



LANG TOOLS
 Professional Tools For 4 Generations

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Lang Tools

Lang represents hand tools that professional technicians and handymen have used for **80 years**, which assures that you are dealing with performance proven, consumer preferred, professional high quality products.

Visit the Lang Tools website at: www.langtools.com

COMPRESSION TESTING

CLT-2 CYLINDER LEAKAGE TESTER WITH 2 GAUGES - 100 PSI/7BAR



CLT-4 CYLINDER LEAKAGE TESTER WITH 2 GAUGES - 35 PSI/2.4BAR



- Measures the ability of an engine cylinder to hold compressed air using shop air supplements; a compression tester
- Precision regulator, M14 standard reach adapter on a 26" hose assembly M14 long reach solid adapter
- M68 special gauge has one multicolored band for measuring low, moderate and high leakage, and a scale range from 0-100%

TU-3 UNIVERSAL COMPRESSION TESTER



- Tests compression on domestic and foreign cars and trucks with gasoline engines
- Adapters included: M14 x M18 short solid adapter, M14 x M18 long flex adapter, and M14 long reach adapter
- Screw-in adapters with o-rings provide professional accuracy
- Long flex 12" hose
- Side release valve allows quick re-testing of cylinder without removing adapter
- M68 gauge has a dual scale dial 300 PSI and 21 bar

TU-7 FLEX DRIVE COMPRESSION TESTER



- Tests domestic and foreign cars and trucks with gasoline engines
- M14 x M18 adapter attached to end of 12" hose
- Separate M14 long reach adapter that can be screwed onto end of hose adapter by hand
- Side release valve allows multiple re-testing without removing tester
- M68 gauge has dual scale dial with ranges from 0-300 PSI and 0-21 bar

TU-8A QUICK COMPRESSION TESTER



- This handy tester is ideal on cars with easy accessibility to cylinders
- For domestic and imported cars and trucks with gasoline engines
- Short offset stem has universal rubber cone for easy seating in most spark plug holes
- M68 gauge has a dual scale dial with ranges from 0-300 PSI and 0-21 bar

COMPRESSION TESTING

TU-17 WHISTLE FOR CYLINDER LEAKAGE TESTER



- Whistles on compression stroke and stops whistling at top dead center
- Quick coupler connects directly to the cylinder hose on CLT-2 and CLT-4 as well as 74498 diesel adapter
- Also used to re-install distributors correctly

TU-18 WHISTLE - GENERIC



- Whistles on the compression stroke and stops whistling at approximately top dead center
- Whistle is attached to hose with M14 x M18 spark plug threads
- Very useful to locate approximate Top Dead Center for cylinder leak testing
- Can also be used to set approximate distributor timing

TU-20-1 (WITH BOOT) TU-20-2 (WITHOUT BOOT) JIFFEE COMPRESSION TESTER W/ GAUGE BOOT



- M68 gauge has a dual scale dial with ranges from 0-300 PSI and 0-21 bar
- Set also includes the following: Straight adapter with rubber cone, 45° angle adapter with rubber cone, 4" solid extension, and 7-1/2" flex extension

TU-21 SMALL ENGINE COMPRESSION TESTER



- Will test all small engines with M14 or M18 threads
- Valve core at bottom ensures accurate readings
- M43 gauge has a dual scale dial with ranges from 0-200 PSI and 0-14 bar

TU-30A COMPRESSION TESTER SET



- Tests compression on all domestic and foreign cars and light trucks with gasoline engines, including mini engines
- M68 gauge has a dual scale dial with ranges from 0-300 PSI and 0-21 bar; includes durable boot for protection
- M14 hose adapter short thread, M14 long thread hose adapter, M10 solid adapter, M12/M16 Ford hose adapter, 8" extension tube and repair parts kit
- 24" extension hose

TU-310C "HANDS FREE" MOTORCYCLE COMPRESSION TESTER



- Metal clip can be attached to the gauge; the gauge can then be clipped to the frame, or handle bars allowing hands free testing
- Includes M10, M12, M14 and M18 long reach adapters to test most engines; extra long 16" hose for gauge to reach handle bars
- Also tests domestic and imported small cars and trucks with gasoline engines
- M68 gauge has a dual scale dial with ranges from 0-300 PSI and 0-21 bar

COMPRESSION TESTING

901 AIR HOLD FITTING SET



- Use to apply air pressure to keep valves closed while replacing seal/spring
- Includes M14 x M18 adaptors threaded for 1/4" NPT

73102 M10 x 1.00 MALE BY M14 x 1.25 FEMALE SOLID ADAPTER



- For testing compression on small engines such as: snowmobiles, motorcycles, outboard motors and more
- Male thread is M10 x 1.00, female is M14 x 1.25
- Use with any compression tester with a M14 fitting

73103 M12 x 1.25 MALE BY M14-1.25 FEMALE SOLID ADAPTER



- For testing compression on small engines such as: snowmobiles, motorcycles, outboard motors and more
- Male thread is M12 x 1.25, female is M14 x 1.25
- Use with any compression tester with a M14 fitting

73106 MINI GAS ENGINE ADAPTER M14 x M18



- For small displacement engines such as jet skis, string trimmers, small motorcycles, chain saws and more
- Can be used with TU-3, TU-30 or TU-310 only

73109 COMPRESSION ADAPTER 73109



- Combination compression adapter to be used on cylinder heads with M14 x 1.25 and M18 x 1.50 threads
- 16" hose

73110 M14 COMPRESSION ADAPTER EXTENSION



- 8" long M14 x 1.25 compression test adapter provides easier access for compression testing where spark plug holes are recessed
- Rigid straight tubing is easier to thread into a recessed spark plug hole than a threaded adapter on the end of a test hose

73111 M12 & M16 COMPRESSION FORD ADAPTER



- For testing compression on Ford Triton engines with M12 and M16 threads



TU-30A: Compression Tester Set

ENGINE OIL PRESSURE TESTING

TU-4A AUTOMATIC TRANSMISSION & ENGINE OIL PRESSURE TESTER



- Checks oil pressure in automatic transmissions and gasoline engines
- Tests most domestic and imported cars and light trucks
- More accurate than dashboard oil pressure gauges. Especially helpful on cars with dash indicator light only
- With 6 feet of nitrile (oil proof) hose to make testing easier with 1/8NPT connection
- M68 gauge has a dual scale dial with ranges from 0-300 PSI and 0-21 bar
- 11 standard and metric fittings

TU-11A DELUXE AUTO TRANSMISSION & ENGINE OIL PRESSURE TESTER



- Tests most domestic and imported cars and light trucks
- Lower scale is expanded to allow easier reading and therefore, more accurate reading at low pressure
- With 6 feet of nitrile (oil proof) hose to make testing easier with 1/8NPT connection
- M91 gauge has a dual scale dial with ranges from 0-400 PSI and 0-28 kg/cm²
- 11 standard and metric fittings

TU-12 ENGINE OIL PRESSURE TESTER



- More accurate than dashboard oil pressure gauges. A must for cars with dash indicator light only
- M68 gauge has a dual scale dial with ranges from 0-100 PSI and 0-7 bar
- The hook on gauge enables the technician to hang up gauge and hose assembly to free his hands
- 24" hose with 1/8 NPT connection
- 2 fittings: 1/4 NPT and 3/8 NPT

TU-16A QUICK CHANGE AUTOMATIC TRANSMISSION TO ENGINE OIL PRESSURE TESTER



- Checks engine oil pressure and automatic transmission pressure on cars, trucks, motorcycles, etc., both domestic and imports
- Set includes 22 color-coded standard and metric fittings
- M68 gauge has dual scale with ranges from 0-100 PSI and 0-7 bar
- M91 gauge has dual scale dial with ranges from 0-400 PSI and 0-28 bar
- 6 ft hose with quick coupler for easy gauge changing and 1/8 NPT connection

70408 METRIC OIL AND TRANSMISSION ADAPTERS



- M12 x 1.50 Metric adapter
- M14 x 1.50 Metric adapter
- M18 x 1.50 Metric adapter

FUEL INJECTION PRESSURE TESTING

TU-26 GM TBI FUEL INJECTION THRU FILTER TEST SET (W/ MANIFOLD)



- For testing fuel pressure at the fuel filter on GMTBI systems
- Selecting the same adapter as the fuel filter, the adapter can then be screwed onto manifold by hand. Manifold connects to fuel lines in place of fuel filter
- Can be used with all Lang Tools Fuel Injection Testers and Cleaners, or others with a standard GM Schrader adapter
- 7 adapters plus manifold

TU-113C FUEL INJECTION TESTER - U.S. AND IMPORTS



- M68 gauge has a dual scale dial with ranges from 0-100 PSI and 0-7 bar
- Standard Schrader (GM)
- Small Schrader (Ford)
- M6 x 1.00 adapter (Honda)
- Tee manifold

TU-443 DELUXE FUEL INJECTION PRESSURE TEST SET



- M91 gauge has a dual scale dial with ranges from 0-100 PSI and 0-7 bar
- Set has a relief valve and 6 ft. of tubing to relieve the pressure and the fuel safely. Also allows checking for sufficient fuel flow
- The 4 ft. hook on gauge enables the technician to hang up gauge and hose assembly to free his hands
- 29 adapters (see page 25)
- Quick coupler connection at the end of the gauge hose

TU-446C BASIC FUEL INJECTION PRESSURE TEST SET - GM T.B.I.



- Test cars with single and dual injectors
- Only use this tester on GMTBI
- M68 gauge has a dual scale dial with ranges from 0-60 PSI and 0-4 bar, with hook which enables the technician to hang up gauge and hose assembly to free his hands
- 16" gauge hose with quick coupler
- 4 adapter/adapter kits (see page 25)
- TBI hose assembly

TU-447C BASIC FUEL INJECTION TESTER - BOSCH C.I.S.



- M68 gauge (with hook for hands-free use) has a dual scale dial with ranges from 0-100 PSI and 0-7 bar
- 16" gauge hose, and quick disconnect CIS hose assembly
- 9 adapters (see page 25)

TU-448C BASIC FUEL INJECTION PRESSURE TESTER



- M68 gauge (with hook for hands-free use) has a dual scale dial with ranges from 0-100 PSI and 0-7 bar
- 16" gauge hose assembly, and quick coupler connection
- 14 adapters (see page 25)

FUEL INJECTION PRESSURE TESTING

TU-449 HARLEY FUEL PRESSURE TEST KIT



- M91 gauge (with hook for hands-free use) has a dual scale dial with ranges from 0-100 PSI and 0-7 bar; includes durable boot for protection
- Use to diagnose driveability issues on fuel injected Harley-Davidson motorcycles
- Easy installation for in-line

TU-457P FUEL INJECTION TESTER - GM - MULTI PORT ONLY



- For GM domestic cars with large Schrader adapter- light trucks, vans, and sport-utility vehicles with multi-port
- M68 gauge (with hook for hands-free use) has a dual scale dial with ranges from 0-100 PSI and 0-7 bar

TU-469 FUEL INJECTION PRESSURE TESTER WITH SCHRADER ADAPTERS



- Enables testing on all cars with standard or small Schrader valves
- M91 gauge (with hook for hands-free use) has a dual scale dial with ranges from 0-100 PSI and 0-7 bar
- Quick Coupler connection at end of gauge hose (other QC adapters can be purchased as needed)

TU-470B FUEL INJECTION CLEANER- 2 GAUGES



- Two gauges enable a technician to check the vehicle fuel pressure with the bottom gauge, and then easily set cleaning pressure with the top gauge by referring to vehicle fuel pressure on the bottom gauge
- Cleans carbon from intake valves, fuel passages, and cylinders with a professional carbon cleaning solution, which will restore the original spray pattern more effectively, giving improved performance, fuel economy, and emission tests
- Both gauges are M68 and have dual scale dials with ranges from 0-100 PSI and 0-7 bar



TU-470B: Fuel Injection Cleaner - 2 Gauges

FUEL INJECTION PRESSURE TESTING

TU-550 MASTER GLOBAL FUEL INJECTION TEST KIT



- Covers all major domestic and foreign platforms 1988 to present (does not include CIS/TBI)
- M91 test gauge (includes boot for protection) assembly disconnects from test hose and valve assembly for easier storage and improved gauge protection
- Fuel line tee can accommodate 3/8" hose sizes in addition to the 1/4" and 5/16" previously accommodated hose sizes

74476 6-FT. ROAD TESTER HOSE



- 6' extension hose works with any Lang fuel injection testers with quick connects

FUEL INJECTION PRESSURE TESTER UPDATE KITS

74489 FUEL INJECTION UPDATE KIT I



- Consists of right angle adapters for Ford, GM, etc; deadhead pressure check adapter and quick connects for Chrysler, GM, etc.

TU-540-1 FUEL INJECTION EXPANSION KIT FOR TU-540



- Expands TU-540, enabling fuel injection pressure tests on all major domestic and foreign vehicle platforms to present

TU-443-2 FUEL INJECTION UPDATE KIT II (TU-443 TO TU-550)



- Updates TU-443 enabling fuel injection pressure tests on all major vehicle platforms on the market thru present, domestic and foreign

TU-540-2 CIS/TBI ADAPTER KIT



- Works in conjunction with TU-550 to allow fuel injection pressure testing on all TBI and CIS vehicles

TU-443-3 FUEL INJECTION UPDATE KIT III (TU-443U TO TU-550)



- Updates TU-443U enabling fuel injection pressure tests on all major vehicle platforms on the market thru present, domestic and foreign

FUEL INJECTION ADAPTERS & REPLACEMENT PARTS

33062
HOSE 3/16" ID X 6 FEET



34021
1/4" I.D. X 6" FUEL HOSE



35031
5/16" I.D. X 6" FUEL HOSE



36032
3/8" I.D. X 6" FUEL HOSE



41303
3/16" HOSE BARB X QC BODY



41310
3/16 HOSE BARB X QC PLUG



41327
OTC QUICK COUPLER BODY



41576
BENT TUBE W/ 3/8" INVERTED FLARE NUT



43110
5 PACK - O-RING



43141
5 PACK - O-RING M14



60236
M16 x 1.50 FEMALE BY 3/8" TUBE END



60238
M14 x 1.50 FEMALE BY 3/8" TUBE END



60239
J-BODY ADAPTER



60410
M8 x 1.00 FEMALE BY M12 x 1.50 MALE



60440
M10 x 1.00 FEMALE BY M12 x 1.50 MALE



60772
OTC QUICK COUPLER PLUG



61333
6MM ADAPTER EXTENSION FOR KIA & HYUNDAI



71301
STANDARD SCHRADER HOSE ASSEMBLY



71302
SMALL PARTS KIT



71303
SMALL SCHRADER HOSE ASSEMBLY



71304
M6 x 1.00 (HONDA) HOSE ASSEMBLY



71305
VOLVO ADAPTER, 14MM LH JETRONIC



71306
M11 O-RING ADAPTER



71308
M14 x 1.50 INVERTED FLARE MALE AND FEMALE CONNECTIONS



FUEL INJECTION ADAPTERS & REPLACEMENT PARTS

71313
FORD EFI SPRING LOCK ADAPTER W/ QUICK COUPLER PLUG



71314
FORD CFI ADAPTER, 5/16" QUICK DISCONNECTS



71315
SPRING LOCK ADAPTER W/ SMALL SCHRADER



71316
ADAPTER, 5/16" QUICK DISCONNECTS W/ SMALL SCHRADER



71317
MANIFOLD W/QUICK COUPLER PLUG



71318
STANDARD SCHRADER HOSE ASSEMBLY W/QUICK COUPLER PLUG



71319
SMALL SCHRADER HOSE ASSEMBLY W/QUICK COUPLER PLUG



71321
M16 O-RING ADAPTER



71327
FUEL INJECTION KIT



71328
1/4" HOSE BARB W/QUICK COUPLER PLUG



71329
HOSE ASSEMBLY (AUDI, VW, VOLVO)



71330
HOSE ASSEMBLY (TOYOTA, GEO)



71403
ADAPTER KIT



71404
ADAPTER M8 x 1.00 MALE BY M12 x 1.50 MALE W/O-RING



71405
ADAPTER M10 x 1.00 MALE BY M12 x 1.50 MALE W/O-RING



71406
ADAPTER M8 x 1.00 MALE BY M12 x 1.50 MALE W/O-RING (3" OVERALL)

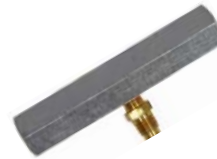


71408
CONNECTING HOSE AND VALVE ASSEMBLY FOR BOSCH CIS



FUEL INJECTION ADAPTERS & REPLACEMENT PARTS

72315
MANIFOLD W/
SCHRADER



72316
ADAPTER
ASSEMBLY



72317
ADAPTER
ASSEMBLY



72318
ADAPTER
ASSEMBLY



72319
ADAPTER
ASSEMBLY



72320
ADAPTER
ASSEMBLY



72322
ADAPTER SET
CONSISTING OF:
60236, 72305, &
72306



72323
ADAPTER KIT



74424
M91/100 PSI
GAUGE



74425
RELEASE VALVE
TUBING



74426
M12 x 1.00
HONDA PULSE
DAMPENER
ADAPTER



74431
BANJO BOLT
M6 x 1.00 WITH
O-RING



74432
BANJO BOLT
M8 x 1.00 WITH
NYLOTRON
WASHER



74433
BANJO BOLT
M10 x 1.00
W/ NYLOTRON
WASHER



74434
BANJO BOLT
M12 x 1.25 WITH
NYLOTRON WASHER



74435
BANJO BOLT
M12 x 1.50 W/
NYLOTRON
WASHER



74437
REPAIR PARTS KIT



74438
M91/100 PSI
GAUGE HOSE AND
RELIEF VALVE



74440
M68/100 PSI
GAUGE AND
HOSE



74442
M68/60 PSI
GAUGE AND HOSE



FUEL INJECTION ADAPTERS & REPLACEMENT PARTS

74444
BOSCH CIS
UPGRADE KIT



74445
UPGRADE KIT
(EXCEPT CIS/TBI)



74446
RELIEF VALVE
AND TUBING
ASSEMBLY



74454
OTC CONVER-
SION, USE
ADAPTERS W/
OTC CANISTER



74455
TUBING KIT
3/8" TUBE
W/ INVERTED
FLARE NUTS
& HOSE CLAMPS



74459
QUICK COUPLER
SOCKET BY
MALE STANDARD
SCHRADER



74469
CONVERSION
ADAPTER FOR
OTC ADAPTERS



74471
M14 x 1.50 BANJO
BOLT (FOR CIS)



74476
6-FT. ROAD
TESTER HOSE



74484
5/16" QUICK DIS-
CONNECT HOSE
ASSEMBLY W/
QUICK COUPLER
PLUG: CHRYSLER/
FORD



74485
3/8" QUICK DIS-
CONNECT HOSE
ASSEMBLY W/
QUICK COUPLER
PLUG: GM



74486
GSI CONVERSION,
USE GSI
ADAPTERS W/
STAR CANISTER



74487
HOSE ASSEMBLY:
74484 & 74485



74488
HOSE ASSEMBLY:
74492 & 74493



74492
5/16" QUICK
DISCONNECT
HOSE ASSEMBLY
W/ STANDARD
SCHRADER
TEST PORT



74493
3/8" QUICK DIS-
CONNECT HOSE
ASSEMBLY W/
STANDARD
SCHRADER
TEST PORT



74494
GM TUBING KIT



74495
GM ADAPTER KIT



74499
1/4" QUICK DIS-
CONNECT HOSE
W/STANDARD
SCHRADER



74571
GAUGE & HOSE
ASSEMBLY



74701
GAUGE & HARD-
WARE ASSEMBLY



74851
DEADHEAD
ALUMINUM
ADAPTER



74852
SCHRADER GM
RIGHT ANGLE
ADAPTER



74853
SMALL SCHRADER
RIGHT ANGLE
ADAPTER



74854
FUEL INJECTION
UPDATE KIT



FUEL INJECTION ADAPTERS & REPLACEMENT PARTS

| Part No. | Description | TU-26 | TU-113 | TU-443 | TU-446 | TU-447 | TU-448 | TU-457 | TU-469 | TU-480A | TU-485A | TU-550 | 74476 | 74489 | TU-443-2 | TU-443-3 | TU-540-1 | TU-540-2 |
|----------|---|-------|--------|--------|--------|--------|--------|--------|--------|---------|---------|--------|-------|-------|----------|----------|----------|----------|
| 33062 | Hose 3/16" ID x 6 feet | | | | | | | | | | | | • | | | | | |
| 34021 | Hose 1/4" ID x 6" | | | | | | | | | • | | | | | | | | |
| 35031 | Hose 5/16" ID x 6" | | | | | | | | | • | | | | | | | | |
| 36032 | Hose 3/8" ID x 6" | | | • | | | | | | | | | | | | | | • |
| 41303 | 3/16" hose barb x quick coupler body | | | | | | | | | | | • | | | | | | |
| 41310 | 3/16" hose barb x quick coupler plug | | | | | | | | | | | • | | | | | | |
| 41327 | Female quick coupler plug, conversion adapter for OTC | | | | | | | | | | | | | | | | | |
| 41576 | Bent tube with 3/8" inverted flare nut | | • | | | | | • | | | | | | | | | | |
| 43110 | O-ring 5/16" x 7/16" | | | | | | | | | | | | | | • | • | | |
| 43141 | O-ring M14 .424" ID x .103" | | | | | | | | | | | | | | • | • | | |
| 52003 | Red Plastic Case | | | | | | | | | | | • | | | | | | |
| 52101 | Gray Plastic Case | • | • | | | | | | | • | | | | | | | | |
| 52105 | Gray Plastic Case | | | • | | | | | | • | | | | | | | | |
| 52107 | Gray Plastic Case | | | | • | • | • | | | | | | | | | | | |
| 52110 | Gray Plastic Case | | | | | | | • | | | | | | | | | | |
| 60236 | M14x1.50 female by 3/8" tube end | | | • | | | | | | • | | | | | | | | • |
| 60238 | M16x1.50 female by 3/8" tube end | | | • | | | | | | • | | | | | | | | • |
| 60239 | Union 3/8" inverted flare by M16x1.50 | | | • | | | | | | • | | | | | | | | • |
| 60410 | M8x1.00 female by M12x1.50 male | | | • | | | | | | • | | | | | | | | |
| 60440 | M10x1.00 female by M12x1.50 male | | | • | | | | | | • | | | | | | | | |
| 60507 | 21-oz bottle Lang branded | | | | | | | | | | • | | | | | | | |
| 60772 | Male quick coupler plug, conversion adapter for OTC | | | | | | | | | | | | | | | | | |
| 61333 | 6mm adapter extensions for Kia and Hyundai | | | | | | | | | | | | | | | | | |
| 71301 | Standard Schrader hose assembly | • | | | | | | | | | | | | | | | | |
| 71302 | Small parts kit | • | | | | | | | | | | | | | | | | |
| 71303 | Small Schrader hose assembly | • | | | | | | | | | | | | | | | | |
| 71304 | M6x1.00 (Honda) hose assembly | • | | | | | | | | | | | | | | | | |
| 71305 | Volvo adapter, 14mm LH Jetronic | | | • | | | | | | • | | | | | | | | |
| 71306 | 11mm o-ring adapter for popular Nissan and Infiniti | | | | | | | | | | • | | | | • | • | • | |
| 71308 | Adapter for Geo Storm and Isuzu I-Tec systems, M14x1.50 3/8" inverted flare male and female connections | | | • | | | • | | | • | | | | | | | | |

FUEL INJECTION ADAPTERS & REPLACEMENT PARTS

| Part No. | Description | TU-26 | TU-113 | TU-443 | TU-446 | TU-447 | TU-448 | TU-457 | TU-469 | TU-480A | TU-485A | TU-550 | 74476 | 74489 | TU-443-2 | TU-443-3 | TU-540-1 | TU-540-2 |
|----------|--|-------|--------|--------|--------|--------|--------|--------|--------|---------|---------|--------|-------|-------|----------|----------|----------|----------|
| 71313 | Ford EFI spring lock adapter with quick coupler plug | | | • | | | • | | | • | • | • | | | | | | |
| 71314 | Ford CFI adapter, 5/16" quick disconnects | | | • | | | • | | | • | • | | | | | | | |
| 71315 | Ford EFI spring lock adapter with small Schrader test port | | | | | | | | | | | | | | | | | |
| 71316 | Ford CFI adapter, 5/16" quick disconnects with small Schrader test port | | | | | | | | | | | | | | | | | |
| 71317 | Manifold with quick coupler plug for 5/16" and 1/4" ID hose | | | • | | | | | | • | • | • | | | | | | |
| 71318 | Standard Schrader hose assembly with quick coupler plug | | | • | | | • | | • | • | • | • | | | | | | |
| 71319 | Small Schrader hose assembly with quick coupler plug | | | • | | | • | | • | • | • | • | | | | | | |
| 71321 | 16mm o-ring adapter for popular Hyundai and Mitsubishi | | | | | | | | | | | • | | | • | • | | |
| 71327 | Kit contains: 34021, 35031, 71317, 71328, 74431, 74432, 74433, 74434 and 74435 | | | | | | • | | | | | | | | | | | |
| 71328 | 1/4" hose barb with quick coupler plug | | | • | | | | | | • | | | | | | | | |
| 71329 | Hose assembly (Audi, VW, Volvo) | | | | | | | | | | | • | | | | | • | |
| 71330 | Hose assembly (Toyota, Geo) | | | | | | | | | | | • | | | | | • | |
| 71403 | Adapter Kit | | | | | | | | | | | | | | | | | • |
| 71404 | Adapter M8x1.00 male by M12x1.50 male with o-ring | | | • | | | | | | • | | | | | | | | |
| 71405 | Adapter M10x1.00 male by M12x1.50 male with o-ring | | | • | | | | | | • | | | | | | | | |
| 71406 | Adapter M8x1.00 male by M12x1.50 male with o-ring (3" overall) | | | • | | | | | | • | | | | | | | | |
| 71408 | Connecting hose and valve assembly for Bosch CIS | | | • | | • | | | | • | | | | | | | | • |
| 71409 | CIS and banjo bolt adapter set consists of: 60410, 60440, 71404, 71405, 71406, 74432, 74433, 74435 | | | | | | • | | | | | | | | | | | |
| 72305 | Bent tubing with 3/8" inverted flare nut by M16x1.50 nut, 3/8" o-ring flare | | | • | | | | | | • | | | | | | | | |
| 72306 | Adapter M16x1.50 thread with 3/8" o-ring flare by 3/8" tube fitting | | | • | | | | | | • | | | | | | | | • |
| 72308 | Connecting hose for GMTBI 3/8" inverted flare ends with quick coupler plug | | | • | • | | | | | • | | | | | | | | • |
| 72309 | Adapter M14x1.50 thread with 3/8" o-ring flare by 3/8" tube fitting | | | • | | | | | | • | | | | | | | | • |

