

Owner's Manual & Safety Instructions

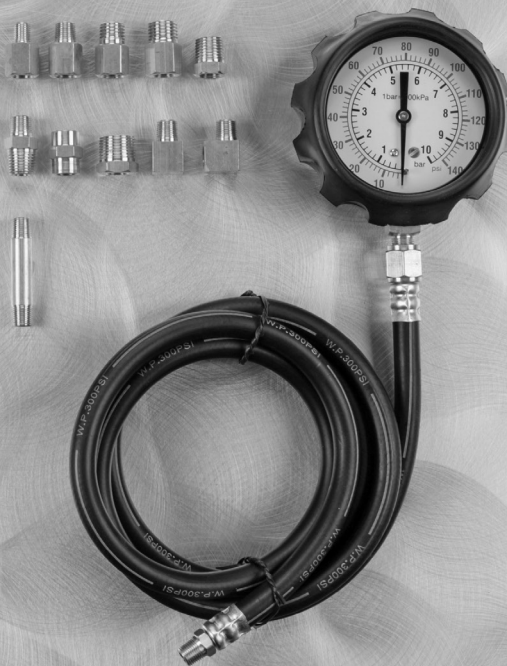
Save This Manual Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

REV 15c

PITTSBURGH[®] AUTOMOTIVE

ITEM 62621

Engine Oil Pressure Test Kit



Visit our website at: <http://www.harborfreight.com>

Email our technical support at: productsupport@harborfreight.com

When unpacking, make sure that the product is intact and undamaged. If any parts are missing or broken, please call 1-888-866-5797 as soon as possible.

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No portion of this manual or any artwork contained herein may be reproduced in any shape or form without the express written consent of Harbor Freight Tools. Diagrams within this manual may not be drawn proportionally. Due to continuing improvements, actual product may differ slightly from the product described herein. Tools required for assembly and service may not be included.

⚠ WARNING

**Read this material before using this product.
Failure to do so can result in serious injury.
SAVE THIS MANUAL.**

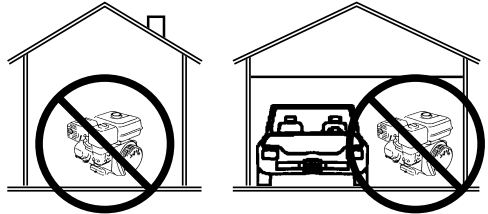
The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

7.

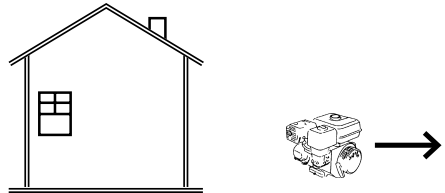


CARBON MONOXIDE HAZARD
Using an engine indoors CAN KILL YOU IN MINUTES.

Engine exhaust contains carbon monoxide. This is a poison you cannot see or smell.



NEVER use inside a home or garage, EVEN IF doors and windows are open.



Only use OUTSIDE and far away from windows, doors, and vents.

Important Safety Information

1. Do not allow the Tester to interfere with the moving parts of a running engine.
2. Maintain labels and nameplates on the tool. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
3. This product is not a toy. Keep it out of reach of children.
4. **WARNING:** The brass components of this product contain lead, a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. (California Health & Safety Code § 25249.5, *et seq.*)
5. **WARNING:** This product contains di (2-ethylhexyl) phthalate (DEHP), a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. (California Health & Safety Code § 25249.5, *et seq.*)
6. People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure. Caution is necessary when near coil, spark plug cables, or distributor of running engine. Engine should be off during distributor adjustment.

Specifications

| | |
|----------------|---|
| Accuracy | ±2% of Reading |
| Pressure Scale | 0~100 PSI (2 PSI Divisions); 0~10 Bar (2 Bar Divisions); 310° Pointer Sweep |
| Gauge Fitting | 1/8" 27 NPT |
| Applications | Works on many domestic and imported cars, trucks, tractors, and starting engines. |

Operating Instructions



Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this document including all text under subheadings therein before set up or use of this product.

1. Read the service manual of the engine that the gauge will be testing.
2. If testing the engine in a vehicle; the vehicle should be parked on a level surface, the transmission should be set in neutral with the parking brake engaged and the wheels chocked.
3. The oil pressure/temperature sensor is usually located on or near the oil pan at the lower part of the engine. Clean the area thoroughly before proceeding.
4. Only connect the Gauge when the engine is off and cool.
5. Place a pan underneath the sensor to catch oil, remove the sensor, and thread the Gauge into the opening.
6. Attach the appropriate fitting to the Gauge.
7. Check the oil level and refill as needed.
8. Start the vehicle and allow it to come to normal running temperature. If necessary, have an assistant maintain the proper RPM indicated by the chart.
9. Compare the reading on the Gauge to the numbers on the chart. If the actual reading is lower or higher than the numbers indicated on the chart have the engine serviced by a qualified technician.

