210	10 tons	190-8"	95/210	82	6.5
6591212	12 tons	240-10"	95/220	82	7.5

# Hydraulic puller

# 65913



		-	⇒§`I		$\nabla \nabla$
Part no.	Capacity	Reach(mm)	Spread(mm)	Stroke(mm)	kg
6591306	6 tons	170-7"	95/210	82	8.5
6591308	8 tons	220-9"	95/220	82	9.5
6591310	10 tons	190-8"	95/210	82	8.5
6591312	12 tons	240-10"	95/220	82	9.5

# Hydraulic puller

# 65906



			⇒§ <sub>mai</sub> I		$\Delta^{\prime}$
Part no.	Capacity	Reach(mm)	Spread(mm)	Stroke(mm)	kg
6590604	4 tons	152-6"	150	55	4.5
6590606	6 tons	152-6"	200	82	4.9
6590606L	6 tons	190-8"	200	82	4.9
6590608	8 tons	190-8"	250	82	6.6
6590608L	8 tons	225-10"	250	82	6.6
6590615	15 tons	225-10"	280	82	8.0
6590615L	15 tons	300-12"	280	82	8.0



# Hydraulic puller

# 6590630



		-5	$\text{con}_{\text{pred}} \mathbf{I}$		
Part no.	Capacity	Reach(mm)	Spread(mm)	Stroke(mm)	kg
6590630	30 tons	375-15"	540	110	31

# Hydraulic puller

# 65907



		Carry	□•E···········I		77
Part no.	Capacity	Reach(mm)	Spread(mm)	Stroke(mm)	kg
6590710	10 tons	182-7"	280	82	5.6
6590710L	10 tons	220-9"	280	82	5.6
6590712	12 tons	220-9"	305	82	7.6
6590712L	12 tons	260-10"	305	82	7.6
6590720	20 tons	260-10"	356	82	10
6590720L	20 tons	300-12"	356	82	10

# Hydraulic puller

# 6590725



			□•Emil		$\Delta \Delta$
Part no.	Capacity	Reach(mm)	Spread(mm)	Stroke(mm)	kg
6590725	25 tons	300-12"	406	110	20
6590725L	25 tons	375-15"	406	110	20

# Separate hydraulic puller



			⇒§ <sub>m</sub> ïI		$\Delta \Delta$
Part no.	Capacity	Reach(mm)	Spread(mm)	Stroke(mm)	kg
6590815	15 tons	230-9"	280	82	14
6590815L	15 tons	300-12"	280	82	14

# Puller accessory

#### 659C2



			⇒§ <sub>mai</sub> I		$\Delta^{\perp}\Delta$
Part no.	Capacity	Reach(mm)	Spread(mm)	Stroke(mm)	kg
659C208	8-12 tons	220-9"	95/220	82	6.0
659C210	6-10tons	190-8"	95/210	82	5.0

# Puller accessory

# 659C3



			→ I		77
Part no.	Capacity	Reach(mm)	Spread(mm)	Stroke(mm)	kg
659C308	8-12 tons	220-9"	95/220	82	9.0
659C310	6-10tons	190-8"	95/210	82	8.0

# ■ Puller accessory and straightener



			□•§		$\Delta^{\dagger}$
	Part no.	Reach(mm)	Spread(mm)	Stroke(mm)	kg
(	659A01	150	100/410	82	9.5
(	659A02	205	100/410	82	9.0
(	659A03	205/150	100/410	82	10.0

<sup>•</sup> This puller part converts 6590615 and 6590815 into a hydraulic straightening tool

# ■ Gear puller - 2 Jaw

# 65901



Part no.	size	Capacity	Spread(mm
6590103	3"	2 tons	40/75
6590104	4"	4 tons	50/100
6590106	6"	6 tons	70/150
6590108	8"	10 tons	95/200
6590112	12"	15 tons	140/300





# **■** Gear puller - 3 Jaw

#### 65902



Part no.	size	Capacity	Spread(mm)
6590203	3"	3 tons	40/75
6590204	4"	6 tons	50/100
6590206	6"	9 tons	70/150
6590208	8"	15 tons	95/200
6590212	12"	22 tons	140/300



# ■ Gear puller – 2 Arm

# 65903



	Jaw open	Capacity	
Part no.	mm	ton	kg
65903065	25-65	1.5	0.4
65903090	30-90	3.0	0.9
65903130	45-130	3.0	1.0
65903160	45-160	4.0	2.8
65903210	45-210	4.0	3.0
65903270	65-270	5.0	7.5
65903340	65-340	5.0	8.2

# Gear puller - 2 Jaw



		1		$\Box$
Part no.	Size	Length	Ton	kg
65909090	90	100	3	1.1
65909130	130	100	3	1.3
65909160	160	150	5	3.2
65909200	200	150	5	3.6
65909250	250	200	7.5	7.8
65909350	350	200	7.5	9.2
65909520	520	200	10	15.2
65909640	640	225	15	23.2





# Quick-adjusting puller - 2 Arm

# 65909Q



	Jaw open	Reach		
Part no.	mm	mm	Packing	kg
65909090Q	90	100	12/14.0/15.0/0.57	1.2
65909130Q	130	100	12/15.5/16.8/0.57	1.3
65909160Q	160	150	6/18.6/19.6/0.56	3.1
65909200Q	200	150	6/21.3/22.3/0.63	3.6
65909250Q	250	200	3/21.8/22.8/0.62	7.3

# ■ Gear puller – 3 Arm

# 65910



	Jaw open	Reach		
Part no.	mm	mm	Packing	kg
65910090	90	100	12/17.8/18.8/0.71	1.5
65910130	130	100	12/19.8/20.8/0.79	1.7
65910160	160	150	3/12.2/13.2/0.46	4.1
65910200	200	150	3/13.2/14.2/0.54	4.4
65910250	250	200	2/18.1/19.1/0.82	9.1

# Quick-adjusting puller - 3 Arm

# 65910Q

7-33



	Jaw open	Reach		$\Delta Z$
Part no.	mm	mm	Packing	kg
65910090Q	90	100	12/18.3/19.3/0.71	1.5
65910130Q	130	100	12/20.1/21.1/0.79°	1.7
65910160Q	160	150	3/12.3/13.3/0.46	4.1
65910200Q	200	150	3/13.3/14.3/0.54	4.4
65910250Q	250	200	2/17.6/18.6/0.82	8.8



# Mechanical



Item No.	Span (mm)	Depth (mm)	Dimensions (mm)	Spindle Thread	Extraction force	Mass (Kg)
6590305	130(5")	105	(a)14+1(b)15+1	M14x1.5	45	1.9
6590309	230(9")	150	(a)19+1(b)22+1	M22x2.0	100	4.0
6590312	295(12")	235	(a)19+1(b)22+1	M22x2.0	100	5.1

6590309

7-34



# 8. General



Socket bit tool / Socket series

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Damaged bolt remove

Damaged bolt remove / Screw extractor

Page 8-22 ~8-26



Vise

Page 8-36~ 8-38



Steel wire rope / Bolt cutter

Page 8-52 ~ 8-52



Steel creeper / Steel car seat

Page 8-61 ~ 8-61



Wrench series / Screwdriver Page 8-11 ~ 8-17



Threaded repair / Nut cracker tool Page 8-26 ~8-28



Shears / Pliers Page 8-38 ~ 8-44



Inspection mirror /
Work light
Page 8-53 ~ 8-57



**Oil pump** Page 8-62 ~ 8-62



Air hose reel / Air blow gun

Page 8-18 ~ 8-19



Hammer / Chisel / Pin punch Page 8-28 ~ 8-33

Pipe wrench
Page 8-45 ~ 8-46



Magnetic pick-up / Fender cover / Car seat Page 8-57 ~8-59



Grease gun / Oil can / Pry bar

Page 8-63 ~ 8-68



Stud extractor
Page 8-20 ~ 8-21



Riveter tool
Page 8-34 ~ 8-36



Tubing cutter /
Double flaring tool
Page 8-46 ~ 8-52



Fender cover / Seat cover Page 8-59 ~ 8-60



**Brush** Page 8-69 ~ 8-69

# 20pc 1/2" Hex socket bit set



Part no.	0		
	Content		
344055 0512	7-Hex socket bit (55mmL)		
	5; 6; 7; 8; 9; 10; 12 mm		
34406514	1-Hex socket bit (65mmL)		
	14 mm		
344070 1719	2-Hex socket bit (70mmL)		
544070 1717	17: 19 mm		
344100.0514	9-Hex socket bit (100mmL)		
344100 0314	5; 6; 7; 8; 10; 11; 12; 13; 14 mm		
	, , , , , , , , ,		
34411017	1-Hex socket bit (110mmL)		
4/13/14/1.3'	17mm △ ∆ 3250g		

# ■ 26pc 1/2" Star socket bit set



<b>O</b>
Content
12-Star socket bit (55mmL)
T20; T25; T27; T30; T35; T40; T45;
T47; T50; T55; T60; T70.
13-Star socket bit (100mmL)
T20; T25; T27; T30; T40; T45; T50;
T55; T60; T70; T80; T90; T100.
1-Star socket bit (140mmL) T60.

4/14.9/15.9/1.3'

∆ 3725g

# ■ 28pc 1/2" Spline socket bit set

4285

8-1



Part no.	O
	Content
348055 0516	8-Spline socket bit (55mmL)
	M5; M6; M8; M9; M10; M12; M14;
	M16.
348100 0518	10-Spline socket bit (100mmL)
	M5; M6; M8; M9; M9.5; M10; M12;
	M14; M16; M18.
348140 0814	5-Spline socket bit (140mmL)
	M8; M9; M10; M12; M14.
348055 14T16T	2-Spline security socket bit (55mmL)
	M14; M16.
34810016T	1-Spline security socket bit (100mmL)
	M16.
674	2-M10 Alternator tools
	1pc 1/2"DR. Spline(XZN) socket bit
	M10x110mmL
	1pc Reaction corkscrew cap 33 teeth-
	Ø19mm-17mm hex



# ■ 26pc 1/2" Ribe socket bit set

4265



Part no.	$\circ$
	Content
349100 0516	10-Ribe socket bit (100mmL)
	M5; M6; M7; M8; M9; M10; M12;
	M13;M14; M16.
349140 0814	5-Ribe socket bit (140mmL)
	M8; M9; M10; M12; M14.
34914010V	1-Ribe socket bit (140mmL)
	M10V.
349063 05T16T	9-Ribe tamperproof socket bit (63mmL)
	M5; M6; M7; M8; M9; M10; M12;
	M14;M16.
34905506	1-Ribe socket bit (55mmL)
	M6.

4/15.7/16.7/1.3'

∆¹∆ 3925g

# ■ 26pc Special socket bit set

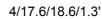
**4266** 



Part no.	00000
1 011110.	Content
344100 1113	2-Hex socket bit (100mmL)
344100 1113	11; 13.
34414010	1-Hex socket bit (140mmL) 10mm.
346100 6070	2-Star socket bit (100mmL)
340100 0070	T60; T70.
34614060	1-Star socket bit (140mmL) T60.
34710055	1-Star tamperproof socket bit (100mmL) T-55H
34710570	1-Star tamperproof socket bit (105mmL) T-70H.
34713030	1-Star tamperproof socket bit (130mmL) T-7011.
34714080	1-Star tamperproof socket bit (130mmL) 1-30H.  1-Star tamperproof socket bit (140mmL) T-80H.
34810014	1
34812009	1-Spline socket bit (100mmL) M14.
348140 0812	1-Spline socket bit (120mmL) M9.
348140 0812	4-Spline socket bit (140mmL)
2400551675	M8; M9; M10; M12.
34805516T	1-Spline security socket bit (55mmL) M16.
34810016T	1-Spline security socket bit (100mmL) M16.
34910013	1-Ribe socket bit (100mmL) M13.
34912012	1-Ribe socket bit (120mmL) M12.
34914009	1-Ribe socket bit (140mmL) M9.
34914010V	1-Ribe socket bit (140mmL) M10V.
674	2-M10 Alternator tools
	1pc 1/2"DR. Spline(XZN) socket bit M10x110mmL
	1pc Reaction corkscrew cap 33 teeth-Ø19mm-17mm hex
678	2-T50 Alternator tools
	1pc 1/2"DR. Star socket bit T50x110mmL
	1pc Reaction corkscrew cap 33 teeth-Ø19mm-17mm hex

4/18.8/19.8/1.3'

∆ 4700g





∆ 4400g



### ■ 31pc 1/4" Bit set

#### 2311



#### Content:

- 1-Magnetic bit holder 60mmL (81260Q)
- 6-1/4" Phillips bit PH.0, PH.1x2, PH.2x2, PH.3
- 6-1/4" Pozidriv bit PZ.0, PZ.1x2, PZ.2x2, PZ.3
- 4-1/4" Slotted bit 3, 4, 5, 6.5
- 6-1/4" Hex bit 2, 2.5, 3, 4, 5, 6 mm
- 8-1/4" Star tamperproof bit T-10H, T-15H, T-20H T-25H, T-27H, T-30H, T-35H, T-40H







### ■ 9pc 1/4" & 3/8" Five-sided star tamperproof socket bit set

#### 3095



#### Content: 1/4"DR. & 3/8"DR.

32F32 10...40 7-1/4"DR.:Five-sided star tamperproof socket bit TS10; TS15; TS20; TS25; TS27; TS30; TS40

33F50 45...50 2-3/8"DR. Five-sided star tamperproof socket bit TS45; TS50





30/7/8/0.9'



#### ■ 5pc Specialty set

#### 4059



#### Content:1/2"DR

O 348140 08...12 3-1/2" Spline socket bit

M8; M10; M12 (140mmL)

34413008

1-1/2" Hex socket bit 8mm (130mmL)

**3**4410508B

1-1/2" Bent hex socket bit 8mm (105mmL)

20/13.0/14.0/1.3'

∆ 650g

## 3/8" DR. Universal star socket bit







	0	1	$\Delta \Delta$	
Part no.	Tip	mm	g	pc/box
33645U	T45	65	68	10
33650U	T50	65	70	10

## FORCE Professional Tools

### 1/2"DR. Bent hex socket bit (8mm)

#### 34410508B



	0	l		
Part no.	size	mm	g	pcs/box
34410508B	8mm	105	92	10

### PH.2 Bits with limiter

#### 121A





	4	2
-	<u> </u>	
T		
Ч	1	

Size	e   <i>l</i>		
PH	.2 25mn	n 400/7.8/8.8	3/1.2' 19.5g
PH	.2 50mn	n 400/10.2/11	.2/1.2' 25.5g
	PH	PH.2 25mn	Size <i>l</i> 25mm 400/7.8/8.8 PH.2 50mm 400/10.2/11

### ■ 10mm Square bit

#### 174S



	Size
Part no.	mm
174S3008	8
174S3009	9
174S3010	10
174S3013	13

### Angle driver drill tool with quick release

#### 827B03



- 1/4" Hex shank.
- 1/4" Bit holder with quick release.
- Mini handle attached to quick locking sleeve allows user to rotate 360°.
- Smooth precision turning at 90° position.
- Reach most difficult space.

48/18.7/19.7/0.8'

∆ 390g



### ■ Magnetic screw bit holder

### 827B02



Width: 14mm Length: 24mm

400/3.2/4.2/0.58'

#### ∆\_ გვ

### ■ 1/4" DR. Universal socket

### 80525



		l	$\Delta \Delta$	
Part no.	socket	mm	g	pc/box
8052505	5	39	22	20
8052506	6	39	22	20
8052507	7	39	24	20
8052508	8	39	24	20
8052509	9	39	24	20

### ■ 1/4" DR. Universal deep socket

### 8052565



		l		
Part no.	socket	mm	g	pc/box
805256505	5	65	29	20
805256506	6	65	31	20
805256507	7	65	36	20
805256508	8	65	38	20
805256509	9	65	38	20
805256510	10	65	44	20
805256511	11	65	49	20
805256512	12	65	49	20
805256513	13	65	50	20



### ■ 3/8"DR. Universal socket

#### 80535

		1		
Part no.	socket	mm	g	pc/box
8053510	10	57	64	10
8053511	11	57	66	10
8053512	12	57	67	10
8053513	13	57	67	10
8053514	14	57	70	10
8053515	15	57	77	10
8053516	16	57	78	10
8053517	17	57	82	10
8053518	18	57	92	10
8053519	19	57	92	10
805353.8	3/8"	57	64	10
805357.16	7/16"	57	66	10
805351.2	1/2"	57	67	10
805359.16	9/16"	57	67	10
805355.8	5/8"	57	78	10
8053511.16	11/16"	57	82	10
805353.4	3/4"	57	92	10

### ■ 3/8"DR. Universal deep socket

#### 8053585



		<b>1</b>		
		l	$\triangle \triangle$	
Part no.	socket	mm	g	pc/box
805358510	10	85	82	10
805358511	11	85	86	10
805358512	12	85	92	10
805358513	13	85	92	10
805358514	14	85	104	10
805358515	15	85	108	10
805358516	16	85	112	10
805358517	17	85	121	10
805358518	18	85	136	10
805358519	19	85	136	10
80535853.8	3/8"	85	82	10
80535857.16	7/16"	85	86	10
80535851.2	1/2"	85	92	10
80535859.16	9/16"	85	92	10
80535855.8	5/8"	85	112	10
805358511.16	11/16"	85	121	10
80535853.4	3/4"	85	136	10



8-5



### ■ 3/8"DR. Star universal socket

### 80536



		1	$\Delta \Delta$	
Part no.	socket	mm	g	pc/box
8053606	E6	42	52	10
8053607	E7	42	52	10
8053608	E8	42	56	10
8053610	E10	42	56	10
8053611	E11	42	60	10
8053612	E12	42	60	10
8053614	E14	42	62	10
8053616	E16	42	62	10

### ■ 1/2" DR. Universal socket

### 80545



		l	$\Delta \Delta$	
Part no.	Socket	mm	g	pc/box
8054513	13	67	131	10
8054514	14	67	136	10
8054515	15	67	136	10
8054516	16	67	137	10
8054517	17	67	137	10
8054518	18	67	144	10
8054519	19	67	151	10
8054520	20	67	151	10
8054521	21	67	151	10
8054522	22	67	155	10
8054524	24	67	168	10
805451.2	1/2"	67	130	10
805459.16	9/16"	67	135	10
805455.8	5/8"	67	136	10
8054511.16	11/16"	67	137	10
805453.4	3/4"	67	151	10
8054513.16	13/16"	67	151	10
805457.8	7/8"	67	153	10
8054515.16	15/16"	67	167	10



### ■ 1/2" DR. Universal deep socket

### 80545108

		1	$\Box$	
Part no.	Socket	mm	g	pc/box
8054510813	13	108	172	10
8054510814	14	108	179	10
8054510815	15	108	186	10
8054510817	17	108	201	10
8054510819	19	108	222	10
8054510821	21	108	255	10
8054510822	22	108	266	10
8054510824	24	108	283	10
805451081.2	1/2"	108	173	10
805451089.16	9/16"	108	175	10
805451085.8	5/8"	108	179	10
8054510811.16	11/16"	108	192	10
805451083.4	3/4"	108	216	10
8054510813.16	13/16"	108	259	10
805451087.8	7/8"	108	266	10
8054510815.16	15/16"	108	283	10

### ■ 1/2" DR. Star universal socket

### 80546



		l	$\Delta \Delta$	
Part no.	Socket	mm	g	pc/box
8054608	E8	65	124	10
8054610	E10	65	124	10
8054611	E11	65	125	10
8054612	E12	65	127	10
8054614	E14	65	127	10
8054616	E16	65	133	10
8054618	E18	65	133	10
8054620	E20	65	177	10
8054624	E24	65	177	10



8-7

### ■ 1/2"DR. Vacuum switch socket (22. 27mm)

#### 443



		l	$\Delta \Delta$	
Part no.	size	mm	g	pc/box
44322	22	85	230	10
44327	27	85	389	10
44315022	22	150	450	10

### ■ 3/4" DR. Star impact deep socket

#### 466110



		l	$\Delta \Delta$	
Part no.	socket	mm	g	pc/box
46611018	E18	110	520	1
46611020	E20	110	540	1
46611022	E22	110	580	1
46611024	E24	110	591	1
46611028	E28	110	710	1

• E20 For HGV Cylinder-head bolts.