FUEL INJECTION ADAPTERS & REPLACEMENT PARTS

| Part No. | Description | TU-26 | TU-113 | TU-443 | TU-446 | TU-447 | TU-448 | TU-457 | TU-469 | TU-480A | TU-485A | TU-550 | 74476 | 74489 | TU-443-2 | TU-443-3 | TU-540-1 | TU-540-2 |
|----------|---|-------|--------|--------|--------|--------|--------|--------|--------|---------|---------|--------|-------|-------|----------|----------|----------|----------|
| 72315 | Manifold with standard Schrader | • | | | | | | | | | | | | | | | | |
| 72316 | 3/8" male stem adapter GM/TBI | • | | | | | | | | | | | | | | | | |
| 72317 | 3/8" flare adapter GM/TBI | • | | | | | | | | | | | | | | | | |
| 72318 | M16x1.50 GMTBI adapter | • | | | | | | | | | | | | | | | | |
| 72319 | M16x1.50 female by 3/8" quick coupler plug | • | | | | | | | | | | | | | | | | |
| 72320 | M16x1.50 long stem quick coupler GM/TBI | • | | | | | | | | | | | | | | | | |
| 72321 | Cut hose, 3 pieces. Consists of: 34201,35031 and 36032 | | • | | | | | | | • | | • | | | | | | |
| 72322 | Consists of 60236, 72305 and 72306 | | | | | | | | | | | | | | | | | |
| 74423 | Repair parts kit | | | | | | | | | | | • | | | | | | |
| 74424 | Gauge assembly | | | | | | | | | | | • | | | | | | |
| 74425 | Hose assembly | | | | | | | | | | | • | | | | | | |
| 74426 | M12x1.00 Honda pulse dampener adapter | | | | | | | | | | | • | | | • | • | • | |
| 74431 | Banjo bolt M6x1.00 with o-ring | | • | | | | | | | • | • | • | | | | | • | |
| 74432 | Banjo bolt M8x1.00 with nylotron washer | | • | | | | | | | • | • | • | | | | | | |
| 74433 | Banjo bolt M10x1.00 with nylotron washer | | • | | | | | | | • | • | • | | | | | • | |
| 74434 | Banjo bolt M12x1.25 with nylotron washer | | • | | | | | | | • | • | • | | | | | • | |
| 74435 | Banjo bolt M12x1.50 with nylotron washer | | • | | | | | | | • | • | • | | | | | | |
| 74437 | Repair parts kit | | • | • | • | • | | | | • | • | | | | | | | • |
| 74438 | 100 PSI gauge, hose and relief valve | | • | | | | | • | • | | | | | | | | | |
| 74440 | 100 PSI gauge and hose | | | | • | • | | | | | | | | | | | | |
| 74442 | 60 PSI gauge and hose | | | • | | | | | | | | | | | | | | |
| 74444 | Bosch CIS kit: 71408 and 71409 | | | | | | | | | | | | | | | | | |
| 74445 | Upgrade kit (except CIS/TBI): 71308, 71313, 71314, 71318, 71319 and 71327 | | | | | | | | | | | | | | | | | |
| 74446 | Relief valve and tubing assembly | | | | | | | | | | | | | | | | | |
| 74454 | OTC-style conversion adapter, use Lang adapters with OTC canister | | | | | | | | | | | | | | | | | |
| 74455 | Straight tubing, nut and clamp parts kit | | • | • | | | | | | • | | • | | | | | | • |
| 74459 | Quick coupler socket by male standard Schrader | | | | | | | | | | | | | | | | | |
| 74469 | Conversion adapter OTC | | | | | | | | | | | | | | | | | |

FUEL INJECTION ADAPTERS & REPLACEMENT PARTS

| Part No. | Description | TU-26 | TU-113 | TU-443 | TU-446 | TU-447 | TU-448 | TU-457 | TU-469 | TU-480A | TU-485A | TU-550 | 74476 | 74489 | TU-443-2 | TU-443-3 | TU-540-1 | TU-540-2 |
|----------|---|-------|--------|--------|--------|--------|--------|--------|--------|---------|---------|--------|-------|-------|----------|----------|----------|----------|
| 74471 | M14x1.50 banjo bolt (for CIS) | | | | | | | | | | | • | | | • | • | | |
| 74476 | Road tester hose | | | | | | | | | | | • | | | | | | |
| 74484 | 5/16" quick disconnect hose assembly with quick coupler plug: Chrysler, Ford | | | | | | | | | | • | • | | • | • | | | |
| 74485 | 3/8" quick disconnect hose assembly with quick coupler plug: GM | | | | | | | | | | • | • | | • | • | | | |
| 74486 | GSI conversion adapter, use GSI adapters with Lang gauges and canister | | | | | | | | | | | | | | | | | |
| 74487 | Hose assembly: 74484 and 74485 | | | | | | | | | | | | | | | | | |
| 74488 | Hose assembly: 74492 and 74493 | | | | | | | | | | | | | | | | | |
| 74492 | 5/16" quick disconnect hose assembly with standard Schrader test port | | | | | | | | | | | | | | | | | |
| 74493 | 3/8" quick disconnect hose assembly with standard Schrader test port | | | | | | | | | | | | | | | | | |
| 74494 | GM tubing kit, consists of adapters: 41576 and 72305 | | | | • | | | | | | | | | | | | | • |
| 74495 | GM adapter kit, consists of adapters: 60236, 60238, 60239, 72306, 72309 and 74434 | | | | • | | | | | | | | | | | | | |
| 74499 | 1/4" quick disconnect hose assembly with quick coupler plug | | | | | | | | | | | | | | | | | |
| 74571 | Gauge and hose assembly | | | | | | | • | | | | | | | | | | |
| 74701 | Gauge and hardware assembly | | | | | | | | | | • | | | | | | | |
| 74852 | Standard Schrader right angle adapter with quick coupler plug | | | | | | | | | | | • | | • | | | | |
| 74853 | Small Schrader right angle adapter with quick coupler plug | | | | | | | | | | | • | | • | | | | |
| 74854 | Fuel injection update kit, consists of adapters: 74851, 74852 and 74853 | | | | | | | | | | • | | | | • | | • | |

MISCELLANEOUS TEST EQUIPMENT

TU-1 DELUXE VACUUM & FUEL PUMP TESTER



- Comes complete with 2 feet of high quality hose, plus 3 fittings to test all domestic and foreign cars and trucks with gasoline engines
- M91 compound gauge has a multicolor dual scale dial with ranges from 0-10 PSI / 0-0.7 kg/cm² pressure; and 0-28 inHg / 0-70 cmHg vacuum
- Hook on gauge enables the technician to hang up gauge and hose assembly to free his hands
- Assists in diagnosing a variety of problems: fuel pump pressure; leaky, burnt, or sticky valves; leaky intake manifold; restricted exhaust systems; turbo pressures; worn piston rings; incorrect timing; heating and air conditioning controls; wind shield wipers; power brakes; emission control devices

TU-24A THREE-WAY EXHAUST BACK PRESSURE KIT



- This Three-Way tester allows quicker and more accurate testing of exhaust blockages in catalytic converters, mufflers, etc
- M68 special gauge has two multi-colored bands for measuring at Idle and 2500 RPM. The scale ranges are in PSI and bar. Boot included on gauge for extra protection
- Hose is 6 feet, enough length for the technician to test from the drivers seat
- Can test in THREE different places: Oxygen Sensor, Exhaust Pipes, and Air Injection System

TU-2 FLEXIBLE VALVE AIR-HOLD TOOL



- This tool allows replacement of valve seals and broken or weak valve springs on OHV and OHC engines without removing the head by applying air to cylinder through spark plug hole
- Flexible design makes job easier and quicker where spark plug holes are hard to get at
- Overall length 13-in., with one end M14 and M18 threads fit spark plug hole. Other end 1/4-in. female pipe thread for coupler plug attachment
- After attaching plug and quick coupler, air pressure keeps valve closed while working

TU-25 STANDARD VACUUM & FUEL PUMP TESTER



- Assists in diagnosing a variety of problems on domestic and imported vehicles: fuel pump pressure; leaky, burnt, or sticky valves; leaky intake manifold; restricted exhaust systems; turbo pressures; worn piston rings; incorrect timing; heating and air conditioning controls; wind shield wipers; power brakes; emission control devices
- M68 compound gauge has a multicolor dual scale dial with ranges from 0-10 PSI / 0-0.7 kg/cm² pressure; and 0-30 inHg / 0-1.0 bar vacuum
- Complete with hose, fittings, instructions, and specifications

TU-22A POWER STEERING & RACK TESTER



- Takes the guesswork out of power steering analysis quickly and accurately by detecting defective power steering pumps; gears, plus kinked or clogged lines
- Includes most adapters to test domestic cars and light trucks, and some imports
- M68 gauge has a dual scale dial with ranges from 0-2000 PSI and 0-140 bar

TU-29 BASIC EXHAUST BACK PRESSURE KIT



- Enables technician to test exhaust back pressure thru oxygen sensor
- Oxygen Sensor adapter includes M12 and M18 thread
- The special M68 gauge has two multi-colored bands - idle and 2500 RPM, with pressures shown in PSI and bar; includes boot for protection
- Hose is 6 feet, enough length for the technician to test from the driver's seat

COMPRESSION TESTING

74498 DIESEL ADAPTER FOR CYLINDER LEAKAGE TESTER



- Connects CLT-2 or CLT-4 to diesel adapters
- Measure diesel engine cylinder ability to hold compressed shop air

TU-15-51 DIESEL COMPRESSION TEST SET



- 7 adapters (see chart on page 20)
- TU-15 gauge assembly

TU-15-70 DIESEL COMPRESSION TEST SET WITH TESTER AND ADAPTERS



- Test heavy-duty trucks and equipment
- 14 adapters (see chart on page 20)
- TU-15 gauge assembly

TU-17 WHISTLE FOR CYLINDER LEAKAGE TESTER



- Whistles on compression stroke and stops whistling at top dead center
- Quick coupler connects directly to the cylinder hose on CLT-2 and CLT-4

TU-15-52B DIESEL COMPRESSION TEST SET - LIGHT CARS/TRUCKS



- 7 adapters (see chart on page 20)
- TU-15 gauge assembly

TU-15-71 DIESEL COMPRESSION ADAPTER SET



- Same as TU-15-70 with the exception of the gauge
- 14 adapters (see chart on page 20)

TU-15 DIESEL COMPRESSION TESTER



- Deflator button for repeat testing
- Swivel-end Quick Coupler
- M68 gauge has a dual scale dial 1000 PSI, 70 bar in red and black dial

TU-15-53 DIESEL COMPRESSION TEST SET



- 9 adapters (see chart on page 20)
- TU-15 gauge assembly

COMPRESSION TESTING

DIESEL COMPRESSION SET CHART

| Part # | Description | TU-15 | TU-15-51 | TU-15-52B | TU-15-53 | TU-15-70 | TU-15-71 |
|-----------|----------------------------|-------|----------|-----------|----------|----------|----------|
| TU-15 | Gauge, hose, quick connect | • | • | • | • | • | |
| 52110 | Case | • | | | | | |
| 52102 | Case | | • | • | • | | |
| 52011 | Case | | | | | • | • |
| 56244 | Adapter Chart | | • | • | • | • | • |
| 42553 | Instructions | | • | • | • | • | • |
| TU-15-1A | Glow Plug | | • | | • | | |
| TU-15-2A | Glow Plug | | • | | • | | |
| TU-15-3A | Glow Plug | | • | • | • | | |
| TU-15-4A | Injector | | • | • | • | • | • |
| TU-15-5 | Glow Plug | | • | • | • | | |
| TU-15-6 | Glow Plug | | • | • | • | | |
| TU-15-8 | Injector | | | | | • | • |
| TU-15-9 | Injector | | | | | • | • |
| TU-15-11A | Injector | | | | | • | • |
| TU-15-12A | Injector | | | | | • | • |
| TU-15-13A | Motometer | | | • | | | |
| TU-15-14 | Glow Plug | | • | • | • | • | • |
| TU-15-17 | Injector | | | | • | • | • |
| TU-15-18A | Injector | | | | | • | • |
| TU-15-19 | Injector | | | | | • | • |
| TU-15-20 | Injector | | | | | • | • |
| TU-15-21 | Injector | | | | | • | • |
| TU-15-22A | Glow Plug | | | | • | | |
| TU-15-23 | Glow Plug | | | • | | • | • |
| TU-15-28 | Extension | | | | | • | • |
| TU-15-29 | Extension | | | | | • | • |

TU-15-1A
M10 x 1.00 GLOW PLUG



TU-15-2A
M10 x 1.00 GLOW PLUG



TU-15-3A
M10 x 1.25 GLOW PLUG



TU-15-4A
M24 x 2.00 INJECTOR



COMPRESSION TESTING

DIESEL COMPRESSION TEST ADAPTERS

TU-15-5
M12 x 1.25, M18 x 1.50
GLOW PLUG



TU-15-6
M12 x 1.25, M18 x 1.50
GLOW PLUG



TU-15-8
7/8" INJECTOR



TU-15-9
1" INJECTOR



TU-15-11A
M21 INJECTOR



TU-15-12A
M24 INJECTOR
DETROIT DIESEL



TU-15-13A
MOTOMETER



TU-15-14
M10 x 1.25 GLOW PLUG



TU-15-15
SNAP-ON/OTC



TU-15-17
M24 x 1.50 INJECTOR



TU-15-18A
M17 INJECTOR



TU-15-19
M17 INJECTOR



TU-15-20
3/8" INJECTOR



TU-15-21
9/16" INJECTOR



TU-15-22A
M10 x 1.00 GLOW PLUG - FORD/NAVISTAR



TU-15-23
M12 x 1.25 GLOW PLUG



TU-15-24
M14 x 1.25
GLOW PLUG



TU-15-25
INTERNATIONAL
DT466, DT530



TU-15-26
CUMMINS ISB



TU-15-27
CUMMINS ISC



TU-15-28
CUMMINS NCT/NTS



TU-15-29
CUMMINS N14



TU-15-30
TESTER 7" EXTENSION



TU-15-31
TEST 90 DEGREE
ADAPTER



COMPRESSION TESTING

DIESEL COMPRESSION TEST ADAPTERS

TU-15-32

45 DEGREE ADAPTER



TU-15-36

MACK E6 & E7



TU-15-40

PERKINS 4.108 ENGINES



TU-15-44

CATERPILLAR 3126B AND 3126E



TU-15-48

CATERPILLAR



TU-15-77

CATERPILLAR 3500 SERIES



TU-15-81

CATERPILLAR C7 & C9



TU-15-33

DETROIT DIESEL 50 & 60



TU-15-37

MBE-900 AND MBE-4000



TU-15-41

PERKINS AND CATERPILLAR



TU-15-45

CATERPILLAR 3176



TU-15-49

CATERPILLAR 3406E



TU-15-78

CUMMINS ISX



TU-15-34

M20 x 1.50



TU-15-38

6.6L DURAMAX M10 x 1.25



TU-15-42

CATERPILLAR 3116



TU-15-46

CATERPILLAR 3196



TU-15-75

CUMMINS ISB



TU-15-79

INTERNATIONAL MAXXFORCE



TU-15-35

M8 x 1.00



TU-15-39

M22 x 1.50 MERCEDES BENZ



TU-15-43

CATERPILLAR 3126 AND 3126B



TU-15-47

CATERPILLAR 3304



TU-15-76

CATERPILLAR 3408E/3412E



TU-15-80

GLOW PLUG FORD 6.7L M8 x 1.00



COMPRESSION TESTING

APPLICATION CHART FOR DIESEL COMPRESSION TEST ADAPTERS

| Application | Engine | Type | Thread | Adapter |
|----------------|--|----------------|------------|-----------|
| Allis Chalmers | 6000, 7000, 10000, 11000 | Injector M21 | - | TU-15-11A |
| Audi | Early Models, see VW for TDI | Injector | M24 x 2.00 | TU-15-4A |
| | (1982-83) 4000, 4000 Quattro 1.6L | Glow Plug | M12 x 1.25 | TU-15-6 |
| | (1979-85) 5000 Quattro 2.0L | | | TU-15-23 |
| Bedford | 200, 220, 300, 330, 466 | Injector M21 | - | TU-15-11A |
| BMW | 2.4L MFI Turbo | Glow Plug | M12 x 1.25 | TU-15-6 |
| | | | | TU-15-23 |
| Caterpillar | D336, 1674, 1676, 3406, 3408, 3412 3406B | Injector 9/16" | 7/8"-14 | TU-15-21 |
| | 3208, 110 | Injector 3/8" | - | TU-15-20 |
| | 3022, 3023, 3024, 3034 | Glow Plug | M10 x 1.25 | TU-15-14 |
| | 3116 | Injector | - | TU-15-42 |
| | 3054, 3056 | Injector | M24 x 1.50 | TU-15-41 |
| | 3126, 3126B | Injector | - | TU-15-43 |
| | 3126D, 3126E | Injector | - | TU-15-44 |
| | 3176, C10, C11 | Injector | - | TU-15-45 |
| | 3196, C12, C13 | Injector | - | TU-15-46 |
| | 3304 | Injector | - | TU-15-47 |
| | 3204, Late Model 3208, 3304B, 3306C, 3406C | Injector | - | TU-15-48 |
| | 3406E, C15, C16 | Injector | - | TU-15-49 |
| | 3408E, 3412E | Injector | - | TU-15-76 |
| 3500 Series | Injector | - | TU-15-77 | |
| C7, C9 | Injector | - | TU-15-81 | |
| Chevette/Isuzu | 1.8L, 2.2L | Glow Plug | M10 x 1.25 | TU-15-3A |
| Cummins | V-185, V-210, V-225, V-555, VT-255, VT-555 | Injector 7/8" | - | TU-15-8 |
| | NH, V6, V8, V12, All 5-1/2" Bore NH, and 903 V8 Cylinder PTB | Injector 1" | - | TU-15-9 |
| | N14 | Extension | - | TU-15-29 |
| | NTC, NTS, M11, ISM, L10 | Extension | - | TU-15-28 |
| | 1998-2002 ISB 5.9L | Injector | - | TU-15-26 |
| | 2003-Present ISB 5.9L, 6.7L | Injector | - | TU-15-75 |
| | 1998-2003 ISC, ISL | Injector | - | TU-15-27 |
| | 1984-1998 B Series 2.9L, 3.9L, 5.9L, 4.5L | Injector | M24 x 1.50 | TU-15-17 |
| | 1985-1998 C Series 8.3L | Injector M17 | - | TU-15-18A |
| | B Series 3.3L | Injector M17 | - | TU-15-19 |
| | 2001-2010 ISX | Injector | - | TU-15-78 |
| Detroit Diesel | 53, 71, 92, 110, 149, V53, V71 8.2L | Injection M24 | - | TU-15-12A |
| | Series 40 | Injector | - | TU-15-25 |
| | Series 60 and 50 | Injector | - | TU-15-33 |
| Deutz | Most models | Glow Plug | M12 x 1.25 | TU-15-6 |
| | Some models | Injector M17 | - | TU-15-18A |

COMPRESSION TESTING

APPLICATION CHART FOR DIESEL COMPRESSION TEST ADAPTERS

| Application | Engine | Type | Thread | Adapter |
|-------------------------|---|---------------|------------|--------------------------------|
| Dodge/Cummins, Dodge | (1989-98) 5.9L | Injector | M24 x 1.50 | TU-15-17 |
| | (1998-2009) 5.9L ISB | Injector | - | TU-15-26 |
| Fiat Allis | 8035-02-300, 8035-02-301, 8035-02-302, 8045-02, 8045-03 | Injector M21 | - | TU-15-11A |
| Ford | 6.6L, 7.8L, Bosch | Injector M21 | - | TU-15-11A |
| Ford/Mazda | (1984-1987) 2.0L; (1983-84) 2.2L Escort, Lynx, Ranger, Tempo, Topaz | Glow Plug | M10 x 1.25 | TU-15-14 |
| Ford/Mitsubishi | (1985-1987) Ranger 2.3L | Glow Plug | M10 x 1.25 | TU-15-14 |
| Ford | (1982-1994) 6.9L, 7.3L | Glow Plug | M10 x 1.00 | TU-15-1A |
| | (1994-2004) 7.3L Turbo, Direct Injection Power Stroke | Glow Plug | M10 x 1.00 | TU-15-22A |
| | (2003-2008) 6.0L, 6.4L Power Stroke (2008-2010) | Glow Plug | M14 x 1.25 | TU-15-24 |
| | 2011-2015 6.7L Powerstroke | Glow Plug | M8 x 1.00 | TU-15-80 |
| General Motors | 4.3L V6, 4.3L V8, 5.7L V8 (1978-85) | Glow Plug | M10 x 1.00 | TU-15-1A |
| | 6.2L & 6.5L V8 True Diesel (1982-2002) | Glow Plug | M10 x 1.00 | TU-15-2A |
| | DuraMax 6.6L Turbo Diesel (2001-2005) | Glow Plug | M10 x 1.25 | TU-15-3A |
| | DuraMax 6.6L Turbo Diesel (2005-Present) | Glow Plug | M10 x 1.25 | TU-15-38 |
| | DuraMax ID415 | Injector M17 | - | TU-15-19 |
| GMCTruck | W4, W7, W7HV | Glow Plug | M12 x 1.25 | TU-15-23 |
| Hatz | Some Models | Injector M17 | - | TU-15-19 |
| Hino | Medium | Glow Plug | M12 x 1.25 | TU-15-23 |
| Hummer H1 | (1992-2004) Optimizer 6500 V8 Turbo & 6.2L V8 | Glow Plug | M10 x 1.00 | TU-15-2A |
| Hummer H1-Alfa | 6.6L Duramax (2005-06) | Glow Plug | M10 x 1.25 | TU-15-38 |
| International Harvester | D/DT361, D/DT429, DV462, DV/DVT550, DT/DV/DVT, 573, 361, 407 | Injector M21 | - | TU-15-11A |
| | 6.9L, 7.3L | Glow Plug | M10 x 1.00 | TU-15-1A |
| International Navistar | (1984-1997) DT 360, DT408, DT466, 312, 360, 414, 436, 446 C.I.D. | Injector M17 | - | TU-15-19 |
| | 1994-2007 7.3L T444E | Glow Plug | M10 x 1.00 | TU-15-22A |
| | 4.5L VT275, 6.0L VT365E, 6.4L Maxxforce7 | Glow Plug | M14 x 1.25 | TU-15-24 |
| | 1994-2004 7.6L DT466E, 8.7E DT530E, DT570 | Injector | - | TU-15-25 |
| | 2004-Present International MaxxForce DT, 9,10 | Injector | - | TU-15-79 |
| Isuzu/Isuzu Truck | (1992-98) HE1-TC (1998-present) 6HK1-TC | Glow Plug | M10 x 1.25 | TU-15-3A |
| | (1998-present) 4HE1-TC; (up to 1998) 6HK1-TC | Glow Plug | M12 x 1.25 | TU-15-5 TU-15-6 TU-15-23 |
| | 1.8L, 2.2L, I-Mark, Pick-up, Trooper | Glow Plug | M10-1.25 | TU-15-14 |
| Jeep | (2005) Liberty 2.8L | Glow Plug | M10 x 1.00 | TU-15-2A |
| J.I. Case | 2.9L, 3.9L, 5.9L | Injector | M24 x 1.50 | TU-15-17 |
| | 8.3L | Injector M17 | - | TU-15-18A |
| | Models not using pencil nozzle | Injector M21 | - | TU-15-11A |
| J.I. Case 70 Series | 188, 207 | Injector 3/8" | - | TU-15-20 |

COMPRESSION TESTING

APPLICATION CHART FOR DIESEL COMPRESSION TEST ADAPTERS

| Application | Engine | Type | Thread | Adapter |
|------------------|---|---------------|------------|--------------------------------|
| John Deere | Early 300, 400, 500 Series; 276, 404, and 531 CID | Injector 3/8" | - | TU-15-20 |
| | 404, 466, 531, 619 | Injector M21 | - | TU-15-11A |
| Kawasaki | Mule 3010 Diesel (Kubota) | Injector | M20 x 1.50 | TU-15-34 |
| | Mule 3010 Diesel (Diahatsu) | Glow Plug | M10 x 1.25 | TU-15-14 |
| Kubota | D722, D902, D950, D1105, V1505, V2203 | Glow Plug | M8 x 1.00 | TU-15-35 |
| | D650, D1100 | Glow Plug | M10 x 1.25 | TU-15-14 |
| | D902, D950 | Injector | M20 x 1.50 | TU-15-34 |
| Lincoln | (1984-85 cars) Mark VII, Continental 2.4L MFI Turbo | Glow Plug | M12 x 1.25 | TU-15-6 TU-15-23 |
| Mack Truck | END 405, 457, 510, 519, 605, 672, 673, 674, 711, 864, ENDT 673, 675, 676, 865, 866 | Injector M21 | - | TU-15-11A |
| | E6, E7, E-Tech, E460 | Injector | - | TU-15-36 |
| Mazda | (1982-84) B2200 2.2L, (1984-85) 626 2.0L | Glow Plug | M10 x 1.25 | TU-15-14 |
| Massey Ferguson | 4.203, 4.236, 4.248, 6.354, 8.540 | Injector M21 | - | TU-15-11A |
| Mercedes-Benz | (1960-80) models | Glow Plug | M18 x 1.50 | TU-15-5 TU-15-6 |
| | (1978-99) models, (1988-89) 190E 2.5L, (1991-99) E300, (1992-95) 300 SD / S350 | Glow Plug | M12 x 1.25 | TU-15-5 TU-15-6 TU-15-23 |
| | (1966-87) models | Injector | M24 x 2.00 | TU-15-4A |
| | (1987-2005) models | Injector | M22 x 1.50 | TU-15-39 |
| | (2004-05) E320 CDI | Glow Plug | M10 x 1.00 | TU-15-1A |
| | MBE 900 & MBE 4000 | Injector | - | TU-15-37 |
| | 2.7L | Glow Plug | M10 x 1.00 | TU-15-2A |
| Mitsubishi | 2 and 3 cylinder engines | Glow plug | M10 x 1.25 | TU-15-14 |
| Mitsubishi-Fuso | Medium | Glow Plug | M10 x 1.25 | TU-15-14 |
| | Medium | Injector M21 | - | TU-15-11A |
| Nissan | (1965-71) Cedric 2.2L SD22 | Glow Plug | M10 x 1.25 | TU-15-14 |
| | (1981) 810 2.8L (Datsun) RD 28; | Glow Plug | M12 x 1.25 | TU-15-23 |
| | (1982-83) Maxima 2.8L RD28 (1983-87) Sentra 1.7L CD17 | Glow Plug | M10 x 1.00 | TU-15-1A |
| Nissan / UDTruck | Medium | Glow Plug | M10 x 1.25 | TU-15-14 |
| Onan | DSL, MDL | Injector M21 | - | TU-15-11A |
| Perkins | 3.125, 4.203, 4.236, 4.248, 4.318, 6.354, 6.370, 8.540, 8.640, Phaser/1004, Phaser/1006 | Injector M21 | - | TU-15-11A |
| | 100, 200, 400, 700 series | Glow Plug | M10 x 1.25 | TU-15-14 |
| | 4.108 | Glow Plug | 5/8"-18 | TU-15-40 |
| | 1000 series | Injector | M24 x 1.50 | TU-15-41 |