10. Turn the vehicle off and allow it to cool before removing the Gauge.
11. Replace the oil pressure/temperature sensor, refill oil as necessary and recycle spilled oil according to local, state, and federal laws and regulations.
12. Clean, then store the tool indoors out of children's reach.

Maintenance and Servicing



Procedures not specifically explained in this manual must be performed only by a qualified technician.

WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:
Detach the tool from the vehicle being tested before performing any inspection, maintenance, or cleaning procedures.

TO PREVENT SERIOUS INJURY FROM TOOL FAILURE:
Do not use damaged equipment. If abnormal noise or vibration occurs, have the problem corrected before further use.

1. **BEFORE EACH USE**, inspect the general condition of the tool. Check for loose fittings, misalignment or binding of moving parts, cracked or broken parts and any other condition that may affect its safe operation.
2. **AFTER USE**, clean external surfaces of the tool with clean cloth.

| Make | Year | Engine | Normal | | @RPM |
|-----------|--------------|---|--------|--------------------|-------|
| | | | PSI | KG/CM ² | |
| Chrysler® | 1983-86 | 1.6 | 40-90 | 2.8-6.3 | 3,000 |
| Chrysler | 1983 | 1.7 | 28 | 1.97 | 2,000 |
| Chrysler | 1983-85 | 2.2 | 50 | 3.5 | 2,000 |
| Chrysler | 1986-89 | 2.2 & 2.8 | 50 | 3.5 | 3,000 |
| Chrysler | 1983-85 | 2.6 | 50-64 | 3.5-4.5 | 2,000 |
| Chrysler | 1989 | 2.5 (2459) | 37 | 2.6 | 1,600 |
| Chrysler | 1989-90 | 2.2 | 30-80 | 2.1-5.6 | 3,000 |
| Chrysler | 1989-93 | 1.5 & 1.6 | 54 | 3.8 | 2,000 |
| Chrysler | 1989-93 | 1.8 & 2.0 | 41 | 2.9 | 2,000 |
| Chrysler | 1993 | 2.4 | 11.4 | .8 | Idle |
| Chrysler | 1994 | Talon® & Laser® | 11.4 | .8 | Idle |
| Chrysler | 1995-97 | Talon (F) | 11.4 | .8 | Idle |
| Chrysler | 1995-97 | Talon (Y) | 4 | .28 | Idle |
| Chrysler | 1993-95 | 2.3, 2.5, Lebaron®, Daytona®, Shadow®, Spirit®, Acclaim®, Sundance® | 25-80 | 1.8-5.6 | 3,000 |
| Chrysler | 1995-97 | 2.0 (except Talon & Laser) and all 2.4 | 25-80 | 1.8-5.6 | 3,000 |
| Chrysler | 1995-97 | 2.5 Cirrus®, Stratus®, Sebring®, Avenger® | 35-75 | 2.5-5.3 | 3,000 |
| Chrysler | 1993 | 2.5 (2507) | 35-65 | 2.5-4.6 | 2,000 |
| Chrysler | 1994-95 | 2.5 (2507 & 2458) | 25-80 | 1.8-5.6 | 3,000 |
| Chrysler | 1988 | 3.0 | 100 | 7.0 | 3,000 |
| Chrysler | 1983 | 3.7 | 30-70 | 2.1-4.9 | 2,000 |
| Chrysler | 1991-92 | 3.0 (2967) | 30-80 | 2.1-5.6 | 2,000 |
| Chrysler | 1989-92 | 3.0 (2950) | 60 | 4.2 | 4,000 |
| Chrysler | 1993-97 | 3.0 (2972), 3.3, 3.8, 3.9 (3916), 5.2, 5.9 (5899) | 30-80 | 2.1-5.6 | 3,000 |
| Chrysler | 1993 | 3.0 (except Stealth® & 2972) | 28.5 | 2.0 | 3,000 |
| Chrysler | 1994-95 | 3.0 (except Stealth & 2972) | 35-75 | 2.5-5.3 | 3,000 |
| Chrysler | 1993-97 | Stealth | 35-100 | 2.5-7.0 | 2000 |
| Chrysler | 1993 | 3.5 | 25-70 | 1.8-4.9 | 3,000 |
| Chrysler | 1994, 96, 97 | 3.5 | 25-80 | 1.8-5.6 | 3,000 |
| Chrysler | 1983-89 | 5.2 | 30-80 | 2.1-5.6 | 2,000 |
| Chrysler | 1993-97 | 5.9 (5882) | 30 | 2.1 | 2,500 |
| Chrysler | 1989-93 | A, C, E, G, H, J, K, P, Y Body | 30-80 | 2.1-5.6 | 3,000 |
| Chrysler | 1989 | Rear Wheel Drive | 80 | 5.6 | 3,000 |
| Chrysler | 1989-90 | Front Wheel Drive | 30-80 | 2.1-5.6 | 3,000 |
| Ford® | 1983-85 | 1.6 | 30-50 | 2.1-3.5 | 2,000 |
| Ford | 1989-91 | 1.6 | 50-64 | 3.5-4.5 | 3,000 |
| Ford | 1992-94 | 1.6 | 45 | 3.2 | 3,000 |
| Ford | 1994-97 | Aspire® | 50-64 | 3.5-4.5 | 3,000 |
| Ford | 1986-97 | 1.9 | 35-65 | 2.5-4.6 | 2,000 |
| Ford | 1991-92 | 1.8 | 43-57 | 3.0-4.0 | 3,000 |