### ■ 21x28 mm Rectangular deep socket

#### 48311021



- Special design for railway.
- Drive: 1"
- Size: 21 x 28 mm

20/28.8/29.8/0.46

∆ 1440g

### ■ 6pc 1/2"DR. Star extra-long deep socket set

#### 40616

8-9



Part no.	
	Content:
546150	6-1/2"DR. Star extra-long deep socket (150mmL)
10B20B	E10; E12; E14; E16; E18; E20

10/17.3/18.3/1.2'

∆¹∆ 1732g



### ■ 1/4"DR. Mixture adjuster

#### 601235



1/4" Driver tamperproof mixture adjuster (Double D) for use on Asian and Mikuni carburetors found on Toyota and Mitsubishi cars (35mmL).

200/5.6/6.6/1.3'

∆ 28g

### ■ 1/4"DR. Mixture adjuster

#### 601250



1/4" Driver tamperproof mixture adjuster (fish tail) for use on Nikki and Hitachi carburetors found on Nissan and Subaru cars (50mmL).

200/5.6/6.6/1.3'

△ 28g

### T tap wrench (ratchet type)

#### **881**



		1	7,7
Part no.	Tap range	mm	g
8812090	1/8"-1/4" (3-6mm)	90	190
8812250	1/8"-1/4" (3-6mm)	250	280
8814110	1/4"-1/2" (6-12mm)	110	320
8814300	1/4"-1/2" (6-12mm)	300	460
	,		

### ■ 6pc Star wrench set

#### **5062**



**Contents:** 

756 0608...2024 6-Star wrench

> E6xE8; E7xE11; E10xE12; E14xE18; E16xE22; E20xE24



30/16.7/17.7/1.4'





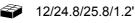
### ■ 6pc Extra long flat ring wrench set

50622



760 1012...1719 6-Extra long flat ring wrench 10x12; 12x14; 13x15; 14x17; 16x18; 17x19 mm





∆ 2070g

### ■ 6pc Double gear flat long wrench set

50623

#### **Contents:**

827 1012...1719 6-Double gear flat long wrench 10x12; 12x14; 13x15; 14x17; 16x18; 17x19 mm





12/20.9/21.9/1.2'

∆ 1741g

### ■ 6pc S-form ring wrench set

50634



#### **Contents:**

761 1012A...2224A 6pc S-form wrench 10x12; 11x13; 14x15; 16x18; 17x19; 22x24



10/11.0/12.0/1.1'

∆¹∆ 1100g

### 6pc Flare nut wrench set

5066 / 5066S



#### 5066 Contents:

751 0810...1719 6-Flare nut wrench

8x10; 10x11; 10x12; 11x13; 12x14; 17x19 mm

**5066S** Contents:

751 0810S...1719S 6-Flare nut wrench

5/16" x 3/8"; 3/8" x 7/16"; 7/16" x 1/2"; 1/2" x 9/16"; 5/8" x 3/4"; 11/16" x 3/4"



30/18.3/19.3/1.3'





#### Ratchet flare nut wrench

751...A



	Size	l		
Part no.	mm	mm	g	pc/bc
75108A	8	137	84	10
75110A	10	137	85	10
75111A	11	138	88	10
75112A	12	138	82	10
75113A	13	140	91	10
75114A	14	140	86	10
75117A	17	186	146	10
75119A	19	189	157	10





### 9pc Ratchet flare nut wrench

#### T50918



Contents:

751 08A...22A 9-Ratchet flare nut wrench 8; 10; 11; 12; 13; 14; 17; 19; 22 mm



6/8.1/9.1/0.66'

∆ 1350g

### 2pc Adjustable wrench set

**5023** 



Part no.	
	Contents:
	2-Adjustable gauged wrench
649200E	8" (200mmL)
649300E	12" (300mmL)



∆ 1562g

### Adjustable gauged wrench

649...E



	Size	l
Part no.	mm	mm
649200E	24	200
649250E	29	250
649300E	33	300

### 2pc Auto adjustable wrench

#### 902U2





• Ideal for track-red ends. Allows leverage in confined areas.

- 9U0703 for use with 3/8"DR. power bar. (40/10.4/11.0/0.6')
- 9U0704 for use with 1/2"DR. power bar. (40/18.0/19.0/1.0')
- 20/13.8/14.8/0.46'



### Adjustable spanner wrench



- This tool is ideal for adjusting pillow block bearings.
- Also works well on international model "M" water pump or power takeoff on all.
- Adjustable from 1/2" to 2-3/4".





### ■ 13pc Hex extra long key set (SAE)

#### **5137XLS**



Part no.	0
	Contents:
764 1.16XL	13-Hex extra long key
3.4XL	1/16"; 5/64"; 3/32"; 1/8"; 5/32"; 3/16"; 1/4";
6	5/16"; 3/8"; 1/2"; 9/16"; 5/8"; 3/4"

6/18.2/19.2/0.68 ∆ 3030g

### ■ 9pc Star & star ball point long key set

#### 5098LB



#### **Contents:**

766 10BL...50BL 9-Star & Star ball point long key T10; T15; T20; T25; T27; T30; T40; T45; T50



50/16.5/17.5/2.2'





### ■ Extra-long spline key M8

#### 76808XL

- Size: Spline M8
- Total length (300mm), for use in hard-to-access areas.



200/23.0/24.0/.96



△ 115g

#### ■ 1/2" DR. Extension with light

#### 8044080L



	1	$\Delta'\Delta$	
Part no.	mm	g	Packing
8044080L	80	360	60/12.6/13.6/1.1'

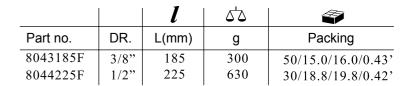


#### ■ Flexible extension tube

#### 804...F

- Reach to unreachable corners.
- Delivers high torsion
- Material: SCM 440





#### ■ 18" Flexible extension





• Length: 18", 450mm



100/16.8/17.8/0.9'



#### Flexible hex nut driver

648



		1	l	$\Delta \Delta$	
Part no.	size	Blade	over	g	Pc/carton
648055	5.5	160	270	190	60/2.5'
64806	6	160	270	192	60/2.5'
64807	7	160	270	196	60/2.5'
64808	8	160	270	198	60/2.5'
6481.4	1/4"	160	270	192	60/2.5'
6485.16	5/16"	160	270	198	60/2.5'

#### ■ Flexible hex nut driver

6480607



	0	l	l		
Part no.	size	Blade	over	g	Pc/carton
6480607	6x7	160	275	220	60/2.5'

### ■ Flexible hex nut driver

648...L

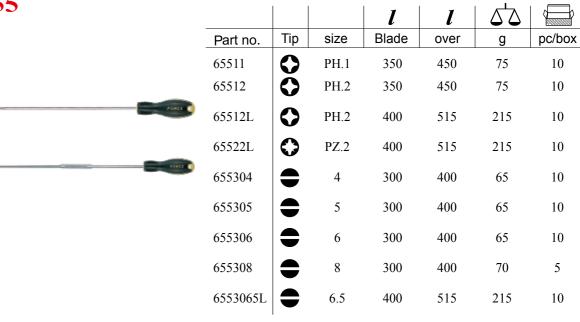


		1	1		
Part no.	size	L	over	g	Pc/carton
648055L	5.5	500	630	275	30/1.1'
64806L	6	500	630	275	30/1.1'
64807L	7	500	630	275	30/1.1'
64808L	8	500	630	275	30/1.1'



### ■ Extra long screwdriver

**655** 



### ■ 7pc Star screwdriver set (300 mmL)

20719



#### **Contents:**

716300 10...40 7-Star screwdriver for hard-to-reach fastener T10; T15; T20; T25; T27; T30; T40 (300mmL)

\* Pack in color box

Tip 🕥

10/10.3/11.3/1.3'

∆ 1030g

### Spline screwdriver M4

71817004A



- For removing & fitting the internal covering of tail lamps and dashboards as fitted to the Golf IV & new AUDI / VW models.
- For door handle VW Passat and Golf IV.
- Length: 80mm







### **■** Five-sided star tamperproof screwdriver

#### **71F**



	<b>②</b>	1	1	$\Delta^{\perp}\Delta$	
Part no.	Tip	Blade(mm)	Over(mm)	g	pc/box
71F10	TS10	150	255	62	10
71F15	TS15	150	255	62	10
71F20	TS20	150	255	62	10
71F25	TS25	150	255	73	10
71F27	TS27	150	270	104	10
71F30	TS30	150	270	104	10
71F40	TS40	150	280	146	10

### ■ 6pc Extra-long screwdriver set

#### 20611



Part no.	
	Content
655 1112	2-Extra-long Phillips screwdriver (350mmL)
	PH.1; PH.2
6553 0408	4-Extra-long slotted screwdriver(300mmL)
	4;5;6;8mm

10/11.5/12.5/2' \( \sqrt{1} \) 1150g

### Magnetic base

#### 891B01



• Holding power: 80kgw





∆ 1370g



### Dial gauge

### 891A01





- Range: 0-8mm
- Reading: 0.01mm



∆ 65g

#### Auto-rewinder air hose reel

#### 9U0201



- Size: 330 x 150 x 410 mm
- Inlet / Outlet: 1/4"
- Maximum Pressure: 300 PSI
- Hose Length: 15m
- Hose I.D.: 5/16"

3/20/21/3'

∆ 6500g

#### Auto-rewinder air hose reel

#### 9U0201A



- Size: 330 x 150 x 410 mm
- Inlet / outlet: 1/4"
- Maximum pressure: 300 PSI
- Hose length: 12M
- Hose I.D.: 3/8"

3/19/20/3'

∆ 6335g

### High volume air nozzle (slide type)

#### 9U0221



- •Equip the nozzle on pipes, in spiral direction, and tighten the bolt and nozzle onto pipes.
- •High volume air nozzle produces triple the air volume of a regular blow gun.
  - •Inner O-ring attachment design, protect pipes of air blow gun.
  - •Applicable for any air blow guns with Ø6mm or Ø8mm pipes.

### Air blow gun

#### 9U0202 / 9U0203



It is suitable for removing and cleaning any kind of chip.

#### **Specification:**

- Length: 4" (9U0202) / 13" (9U0203)
- Working pressure: 78~120 PSI / 5~8 KGS
- Thread type: 1/4"





### ∆ 240g

△ 167g

### Extendable air blow gun

#### 9U0204 / 9U0205



• Special extendable tube and swivel angle can work in any kind of area.

#### **Specification:**

- Length: 7~12" (9U0204) / 13"~24" (9U0205)
- Working pressure: 78~120 PSI / 5~8 KGS
- Thread type: 1/4"



Extendable



60/17/18/2.5'

∆¹∆ 283g



9U0205 **50/13/14/2**.9°

∆ 260g

### Multi-functional air blow gun





- •The air nozzle is slidable.
- ·Air volume regulator: Regulator fixed amount of air volume output.
- ·Suitable for any industries, such as factories, machine tools, vehicles etc.





### Air/Hydraulic pump 1600 c.c.

#### 9U4501



- •Usable oil capacity:1600 cc
- •Rated pressure:10000 psi



2/15.1/16.1/0.8' ∆¹∆ 1890g

Performance chart											
Pressure (psi)	0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
Oil flow (c.c./min)	1250	913	718	598	513	475	393	315	257	233	193

### ■ 4pc Stud extractor set

5042 / 5042S

• For remove threaded, broken, rusted, stripped or smooth studs.



5042 Contents:

4pc Stud extractor set (MM)

818 06...12 4-Stud extractor 6; 8; 10; 12 mm

#### 5042S Contents:

4pc Stud extractor set (SAE)

818 1.4...7.16 4-Stud extractor 1/4"; 5/16"; 3/8"; 7/16"

20/15.8/16.8/0.74 ∆ 790g

#### ■ 7pc Stud extractor set (MM)

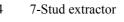
#### **5078**

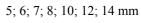


• For removing threaded, broken, rusted, stripped or smooth studs.





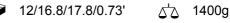
















#### Stud extractor

818

• For remove threaded, broken, rusted, stripped or smooth studs.



			1		
Part no.	Drive	size	mm	g	pc/box
81805	3/8"	5	60	127	10
81806	1/2"	6	60	132	10
81807	1/2"	7	60	130	10
81808	1/2"	8	60	130	10
81810	1/2"	10	68	186	10
81812	1/2"	12	68	184	10
81814		14	68	253	10
8183.16	3/8"	3/16"	60	126	10
8181.4	1/2"	1/4"	60	126	10
8185.16	1/2"	5/16"	60	124	10
8183.8	1/2"	3/8"	68	176	10
8187.16	1/2"	7/16"	68	172	10
8181.2		1/2"	68	196	10

#### Stud extractor

818A



- Socket 1/2" DR. Stud Extractor.
- For remove threaded, stripped, rusted, broken and smooth studs.
- Stud range: 6 19mm (1/4" 3/4")



30/16.9/17.9/0.55'



### Stud Extractor

818B



- For removing threaded, broken, rusted, stripped or smooth studs.
- Stud Range: 6 12mm (1/4" 1/2")



		l		
Part no.	DR.	mm	g	packing
818B01	3/8"	55	375	48/18.0/19.0/1.8
818B02	1/2"	75	395	48/19.0/20.0/1.8



### ■ 6pc 1/2" DR. Twist socket set

906U2



• Remove damaged bolts or rounded fasteners.

#### **Contents:**

5-1/2" DR. Twist socket (50mmL) 17; 19; 21; 23; 27mm



20/19.8/20.8/1.4





### ■ 12pc 3/8" & 1/2" DR. Twist socket set

912U3

• Remove damaged bolts or rounded fasteners.

#### **Contents:**

4-3/8" DR. Twist socket 8; 10; 12; 13mm 6-1/2" DR. Twist socket 14; 15; 16; 17; 19; 21mm



20/15.5/16.5/0.9

∆ 775g

### ■ 10pc 3/8" DR. Twist socket set

910U2



• Remove damaged bolts or rounded fasteners.

#### **Contents:**

9pc impact socket : mm(inches) 10; 11; 12; 13; 14; 15; 16(5/8"); 17; 19(3/4") 1pc 8mm Straight rod



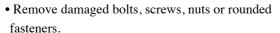
20/13.5/14.5/0.9'



#### ■ Bolts & rounded fasteners extractor set

#### 920U3







1ps 3/8" DR. Quick-grip wrench: 8~19mm(5/16"~3/4")

5ps Screw extractor: 1/8"~1/4" (M3~6): 1/4"~5/16" (M6~8) 5/16"~7/16" (M8~11): 7/16"~9/16"

 $(M8\sim14)9/16"\sim3/4" (M14\sim18)$ 

10ps 3/8" DR. Twist socket:

8;10;11;12;13;14;15;16;17;19 mm

1ps L type rod 6mm

1ps Adaptor for 3/8" extension: 3/8"(F) x 3/8"(M)

1ps 3/8" DR Extension: 6"(150 mm)

1ps 3/8" DR Wobble extension: 1.75"(44 mm)



10/14.4/15.4/1.2



#### ∆ 1440g

### 10pc Combination extractor and drill set

#### 910U1



- Contents five spiral extractors #1 through #5 and five mechanic's length hess drill, removes bolts and screws up to 5/8".
- Left hand extractors with right hand drills.