COMPRESSION TESTING

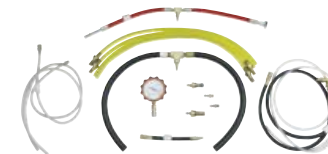
APPLICATION CHART FOR DIESEL COMPRESSION TEST ADAPTERS

| Application | Engine | Type | Thread | Adapter |
|--|--|--------------|--------------------------|--------------------------------|
| Peugeot | Most Models | Glow Plug | M12 x 1.25 M18 x 1.50 | TU-15-6 |
| Scania | DN11, DS11 | Injector M21 | - | TU-15-11A |
| Sprinter/ Mercedes/ Freightliner/Dodge | (2001-2006) 2.7L, OM612/647 | Glow Plug | M10 x 1.00 | TU-15-2A |
| | (2007-Present) 3.0L, OM642/V6 | Glow Plug | M8 x 1.00 | TU-15-80 |
| Toyota | 1.8L | Glow Plug | M10 x 1.25 | TU-15-3A |
| | 2.2L | Glow Plug | M10 x 1.25 | TU-15-14 |
| UDTruck | Medium | Glow Plug | M10 x 1.25 | TU-15-14 |
| Universal Marine | M15, M20, M25, M25XP, M30 | Injector | M20 x 1.50 | TU-4A TU-15-34 |
| | | | | |
| Volvo | Early models | Injector | M24 x 2.00 | TU-15-4A |
| | Models 30's, 40's | Glow Plug | M12 x 1.25 | TU-15-23 |
| Volvo Penta | MD marine engines | Injector M17 | - | TU-15-18A |
| VW | (1970s) Rabbit | Injector | M24 x 2.00 | TU-15-4A |
| | (1979-81) Dasher, (1996) Eurovan, (1985-96) Golf, (1981-95) Jetta, (1992-94) Passat, (1981-84) Pick-up, (1982-85) Quantum, (1977-84) Rabbit, (1982-85) Vanagon | Glow Plug | M12 x 1.25 | TU-15-5 TU-15-6 TU-15-23 |
| | (1997-05) Golf, (1997-05) Jetta / Jetta Wagon, (1998-05) Beetle, (1996-97) Passat, (2004-05) Touareg | Glow Plug | M10 x 1.00 | TU-15-1A |
| | | | | |
| | | | | |
| Waukesha | Most | Injector M21 | - | TU-15-11A |
| Westerbeke | Marine engines | Glow Plug | M10 x 1.00 | TU-15-1A |
| | | Glow Plug | M10 x 1.25 | TU-15-14 |
| | | Injector M21 | - | TU-15-11A |
| White Farm | 66, 77, 88, 99, 166, 177, 188, 199, 550, 660, 770, 880, 950, 1550, 1555, 1600, 1650, 1655, 1750, 1755, 1800, D2000, 2300, 3000 | Injector M21 | - | TU-15-11A |
| Wisconsin | 340, 350, 430, 660, 670, 750, 860, 1000 | Injector M21 | - | TU-15-11A |
| Yanmar | Some models | Injector M17 | - | TU-15-18A |

FUEL PRESSURE TESTING

TU-32

MASTER FUEL SYSTEM TEST KIT - CUMMINS 5.9L



- M68 compound 45 PSI, 30inHg gauge, fuel pressure, inlet restriction and fuel volume test adapters
- Contains all adapters necessary for testing on Cummins Series B and ISB engines (including Dodge Ram)

TU-32-1

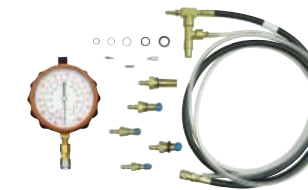
FUEL SYSTEM TEST ADAPTER KIT - CUMMINS 5.9L



- Includes an OTC-style conversion adapter so that pressure adapter and inlet restriction adapters can be used with existing gauges on the market

TU-32-2

BASIC DIESEL FUEL PRESSURE TEST KIT



- M91/100 PSI gauge w/ boot assembly and 4-ft. hose
- Pressure relief valve
- 5 banjo bolt adapters ranging from M8 to M14 and 1 repair kit

TU-32-3

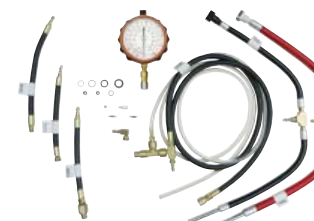
INTERNATIONAL DIESEL FUEL SYSTEM TEST KIT



- International engines VT365, T444E, DT466, DT530, and DT570
- Two M91 gauges: 0 - 100 PSI and 0 - 30 inHg
- 4-ft. hose
- 4 adapters

TU-32-4

FORD POWER STROKE DIESEL FUEL SYSTEM KIT



- Ford Power Stroke engines 1994 to present
- M91/100 PSI gauge w/boot and bleed off assembly
- Adapters necessary to pressure test the fuel system on Power Stroke engines
- Adapters can be used for testing at both the fuel filter and at the fuel pump

TU-32-5

FORD POWER STROKE DIESEL FUEL PRESSURE ADAPTER KIT



- Includes all adapters necessary to test Ford Power Stroke engines 1994 to present
- Adapters can be used with any gauge from the following sets: TU-443, TU-469, TU-540, TU-550, TU-32-2, TU32-3

TU-32-6

GM 6.6L DURAMAX DIESEL FUEL SYSTEM TEST KIT



- Quick connect test port on GM 6.6L Duramax engines
- Gauge assembly with 6-ft. hose
- M91 gauge w/vinyl boot reads 30 inHg to 15 PSI

TU-32-7

HIGH PRESSURE OIL SYSTEM TEST KIT



- Used to diagnose the inline pressure, pressure loss to one head, and oil pump dead head pressure in the following: Ford Power Stroke 6.0L and 7.3L as well as International T444E and VT 365E engines
- 5000 PSI gauge and hose assembly, 12mm straight thread adapter
- STC and JIC adapters
- STC release tool

FUEL PRESSURE TESTING

TU-32-8 HIGH PRESSURE OIL SYSTEM TEST KIT



- Used to diagnose the inline pressure and oil pump dead head pressure in the following engines using ORFS connectors: DT-466 engines with EGR, MaxxFORCE 5, MaxxFORCE DT, MaxxFORCE 9, and MaxxFORCE 10
- 10,000 PSI gauge and hose assembly
- Inline adapter tee, shopair adapter

TU-32-23 INTERNATIONAL SCHRADER ADAPTER



- Fits Schrader test ports on the fuel system of International Diesel engines and Ford Power Stroke (1994-1997) diesel engines

TU-32-28 INTERNATIONAL MAXXFORCE ADAPTER



- Applications include: late model DT-466 engines with EGR, MaxxFORCE DT, MaxxFORCE 9, and MaxxFORCE 10 engines

TU-32-20 FUEL SYSTEM PRESSURE TEST GAUGE - COMPUCHEK



- Used to check fuel system pressure on diesel engines with Compuchek test ports
- M91/300 PSI gauge w/ boot
- 6 ft. hose

TU-32-24 INTERNATIONAL RIGHT ANGLE ADAPTER



- Used to connect a pressure gauge to the engine fuel system
- Fits Schrader test ports on the fuel system of International Diesel engines and Ford Power Stroke diesel engines

TU-32-27 FORD POWER STROKE 6.0L FUEL PRESSURE ADAPTER



- For testing Ford Power Stroke 6.0L engines, 2003 to present
- M12 x 1.50 male fitting on a 6" hose with 1/4" NPTF on the other

TU-32-21 FUEL SYSTEM RESTRICTION TEST GAUGE - COMPUCHEK



- Used to check fuel system restriction on diesel engines with Compuchek test ports
- M91/30 inHg vacuum gauge w/ boot
- 6 ft. hose

TU-32-25 COMPUCHEK ADAPTER



- To be used with the Lang Tools 74438 gauge assembly, or the 74424 gauge assembly with the 74425 hose assembly
- Used to measure fuel pressure, check for air bubbles and bleed air from the fuel system on the family of engines from Navistar/International VT365, DT466, DT570 and HT570 engines

TU-32-22 COMPUCHEK TEST PORT



- Can be added to an engine's fuel system permanently or temporarily for testing pressure or restriction with a Compuchek tester

TU-32-26 FORD POWER STROKE 7.3L FUEL PRESSURE ADAPTER



- For diesel fuel pressure testing on Ford Power Stroke 7.3L engines, 1998 thru 2004
- 8-in. hose with 1/8-in. MNPT

FUEL ADAPTERS, ASSEMBLIES & REPLACEMENT PARTS

| Part No. | Description | Point |
|--------------|--------------------------------------|--|
| 71327 | Fuel Injection Kit | Kit contains: 34021, 35031, 71317, 71328, 74431, 74432, 74433, 74434 and 74435 |
| 73211 | Gauge Assembly 30inHg | Gauge assembly for the TU-32-3 |
| 74425 | Release Valve & Amp Tubing | Hose assembly for the TU-32, TU-32-2, TU-32-3 & TU-32-4 |
| 74427 | Gauge assembly | Gauge assembly for the TU-32-2, TU-32-3 or TU-32-4 |
| 74471 | M14 x 1.50 Banjo Bolt 100 PSI | M14 banjo bolt |
| 74484 | 5/16" quick disconnect hose assembly | 5/16" quick disconnect hose assembly with quick coupler plug: Chrysler, Ford |
| 74485 | 3/8" quick disconnect hose assembly | 3/8" quick disconnect hose assembly with quick coupler plug: GM |



74427: Gauge Assembly on the TU-30A

71327



73211



74427



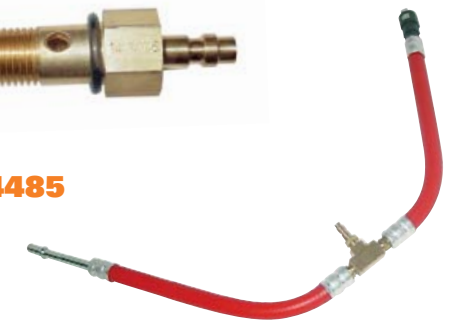
74425



74471



74485



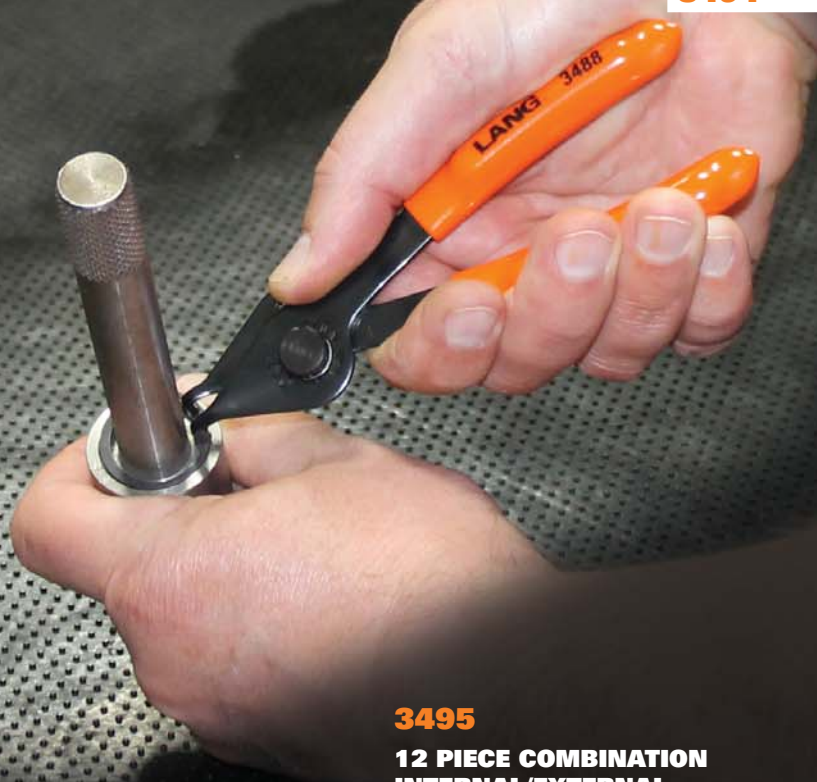
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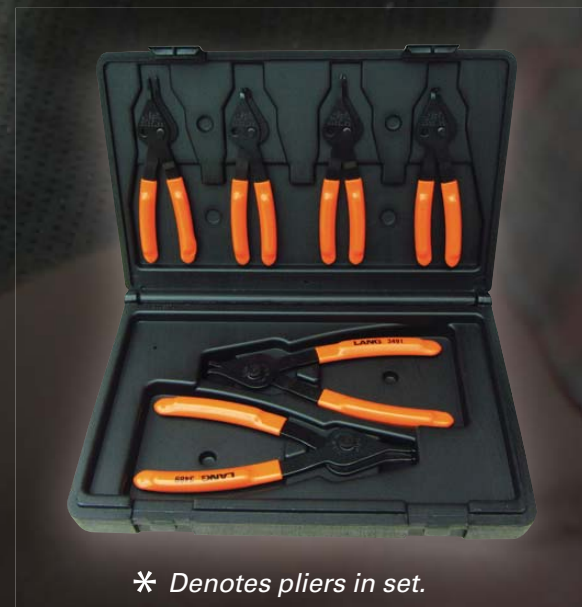
FIXED TIP RETAINING RING PLIERS

- Convertible for use on internal / external snap rings
- Cushioned grip handles
- Knurled center screw with spring for easy changing and secure hold
- Sets packaged in a plastic blow molded case for protection and easy use
- Individual pliers packaged in a plastic hanger

| Part No. | Tip Diameter (in.) | Tip Angle | Nominal length (in.) |
|----------|--------------------|-----------|----------------------|
| * 3483 | .038 | 0° | 6 |
| * 3484 | .038 | 45° | 6 |
| * 3485 | .038 | 90° | 6 |
| * 3486 | .047 | 0° | 6 |
| * 3487 | .047 | 45° | 6 |
| * 3488 | .047 | 90° | 6 |
| * 3489 | .070 | 0° | 7-1/2 |
| * 3490 | .070 | 45° | 7-1/2 |
| * 3491 | .070 | 90° | 7-1/2 |
| * 3492 | .090 | 0° | 9-1/4 |
| * 3493 | .090 | 45° | 9-1/4 |
| * 3494 | .090 | 90° | 9-1/4 |



3497
6 PIECE COMBINATION
INTERNAL/EXTERNAL
SNAP RING PLIERS SET



* Denotes pliers in set.

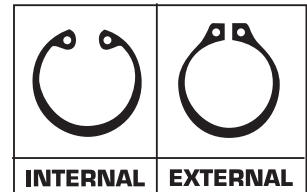
3495
12 PIECE COMBINATION
INTERNAL/EXTERNAL
SNAP RING PLIERS SET



| Part No. | Description | Ring Size | |
|----------|-------------|---------------|-------------|
| | | SAE (Inch) | Metric |
| 3495 | Internal | 3/8" - 3" | 10mm - 76mm |
| | External | 1/8" - 3-1/2" | 3mm - 89mm |
| 3497 | Internal | 3/8" - 2" | 10mm - 51mm |
| | External | 1/4" - 2" | 7mm - 51mm |

QUICK SWITCH CONVERTIBLE RETAINING RING PLIERS

- Convert between internal / external with a quick flip of a switch
- Eliminates the jaw aligning process
- Cushion grip, spring return handles
- Tip kit included with every pliers
- Patented



1421
QUICK SWITCH PLIERS WITH
ADJUSTABLE STOP AND TIP KIT

1434
QUICK SWITCH PLIERS
WITH TIP KIT

1435
QUICK SWITCH PLIERS WITH
ADJUSTABLE STOP AND TIP KIT

1450
2-PC. QUICK SWITCH
RETAINING RING PLIERS SET



- Contains Models: 1421 and 1434
- Tip Kits Include: color-coded, interchangeable tips and hex key

1485
HEAVY DUTY SNAP
RING PLIERS- INTERNAL



1486
HEAVY DUTY SNAP
RING PLIERS- EXTERNAL



75
QUICK SWITCH PLIERS WITH
AUTOMATIC RATCHET LOCK
AND TIP KIT



- Automatic ratchet lock feature keeps rings open or closed for easy installation and removal

1465
3-PC. QUICK SWITCH
RETAINING RING PLIERS SET



- Contains Models: 1421, 1434 & 75
- Tip Kits Include: color-coded, interchangeable tips and hex key

- Spring ratchet locking mechanism securely holds against snap ring tension
- Optional .120", 45° & 90° tips available (sold separately)

| Part No. | Description | Ring Size | |
|----------|-------------|------------------|--------------|
| | | SAE (Inch) | Metric |
| 1421 | Internal | 1/4" - 1" | 7mm - 26mm |
| | External | 1/8" - 1" | 3mm - 26mm |
| 1434 | Internal | 3/8" - 2" | 10mm - 51mm |
| | External | 1/4" - 2" | 7mm - 51mm |
| 1435 | Internal | 3/8" - 2" | 10mm - 51mm |
| | External | 1/4" - 2" | 7mm - 51mm |
| 75 | Internal | 1-13/16" - 4" | 46mm - 102mm |
| | External | 1-1/2" - 4" | 32mm - 102mm |
| 1450 | Internal | 1/4" - 2" | 7mm - 51mm |
| | External | 1/8" - 2" | 3mm - 51mm |
| 1465 | Internal | 1/4" - 4" | 7mm - 102mm |
| | External | 1/8" - 4" | 3mm - 102mm |
| 1485 | Internal | 3-1/16" - 6-1/4" | 78mm - 159mm |
| 1486 | External | 3-1/2" - 6-1/2" | 89mm - 165mm |

| Part No. | Tips | Tip Sizes | |
|----------|----------|--------------------------------|----------------------------|
| | | SAE (Inch) | Metric |
| 1421 | Straight | 0.023", 0.039", 0.047" | 0.6mm, 1.0mm, 1.2mm |
| | Bent 90° | 0.039", 0.047" | 1.0mm, 1.2mm |
| 1434 | Straight | 0.039", 0.047", 0.074" | 1.0mm, 1.2mm, 1.9mm |
| | Bent 90° | 0.039", 0.047" | 1.0mm, 1.2mm |
| 1435 | Straight | 0.039", 0.047", 0.074" | 1.0mm, 1.2mm, 1.9mm |
| | Bent 90° | 0.039", 0.047" | 1.0mm, 1.2mm |
| 75 | Bent 15° | 0.090", 0.108", 0.120" | 2.3mm, 2.7mm, 3.0mm |
| | Bent 70° | 0.090", 0.108", 0.120" | 2.3mm, 2.7mm, 3.0mm |
| | Straight | 0.023", 0.039", 0.047", 0.074" | 0.6mm, 1.0mm, 1.2mm, 1.9mm |
| 1450 | Bent 90° | 0.039", 0.047" | 1.0mm, 1.2mm |
| | Straight | 0.023", 0.039", 0.047", 0.074" | 0.6mm, 1.0mm, 1.2mm, 1.9mm |
| | Bent 15° | 0.090", 0.108", 0.120" | 2.3mm, 2.7mm, 3.0mm |
| 1465 | Bent 70° | 0.090", 0.108", 0.120" | 2.3mm, 2.7mm, 3.0mm |
| | Bent 90° | 0.039", 0.047" | 1.0mm, 1.2mm |
| | Straight | 0.023", 0.039", 0.047", 0.074" | 0.6mm, 1.0mm, 1.2mm, 1.9mm |
| 1485 | Straight | 0.120" | 3.0mm |
| 1486 | Straight | 0.120" | 3.0mm |

REPLACEABLE TIP PLIERS

87

HEAVY-DUTY PLIERS WITH TIP KIT



- Provides safe and stable service of extra large retaining rings
- Compound screw lever for easy ring installation and removal
- Durable heat treated alloy steel components provide reliability of use not available with other tools for servicing this range of rings

| Part No. | Description | Ring Size | |
|----------|-------------|-------------|--------------|
| | | SAE (Inch) | Metric |
| 87 | Internal | 3-1/2" - 7" | 90mm - 175mm |
| | External | 3-1/2" - 7" | 90mm - 175mm |

| Part No. | Tips | Tip Sizes | |
|----------|----------|------------------------|---------------------|
| | | SAE (Inch) | Metric |
| 87 | Bent 20° | 0.120", 0.150", 0.180" | 3.0mm, 3.8mm, 4.6mm |
| | Bent 72° | 0.120", 0.150", 0.180" | 3.0mm, 3.8mm, 4.6mm |

RETAINING RING PLIERS TIP KITS

| Part No. | Models | Tips | Tip Sizes | |
|----------|-----------|----------|------------------------|---------------------|
| | | | SAE (Inch) | Metric |
| 12 | 1421 | Straight | 0.023", 0.039", 0.047" | 0.6mm, 1.0mm, 1.2mm |
| | | Bent 90° | 0.039", 0.047" | 1.0mm, 1.2mm |
| 14 | 1434,1435 | Straight | 0.039", 0.047", 0.074" | 1.0mm, 1.2mm, 1.9mm |
| | | Bent 90° | 0.039", 0.047" | 1.0mm, 1.2mm |
| 6515 | 75 | Bent 15° | 0.090", 0.108", 0.120" | 2.3mm, 2.7mm, 3.0mm |
| 6590 | 75 | Bent 70° | 0.090", 0.108", 0.120" | 2.3mm, 2.7mm, 3.0mm |
| 651590 | 75 | Bent 15° | 0.090", 0.108", 0.120" | 2.3mm, 2.7mm, 3.0mm |
| | | Bent 70° | 0.090", 0.108", 0.120" | 2.3mm, 2.7mm, 3.0mm |
| 8600 | 1485,1486 | Straight | 0.120" | 3.0mm |
| 8645 | 1485,1486 | Bent 45° | 0.120" | 3.0mm |
| 8690 | 1485,1486 | Bent 90° | 0.120" | 3.0mm |
| 8720 | 87 | Bent 20° | 0.120", 0.150", 0.180" | 3.0mm, 3.8mm, 4.6mm |
| 8790 | 87 | Bent 72° | 0.120", 0.150", 0.180" | 3.0mm, 3.8mm, 4.6mm |

HOSE-PLIERS

145

HOSE PINCH-OFF PLIERS



- Eliminates the need to drain cooling system when servicing
- Squeezes hoses shut and jaws swivel for parallel clamping
- Pliers include automatic locking ratchet

3976

HOSE CLAMP PLIERS



- For flat type hose clamps
- Tips rotate to grip at any angle

3444

LARGE HOSE CLAMP PLIERS



- For use on flat type hose clamps
- Fine tooth locking ratchet
- For heavy-duty jobs

3975

HOSE CLAMP PLIERS



- For Corbin style hose clamps
- Slotted tips rotate to grip at any angle

3977

ANGLED HOSE CLAMP PLIERS



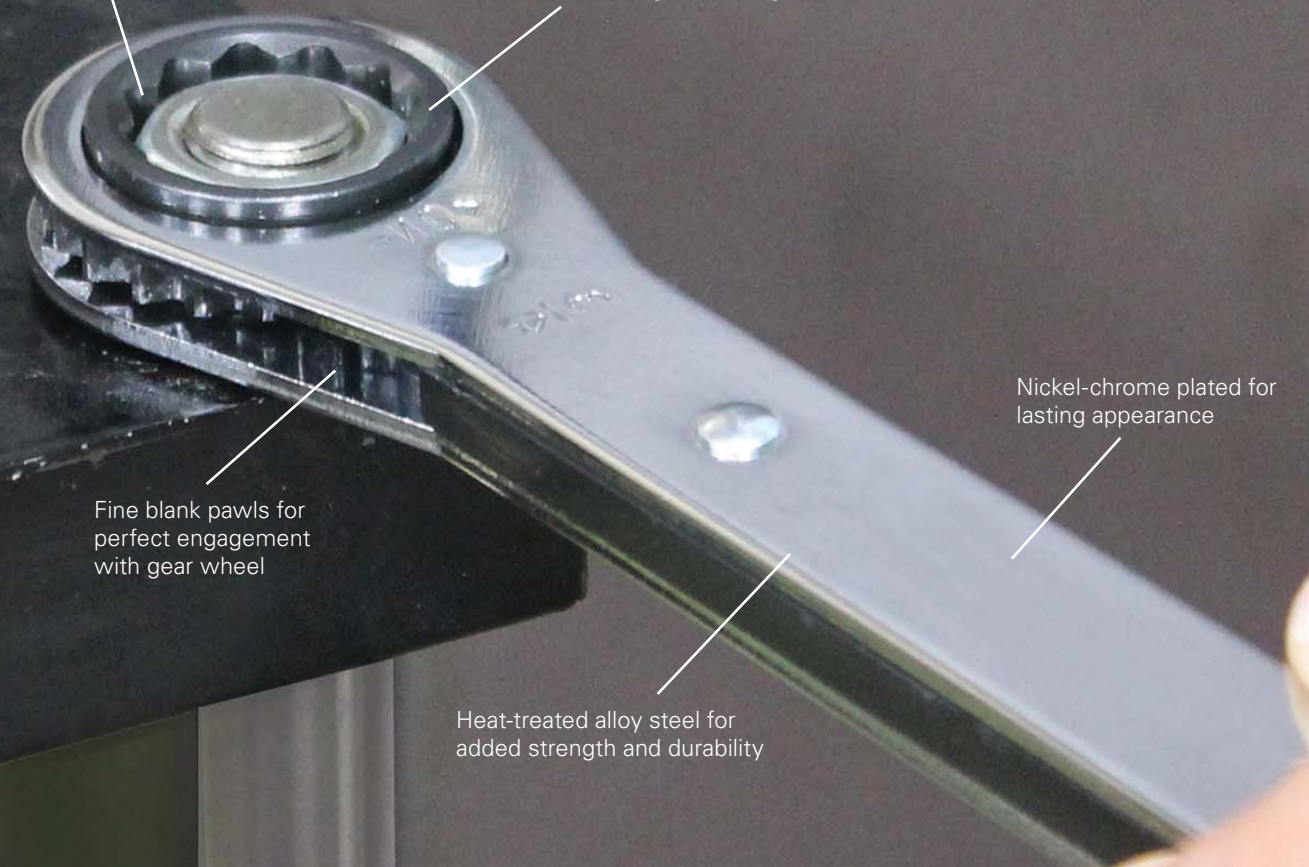
- For flat type hose clamps
- Angle feature provides easy access to clamps located in hard-to-reach areas

LET RATCHETING BOX WRENCHES SPEED UP YOUR JOB!

Those "hard-to-get-at" nuts and bolts are easy to turn with these top quality ratcheting box wrenches. Openings are accurately broached for that perfect non-slip fit. Critical parts are heat-treated to ensure safety and durability. Wrench handles are nickel-chrome plated for lasting quality and assurance. Exceeds torque capacity requirement of Federal specification ASME B107.100-2010 for ratcheting box wrenches.