| Make | Year | Engine | Normal | | @RPM |
|------|---------|---|---------|--------------------|-------|
| | | | PSI | KG/CM ² | |
| Ford | 1993-95 | 1.8 | 35-65 | 2.5-4.6 | 2,000 |
| Ford | 1996-97 | 1.8 | 28-43 | 2.0-3.0 | 1,000 |
| Ford | 1985-87 | 2.0 | 43 | 3.0 | 3,000 |
| Ford | 1993-97 | 2.0 (1993) | 57-71 | 4.0-5.0 | 2,000 |
| Ford | 1995-97 | 2.0 (1999) & 2.5 (2507) | 20-45 | 1.4-3.2 | 1,500 |
| Ford | 1989-92 | 2.2 | 43-57 | 3.0-4.0 | 3,000 |
| Ford | 1984-93 | 2.3 (2326 OHV) & 2.5 (2524) | 55-70 | 3.9-4.9 | 2,000 |
| Ford | 1983-93 | 2.3 (2295 OHC) & 2.3 (2300 M) | 40-60 | 2.8-4.2 | 2,000 |
| Ford | 1993-97 | 2.3 (2294), 4.0 & 4.9 | 40-60 | 2.8-4.2 | 2,000 |
| Ford | 1993-94 | Villager® | 40-60 | 2.8-4.2 | 2,000 |
| Ford | 1995-97 | Windstar® & Villager | 40-60 | 2.8-4.2 | 2,500 |
| Ford | 1993-97 | 2.5 (2501) | 49-71 | 3.4-5.0 | 3,000 |
| Ford | 1986-92 | 3.0 (2971) & 3.8 | 40-60 | 2.8-4.2 | 2,000 |
| Ford | 1993-94 | 3.0 (2971 Y) | 40-65 | 2.8-4.6 | 2,000 |
| Ford | 1988-92 | 3.0 (2980 SHO) | 12.8 | .9 | 800 |
| Ford | 1993-95 | 3.0 (2980 Y) | 40-65 | 2.8-4.6 | 2,000 |
| Ford | 1993-97 | 3.0 (2971 U), 2.3 (2300 X), 3.0 (2980 U) 3.0 (2982) | 55-70 | 3.9-4.9 | 2,000 |
| Ford | 1993-95 | 3.2 | 40-60 | 2.8-4.2 | 2,000 |
| Ford | 1983 | 3.3 | 30-50 | 2.1-3.5 | 2,000 |
| Ford | 1993-97 | 3.0 Aerostar®, Ranger® & all 3.8 | 40-60 | 2.8-4.2 | 2,500 |
| Ford | 1996-97 | 4.2 | 50 | 3.5 | 2,000 |
| Ford | 1991-92 | 4.6 | 40-60 | 2.8-4.2 | 1,500 |
| Ford | 1993-97 | 4.6 (4593 V) | 33 | 2.3 | 1,500 |
| Ford | 1993-97 | 406 (4593 W) | 20-45 | 1.4-3.2 | 2,000 |
| Ford | 1996-97 | 3.0 (2998 S) & 4.6 (4588) | 20-45 | 1.4-3.2 | 1,500 |
| Ford | 1983-97 | 5.0 & 5.8 | 40-65 | 2.8-4.6 | 2,000 |
| Ford | 1993 | 7.3 | 40-70 | 2.8-4.9 | 2,000 |
| Ford | 1994-97 | 7.3 VIN F | 40-70 | 2.8-4.9 | 3,000 |
| Ford | 1994-95 | 7.3 VIN K & VIN M | 40-70 | 2.8-4.9 | 2,000 |
| Ford | 1993 | 7.5 | 40-65 | 2.8-4.6 | 2,000 |
| Ford | 1994-97 | 7.5 | 40-88 | 2.8-6.2 | 2,000 |
| GM® | 1984-87 | 1.6 | 50-65 | 3.5-4.6 | 1,200 |
| GM | 1985-88 | Sprint® | 42.7-54 | 3.0-3.8 | 3,000 |
| GM | 1985-90 | Spectrum® | 49 | 3.4 | 5,200 |
| GM | 1985-88 | Nova® (1600) | 34 | 2.4 | 2,000 |
| GM | 1988 | Nova (1600 EFI) | 56 | 3.9 | 3,000 |
| GM | 1988 | 1.6 | 35 | 2.5 | 2,000 |
| GM | 1989-92 | Metro® | 39 | 2.7 | 4,000 |
| GM | 1993 | Metro 1.0 | 50 | 3.5 | 3,000 |