#### **Contents:**

Hess drill size, 5/64", 7/64", 5/32", 1/4", 19/64" Screw extractor size, 5/64", 7/64", 5/32", 1/4", 19/64"



48/16.0/17.0/2.2'



### ■ 25pc Screw extractor / drill & guide set

#### 925U1



- Fluted type extractors that provide a solid grip on broken studs and screws.
- These screw extractors do not expand the screw while turning and their special design ensures a positive grip when driven into the drilled out hole.
- Drill size is stamped on each extractor for ease of identification.
- Range: 3/16" to 9/16"(5 to 14 mm)



20/11.6/12.6/1.2'







### ■ 5pc Straight flute screw extractor set

#### 905U1



- Made of chrome molybdenum
- Heat treated
- Quick & easy way to remove broken screws, pipes, bolts & studs
- Size: 3/16" 5/16" (M5-8)

5/16" - 3/8" (M8-10)

3/8" - 7/16" (M10-12)

7/16" - 9/16" (M12-14)

9/16" - 5/8" (M14-16)

100/17.5/18.5/1'



#### **■** 5pc Screw extractor set

#### 63005 / 63005B



1/4" - 5/16" (M6-8) 5/16" - 7/16" (M8-11) 7/16" - 9/16" (M8-14) 9/16" - 3/4" (M14-18)

• Size: 1/8" - 1/4" (M3-6)



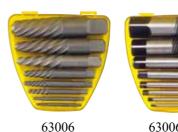


100/13.7/14.7/1.4'

△ 137g

#### ■ 8pc Screw extractor set

#### 63006 / 63006B



63006B

• Size: 1/8" - 1/4" (M3-6)

1/4" - 5/16" (M6-8)

5/16" - 7/16" (M8-11)

7/16" - 9/16" (M11-14)

9/16" - 3/4" (M14-18)

3/4" - 1" (M18-25)

1" - 1-1/8" (M25-28)

1-1/8" - 1-1/4" (M28-32)

24/19.9/20.9/0.77'

∆ 830g

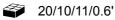


### 8pc Torx plus extractor set

#### 908U2



- Special design of torx plus head, twist body with teeth and tap shape.
- High efficiency to remove damaged objects as below:
- Hex inside (not stripped)
- Stripped hex inside
- Round inside
- · Stripped round inside
- Torx / torx plus / torx security inside
- Stripped torx / torx plus / torx security inside 7
- Application size:3mm(3.4~4.6mm), 4mm(4.3~5.9mm), 5mm (5.3~7.0mm), 6mm(6.3~8.1mm), 7mm (7.4~9.2mm), 8mm (8.4~10.4mm), 10mm(10.4~12.6mm), 12mm(12.4~14.0mm)







#### 9pc Torx plus extractor set

#### 909U1



- - Special design of torx plus head, twist body with teeth and tap shape.
  - High efficiency to remove damaged objects as below:
  - Hex inside (not stripped)
  - · Stripped hex inside
  - Round inside
  - Stripped round inside
  - Torx / torx plus / torx security inside
  - Stripped torx / torx plus / torx security inside 7
  - Application size: T6(1.5~2.7mm), T7(1.7~2.9mm), T8 (2~3.4mm), T9(2.2~3.7mm), T10 (2.6~4.0mm), T15 (3.4~4.8mm), T20(3.6~5.0mm), T25(4.2~5.8mm)



50/10/11/0.75'



### ■ 130pc Threaded coil-insert repair kit

#### 9130U1



#### Contents:

- Screw-Coil: Material: Stainless Steel SUS304. 25pc M5-0.8\*1.5D, 25pc M6-1.0\*1.5D, 25pc M8-1.25\*1.5D, 25pc M10-1.5\*1.5D, 10pc M12-1.75\*1.5D.
- Tap: Material: HSS.

1pc M5-0.8, 1pc M6-1.0, 1pc M8-1.25, 1pc M10-1.5, 1pc M12-1.75.

- Tang Puncher: Material: Carbon Steel. 1pc M5-0.8, 1pc M6-1.0, 1pc M8-1.25, 1pc M10-1.5, 1pc M12-1.75.
- Drill: Material: HSS.

1pc 5.2mm, 1pc 6.3mm, 1pc 8.3mm, 1pc 10.4mm, 1pc 12.4mm.

• Main Tool: Material: Steel. 1pc M5-0.8, 1pc M6-1.0, 1pc M8-1.25, 1pc M10-1.5, 1pc M12-1.75.









#### Threaded coil-insert repair kit

929../924../912../910..



Part no.	Size	pc	Packing	g
929U1	M5x0.8	29	30/8.2/9.2/1.7	275
929U2	M6x1.0	29	30/9.2/10.2/1.7'	310
929U3	M8x1.25	29	30/11.6/12.6/1.7'	390
924U2	M10x1.0	24	30/13.8/14.8/1.7'	460
924U3	M10x1.25	24	30/13.8/14.8/1.7'	460
924U5	M10x1.5	24	30/13.8/14.8/1.7'	460
912U5	M12x1.25	12	30/16.5/17.5/1.7'	550
912U6	M12x1.5	12	30/16.5/17.5/1.7'	550
912U7	M12x1.75	12	30/16.5/17.5/1.7	550
910U5	M14x1.25	10	30/18.6/19.6/1.7'	620
910U6	M14x1.5	10	30/18.6/19.6/1.7	620

### 8pc Axle spindle rethreading set

#### 67001



- 8pcs thread restoring die set is used to clean or repair axle threads on spindles.
- Use with 1-1/4" socket or wrench.
- Size: M24x1.50; M24x2.00; M22x1.00; M22x1.50; M20x1.50; M20x1.25; 3/4"x20UNEF; 13/16"x20UNEF



20/12/13/0.6'



### 20pc Master spindle rethreading set

#### 920U1



- This 20-piece set will repair or renew damaged threads on stub axles / spindles on most vehicles. Dies are made of high tempered steel for strength and durability. All dies have the same 1-1/4" (32mm) hex size. Stored in high impact blow mold case.
- Imperial sizes:11/16"x24,3/4"x16,3/4"x20,13/16"x20, 27/32"x20,7/8"x14,1"x14
- Metric sizes: 16x1.0, 16x1.5, 18x1.5, 19x1.5, 20x1.0, 20x1.25, 20x1.5,22x1.0, 22x1.5, 24x1.5, 24x2.0, 25x1.5, 27x2.0



6/11.3/12.3/1.3'





### ■ 15pc Metric rethreader set

#### 915U1



#### **Contents:**

- Seven metric rethreader dies, seven metric rethreader taps, one metric thread file.
- Rethreader die sizes: 6x1.00, 8x1.25, 10x1.25, 10x1.50, 12x1.25, 12x1.5, 12x1.75mm
- Rethreader tap sizes: 6x1.00, 8x1.25, 10x1.25, 10x1.50, 12x1.25, 12x1.5, 12x1.75mm
- 1pc metric thread file



10/6.2/7.2/0.57



#### ∆ 620g

### ■ 43pc UNF, UNC & Metric rethreader set

#### 943U1



#### **Contents:**

Seven UNC, seven UNF and seven metric rethreader dies, six UNC, six UNF and seven metric rethreader taps, one UNF and UNC thread file and one metric thread file.

- Rethreader Die Sizes: 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", & 5/8", UNC 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", & 5/8", UNF 6x1.00, 8x1.25, 10x1.25, 10x1.50, 12x1.25, 12x1.5, 12x1.75mm
- Rethreader Tap Sizes: 1/4",5/16",3/8",7/16",1/2", & 9/16", UNC 1/4",5/16",3/8",7/16",1/2", & 9/16", UNF 6x1.00, 8x1.25, 10x1.25, 10x1.50, 12x1.25, 12x1.5, 12x1.75mm
- Description Pitch Sizes: Metric file 0.75, 1.00, 1.25, 1.75, 2.00, 2.50 and 3.0mm SAE file 11, 12, 13, 14, 16, 18, 20, and 24 SAE file 9, 10, 12, 16, 20, 27, 28 and 32



6/11.0/12.0/0.7'







#### External thread restorer files

#### 66901 / 66902 / 66903

#### 66901 Contents:

Metric file / Pitch size: 0.75; 1.00; 1.25; 1.50;

1.75; 2.00; 2.50; 3.00



#### **66902** Contents:

SAE file / Pitch size: 11; 12; 13; 14; 16; 18; 20; 24

#### 66903 Contents:

SAE file / Pitch size: 9; 10; 12; 16; 20; 27; 28; 32

• Rostore tool for renewing damaged thread on any diameter bolt, stud, axle of shaft file, both right and left threads.



72/15.0/16.0/1.2'



∆ 208g

#### External & internal restorer file

#### 9U1101 / 9U1102



- Restorer tool for renewing damaged thread on bolt, stud, axle or shaft of any diameter. File both right and left hand threads.
- Designed for use in hidden & narrow area.
- Description pitch sizes:

#### 9U1101

Metric File :0.80-1.00-1.25-1.50-1.75-2.00-2.50-3.00

9U1102

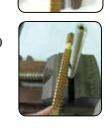
SAE file: 24-20-18-16-14-12-11-10



120/19.7/20.7/1.7'







### ■ 7pc Square thread tap set

#### 907U2











#### SAE:

- 1 : 4N, 5N, 6N, 7N
- 2: 7-1/2N, 9N, 11N, 11-1/2N
- 3:8N, 10N, 12N, 14N
- 4:16N, 18N, 20N, 24N

#### **Metric:**

- 5 : 1P, 1.25P, 1.5P, 1.75P
- 6: 2P, 2.5P, 3P, 3.5P
- 7:4P



100/14.2/15.2/0.61'









### ■ 4pc Nut splitter set

672



#### **Contents:**

6720912	1pc 5/16"to 1/2" (9-12mm)
6721216	1pc 1/2" to 5/8" (12-16mm)
6721622	1pc 5/8" to 7/8" (16-22mm)
6722227	1pc 7/8" to 1-1/8" (22-27mm)

12/18.5/19.5/0.87





## Universal nut cracker

#### 9U1001



- Splits most stubborn nuts 7/16" (11mm) through 3/4" (19mm) across the flats.
- Works in channels not accessible by other tools.
- Parallel action of pusher cracks nuts without damaging bolt threads. Chisel rotates 360° to line up parallel to bolt. Simply tighten the screw until the nut splits.
- With a rugged drop-forged frame.
- Do not use on heat-treated nuts.
- Length: 6-3/4" serviceable product.



24/15.5/16.5/1'





∆ 1540g

### ■ Recoilless hammer (head-replaceable)

616A



	l		
Part no.	mm	g	packing
616A025	25	389	48/16/18/1.24'
616A030	30	435	72/23/25/1.3'
616A035	35	505	48/26/28/1.4'
616A040	40	606	24/21/23/0.92'
616A045	45	865	24/24/26/1.1'
616A050	50	952	24/27/29/1.26'
616A055	55	1038	18/22/24/1.3'
616A060	60	1125	18/30/31/1.58'

- Steel handle with positive plastic grip.
- PU-material strike faces.
- Both strike faces can be repeatedly changed if broken.



### Soft face hammer

#### 616A400



- •Hammer head: 1 yellow PU + 1 white Nylon
- Handle: natural color hickory

48/19.9/21.8/1.62' ∆ d15g

#### Soft face hammer

#### 616A700



- Hammer head:black TPR & transparent yellow acetate head
- Handle: 1.4mm harden tubular steel handle, PVC ring & A type PVC grip

24/20.2/21.4/0.91

∆ 842g

### Sledge hammers

#### 616G....



	Head Weight	Total Length	Packing
Part no.	g	mm	
616G1250	1250	260	16/22.6/23.6/0.68
616G1500	1500	280	12/21.6/22.4/0.59

### ■ Brass taper punch 3/8", 5/8"hex

#### 606B200

• Length: 8"(200mm)





### 5pc Chisel set

50510



#### **Contents:**

602 10150...22200 5-Chisel

30/26.6/27.6/0.5'

10(150mmL); 12(150mmL); 15(180mmL); 19(200mmL);

22(200mmL)

∆∆ 887g

### 6pc Pin punch set

50613



#### **Contents:**

604 2140...8215

6-Pin punch

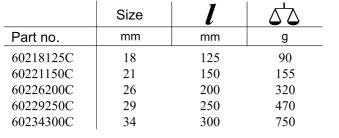
2mm (140mmL); 3mm (150mmL) 4mm (190mmL); 5mm (200mmL)

6mm (210mmL); 8mm (215mmL)

30/16.7/17.7/1.3' △ 540g

### Ribbed (Cold) chisel

602...C





### ■ Ribbed (Cold) chisel with sheath handle

602...Q



	Size	1	△ △
Part no.	mm	mm	g
60229250Q	29	250	540
60234300Q	34	300	820

### 6pc Chisel & punch set (long type, interchangeable)

906U1



#### **Contents:**

1pc Main handle / 1pc Flat chisel 13mm 1pc Center punch 3mm / 3pc Pin punch 3; 4; 5mm

- Material and shape: Main handle made by carbon steel; bits made by chrome-vanadium. All shank 10mm hex with two grooves.
- Comfortable and protective handle
- Double locking device holding tight
- Save space, time and money
- Create high efficiency

Warning: Wear safety goggles when in use; chisel and punch shanks have to be inserted to hole bottom.

48/31.2/32.2/3.3'

∆ 650g

### ■ 15pc Chisel & punch set (interchangeable)

915U3



- Material and shape: Main handle made from Chrome-Vanadium; Bits made by Chrome-Vanadium. All shank 13mm hex with two grooves.
- Comfortable and protective handle
- Double locking device holding tight

Warning: Wear safety goggles when in use; chisel and punch shanks have to be inserted to hole bottom.



10/22.5/23.5/1.8'



### ■ 15pc Hammer chisel & punch set (interchangeable)

#### 915U4



- Material: Main hammer made from drop forged carbon steel; bits made by chrome-vanadium.
- Safe and comfortable handle of hammer.
- Double locking device holding tight

Warning: Wear safety goggles when in use; chisel and punch shanks have to be inserted to hole bottom.

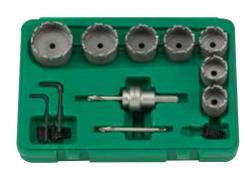


10/24.0/25.5/2.4'



### ■ 13pc Tungsten carbide tipped metal borer set

#### 913U1 / 913U2



- Use the same arbor for saw heads of different sizes.
- Change saw heads with a simple push and turn the fixed screw.
- H.S.S. center drill is replaceable.
- Shank size of the arbor is 3/8".
- Spring can help slug removal.

#### **Contents:**

1pc Arbor

1pc Spring

2pc H.S.S center pilot drill 75; 84 mm

2pc Hex key 3; 4.0 mm

913U1 7pc Saw head 19; 22; 25; 28; 30; 32; 35 mm

913U2 7pc Saw head 30; 32; 35; 38; 40; 45; 51 mm

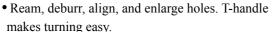


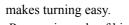
10/15.7/16.7/1.4'

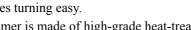


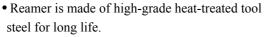
#### Tapered reamer

#### 9U0901 / 9U0902









• To avoid damage tool, it must always be turned clockwise. The use of cutting oil is recommended.

**9U0901** Capacity: 1/8" to 3/8" (3mm to 10mm)

**9U0902** Capacity: 5/32" To 17/32" (4mm To 31mm)

Part no.	packing	g
9U0901	240/16.8/17.8/1.4'	70
9U0902	48/16.6/17.6/1.3'	345

### Rivet pliers

#### 67801



		1	
Part no.	packing	mm	g
67801	20/15.7/16.7/2.1'	180	785

#### • Riveting capacity

f a	Rivet material Rivet diameter	Aluminum
<b>-</b> Ø	Ø2.4mm or Ø3/32"	<b>A</b>
	Ø3.0/3.2mm or Ø1/8"	<b>A</b>
	Ø4.0mm or Ø5/32"	<b>A</b>
$\lor$	Ø4.8/5.0mm or Ø3/16"	<b>A</b>

#### Grade nut fastener

#### 67802



		l	
Part no	packing	mm	g
67802	20/11.6/12.6/2.1'	280	582

• Size:M3, M4, M5, M6

#### Hand riveter



30/17.3/18.3/1.5'

∆'∆ 556g

- Rivet size:
- Ø2.4mm (Ø3/32"); Ø3.0, 3.2mm (Ø1/8");
- Ø4.0mm (Ø5/32"); Ø4.8, 5.0mm (Ø3/16")
- High-grade heavy-duty steel plate upper handle with advanced heat treatment, high-strength aluminum body, high-grade steel alloy key parts (jaws, jaw case, fulcrum pin, etc) with advanced heat treatment, PAHs-Free (non-toxic to hand skin) plastic hand grips.
- · Riveting capacity

	fi ~	Rivet material Rivet diameter	Aluminum	Steel	Stainless Steel/Inox
١	1-0	Ø2.4mm or Ø3/32"	<b>A</b>		•
١		Ø3.0/3.2mm or Ø1/8"	<b>A</b>		•
		Ø4.0mm or Ø5/32"	•		•
	V	Ø4.8/5.0mm or Ø3/16"	<b>A</b>		





8-33

GENERAL

### Heavy-duty 2-handled lever type riveter

678535



- Cap: Ø3.0mm ~ Ø6.4mm
- Blind rivets: Ø1/8"~ Ø1/4"

#### · Riveting capacity

	Rivet material Rivet diameter	Aluminum	Steel	Stainless Steel/Inox
→Î+ø	Ø3.0/3.2mm or Ø1/8"	<b>A</b>	•	•
₩~	Ø4.0 mm or Ø5/32"	<b>A</b>	•	•
	Ø4.8/5.0mm or Ø3/16"	<b>A</b>	-	•
	Ø6.0mm	<b>A</b>		•
٧	Ø6.4mm or Ø1/4"	<b>A</b>		•

10/17.5/18.5/1.6'

∆ 1890g

### Heavy-duty lazy tong type riveter

678810





- Cap: Ø3.0mm ~ Ø6.4mm
- Blind rivets: Ø1/8"~ Ø1/4"

#### · Riveting capacity

_	Rivet material Rivet diameter	Aluminum	Steel	Stainless Steel/Inox
→   +ø	Ø3.0/3.2mm or Ø1/8"	<b>A</b>		•
╽╫╸	Ø4.0 mm or Ø5/32"	<b>A</b>		•
	Ø4.8/5.0mm or Ø3/16"	<b>A</b>		•
	Ø6.0mm	<b>A</b>		
	Ø6.4mm or Ø1/4"	<b>A</b>		

### 10/19.5/20.5/1.4'



### Hand nut riveter(M3~M8)

678N260

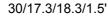


- With 5 short type threaded mandrels  $M3 \sim M8$ .
- With 4 nosepieces M3 ~ M6 (M8 does not need nosepiece).
- Forged steel upper handle with advanced heat treatment, high strength aluminum body with steel insert design.
- · Stroke adjuster design.
- Riveting capacity

655	Rivet Nut Material Rivet Nut Thread Size	Aluminum	Steel	Stainless Steel / Inox
	M3x0.5 or 6-32 Rivet Nut	<b>A</b>		•
	M4x0.7 or 8-32 Rivet Nut	<b>A</b>		•
7	M5x0.8 or 10-24, 10-32 Rivet Nut	<b>A</b>		
	M6x1.0 or 1/4-20 Rivet Nut	<b>A</b>		
Thread Size	M8x1.25 or 5/16-18 Rivet Nut	<b>A</b>		











### ■ Heavy-duty hand nut riveter(M4~M10)

678N320

10/17.5/18.5/1.6'



- With 5 short type threaded mandrels M4  $\sim$  M10 and 5 Nosepieces
- High tension steel short handle with super leverage design, high strength aluminum bodies.
- Special design to solve the headache problem of rivet nut stuck with threaded mandrel.
- Stroke adjuster design with stroke indicator.
- · Mandrel length adjustable design.
- Riveting capacity

SEE	Rivet Nut Material Rivet Nut Thread Size	Aluminum	Steel	Stainless Steel / Inox
	M4x0.7 or 8-32 Rivet Nut	<b>A</b>		•
	M5x0.8 or 10-24, 10-32 Rivet Nut	<b>A</b>		•
	M6x1.0 or 1/4-20 Rivet Nut	<b>A</b>	-	•
Thursd Cine	M8x1.25 or 5/16-18 Rivet Nut	<b>A</b>		
Thread Size	M10x1.5 or 3/8-16 Rivet Nut	<b>A</b>		

### Grey cast iron bench vise (without base)

∆ 860g

65401



	Jaw	Throat	
Part no.	open	depth	packing
6540104	4"	2-5/8"	1/12.2/13.2/0.43'
6540105	5"	3-1/4"	1/13.7/14.7/0.6'
6540106	6"	3-3/4"	1/19.6/20.6/0.82'
6540108	8"	4"	1/26.8/27.8/0.97'

### Drilling press vise



	Jaw	Throat	
Part no.	Open	Depth	Packing
6540403	2-3/4"	3/4"	2/3.2/4.2/0.16'
6540404	4"	1"	2/6.2/7.2/0.24'
6540405	5"	1"	2/11.0/12.0/0.3'
6540406	5-1/2"	1"	2/13.5/14.5/0.43'



### Cross vise

#### 65405



	Jaw	
Part no.	Open	Packing
6540503	3"	1/6.2/7.2/0.31'
6540504	4"	1/10.0/11.0/0.44'
6540505	5"	1/13.5/14.5/0.5'
6540506	6"	1/16.5/17.5/0.65'

### ■ Forged steel bench vise

65406



Item No.	Jaw opening	Weight (kg)	Packing
6540604	4"	8.4	1/8.4/9.4/0.3'
6540605	5"		1/11.5/12.5/0.63'
6540606	6"	20.5	1/19.5/20.5/1.02'

### Heavy duty bench vise

65402..A



Part no.	Size	Weight(kg)	packing
6540204A	4"	7.7	1/7.3/8.3/0.36'
6540205A	5"	11.2	1/11/12/0.48'
6540206A	6"	14.5	1/14/15/0.57'
6540208A	8"	19.2	1/19.2/20.2/0.91'
6540210A	10"	25.6	1/27/29/1.4'



The nut and the base are one-piece forged, instead of being jointed together later by screws.