Accurately broached sizes for perfect, no-slip fit

Alloy heat-treated gear wheel for strength and long life



Fine blank pawls for perfect engagement with gear wheel

Nickel-chrome plated for lasting appearance

Heat-treated alloy steel for added strength and durability

All Lang 6 & 12 point ratcheting box wrenches utilize the "torque grip system"

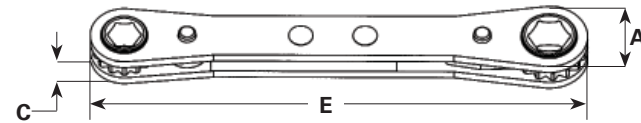


TORQUE GRIP



CONVENTIONAL

SAE FLAT



| EDP# | Part No. | Description | Point | Weight (Each) | Dimensions | | |
|------|----------|-------------|-------|------------------|------------|---|---|
| | | | | | A | C | E |

SAE FLAT INDIVIDUAL RATCHETING BOX WRENCHES

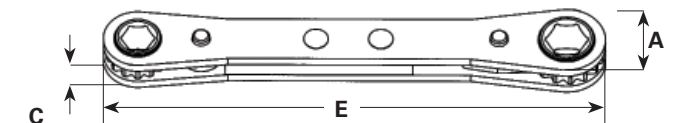
| | | | | | | | |
|--------|-----------|------------------|----|----------|-------------------|-------|--------|
| 5500 | RB-810* | 1/4" x 5/16" | 6 | .16 lbs. | 19/32"-43/64" | 3/8" | 4-1/2" |
| 5501 | RB-810DH | 1/4" x 5/16" | 12 | .12 | 19/32"-43/64" | 3/8" | 4-1/2" |
| 6500 | RB-1214* | 3/8" x 7/16" | 6 | .21 | 51/64"-57/64" | 3/8" | 5-1/2" |
| 6501 | RB-1214DH | 3/8" x 7/16" | 12 | .17 | 51/64"-57/64" | 3/8" | 5-1/2" |
| 7522** | 7522 | 3/8" x 1/2" | 6 | .30 | 1-1/64"-1-5/32" | 1/2" | 6-7/8" |
| 7514 | RB-1218 | 3/8" x 9/16" | 6 | .30 | 1-1/64"-1-5/32" | 1/2" | 6-7/8" |
| 7529 | RB-1218DH | 3/8" x 9/16" | 12 | .30 | 1-1/64"-1-5/32" | 1/2" | 6-7/8" |
| 7517 | RB-1416 | 7/16" x 1/2" | 6 | .30 | 1-1/64"-1-5/32" | 1/2" | 6-7/8" |
| 7518 | RB-1416DH | 7/16" x 1/2" | 12 | .30 | 1-1/64"-1-5/32" | 1/2" | 6-7/8" |
| 7500 | RB-1618* | 1/2" x 9/16" | 6 | .34 | 1-1/64"-1-5/32" | 1/2" | 6-7/8" |
| 7501 | RB-1618DH | 1/2" x 9/16" | 12 | .30 | 1-1/64"-1-5/32" | 1/2" | 6-7/8" |
| 8512 | RB-1820 | 9/16" x 5/8" | 12 | .46 | 1-19/64"-1-7/16" | 1/2" | 8-1/8" |
| 8513** | 8513 | 9/16" x 3/4" | 12 | .46 | 1-19/64"-1-7/16" | 1/2" | 8-1/8" |
| 8500 | RB-2022* | 5/8" x 11/16" | 12 | .50 | 1-19/64"-1-7/16" | 1/2" | 8-1/8" |
| 8501 | RB-2024 | 5/8" x 3/4" | 12 | .46 | 1-19/64"-1-7/16" | 1/2" | 8-1/8" |
| 9515 | RB-2224 | 11/16" x 3/4" | 12 | .46 | 1-13/32"-1-37/64" | 1/2" | 9-1/4" |
| 9501 | RB-2226 | 11/16" x 13/16" | 12 | .50 | 1-13/32"-1-37/64" | 1/2" | 9-1/4" |
| 9516 | RB-2228 | 11/16" x 7/8" | 12 | .50 | 1-13/32"-1-37/64" | 1/2" | 9-1/4" |
| 9518 | RB-2426 | 3/4" x 13/16" | 12 | .50 | 1-13/32"-1-37/64" | 1/2" | 9-1/4" |
| 9500 | RB-2428* | 3/4" x 7/8" | 12 | .54 | 1-13/32"-1-37/64" | 1/2" | 9-1/4" |
| 9520 | RB-2628 | 13/16" x 7/8" | 12 | .50 | 1-13/32"-1-37/64" | 1/2" | 9-1/4" |
| 9521 | RB-2630* | 13/16" x 15/16" | 12 | .54 | 1-13/32"-1-37/64" | 1/2" | 9-1/4" |
| 9601 | RB-3234 | 1" x 1-1/16" | 12 | 1.38 | 1-29/32"-2-17/64" | 9/16" | 15" |
| 9602 | RB-3436 | 1-1/16" x 1-1/8" | 12 | 1.38 | 1-29/32"-2-17/64" | 9/16" | 15" |
| 9604 | RB-3440 | 1-1/16" x 1-1/4" | 12 | 1.38 | 1-29/32"-2-17/64" | 9/16" | 15" |
| 9603 | RB-3638 | 1-1/8" x 1-3/16" | 12 | 1.38 | 1-29/32"-2-17/64" | 9/16" | 15" |
| 9608 | RB-3640 | 1-1/8" x 1-1/4" | 12 | 1.38 | 1-29/32"-2-17/64" | 9/16" | 15" |

SAE FLAT INDIVIDUAL AIRCRAFT RATCHETING BOX WRENCHES

| | | | | | | | |
|--------|------|----------------|----|----------|---------------|------|--------|
| 5508** | 5508 | 7/32" x 1/4" | 6 | .12 lbs. | 19/32"-43/64" | 3/8" | 4-1/2" |
| 5532** | 5532 | 1/4" x 9/32" | 6 | .12 | 19/32"-43/64" | 3/8" | 4-1/2" |
| 5516** | 5516 | 5/16" x 11/32" | 6 | .12 | 19/32"-43/64" | 3/8" | 4-1/2" |
| 5520** | 5520 | 1/4" x 11/32" | 6 | .12 | 19/32"-43/64" | 3/8" | 4-1/2" |
| 5526** | 5526 | 5/16" x 11/32" | 12 | .12 | 19/32"-43/64" | 3/8" | 4-1/2" |
| 5527** | 5527 | 7/32" x 11/32" | 12 | .12 | 19/32"-43/64" | 3/8" | 4-1/2" |
| 5528** | 5528 | 9/32" x 11/32" | 12 | .12 | 19/32"-43/64" | 3/8" | 4-1/2" |
| 5531** | 5531 | 1/4" x 9/32" | 12 | .12 | 19/32"-43/64" | 3/8" | 4-1/2" |

*Skin-packed ** Available only by special quote (with lead time and minimum order requirements)

METRIC FLAT



| EDP# | Part No. | Description | Point | Weight (Each) | Dimensions | | |
|------|----------|-------------|-------|------------------|------------|---|---|
| | | | | | A | C | E |

METRIC FLAT INDIVIDUAL RATCHETING BOX WRENCHES

| | | | | | | | |
|--------|------------|-------------|----|----------|-------------------|------|--------|
| 5504 | RBM-0708 | 7mm x 8mm | 6 | .12 lbs. | 19/32"-43/64" | 3/8" | 4-1/2" |
| 5506 | RBM-0708DH | 7mm x 8mm | 12 | .12 | 19/32"-43/64" | 3/8" | 4-1/2" |
| 5585** | 5585 | 6mm x 7mm | 12 | .12 | 19/32"-43/64" | 3/8" | 4-1/2" |
| 6585** | 6585 | 8mm x 9mm | 12 | .17 | 51/64"-57/64" | 3/8" | 5-1/2" |
| 6504 | RBM-0910 | 9mm x 10mm | 6 | .17 | 51/64"-57/64" | 3/8" | 5-1/2" |
| 6506 | RBM-0910DH | 9mm x 10mm | 12 | .17 | 51/64"-57/64" | 3/8" | 5-1/2" |
| 6507** | 6507 | 8mm x 10mm | 12 | .17 | 51/64"-57/64" | 3/8" | 5-1/2" |
| 7515 | RBM-1011DH | 10mm x 11mm | 12 | .30 | 1-1/64"-1-5/32" | 1/2" | 6-7/8" |
| 7504 | RBM-1112 | 11mm x 12mm | 6 | .30 | 1-1/64"-1-5/32" | 1/2" | 6-7/8" |
| 7509 | RBM-1112DH | 11mm x 12mm | 12 | .30 | 1-1/64"-1-5/32" | 1/2" | 6-7/8" |
| 7523 | RBM-1113 | 11mm x 13mm | 6 | .30 | 1-1/64"-1-5/32" | 1/2" | 6-7/8" |
| 7586 | RBM-1213DH | 12mm x 13mm | 12 | .30 | 1-1/64"-1-5/32" | 1/2" | 6-7/8" |
| 7524 | RBM-1214 | 12mm x 14mm | 6 | .30 | 1-1/64"-1-5/32" | 1/2" | 6-7/8" |
| 7506 | RBM-1314 | 13mm x 14mm | 6 | .30 | 1-1/64"-1-5/32" | 1/2" | 6-7/8" |
| 7510 | RBM-1314DH | 13mm x 14mm | 12 | .30 | 1-1/64"-1-5/32" | 1/2" | 6-7/8" |
| 8587 | RBM-1415 | 14mm x 15mm | 12 | .46 | 1-19/64"-1-7/16" | 1/2" | 8-1/8" |
| 8504 | RBM-1517 | 15mm x 17mm | 12 | .46 | 1-19/64"-1-7/16" | 1/2" | 8-1/8" |
| 8505 | RBM-1618 | 16mm x 18mm | 12 | .46 | 1-19/64"-1-7/16" | 1/2" | 8-1/8" |
| 9504 | RBM-1921 | 19mm x 21mm | 12 | .50 | 1-13/32"-1-37/64" | 1/2" | 9-1/4" |

** Available only by special quote (with lead time and minimum order requirements)

PORTABLE TOOL CADDY



5373

5-PIECE SAE RATCHETING BOX WRENCH SET

| Part No. | Description | Point |
|-----------|---------------|-------|
| RB-810DH | 1/4" x 5/16" | 12 |
| RB-1214DH | 3/8" x 7/16" | 12 |
| RB-1618DH | 1/2" x 9/16" | 12 |
| RB-2024 | 5/8" x 3/4" | 12 |
| RB-2228 | 11/16" x 7/8" | 12 |

5374

5-PIECE METRIC RATCHETING BOX WRENCH SET

| Part No. | Description | Point |
|------------|-------------|-------|
| RBM-0708DH | 7mm x 8mm | 12 |
| RBM-0910DH | 9mm x 10mm | 12 |
| RBM-1213DH | 12mm x 13mm | 12 |
| RBM-1415 | 14mm x 15mm | 12 |
| RBM-1921 | 19mm x 21mm | 12 |

VINYL POUCH

RB-312P EDP#5428

3 PC. 12 PT. SAE FLAT WRENCH SET



| Part No. | Description | Point |
|----------|--------------|-------|
| RB-1214 | 3/8" x 7/16" | 12 |
| RB-1618 | 1/2" x 9/16" | 12 |
| RB-2024 | 5/8" x 3/4" | 12 |

RB-5 EDP#5485

5-PIECE SAE FLAT WRENCH SET



| Part No. | Description | Point |
|----------|---------------|-------|
| RB-810 | 1/4" x 5/16" | 6 |
| RB-1214 | 3/8" x 7/16" | 6 |
| RB-1618 | 1/2" x 9/16" | 6 |
| RB-2022 | 5/8" x 11/16" | 12 |
| RB-2428 | 3/4" x 7/8" | 12 |

RB-6 EDP#5486

6-PIECE SAE FLAT WRENCH SET



| Part No. | Description | Point |
|----------|-----------------|-------|
| RB-810 | 1/4" x 5/16" | 6 |
| RB-1214 | 3/8" x 7/16" | 6 |
| RB-1618 | 1/2" x 9/16" | 6 |
| RB-2022 | 5/8" x 11/16" | 12 |
| RB-2428 | 3/4" x 7/8" | 12 |
| RB-2630 | 13/16" x 15/16" | 12 |

RB-3P EDP#5483

3-PIECE SAE FLAT WRENCH SET

| Part No. | Description | Point |
|----------|--------------|-------|
| RB-810 | 1/4" x 5/16" | 6 |
| RB-1214 | 3/8" x 7/16" | 6 |
| RB-1618 | 1/2" x 9/16" | 6 |

RBM-5 EDP#5490

5 PC. METRIC FLAT WRENCH SET

| Part No. | Description | Point |
|----------|-------------|-------|
| RBM-0708 | 7mm x 8mm | 6 |
| RBM-0910 | 9mm x 10mm | 6 |
| RBM-1113 | 11mm x 13mm | 6 |
| RBM-1214 | 12mm x 14mm | 6 |
| RBM-1517 | 15mm x 17mm | 12 |

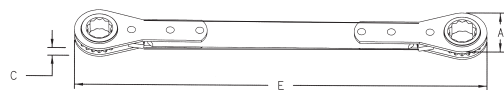
ROLL POUCH

RBM-7 EDP#5491

7 PC. METRIC FLAT WRENCH SET

| Part No. | Description | Point |
|----------|-------------|-------|
| RBM-0708 | 7mm x 8mm | 6 |
| RBM-0910 | 9mm x 10mm | 6 |
| RBM-1113 | 11mm x 13mm | 6 |
| RBM-1214 | 12mm x 14mm | 6 |
| RBM-1517 | 15mm x 17mm | 12 |
| RBM-1618 | 16mm x 18mm | 12 |
| RBM-1921 | 19mm x 21mm | 12 |

EXTRA LONG



| Part no. | Description | Point | Weight (Each) | Dimensions | | |
|----------|-------------|-------|---------------|------------|---|---|
| | | | | A | C | E |

SAE INDIVIDUAL LARGE RATCHETING BOX WRENCHES

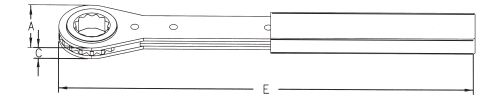
| | | | | | | |
|------|---------------|----|----------|-------------------|-------|-----|
| 6660 | 1/4" x 5/16" | 12 | .30 lbs. | 51/64"-57/64" | 3/8" | 8" |
| 7660 | 3/8" x 7/16" | 12 | .70 | 1-1/64"-1-5/32" | 1/2" | 10" |
| 7661 | 1/2" x 9/16" | 12 | .70 | 1-1/64"-1-5/32" | 1/2" | 10" |
| 8660 | 5/8" x 11/16" | 12 | .80 | 1-19/64"-1-7/16" | 1/2" | 12" |
| 9660 | 3/4" x 7/8" | 12 | .90 | 1-29/32"-2-17/64" | 9/16" | 14" |

METRIC INDIVIDUAL LARGE RATCHETING BOX WRENCHES

| | | | | | | |
|------|-------------|----|----------|-------------------|-------|-----|
| 6665 | 8mm x 10mm | 12 | .30 lbs. | 51/64"-57/64" | 3/8" | 8" |
| 7665 | 12mm x 14mm | 12 | .70 | 1-1/64"-1-5/32" | 1/2" | 10" |
| 8665 | 13mm x 15mm | 12 | .80 | 1-19/64"-1-7/16" | 1/2" | 12" |
| 8666 | 17mm x 19mm | 12 | .80 | 1-19/64"-1-7/16" | 1/2" | 12" |
| 9665 | 18mm x 21mm | 12 | .90 | 1-29/32"-2-17/64" | 9/16" | 14" |

LARGE RATCHETING BOX WRENCHES

For Heavy Duty Equipment and Industrial Applications



- Built for those tough jobs where lots of torque, leverage & durability are required
 - Requires less effort than a conventional combination wrench
- Great for: Agricultural, construction, utility, mining, industrial equipment and much more!

| EDP# | Part No. | Description | Point | Weight (Each) | Dimensions | | |
|------|----------|-------------|-------|---------------|------------|---|---|
| | | | | | A | C | E |

SAE INDIVIDUAL LARGE RATCHETING BOX WRENCHES

| | | | | | | | |
|------|-------|----------|----|----------|--------|------|---------|
| 9630 | RB-42 | 1-5/16" | 12 | 3.2 lbs. | 2-3/4" | 5/8" | 15-1/2" |
| 9631 | RB-44 | 1-3/8" | 12 | 3.2 | 2-3/4" | 5/8" | 15-1/2" |
| 9632 | RB-46 | 1-7/16" | 12 | 3.2 | 2-3/4" | 5/8" | 15-1/2" |
| 9633 | RB-48 | 1-1/2" | 12 | 3.2 | 2-3/4" | 5/8" | 15-1/2" |
| 9634 | RB-50 | 1-9/16" | 12 | 3.2 | 2-3/4" | 5/8" | 15-1/2" |
| 9635 | RB-52 | 1-5/8" | 12 | 3.2 | 2-3/4" | 5/8" | 15-1/2" |
| 9650 | RB-54 | 1-11/16" | 12 | 4.1 | 3-3/8" | 5/8" | 19" |
| 9651 | RB-56 | 1-3/4" | 12 | 4.1 | 3-3/8" | 5/8" | 19" |
| 9652 | RB-58 | 1-13/16" | 12 | 4.1 | 3-3/8" | 5/8" | 19" |
| 9653 | RB-60 | 1-7/8" | 12 | 4.1 | 3-3/8" | 5/8" | 19" |
| 9654 | RB-64 | 2" | 12 | 4.1 | 3-3/8" | 5/8" | 19" |
| 9655 | RB-68 | 2-1/8" | 12 | 4.1 | 3-3/8" | 5/8" | 19" |

METRIC INDIVIDUAL LARGE RATCHETING BOX WRENCHES

| | | | | | | | |
|------|--------|------|----|----------|----------|-------|---------|
| 9620 | RBM-22 | 22mm | 12 | 1.0 lbs. | 1-15/16" | 9/16" | 12" |
| 9623 | RBM-23 | 23mm | 12 | 1.0 | 1-15/16" | 9/16" | 12" |
| 9622 | RBM-24 | 24mm | 12 | 1.0 | 1-15/16" | 9/16" | 12" |
| 9624 | RBM-25 | 25mm | 12 | 1.0 | 1-15/16" | 9/16" | 12" |
| 9625 | RBM-26 | 26mm | 12 | 1.0 | 1-15/16" | 9/16" | 12" |
| 9626 | RBM-27 | 27mm | 12 | 1.0 | 1-15/16" | 9/16" | 12" |
| 9627 | RBM-29 | 29mm | 12 | 1.0 | 1-15/16" | 9/16" | 12" |
| 9629 | RBM-30 | 30mm | 12 | 1.0 | 1-15/16" | 9/16" | 12" |
| 9640 | RBM-32 | 32mm | 12 | 3.2 | 2-3/4" | 5/8" | 15-1/2" |
| 9641 | RBM-36 | 36mm | 12 | 3.2 | 2-3/4" | 5/8" | 15-1/2" |

OFFSET E-Z GRIP

- Our offset E-Z GRIP ratcheting box wrenches combine the speed of a ratcheting box wrench with the comfort of a screwdriver-style handle to create the ultimate fastener turning tool
- Easy thumb-operated reversing lever especially useful for bench type repetitive applications

| EDP# | Part No. | Size | Point | Length | Wt. (ea.) | EDP# | Part No. | Size | Point | Length | Wt. (ea.) |
|------|----------|------|-------|--------|-----------|------|----------|------|-------|--------|-----------|
|------|----------|------|-------|--------|-----------|------|----------|------|-------|--------|-----------|

SAE OFFSET RATCHETING BOX WRENCHES

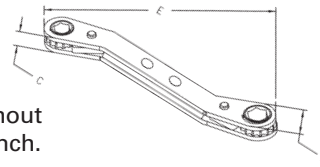
| | | | | | |
|------|--------|--------|----|--------|----------|
| 6789 | ROW-08 | 1/4" | 6 | 5-1/2" | .25 lbs. |
| 6790 | ROW-10 | 5/16" | 6 | 5-1/2" | .25 |
| 6791 | ROW-12 | 3/8" | 6 | 5-1/2" | .25 |
| 6792 | ROW-14 | 7/16" | 6 | 5-1/2" | .25 |
| 7791 | ROW-16 | 1/2" | 6 | 6-3/4" | .43 |
| 7792 | ROW-18 | 9/16" | 6 | 7" | .43 |
| 8791 | ROW-20 | 5/8" | 12 | 7-3/4" | .50 |
| 8792 | ROW-22 | 11/16" | 12 | 8" | .56 |
| 9791 | ROW-24 | 3/4" | 12 | 8-3/4" | .56 |
| 9792 | ROW-28 | 7/8" | 12 | 9" | .62 |

METRIC OFFSET RATCHETING BOX WRENCHES

| | | | | | |
|------|---------|------|----|--------|----------|
| 6794 | ROWM-08 | 8mm | 6 | 5-1/2" | .25 lbs. |
| 6795 | ROWM-9 | 9mm | 6 | 5-1/2" | .25 |
| 6796 | ROWM-10 | 10mm | 6 | 5-1/2" | .25 |
| 7795 | ROWM-11 | 11mm | 6 | 6-3/4" | .43 |
| 7796 | ROWM-12 | 12mm | 6 | 6-3/4" | .43 |
| 7797 | ROWM-13 | 13mm | 6 | 6-3/4" | .43 |
| 7798 | ROWM-14 | 14mm | 6 | 7" | .50 |
| 8795 | ROWM-15 | 15mm | 12 | 7-3/4" | .50 |
| 8796 | ROWM-16 | 16mm | 12 | 7-3/4" | .50 |
| 8797 | ROWM-17 | 17mm | 12 | 8" | .56 |
| 8798 | ROWM-18 | 18mm | 12 | 8" | .56 |

SAE OFFSET

The 25° angle at each end of these wrenches allows reach to those tight applications without scraping knuckles, and still provided the speed and convenience of a ratcheting box wrench. Reverse direction by simply flipping the reversing lever



| EDP# | Part No. | Description | Point | Weight (Each) | Dimensions | | |
|------|----------|-------------|-------|---------------|------------|---|---|
| | | | | | A | C | E |

SAE OFFSET INDIVIDUAL RATCHETING BOX WRENCHES

| | | | | | | | |
|--------|------------|-----------------|----|----------|-------------------|------|---------|
| 5700 | ROW-0810* | 1/4" x 5/16" | 6 | .16 lbs. | 19/32"-43/64" | 3/8" | 4-1/4" |
| 5701 | ROW-0810DH | 1/4" x 5/16" | 12 | .13 | 19/32"-43/64" | 3/8" | 4-1/4" |
| 6700 | ROW-1214* | 3/8" x 7/16" | 6 | .24 | 51/64"-57/64" | 3/8" | 5-7/16" |
| 6701 | ROW-1214DH | 3/8" x 7/16" | 12 | .20 | 51/64"-57/64" | 3/8" | 5-7/16" |
| 7717** | 7717 | 7/16" x 1/2" | 6 | .30 | 1-1/64"-1-5/32" | 1/2" | 6-3/4" |
| 7700 | ROW-1618* | 1/2" x 9/16" | 6 | .34 | 1-1/64"-1-5/32" | 1/2" | 6-3/4" |
| 7701 | ROW-1618DH | 1/2" x 9/16" | 12 | .30 | 1-1/64"-1-5/32" | 1/2" | 6-3/4" |
| 8712** | 8712 | 9/16" x 5/8" | 12 | .44 | 1-19/64"-1-7/16" | 1/2" | 8" |
| 8713** | 8713 | 9/16" x 3/4" | 12 | .44 | 1-19/64"-1-7/16" | 1/2" | 8" |
| 8700 | ROW-2022A | 5/8" x 11/16" | 12 | .44 | 1-19/64"-1-7/16" | 1/2" | 8" |
| 8701 | ROW-2024* | 5/8" x 3/4" | 12 | .48 | 1-19/64"-1-7/16" | 1/2" | 8" |
| 9701** | 9701 | 11/16" x 13/16" | 12 | .51 | 1-13/32"-1-37/64" | 1/2" | 9-1/8" |
| 9781 | ROW-2228 | 11/16" x 7/8" | 12 | .51 | 1-13/32"-1-37/64" | 1/2" | 9-1/8" |
| 9700 | ROW-2428* | 3/4" x 7/8" | 12 | .55 | 1-13/32"-1-37/64" | 1/2" | 9-1/8" |
| 9721 | ROW-2630 | 13/16" x 15/16" | 12 | .51 | 1-13/32"-1-37/64" | 1/2" | 9-1/8" |

SAE OFFSET INDIVIDUAL AIRCRAFT RATCHETING BOX WRENCHES

| | | | | | | | |
|--------|------------|----------------|----|----------|---------------|------|--------|
| 5709** | 5709 | 7/32" x 9/32" | 12 | .13 lbs. | 19/32"-43/64" | 3/8" | 4-1/4" |
| 5717 | ROW-1011DH | 5/16" x 11/32" | 12 | .13 | 19/32"-43/64" | 3/8" | 4-1/4" |

*Skin-packed ** Available only by special quote (with lead time and minimum order requirements)

METRIC OFFSET

| EDP# | Part No. | Description | Point | Weight (Each) | Dimensions | | |
|------|----------|-------------|-------|---------------|------------|---|---|
| | | | | | A | C | E |

METRIC OFFSET INDIVIDUAL RATCHETING BOX WRENCHES

| | | | | | | | |
|------|-------------|-------------|----|----------|-------------------|------|---------|
| 5704 | ROWM-0708A | 7mm x 8mm | 6 | .12 lbs. | 19/32"-43/64" | 3/8" | 4-1/4" |
| 5706 | ROWM-0708DH | 7mm x 8mm | 12 | .12 | 19/32"-43/64" | 3/8" | 4-1/4" |
| 6704 | ROWM-0910* | 9mm x 10mm | 6 | .17 | 51/64"-57/64" | 3/8" | 5-7/16" |
| 6705 | ROWM-0910DH | 9mm x 10mm | 12 | .17 | 51/64"-57/64" | 3/8" | 5-7/16" |
| 7704 | ROWM-1112 | 11mm x 12mm | 6 | .30 | 1-1/64"-1-5/32" | 1/2" | 6-3/4" |
| 7705 | ROWM-1112DH | 11mm x 12mm | 12 | .30 | 1-1/64"-1-5/32" | 1/2" | 6-3/4" |
| 7723 | ROWM-1113* | 11mm x 13mm | 6 | .30 | 1-1/64"-1-5/32" | 1/2" | 6-3/4" |
| 7786 | ROWM-1213DH | 12mm x 13mm | 12 | .30 | 1-1/64"-1-5/32" | 1/2" | 6-3/4" |
| 7724 | ROWM-1214* | 12mm x 14mm | 6 | .30 | 1-1/64"-1-5/32" | 1/2" | 6-3/4" |
| 7706 | ROWM-1314 | 13mm x 14mm | 6 | .30 | 1-1/64"-1-5/32" | 1/2" | 6-7/8" |
| 7710 | ROWM1314DH | 13mm x 14mm | 12 | .30 | 1-1/64"-1-5/32" | 1/2" | 6-3/4" |
| 8787 | ROWM-1415 | 14mm x 15mm | 12 | .46 | 1-19/64"-1-7/16" | 1/2" | 8" |
| 8704 | ROWM-1517 | 15mm x 17mm | 12 | .46 | 1-19/64"-1-7/16" | 1/2" | 8" |
| 8705 | ROWM-1618 | 16mm x 18mm | 12 | .46 | 1-19/64"-1-7/16" | 1/2" | 8" |
| 9704 | ROWM-1921 | 19mm x 21mm | 12 | .50 | 1-13/32"-1-37/64" | 1/2" | 9-1/8" |