| Make | Year | Engine | Normal | | @RPM |
|------|---------|---|--------|--------------------|-------|
| | | | PSI | KG/CM ² | |
| GM | 1994-97 | Metro 1.0 | 54 | 3.8 | 3,000 |
| GM | 1989-92 | Prizm® & Storm® | 56 | 3.9 | 3,000 |
| GM | 1993-94 | Prizm 1.6 | 54 | 3.8 | 3,000 |
| GM | 1993 | Prizm 1.8 | 54 | 3.8 | 3,000 |
| GM | 1994 | Prizm 1.8 | 71 | 5.0 | 3,000 |
| GM | 1993 | Storm 1.6 | 58 | 4.1 | 3,000 |
| GM | 1993 | Storm 1.8 | 71 | 5.0 | 3,000 |
| GM | 1995-97 | Prizm 1.6 & Prizm 1.8 | 36-71 | 2.5-5.0 | 3,000 |
| GM | 1993 | Tracker® | 51-62 | 3.6-4.4 | 3,000 |
| GM | 1994 | Tracker | 47-61 | 3.3-4.3 | 3,000 |
| GM | 1995-97 | Tracker | 47-61 | 3.3-4.3 | 4,000 |
| GM | 1993-97 | Saturn® 1.9 (7) | 29 | 2.0 | 2,000 |
| GM | 1993-97 | Saturn 1.9 (8 & 9) | 36 | 2.5 | 2,000 |
| GM | 1984-89 | 1.8 & 2.0 (1983 OHC Turbo) | 65 | 4.6 | 2,500 |
| GM | 1991-93 | 1.9 | 36 | 2.5 | 2,000 |
| GM | 1989 | 2.0 (1983 TBI) | 45 | 3.2 | 2,000 |
| GM | 1983-89 | 2.0 (1983 OHV TBI-HO) | 63-77 | 4.4-5.4 | 1,200 |
| GM | 1993-94 | 2.0 (1993) H | 30 | 2.1 | 2,000 |
| GM | 1990-97 | 2.2 (2189, 2195, 2196) | 56 | 3.9 | 3,000 |
| GM | 1990-95 | 2.2 (2180) | 63-77 | 4.4-5.4 | 1,200 |
| GM | 1996-97 | 2.2 (2180) | 56 | 3.9 | 3,000 |
| GM | 1988 | 2.3 | 25 | 1.8 | 2,000 |
| GM | 1989-93 | 2.3 (DOHC 2262 & 2300) | 30 | 2.1 | 2,000 |
| GM | 1989 | 2.3 (2262 DOHC-HO) | 37 | 2.6 | 2,000 |
| GM | 1993-95 | 2.3 | 30 | 2.1 | 2,000 |
| GM | 1996-97 | 2.4 | 30 | 2.1 | 3,000 |
| GM | 1983-87 | 2.5 | 36-41 | 2.5-2.9 | 2,000 |
| GM | 1988 | 2.5 | 50 | 3.5 | 2,000 |
| GM | 1989 | 2.5 | 26 | 1.8 | 800 |
| GM | 1991-93 | 2.5 (2475 & 2500) | 26 | 1.8 | 800 |
| GM | 1989-90 | 2.5 (2475) | 37.5 | 2.6 | 2,000 |
| GM | 1993 | 2.5 (2474) | 41 | 2.9 | 2,000 |
| GM | 1985 | 2.8 | 30-55 | 2.1-3.9 | 2,000 |
| GM | 1989 | 2.8 PFI "A" Body & 2.8 Beretta/Corsica® | 50-65 | 3.5-4.6 | 1,200 |
| GM | 1989 | 2.8 (2835 PFIJ Body) | 50 | 3.5 | 2,400 |
| GM | 1989 | 2.8 (MPFI 2835 W Body) | 15 | 1.1 | 1,100 |
| GM | 1989 | 2.8 (2837) | 55 | 3.9 | 2,000 |
| GM | 1993 | 2.8 (2835) | 50 | 3.5 | 2,000 |
| GM | 1991 | All | 11.5 | .8 | 750 |
| GM | 1992-3 | Colt® 1.5 & Summit® 1.5 | 50-64 | 3.5-4.5 | 700 |