The strengthened structure ensures the firm and steady joint between the base and the lead screw, and thus the jaws can provide you with powerful and sturdy grip to weighty pieces.



### Heavy duty ductile octagonal supporting vise

65407



Part no.	Size	Weight(kg)	packing
6540706	6"	28	1/27/28/0.85'
6540708	8"	40.5	1/41/42/1.43'

The nut fits completely into the jaw. The nut which is not movable mates and works precisely with the lead screw.

### Heavy duty ductile square supporting vise

65408





Part no.	Size	Weight(kg)	packing
6540804	4"	15	1/15/16/0.5'
6540805	5"	17	1/17/18/0.53'
6540806	6"	18.6	1/18.6/19.6/0.6'

The nut fits completely into the jaw. The nut which is not movable mates and works precisely with the lead screw.

### Scriber of wolfram steel

87901



	l	$\Delta^{\dagger}\Delta$
Part no.	mm	g
87901	145	20

<sup>•</sup> Include one tungsten lead and one carbon lead.

### Straight shears

5055P1



		l	$\Delta \Delta$	
Part no.	Cutting Length	mm	g	packing
5055P1	51mm	265-10.5"	480	36/17/18/1.3'
5055P112	70mm	305-12"	650	24/21/23/1.2'

### Aviation tin snips

#### **698**





		l	l	77	
Part no.	Direction	mm	CuttingL	g	packing
6981250	Straight cut	250	38mm	400	60/24/15/1.86'
698L248	Left cut	248	35mm	400	60/24/25/1.86'
698R248	Right cut	248	35mm	400	60/24/25/1.86'



### ■ Stainless steel pvc pipe cutter

#### 65607



- For 40mm O.D. PVC pipe
- Part: Cutting wheel (65607-B)
- Weight:490g
- Length:225mm





### ■ Locking pliers (straight jaw)

#### 614A



	l		
Part no.	mm-inch	packing	g
614A175 614A250	175-7" 250-10"	40/16.4/17.4/0.96' 40/23.2/24.2/1.0'	380 580

### Locking pliers (V-jaw)

#### 614B225



	l		
Part no.	mm-inch	packing	g
614B225	225-9"	40/23.0/24.0/1'	575



### Locking pliers

#### 614



		l	$\Delta \Delta$
Part no.	packing	mm	g
614125	40/7.6/8.6/0.7'	125-5"	190
614175	40/14.8/15.8/0.96'	175-7"	370
614250	40/22.0/23.0/1'	250-10"	550

### Long nose locking pliers

#### 615



		l	$\nabla_{\Gamma}$
Part no.	packing	mm	g
615150	50/10.3/11.3/1.1"	150-6"	220
615225	50/19.5/20.5/1.2"	225-9"	390

### Adjustable locking pliers

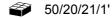
#### 65202



	Jaw	l	$\Delta \Delta$
Part no.	mm	Length	g
	3-46	9"(215mm)	400



- For clamping plumbing and worn screws
- Can be adjusted for clamping small to large screws
- Smooth and fast screw clamping and releasing
- Material: Jaw Cr-Mo; Body: Cr-Mo





### Wire twisting pliers

#### 6958



	l	$\Delta \Delta$	
Part no.	mm	g	Packing
6958160 6958225	160 225	220 360	80/19.0/20.0/1.1' 60/26/27/2.1'
		200	00,20,2,,21







### ■ Wire rope cutter

#### 6959180



	l	$\Delta \Delta$	
Part no.	mm	g	Packing
6959180	180	280	60/17.0/18.0/1.1'

### Parallel jaw lock ring pliers

#### **9T0101**



- Features heavy drop forged 10" external action lock ring pliers
- Features compound leverage action.
- The thin jaws are notched to securely hold snap rings and they open in a parallel plane.
- Ideal for working on automatic transmissions.
- Spread: 1.1/16"(27mm)
- Length: 10"(250mm)



**3**6/14.2/15.2/1.7' △ 395g

### Straight tip lock ring pliers

#### **9T0103**



- Features heavy drop forged tips with wider opening for standard transmissions
- Tip: flat, straight, serrated.
- Spread: 1-1/2" (38mm)
- Length: 9" (230mm)

### Angled tip lock ring pliers





- Features heavy drop forged tips with wider opening for standard transmissions.
- Tip: flat, angled, serrated.
- Spread: 1-1/2"(38mm)
- Length: 9"(230mm)
- 48/14.4/15.4/0.75





### ■ Internal lock ring pliers

#### 9T0105



- Wide flat jaws designed for easy removal of lock rings on transmissions, differentials, shafts etc.
- Spring return handles.
- 36/14.6/15.6/0.8
- △ 4000

#### Snap ring pliers (internal 90° bent tip )

#### 609...ABC



g
80
150
300
465

• 60912ABC is without a spring.

### Snap ring pliers (external 90° bent tip)

#### 609...ABO



	Capacity	Tip		1	$\Delta \Delta$
Part no.	mm	mm	packing	mm	g
60905ABO	8-25	1.3	30/2.4/3.4/0.44		
609ABO	19-60	1.9	30/4.5/5.5/0.7'	180-7"	150
60909ABO	40-100	2.3	30/9.0/11.0/1.2'	230-9"	300
60912ABO	85-165	3.2	30/16.5/17.5/1.8	' 310-12"	510

### Snap ring pliers (internal straight tip)

#### 609...ASC



	Capacity	Tip		l	$\overline{\nabla}$
Part no.	mm	mm	packing	mm	g
60905ASC	8-25	1.3	30/2.4/3.4/0.44'	140-5.5"	80
609ASC	19-60	1.9	30/4.5/5.5/0.7'	180-7"	150
60909ASC	40-100	2.3	30/9.0/11.0/1.2'	230-9"	300
60912ASC	85-165	3.2	30/16.5/17.5/1.8'	310-12"	470

• 60912ASC is without a spring.

### Snap ring pliers (external straight tip)

#### 609...ASO



	Capacity	Tip	<b>3</b>	l	$\Delta^{\perp}\Delta$
Part no.	mm	mm	packing	mm	g
60905ASO	8-25	1.3	30/2.4/3.4/0.44'	140-5.5"	80
609ASO	19-60	1.9	30/4.5/5.5/0.7'	180-7"	150
60909ASO	40-100	2.3	30/9.0/11.0/1.2'	230-9"	300
60912ASO	85-165	3.2	30/16.2/17.2/1.3'	310-12"	490

### Internal snap ring pliers (long arm)



- Special design for the retaining ring in the deep hole.
- The most deep size: 56mm



48/11.5/12.5/2.0'

∆ 240g

### ■ 3pc Heavy-duty lock ring pliers set

#### 903U1



- Serrated angled flat tips retaining screws.
- Designed for heavy-duty service on external lock rings used in truck and tractor transmissions.
- Replaceable tips.
- Extra leverage from long spring loaded handles.
- Spread: 3" (75mm)
- Length: 14" (355mm)



36/21.5/23/1.4'

∆ 545g

#### 4pc Internal-external snap ring pliers set



8-43



- Effective range: 10 50 mm (3/8" 2")
- Includes four pieces exchangeable tips
- 2pc straight tips
- 1pc 90° angled tips
- 1pc 45° angled tips
- Jaws can be exchanged easily for 6 internal-external different purposes.



60/12/14/2.5'





### ■ 12pc Internal-external circlip pliers set

#### 912U1



• Feature replaceable points and spring ratchet locking mechanism to securely hold against circlip tension.

Internal: 3-1/16" - 6-1/4" External: 3-1/2" - 6-1/2" • Tip diameter: 0.12" (3mm) Spread: 3-1/4" (85mm) Length: 16" (400mm)

6/19.8/20.8/2.3' ∆<sup>1</sup>∆ 3300g

### ■ 20pc Internal-external circlip pliers set

#### 920U2



- Feature replaceable tips and spring ratchet locking mechanism to securely hold against tension. Offset tips make it easier to facilitate circlip.
- Internal: 2-1/16" 6-1/4" External: 3-1/2" – 6-1/2"
- Replaceable tips:

1	1	
Qty	Tip size	Tip angle
2	0.108	0°
2	0.108	15°
2	0.108	45°
2	0.108	90°
2	0.120	$0^{\circ}$
2	0.120	15°
2	0.120	45°
2	0.120	90°
~		٠.

10/13.5/15.0/1.6 △ 1.35kg

### ■ 10pc Universal locking tool set

#### 910U3



- The multipurpose 9-1/2" pliers with five attachments.
- Parts are interchangeable depending on the desired functions and purpose.



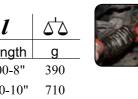
10/13.1/14.1/1.3'



### Pipe wrench

#### 684





		l	$\Delta \Delta$
Part no.	packing	Length	g
68408	36/14.0/15.0/0.4'	200-8"	390
68410	24/17.0/18.0/0.4'	250-10"	710
68412	24/23.0/24.0/0.5'	300-12"	960
68414	12/16.0/17.0/0.4'	355-14"	1340
68418	12/25.0/26.0/0.6'	455-18"	2090
68424	6/22.0/23.0/0.7'	610-24"	3670
68436	3/25.0/26.0/1.1'	863-36"	8340
68448	2/24.0/25.0/1.0'	1220-48"	12000

### Aluminum pipe wrench

#### 684...A



		1	$\Delta \Delta$
Part no.	packing	Length	g
68410A	24/11.0/12.0/0.4'	250-10"	460
68412A	24/17.0/18.0/0.4'	300-12"	700
68414A	24/21.5/22.5/0.5'	355-14"	895
68418A	12/18.0/19.0/0.9'	455-18"	1500
68424A	6/14.0/15.0/0.7'	610-24"	2330
68436A	3/14.0/15.0/1.1'	863-36"	4660
68448A	2/13.0/14.0/1.0'	1220-48"	6500



#### 684C



	size	l		$\Delta^{\perp}\Delta$
Part no.	inch	Length	packing	g
684C14	1	350mm(14")	20/15.8/16.8/0.78'	790
684C17	1-1/2	440mm(17")	16/23.2/24.2/1.7'	1450
684C22	2	560mm(22")	8/18.8/19.8/1.6'	2350

### ■ Pipe torque wrench

#### 647P...



		Torque	l	
	Part no.	Nm	mm	kg
	647P210	40-210	590	3
D	647P350	70-350	825	3.7
	647P500	100-500	920	4.6

<sup>\*</sup>Accuracy:+-6%



### Pipe gripping pliers

#### 6957240



		1	$\Delta \Delta$
Part no.	Packing	mm	g
6957240	60/19.2/20.2/1.6'	240	320

### ■ 10pc Tubing cutter & double flaring tool set

#### 656A / 656AM

#### **Contents:**

1-Flaring tool

1-Flare bar

Size of flare bar and adapters:

S.A.E.: 3/16", 1/4", 5/16", 3/8", 7/16", 1/2" & 5/8" 1-Heavy duty tube cutter: 1/8"-1/18"

• This 2-in-1 flaring tool set is designed to withstand the high pressures necessary to double flare soft steel tubing, as well as, single flare soft copper, aluminum and brass tubing. Automotive 45°.

# 9

#### 656AM Changed item

1-Flare bar

Size of flare bar and adapters:

Metric: 4-4.75-6-8-10-12-14mm 1-Heavy duty tube cutter: 4-28mm

### ■ 7pc Double flaring tool kit

#### 656F



#### **Contents:**

1-Flaring tool

1-Flare bar: includes 5 size:

S.A.E.: 3/16", 1/4", 5/16", 3/8" & 1/2"

5-Flare adapters:

S.A.E.: 3/16", 1/4", 5/16", 3/8" & 1/2"

This 45° double flaring tool is designed for S.A.E. size tubing and will withstand pressure that is necessary for double flare tubing up to 1mm wall thickness. Tool can be used as a single flaring tool.



#### ■ 10pc Tubing cutter and double flaring tools kit

656 / 656M



1pc Tubing cutter.

1pc 9/16" Screen bar.

7pc Adaptor 3/16"; 1/4"; 5/16"; 3/8"; 7/16"; 1/2"; 5/8"

#### **656M** Changed item:

7pc Adaptor 4; 6; 8; 10; 12; 14; 16 mm



12/18.6/19.6/1.5'



### Professional universal flaring tool

906T2



- Tool works in two steps for thin walled steel, aluminum or copper pipes.
- For dimensions of 3/16"(4.75mm) and 1/4" (6mm)
- Fast manual flaring tool with minimal material wastage.



4/22.0/23.0/2'

∆ d300g



### Hydraulic flaring tool kit

656B



- SAE:3/16";1/4"
- DIN:3/16"; 1/4"



8

6/15/16/1.5





### Hydraulic flaring tool kit

#### **656BM**



- Use in-site on the vehicle and suitable for producing SAE (3/16" & 1/4") and DIN 45 degree (3/16" & 1/4")
- Capable of working on steel brake pipes.
- 4.75; 5; 6 mm





6/15.5/16.3/1.4'



### Universal hydraulic flaring tool set

#### 656B01



- •A quality flaring tool set containing a hydraulic flaring tool capable of 6 tons of pressure and a range of dies and adaptors suitable for:
- 1. Push connect: 1/4", 5/16", 3/8", 1/2"
- 2. GM fuel line flare: 5/16", 3/8"
- 3. 45° & Double flare: 3/16", 1/4", 5/16",3/8", 1/2"
- 4. Metric bubble flare: 4.75mm, 6mm, 8mm, 10mm
- 5. GM-TC: 3/8", 1/2"



2/13/14/1.2'



### 45° Eccentric flaring tool for R410A

#### 65641





- Engineered to create stronger flare joints for high pressure R410A systems.
- Unique clutch driven feed screw and faceted cone produce uniform, clean flare walls without thin spots or galling.
- For 45° flaring of 1/4", 5/16", 3/8", 1/2", 5/8", 3/4" O.D. tubing.



### ■ 3-in-1 Tubing bender

653



	Application		$\Delta \Delta$
Part no.	size	packing	g
65301	6;8;10mm	50/17.4/18.4/2'	348
65302	1/4";5/16";3/8"	50/19.5/20.5/2'	390





#### ■ 180° 3-in-1 Tube bender

653180



- Quality aluminum body
- Three size tube bender Inch: 1/4", 5/16", 3/8" Metric: 6mm, 8mm, 10mm
- **②** 20/10.9/11.9/2' △ 545g

### Breakline bending pliers

65303

• SIZE: 3/16", 1/4"







50/20.5/21.5/0.85'

∆¹∆ 420g

### ■ Tubing bending pliers

65305



- For bending brass, copper, aluminum and steel tubing.
- Tubing bender pliers feature one rollers.
- One roller accepts 3/16" / 1/4" / 5/16" / 3/8" (4.8 / 6.4 / 7.9 / 9.5mm) O.D. tubing.
- **8**/20.0/21.0/0.8' △ 2500g



### ■ Tube straightener tool

65306





- •Straighten coils of brake pipe quickly and easily.
- •For use on most types of tubing including soft metal tube, copper and stainless steel.
- •Size ranges from 3/16"-1/2" (4.75 12.7 mm)

∆'∆ 6526g

#### Iron pipe cutter

65605



- For 1/8"-2" (3mm-50mm) O.D. iron pipe
- Part: Cutting wheel (65605-B)
- 43cm
- 3100g
- **6/18.6/19.6/1.9' △ 3100g**

### ■ Telescopic tubing cutter

65601



- Hardened cutting wheel.
- Tapered burr remover.
- Cuts copper, brass, aluminum & mild steel tubing 1/8" to 1-1/8" (3-29mm) outside diameter.



60/17/18/2.1'

∆¹∆ 283g

### Mini tubing cutter

65602



- 1/8" to 7/8" (3-22mm) O.D. range.
- Small size allows use in restricted areas.



100/13.5/14.5/2.2/







### ■ Professional tubing cutter

#### 65604



- Solid and durable
- Aluminum alloy body
- High grade SUJ2 steel blade
- With deburring reamer.
- Capacity: 4-28mm (1/8"~1-1/8")
- For copper, brass and aluminum tubing.

60/16.8/17.8/1.8'

∆ 280g

### ■ Telescopic tubing cutter

65608

• For 1/8"-1 1/4"(3-32mm) O.D. tube,sk-2(1+1)



60/17.0/18.0/2'

### Ratchet tube cutter

656



	Capacityø		$\Delta^{\perp}\Delta$
Part no.	mm	packing	g
65631	8-28	36/16.5/17.5/2.14	392
65632	28-67	12/13/13.5/0.84	1036

- Quick and easy ratchet mechanism make it easy and comfortable to use even in narrow spaces.
- 65631 can cut copper pipe up to 1.5mm.
- 65632 can cut stainless pipe up to 3mm.