*Skin-packed ** Available only by special quote (with lead time and minimum order requirements)

PORTABLE TOOL CADDY

5362

5-PIECE SAE OFFSET CADDY WRENCH SET

| Part No. | Description | Point |
|------------|---------------|-------|
| ROW-0810DH | 1/4" x 5/16" | 12 |
| ROW-1214DH | 3/8" x 7/16" | 12 |
| ROW-1618DH | 1/2" x 9/16" | 12 |
| ROW-2024 | 5/8" x 3/4" | 12 |
| ROW-2228 | 11/16" x 7/8" | 12 |

5363

5-PIECE METRIC OFFSET CADDY WRENCH SET

| Part No. | Description | Point |
|-------------|-------------|-------|
| ROWM-0708DH | 7mm x 8mm | 12 |
| ROWM-0910DH | 9mm x 10mm | 12 |
| ROWM-1213DH | 12mm x 13mm | 12 |
| ROWM-1415 | 14mm x 15mm | 12 |
| ROWM-1921 | 19mm x 21mm | 12 |



ROLL POUCH

ROWM-7P EDP#5497

7 PC. METRIC OFFSET WRENCH SET

| Part No. | Description | Point |
|-----------|-------------|-------|
| ROWM-0708 | 7mm x 8mm | 6 |
| ROWM-0910 | 9mm x 10mm | 6 |
| ROWM-1113 | 11mm x 13mm | 6 |
| ROWM-1214 | 12mm x 14mm | 6 |
| ROWM-1517 | 15mm x 17mm | 12 |
| ROWM-1618 | 16mm x 18mm | 12 |
| ROWM-1921 | 19mm x 21mm | 12 |



VINYL POUCH

ROW-3 EDP#5493

3-PC. SAE OFFSET WRENCH SET

| Part No. | Description | Point |
|----------|--------------|-------|
| ROW-0810 | 1/4" x 5/16" | 6 |
| ROW-1214 | 3/8" x 7/16" | 6 |
| ROW-1618 | 1/2" x 9/16" | 6 |



VINYL POUCH

ROW-5 EDP#5495

5-PC. SAE OFFSET WRENCH SET

| Part No. | Description | Point |
|----------|---------------|-------|
| ROW-0810 | 1/4" x 5/16" | 6 |
| ROW-1214 | 3/8" x 7/16" | 6 |
| ROW-1618 | 1/2" x 9/16" | 6 |
| ROW-2022 | 5/8" x 11/16" | 12 |
| ROW-2428 | 3/4" x 7/8" | 12 |



ROWM-5 EDP#5496

5 PC. METRIC OFFSET WRENCH SET

| Part No. | Description | Point |
|-----------|-------------|-------|
| ROWM-0708 | 7mm x 8mm | 6 |
| ROWM-0910 | 9mm x 10mm | 6 |
| ROWM-1113 | 11mm x 13mm | 6 |
| ROWM-1214 | 12mm x 14mm | 6 |
| ROWM-1517 | 15mm x 17mm | 12 |



BIT WRENCH SETS WITH MAGNETIC BIT RETENTION

- Use with any 1/4" drive bit as a ratcheting screwdriver or a 1/4" adapter enabling use of a 1/4" socket to access restricted applications
- Readily accessible reversing lever for one-hand use
- Raised knurl design allows fingertip control for loose screws

5220
7-PC. FINE TOOTH BIT WRENCH SET



5278
7-PC. RATCHETING SCREWDRIVER BIT WRENCH SET



5370
5-PC. OFFSET RATCHETING SCREWDRIVER BIT WRENCH SET



5221
5-PC. FINE TOOTH BIT WRENCH SET



5345
5-PC. REVERSE OFFSET RATCHETING SCREWDRIVER BIT WRENCH SET



5382
2-PC. FINE TOOTH BIT WRENCH SET



5222
6-PC. FINGER RATCHET BIT DRIVER



5222: 6-Piece Finger Ratchet Bit Driver

| Part No. | 5° Ratchet Flat | 5° Ratchet Offset | 5° Reverse Ratchet Offset | 5° Finger Ratchet | Flat | Offset | Reverse | #1 Phillips | #2 Phillips | 6-8" Slotted | 8-10" Slotted | 1/4" Adapter | Extender |
|----------|-----------------|-------------------|---------------------------|-------------------|------|--------|---------|-------------|-------------|--------------|---------------|--------------|----------|
| 5220 | • | • | • | | | | | • | • | • | • | | |
| 5221 | | • | | | | | | • | • | • | • | | |
| 5222 | | | | • | | | | • | • | • | • | • | • |
| 5278 | | | | | • | • | • | • | • | • | • | | |
| 5345 | | | | | | | • | • | • | • | • | | |
| 5370 | | | | | | • | | • | • | • | • | | |
| 5382 | | • | | | | | | | | | | • | |

SET INCLUDES A VARIETY OF 32 BITS:

1/4" TORX® BITS: T-10, T-15, T-20, T-25, T-27, T-30, T40, T45, T50

PHILLIPS® BITS: P1, P2

HEX BITS: 5/64", 3/32", 7/64", 1/8", 9/64", 7/32", 1/4", 5/32", 3/16"

POZIDRIV® BITS: PZ-1, PZ-2

CLUTCH BITS: C2, C3, C4

SLOTTED BITS: 4-5, 6-8, 8-10

ROBERTSON BITS: R-1, R-2, R-3

1/4" ADAPTER

5457
35-PC. RATCHETING SCREWDRIVER BIT WRENCH SET



2 WRENCH DRIVERS:
1 magnetic 1/4" extension
The double end design on both will accommodate 1/4" and 5/16" drive bits

One ratcheting wrench is flat and the other is offset 25°

SQUARE DRIVE

Air Conditioning and Refrigerator Ratcheting Box Wrenches

- Specifically designed for servicing automotive, commercial and home air conditioners, refrigeration units and freezers
- Reversing feature on both ends
- Four sizes in each wrench

9902A
1/4" X 3/16" SQ. X 9/16" X 1/2" 6-PT. AC AND REFRIGERATION WRENCH



9903A
3/8" X 5/16" SQ. X 1/4" X 3/16" SQ. AC AND REFRIGERATION WRENCH



9907A
3/8" X 5/16" SQ. X 1/4" X 3/16" SQ. OFFSET AC AND REFRIGERATION WRENCH



| Part No. | 4-in-1 ratchet sizes | Length |
|----------|---|---------|
| 9902A | 1/4" x 3/16" square X 1/2" x 9/16" 6-pt. | 7" |
| 9903A | 3/8" x 5/16" X 1/4" x 3/16" square | 5-1/2" |
| 9907A | 3/8" x 5/16" X 1/4" x 3/16" square OFFSET | 5-7/32" |



9903A: 3/8" x 5/16" Sq. x 1/4" x 3/16" Sq. Wrench

MECHANIC MATS AND KNEELING PADS

- Will not breakdown under harsh chemicals, including the harsh oils used in the automotive/aircraft industry
- Customer name and logo can be marked on the pads (Minimum required)
- Sold in 5-packs only

1160
FOAM KNEELING PAD-SMALL



• Size: 8-5/8" x 13"

1167
FOAM MECHANICS FLOOR MAT



• Size: 15-1/2" x 38-1/2"; laminated closed cell foam

1174
FOAM KNEELING PAD - MEDIUM (MULTIPLE COLORS)



• 5 large (10" x 19") kneeling pads in the color assortment as follows: (1) red, (1) yellow, (1) green, (1) blue and (1) orange

13800
DIGITAL THERMOMETER



- Foldout stainless steel probe
- Magnetic mount for hands-free use
- Large, easy-to-read display
- Min/Max
- -58°F to 572°F

13803
AUTOMOTIVE DIGITAL MULTIMETER



- ACV/DCV, ACA/DCA, resistance, diode, frequency, continuity, temperature
- Duty cycle and dwell reading
- RPM measurement
- Ruggedized design
- Inductive pickup/carrying case/thermocouple probe/test leads

13808
CAT IV CLAMP METER



- DC and AC clamp-on current measurement to 600A
- 1000V DC/ 750V AC voltage ranges
- Cat IV Rated for HEV diagnostics
- High resolution (0.01A), full function clamp meter
- Check starter or charging current
- Check voltage drops, capturing minimum or maximum values

13801
IP54 INFRARED THERMOMETER



- IP54 Splash proof certification
- 12:1 distance/spot ratio
- Min/Max, diff and lock
- Backlit display
- -76°F to 1022°F

13804
CAT IV DIGITAL MULTIMETER



- Cat IV 600/Cat III 1000V for HEV work
- High accuracy standard DMM
- Fuel injector pulse width testing
- RPM measurements with included inductive pick-up
- Limited Lifetime Warranty

13809
BASIC CATIII DMM



- DC and AC Voltage to 600V
- 2M ohm resistance
- 10A DC Current
- Preform basic voltage and resistance measurement
- Audible continuity for checking switches and fuses
- Cat III 600V safety rating

13802
INFRARED THERMOMETER



- UV worklight
- 12:1 distance/spot ratio
- Backlit display
- Max value capture
- -58°F to 1200°F

13805
DIGITAL STORAGE OSCILLOSCOPE/GMM



- Two-Channel, 20 Mega-sample/second sample rate
- Preset standard sensor/actuator/ignition waveforms
- Full auto signal capture
- Glitch mode to capture single events
- Complete kit with two shielded test leads, ground lead extension, standard tips, back-probe tips, alligator tips, capacitive pick-up, inductive (triggering) pick-up, AC Adapter, soft-sided carrying case

13810
CAT IV WIRELESS CLAMP/ VOLT METER



- Wireless High Amps, Low Amps, and Voltage in one complete kit
- View readings remote on your smartphone or tablet
- mA resolution for parasitic current drain
- High current clamp for starter and charging current
- DC /AC Volts for checking voltage drops while under load
- Cat IV rated safety for use with HEV diagnostics

REPLACEMENT PARTS

- | | | | | | | |
|--|--|--|--|--|--|--|
| <p>13902 POUCH</p> <ul style="list-style-type: none"> • Pouch for 13802 | <p>13908 INDUCTIVE PICKUP</p> <ul style="list-style-type: none"> • Inductive pickup for 13803 and 13804 | <p>13909 PROTECTIVE CASE</p> <ul style="list-style-type: none"> • Protective case for 13803 and 13804 | <p>13910 TEMPERATURE ADAPTER</p> <ul style="list-style-type: none"> • Temperature adapter for 13803 | <p>13912 TEST LEADS</p> <ul style="list-style-type: none"> • Test leads for 13803 and 13804 | <p>13914 TEMPERATURE PROBE</p> <ul style="list-style-type: none"> • K-type thermocouple probe for 13803 and 13804 | <p>13915 UNIVERSAL HANGER & MAGNET</p> <ul style="list-style-type: none"> • Universal hanger & magnet for 13804 • Adjustable strap |
|--|--|--|--|--|--|--|

FEATURES

- Used for testing electrical circuits in cars, trailers, boats and more
- Retractable test leads pull out and stay at desired length and rewind into its own protective case when not in use
- 18 gauge copper wire with insulated alligator clips
- Different color wires for easy identification
- Maximum amperage: 10 AMPS fully unwound, 6 AMPS wound

1129
RETRACTABLE TEST LEADS - 3 LEADS X 10 FT.



1137
RETRACTABLE TEST LEADS - 2 LEADS X 30-FT.



1175
RETRACTABLE TEST LEADS - 2 LEADS X 15 FT. WITH BANANA PLUGS



1130
RETRACTABLE TEST LEADS - 1 LEAD X 30 FT.



1138
MAGNETIC RETRACTABLE TEST LEADS - 2 LEADS X 30-FT.



1176
7-PIECE RETRACTABLE TEST LEAD SET



1135
MAGNETIC RETRACTABLE TEST LEADS - 3 LEADS X 10-FT.



1140
RETRACTABLE TEST LEADS - 2 LEADS X 10 FT.



- Use with any multimeters with steel banana jack connectors

Includes: One 2 x 15-ft. test lead with banana plugs (1175), one pair of test probes (1170R), one pair of alligator clips (1167R), and one pair of spring hooks (1173R)

REPLACEMENT PARTS

- | | | | |
|---|---|--|--|
| <p>1167R REPLACEMENT ALLIGATOR CLIPS FOR 1176</p> | <p>1170R REPLACEMENT TEST PROBES FOR 1176</p> | <p>1173R REPLACEMENT SPRING HOOKS FOR 1176</p> | <p>1174R REPLACEMENT SET - ALLIGATOR CLIPS, TEST PROBES & SPRING HOOKS</p> |
|---|---|--|--|

DIES

For quick, on-the-job repairs of damaged threads on bolts and studs. Chase out damaged threads and remove nicks and burrs without undercutting good threads. Rethreading dies are highly tempered for strength and durability, and are 6-pt. shaped for use with socket or wrench. Dies are color-coded for quick visual identification. Use with standard wrench and light oil. Never use to cut new threads. (See chart on page 46 for sizes included in sets.)

2590
7-PC. SAE COARSE THREAD RESTORER DIE SET



2592
7-PC. SAE FINE THREAD RESTORER DIE SET



2594
5-PC. METRIC THREAD RESTORER DIE SET



2579
8-PIECE FRACTIONAL AND METRIC SPINDLE RETHREADER SET



2577
8-PC. FLOATING AXLE HOUSING THREAD RESTORER KIT



2583
7-PC. WHEEL STUD THREAD RESTORER KIT



2599
20-PC. SPINDLE THREAD RESTORER DIE SET



801
7-PC. ATV AXLE END THREAD RESTORER KIT



TAPS

For repair of damaged internal threads on nuts. Chase out damaged threads and remove nicks and burrs without undercutting good threads. Rethreading taps are highly tempered for strength and durability, and are 6-pt. shaped for use with a socket or wrench. Taps are color-coded for quick visual identification. Use with standard wrench and light oil. Never use to cut new threads. (See chart on page 46 for sizes included in sets.)

2585
6-PC. SAE COARSE THREAD RESTORER TAP SET



2586
6-PC. NF THREAD RESTORER TAP SET



2588
6-PC. METRIC THREAD RESTORER TAP SET



FILES

Restores damaged external threads, any diameter, right or left hand. Just select the proper number of threads per inch or millimeters per thread, and overlapping several good threads, work over the area using regular file strokes. Rethreading files are highly tempered for strength and durability. Packaged in a reusable pouch. (See chart on page 46 for pitch sizes included.)

2665
THREAD RESTORER FILE 8 PITCHES 11-24 TPI



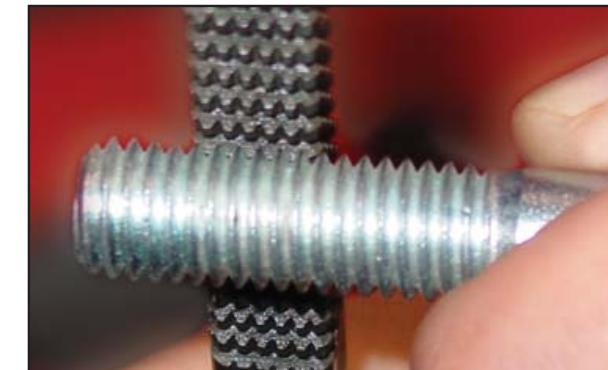
2666
THREAD RESTORER FILE 8 PITCHES 9-32 TPI



2670
METRIC THREAD FILE 8 PITCHES 0.75MM-3.0MM



2573
3-PC. THREAD RESTORER FILE SET



2665: Thread Restorer File

KITS

2581
26-PC. THREAD RESTORER TAP AND DIE SET



2584
15-PC. METRIC THREAD RESTORER SET



Both of these sets are packaged in a high-impact styrene tray with clear cover for display and storage. (See chart on page 46 for sizes included in sets.)

971
48 PC. SAE AND METRIC THREAD RESTORER KIT



972
40 PC. SAE AND METRIC THREAD RESTORER KIT



Both of these sets are packaged in a plastic blow molded case for protection and easy use. (See chart on page 46 for sizes included in sets.)

| | Die Part Numbers | Tap Part Numbers | Size | 801 | | 971 | | 972 | | 2573 | 2577 | 2579 | 2581 | | 2583 | | 2584 | | 2585 | 2586 | 2588 | 2590 | 2592 | 2594 | 2599 | |
|-----------------|------------------|--|-------------|-----|-----|-----|-----|-----|-----|------|------|------|------|-----|------|-----|------|-----|------|------|------|------|------|------|------|-----|
| | | | | Die | Tap | Die | Tap | Die | Tap | Die | Tap | Die | Tap | Die | Tap | Die | Tap | Die | Tap | Die | Tap | Die | Tap | Die | Tap | Die |
| NATIONAL COARSE | 51-2625-0005 | 50-2600-0005 | 1/4"-20 | • | • | • | • | | | | | | • | • | | | | | • | | | • | | | | |
| | 51-2626-0005 | 50-2601-0005 | 5/16"-18 | • | • | • | • | | | | | | • | • | | | | | • | | | • | | | | |
| | 51-2627-0005 | 50-2602-0005 | 3/8"-16 | • | • | • | • | | | | | | • | • | | | | | • | | | • | | | | |
| | 51-2628-0005 | 50-2603-0005 | 7/16"-14 | • | • | • | • | | | | | | • | • | | | | | • | | | • | | | | |
| | 51-2629-0005 | 50-2604-0005 | 1/2"-13 | • | • | • | • | | | | | | • | • | | | | | • | | | • | | | | |
| | 51-2630-0005 | 50-2605-0005 | 9/16"-12 | • | • | • | • | | | | | | • | • | | | | | • | | | • | | | | |
| | 51-2631-0005 | | 5/8"-11 | • | | • | | | | | | | • | | | | | | • | | | • | | | | |
| | 51-2632-0005 | | 3/4"-10 | | | | | | | | | | | | | | | | | | | | | | | |
| | 51-2633-0005 | | 7/8"-9 | | | | | | | | | | | | | | | | | | | | | | | |
| | 51-2634-0005 | | 1"-8 | | | | | | | | | | | | | | | | | | | | | | | |
| | 51-2635-0005 | | 1-1/8"-7 | | | | | | | | | | | | | | | | | | | | | | | |
| | 51-2636-0005 | | 1-1/4"-7 | | | | | | | | | | | | | | | | | | | | | | | |
| NATIONAL FINE | 51-2640-0005 | 50-2610-0005 | 1/4"-28 | • | • | • | • | | | | | | • | • | | | | | • | | | • | | | | |
| | 51-2641-0005 | 50-2611-0005 | 5/16"-24 | • | • | • | • | | | | | | • | • | | | | | • | | | • | | | | |
| | 51-2642-0005 | 50-2612-0005 | 3/8"-24 | • | • | • | • | | | | | | • | • | | | | | • | | | • | | | | |
| | 51-2643-0005 | 50-2613-0005 | 7/16"-20 | • | • | • | • | | | | | | • | • | • | | | | • | | | • | | | | |
| | 51-2644-0005 | 50-2614-0005 | 1/2"-20 | • | • | • | • | | | | | | • | • | • | | | | • | | | • | | | | |
| | 51-2645-0005 | 50-2615-0005 | 9/16"-18 | • | • | • | • | | | | | | • | • | • | | | | • | | | • | | | | |
| | 51-2646-0005 | | 5/8"-18 | • | | • | | | | | | | • | | | | | | • | | | • | | | | |
| | 54-2671-0005 | | 11/16"-24 | | | | | | | | | | | | | | | | | | | | | | | • |
| | 54-2696-0005 | | 3/4"-16 | • | | | | | | | | | | | | | | | | | | | | | | • |
| | 54-2676-0005 | | 3/4"-20 | | | | | | | | | • | | | | | | | | | | | | | | • |
| | 54-2677-0005 | | 13/16"-20 | | | | | | | | | • | | | | | | | | | | | | | | • |
| | 54-2688-0005 | | 27/32"-20 | | | | | | | | | | | | | | | | | | | | | | | • |
| | 54-2697-0005 | | 7/8"-14 | • | | | | | | | | | | | | | | | | | | | | | | • |
| | 54-2698-0005 | | 1"-14 UNS | | | | | | | | | | | | | | | | | | | | | | | • |
| | 51-2649-0005 | | 1"-14 | | | | | | | | | | | | | | | | | | | | | | | • |
| | 51-2650-0005 | | 1-1/8"-12 | | | | | | | | | | • | | | | | | | | | | | | | • |
| | 51-2651-0005 | | 1-1/4"-12 | | | | | | | | | | • | | | | | | | | | | | | | • |
| | 1043-3R | | 1-5/8"-16 | | | | | | | | | • | | | | | | | | | | | | | | • |
| | 1043-4R | | 1-13/16"-16 | | | | | | | | | • | | | | | | | | | | | | | | • |
| | 1043-1R | | 2"-16 | | | | | | | | | • | | | | | | | | | | | | | | • |
| 1043-5R | | 2"-16 LH | | | | | | | | | • | | | | | | | | | | | | | | • | |
| 1043-6R | | 2-1/8"-16 | | | | | | | | | • | | | | | | | | | | | | | | • | |
| 1043-7R | | 2-1/4"-16 | | | | | | | | | • | | | | | | | | | | | | | | • | |
| METRIC | 52-2655-0005 | 50-2620-0005 | M6x1.00 | • | • | • | • | | | | | | | | | | | | • | | | • | | | | |
| | 52-2656-0005 | 50-2621-0005 | M8x1.25 | • | • | • | • | | | | | | | | | | | | • | | | • | | | | |
| | 52-2699-0005 | 50-2638-0005 | M10x1.00 | • | • | | | | | | | | | | | | | | | | | | | | | |
| | 52-2662-0005 | 50-2619-0005 | M10x1.25 | • | • | | | | | | | | | | | | | | | | | | | | | |
| | 52-2657-0005 | 50-2622-0005 | M10x1.50 | • | • | • | • | | | | | | | | | | | | | | | | | | • | |
| | 52-2702-0005 | 50-2639-0005 | M11x1.50 | • | • | | | | | | | | | | | | | | | | | | | | | |
| | 52-2660-0005 | 50-2637-0005 | M12x1.25 | • | • | • | • | | | | | | | | | | | | | | | | | | | |
| | 52-2658-0005 | 50-2623-0005 | M12x1.50 | • | • | • | • | | | | | | | | | | | | | | | | | | • | |
| | 52-2659-0005 | 50-2624-0005 | M12x1.75 | • | • | • | • | | | | | | | | | | | | | | | | | | • | |
| | 52-2703-0005 | 50-2618-0005 | M14x1.50 | • | • | • | | | | | | | | | | | | | | | | | | | | |
| | 54-2689-0005 | | M16x1.00 | | | | | | | | | | | | | | | | | | | | | | | • |
| | 54-2690-0005 | | M16x1.50 | • | | | | | | | | | | | | | | | | | | | | | | • |
| | 54-2691-0005 | | M18x1.50 | • | | | | | | | | | | | | | | | | | | | | | | • |
| | 54-2692-0005 | | M19x1.50 | | | | | | | | | | | | | | | | | | | | | | | • |
| | 54-2693-0005 | | M20x1.00 | | | | | | | | | | | | | | | | | | | | | | | • |
| | 54-2673-0005 | | M20x1.25 | | | | | | | | | | | | | | | | | | | | | | | • |
| | 54-2678-0005 | | M20x1.50 | • | | | | | | | | | | | | | | | | | | | | | | • |
| | 54-2674-0005 | | M22x1.00 | | | | | | | | | | | | | | | | | | | | | | | • |
| | 54-2679-0005 | | M22x1.50 | | | | | | | | | | | | | | | | | | | | | | | • |
| | 54-2675-0005 | | M24x1.50 | • | | | | | | | | | | | | | | | | | | | | | | • |
| 54-2680-0005 | | M24x2.00 | | | | | | | | | | | | | | | | | | | | | | | • | |
| 54-2681-0005 | | M25x1.50 | | | | | | | | | | | | | | | | | | | | | | | • | |
| 54-2682-0005 | | M27x2.00 | | | | | | | | | | | | | | | | | | | | | | | • | |
| 1043-2R | | M38x1.50 | | | | | | | | | • | | | | | | | | | | | | | | • | |
| FILES | 2665 | 11, 12, 13, 14, 16, 18, 20, 24 TPI | | • | | • | | | | | | | | | | | | | | | | | | | | |
| | 2666 | 9, 10, 12, 16, 20, 27, 28, 32 TPI | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2670 | 0.75, 1.00, 1.25, 1.50, 1.75, 2.00, 2.50, 3.00mm | | • | | • | | | | | | | | | | | | | | | | | | | | |

RETHREADERS

- Restores and cleans threads of dirt, carbon build up and metal particles
- Rubber o-ring holds chaser firmly in socket

1010

M10 X M14 SPARK PLUG THREAD CHASER



1012

M14 X M18 SPARK PLUG THREAD CHASER



1013A

M12 SPARK PLUG THREAD RESTORER



1016A

M18 O2 SENSOR THREAD RESTORER



1020A

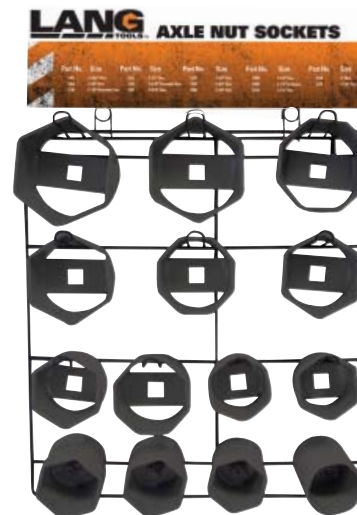
M14 SINGLE END SPARK PLUG CHASER



| Part No. | Services on all major vehicle platforms | Use with 13/16" hex deep well socket | Use with 5/8" hex deep well socket | Use with 3/8" square ratcheting wrench | Long Neck for extra deep cavities (2.3L Ford and Mercury engines) | Used on Harley Davidson, Twin Cam, V-Rod and other Sportster models |
|----------|---|--------------------------------------|------------------------------------|--|---|---|
| 1010 | • | | • | | | |
| 1012 | • | • | | | | |
| 1013A | | | • | • | | • |
| 1016A | • | • | | • | | |
| 1020A | | | • | • | • | |

AXLE NUT SOCKETS

- Axle nut sockets are designed for use with a torque wrench when servicing truck wheel bearing lock nuts
- 3/4" square drive OR 1/2" square drive (see chart ◊)
- Full range of six and eight-point sizes
- NOTE: Not to be used with pneumatic power tools. Wear safety goggles



1290 14-PIECE AXLE NUT DISPLAY

Includes: Rack, header board and one each (see chart •)

