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.

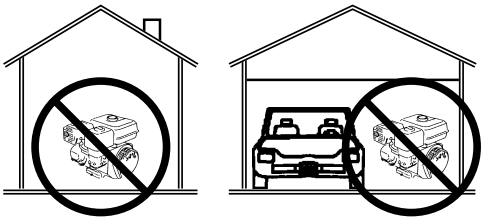
⚠WARNING

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

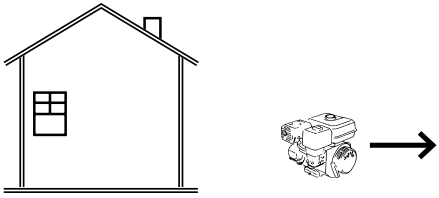
The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

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.
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.

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	3000GT & 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	401	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

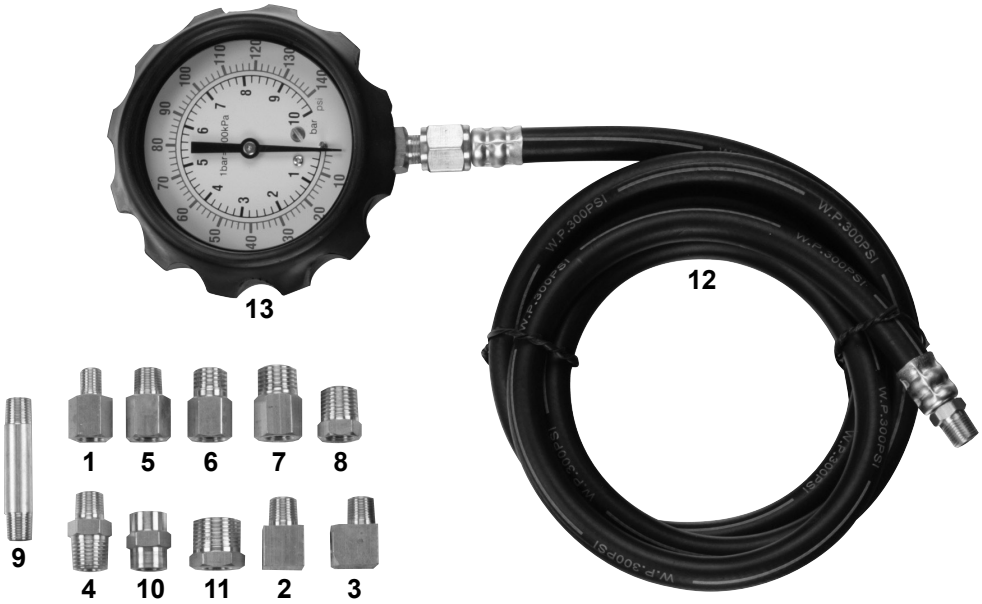
Make	Year	Engine	Normal		@RPM
			PSI	KG/CM^2	
Subaru®	1983-84	1600	71-82	2.5-4.0	2,000
Subaru	1983-84	1800	50-64	3.5-4.5	2,000
Subaru	1985-88	All except 3 cylinder	57-74	4.0-4.5	2,000
Subaru	1986-88	3 Cylinder	35-40	2.5-2.8	2,000
Subaru	1989	2 DR	57	4.0	2,500
Subaru	1989-91	Justy®	47	3.3	3,000
Subaru	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 – 90º Elbow	1
3	1/8″-28 BSPT M x 1/8″-27 NPT F – 90º 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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