### Exhaust pipe and tubing cutter

65603



- Cuts thin walled steel and copper tubing from Ø20mm to Ø75mm (3/4"-3").
- Cuts quickly and easily.
- Fitted with 7 cutting blades for fast, clean cutting.



30/17.6/18.6/1.1'

∆'∆ 586g



### Inside/ Outside deburring tool

#### 65304



• 3/16"-1 1/2"O.D, plastic body



120/5.0/6.0/2.5'

∆ 35g

### Steel wire rope cutter

#### 6927310

- •For cutting steel wire rope up to 7mm and mild steel rod up to 5mm.
- •For cutting copper and aluminum cable up to 60 mm<sup>2</sup>.
- •Length:310 mm.

#### Steel wire rope cutter

#### 6927600

- •For cutting steel wire rope up to 14 mm and mild steel rod up to 9
- •For cutting copper and aluminum cable up to 150 mm<sup>2</sup>.
- •Length:600 mm.



#### Bolt cutter

#### 9U0501



		l	
Part no.	packing	Length	g
9U050112	20/16.6/17.6/2.1'	300-"12	830
9U050114	20/24.0/25.0/1.9'	355-14"	1200
9U050118	15/24.2/25.2/2.3'	455-18"	1613
9U050124	8/19.0/20.0/2.7	610-24"	2375
9U050130	6/23.8/24.8/2.1'	762-30"	3967
9U050136	5/30.4/31.4/1.8'	863-36"	6080
9U050142	3/28.0/29.0/2'	1066-42"	9330

GENERAL

#### Micrometer

#### 5096P9



Part no.	Specification	Packing
5096P9025	0-25mm	50/15/16/0.6
5096P9050	25-50mm	50/25/26/0.8'
5096P9075	50-75mm	30/24/25/1.2'
5096P9100	75-100mm	25/20/21/1'

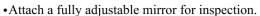
#### 5096P9050~5096P9100

### ■ Multi-function magnetic pick-up

**617** 

- •Magnetic pick-up tool in telescopic extended, maximum 63cm extension.
- Take off the cap of bottom, the needle point head can be used for marking when draw a line or clean the narrow slot and small hole.

*l* 235mm



•All-in-one handy tool with pocket clip.





### Multi-function inspection tool

**617A** 



- pc Aluminum interchangeable handle
- lpc Inspection mirror

100/8.9/9.9/1.1'

- 1pc 6-lbs Magnetic retriever
- pc 10" Flexible adapter
- 1pc 9" 135 degree bended adapter
- 1pc 8" Straight adapter
- pc UV light
- 1pc LED light
- 40/19.2/20.2/0.8'





### ■ 3-in-1 Magnetic flexible pickup tool with light & mirror

617L



- Positive action turn on / off switch
- Magnetic pick-up 3.5lbs. (1.6kgw)
- Flexible shank of dia. 8.5mm and length 455mm(17-7/8")
- Oval glass mirror 25 x 50mm (1-1/8"x2")
- Replaceable bulb (2.2V, 0.25A)
- Inspection light is operated with 2pc AA batteries (not included)

72/15.1/16.1/2'

∆ 210g

### Hinged flexible inspection mirror

61703

• Mirror: 50X70mm

• Length: 510mm





36/11.0/12.0/2.3'

∆'∆ 300g

### Palm flash light

68609



- Designed for grab the tools to light up the narrow or hard-to reach space
- It is magnetic on the back.

150/2.4/3.4/0.4



### Infrared thermometer

#### **9U0401**



- Laser indicator.
- Changeable between: °C and °F
- Temperature range:-20 to 500°C
- Operating temperature:0 to 50°C
- Storage temperature:-20 to 50°C
- Precision:±2.5%or 3°C
- Distance-to-Spot: 10:1
- Power supply:9V battery



20/3.5/4.5/2'

∆¹∆ 175g

### ■ 14 LED Work light with magnifying head

#### 68610



- LED white light bulb.
- 3x magnifying glass.
- Magnifying glass's diameter is 4".
- Could be supplied power by the two kinds of options which are the 2 pcs of AAA battery or AC transformer
- Magnetic base attaches firmly to any metal surface.
- Power: AAA battery x 2 (1.5V/pc).

Transformer (Input: AC100V / AC240V; Output: DC4.5V).







### ■ LED white light, clip-type (360° rotation)

68601



• 3 LEDS.





120/7.3/8.3/1.9'



### Limber magnetic LED light

#### 68602



• 3 LEDS.



120/10.2/11.7/3.5'







### ■ Magnetic LED head light

#### 68603



• 11 LEDS.





100/12.7/13.7/3.55'

∆ 127g

### ■ 10W LED working light

#### 68608



• Size: 330 x 95 x 100 mm

• Charging time: 3.5~4 hours

• Input power: AC 100~240V, DC 12V~24V

• Battery: 3.6V 2250mAh NI-MH

• Working time: 4 hours when fully charged

• Activetime: 2.5 hours

20/12.0/13.0/1.6'

∆ d90g



### Ultra COB LED slim light (lumen-adjustable switch)

#### 68611



• Specifications:

A. LED Max power: 15W LED COB light

B. Li-ion Rechargeable battery: 3.7V 2200mAh

C. Charger input: AC100~240V 50/60Hz

D. Power output: 5.0V 1000mAh

E. Charger time: 3.5~4.0 hours

F. Avtive time: 2.5 hours

G. Storage temperature: -20°C to 70°C

H. Operation temperature: -5°C to 50°C

I. Product size: 375(L)x40(W)x30(H) mm

• Features:

1. Micro adjustment lumen switch

2. Foldable base with powerful magnet

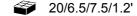
3. Swivel hanging hook

4. Built-in 2200 mAh LI-ion battery

5. For full light-approx 2.5 hours working hours, for semi light-approx 10 working hours

6. 4 hours charging time: in charging -red indicator flash, charged completed-blue indicator light on, low battery -yellow indicator flash

7. Comes with 5V 1A USB charger & USB cable







8-56



### ■ 5W COB LED pen light

#### 68612



- Size: 165x25x30 mm
- 5W LED COB light
- 360 degree of rotation
- Clip with magnet



100/8/9/1.4'



### Flash Light

#### 68607

- 6 LEDS
- Battery: AAA x 3pc
- Size: 36\*28\*95 mm



30/6.6/7.6/0.4



### EZ-release magnetic pick-up

#### 88011



- 680mmL(26-3/4")
- Capacity: 8 LBS (3.63 kg)

#### **Functions:**



• EZ- Release magnetic pick up tool has a magnetic device that is able to attract any metallic items or spare parts laying on the floor without having to go through the trouble and pick them up one by one.





12/8.0/9.0/2.1'



### ■ Midi EZ-release magnetic pick-up

#### 88012





• Capacity: 10 LBS (4.54 kg)

#### **Functions:**

- Easy pick-up and release of metallic materials.
- Just squeeze the handle to quickly release material.



24/15.1/16.6/2.5'



∆'∆ 630g



### ■ Power EZ-release magnetic pick-up

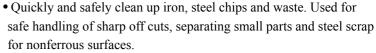
#### 88013



- 400mmL(15-3/4")
- Capacity: 14 LBS (6.36 kg)



### **Functions:**





20/12.8/13.8/2.9'



#### Heavy-duty flexible magnet pick-up tool

#### 61701



- Flexible shank diameter 8.5mm; 440mmL
- With plastic PVC grip
- Magnetic Capacity: 3.5Lbs(1.6Kgw)
- Overall length: 535mm(21")



100/19/20/1.9'



### Flexible magnet pick-up tool

#### 61702



- Flexible shank diameter 5.0mm; 400mmL
- With plastic PP grip
- Magnetic Capacity: 1.5Lbs(0.7Kgw)
- Overall length: 510mm(20")



**72/11/12/1.8'** 



### Telescopic magnetic pick-up tool

#### 88902





- 7-section extension rod.
- Length: 135 mm 65 mm.
- Magnetic capacity: 3.5LBS (1.6kg).
- With pocket clip.



200/12.0/13.0/1.2'



### Demagnetizer / Magnetizer

#### 88601

• Size: 5cmx5cmx3cm



120/16.6/17.6/1.3' ∆ 140g

### 3-Claw pick-up tool

#### 88901



• Length:560mmL



150/15.1/16.1/1.2'

∆ 100g

#### Magnetic fender cover with 4 pockets

#### 88801



- Size:110cmx56cm
- Front cover made with PVC Sponge leather, backing is TR/BRUSH which does not damage or scratch any surface



- Top row includes STRONG magnets, which attract and stay on any metal surface easily.
- Easy to open and fold into compact size.
- The magnets are removable and replaceable before and after washing the fender cover.



17/16.7/17.7/4'



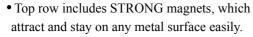
∆ 980g

### ■ Magnetic fender cover w/o pockets

#### 88802



- Size:110cmx56cm
- Front cover made with PVC Sponge leather, backing is TR/BRUSH which does not damage or scratch any surface



- Easy to open and fold into compact size.
- The magnets are removable and replaceable before and after washing the fender cover.



18/13.2/14.2/4'



#### ∆ 734g



### Magnetic fender cover w/o pockets

#### 88803



- Size:80cmx60cm
- Front cover made with PVC Sponge leather, backing is TR/BRUSH which does not damage or scratch any surface
- Top row includes STRONG magnets, which attract and stay on any metal surface easily.
- Easy to open and fold into compact size.
- The magnets are removable and replaceable before and after washing the fender cover.



18/10.2/11.2/4



∆'∆ 566g

### Magnetic fender cover w/o pockets

#### 88804



- Size:108cmx39cm
- Front cover made with PVC Sponge leather, backing is TR/BRUSH which does not damage or scratch any surface



- Top row includes STRONG magnets, which attract and stay on any metal surface easily.
- Easy to open and fold into compact size.
- The magnets are removable and replaceable before and after washing the fender cover.



18/11.9/12.9/4'





#### Seat cover

#### **G81**



- Size:140mm×70mm

50/17.3/18.3/1.5'







8-59

### Steel creeper

#### 9U0311

- Six wheels make the movements easily.
- The pillow is removable and replaceable.
- Size: 93×50×12 cm



- 1/8.0/9.0/1.8'
- ∆¹∆ 8kg

#### Steel car seat

#### 9U0312

- Size: 40 × 30 × 30 mm
- Tools not included.

1/7.5/8.5/1.4'

 $\Delta$  7.5kg

#### Steel car seat

#### 9U0313



- Strong and stable frames.
- Plastic corner for protection

1/6/6.7/1.08'

∆ 6kg



### Oil barrel pump

#### 887P01



- Two-piece telescopic suction tube fits 15 to 55 gallon drums.
- Tube adjusts from 19-9/32" to 35" (490mm to 890mm)
- Dispenses approximately 350 c.c. per stroke.
- 2" and 1-1/2" NPT bung nuts are equipped.



10/22.3/23.3/1.9'



∆ 2230g

### Oil bucket pump

#### 887P02



- For transferring of transmission, differential and heavier oils.
- Fits 25-50 lb (5-gallon pail) original refinery and 12" I.D. (300mm) clamp-on-carry bucket.
- Dispenses approximately 2 oz.(59 c.c.) per stroke.
- 5 ft. Oil-resistant hose.



4/13/14/4'



### Aluminum rotary pump

### 887P03





- 887P03 with aluminum alloy body, PPS rotor, PPS vane, FKM seal, spout and suction tube is plate.
- Application: gasoline, diesel fuel, kerosene, lubricant, ethyl alcohol.
- Capacity: 280 CC /rotation.



6/17.5/18.5/1.4'

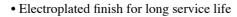
∆ 2915g



### Lever type grease gun

#### 887120





- Short-stroke "lever action" for easy use
- Uses 120 c.c. bulk grease.



40/24.2/25.9/1.6'



### Air grease gun combination kit

887



1pc Air grease gun

1pc 1/4" Quick release coupler

1pc 1/4" Hose fitting

1pc Metallic bend spout

1pc 9" High pressure nylon hose

1pc Manual operated gun head

#### **Features:**

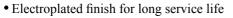
- 360° angle-free rotating & continuous flow.
- Where there is no air source or air hose can't reach, you can change the air gun head to the hand-operated gun head to proceed lubrication by manual operation.

		l	△△	
Part no.	Size	mm	g	Packing
88701	14 o.z./400 c.c.	380	2600	8/18.2/21.1/2'
88701L	16 o.z./500 c.c.	380	2775	8/19.6/22.7/2'

#### Lever type grease gun







- Short-stroke "lever action" for easy use
- Uses 150 c.c. bulk grease.



20/20.9/22.9/1.9



∆ 1150g



### Lever type grease gun

#### 88704 / 88704H9

- Electroplated finish for long service life
- Short-stroke "lever action" for easy use
- Vented head cap for easy filling
- Use standard 14 oz. grease cartridge
- 3-ways loading: Standard 14 oz. crtridge, pressure filler and bulk 400 c.c.
- 88704H9 Greasegun-lever type(400c.c) with flexible hose 9"



88704

20/23.0/26.9/2.3'

∆ 1.3kg

### Hand grease gun (400c.c.)

#### 887400P



- Chrome-plated finish for long service life.
- Pistol grip "lever action" for easy use.
- Vented head cap & positive lock for easy filling.
- Knurled thick wall barrel for secure grip.
- Uses standard 14oz. grease cartridge.
- Working Pressure: 4300 P.S.I.
- 100mm straight pipe with standard coupler.
- Pistol type with 4-1/2" metal spout.



8-63

### ■ Oil suction gun (500 c.c.)

#### 887A500



- Perfect for removing or replacing oil in engine/ transmissions/ differentials gearbox sumps/ crankcases, enables easy access to awkward locations.
- Ideal for vehicle & machinery use
- Knurled thick wall barrel for secure grip
- 10" Flexible hose
- Capacity Bulk:20 oz / 550 cc

20/17.0/18.0/1.4'



### Metal oil can (350ml)

#### 887C01



- Angled spout enables lubricating in difficult-to-access locations.
- Robust pump provides trickle feed supply.
- Material of container:steel
- Material of pump:copper
- Volume of container:350 ml

48/15.4/16.4/4.4'

∆ 316g

### Metal oil can with flexible spout (350 ml)

#### 887C02



- Flexible spout enables lubricating in difficult-to-access locations.
- Robust pump provides trickle feed supply.
- Material of container:steel
- Material of pump:copper
- Material of flex spout:PVC
- Volume of container:350 ml





48/16.2/17.2/4.4'



∆ 316g



### Plastic oil can with flexible spout (500 ml)

#### 887C03



- Flexible spout enables lubricating in difficult-to-access locations.
- Robust pump provides trickle feed supply.
- Material of container:HDPE
- Material of pump:copper
- Material of flex spout:PVC
- Volume of container:500 ml



40/9.9/10.9/4.4'



∆ 220g

#### Flexible metal funnel

#### 887D01



- - Galvanized steel funnel with metallic flexible spout with mesh filter.
  - For filling oil easily at inaccessible area.
  - Tube length: 370 mm



10/3.4/4.4/2.6'





### ■ 3/8" DR. Pry bar head

#### 68701



- This adapter gives you the versatility of a pry bar without the
- Turn any 3/8"drive ratchet or breaker bar into a rolling pry bar head, then just disassemble them and toss it into your tool box when



72/7.4/18.4/0.65'



∆ 100g



### Jumbo pry bar

#### **687**

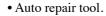


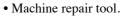
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Part no.	Length	g	packing
687780	780mm-30.7"	1085	20/20/21/0.8'
687910	910mm-36"	1830	12/22.0/23.0/0.5
687910A	910mm-36"	1830	12/22.0/23.0/0.59

### Free long pry bar

#### 68790 / 68755

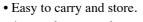


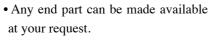
















Item no.	Slide	Min.	Max.	Weight	Moment	Packing
	Shank	Length	Length	(kg)	(kgf.m)	
68790	16 mm Hex	65.5 cm	90.5 cm	2.0	50	8/16.0/16.8/1.6'
		25.8"	35.6"			
68755	13 mm Hex	42.0 cm	55.5 cm	0.9	35	20/18.0/19.0/0.94'
		16.5"	21.8"			

### ■ 4pc Pry bar

#### 904U5



• Size: 8"; 12"; 18"; 24"

12/17.0/18.0/1.5'

∆¹∆ 1420g

### 4pc Jumbo heavy duty pry bar set

#### 904U2

- Extra large handles allow use of both hands for increased leverage
- Textured handle grips for secure hold
- Chrome Molybdenum steel shafts
- Hardened and tempered for maximum strength
- Heavy duty 5/8" bar stock
- Go-through shafts with steel end caps
- Sizes : 24" x 70°; 24" x 90°; 36" x 35°; 36" straight



2/17.5/18.5/1.4'



### Pry bar

#### **687**

687450

9	
687445	

#### • Material: S45C

	l		
Part no.	Length	g	Packing
687450	450mm (17.72")	923	40/26.5/27.5/0.7'
687445	445mm (17-1/2")	846	20/17.6/18.6/0.7'

### 4pc Pry bar set

#### 904U6



- 904U606 6";
- 904U612 12";
- 904U616 16";
- 904U620 20"
- **10/17/18/1.1'**
- ∆ 1700g

### Crowbar with crook beak

#### 687400H

- Bending tool
- Length: 400mm (16")
- Bended head, hexagonal shank



40/18.6/19.6/0.47



∆ d65g



### Brush Assortment

#### 938U1





- •For professional cleaning and deburring of cylinders, tubes, bushings, etc.
- •also for use on electric and air powered drills.
- •Contents:

12pc nylon brushes: Ø 8 - 9 - 10 - 11 - 12 - 13 - 14 - 15 - 16 - 17 - 18 - 19 mm

12pc steel brushes: Ø 8 - 9 - 10 - 11 - 12 - 13 - 14 - 15 - 16 - 17 - 18 - 19 mm

12pc brushes with brass coating: Ø 8 - 9 - 10 - 11 - 12 - 13 - 14 - 15 - 16 - 17 - 18 - 19 mm

1pc 1/4" handle with adapter and quick lock 1pc extension 150 mm

B

4/5.8/6.8/1'

∆ 1458g

### ■ Brass & nylon scrape brushes

### 9U3001

• Length: 75mm



**240/8.7/9.7/2'** 

∆ 36g

### ■ Wire brush

#### 9U3003



• Length : 220mm



120/7.7/8.7/2.5'





### ■ 13pc Extra long combination wrench set

#### 51313



Part no.	
	Content
755 8L24L	13-Extra long combination wrench
	8, 10, 11, 12, 13, 14, 15, 16, 17, 18
	19, 22, 24 mm