1291 22-PIECE AXLE NUT DISPLAY

Includes: Rack, header board and one each (see chart *)

| 6-Point | | 6-Point | | 6-Point | |
|---------|-------------|---------|-----------------|---------|----------------|
| Part # | Size | Part # | Size | Part # | Size |
| 1201 | 2-3/32" * | 1218 | 4-7/8" | 1236 | 2-3/8" Rd. |
| 1202 | 2-3/8" * | 1220 | 2-1/4" • * | 1238 | 59mm |
| 1204 | 2-9/16" • * | 1221 | 2-1/2" • * | 1239 | 5-1/4" |
| 1206 | 3" • * | 1222 | 2-5/8" • * | 1244 | 2-1/2" Rd. ◊ |
| 1208 | 3-1/4" • * | 1223 | 2-3/4" • * | 1245 | 2-3/4" Rd. * ◊ |
| 1210 | 3-1/2" • * | 1228 | 2-9/16" Rd. • * | 1251 | 55mm ◊ |
| 1212 | 3-7/8" * | 1229 | 54mm * | 1252 | 60mm |
| 1214 | 4" • * | 1231 | 3-3/4" | 1253 | 70mm |
| 1215 | 4-1/8" • * | 1232 | 2-7/8" * | 1254 | 71mm |
| 1216 | 4-3/8" | 1234 | 3-1/8" | 1255 | 80mm |
| 8-Point | | 8-Point | | 8-Point | |
| Part # | Size | Part # | Size | Part # | Size |
| 1203 | 2-3/8" | 1225 | 3-3/4" • * | 1250 | 4-1/2" |
| 1205 | 2-9/16" | 1226 | 2-13/16" | 1256 | 82mm |
| 1207 | 3" * | 1227 | 3-13/16" • * | 1257 | 90mm |
| 1209 | 3-1/4" • * | 1230 | 3-3/8" | 1258 | 94mm |
| 1211 | 3-1/2" | 1233 | 2-7/8" | 1259 | 106mm |
| 1213 | 3-7/8" * | 1235 | 3-1/8" | 1260 | 110mm |
| 1217 | 4-3/8" | 1237 | 2-3/4" | 1261 | 120mm |
| 1219 | 4-7/8" | 1240 | 4-1/8" | 1262 | 100mm |
| 1224 | 2-3/4" Rd. | 1241 | 4-13/16" | | |

SPINDLE NUT SOCKETS

2467
4-LUG 4WD SPINDLE NUT SOCKET 1/2 TO 3/4 - TON DANA 44



Remove and install 4-slot axle lock nuts on Ford Ranger, Bronco II, Explorer, F-Series, and full-size Bronco; GM 1/2-ton trucks and full-size Blazer/Jimmy; International 1/2-ton trucks; Dodge 1/2-ton trucks and Dodge with Dana 44

2770
6-LUG 4WD SPINDLE NUT SOCKET 3/4 TO 1 - TON DANA 44



Remove and install 4-slot front axle lock nuts on Ford F-Series 4WD trucks; Ranger, Bronco, GM 4WD 3/4- and 1-ton trucks; Dodge trucks with Dana 44

3195
4-LUG WITH EXTENSION 1/2 - TON DANA 80



For high-shear rotating nuts on F250-350 with Dana 80 rear axle 10-1/4" ring gear; E350 with Dana 80 rear axle and 10-1/4" ring gear; F super-duty with Dana 80 rear axle and 10-1/4" ring gear

3246
4WD SPINDLE NUT WRENCH



For use on GM 3/4- and 1-ton trucks; Ford F-Series 1/2-ton trucks with Dana 28, F250 and F350 4WD trucks

3910
4WD SPINDLE PULLER



Removes front spindle to access needle bearing when lubricating and aligning front wheels. 5/8"-18 fine thread permits use with slide hammer. Fits spindle thread sizes 2"-16, 1-5/8"-16, and M38 x 1.50 Applications: Full-size GM, Ford, Jeep and International pickups with Dana front axles, plus Ranger and Bronco II

3911
TOYOTA LOCK NUT TOOL



Servises high-torque lock nuts on Toyota 4WD vehicles having free-wheel (lock-out) hubs; Tacoma; T100 and 4-Runner

3937
4-LUG 4WD SPINDLE NUT SOCKET 1/2 - TON DANA 50



Remove and install 4-slot front axle nuts on Ford F250-350, Bronco with Dana Axle, or Dana 50IFS or model 60 monobeam axle outer adjusting nut; GM Heavy-duty 3/4- and 1-ton trucks



3246: 4WD Spindle Nut Wrench

AIR CHUCKS

- These air chucks are combined with our E-Z Grip handles to provide a comfort grip when using the air chuck
- Durable, heavy duty handle stands up to tough shop abuse
- 1/4" NPT pipe threaded end will accept an air line quick-disconnect fitting

780
E-Z GRIP DUAL HEAD AIR CHUCK



- Designed for use on trucks, dual rear wheels, semis, and hard-to-reach wheels

782
E-Z GRIP DUAL HEAD STRAIGHT AIR CHUCK TOOL



- Straight On Dual Head Tool permits access to hard to reach inner tandem wheels and includes the new tilt-lock feature which locks onto the valve

785
STANDARD AND LARGE BORE AIR CHUCK



- For inflating tires on large trucks and earth moving equipment with large bore valves

915
E-Z GRIP AIR CHUCK TOOL - PASSENGER VEHICLES



- Sealed ball air chuck is extended 1" from handle to allow access to tight areas

BATTERY CARRIERS

B-600
HEAVY DUTY BATTERY CARRIER



- For use on all batteries with horizontal ridges; Non-slip, acid resistant, riveted rubber grip pads secure a firm hold on any battery up to 7-1/2" wide
- Zinc-plated steel construction

B-610
BATTERY CARRIER - STRAP STYLE



- Accommodates battery size from 3-1/2" to 7-3/4"
- Jaws made from zinc-plated carbon steel
- Reinforced conveyor strapping handle

BATTERY TERMINAL

B-10A
5/16" RATCHETING SIDE TERMINAL BATTERY WRENCH



6525
5/16" EXTRA LONG RATCHETING SIDE TERMINAL BATTERY WRENCH



6571
5/16" X 10MM EXTRA LONG BATTERY TERMINAL WRENCH



6572
10MM BATTERY TERMINAL WRENCH



| Part No. | Removes/installs 5/16" battery terminals | Removes/installs 10mm battery terminals and hold-down fasteners | Insulated handle to prevent electric shock | Reversible ratcheting box wrench allows for quick and effective bolt removal | Extra length (9-3/4") allows for easy access to recessed terminals |
|----------|--|---|--|--|--|
| B-10A | • | | • | • | |
| 6525 | • | | • | • | • |
| 6571 | • | • | • | • | • |
| 6572 | | • | • | • | |

41701
BATTERY SERVICE KIT



- Terminal puller
- Nut pliers
- Terminal brush
- Terminal spreader and cleaner
- 5/16" x 10mm extra long terminal wrench

BATTERY TERMINAL

297 BATTERY NUT PLIERS



- Use to easily loosen and tighten nuts on battery terminal clamps
- Handles are offset for working in confined areas
- Jaws are serrated for a firm grip

298 BATTERY TERMINAL SPREADER AND CLEANER



- Use to clean corrosion from the cable clamp
- Sharp teeth effectively clean corrosion from the cable clamp

299 BATTERY BRUSH



- Use this durable steel brush to remove corrosion and dirt from battery terminals and cable clamps
- External brush cleans cable clamps and internal brush cleans terminal posts
- Rugged steel case has long life

202 BATTERY TERMINAL PULLER



- Easily remove battery terminal cables, preventing damage to battery posts
- Jaws fit under cable terminal and center screw pushes down on post to pull terminal up
- Durable jaws open 1/4" to 1-1/8" to fit most battery terminals

COMPUTER MEMORY SAVERS

- Maintains the memory of the on-board vehicle computer (CCU) when battery is disconnected
- Prevents loss of certain drivability codes, keyless entry codes, digital radio settings and function on anti-theft systems, cellular phone settings, and other memory related functions

291 MEMORY SAVER KIT



- Modern vehicles require 12 volts of memory supply vs. the older 9 volt method
- This kit allows for multiple ways to supply 12 volts to a modern vehicles memory system

294A COMPUTER MEMORY SAVER W/ 12 VOLT ADAPTER ON STANDARD 120 VAC OUTLET



295A COMPUTER MEMORY SAVER WITH 9 VOLT ALKALINE BATTERY



BRAKES/WHEELS

541A TUBE BENDER 1/4" O.D.



- Bends tubing up to 1/4" OD (outer diameter) to 360° without kinks
- For copper, brass, brake lines and Bundy weld tubing
- Zinc die-cast for durability

279 BRAKE CALIPER PRESS



- Four tools in one
- Works on various single, dual & quad piston calipers
- Centrally distributes force
- Compact design
- 360° ratchet swing allows access at any angle

380A BRAKE RESETTING GAUGE



- Wide working range allows measurements from 6-1/2" to 13-1/4" in diameter
- Services foreign and domestic cars and light trucks with drum brakes
- Locks the measurement at the appropriate inch or metric calibration during use
- Heat-treated, chrome-plated steel jaws ensure long tool life

BRAKES/WHEELS

833 BRAKE DRUM AND ROTOR PULLER



- Saves time and reduces damage to the wheel bearing by eliminating the need to repeatedly strike or heat the brake drum to free it from the hub
- Adjustable with a 17" spread and 6" reach to accommodate the most common drum sizes
- Includes specially designed jaws to maximize surface contact ensuring uniform grip even on deteriorated drums

401 RAPID DEFLATORS WITH TPMS LOCATION MARKS



- Sockets are clearly marked with LF (left front), RF (right front), LR (left rear) & RR (right rear) for easy identification so tires can be returned to original position without TPMS needing to be reset
- Orange anodized aluminum with permanent markings for easy identification
- Cutout allows for quick evacuation of air without removing valve core
- Socket also holds valve caps for easy storage
- Knurling creates sure grip even in greasy situations

847 WHEEL HUB LOCK TOOL



- Works on most vehicles with wheel stud bolt patterns ranging from 4x100mm to 8x170mm
- Used to hold the wheel hub in place while the axle nut is removed or installed for axle or wheel bearing service
- Works with 1/2" square drive ratchet or bracker bar

6 PC. WHEEL STUD INSTALLER KITS

- Assures correct installation of wheel studs
- No more ruined studs or lug nuts
- Also includes spacer and washer
- Will install wheel studs on major vehicle platforms, domestic and foreign, including light trucks and SUVs



755 LIGHT TRUCKS & SUV'S

- Kit includes installer sizes: 1/2"-20; 9/16"-18; M12 x 1.75; M14 x 1.50

938 AUTOMOBILES

- Includes installer sizes: 7/16"-20; 1/2"-20; M12 x 1.25; M12 x 1.50

BRAKES/WHEELS

541A TUBE BENDER 1/4" O.D.



- Bends tubing up to 1/4" OD (outer diameter) to 360° without kinks
- For copper, brass, brake lines and Bundy weld tubing
- Zinc die-cast for durability

279 BRAKE CALIPER PRESS



- Four tools in one
- Works on various single, dual & quad piston calipers
- Centrally distributes force
- Compact design
- 360° ratchet swing allows access at any angle

380A BRAKE RESETTING GAUGE



- Wide working range allows measurements from 6-1/2" to 13-1/4" in diameter
- Services foreign and domestic cars and light trucks with drum brakes
- Locks the measurement at the appropriate inch or metric calibration during use
- Heat-treated, chrome-plated steel jaws ensure long tool life



1410: Tire Valve Installer

1410 TIRE VALVE INSTALLER



- Simplify inserting any tubeless tire valve
- Swivel head screws onto cap thread of tire valve
- Handle is used as a lever to pull tire valve into rim hole

GENERAL PURPOSE

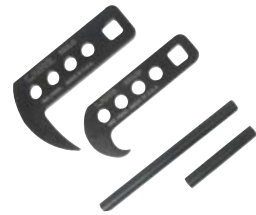
- Magnetic insert firmly holds the fastener in the socket for easy installation/removal
- Prevents fasteners from dropping into restricted areas where they can be difficult to locate and/or retrieve
- Magnetic insert can be left in or removed for use in other sockets

520 9 PC. MAGNETIC SOCKET INSERTS (SAE)



- Includes nine pieces: 3/8", 7/16", 1/2", 9/16", 5/8", 11/16", 3/4", 13/16", and 7/8"

850 UNIVERSAL SEAL PULLER KIT



- Pin creates a pivot point on the surface of the seal, thus distributing the force evenly over a larger surface area (when compared to competitive puller designs)
- Greater surface area on hook helps prevent seal puller from piercing through the seal
- Works with 3/8" square drive ratchet or braker bar

521 10 PC. MAGNETIC SOCKET INSERTS (METRIC)



- Includes nine pieces: 10, 11, 12, 13, 14, 15, 16, 17, 18 and 19mm

852 2-PIECE PRYBAR HEAD SET



- Teeth allow for a better grip and approximately 70% less movement on the prying surface
- 3/8" and 1/2" square drive connections provide various orientations in limited access locations

522 19 PC. MAGNETIC SOCKET INSERTS (SAE & METRIC)



- Includes nineteen pieces: SAE and Metric sets combined

950 11 PC. GASKET HOLE PUNCH SET



- Designed to cut holes and internal radii in gaskets and other soft material (i.e., rubber, lead foil, linoleum, felt fiber)
- Contains long driving mandrel
- Ten punch sizes: 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 3/4", 7/8", 1"

PULLEY

Removes and installs power steering pump pulleys on most major domestic vehicle platforms including early GM, Chrysler, Ford and GM belt-driven vacuum pumps and pressed-on water pump pulleys on GM 4 and 6 cylinders

5238 MASTER POWER STEERING PULLEY REMOVER AND INSTALLER SET



5239A (CLAMSHELL) 5239B (CASE) POWER STEERING PUMP/ALTERNATOR PULLEY REMOVER/INSTALLER



SERRATED BIT WRENCHES

- Use to install and remove 12-point (triple-square) metric socket-head screws
- Turn with a socket or wrench

| Part No. | 12-POINT | | | | DRIVE | |
|----------|----------|-----|------|------|-------|------|
| | 6MM | 8MM | 10MM | 12MM | 5/16" | 1/2" |
| 676-6 | • | | | | • | |
| 676-8 | | • | | | • | |
| 676-10 | | | • | | | • |
| 676-12 | | | | • | | • |



MISCELLANEOUS

413 FORD SEATBELT PRETENTIONER RELEASE TOOL



- Allows for the disconnection of Ford Interceptor, Taurus & Lincoln MKS seat belt pretensioner system
- Simplifies disconnection of seatbelt release mechanism

436A EXHAUST HANGER REMOVAL PLIERS



- For removal of rubber exhaust system hangers, (i.e. tailpipe, exhaust pipe and muffler)
- Self-locating forcing pin
- Cushioned slip-resistant handles at a 25° offset for easy access in restricted areas

504 GLOW PLUG HARNESS TOOL



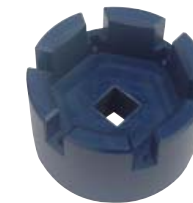
- Prevents damage to harness and connector rail
- Removes and installs glow plug connectors
- Applications Include 2004 and newer
 - 6.0 Liter Diesel
 - E-series
 - Low Cab Forward
 - F250-F350 Super Duty

525 TILT STEERING PIVOT PIN REMOVER



- Removes pivot pins from Chrysler, Ford, and GM steering columns
- Fits all telescoping steering columns (1969 to present)

538 FORD FUEL FILTER CAP TOOL



- 36mm hex, combined with 6 notches allows this tool to do the work of two
- Blue anodized aluminum
- 3/8" drive

548 MAXXFORCE FUEL LINE RELEASE TOOL



- Fuel line disconnect for International MaxxForce series 11 & 13 engines
- Heat treated to minimize fork deflection

563 FORD 1/2" FUEL LINE & VAPOR REMOVAL CONNECTION TOOL



- Removal of Ford type 1&2 quick release connectors
- Removal of Super Duty truck Fuel supply line quick connectors
- Found on majority of 2005 to current Ford Motor Co. vehicles

568 FORD 3/8" FUEL LINE & VAPOR REMOVAL CONNECTION TOOL



- Removal of Ford type 1&2 quick release connectors
- Removal of passenger car and light truck 5/16" & 3/8" Fuel supply & Vapor line quick connectors
- Found on majority of 2005 to current Ford Motor Co. vehicles

635A UNIVERSAL OIL FILTER WRENCH



- Designed to fit oil filters for all domestic and foreign compact, mid- and standard sized automobiles
- Self-adjusting wrench will fit all filters 2-1/2" through 3-13/16" in diameter
- Works with a 3/8" square drive socket wrench

708 CAMSHAFT SPROCKET HOLDING TOOL



- Pivoting design allows fit in most cam and injection pump gear sizes
- Dented grooves on holding pins gives user a sure hold
- Use as a counter holder when loosening or tightening sprocket retainer bolts

3509 STEEL WHEEL LOCK-PLATE REMOVER/INSTALLER



- Features puller yoke to fit late model GM cars with (S.I.R.) air bags
- Narrow yoke prevents damage to the lock plate
- Hex screw supplied will lock down telescoping steering columns while removing lock plate
- Zinc and black oxide for corrosion resistance

SPARK PLUG

135 SPARK PLUG TERMINAL PLIERS



- Safely remove spark plug cables and prevent cable damage
- Pliers' handles and jaws are coated with heavy-duty plastic for a sure grip

528 (5/8" DIA., 3/8" DRIVE) 529 (13/16" DIA., 3/8" DRIVE) MAGNETIC SPARK PLUG SOCKET



- Magnet firmly holds the spark plug for easy installation and removal avoiding the chance of dropping and damaging the spark plug
- Unique design prevents damage to the spark plug's ceramic top
- Unlike sockets with rubber inserts, the permanent magnet in this socket will not wear out or be damaged by exposure to oil or humidity

4663 SPARK PLUG EXTRACTOR TOOL



- Removes broken spark plugs from the cylinder head on Ford Triton® 4.6L, 5.4L, and 6.8L 3-valve engines without removing the head
- Engine Applications:
 - Ford Triton® 4.6L V8 3-valve
 - Ford Triton® 6.8L V10 3-valve
 - Ford Triton® 5.4L V8 3-valve used on 2004-2010 Ford F150
 - F250 and F350 F-Series pick-ups, 2004-2010 Ford Super Duty pick-ups, 2004-2010 Ford Expedition and 2004-2010 Lincoln Navigator

4647 HARNESS CONNECTOR RELEASE TOOLS



- For disconnecting electrical connectors
- Specially designed, heat-treated blades with E-Z Grip handles
- Set includes one tool designed for pulling connectors off, and the other for pushing connectors off
- Easy connector removal, regardless of component location

SERVICE

- Compress valve springs on overhead valve and L-head engines on cars, trucks and tractors
- Variable sizes, jaw openings and throat depths for use on multiple engine models

379 SMALL ENGINE VALVE SPRING COMPRESSOR



- Long and slender, maximum opening 2-3/8"
- Will reach into small recesses where valve springs and retaining washers are located
- Jaws are adjustable in width and have edges so thin they can be forced under and over ends of valve spring to compress it for removal

380 VALVE SPRING COMPRESSOR



- Jaws and plunger bars are easily adjusted
- Plunger bar seats on both flat and cup-shaped valve heads
- 9-3/4" Throat depth, and jaw openings of 2-3/4" to 7-3/4"; 2 straight jaws included

383A VALVE SPRING COMPRESSOR



- A handle on the outside of the tool makes it easy to use
- 7-1/2" Throat depth, and jaw openings of 2-3/4" to 5-7/8"

385 VALVE SPRING COMPRESSOR



- Designed for light-weight valve springs
- 6-1/4" Throat depth, and jaw openings of 3" to 5-3/8"

277A PISTON RING COMPRESSOR



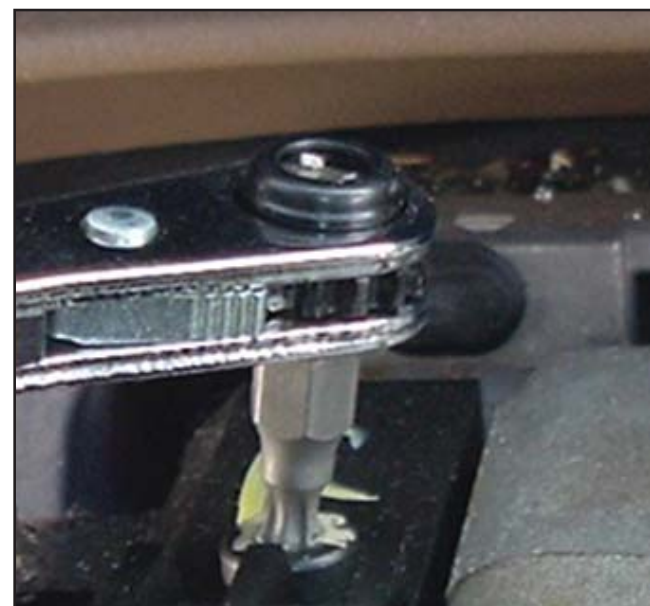
- Double tension band with gear ratchet
- Stronger locking mechanism and quick release
- For use with major vehicle platforms, domestic and foreign
- Ring capacity 2-1/8" to 5"; depth 3-1/2"

1722 PISTON RING GROOVE CLEANER



- Effectively removes carbon from ring grooves on pistons 2" to 5" (51mm to 127mm)
- The two 6-bladed cutters cover all major piston ring grooves in SAE and metric sizes
- Cutters rotate to any selected size, locking in place with hold-down nut

WRENCHES



FM-720A: Ford Ignition Module Wrench

FM-720A FORD IGNITION MODULE WRENCH



- 25° offset ratcheting dual-end wrench containing a 7/32" six-point (5.5mm), and T-20 TORX® bit
- For easy removal of Ford ignition module without removing or tampering with the distributor

615 TIE ROD WRENCH



- For adjusting tie rods on vehicles with rack and pinion steering
- Spring-loaded upper jaw pivots to accommodate tie rods ranging in size from 10mm-18mm
- Works on 2-flat, spline and hex
- Cam action increases the gripping pressure as the load applied to the handle increases

1418 DRAIN PLUG WRENCH



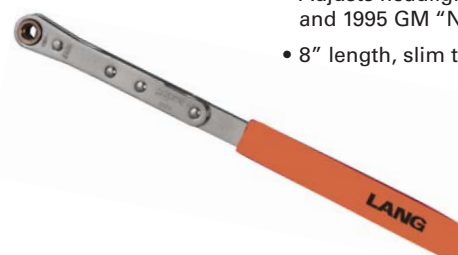
- For drain plugs on differentials, transmissions (auto/manual), transfer cases, and engines
- Designed to fit the two most common female drain plug sizes: 3/8" and 1/2" square

5523 4MM FORD HEADLIGHT ADJUSTING RATCHETING WRENCH



- For use on late model Fords with aerodynamic designs and headlights with rear mounted adjusters
- 8" length, slim tool profile

5524 5MM GM HEADLIGHT ADJUSTING RATCHETING WRENCH



- Adjusts headlights on 1994 and 1995 GM "N" body vehicles
- 8" length, slim tool profile

5529A FORD HEADLIGHT ADJUSTING RATCHETING WRENCH



- 4mm x 4.5mm wrench for adjusting headlights on late model Fords with aerodynamic designs and headlights with rear mounted adjusters
- 8" length, slim tool profile

SETS

- Remove and install the fan clutch thermostatic fan assembly on many models when repairing or replacing water pump, timing chain or the fan clutch
- Use with 1/2" square drive tools and a torque wrench
- Individual and set configurations listed in chart below

3136

FORD FAN CLUTCH WRENCH SET



3296

FORD DIESEL FAN CLUTCH WRENCH SET



3472

FAN CLUTCH WRENCH SET



41570

FAN CLUTCH WRENCH SERVICE KIT



| Part Number | Product Description | Fan Clutch Wrench Set 3136 | Fan Clutch Wrench Set 3296 | Fan Clutch Wrench Set 3472 | Fan Clutch Wrench Set 41570 |
|-------------|--|----------------------------|----------------------------|----------------------------|-----------------------------|
| 3136-36 | 36mm Fan Clutch Wrench Used to remove/replace the thermostatic fan assembly on: -Ford 4.9L E and F Series truck engines (1984-1993) -Ford 4.6L modular engines -Ford 2.8L engines (1984-1987) -Ford 2.9-3.0L engines (1988-current) -Ford 4.0L engines (1990-current) | • | | • | • |
| 3136-58 | 58mm Short Fan Clutch Wrench Used to install/remove thermostatic fan assembly in Fords | • | | | |
| 3296-83 | 83mm Short Fan Clutch Wrench Used to install/remove thermostatic fan assembly in Ford Diesels, Ford 6.9L and 7.3L engines | | • | | |
| 3422 | 40mm Fan Clutch Wrench Removes thermostatic fan assembly on 1993-current 4.9L Ford engines. Use in conjunction with 8mm Short Wrench of Universal Pulley Holder | | | • | • |
| 3473 | 47mm Fan Clutch Wrench Used to install/remove thermostatic fan assembly in Ford Diesels | | | | • |
| 3474 | 48mm Fan Clutch Wrench Used to install/remove thermostatic fan assembly in Ford Diesels, Ford 6.9L and 7.3L engines | | • | | |
| 3900 | Universal Pulley Holder with pin set (5x8mm) Holds both bolted-on and pressed-on pulleys found on many vehicles | | | • | • |
| 3903 | 22mm Fan Clutch Wrench Used to install/remove thermostatic fan assembly in Fords | | | | • |
| 3904 | 50mm Fan Clutch Wrench Used to install/remove thermostatic fan assembly in Fords & Internationals | | | | • |

3901

PULLEY HOLDER PIN SET

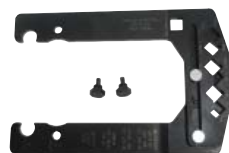


- Small set: 5mm x 8mm
- Large set: 6mm x 10mm and 7.5mm x 18mm

729

UNIVERSAL HOLDING TOOL

- Replaces numerous tools and quickly adjusts to multiple pulley configurations
- Improves accessibility with low profile in tight fan clutch areas
- Get more torque with square drive cutouts designed for use with a breaker bar



3406



- Sizes: 22mm, 32mm, 36mm, 40mm, 48mm and 50mm
- Convenience of combining the 6 most commonly used wrench sizes onto one double-end wrench; eliminates the guess work of sizing
- Offset wrenches provide better hand alignment and a clearer line of sight, while improving accessibility in tight fan clutch areas
- Square drive cutouts designed for use with a breaker bar for added torque or length

FEATURES

- Releases the tension on spring-loaded idler pulleys
- Allows direct access to the tensioner without having to remove engine accessories or frame components. This can be done by rotating the drive end on the wrench to match the position of the serpentine belt tensioner
- Ratcheting feature allows quick and easy positioning to access the tensioner from any angle
- Heat-treated and nickel-chrome plated for strength, durability, appearance, and long tool life
- Slim head design for access to restricted areas

INDIVIDUAL RATCHETING WRENCHES

8579

RATCHETING SERPENTINE BELT WRENCH 15MM 6-PT. X 3/8" MALE SQUARE X 16MM 6-PT.