| Make | Year | Engine | Normal | | @RPM |
|-----------|---------|--|--------|--------------------|-------|
| | | | PSI | KG/CM ² | |
| GM | 1994-96 | Colt 1.5 & Summit 1.5 | 54 | 3.8 | 2,000 |
| GM | 1992-96 | Colt Vista 2.4 & Summit® Wagon 2.4 | 42.7 | 3.0 | 2,000 |
| GM | 1992-96 | Colt Vista, Summit, Summit Wagon & Colt (AL) | 56.9 | 4.0 | 3,000 |
| Daihatsu® | 1989-92 | All | 36-71 | 3.5 | 2,000 |
| Honda® | 1983-85 | Accord® | 50 | 3.5 | 2,000 |
| Honda | 1986-88 | Accord | 55 | 3.9 | 2,000 |
| Honda | 1989 | Accord | 55-65 | 3.9-4.6 | 3,000 |
| Honda | 1983-88 | Civic® | 50-55 | 3.5-3.9 | 2,000 |
| Honda | 1989 | Civic | 74 | 5.2 | 3,000 |
| Honda | 1983-84 | Prelude® | 60 | 4.2 | 1,500 |
| Honda | 1985 | Prelude | 55 | 3.9 | 2,000 |
| Honda | 1986-88 | Prelude | 50 | 3.5 | 2,000 |
| Honda | 1989 | Prelude | 75-87 | 5.3-6.1 | 3,000 |
| Honda | 1995 | Passport® 2.6 | 57-71 | 4.0-5.0 | 4,000 |
| Honda | 1995 | Passport 3.2 | 57-80 | 4.0-5.6 | 3,000 |
| Honda | 1996-97 | Passport | 57-80 | 4.0-5.6 | 3,000 |
| Honda | 1990-97 | All Others | 50 | 3.5 | 3,000 |
| Hyundai® | 1986-89 | All | 45 | 3.2 | 2,000 |
| Hyundai | 1990-92 | Excel® (VIN M) & Sonata® | 45 | 3.2 | 2,000 |
| Hyundai | 1990-92 | Elantra®, Sonata® 2.0 & S Coupe | 12 | .8 | 750 |
| Hyundai | 1990-92 | Excel (VIN J) | 12 | .8 | 750 |
| Hyundai | 1990-96 | Sonata 3.0 L | 30-80 | 2.1-5.6 | 2,000 |
| Hyundai | 1993-96 | Excel, Elantra, Sonata 2.0 | 12 | .8 | 750 |
| Hyundai | 1993-96 | S Coupe | 21 | 1.5 | 800 |
| Hyundai | 1995-96 | Accent® | 21 | 1.5 | Idle |
| Infiniti® | 1990-96 | Q45 4.5 L | 67-81 | 4.7-5.7 | 3,000 |
| Infiniti | 1990-92 | M30 3.0 L | 53-65 | 3.7-4.6 | 3,200 |
| Infiniti | 1990-96 | G20 2.0 L | 46-57 | 3.2-4.0 | 3,200 |
| Infiniti | 1990-96 | J30 3.0 L | 51-65 | 3.6-4.6 | 3,000 |
| Isuzu | 1983-89 | Impulse® I-mark 1816 | 57 | 4.0 | 1,400 |
| Isuzu | 1985-91 | I-mark 1588 & 1471 | 49 | 3.4 | 3,000 |
| Isuzu | 1996-97 | 2.2 (2156) | 50 | 3.5 | 3,000 |
| Isuzu | 1996-97 | 2.2 (2189) | 56 | 3.9 | 3,000 |
| Isuzu | 1993-95 | 2.3 (2243 & 2254) | 57 | 4.0 | 3,000 |
| Isuzu | 1993-95 | 2.6 (2559) | 57-71 | 4.0-5.0 | 4,000 |
| Isuzu | 1996-97 | 2.6 (2559) | 57-80 | 4.0-5.6 | 3,000 |
| Isuzu | 1993-94 | 3.1 (3098) | 30-55 | 2.1-3.9 | 2,000 |
| Isuzu | 1993-97 | 3.2 (3165) | 57-80 | 4.0-5.6 | 3,000 |
| Isuzu | 1992-93 | All others | 51-80 | 3.6-5.6 | 3,000 |
| Jaguar® | 1989-93 | All | 70 | 4.9 | 4,000 |