### **■** Extra long combination wrench

#### 755...L



	Size	ľ		
Part no.	mm	mm	Packing	g
75506L	6	128	1000/20/21/0.61	20
75507L	7	138	600/14.4/15.4/0.5	24
75508L	8	148	400/12.8/13.8/0.7	32
75509L	9	160	400/14/15/0.7'	35
75510L	10	167	400/16/17/0.7	40
75511L	11	186	200/12/13/0.57	60
75512L	12	196	200/16/17/0.59'	80
75513L	13	205	200/20/21/0.7	100
75514L	14	223	200/24/25/0.62'	120
75515L	15	233	100/14/15/0.42'	140
75516L	16	243	150/24/25/0.67	160
75517L	17	262	100/20/21/0.62'	200
75518L	18	272	100/22/23/0.62'	220
75519L	19	281	100/24/25/0.96'	240
75520L	20	301	50/14/15/0.63	280
75521L	21	301	50/15/16/0.63	300
75522L	22	319	50/16/17/0.82'	320
75523L	23	329	50/17 /18/0.82	340
75524L	24	339	40/18.8/19.8/0.77	470
75525L	25	358	40/19.5/20.5/0.77	488
75526L	26	358	40/21/22/0.77	525
75527L	27	388	30/21/22/0.97	700
75528L	28	388	30/21.5/22.5/0.97	717
75529L	29	404	30/23/24/0.97	767
75530L	30	404	30/24.6/25.6/0.97	820
75531L	31	431	20/22/23/0.69'	1100
75532L	32	431	20/22/23/0.69'	1100
75533L	33	471	20/22/23/0.76'	1100
75534L	34	471	20/24/25/0.76'	1200
75535L	35	510	10/12.5/13.5/0.58	1250
75536L	36	510	10/13/14/0.58'	1300

8-69







■908G5

P.1-26

Engine timing tool set for VW, Audi



**■928G1** 

P.1-27

Engine timing tool set - VW, Audi, Seat and Skoda



**■929G1** 

Timing setting tool set - VW, Audi, Seat and Skoda

P.1-27



■ 910G5

P.1-27 **Engine timing tool set for AUDI** 



■913G7

P.1-28

Engine timing tool set for VW / **AUDI** 



■902G18

Camshaft clamp for VW / AUDI

P.1-28

P.1-28

P.1-29



■904G15

**Engine timing tool set for VW** 



■907G13

Engine timing tool set for VW / **AUDI** 



■ 906G6

P.1-29

Engine timing tool set for VW



■ 904G16

P.1-29

Engine timing tool set for VW / **AUDI** 



■ 914G5

P.1-30

Engine timing tool set for VW / **AUDI** 



■ 908G13

Engine timing tool set for VW

P.1-30



■ 908G18

P.1-30

P.1-31

P.1-31

P.1-31

Engine timing tool set for VW, **AUDI, SKODA** 



■ 904G20

Engine timing tool set for VW, **AUDI** 



■ 906G10

Engine timing tool for VW/Skoda/ Seat



■ 910G9

Engine timing tool set for VAG 1.6 / 2.0TDI



■ 909G10

Engine timing tool set for VW, **AUDI, SKODA, SEAT** 

P.1-32



■ 904G21

Audi, Seat, Skoda

P.1-32 Timing chain test tool for VW,



■ 904G17

P.1-32 3-in-1 Bosch timing tool for VW



■ 9G0129

Crankshaft seal installer tool for VW / AUDI

P.1-33



■ 902G13

VW / AUDI

P.1-33 Camshaft central valve tool for



■ 9G1210

P.1-33 Camshaft adjusting socket for AUDI



■ 9G1216

**Camshaft alignment tool** 

P.1-34

P.1-34



■ 903G14

Camshaft alignment tool









■ 9G1209

P.1-34

Camshaft alignment plate for VW, **AUDI** 



■ 902G6 P.1-34

Camshaft alignment tool



■ 9G1206 P.1-35 Camshaft locking tool for VW



■903G10 P.1-35

Camshaft locking tool



■ 902G15

Engine timing tool set for VW / **AUDI** 

P.1-35

P.1-36



■ 902G16

Engine timing tool set for VW / **AUDI** 



■ 902G17 P.1-36

Engine timing tool set for VW / **AUDI** 



■902G19 P.1-36 **Engine timing tool set for AUDI** 

■ 9G0807 **Engine timing tool for VAG** 



P.1-36

P.1-37

P.1-37

P.1-37

■ 9G1302 AUDI crank locking pin



■ 9G1303

VW/AUDI crank locking pin



■ 9G1305

Crank locking pin for AUDI







■ 9G1306

P.1-37

Crank locking pin for VAG



■ 906G4 P.1-38 Timing tool set for VAG 2.0 TDI PD



■9G1208 Crankshaft locking tool



■9G1301 Crankshaft locking tool for VW



■ 902G2

Counter hold tool for VW / AUDI



P.1-38 ■ 9G0607 VW, AUDI belt pulley holder



P.1-38

P.1-38 Locking tool set for VW, Audi



■ 9G0616 P.1-43



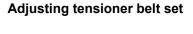
P.1-43



**9G0608** P.1-43 VW, SEAT belt pulley holder



■ 903G15



P.1-52

P.1-53

P.1-45



903G8 P.1-52

Belt tension locking pins VW / **AUDI / TDi PD engines** 



■ 902G4 Tensioner adjusting tool



**9G0704** 

**Reaction wrench** 









■ 9G0705

P.1-45

P.1-92

P.1-8

Reaction wrench (1/2" DR.)



**34914010V** 

M10S Cylinder head bolt tool



■ 904T5

4pc VW, AUDI ignition coils puller set



■ 9G3103 P.1-8 Ignition coil puller for VAG



■ 9G0208

P.1-57

Hose clamp pliers (for VW, AUDI 2.0)



**62530** P.1-56

Hose clamp pliers



**61930** P.1-109

Assembly tool for plastic oil drain plug (VAG group)



■ 348...T

1/2" DR. Drain nut socket bit (M16H)

P.1-109



**61925** 

Oil filter drain tool (VW)

P.1-110



■ 912G6 P.1-78

VW, AUDI Diesel & gas injection remover tool (TDI & FSI)



■ 9G0721

Fuel tank locking ring tool for VW/ AUDI



■ 9G0726

P.1-118

P.1-117

Fuel filter cover mounting tool for VW, Audi, Skoda and Seat







**9G0711** 

P.1-118

P.1-50

Fuel pump wrench



■ 902G25

Clutch centering disc



**907T6** P.3-29 Bush remover / installer for VW



917T3

Wheel hub and wheel bearing extraction : & installation set for VW-T5

P.3-29



**921T1** 

P.3-29

21pc Compact wheel hub/bearing kit, Ø 62mm,Ø 66mm, Ø 72mm



9T0205 P.3-66

VW Automatic transmissions socket



905T4 P.3-28

5pc VW, AUDI Rear suspension tool



62821

Audi ball joint tool



9T1481

P.3-50 Strut nut socket for VW/AUDI



P.3-51

P.3-9

904T1

Drive nut set



914B1

Brake calliper guidance thread repair set



905T11

P.3-67 VW Audi 7 Speed DSG clutch installer and remover



**9G4601** 

P.3-44

7-Speed DSG mechatronic unit

P.3-67

remover for VW, AUDI, SEAT







M271

■ 904G18

■ 9G1218

**Engine timing tool set for BENZ** 

P.1-24

P.1-24

Engine timing tool set for BENZ Engine timing tool set for BENZ M133, M270, M274





■ 903G21

M651

■ 915G6

P.1-26

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P.1-25

**674** 

**678** 

P.1-47

P.1-47

2pc T50 Alternator tools

■9G1803 / 9G1804 P.1-112

■ 9G1805 / 9G1806 P.1-112

Oil gauge

Transmission oil gauge

2pc M10 Alternator tools



Engine timing tool set for BENZ

■ 906G7 P.1-26

**Engine timing tool set for BENZ BENZ M156** 



■9G1215 P.1-25

**BENZ flywheel locking tool** 



■ 904G19

Engine timing tool set for



■ 9G1219 P.1-42

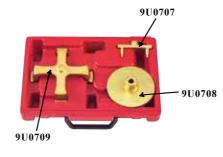
Crankshaft pulley holder tool for BENZ M272/M273



**■903U2** 

P.1-116

3pc Benz fuel tank cap wrench



■9G0725 P.1-116 Fuel tank lid remover/installer for

BENZ(W211/W203)/ BMW(E36/E46)



■9G0720 P.1-116 Fuel tank lid wrench for BENZ(W164/W166/W251)



■903G19 Diesel injector nozzle extractor set

P.1-75



**■903G17** 

P.1-77

Injector nozzle extractor with spindle



■909G5

for DB CDI-engines

P.1-78 Injector extractor with slide hammer



**■9G0121** 

33 Teeth socket diesel injection pump for Mercedes

P.1-79

P.1-79



■9G0122

Diesel pre-chamber collar nut socket for Mercedes



**61935** 

P.1-105

Oil Filter Wrench for Mercedes Dodge Jeep



62820

P.3-44

1/2" DR. BENZ (W163/W164) Pin wrench socket



902B1

P.3-25

2pc Wheel stud alignment guide tool set



902B2

P.3-26

2pc Wheel stud alignment guide tool set





8pc Wheel stud alignment guide

Wheel nut socket for Mercedes-Benz

Spring compressor for Mercedes



908B3

9T0206

905T3

tool set

P.3-26

P.3-21

P.3-49

BENZ Bush remover / installer

**9T0307** 

P.3-26 **905T7** 

> 5pc 1/2"DR. Drive tooth socket for Mercedes



9T0311



9T1401

Professional wheel bearing tool



9T0304 P.3-51

BENZ W220 Shock absorber



P.3-27

BENZ Axles wheel bearing extractor / installer



P.3-51

BENZ (W203) Strut nut socket



9T1402 P.3-51

BENZ (W220) Strut nut socket



P.3-43

P.3-44

P.3-30



905T10

Ball-joint installer/ remover for BENZ (W220/W211/W230)



**927T1** 

set for BENZ





9T1407

P.4-1

P.4-2

P.4-3

BENZ Axle nut socket 95mm



9T1408

BENZ Rear axle nut socket 105-125 mm



9T1424

BENZ & MAN Clamp nut socket 56 mm



9T1425

**BENZ & MAN Clamp nut socket** 60 mm



9T1426 P.4-2 BENZ & MAN Rear axle nut



9T1427

socket 80-95 mm

Benz & Man Rear axle nut socket 95-115 mm

P.4-2

P.4-3



6281842

3/4" DR. BENZ & MAN Pitman arm puller 42mm







■905G1

P.1-18

BMW (M52, M54, M56) Timing tool kit



**■907G6** 

P.1-19

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P.1-19

Timing tool kit (BMW MINI)



■ 913G6

Engine timing tool set for BMW M41, M51, M47, M57



■ 905G17

Engin timing tool set for BMW M47



■ 904G11

P.1-20

Diesel engine timing tool set for **BMW N47/N47S** 



■ 908**G**9

P.1-20

Engine timing tool set for BMW N42, N46, N46T



■ 918G3

P.1-20

Engine timing tool set for BMW N42/N46



■ 906G5

Engine timing tool set for BMW N40/N45/N45T

P.1-21



■ 912G5

P.1-21

Engine timing tool set for BMW N51/N52/N53/N54



■ 905G19

P.1-21

Engine timing tool set for BMW N62 / N73



■ 912G12

P.1-22

Engine timing tool set for BMW M60, M62 (VANOS)



■ 906G8

P.1-22

Engine timing tool set for BMW





Engine timing tool set for BMW

■ 908G15

P.1-22

**9G1220** 

holder tool for BMW



■ 908G16

P.1-23

Engine timing tool set for BMW N13/N18



■ 910G8

Petrol engine twin camshaft





Crankshaft harmonic balancer

P.1-41



■ 904G7

Diesel injection pump puller (BMW)



P.1-23

setting tool kit For BMW MINI / CITROEN / PEUGEOT



■ 905G12

P.1-23

Engine timing tool set for BMW, Mini, Citroen, Peugeot

P.1-80



■ 9G1501

(BMW)

P.1-80 Diesel injection pump puller

**674** 

P.1-47 2pc M10 Alternator tools



■ 9G0405

P.1-88

Valve pressure spring installer/ remover for BMW N20, N55



■ 9G0406

P.1-88

P.1-93

P.1-113

Valve pressure spring installer/ remover for BMW N51, N52



■ 54615012B

1/2" DR. 150mm Cylinder head bolt tool (E12)



**9G0717** 

Oil cooler line pliers







■ 9G0127

P.1-113

Fuel injector remover/installer tool for BMW N55



■ 9G0128

P.1-113

Fuel injector remover/installer tool for BMW N20/N55



■ 9G0130

P.1-114

Fuel injector remover/installer tool for BMW N63



■9G0725

P.1-116

Fuel tank lid remover/installer for BENZ(W211/W203)/ BMW(E36/E46)



■ 9G0722

P.1-117

Fuel tank locking ring tool for BMW/MINI/PORSCHE



■9G0718

P.1-120

BMW line disconnect tool



■9G0719

P.1-120 **BMW** line disconnect tool



■908G11

Diesel injectors remover for BMW

P.1-76



■ 905G15

P.1-24

Fly wheel holder tool for BMW



903T5

P.3-27

BENZ (W203) Strut nut socket



902T2

P.3-66

Camber adjustment tool for **BMW** rear axles





■ 905G16



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P.1-12

P.1-12

P.1-12

Engine timing tools set for VAUXHALL/ **OPEL diesel 1.9 CDTI** 



■ 920G2

Engine timing Tool set for Opel Vauxhall



■ 907G17

Engine timing tool set for Vauxhall/ Opel



■ 907G18

Engine timing tool set for Vauxhall/ Opel



**■904G5** 

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P.1-51

Timing tool kit (for GM 1.3 CDTI diesel engine)



■908G12

Diesel engine timing tool set for RENAULT, NISSAN, OPEL



**■906G9** 

Puller, Harmonic damper pulley (Chrysler, GM)



**■9G0802** 

Belt tensioning adjuster



■ 9G0803

Belt tensioning adjuster



**88442** 

P.1-70

P.1-51

10pc Deluxe noid lite / IAC test kit plus one fibre optic noid lite extension



■ 907G12

P.1-46

Power steering pump pulley kit



**63303** 

P.1-119

Diesel injection priming tool











**908T6** 

Rear suspension tool for GM **VECTRA** 



**908T7** 

P.3-28

Rear axle bush installation/ removal tool set for Vauxhall / **Opel Vectra** 



65014

P.3-10

1/2"DR. Pentagon socket 14mm





■905G8

P.1-15

Timing locking tools for FORD



**922G2** 

P.1-16

Engine timing tool set - Ford, Mazda



■911G6

P.1-16

Engine timing tool set for **FORD** 



■916G5

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Engine timing tool set for **FORD** 

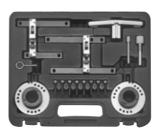




■916**G**6

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Engine timing tool set for Ford 1.0 Ecoboost



■905G22

2.0 Ecoboost

P.1-17 Engine timing tool set for Ford



■903G11

FORD flywheel locking tool

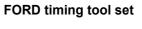


■ 9G1211

Camshaft setting bar & TDC



■904G6





**■907G12** 

Power steering pump pulley kit



**63302** 

P.1-17

P.1-18

Fuel transfer tool



**61927** 

Oil filter wrench -27mm



905T5

P.1-18

P.1-46

P.1-119

P.1-103

P.3-27 Sub frame bush remover (Ford Mondeo)



913T2

P.3-30

Wheel hub and wheel bearing extraction & installation set for Ford / Volvo / Mazda







■ 934G1

P.1-40

Engine timing tool set for FIAT



■ 907G16

P.1-40

Engine timing tool set for FIAT



■ 910G7

P.1-41

Engine timing tool set for Fiat 1.2 8V & 1.4 16V



■ 903G23

P.1-41

**Engine timing tool set for FIAT** 





**■917G1** 

P.1-13

**Engine timing tool set - Renault** 



■905G20

P.1-14 ■903G5



Engine timing tool set for Renault

■908G12

P.1-14

P.1-13

Diesel engine timing tool set for RENAULT, NISSAN, OPEL



■911G5

Diesel engine locking tool set for Opel / Renault / Nissan



■ 902G5

**Timing locking tools** 



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P.1-117

Renault timing kit (DCI engines)



■907G15

Engine timing tool set for **RENAULT 1.8 / 2.0 16V** 



**■9G0727** 

Fuel Filter Wrench 108mm



P.1-14 : 65019

P.3-10

1/2"DR. Pentagon socket 14mm



65019

920T2

P.3-30

Professional wheel bearing tool set For Peugeot / Citroen / Renault









■935G1

■911G7

P.1-29

■904G13

P.1-74 **9T1482** 

P.3-45

Engine timing tool set - Peugeot, 4pcs Injection nozzle socket

Citroen

Lower ball joint socket for Peugeot/ Citroen







P.1-117

Engine timing tool set for CITROEN / PEUGEOT







Flywheel holding tool

65019

P.3-10 1/2"DR. Pentagon socket 19mm



■ 910G3

P.1-76

P.1-11

Diesel injector nozzle extractor set (PSA HDI engines)