8585

RATCHETING SERPENTINE BELT WRENCH 13MM X 14MM 6-PT. X 18MM 6-PT. X 1/2" MALE SQUARE



8586

RATCHETING SERPENTINE BELT WRENCH 15MM 6-PT. X 3/8" MALE SQUARE X 16MM 6-PT. X 1/2" MALE SQUARE



8591

RATCHETING SERPENTINE BELT WRENCH 14MM X 17MM 6-PT. X 19MM 6-PT. X 3/4" MALE SQUARE



8592

RATCHETING SERPENTINE BELT WRENCH 15MM 6-PT. X 3/8" MALE SQUARE X 13MM X 14MM 6-PT.



8593

13" REVERSIBLE RATCHETING SERPENTINE BELT WRENCH FOR HEAVY-DUTY TRUCKS



- Used to release serpentine belt tensioners with 1/2" square drive openings
- Low profile for better access to contained areas

RATCHETING WRENCH SETS

5339

2-PC. RATCHETING SERPENTINE BELT WRENCH SET FOR IMPORT VEHICLES

- No. 8591 - 14mm x 17mm 6-pt. x 19mm 6-pt. x 3/4" male square
- No. 8592 - 15mm 6-pt. x 3/8" male square x 13mm x 14mm 6-pt.



5344

3-PC. UNIVERSAL RATCHETING SERPENTINE BELT WRENCH SET

- No. 8579 - 15mm 6-pt. x 3/8" male square x 16mm 6-pt.
- No. 8585 - 13mm x 14mm 6-pt. x 18mm 6-pt. x 1/2" male square
- No. 8591 - 14mm x 17mm 6-pt. x 19mm 6-pt. x 3/4" male square



8584

2-PC. RATCHETING SERPENTINE BELT WRENCH SET

- No. 8579 - 15mm 6-pt. x 3/8" male square x 16mm 6-pt.
- No. 8585 - 13mm x 14mm 6-pt. x 18mm 6-pt. x 1/2" male square



8572

SERPENTINE BELT WRENCH SET FOR BMW ENGINES

- Set contains one 17mm single hex box wrench, and two 17mm drive end adapters with 8mm and 16mm working ends



RATCHETING WRENCH SETS

5333

9-PIECE FINE TOOTH SERPENTINE BELT WRENCH SET

- Fine Tooth ratcheting action allows quick and easy positioning of wrench-driving end for tensioner access from any angle
- Interchangeable adapters allow service to most serpentine belt applications
- Set includes eight adapters:
 - 6-Point
 - 13mm (1/2"), 14mm (9/16"), 15mm
 - 16mm (5/8"), 18mm, 19mm (3/4")
 - Square
 - 1/2"
 - 3/8"



NON-RATCHETING

3414A

SERPENTINE BELT WRENCH SET

- Set Includes:
 - 3/8" drive bar for sockets and crowfoot wrenches
 - 1/2" square drive bar
 - 15mm, 16mm, 18mm 3/8" drive 12 point sockets
 - 13mm, 14mm, 15mm 3/8" drive crowfoot wrenches



Applications:

- 6-Point
 - 13 mm or 1/2": GM "Quad 4" 2.3L; Volkswagen 2.0L
 - 14 mm: Isuzu 3.1L; Lexus 2.5L, 3.0L, 4.0L; Mazda 2.3L, 3.0L, 4.0L; Saturn, 1.9L with hex on idler pulley; Toyota 3.0L; Volkswagen 1.8L, 2.5L, 2.8L
 - 15 mm: GM 2.2L; Isuzu 2.8L; Jeep 4.7L
 - 16 mm or 5/8": Ford/Lincoln/Mercury 2.3L, 3.8L, 4.0L, 4.9L, 5.0L, 5.8L; GM 4.3L, 5.0L, 5.7L
 - 18 mm: GM 2.0L, 3.1L, 3.3L, 3.4L, 3.8L
 - 19 mm: or 3/4" (use with 15mm adapter for extra reach): Mercedes; Toyota 1.8L, 2.4L Square
- Square
 - 3/8": Ford/Lincoln/Mercury 1.9L, 2.3L, 2.5L, 4.0L; GM 2.0L, 2.2L, 2.8L, 3.1L, 3.4L; Isuzu 2.8L, 3.1L
 - 1/2": Dodge/Chrysler/Plymouth 2.0L, 3.0L; Ford/Lincoln/Mercury 3.0L, 4.2L 4.6L; GM 2.5L, 4.9L, 5.0L, 5.7L; Mitsubishi 3.0L

5139

FLEXIBLE LIGHTED SERPENTINE BELT TOOL

- Flexible serpentine belt tool allows for easy adjustment of belt around various pulley positions
- LED lighted portion of tool ensures easy visibility in dark engine compartments
- Extra-long 33" length allows for deeper reach around crank shaft pulley
- Reverse gripping feature allows for two handed positioning of tool


5331

ECOTEC SERPENTINE BELT TENSIONER TOOL

- Serpentine belt service on Ecotec 2.2 and 2.4L inline 4-cylinder General Motors vehicles
- Allows service of serpentine belt without removal of engine mount or lower air filter housing
- Allows access to tensioner from top of engine compartment
- Double square drive allows improved leverage and flexibility in all Ecotec applications
- Low profile allows it to fit into space between tensioner and frame rail



MISCELLANEOUS

3350

INJECTOR HEIGHT GAUGE FOR DETROIT DIESEL ENGINES



| Size | Series | Year |
|--------|---------|--------------------|
| 78.2mm | 60 | DDEC I 1986-1993 |
| 78.2mm | 60 & 50 | DDEC II 1896-1993 |
| 78.8mm | 60 & 50 | DDEC III 1994-1997 |
| 80.3mm | 60 | DDEC III Late 1997 |
| 80.3mm | 60 & 50 | DDEC IV 1997-1998 |
| 81.0mm | 60 & 50 | DDEC IV 1998-1999 |
| 81.0mm | 60 | Marine 2000-2003 |
| 82.1mm | 60 | See service manual |

486

OIL FILTER NIPPLE INSTALLER SERIES 60 DETROIT DIESEL ENGINES

- Used to reinstall or tighten the oil filter nipple into the oil filter housing
- 2" six-point hex nut with a 3/8" drive plate
- Can be used with a ratchet or torque wrench


679

T-45 TORX® BIT - 7" LONG



- Used to remove/install the intake manifold on CUMMINS N14 engines without having to remove the fuel pump, air compressor, etc

706

FAN CLUTCH TOOL



- For use on International VT365, T444E, DT466, and DT530; Ford Power Stroke 7.3L and 6.0L; Detroit Diesel Series 40; and John Deere
- Firmly affixes to the fan hub with bolts
- Tool length is designed to reach the frame rail
- Hands free operation

**758 (5/8" - 11)
759 (3/4" - 10)**

HEAVY-DUTY TRUCK WHEEL STUD INSTALLERS

- Used for installing drive flange and spoke wheel studs
- 1-1/4" six-point drive
- Easily releases stud when removing tool
- Easily turns in studs without damage to threads


795

WHEEL STUD INSTALLER FOR FORD F250 THRU F550



- Used for installing button head wheel studs on Ford trucks F-250 Super-Duty through F-550 (1998 to present)
- Patented installer pull the stud into the drive flange or hub without damaging the threads
- 1-1/8" six-point drive
- 1-7/8" long and internally threaded M14 x 2.0

WRENCHES

4651

AUTOMATIC SLACK ADJUSTER RELEASE TOOL AND WRENCH



- Used for Rockwell®, Arvin® Meritor systems
- Fork-end tool to release the tensioner button, and a 5/16" double square offset reversible wrench with E-Z Grip handle
- Release the anti-reverse mechanism without prying and apply more turning power with less fatigue to the hand

7578

7/16" AUTOMATIC SLACK ADJUSTER WRENCH



- For brake adjustment on heavy-duty trucks equipped with Haldex® slack adjusters
- Extra long handle provides comfort while overcoming the anti-reverse mechanism

8569

9/16" EXTRA LONG AUTOMATIC SLACK ADJUSTER WRENCH



- For brake adjustment on heavy-duty trucks equipped with Bendix® slack end adjusters
- Extra deep hex allows reach to recessed adjusters

GAUGES

The sizes, both decimal and metric equivalent, are permanently etched on each blade

| | 3072 | 3074 | 3075 | 3078 | 3079 |
|-------------|------|------|------|------|------|
| .008" | • | • | • | | • |
| .009" | • | • | • | | • |
| .010" | • | • | • | | • |
| .011" | • | • | • | | • |
| .012" | • | • | • | | • |
| .013" | • | • | • | | • |
| .014" | • | • | • | | • |
| .015" | • | • | • | | • |
| .016" | • | • | • | | • |
| .017" | • | • | • | | • |
| .018" | • | • | • | | • |
| .019" | • | • | • | | • |
| .020" | • | • | • | | • |
| .021" | • | • | • | | • |
| .022" | • | • | • | | • |
| .023" | • | • | • | | • |
| .024" | • | • | • | | • |
| .025" | • | • | • | | • |
| .026" | • | • | • | | • |
| .027" | • | • | • | | • |
| .028" | • | • | • | | • |
| .029" | • | • | • | | • |
| .030" | • | • | • | | • |
| .019"-.021" | | | | • | |
| .022"-.024" | | | | • | |
| .025"-.027" | | | | • | |
| .031"-.033" | | | | • | |
| .058"-.060" | | | | • | |
| .063"-.065" | | | | • | |

5469
DOUBLE-END HANDLE FOR FEELER GAUGE BLADES

- Color-coded handle makes using the correct blade fast and accurate, where light blue is for intake and red for exhaust
- Even in dimly lit shops, the technician can be confident in using the correct blade without wasting time having to read the blades every time

3074
23-BLD FEELER GAUGE FOR GEN. H.D. TRUCK VALVE ADJ.

- 3" blade, with 5/8" long 45° offset



3072
23-BLD FEELER GAUGE FOR CUMMINS DIESEL VALVE ADJ.

- 6" blade, with 1" long 90° offset



3075
23-BLD FEELER GAUGE FOR DETROIT DIESEL VALVE ADJ.

- 3" blade, with 1" long 30° offset, and 1/2" of 0.002" step



3078
FEELER GAUGE SET, JACOBS ENGINE BRAKES-DETROIT DIESEL

- Blade sizes and usage: 0.019" - 0.021" Series 60 model years 1999 and before; 0.022" - 0.024" Series 60 all model years, Series 50; 0.025" - 0.027" Series 60 all model years, Series 50; 0.031" - 0.033" Series 60 model year 2000 and after; 0.058" - 0.060" Series 71, Series 92; 0.063" - 0.065" Series 71, Series 92
- This set contains the gauges required to set slave piston lash on Detroit Diesel engines
- 4" blade with 1/2" long 45° offset and 0.002" step Go-No-Go
- 0.002" step is on the bottom side of the blade so that the Go-No-Go can be felt against the exhaust rocker arm adjusting screw or exhaust valve bridge (depending on the model engine)



3079
MASTER FEELER GAUGE SET FOR H.D. TRUCK VALVE ADJ.



- Set contains:
 Part No. 5469 - double-end plastic color-coded handle
 Part No. 3072 - 6" blade with 1" long 90° offset;
 Part No. 3074 - 3" blade with 5/8" long 45° offset
 Part No. 3075 - 3" blade with 1" long 30° offset and 1/2" of 0.002" step
- This handle and blade set was designed to make valve adjustments faster and easier

MISCELLANEOUS

408A
VALVE STEM FISHING TOOL



- Used to pull valve stems and valve stem/inner tube assemblies through the valve stem hole on vehicle rims
- Tool has three functions: valve stem puller, valve core removal, and tire deflator
- Unlike existing tools on the market, this valve stem puller threads into the valve stem rather than over-the-valve stem, eliminating the need to put hands inside the rim/tire assembly

444
SPRINGER FORK BEARING ADJUSTING TOOL



- Adjust the steering stem adjuster nut to allow for proper neck bearing endplay
- Three-prong socket, 3/8" drive, with a pass through hole in the center allows for precise neck endplay adjustment
- Used on Harley-Davidson® motorcycle Springer® forks

449
NECKBEARING ADJUSTMENT TOOLS FOR HARLEY-DAVIDSON® MOTORCYCLES



- Tapered end allows easy access to the neck bearing adjusting star on Harley-Davidson® front ends
- Screwdriver-style handle offers a comfortable grip

437
CRANKSHAFT BEARING END PLAY SETUP TOOL



- Used on Big Twin® engines
- Allows inner bearing races to be installed and removed without pressing them on or off as you would if you were using a crankshaft
- Allows for much faster servicing

445
REAR ISOLATOR REPLACEMENT TOOL



- Offset ratcheting wrench with extended handle
- A threaded bolt is used to jack apart the frame and the swing arm; assembly is kept from turning by a handle staked to the wheel
- Built-in feature keeps motorcycle frame from being overspread
- Applications include: S1 Lightning®, S1 Cyclone®, S2 Thunderbolt®, S2T Thunderbolt®, and S3T Thunderbolt®

492
LOCK RING TOOL



- Allows access to the fuel filter and pump as the lock ring is connected to the pump
- Made of durable ABS plastic
- Competitive products are metal and can scratch the painted surface of the motorcycle

440
SHOCK ABSORBER FORK OIL REPLENISHMENT KIT



- Clear plastic tube and special fitting allows replacement of the oil in the fork through the drain plug
- No need to disassemble the fork and front end

446
CYLINDER SLEEVE HOLD DOWNS



- Specialty nuts (four per package) used to hold down cylinder sleeves during service procedures
- Motor can be turned over with the heads off
- Applications: Harley-Davidson® BigTwin®, Twin Cam®, Sportster® and models with 3/8" studs
- Nuts are for a 3/8" - 16 UNC thread
- 3/4" hexagon (easy handling)

514
SEAT SCREWDRIVER FOR SOFTTAIL®



- Seat screwdriver for Harley-Davidson® SoftTail®

MISCELLANEOUS

801 7-PC. ATV AXLE END THREAD RESTORER KIT



- Contains 7 different dies to restore threads on axle ends of ATVs such as Honda, Kawasaki, Suzuki, Yamaha and more
- Die sizes included: M14x1.50, M16x1.50, M18x1.50, M20x1.50, M24x1.50, 3/4"-16 and 7/8"-14

1201A LOW PRESSURE TIRE GAUGE



- Reads 1 - 20PSI, 1/2 lb. increments
- Metal body/plastic gauge, pocket clip, deflator feature
- For ATVs, lawn tractors and motorcycles

1610 14-BLADE VALVE LASH GAUGE SET



- Set of 4" x 1/4" feeler gauge blades, thickness .002" through .015"
- 1/4" wide gauge blades can be used to check valve clearances of small diameter bucket and shim type valve trains
- Standard 1/2" wide blades may contact the cylinder head and not provide the proper clearance "feel"
- 4" length allows for extra reach to recessed valve systems

WRENCHES

5530 INTAKE MANIFOLD WRENCH



- Reversible ratcheting box wrench used on BigTwin® engines to install/remove intake manifold socket head cap screws
- 1/4" ball-end Allen bit

6529 ROCKER BOX COVER RATCHETING BOLT WRENCH



- Reversible ratcheting box wrench used on Harley Davidson® Evolution® motor rocker box covers
- Low profile allows clearance between the frame and engine
- Long handle for increased reach
- Ergonomic rubber grip will not scratch chrome
- 9-3/4" long chrome plated with 1/4" drive

702 ROCKER BOX COVER WRENCH REPLACEMENT BITS



- Three 3/16" Allen bits packaged in a polybag

6530 LOWER ROCKER BOX 7/16" WRENCH FOR TWIN CAM®



- Reversible ratcheting box wrench used to install/remove the lower rocker box on Harley-Davidson® motorcycles with Twin Cam® engines (1999-2006)
- Vinyl grip prevents the wrench from scratching or marring the bike
- 7/16" protruding socket, 1" socket length

6531 LOWER ROCKER BOX 7/16" WRENCH FOR EVOLUTION®



- Reversible ratcheting box wrench used to install/remove the lower rocker box on Harley-Davidson® motorcycles with Evolution® engines (1994-1999)
- Vinyl grip prevents the wrench from scratching or marring the bike
- 7/16" protruding socket, 1-1/4" socket length

6538 EXHAUST BRACKET WRENCH



- Reversible ratcheting wrench used to remove/install the front exhaust bracket on Harley-Davidson® Dyna® model Twin Cams® from 1999 to present
- 9-3/4" long with a removable/replaceable shortened T-27 TORX® bit
- Vinyl grip prevents the wrench from scratching or marring the bike

WRENCHES

6562 REAR FENDER BOLT WRENCH



- 13" long rocker box wrench used to remove/replace the bolt that holds the rear fender to the frame on Harley-Davidson® Touring® models, 1988 to present
- Remove the rear fender bolt without having to remove the tire
- T40 Bit

8598 22MM X 24MM FRONT AXLE WRENCH



- Reversible ratcheting wrench used to remove/install the front axle shaft on motorcycles equipped with a female six-point socket in the end of the axle
- Used on various late models of Honda, Kawasaki, Suzuki and Yamaha

9280 24-TOOTH CRANKSHAFT WRENCH



- Used for rotation of the crankshaft on all 24-spline engines (2006 Harley-Davidson® Dyna®), and to check engine timing and parts clearance
- Custom design fits perfectly on the crankshafts of 2006 Dyna® model
- E-Z Grip handle allows more turning power with less fatigue to the hand

6738 MAGNETIC SPEEDOMETER SENDING UNIT WRENCH



- Reversible offset ratcheting wrench used to remove/install magnetic speedometer sending units on Harley-Davidson® Sportster® motorcycles and other Harley-Davidson®
- Shortened 3/16" ball-end hex bit allows access to remove/install sending units without further disassembly

8799 17MM ENGINE OIL DRAIN PLUG WRENCH



- Reversible offset ratcheting wrench used to remove/install the engine oil drain plug on Metric V-Twin® motorcycles: Honda Shadows®, Yamaha V-Stars®, Kawasaki® Vulcan® and other metric motorcycles with 17mm engine and rear differential drain plug
- 17mm extended wheel, low profile head

9636 REAR AXLE 36MM NUT RATCHET WRENCH



- Reversible ratcheting wrench used to install/remove 36mm axle nuts on FL Touring® models
- Insert a torque wrench into the built-in 1/2" square drive to get a torque reading

8577 17MM X 19MM FRONT AXLE WRENCH



- Reversible ratcheting wrench used to remove/install the front axle shaft on motorcycles equipped with a female six-point socket in the end of the axle
- Used on various late models of Honda, Kawasaki, Suzuki and Yamaha

9270 6-TOOTH CRANKSHAFT WRENCH



- Reversible ratcheting wrench used for rotation of the crankshaft on all 6-spline engines (2007 Harley-Davidson® Sportsters® and 2008 Buell®)
- Extended wheel/socket to prevent wrench from sliding to far onto the crankshaft
- E-Z Grip handle allows more turning power with less fatigue to the hand

9723 OIL PRESSURE INDICATOR LAMP SENDING UNIT WRENCH



- Reversible ratcheting wrenches used to remove/install the oil pressure indicator lamp sending unit on Harley-Davidson® FL Touring® motorcycles (1999 and up)
- Special low profile
- Vinyl grip prevents the wrench from scratching or marring the bike

WRENCHES

9724 OIL PRESSURE INDICATOR GAUGE SENDING UNIT WRENCH



- Special low profile reversible ratcheting wrench used to remove/install the oil pressure indicator gauge sending unit on Harley-Davidson® FL Touring® motorcycles (1999 and up)
- Vinyl grip prevents the wrench from scratching or marring the bike

9793 SIX SPLINE RATCHETING OUTPUT WRENCH



- Reversible offset ratcheting EZ Grip wrench contains a 1" drive to service a six spline crankshaft
- Used for rotation of the crankshaft check engine timing and parts clearance on Sportster® motorcycles

9794 TEN SPLINE RATCHETING OUTPUT WRENCH



- Reversible offset ratcheting EZ Grip wrench contains a 1-1/8" drive to service a ten spline crankshaft
- Used for rotation of the crankshaft/check engine timing and parts clearance on Sportster® motorcycles

SPARK PLUG GAP

712A RAMP GAUGE LARGE CHROME



- Spark plug tool adjusts spark plug gap in graduated ramp sequence
- Sizes: SAE - .020 - .100; Metric - .60 - 2.40mm

2633A HIGH-ENERGY SPARK GAUGE



- Contains: Six round wires - .040, .044, .045, .050, .060, .080 with double end electrode adjusting tool
- Popular sizes required to gap spark plugs
- Round wire in this gauge permit exact gap checking at all angles

2634A ROUND STYLE WIRE GAUGE



- Contains: Six round wires - .025, .030, .034, .035, .040, .045 with double end electrode adjusting tool
- Most popular "standard ignition" spark plug gapping wire sizes
- Round wire in this gauge permit exact gap checking at all angles

4450A E-Z GRIP SPARK PLUG RAMP GAUGE



- Full range coverage for all spark plug gapping requirements from .020 to .080 (.60 to 2.00mm)
- Applications include those with distributor-less ignition systems
- Tool includes a recess specifically designed to adjust electrodes

GENERIC

The sizes, both decimal and metric equivalent, are permanently etched on each blade

21A 9-BLADE FEELER GAUGE

- 3" x 1/2" blades
- Steel ruler
- For ignition and general purpose



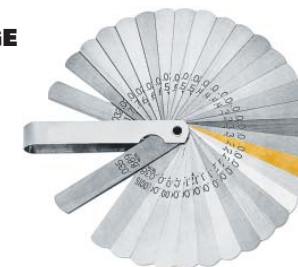
28A 9-BLADE TUNE-UP GAUGE

- 3" x 1/2" blades and five - 1" x 1/4" blades
- Steel ruler and adjusting tool



36A 32-BLADE FEELER GAUGE

- 3" x 1/2" blades
- Thirty-one steel and one .010 brass blade for transistorized engines



3013A 22-BLADE GO-NO-GO GAUGE

- 3" x 1/2" step-ground blades that are ground at the tip .002" less than the normal blade thickness to permit a quick check for proper setting or clearances



9-3MC 9-BLADE FEELER GAUGE

- 3" x 1/2" blades



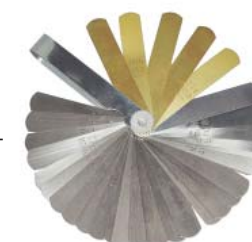
FG-2 25-BLADE FEELER GAUGE

- 3" x 1/2" blades



FG-135 36-BLADE COMBINATION STANDARD AND BRASS FEELER GAUGE

- Thirty steel and six brass blades - 3" x 1/2" blades



27A 15-BLADE FEELER GAUGE

- 3" x 1/2" blades
- Steel ruler



29A 26-BLADE FEELER GAUGE

- 3" x 1/2" blades



36XK MASTER THICKNESS GAUGE

- 3" x 1/2" blades
- Thirty-one steel and one .010 brass blade for transistorized engines



4046A 26-BLADE FEELER GAUGE

- 3" x 1/2" blades



16-3-5/16MC 15-BLADE FEELER GAUGE WITH STEEL RULER

- 3" x 1/2" blades



FG-35-A 35-BLADE FEELER GAUGE

- 3" x 1/2" blades



(See chart on page 66 for sizes included in sets.)

| | 21A | 27A | 28A | 29A | 36A | 36XK | 3013A | 4046A | 9-3MC | 16-3-5/16MC | FG-2 | FG-35-A | FG-135 |
|----------------|--------|-----|-----|-----|-----|------|-------|-------|-------|-------------|------|---------|--------|
| 0.50-in Width | .0015" | | | • | • | • | | • | • | | • | • | |
| | .002" | • | • | • | • | • | | • | • | • | • | • | • |
| | .0025" | | | • | • | • | | • | | | | | • |
| | .003" | • | • | • | • | • | | • | • | • | • | • | • |
| | .004" | • | • | • | • | • | | • | • | • | • | • | • |
| | .005" | | • | • | • | • | | • | • | • | • | • | • |
| | .006" | • | • | • | • | • | • | • | • | • | • | • | • |
| | .007" | | | • | • | • | | • | | | • | • | • |
| | .008" | • | • | • | • | • | • | • | • | • | • | • | • |
| | .009" | | | • | • | • | • | • | | | • | • | • |
| | .010" | | | • | • | • | • | • | • | | • | • | • |
| | .011" | | • | • | • | • | • | • | | • | • | • | • |
| | .012" | • | • | • | • | • | • | • | • | • | • | • | • |
| | .013" | • | • | • | • | • | • | • | | • | • | • | • |
| | .014" | | • | • | • | • | • | • | | • | • | • | • |
| | .015" | | | • | • | • | • | • | • | | • | • | • |
| | .016" | | • | • | • | • | • | • | | • | • | • | • |
| | .017" | | | • | • | • | • | • | | | • | • | • |
| | .018" | | • | • | • | • | • | • | | • | • | • | • |
| | .019" | | | • | • | • | • | • | | | • | • | • |
| | .020" | • | • | • | • | • | • | • | • | • | • | • | • |
| | .021" | | | • | • | • | • | • | | | • | • | • |
| | .022" | | • | • | • | • | • | • | • | • | • | • | • |
| | .023" | | | • | • | • | • | • | | | • | • | • |
| | .024" | | | • | • | • | • | • | | | • | • | • |
| | .025" | • | • | • | • | • | • | • | • | • | • | • | • |
| | .026" | | | | • | • | • | • | | | • | • | • |
| | .027" | | | | | | • | • | | | • | • | • |
| | .028" | | | | • | • | | | | | • | • | • |
| | .029" | | | | | | | | | | • | • | • |
| | .030" | | | | • | • | | | | | • | • | • |
| | .031" | | | | | | | | | | • | • | • |
| | .032" | | | | • | • | | | | | • | • | • |
| | .033" | | | | | | | | | | • | • | • |
| | .034" | | | | | | | | | | • | • | • |
| | .035" | | | | • | • | | | | | • | • | • |
| | .040" | | | | | | | | | | | | |
| 0.25-in Width | .025" | | • | | | | | | | | | | |
| | .030" | | • | | | | | | | | | | |
| | .035" | | • | | | | | | | | | | |
| | .040" | | • | | | | | | | | | | |
| | .044" | | • | | | | | | | | | | |
| Brass | .006" | | | | | | | | | | | | • |
| | .008" | | | | | | | | | | | | • |
| | .010" | | | | • | • | | | | | | | • |
| | .012" | | | | | | | | | | | | • |
| | .014" | | | | | | | | | | | | • |
| | .016" | | | | | | | | | | | | • |
| Steel Rule | | • | • | • | | | | | • | | | | |
| Electrode Tool | | | • | | | | | | | | | | |
| Knurl Lock-Nut | | | | | | • | • | | • | • | • | • | • |
| Rivet | • | • | • | • | • | | | | | | | | |

LONG

The sizes, both decimal and metric equivalent, are permanently etched on each blade except where noted *

| | 12025 | 8-9MC | 8-12MC | 22-2-5/16MC |
|----------------|--------|-------|--------|-------------|
| 0.50-in Width | .0015" | • | | |
| | .002" | • | • | |
| | .0025" | | | |
| | .003" | • | • | |
| | .004" | • | • | • |
| | .005" | • | • | • |
| | .006" | • | • | • |
| | .007" | • | | • |
| | .008" | • | • | • |
| | .009" | • | | • |
| | .010" | • | • | • |
| | .011" | • | | • |
| | .012" | • | | • |
| | .013" | • | | • |
| | .014" | • | | • |
| | .015" | • | • | • |
| | .016" | • | | • |
| | .017" | • | | • |
| | .018" | • | | • |
| | .019" | • | | • |
| | .020" | • | | • |
| | .021" | • | | • |
| | .022" | | | • |
| | .023" | | | • |
| | .024" | | | • |
| | .025" | • | | • |
| | .026" | | | |
| | .027" | • | | |
| | .028" | | | |
| | .029" | | | |
| | .030" | • | | |
| | .031" | | | |
| | .032" | | | |
| | .033" | | | |
| | .034" | | | |
| | .035" | | | |
| | .040" | | | |
| Knurl Lock-Nut | • | • | • | • |

12025

25-BLADE FEELER GAUGE
• 12" x 1/2" blades



8-9MC

8-BLADE FEELER GAUGE
• 9" x 1/2" blades



8-12MC

8-BLADE FEELER GAUGE
• 12" x 1/2" blades



22-2-5/16MC

22-BLADE FEELER GAUGE
• 2-5/16" x 1/2" blades



METRIC

* Only metric sizes etched on blades.