| Make | Year | Engine | Normal | | @RPM |
|----------------|--------------|---|-------------|--------------------|--------|
| | | | PSI | KG/CM ² | |
| Lexus® | 1990-96 | EX 300, SC 300, ES 250 & GS 300 | 43-78 | 3.0-5.5 | 3,000 |
| Lexus | 1990-96 | LS 400, SC 40 & LX 450 | 36-71 | 2.5-5.0 | 3,000 |
| Mazda® | 1983-85 | GLC® | 50-64 | 3.5-4.5 | 3,000 |
| Mazda | 1986-87 | 323 | 43-57 | 3.0-4.0 | 3,000 |
| Mazda | 1988-91 | 323 | 50-64 | 3.5-4.5 | 3,000 |
| Mazda | 1992-96 | 323 & MX3 (1.6) | 43-57 | 3.0-4.0 | 3,000 |
| Mazda | 1992-96 | MS3 (1.8) | 48-71 | 3.4-5.0 | 3,000 |
| Mazda | 1983-92 | 626, MX6 (both 2184) | 43-57 | 3.0-4.0 | 3,000 |
| Mazda | 1993-96 | 626, MX6 (both 1991) | 57-71 | 4.0-5.0 | 3,000 |
| Mazda | 1993-96 | 626 (2.5), MX6 (2.5) & Millenia (2.5) | 49-71 | 3.4-5.0 | 3,000 |
| Mazda | 1993 | MX6 LS (2496) | 49-71 | 3.4-5.0 | 3,000 |
| Mazda | 1988 | 929 | 50-64 | 3.5-4.5 | 3,000 |
| Mazda | 1989 | 929 | 47-61 | 3.2-5.0 | 3,000 |
| Mazda | 1990-92 | 929 | 46-71 | 3.2-5.0 | 3,000 |
| Mazda | 1993-97 | 929 & MPV 3.0 | 53-75 | 3.7-5.3 | 3,000 |
| Mazda | 1983-91 | RX7 | 64-78 | 4.5-5.5 | 3,000 |
| Mazda | 1992-93 | RX7 | 50 | 3.5 | 3,000 |
| Mazda | 1990-96 | Protege® & Miata® | 43-57 | 3.0-4.0 | 3,000 |
| Mazda | 1995-96 | Millenia® S (2.3) | 44-66 | 3.1-4.6 | 3,000 |
| Mazda | 1993 | B2200 | 43-57 | 3.0-4.0 | 3,000 |
| Mazda | 1993-94 | B2600 & MPV 2.6 | 45-58 | 3.2-4.1 | 3,000 |
| Mazda | 1993-94 | Navajo® | 40-60 | 2.8-4.2 | 2,000 |
| Mazda | 1994, 96, 97 | B2300 & B3000 | 40-60 | 2.8-4.2 | 2,000 |
| Mazda | 1995 | B3000, B2300, B4000 | 36-71 | 2.5-5.0 | 3,000 |
| Mazda | 1996-97 | B4000 | 40-60 | 2.8-4.2 | 2,000 |
| Mercedes Benz® | 1983-91 | All | 55 | 3.9 | 2,000 |
| Mercedes Benz | 1992-93 | 400E, 400SE, 400SEL, 500E, 500SEL, 500SEC | 23.2 - 72.5 | 1.6-5.1 | 2,000 |
| Mercedes Benz | 1992 | All others | 43.5 | 3.1 | Idle |
| Mercedes Benz | 1993 | 500SL | 23.2 - 72.5 | 1.6-5.1 | 2,000 |
| Mercedes Benz | 1993 | 300E (2.8), 300CE (3.2), 300TE (3.2) | 69.6 | 4.9 | 2,000 |
| Mercedes Benz | 1993 | All others | 43.5 | 3.1 | Idle |
| Mercedes Benz | 1994-96 | C220 | 43.5-58 | 3.1-4.1 | 2,000 |
| Mercedes Benz | 1994-96 | S350, S600, SL600 | 43.5 | 3.1 | @ Idle |
| Mercedes Benz | 1994-96 | S420, E500, E420, S500, SL500 | 23.2 - 72.5 | 1.6-5.1 | 2,000 |