**920T2** 

Professional wheel bearing tool set For Peugeot / Citroen / Renault



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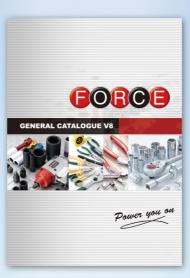
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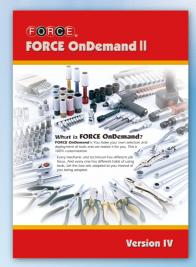
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9K0103         4-13         9T0317         3-66         9T1433         4-9         9U0201         8-18         9Y0161         6-5           9M0101         5-23         9T0401         3-23         9T1435         4-9         9U0202         8-19         9Y0161         6-11           9M0105         5-24         9T04012         3-24         9T1436         4-10         9U0204         8-19         9Y0181         6-13           9M0106         5-14         9T0403         3-24         9T1438         4-11         9U0204         8-19         9Y0183         6-1           9M0107         5-8         9T0405         4-21         9T1440         4-13         9U0206         8-19         9Y0183         6-1           9M0107         5-8         9T0407         3-25         9T1441         4-14         9U0301         8-19         9Y0183         6-2           9M0201         5-31         9T0407         3-55         9T1442         4-14         9U0311         8-61         9Y0187         6-3           9M0202         5-30         9T0501         3-55         9T1443         4-14         9U0311         8-61         9Y0187         6-3           9M0302         5-10	9K0101	4-12	9T0311	3-27	9T1431	4-8	9U0102	8-43	9Y0143B	6-8
9N10101         5.23         9T0401         3.23         9T1435         4.9         9U0202         8.19         9Y0161         6-13           9M0102         5.24         9T04010         3.24         9T1436         4.10         9U0203         8.19         9Y0161         6-13           9M0106         5.13         9T0403         3.24         9T1437         4.10         9U0206         8.19         9Y0182         6-1           9M0107         5.8         9T0405         4.21         9T1439         4.12         9U0201         8.19         9Y0183         6-2           9M0108         5.31         9T0405         4.21         9T1440         4.13         9U0201         8.19         9Y0183         6-2           9M0202         5.31         9T0407         3.25         9T1441         4.14         9U0301         3.33         9Y0186         6-2           9M0202         5.31         9T0503         3.57         9T1445         4.15         9U0312         8-61         9Y0201         6-2           9M0207         5.30         9T0503         3.57         9T1446         4.15         9U031         8-61         9Y0201         6-12           9M0303         5.10	9K0102	4-13	9Т0316	3-64	9T1432	4-8	9U0201	8-18	9Y0145	6-13
9M0102         5-24         9T0401D         3-24         9T1436         4-10         9U0203         8-19         9Y0161         6-13           9M0105         5-13         9T0402         3-24         9T1437         4-10         9U0204         8-19         9Y0181         6-3           9M0107         5-8         9T0405         4-21         9T1439         4-12         9U0206         8-19         9Y0183         6-1           9M0108         5-31         9T0405         4-21         9T1449         4-12         9U0201         8-19         9Y0185         6-2           9M0201         5-31         9T0407         3-25         9T1441         4-14         9U0311         8-61         9Y0185         6-2           9M0202         5-31         9T0501         3-55         9T1442         4-14         9U0311         8-61         9Y0186         6-2           9M0202         5-30         9T0503         3-57         9T1442         4-14         9U0311         8-61         9Y0186         6-2           9M0202         5-10         9T0503         3-57         9T1446         4-15         9U0311         8-13         9Y0202         6-12           9M0302         5-10	9K0103	4-13	9T0317	3-66	9T1433	4-9	9U0201A	8-18	9Y0146	6-5
9M0105         5-13         9T0402         3-24         9T1437         4-10         9U0204         8-19         9Y0181         6-3           9M0106         5-14         9T0403         3-24         9T1438         4-11         9U0206         8-19         9Y0182         6-1           9M0107         5-8         9T0405         4-21         9T1440         4-13         9U0201         8-19         9Y0183         6-1           9M0201         5-31         9T0407         3-25         9T1441         4-14         9U0301         3-33         9Y0186         6-2           9M0202         5-31         9T0501         3-55         9T1442         4-14         9U0311         8-61         9Y0183         6-2           9M0203         5-23         9T0503         3-57         9T14445         4-15         9U0313         8-61         9Y0188         6-2           9M0303         5-10         9T0701         3-35         9T1445         4-15         9U0313         8-61         9Y0202         6-12           9M0303         5-10         9T0701         3-45         9T1446         4-16         9U0701         8-13         9Y0302         6-10           9M0303         5-27	9M0101	5-23	9T0401	3-23	9Т1435	4-9	9U0202	8-19	9Y0151	6-11
9M0106         5-14         9T0403         3-24         9T1438         4-11         9U0205         8-19         9Y0182         6-1           9M0107         5-8         9T0408         4-21         9T1439         4-12         9U0206         8-19         9Y0183         6-1           9M0101         5-31         9T0405         3-25         9T1441         4-14         9U0301         3-33         9Y0186         6-2           9M0202         5-31         9T0501         3-55         9T1442         4-14         9U0311         8-61         9Y0187         6-3           9M0202         5-31         9T0502         3-56         9T1442         4-14         9U0313         8-61         9Y0188         6-2           9M0207         5-30         9T0503         3-57         9T1445         4-15         9U0313         8-61         9Y0781         6-12           9M0301         5-10         9T0505         3-57         9T1446         4-15         9U0311         8-61         9Y0202         6-12           9M0303         5-10         9T0701         3-45         9T1447         4-15         9U0401         8-13         9Y0301         6-10           9M0503         5-27	9M0102	5-24	9T0401D	3-24	9T1436	4-10	9U0203	8-19	9Y0161	6-13
9M0107         5-8         9T0405         4-21         9T1439         4-12         9U0206         8-19         9Y0183         6-1           9M0108         5-31         9T0405B         4-21         9T1440         4-13         9U0221         8-19         9Y0185         6-2           9M0201         5-31         9T0407         3-25         9T1441         4-14         9U0301         3-33         9Y0186         6-2           9M0203         5-23         9T0502         3-56         9T1443         4-14         9U0312         8-61         9Y0188         6-2           9M0203         5-23         9T0505         3-57         9T1443         4-14         9U0313         8-61         9Y0201         6-12           9M0301         5-10         9T0505         3-57         9T1446         4-15         9U0401         8-54         9Y0202         6-12           9M0303         5-10         9T0701         3-45         9T1447         4-16         9U0401         8-52         9Y0203         6-13           9M0503         5-27         9T1401         3-51         9T1448         4-16         9U0701         6-13         9Y0303         6-10           9M0503         5-27	9M0105	5-13	9Т0402	3-24	9T1437	4-10	9U0204	8-19	9Y0181	6-3
9M0108         5-31         9T0405B         4-21         9T1440         4-13         9U0221         8-19         9Y0185         6-2           9M0201         5-31         9T0407         3-25         9T1441         4-14         9U0301         3-33         9Y0186         6-2           9M0203         5-30         9T0501         3-55         9T1442         4-14         9U0311         8-61         9Y0187         6-3           9M0207         5-30         9T0503         3-57         9T1445         4-15         9U0313         8-61         9Y0201         6-2           9M0301         5-10         9T0505         3-57         9T1446         4-15         9U0301         8-61         9Y0202         6-12           9M0302         5-10         9T0701         3-45         9T1446         4-15         9U0401         8-54         9Y0202         6-12           9M0303         5-10         9T0701         3-45         9T1446         4-16         9U0701         6-13         9Y0301         6-10           9M0503         5-27         9T1401         3-51         9T1448         4-16         9U0701         8-13         9Y0302         6-10           9M1501         5-7	9M0106	5-14	9T0403	3-24	9T1438	4-11	9U0205	8-19	9Y0182	6-1
9M0201         5-31         9T0407         3-25         9T1441         4-14         9U0301         3-33         9Y0186         6-2           9M0202         5-31         9T0501         3-55         9T1442         4-14         9U0311         8-61         9Y0187         6-3           9M0207         5-30         9T0502         3-56         9T1443         4-14         9U0313         8-61         9Y0202         6-12           9M0207         5-30         9T0505         3-57         9T1446         4-15         9U0401         8-54         9Y0202         6-12           9M0302         5-10         9T0701         3-45         9T1446         4-15         9U0401         8-54         9Y0202         6-13           9M0303         5-10         9T0801         3-46         9T1448         4-16         9U0701         6-13         9Y0301         6-10           9M0503         5-27         9T1402         3-51         9T1480         4-16         9U0701         8-13         9Y0302         6-10           9M1501         5-7         9T1403         6-12         9T1481         3-50         9U0706         1-10         9Y0303         6-11           9M1602         5-18	9M0107	5-8	9T0405	4-21	9T1439	4-12	9U0206	8-19	9Y0183	6-1
9M0202         5-31         9T0501         3-55         9T1442         4-14         9U0311         8-61         9Y0187         6-3           9M0203         5-23         9T0502         3-56         9T1443         4-14         9U0312         8-61         9Y0188         6-2           9M0207         5-30         9T0503         3-57         9T1445         4-15         9U03013         8-61         9Y0201         6-12           9M0301         5-10         9T0505         3-57         9T1446         4-15         9U0401         8-54         9Y0202         6-12           9M0303         5-10         9T0801         3-45         9T1447         4-16         9U0701         6-13         9Y0301         6-10           9M0503         5-27         9T1401         3-51         9T1449         4-16         9U0701         8-13         9Y0302         6-10           9M1501         5-7         9T1402         3-51         9T1449         4-16         9U0702         1-62         9Y0303         6-10           9M1501         5-7         9T1403         6-12         9T1481         3-50         9U0706         1-10         9V0305         6-11           9M1601         5-18	9M0108	5-31	9T0405B	4-21	9T1440	4-13	9U0221	8-19	9Y0185	6-2
9M0203         5-23         9T0502         3-56         9T1443         4-14         9U0312         8-61         9Y0188         6-2           9M0207         5-30         9T0503         3-57         9T1445         4-15         9U0313         8-61         9Y0201         6-12           9M0301         5-10         9T0505         3-57         9T1446         4-15         9U0401         8-54         9Y0202         6-12           9M0302         5-10         9T0701         3-45         9T1447         4-15         9U0501         8-52         9Y0203         6-13           9M0303         5-10         9T0701         3-46         9T1448         4-16         9U0701         8-13         9Y0301         6-10           9M0503         5-27         9T1402         3-51         9T1450         3-68         9U0702         1-62         9Y0305         6-11           9M1501         5-7         9T1403         6-12         9T1481         3-50         9U0706         1-106         9Y0305         6-11           9M1601         5-18         9T1405         4-1         9T3403         3-50         9U0711         1-107         9Y0306         6-11           9M1602         5-18<	9M0201	5-31	9T0407	3-25	9T1441	4-14	9U0301	3-33	9Y0186	6-2
9M0207         5-30         9T0503         3-57         9T1445         4-15         9U0313         8-61         9Y0201         6-12           9M0301         5-10         9T0505         3-57         9T1446         4-15         9U0401         8-54         9Y0202         6-12           9M0302         5-10         9T0701         3-45         9T1447         4-15         9U0501         8-52         9Y0203         6-13           9M0303         5-10         9T0801         3-46         9T1448         4-16         9U0701         6-13         9Y0301         6-10           9M0505         5-27         9T1402         3-51         9T1449         4-16         9U0701         8-13         9Y0302         6-10           9M1501         5-7         9T1403         6-12         9T1481         3-50         9U0706         1-16e         9Y0305         6-11           9M1601         5-18         9T1404         3-42         9T1482         3-45         9U0710         1-107         9Y0306         6-11           9M1603         5-19         9T1406         4-1         9T3606         3-60         9U0901         8-33         K64706         7-14           9M1603         5-19	9M0202	5-31	9T0501	3-55	9T1442	4-14	9U0311	8-61	9Y0187	6-3
9M0301         5-10         9T0505         3-57         9T1446         4-15         9U0401         8-54         9Y0202         6-12           9M0302         5-10         9T0701         3-45         9T1447         4-15         9U0501         8-52         9Y0203         6-13           9M0303         5-10         9T0801         3-46         9T1448         4-16         9U0701         6-13         9Y0301         6-10           9M0505         5-27         9T1402         3-51         9T1450         3-68         9U0702         1-62         9Y0303         6-10           9M1501         5-7         9T1403         6-12         9T1481         3-50         9U0706         1-106         9Y0305         6-11           9M1601         5-18         9T1405         4-1         9T3403         3-50         9U0710         1-107         9Y0306         6-11           9M1602         5-18         9T1405         4-1         9T36066         3-60         9U0901         8-33         K60706         7-14           9M1603         5-19         9T1407         4-1         9T3606P         3-61         9U0902         8-33         K64706S         7-14           9M1605         5-1	9M0203	5-23	9T0502	3-56	9T1443	4-14	9U0312	8-61	9Y0188	6-2
9M0302         5-10         9T0701         3-45         9T1447         4-15         9U0501         8-52         9Y0203         6-13           9M0303         5-10         9T0801         3-46         9T1448         4-16         9U0701         6-13         9Y0301         6-10           9M0503         5-27         9T1401         3-51         9T1450         3-68         9U0702         1-62         9Y0303         6-10           9M1501         5-7         9T1403         6-12         9T1481         3-50         9U0706         1-106         9Y0305         6-11           9M1601         5-18         9T1405         4-1         9T3403         3-50         9U0710         1-107         9Y0306         6-11           9M1602         5-18         9T1405         4-1         9T3403         3-50         9U0711         1-107         G81         8-60           9M1603         5-19         9T1406         4-1         9T3606M         3-61         9U0901         8-33         K3021         1-1           9M1604         5-19         9T1407         4-1         9T3606M         3-61         9U1001         8-29         K64706S         7-14           9M1606         5-19 <td>9M0207</td> <td>5-30</td> <td>9T0503</td> <td>3-57</td> <td>9T1445</td> <td>4-15</td> <td>9U0313</td> <td>8-61</td> <td>9Y0201</td> <td>6-12</td>	9M0207	5-30	9T0503	3-57	9T1445	4-15	9U0313	8-61	9Y0201	6-12
9M0303         5-10         9T0801         3-46         9T1448         4-16         9U0701         6-13         9Y0301         6-10           9M0503         5-27         9T1401         3-51         9T1449         4-16         9U0701         8-13         9Y0302         6-10           9M0505         5-27         9T1402         3-51         9T1450         3-68         9U0702         1-62         9Y0303         6-10           9M1501         5-7         9T1403         6-12         9T1481         3-50         9U0706         1-106         9Y0305         6-11           9M1601         5-18         9T1404         3-42         9T1482         3-45         9U0710         1-107         9Y0306         6-11           9M1602         5-18         9T1405         4-1         9T3606         3-60         9U0711         1-107         G81         8-60           9M1603         5-19         9T1406         4-1         9T3606         3-60         9U0901         8-33         K3021         1-1           9M1604         5-19         9T1408         4-2         9T3606         3-61         9U1001         8-29         K647068         7-14           9M1605         5-19	9M0301	5-10	9T0505	3-57	9T1446	4-15	9U0401	8-54	9Y0202	6-12
9M0503         5-27         9T1401         3-51         9T1449         4-16         9U0701         8-13         9Y0302         6-10           9M0505         5-27         9T1402         3-51         9T1450         3-68         9U0702         1-62         9Y0303         6-10           9M1501         5-7         9T1403         6-12         9T1481         3-50         9U0706         1-106         9Y0305         6-11           9M1601         5-18         9T1404         3-42         9T1482         3-45         9U0710         1-107         9Y0306         6-11           9M1602         5-18         9T1405         4-1         9T3606         3-60         9U0901         8-33         K3021         1-1           9M1603         5-19         9T1406         4-1         9T3606M         3-61         9U0901         8-33         K64706         7-14           9M1604         5-19         9T1408         4-2         9T3606M         3-61         9U1001         8-29         K64706S         7-14           9M1606         5-19         9T1409         4-4         9T3607         3-61         9U1001         8-28         K64706S         7-14           9M1607         5-20 <td>9M0302</td> <td>5-10</td> <td>9T0701</td> <td>3-45</td> <td>9T1447</td> <td>4-15</td> <td>9U0501</td> <td>8-52</td> <td>9Y0203</td> <td>6-13</td>	9M0302	5-10	9T0701	3-45	9T1447	4-15	9U0501	8-52	9Y0203	6-13
9M0505         5-27         9T1402         3-51         9T1450         3-68         9U0702         1-62         9Y0303         6-10           9M1501         5-7         9T1403         6-12         9T1481         3-50         9U0706         1-106         9Y0305         6-11           9M1601         5-18         9T1404         3-42         9T1482         3-45         9U0710         1-107         9Y0306         6-11           9M1602         5-18         9T1405         4-1         9T3403         3-50         9U0711         1-107         G81         8-60           9M1603         5-19         9T1406         4-1         9T3606         3-60         9U0901         8-33         K3021         1-1           9M1604         5-19         9T1407         4-1         9T3606M         3-61         9U1001         8-29         K64706S         7-14           9M1605         5-19         9T1409         4-4         9T3607         3-61         9U1001         8-29         K64706S         7-14           9M1607         5-20         9T1410         4-4         9T3608         3-62         9U1101         8-28         K64706S         7-14           9M2301         5-29	9M0303	5-10	9T0801	3-46	9T1448	4-16	9U0701	6-13	9Y0301	6-10
9M1501         5-7         9T1403         6-12         9T1481         3-50         9U0706         1-106         9Y0305         6-11           9M1601         5-18         9T1404         3-42         9T1482         3-45         9U0710         1-107         9Y0306         6-11           9M1602         5-18         9T1405         4-1         9T3403         3-50         9U0711         1-107         G81         8-60           9M1603         5-19         9T1406         4-1         9T3606         3-60         9U0901         8-33         K3021         1-1           9M1604         5-19         9T1407         4-1         9T3606M         3-61         9U0902         8-33         K64706         7-14           9M1605         5-19         9T1408         4-2         9T3606P         3-61         9U1001         8-29         K64706S         7-14           9M1606         5-19         9T1410         4-4         9T3607         3-61         9U1101         8-28         K64706S         7-14           9M1607         5-20         9T1411         4-4         9T3608         3-62         9U1102         8-28         K909G4         1-82           9M2301         5-29	9M0503	5-27	9T1401	3-51	9T1449	4-16	9U0701	8-13	9Y0302	6-10