342A *

15-BLADE METRIC FEELER GAUGE
• 3" x 1/2" blades



| | 342A | 343A | FG-30 |
|-----------------|---------|------|-------|
| 0.50-inch Width | 0.04 mm | • | • |
| | 0.05 mm | | • |
| | 0.06 mm | • | • |
| | 0.07 mm | • | • |
| | 0.08 mm | • | • |
| | 0.09 mm | | • |
| | 0.10 mm | • | • |
| | 0.15 mm | • | • |
| | 0.20 mm | • | • |
| | 0.25 mm | • | • |
| | 0.30 mm | • | • |
| | 0.35 mm | • | • |
| | 0.40 mm | • | • |
| | 0.45 mm | • | • |
| | 0.50 mm | • | • |
| | 0.55 mm | • | • |
| | 0.60 mm | • | • |
| | 0.65 mm | | • |
| | 0.70 mm | • | • |
| | 0.75 mm | | • |
| | 0.80 mm | • | • |
| | 0.85 mm | | • |
| | 0.90 mm | • | • |
| | 0.95 mm | | • |
| | 1.00 mm | • | • |
| | Rivet | • | • |
| Knurl Lock-Nut | | • | • |

343A *

25-BLADE METRIC FEELER GAUGE
• 3" x 1/2" blades



FG-30 *

25-BLADE METRIC FEELER GAUGE
• 3" x 1/2" blades



OFFSET The sizes, both decimal and metric equivalent, are permanently etched on each blade

| | 39A | 316A | 3085 | 3275A |
|----------------|-----|------|------|-------|
| .0015" | | | | |
| .002" | | | | |
| .0025" | | | | |
| .003" | | | | |
| .004" | | | | |
| .005" | | • | • | • |
| .006" | | • | • | • |
| .007" | | • | • | • |
| .008" | • | • | • | • |
| .009" | • | • | • | • |
| .010" | • | • | • | • |
| .011" | • | • | • | • |
| .012" | • | • | • | • |
| .013" | • | • | • | • |
| .014" | • | • | • | • |
| .015" | • | • | • | • |
| .016" | • | • | • | • |
| .017" | | • | | • |
| .018" | • | • | | • |
| .019" | • | • | | • |
| .020" | • | • | | • |
| .021" | | | | • |
| .022" | | | | • |
| .023" | | | | • |
| .024" | | | | • |
| .025" | • | | | • |
| .026" | • | | | • |
| .027" | | | | • |
| .028" | | | | • |
| .029" | | | | • |
| .030" | | | | • |
| .031" | | | | • |
| .032" | | | | • |
| .033" | | | | • |
| .034" | | | | • |
| .035" | | | | • |
| .040" | | | | • |
| Knurl Lock-Nut | | | • | • |
| Rivet | • | • | | |

39A
12-BLADE OFFSET FEELER GAUGE 4" LONG
 • 4" x 1/2" blades
 • Blades have 1" 45° offset for checking valve clearances



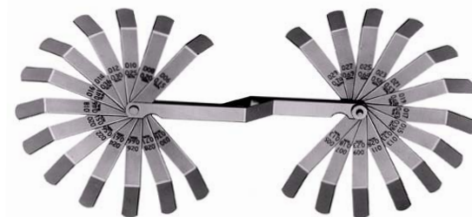
316A
16 OFFSET BLADE TAPPET FEELER GAUGE 4" LONG
 • 4" x 1/2" blades
 • Blades have 1" 45° offset for checking valve clearances



3085
11 OFFSET VALVE TAPPET GAUGE SET - IMPORTS
 • 3" x 1/2" blades
 • Blades have 30° offset for easy use
 • This two handle, eleven feeler blade set is designed for use when setting valve tappets on many import vehicles
 • E-Z grip handle for comfort and control



3275A
26-BLADE OFFSET FEELER GAUGE 4" LONG
 • 4" x 1/2" blades
 • Blades have 1" 45° offset for checking valve clearances



THIN

1610
14-BLADE VALVE LASH GAUGE SET



- 4" x 1/4" blades
- 1/4" wide gauge blades can be used to check valve clearances of small diameter bucket and shim type valve trains
- Standard 1/2" wide blades may contact the cylinder head and not provide the proper clearance "feel"
- 4" length allows for extra reach to recessed valve systems

2636A
17 MINI-BLADE FEELER GAUGE
 • 1-3/4" x 1/4" blades



| | 1610 | 2636A |
|----------------|------|-------|
| .002" | • | |
| .003" | • | |
| .004" | • | |
| .005" | • | |
| .006" | • | |
| .007" | • | |
| .008" | • | |
| .009" | • | |
| .010" | • | • |
| .011" | • | |
| .012" | • | • |
| .013" | • | • |
| .014" | • | |
| .015" | • | • |
| .016" | | • |
| .017" | | • |
| .018" | | • |
| .019" | | • |
| .020" | | • |
| .022" | | • |
| .024" | | • |
| .025" | | • |
| .026" | | • |
| .028" | | • |
| .030" | | • |
| .032" | | • |
| .035" | | • |
| Pouch | • | |
| Knurl Lock-Nut | | • |

| Part # | Pg. | Part # | Pg. | Part # | Pg. | Part # | Pg. | Part # | Pg. | Part # | Pg. |
|-------------|-----|--------|-----|--------|-----|--------|-----|---------|-----|--------|-----|
| 8-9MC | 67 | 522 | 52 | 1160 | 41 | 1245 | 47 | 3074 | 60 | 4663 | 54 |
| 8-12MC | 67 | 525 | 53 | 1167 | 41 | 1250 | 47 | 3075 | 60 | 5139 | 58 |
| 9-3MC | 65 | 528 | 54 | 1167R | 43 | 1251 | 47 | 3078 | 60 | 5220 | 40 |
| 12 | 32 | 529 | 54 | 1170R | 43 | 1252 | 47 | 3079 | 60 | 5221 | 40 |
| 14 | 32 | 538 | 53 | 1173R | 43 | 1253 | 47 | 3085 | 68 | 5222 | 40 |
| 16-3-5/16MC | 65 | 541A | 50 | 1174 | 41 | 1254 | 47 | 3136 | 56 | 5238 | 52 |
| 21A | 65 | 548 | 53 | 1175 | 43 | 1255 | 47 | 3136-36 | 56 | 5239A | 52 |
| 22-2-5/16MC | 67 | 563 | 53 | 1176 | 43 | 1256 | 47 | 3136-58 | 56 | 5239B | 52 |
| 27A | 65 | 568 | 53 | 1201 | 47 | 1257 | 47 | 3195 | 48 | 5278 | 40 |
| 28A | 65 | 615 | 55 | 1202 | 47 | 1258 | 47 | 3246 | 48 | 5331 | 58 |
| 29A | 65 | 635A | 53 | 1203 | 47 | 1259 | 47 | 3275A | 68 | 5333 | 58 |
| 36A | 65 | 676-6 | 52 | 1204 | 47 | 1260 | 47 | 3296 | 56 | 5339 | 57 |
| 36XK | 65 | 676-8 | 52 | 1205 | 47 | 1261 | 47 | 3350 | 59 | 5344 | 57 |
| 39A | 68 | 676-10 | 52 | 1206 | 47 | 1262 | 47 | 3406 | 56 | 5345 | 40 |
| 75 | 31 | 676-12 | 52 | 1207 | 47 | 1290 | 47 | 3414A | 58 | 5362 | 39 |
| 87 | 32 | 679 | 59 | 1208 | 47 | 1291 | 47 | 3422 | 56 | 5363 | 39 |
| 135 | 54 | 702 | 62 | 1209 | 47 | 1410 | 51 | 3444 | 32 | 5370 | 40 |
| 145 | 32 | 706 | 59 | 1210 | 47 | 1418 | 55 | 3472 | 56 | 5373 | 35 |
| 202 | 50 | 708 | 53 | 1211 | 47 | 1421 | 31 | 3473 | 56 | 5374 | 35 |
| 277A | 54 | 712A | 64 | 1212 | 47 | 1434 | 31 | 3474 | 56 | 5382 | 40 |
| 279 | 50 | 729 | 56 | 1213 | 47 | 1435 | 31 | 3483 | 30 | 5457 | 40 |
| 291 | 50 | 755 | 51 | 1214 | 47 | 1450 | 31 | 3484 | 30 | 5469 | 60 |
| 294A | 50 | 758 | 59 | 1215 | 47 | 1465 | 31 | 3485 | 30 | 5500 | 34 |
| 295A | 50 | 759 | 59 | 1216 | 47 | 1485 | 31 | 3486 | 30 | 5501 | 34 |
| 297 | 50 | 780 | 49 | 1217 | 47 | 1486 | 31 | 3487 | 30 | 5504 | 35 |
| 298 | 50 | 782 | 49 | 1218 | 47 | 1610 | 62 | 3488 | 30 | 5506 | 35 |
| 299 | 50 | 785 | 49 | 1219 | 47 | 1722 | 54 | 3489 | 30 | 5508 | 34 |
| 316A | 68 | 795 | 59 | 1220 | 47 | 2467 | 48 | 3490 | 30 | 5516 | 34 |
| 342A | 67 | 801 | 44 | 1221 | 47 | 2573 | 45 | 3491 | 30 | 5520 | 34 |
| 343A | 67 | 833 | 51 | 1222 | 47 | 2577 | 44 | 3492 | 30 | 5523 | 55 |
| 379 | 54 | 847 | 51 | 1223 | 47 | 2579 | 44 | 3493 | 30 | 5524 | 55 |
| 380 | 54 | 850 | 52 | 1224 | 47 | 2581 | 45 | 3494 | 30 | 5526 | 34 |
| 383A | 54 | 852 | 52 | 1225 | 47 | 2583 | 44 | 3495 | 30 | 5527 | 34 |
| 385 | 54 | 901 | 5 | 1226 | 47 | 2584 | 45 | 3497 | 30 | 5528 | 34 |
| 401 | 51 | 915 | 49 | 1227 | 47 | 2585 | 44 | 3509 | 53 | 5529A | 55 |
| 408A | 61 | 938 | 51 | 1228 | 47 | 2586 | 44 | 3900 | 56 | 5530 | 62 |
| 413 | 53 | 950 | 52 | 1229 | 47 | 2588 | 44 | 3901 | 56 | 5531 | 34 |
| 436A | 53 | 971 | 45 | 1230 | 47 | 2590 | 44 | 3902 | 56 | 5532 | 34 |
| 437 | 61 | 972 | 45 | 1231 | 47 | 2592 | 44 | 3903 | 56 | 5585 | 35 |
| 440 | 61 | 1010 | 47 | 1232 | 47 | 2594 | 44 | 3904 | 56 | 5700 | 38 |
| 444 | 61 | 1012 | 47 | 1233 | 47 | 2599 | 44 | 3910 | 48 | 5701 | 38 |
| 445 | 61 | 1013A | 47 | 1234 | 47 | 2633A | 64 | 3911 | 48 | 5704 | 38 |
| 446 | 61 | 1016A | 47 | 1235 | 47 | 2634A | 64 | 3937 | 48 | 5706 | 38 |
| 449 | 61 | 1020A | 47 | 1236 | 47 | 2636A | 68 | 3975 | 32 | 5709 | 38 |
| 486 | 59 | 1129 | 43 | 1237 | 47 | 2665 | 45 | 3976 | 32 | 5717 | 38 |
| 492 | 61 | 1130 | 43 | 1238 | 47 | 2666 | 45 | 3977 | 32 | 6500 | 34 |
| 504 | 53 | 1135 | 43 | 1239 | 47 | 2670 | 45 | 4046A | 65 | 6501 | 34 |
| 514 | 61 | 1137 | 43 | 1240 | 47 | 2770 | 48 | 4450A | 64 | 6504 | 35 |
| 520 | 52 | 1138 | 43 | 1241 | 47 | 3013A | 65 | 4647 | 54 | 6506 | 35 |
| 521 | 52 | 1140 | 43 | 1244 | 47 | 3072 | 60 | 4651 | 59 | 6507 | 35 |

| Part # | Pg. | Part # | Pg. | Part # | Pg. | Part # | Pg. | Part # | Pg. | Part # | Pg. |
|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|---------|-----|
| 6515 | 32 | 7723 | 38 | 9280 | 63 | 9902A | 41 | 71306 | 10 | 74440 | 12 |
| 6525 | 49 | 7724 | 38 | 9500 | 34 | 9903A | 41 | 71308 | 10 | 74442 | 12 |
| 6529 | 62 | 7786 | 38 | 9501 | 34 | 9907A | 41 | 71313 | 11 | 74444 | 13 |
| 6530 | 62 | 7791 | 37 | 9504 | 35 | 12025 | 67 | 71314 | 11 | 74445 | 13 |
| 6531 | 62 | 7792 | 37 | 9515 | 34 | 13800 | 42 | 71315 | 11 | 74446 | 13 |
| 6538 | 62 | 7795 | 37 | 9516 | 34 | 13801 | 42 | 71316 | 11 | 74454 | 13 |
| 6562 | 63 | 7796 | 37 | 9518 | 34 | 13802 | 42 | 71317 | 11 | 74455 | 13 |
| 6571 | 49 | 7797 | 37 | 9520 | 34 | 13803 | 42 | 71318 | 11 | 74459 | 13 |
| 6572 | 49 | 7798 | 37 | 9521 | 34 | 13804 | 42 | 71319 | 11 | 74469 | 13 |
| 6585 | 35 | 8500 | 34 | 9601 | 34 | 13805 | 42 | 71321 | 11 | 74471 | 29 |
| 6590 | 32 | 8501 | 34 | 9602 | 34 | 13808 | 42 | 71327 | 29 | 74476 | 9 |
| 6660 | 36 | 8504 | 35 | 9603 | 34 | 13809 | 42 | 71328 | 11 | 74484 | 29 |
| 6665 | 36 | 8505 | 35 | 9604 | 34 | 13810 | 42 | 71329 | 11 | 74485 | 29 |
| 6700 | 38 | 8512 | 34 | 9608 | 34 | 13902 | 42 | 71330 | 11 | 74486 | 13 |
| 6701 | 38 | 8513 | 34 | 9620 | 37 | 13908 | 42 | 71403 | 11 | 74487 | 13 |
| 6704 | 38 | 8569 | 59 | 9622 | 37 | 13909 | 42 | 71404 | 11 | 74488 | 13 |
| 6705 | 38 | 8572 | 57 | 9623 | 37 | 13910 | 42 | 71405 | 11 | 74489 | 9 |
| 6738 | 63 | 8577 | 63 | 9624 | 37 | 13912 | 42 | 71406 | 11 | 74492 | 13 |
| 6789 | 37 | 8579 | 57 | 9625 | 37 | 13914 | 42 | 71408 | 11 | 74493 | 13 |
| 6790 | 37 | 8584 | 57 | 9626 | 37 | 13915 | 42 | 71409 | 11 | 74494 | 13 |
| 6791 | 37 | 8585 | 57 | 9627 | 37 | 33062 | 10 | 72305 | 11 | 74495 | 13 |
| 6792 | 37 | 8586 | 57 | 9629 | 37 | 34021 | 10 | 72306 | 11 | 74498 | 19 |
| 6794 | 37 | 8587 | 35 | 9630 | 37 | 35031 | 10 | 72308 | 11 | 74499 | 13 |
| 6795 | 37 | 8591 | 57 | 9631 | 37 | 36032 | 10 | 72309 | 11 | 74571 | 13 |
| 6796 | 37 | 8592 | 57 | 9632 | 37 | 41303 | 10 | 72315 | 12 | 74701 | 13 |
| 7500 | 34 | 8593 | 57 | 9633 | 37 | 41310 | 10 | 72316 | 12 | 74851 | 13 |
| 7501 | 34 | 8598 | 63 | 9634 | 37 | 41327 | 10 | 72317 | 12 | 74852 | 13 |
| 7504 | 35 | 8600 | 32 | 9635 | 37 | 41570 | 56 | 72318 | 12 | 74853 | 13 |
| 7506 | 35 | 8645 | 32 | 9636 | 63 | 41576 | 10 | 72319 | 12 | 74854 | 13 |
| 7509 | 35 | 8660 | 36 | 9640 | 37 | 41701 | 49 | 72320 | 12 | 651590 | 32 |
| 7510 | 35 | 8665 | 36 | 9641 | 37 | 42553 | 20 | 72322 | 12 | B-10A | 49 |
| 7514 | 34 | 8666 | 36 | 9650 | 37 | 43110 | 10 | 72323 | 12 | B-600 | 49 |
| 7515 | 35 | 8690 | 32 | 9651 | 37 | 43141 | 10 | 73102 | 5 | B-610 | 49 |
| 7517 | 34 | 8700 | 38 | 9652 | 37 | 52011 | 20 | 73103 | 5 | CLT-2 | 3 |
| 7518 | 34 | 8701 | 38 | 9653 | 37 | 52102 | 20 | 73106 | 5 | CLT-4 | 3 |
| 7522 | 34 | 8704 | 38 | 9654 | 37 | 52110 | 20 | 73109 | 5 | FG-2 | 65 |
| 7523 | 35 | 8705 | 38 | 9655 | 37 | 56244 | 20 | 73110 | 5 | FG-30 | 67 |
| 7524 | 35 | 8712 | 38 | 9660 | 36 | 60236 | 10 | 73111 | 5 | FG-35-A | 65 |
| 7529 | 34 | 8713 | 38 | 9665 | 36 | 60238 | 10 | 73211 | 29 | FG-135 | 65 |
| 7578 | 59 | 8720 | 32 | 9700 | 38 | 60239 | 10 | 74424 | 12 | FM-720A | 55 |
| 7586 | 35 | 8787 | 38 | 9701 | 38 | 60410 | 10 | 74425 | 29 | RB-3P | 36 |
| 7660 | 36 | 8790 | 32 | 9704 | 38 | 60440 | 10 | 74426 | 12 | RB-5 | 36 |
| 7661 | 36 | 8791 | 37 | 9721 | 38 | 60772 | 10 | 74427 | 29 | RB-6 | 36 |
| 7665 | 36 | 8792 | 37 | 9723 | 63 | 61333 | 10 | 74431 | 12 | RB-42 | 37 |
| 7700 | 38 | 8795 | 37 | 9724 | 64 | 70408 | 6 | 74432 | 12 | RB-44 | 37 |
| 7704 | 38 | 8796 | 37 | 9781 | 38 | 71301 | 10 | 74433 | 12 | RB-46 | 37 |
| 7705 | 38 | 8797 | 37 | 9791 | 37 | 71302 | 10 | 74434 | 12 | RB-48 | 37 |
| 7706 | 38 | 8798 | 37 | 9792 | 37 | 71303 | 10 | 74435 | 12 | RB-50 | 37 |
| 7710 | 38 | 8799 | 63 | 9793 | 64 | 71304 | 10 | 74437 | 12 | RB-52 | 37 |
| 7717 | 38 | 9270 | 63 | 9794 | 64 | 71305 | 10 | 74438 | 12 | RB-54 | 37 |

| Part # | Pg. | Part # | Pg. | Part # | Pg. | Part # | Pg. | Part # | Pg. |
|------------|-------|---------------|-----|-----------|-------|-----------|------|----------|-----|
| RB-56 | 37 | ROW-24 | 37 | TU-11A | 6 | TU-15-52B | 19 | TU-457P | 8 |
| RB-58 | 37 | ROW-28 | 37 | TU-12 | 6 | TU-15-53 | 19 | TU-469 | 8 |
| RB-60 | 37 | ROW-0810 | 39 | TU-15 | 19 | TU-15-70 | 19 | TU-470B | 8 |
| RB-64 | 37 | ROW-0810DH | 38 | TU-15-1A | 20 | TU-15-71 | 19 | TU-540-1 | 9 |
| RB-68 | 37 | ROW-1011DH | 38 | TU-15-2A | 20 | TU-15-75 | 22 | TU-540-2 | 9 |
| RB-312P | 36 | ROW-1214 | 39 | TU-15-3A | 20 | TU-15-76 | 22 | TU-550 | 9 |
| RB-810 | 36 | ROW-1214DH | 38 | TU-15-4A | 20 | TU-15-77 | 22 | | |
| RB-810DH | 35 | ROW-1618 | 39 | TU-15-5 | 21 | TU-15-78 | 22 | | |
| RB-1214 | 36 | ROW-1618DH | 38 | TU-15-6 | 21 | TU-15-79 | 22 | | |
| RB-1214DH | 35 | ROW-2022 | 39 | TU-15-8 | 20-21 | TU-15-80 | 22 | | |
| RB-1618 | 36 | ROW-2022A | 38 | TU-15-9 | 20 | TU-15-81 | 22 | | |
| RB-1618DH | 35 | ROW-2024 | 39 | TU-15-11A | 20 | TU-16A | 6 | | |
| RB-2022 | 36 | ROW-2228 | 38 | TU-15-12A | 20 | TU-17 | 4,19 | | |
| RB-2024 | 35 | ROW-2428 | 39 | TU-15-13A | 20-21 | TU-18 | 4 | | |
| RB-2228 | 35 | ROW-2630 | 38 | TU-15-14 | 20 | TU-20-1 | 4 | | |
| RB-2428 | 36 | ROWM-5 | 39 | TU-15-15 | 21 | TU-20-2 | 4 | | |
| RB-2630 | 36 | ROWM-7P | 39 | TU-15-17 | 20 | TU-21 | 4 | | |
| RBM-5 | 36 | ROWM-8 | 37 | TU-15-18A | 20 | TU-22A | 18 | | |
| RBM-7 | 36 | ROWM-9 | 37 | TU-15-19 | 20-21 | TU-24A | 18 | | |
| RBM-22 | 37 | ROWM-10 | 37 | TU-15-20 | 20-21 | TU-25 | 18 | | |
| RBM-23 | 37 | ROWM-11 | 37 | TU-15-21 | 20-21 | TU-26 | 7 | | |
| RBM-24 | 37 | ROWM-12 | 37 | TU-15-22A | 20-21 | TU-29 | 18 | | |
| RBM-25 | 37 | ROWM-13 | 37 | TU-15-23 | 20-21 | TU-30A | 4 | | |
| RBM-26 | 37 | ROWM-14 | 37 | TU-15-24 | 21 | TU-32 | 27 | | |
| RBM-27 | 37 | ROWM-15 | 37 | TU-15-25 | 21 | TU-32-1 | 27 | | |
| RBM-29 | 37 | ROWM-16 | 37 | TU-15-26 | 21 | TU-32-2 | 27 | | |
| RBM-30 | 37 | ROWM-17 | 37 | TU-15-27 | 21 | TU-32-3 | 27 | | |
| RBM-32 | 37 | ROWM-18 | 37 | TU-15-28 | 20-21 | TU-32-4 | 27 | | |
| RBM-36 | 37 | ROWM-0708 | 39 | TU-15-29 | 20-21 | TU-32-5 | 27 | | |
| RBM-0708 | 36 | ROWM-0708A | 38 | TU-15-30 | 21 | TU-32-6 | 27 | | |
| RBM-0708DH | 35 | ROWM-0708DH38 | | TU-15-31 | 21 | TU-32-7 | 27 | | |
| RBM-0910 | 36 | ROWM-0910 | 39 | TU-15-32 | 22 | TU-32-8 | 28 | | |
| RBM-0910DH | 35 | ROWM-0910DH38 | | TU-15-33 | 22 | TU-32-20 | 28 | | |
| RBM-1113 | 36 | ROWM-1112 | 38 | TU-15-34 | 22 | TU-32-21 | 28 | | |
| RBM-1213DH | 35 | ROWM-1112DH | 38 | TU-15-35 | 22 | TU-32-22 | 28 | | |
| RBM-1214 | 36 | ROWM-1113 | 39 | TU-15-36 | 22 | TU-32-23 | 28 | | |
| RBM-1415 | 35 | ROWM-1213DH | 38 | TU-15-37 | 22 | TU-32-24 | 28 | | |
| RBM-1517 | 35-36 | ROWM-1214 | 39 | TU-15-38 | 22 | TU-32-25 | 28 | | |
| RBM-1618 | 36 | ROWM-1314 | 38 | TU-15-39 | 22 | TU-32-26 | 28 | | |
| RBM-1921 | 35-36 | ROWM1314DH | 38 | TU-15-40 | 22 | TU-32-27 | 28 | | |
| ROW-3 | 39 | ROWM-1415 | 38 | TU-15-41 | 22 | TU-32-28 | 28 | | |
| ROW-5 | 39 | ROWM-1517 | 38 | TU-15-42 | 22 | TU-113C | 7 | | |
| ROW-08 | 37 | ROWM-1618 | 38 | TU-15-43 | 22 | TU-310C | 4 | | |
| ROW-10 | 37 | ROWM-1921 | 38 | TU-15-44 | 22 | TU-443 | 7 | | |
| ROW-12 | 37 | TU-1 | 18 | TU-15-45 | 22 | TU-443-2 | 9 | | |
| ROW-14 | 37 | TU-2 | 18 | TU-15-46 | 22 | TU-443-3 | 9 | | |
| ROW-16 | 37 | TU-3 | 3 | TU-15-47 | 22 | TU-446C | 7 | | |
| ROW-18 | 37 | TU-4A | 6 | TU-15-48 | 22 | TU-447C | 7 | | |
| ROW-20 | 37 | TU-7 | 3 | TU-15-49 | 22 | TU-448C | 7 | | |
| ROW-22 | 37 | TU-8A | 3 | TU-15-51 | 19 | TU-449 | 8 | | |



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2. Return the signed agreement to A & E Incorporated. We will promptly evaluate your idea. You will then be notified whether or not we will offer an award or royalty.

A & E Incorporated

5501 21st Street • Racine, WI 53406
P: 262.554.2300 • F: 262-554-7503
www.langtools.com



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