| Make | Year | Engine | Normal | | @RPM |
|-------------|---------|--|--------|--------------------|-------|
| | | | PSI | KG/CM ² | |
| Merkur® | 1983-90 | All | 50 | 3.5 | 2,000 |
| Mitsubishi® | 1983-88 | All | 11-15 | 0.8-1.1 | Idle |
| Mitsubishi | 1989-96 | Starion®, Sigma®, Precis®, Mirage® (1.5) | 54 | 3.8 | 2,000 |
| Mitsubishi | 1989-96 | Eclipse®, Mirage (1.6 & 1.8) | 41 | 2.9 | 2,000 |
| Mitsubishi | 1991-96 | 300GT & Diamanté® | 30-80 | 2.1-5.6 | 2,000 |
| Mitsubishi | 1989-93 | Galant® | 41 | 2.9 | 2,000 |
| Mitsubishi | 1993-97 | Galant | 30-80 | 2.1-5.6 | 2,000 |
| Mitsubishi | 1993-97 | Pickup 2.4 | 41 | 2.9 | 2,000 |
| Mitsubishi | 1993-97 | Pickup 3.0 & Montero® | 30-80 | 2.1-5.6 | 2,000 |
| Nissan® | 1983-87 | 300ZX, 810, 200SX, 280ZX, Stanza®, Maxima® | 43 | 3.0 | 2,000 |
| Nissan | 1983-87 | Pulsar® & Sentra® (1597 & 1488) | 43 | 3.0 | 1,700 |
| Nissan | 1988-96 | Pulsar (1598 & 1809) | 67 | 4.7 | 2,000 |
| Nissan | 1988-96 | Sentra 1.6 & Pulsar 1597 | 50 | 3.5 | 3,000 |
| Nissan | 1988-89 | 200SX, 300ZX & Maxima® | 60 | 4.2 | 3,200 |
| Nissan | 1989-96 | 240SX & Altima® | 60 | 4.2 | 3,000 |
| Nissan | 1988 | Stanza® | 58 | 4.1 | 3,000 |
| Nissan | 1989 | Stanza | 61 | 4.3 | 3,200 |
| Nissan | 1990-92 | Stanza | 60 | 4.2 | 3,000 |
| Nissan | 1990-96 | 300ZX & Maxima VE30DE | 51 | 3.6 | 3,000 |
| Nissan | 1991-96 | Sentra 2.0 (1998) | 46 | 3.2 | 3,200 |
| Nissan | 1992-96 | Maxima VG30E | 53 | 3.7 | 3,200 |
| Nissan | 1993-97 | Pickup 2.4 | 60 | 4.2 | 3,200 |
| Nissan | 1993-97 | Pickup 3.0, Quest® & Pathfinder® | 53 | 3.7 | 3,200 |
| Porsche® | 1983-88 | 911® | 50 | 3.5 | 5,000 |
| Porsche | 1989 | 911 | 66 | 4.6 | 5,000 |
| Porsche | 1986-88 | 911 Turbo | 60 | 4.2 | 5,500 |
| Porsche | 1983-88 | 928, 928S, 928S4 | 70 | 4.9 | 5,500 |
| Porsche | 1983-88 | 924S, 944, 944S, 944 Turbo | 50-70 | 3.5-4.9 | 5,500 |
| Porsche | 1989-93 | 911 Carrera® A4 & 2 | 73 | 5.1 | 5,000 |
| Porsche | 1989-93 | 911 Turbo | 66 | 4.6 | 5,500 |
| Porsche | 1989-93 | 928S4, 928 GT, 928 GTS | 74 | 5.2 | 4,000 |
| Porsche | 1989 | 944, 944 Turbo, 944S2 | 52 | 3.7 | 6,000 |
| Porsche | 1989-91 | 944S2 | 58 | 4.01 | 5,000 |
| Porsche | 1992-93 | 968 | 44 | 3.1 | 3,000 |
| Saab® | 1983-85 | All | 64-71 | 4.5-5.0 | 2,000 |
| Saab | 1986-90 | 900 & 9000 | 51-74 | 3.6-5.2 | 2,000 |
| Saab | 1987-90 | 900 Turbo & 9000 Turbo | 64-71 | 4.5-5.0 | 2,000 |
| Saab | 1991 | All | 52-75 | 3.7-5.3 | 2,000 |
| Saab | 1992-96 | All | 39 | 2.7 | 2,000 |
| Sterling® | 1987-91 | All | 71-82 | 5.0-5.8 | 3,000 |