9M1601         5-18         9T1404         3-42         9T1482         3-45         9U0710         1-107         9Y0306         6-11           9M1602         5-18         9T1405         4-1         9T3403         3-50         9U0711         1-107         G81         8-60           9M1603         5-19         9T1406         4-1         9T3606         3-60         9U0901         8-33         K3021         1-1           9M1604         5-19         9T1407         4-1         9T3606M         3-61         9U0902         8-33         K64706         7-14           9M1605         5-19         9T1408         4-2         9T3606P         3-61         9U1001         8-29         K64706S         7-14           9M1606         5-19         9T1409         4-4         9T3607         3-61         9U101         8-28         K64706S         7-14           9M1607         5-20         9T1410         4-4         9T3609         3-59         9U2101         8-28         K64706         7-14           9M2301         5-29         9T1411         4-4         9T3609         3-59         9U2101         5-28         K909G4         4-25           9M2301         5-28	9M0505	5-27	9T1402	3-51	9T1450	3-68	9U0702	1-62	9Y0303	6-10
9M1602         5-18         9T1405         4-1         9T3403         3-50         9U0711         1-107         G81         8-60           9M1603         5-19         9T1406         4-1         9T3606         3-60         9U0901         8-33         K3021         1-1           9M1604         5-19         9T1407         4-1         9T3606M         3-61         9U1001         8-23         K64706S         7-14           9M1605         5-19         9T1408         4-2         9T3606P         3-61         9U1001         8-29         K64706S         7-14           9M1606         5-19         9T1409         4-4         9T3607         3-61         9U1001         8-28         K64706S         7-14           9M1607         5-20         9T1410         4-4         9T3608         3-62         9U1101         8-28         K64706S         7-14           9M1607         5-20         9T1411         4-4         9T3608         3-62         9U1010         8-28         K909G4         4-25           9M2301         5-29         9T1411         4-4         9T3609         3-59         9U2101         5-28         K909G4         4-25           9M23401         5-30	9M1501	5-7	9T1403	6-12	9T1481	3-50	9U0706	1-106	9Y0305	6-11
9M1603         5-19         9T1406         4-1         9T3606         3-60         9U0901         8-33         K3021         1-1           9M1604         5-19         9T1407         4-1         9T3606M         3-61         9U0902         8-33         K64706         7-14           9M1605         5-19         9T1408         4-2         9T3606P         3-61         9U1001         8-29         K64706S         7-14           9M1606         5-19         9T1409         4-4         9T3607         3-61         9U1101         8-28         K64706S         7-14           9M1607         5-20         9T1410         4-4         9T3608         3-62         9U1102         8-28         K909G4         1-82           9M2301         5-29         9T1411         4-4         9T3609         3-59         9U2101         5-28         K909G4         4-25           9M2904         5-28         9T1412         4-5         9T3610         3-60         9U3001         8-69         K913G5         1-1           9M3401         5-30         9T1413         4-16         9T3610         4-28         9U3002         2-4         K913M1         5-25           9T0101         8-41	9M1601	5-18	9T1404	3-42	9T1482	3-45	9U0710	1-107	9Y0306	6-11
9M1604         5-19         9T1407         4-1         9T3606M         3-61         9U0902         8-33         K64706         7-14           9M1605         5-19         9T1408         4-2         9T3606P         3-61         9U1001         8-29         K64706S         7-14           9M1606         5-19         9T1409         4-4         9T3607         3-61         9U1101         8-28         K64708         7-14           9M1607         5-20         9T1410         4-4         9T3608         3-62         9U1102         8-28         K909G4         1-82           9M2301         5-29         9T1411         4-4         9T3609         3-59         9U2101         5-28         K909G4         4-25           9M2904         5-28         9T1412         4-5         9T3610         3-60         9U3001         8-69         K913G5         1-1           9M3401         5-30         9T1413         4-16         9T3610         4-28         9U3002         2-4         K913M1         5-25           9T0101         8-41         9T1414         4-17         9T3611         3-60         9U3003         8-69         T31010         1-1           9T0103         8-41	9M1602	5-18	9T1405	4-1	9T3403	3-50	9U0711	1-107	G81	8-60
9M1605         5-19         9T1408         4-2         9T3606P         3-61         9U1001         8-29         K64706S         7-14           9M1606         5-19         9T1409         4-4         9T3607         3-61         9U1101         8-28         K64708         7-14           9M1607         5-20         9T1410         4-4         9T3608         3-62         9U1102         8-28         K909G4         1-82           9M2301         5-29         9T1411         4-4         9T3609         3-59         9U2101         5-28         K909G4         4-25           9M2904         5-28         9T1412         4-5         9T3610         3-60         9U3001         8-69         K913G5         1-1           9M3401         5-30         9T1413         4-16         9T3610         4-28         9U3002         2-4         K913M1         5-25           9T0101         8-41         9T1414         4-17         9T3611         3-60         9U3003         8-69         T31010         1-1           9T0103         8-41         9T1416         4-7         9T3612         3-62         9U39         3-69         T50918         8-12           9T0104         8-41	9M1603	5-19	9T1406	4-1	9Т3606	3-60	9U0901	8-33	K3021	1-1
9M1606         5-19         9T1409         4-4         9T3607         3-61         9U1101         8-28         K64708         7-14           9M1607         5-20         9T1410         4-4         9T3608         3-62         9U1102         8-28         K909G4         1-82           9M2301         5-29         9T1411         4-4         9T3609         3-59         9U2101         5-28         K909G4         4-25           9M2904         5-28         9T1412         4-5         9T3610         3-60         9U3001         8-69         K913G5         1-1           9M3401         5-30         9T1413         4-16         9T3610         4-28         9U3002         2-4         K913M1         5-25           9T0101         8-41         9T1414         4-17         9T3611         3-60         9U3003         8-69         T31010         1-1           9T0103         8-41         9T1415         4-17         9T3611         4-28         9U3903         8-69         T50918         8-12           9T0104         8-41         9T1416         4-7         9T3612         3-62         9U39         4-22         T905M2         5-21           9T0105         8-42	9M1604	5-19	9T1407	4-1	9T3606M	3-61	9U0902	8-33	K64706	7-14
9M1607         5-20         9T1410         4-4         9T3608         3-62         9U1102         8-28         K909G4         1-82           9M2301         5-29         9T1411         4-4         9T3609         3-59         9U2101         5-28         K909G4         4-25           9M2904         5-28         9T1412         4-5         9T3610         3-60         9U3001         8-69         K913G5         1-1           9M3401         5-30         9T1413         4-16         9T3610         4-28         9U3002         2-4         K913M1         5-25           9T0101         8-41         9T1414         4-17         9T3611         3-60         9U3003         8-69         T31010         1-1           9T0103         8-41         9T1415         4-17         9T3611         4-28         9U39         3-69         T50918         8-12           9T0104         8-41         9T1416         4-7         9T3612         3-62         9U39         4-22         T905M2         5-21           9T0105         8-42         9T1417         4-6         9T3621         3-58         9U3921         3-69           9T0106         3-6         9T1418         4-7	9M1605	5-19	9T1408	4-2	9T3606P	3-61	9U1001	8-29	K64706S	7-14
9M2301         5-29         9T1411         4-4         9T3609         3-59         9U2101         5-28         K909G4         4-25           9M2904         5-28         9T1412         4-5         9T3610         3-60         9U3001         8-69         K913G5         1-1           9M3401         5-30         9T1413         4-16         9T3610         4-28         9U3002         2-4         K913M1         5-25           9T0101         8-41         9T1414         4-17         9T3611         3-60         9U3003         8-69         T31010         1-1           9T0103         8-41         9T1415         4-17         9T3611         4-28         9U39         3-69         T50918         8-12           9T0104         8-41         9T1416         4-7         9T3612         3-62         9U39         4-22         T905M2         5-21           9T0105         8-42         9T1417         4-6         9T3621         3-58         9U3921         3-69           9T0106         3-6         9T1418         4-7         9T3622         3-58         9U4501         8-20           9T0201         3-57         9T1420         4-6         9T3624         3-59	9M1606	5-19	9T1409	4-4	9T3607	3-61	9U1101	8-28	K64708	7-14
9M2904         5-28         9T1412         4-5         9T3610         3-60         9U3001         8-69         K913G5         1-1           9M3401         5-30         9T1413         4-16         9T3610         4-28         9U3002         2-4         K913M1         5-25           9T0101         8-41         9T1414         4-17         9T3611         3-60         9U3003         8-69         T31010         1-1           9T0103         8-41         9T1415         4-17         9T3611         4-28         9U39         3-69         T50918         8-12           9T0104         8-41         9T1416         4-7         9T3612         3-62         9U39         4-22         T905M2         5-21           9T0105         8-42         9T1417         4-6         9T3621         3-58         9U3921         3-69           9T0106         3-6         9T1418         4-7         9T3622         3-58         9U4501         8-20           9T0107         3-6         9T1419         4-7         9T3623         3-58         9Y0101         6-4           9T0201         3-57         9T1420         4-6         9T3624         3-59         9Y0121         6-4 <td>9M1607</td> <td>5-20</td> <td>9T1410</td> <td>4-4</td> <td>9T3608</td> <td>3-62</td> <td>9U1102</td> <td>8-28</td> <td>K909G4</td> <td>1-82</td>	9M1607	5-20	9T1410	4-4	9T3608	3-62	9U1102	8-28	K909G4	1-82
9M3401         5-30         9T1413         4-16         9T3610         4-28         9U3002         2-4         K913M1         5-25           9T0101         8-41         9T1414         4-17         9T3611         3-60         9U3003         8-69         T31010         1-1           9T0103         8-41         9T1415         4-17         9T3611         4-28         9U39         3-69         T50918         8-12           9T0104         8-41         9T1416         4-7         9T3612         3-62         9U39         3-69         T50918         8-12           9T0105         8-42         9T1417         4-6         9T3621         3-58         9U3921         3-69           9T0106         3-6         9T1418         4-7         9T3622         3-58         9U4501         8-20           9T0107         3-6         9T1419         4-7         9T3623         3-58         9Y0101         6-4           9T0201         3-57         9T1420         4-6         9T3624         3-59         9Y0111         6-4           9T0202         3-4         9T1421         4-10         9T3625         3-59         9Y0122         6-5           9T0204 <td< td=""><td>9M2301</td><td>5-29</td><td>9T1411</td><td>4-4</td><td>9T3609</td><td>3-59</td><td>9U2101</td><td>5-28</td><td>K909G4</td><td>4-25</td></td<>	9M2301	5-29	9T1411	4-4	9T3609	3-59	9U2101	5-28	K909G4	4-25
9T0101         8-41         9T1414         4-17         9T3611         3-60         9U3003         8-69         T31010         1-1           9T0103         8-41         9T1415         4-17         9T3611         4-28         9U39         3-69         T50918         8-12           9T0104         8-41         9T1416         4-7         9T3612         3-62         9U39         4-22         T905M2         5-21           9T0105         8-42         9T1417         4-6         9T3621         3-58         9U3921         3-69           9T0106         3-6         9T1418         4-7         9T3622         3-58         9U4501         8-20           9T0107         3-6         9T1419         4-7         9T3623         3-58         9Y0101         6-4           9T0201         3-57         9T1420         4-6         9T3624         3-59         9Y0111         6-4           9T0202         3-4         9T1421         4-10         9T3625         3-59         9Y0121         6-4           9T0203         3-4         9T1423         4-10         9T3706         3-63         9Y0123         6-5           9T0204B         3-46         9T1424 <td< td=""><td>9M2904</td><td>5-28</td><td>9T1412</td><td>4-5</td><td>9T3610</td><td>3-60</td><td>9U3001</td><td>8-69</td><td>K913G5</td><td>1-1</td></td<>	9M2904	5-28	9T1412	4-5	9T3610	3-60	9U3001	8-69	K913G5	1-1
9T0103       8-41       9T1415       4-17       9T3611       4-28       9U39       3-69       T50918       8-12         9T0104       8-41       9T1416       4-7       9T3612       3-62       9U39       4-22       T905M2       5-21         9T0105       8-42       9T1417       4-6       9T3621       3-58       9U3921       3-69         9T0106       3-6       9T1418       4-7       9T3622       3-58       9U4501       8-20         9T0107       3-6       9T1419       4-7       9T3623       3-58       9Y0101       6-4         9T0201       3-57       9T1420       4-6       9T3624       3-59       9Y0111       6-4         9T0202       3-4       9T1421       4-10       9T3625       3-59       9Y0121       6-4         9T0203       3-4       9T1422       4-9       9T3701       3-62       9Y0122       6-5         9T0204       3-46       9T1423       4-10       9T3706       3-63       9Y0131       6-7         9T0205       3-66       9T1425       4-3       9T3708       3-63       9Y0132       6-7         9T0206       3-21       9T1426       4-2	9M3401	5-30	9T1413	4-16	9T3610	4-28	9U3002	2-4	K913M1	5-25
9T0104       8-41       9T1416       4-7       9T3612       3-62       9U39       4-22       T905M2       5-21         9T0105       8-42       9T1417       4-6       9T3621       3-58       9U3921       3-69         9T0106       3-6       9T1418       4-7       9T3622       3-58       9U4501       8-20         9T0107       3-6       9T1419       4-7       9T3623       3-58       9Y0101       6-4         9T0201       3-57       9T1420       4-6       9T3624       3-59       9Y0111       6-4         9T0202       3-4       9T1421       4-10       9T3625       3-59       9Y0121       6-4         9T0203       3-4       9T1422       4-9       9T3701       3-62       9Y0122       6-5         9T0204       3-46       9T1423       4-10       9T3706       3-63       9Y0133       6-5         9T0204       3-46       9T1424       4-3       9T3707       3-63       9Y0131       6-7         9T0205       3-66       9T1425       4-3       9T3708       3-63       9Y0132       6-7         9T0206       3-21       9T1426       4-2       9T3709       3-63	9T0101	8-41	9T1414	4-17	9Т3611	3-60	9U3003	8-69	T31010	1-1
9T0105       8-42       9T1417       4-6       9T3621       3-58       9U3921       3-69         9T0106       3-6       9T1418       4-7       9T3622       3-58       9U4501       8-20         9T0107       3-6       9T1419       4-7       9T3623       3-58       9Y0101       6-4         9T0201       3-57       9T1420       4-6       9T3624       3-59       9Y0111       6-4         9T0202       3-4       9T1421       4-10       9T3625       3-59       9Y0121       6-4         9T0203       3-4       9T1422       4-9       9T3701       3-62       9Y0122       6-5         9T0204       3-46       9T1423       4-10       9T3706       3-63       9Y0123       6-5         9T0204B       3-46       9T1424       4-3       9T3707       3-63       9Y0131       6-7         9T0205       3-66       9T1425       4-3       9T3708       3-63       9Y0132       6-7         9T0206       3-21       9T1426       4-2       9T3709       3-63       9Y0133       6-7	9T0103	8-41	9T1415	4-17	9T3611	4-28	9U39	3-69	T50918	8-12
9T0106       3-6       9T1418       4-7       9T3622       3-58       9U4501       8-20         9T0107       3-6       9T1419       4-7       9T3623       3-58       9Y0101       6-4         9T0201       3-57       9T1420       4-6       9T3624       3-59       9Y0111       6-4         9T0202       3-4       9T1421       4-10       9T3625       3-59       9Y0121       6-4         9T0203       3-4       9T1422       4-9       9T3701       3-62       9Y0122       6-5         9T0204       3-46       9T1423       4-10       9T3706       3-63       9Y0123       6-5         9T0204B       3-46       9T1424       4-3       9T3707       3-63       9Y0131       6-7         9T0205       3-66       9T1425       4-3       9T3708       3-63       9Y0132       6-7         9T0206       3-21       9T1426       4-2       9T3709       3-63       9Y0133       6-7	<b>9T0104</b>	8-41	9T1416	4-7	9T3612	3-62	9U39	4-22	T905M2	5-21
9T0107       3-6       9T1419       4-7       9T3623       3-58       9Y0101       6-4         9T0201       3-57       9T1420       4-6       9T3624       3-59       9Y0111       6-4         9T0202       3-4       9T1421       4-10       9T3625       3-59       9Y0121       6-4         9T0203       3-4       9T1422       4-9       9T3701       3-62       9Y0122       6-5         9T0204       3-46       9T1423       4-10       9T3706       3-63       9Y0123       6-5         9T0204B       3-46       9T1424       4-3       9T3707       3-63       9Y0131       6-7         9T0205       3-66       9T1425       4-3       9T3708       3-63       9Y0132       6-7         9T0206       3-21       9T1426       4-2       9T3709       3-63       9Y0133       6-7	9T0105	8-42	9T1417	4-6	9T3621	3-58	9U3921	3-69		
9T0201       3-57       9T1420       4-6       9T3624       3-59       9Y0111       6-4         9T0202       3-4       9T1421       4-10       9T3625       3-59       9Y0121       6-4         9T0203       3-4       9T1422       4-9       9T3701       3-62       9Y0122       6-5         9T0204       3-46       9T1423       4-10       9T3706       3-63       9Y0123       6-5         9T0204B       3-46       9T1424       4-3       9T3707       3-63       9Y0131       6-7         9T0205       3-66       9T1425       4-3       9T3708       3-63       9Y0132       6-7         9T0206       3-21       9T1426       4-2       9T3709       3-63       9Y0133       6-7	9T0106	3-6	9T1418	4-7	9Т3622	3-58	9U4501	8-20		
9T0202       3-4       9T1421       4-10       9T3625       3-59       9Y0121       6-4         9T0203       3-4       9T1422       4-9       9T3701       3-62       9Y0122       6-5         9T0204       3-46       9T1423       4-10       9T3706       3-63       9Y0123       6-5         9T0204B       3-46       9T1424       4-3       9T3707       3-63       9Y0131       6-7         9T0205       3-66       9T1425       4-3       9T3708       3-63       9Y0132       6-7         9T0206       3-21       9T1426       4-2       9T3709       3-63       9Y0133       6-7	9T0107	3-6	9T1419	4-7	9Т3623	3-58	9Y0101	6-4		
9T0203       3-4       9T1422       4-9       9T3701       3-62       9Y0122       6-5         9T0204       3-46       9T1423       4-10       9T3706       3-63       9Y0123       6-5         9T0204B       3-46       9T1424       4-3       9T3707       3-63       9Y0131       6-7         9T0205       3-66       9T1425       4-3       9T3708       3-63       9Y0132       6-7         9T0206       3-21       9T1426       4-2       9T3709       3-63       9Y0133       6-7	9T0201	3-57	9T1420	4-6	9Т3624	3-59	9Y0111	6-4		
9T0204     3-46     9T1423     4-10     9T3706     3-63     9Y0123     6-5       9T0204B     3-46     9T1424     4-3     9T3707     3-63     9Y0131     6-7       9T0205     3-66     9T1425     4-3     9T3708     3-63     9Y0132     6-7       9T0206     3-21     9T1426     4-2     9T3709     3-63     9Y0133     6-7	9T0202	3-4	9T1421	4-10	9T3625	3-59	9Y0121	6-4		
9T0204B     3-46     9T1424     4-3     9T3707     3-63     9Y0131     6-7       9T0205     3-66     9T1425     4-3     9T3708     3-63     9Y0132     6-7       9T0206     3-21     9T1426     4-2     9T3709     3-63     9Y0133     6-7	9T0203	3-4	9T1422	4-9	9T3701	3-62	9Y0122	6-5		
9T0205     3-66     9T1425     4-3     9T3708     3-63     9Y0132     6-7       9T0206     3-21     9T1426     4-2     9T3709     3-63     9Y0133     6-7	9T0204	3-46	9T1423	4-10	9T3706	3-63	9Y0123	6-5		
9T0206 3-21 9T1426 4-2 9T3709 3-63 9Y0133 6-7	9T0204B	3-46	9T1424	4-3	9T3707	3-63	9Y0131	6-7		
	9T0205	3-66	9T1425	4-3	9T3708	3-63	9Y0132	6-7		
9T0301 3-64 9T1427 4-2 9T3710 3-63 9Y0135 6-6	9T0206	3-21	9T1426	4-2	9T3709	3-63	9Y0133	6-7		
	9T0301	3-64	9T1427	4-2	9T3710	3-63	9Y0135	6-6		



**Tool Storage V5.2** 



**General Catalogue V8** 



**FORCE OnDemand IV** 







TUV NORD

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