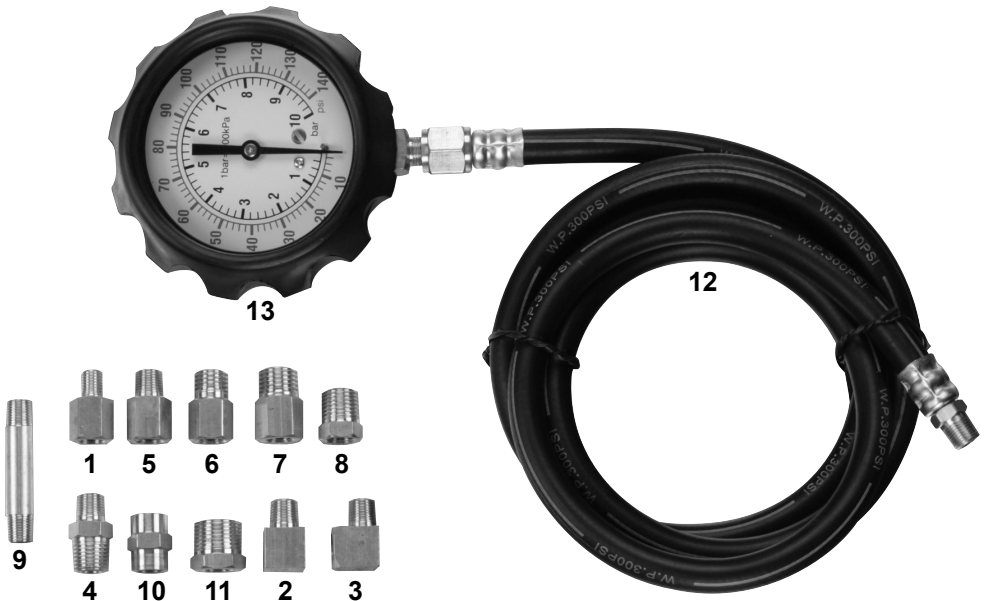
| Make | Year | Engine | Normal | | @RPM |
|---------|---------|---|--------|--------------------|-------|
| | | | PSI | KG/CM ² | |
| Subaru® | 1983-84 | 1600 | 71-82 | 2.5-4.0 | 2,000 |
| Subaru | 1983-84 | 1800 | 50-64 | 3.5-4.5 | 2,000 |
| Subaru | 1985-88 | All except 3 cylinder | 57-74 | 4.0-4.5 | 2,000 |
| Subaru | 1986-88 | 3 Cylinder | 35-40 | 2.5-2.8 | 2,000 |
| Subaru | 1989 | 2 DR | 57 | 4.0 | 2,500 |
| Subaru | 1989-91 | Justy® | 47 | 3.3 | 3,000 |
| Subaru | 1989-91 | All others | 43 | 3.0 | 5,000 |
| Subaru | 1992-96 | Justy | 30 | 2.1 | 1,500 |
| Subaru | 1992-96 | Loyale® | 14 | 1.0 | 550 |
| Subaru | 1992-96 | Legacy®, SVX, Impreza® | 14 | 1.0 | 600 |
| Suzuki® | 1993-95 | Samurai® | 43-60 | 3.0-4.2 | 3,000 |
| Suzuki | 1993-95 | Sidekick® EFI & TEI | 51-63 | 3.6-4.4 | 3,000 |
| Suzuki | 1993-95 | Sidekick 16 Valve | 47-61 | 3.3-4.3 | 3,000 |
| Suzuki | 1996-97 | X90 & Sidekick 1.6 | 47-61 | 3.3-4.3 | 3,000 |
| Suzuki | 1996-97 | Sidekick 1.8 | 55-67 | 3.9-4.7 | 4,000 |
| Toyota® | 1983-91 | All | 36-71 | 2.5-5.0 | 3,000 |
| Toyota | 1994-96 | Supra® | 36-71 | 2.5-5.0 | 3,000 |
| Toyota | 1993-97 | Land Cruiser®, Pickup, Previa®, Rav4®, T100, Tacoma®, 4Runner | 36-71 | 2.5-5.0 | 3,000 |
| Toyota | 1992-96 | All others | 4.3 | 0.3 | Idle |
| VW® | 1983-96 | All (except Eurovan®) | 28 | 1.97 | 2,000 |
| VW | 1993-97 | Eurovan | 29 | 2.0 | 2,000 |
| Volvo® | 1983-96 | All Except Those Listed Below | 35-85 | 2.5-6.0 | 2,000 |
| Volvo | 1983-86 | 760 GLE | 60 | 4.2 | 3,000 |
| Volvo | 1987-90 | 760, 780 (both 2849) | 57 | 4.0 | 3,000 |
| Volvo | 1992-96 | 960 | 36 | 2.5 | 2,000 |
| Volvo | 1993-96 | 850 | 49.8 | 3.5 | 4,000 |

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

Parts List and Assembly Diagram

| Part | Description | Qty |
|------|--|-----|
| 1 | 1/4"-18 NPT F x 1/8"-27 NPT M | 1 |
| 2 | 1/8"-27 NPT M x 1/8"-27 NPT F – 90° Elbow | 1 |
| 3 | 1/8"-28 BSPT M x 1/8"-27 NPT F – 90° Elbow | 1 |
| 4 | M8x1 M x 1/8"-27 NPT F | 1 |
| 5 | M10x1 M x 1/8"-27 NPT F | 1 |
| 6 | M12x1.5 M x 1/8"-27 NPT F | 1 |
| 7 | M14x1.5 M x 1/8"-27 NPT F | 1 |
| 8 | 1/4"-18 NPT M x 1/8"-27 NPT F | 1 |
| 9 | 1/8"-27 NPT M x 1/8"-27 NPT M | 1 |
| 10 | 1/8"-27 NPT F x 1/8"-27 NPT F | 1 |
| 11 | 3/8"-18 NPT M x 1/8"-27 NPT F | 1 |
| 12 | Hose | 1 |
| 13 | Gauge | 1 |
| 14 | Case (not shown) | 1 |



Record Product's Serial Number Here:

Note: If product has no serial number, record month and year of purchase instead.

Note: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

Limited 90 Day Warranty

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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