



ATD-5685 Light-Duty Truck Diesel Compression Tester Owner's Manual



Features:

- Test compression on Dodge Cummins, Ford Power Stroke, GM Duramax and virtually every light-duty diesel truck on the market
- 16-1/2" wire reinforced hydraulic hose has a swivel end quick coupler for easy connection to adapters
- The gauge has a dual scale (0-1000 psi / 0-72 bar) easy to read red and black dial
- Tester resets to zero with a push-button release valve
- (12) Compression Test Adapters included for the following applications:
 - Cummins/Dodge 5.9L 12V & 24V
 - Ford/Navistar 7.3L, 6.0L, 6.4L, 6.7L, T444E, VT365
 - Sprinter/Mercedes 2.7L, 3.0L
 - VW, Mazda, Nissan-UD, Cat-Perkins, Kubota, Isuzu, Hino, Toyota
 - Other Engines Utilizing M10 x 1.0, M1- x 1.25, M14 x 1.25, M 12 x 1.25 M8 x 1.0

WARNING



- Flying particles can cause eye injury
- Wear safety goggles.
 - Be sure all connections are secure.



- Fire can cause injury
- Avoid excess fuel spillage.
 - Do not smoke or cause sparks or flame in the vicinity.
 - Check all connections for leaks before and after testing.



- Moving parts can cause injury
- Keep yourself, clothing and test equipment clear of moving parts.



- Burn Risk
- Do not touch engine components that are hot.
- Riesgo de quemadura



- Exposure to poisonous fuel or vapors can cause injury
- Use this equipment in an adequately ventilated area.
 - Do not siphon fuel by mouth or take internally.
 - Avoid prolonged skin contact with fuel.



- Risk of sudden vehicle movement
- Set vehicle to neutral with hand brake on.

DIESEL ENGINE COMPRESSION TESTING

Follow the engine manufacturer's compression test procedure. If a test procedure does not exist, follow these general instructions.

TESTING AT THE GLOW PLUG:

1. Warm up the engine by running it to normal operating temperature.
2. Make sure the battery is fully charged. You may want to connect a battery charger.
3. Disconnect fuel preheater plug relay.
4. Before cranking the engine, stop the diesel fuel by using the "pull to stop" knob OR by disconnecting the fuel pump solenoid. **WARNING:** Be sure that the fuel is off or the cylinder will ignite when combustion pressure is reached. Damage to the adapter and gauge could result.
5. Remove all the glow plugs from the engine. Then, screw in the correct test adapter. Hand tighten only for adapters with o-rings, or 10 lbs-ft (13Nm) maximum for adapters without o-rings.
6. Attach compression tester to testing adapter. Make sure the locking sleeve on the quick coupler of the tester slides completely into place.
7. Crank engine 8-12 times and record pressure. If another test on the same cylinder is desired, release pressure by pushing deflator that is below the gauge. **NOTE:** To extend the life of the schrader valve in the adapter, wait at least thirty seconds after the engine stops rotating before releasing pressure.
8. Test all cylinders.
9. Compare readings between cylinders. Refer to engine

manufacturer's specifications. If a specification is not available, variation between cylinders should not exceed 10-15%.

- If the tester does not hold pressure, the probable cause is foreign matter in the release valve or the valve core in

the adapter. Remove valve core and make sure there is no foreign matter holding the valve core open.

- If the valve core needs replacing, use a compression tester valve core. See replacement parts (below). Do not use a tire valve core.

TESTING AT THE INJECTOR:

- Warm up the engine by running it to normal operating temperature.
- Make sure the battery is fully charged. You may want to connect a battery charger.
- Remove all the injectors from the engine you want to test. Using a hose, direct the diesel fuel to an approved container, or disable the lift pump.
- Using the correct test adapter, place in normal injector location. Tighten to manufacturer's recommended torque. NOTE: Some adapters require copper washers, o-rings or holding brackets from the injector.
- Attach compression tester to the test adapter. Make sure the locking sleeve on the quick coupler of the tester slides completely into place.
- Crank engine 8-12 times and record pressure. If another test on the same cylinder is desired, release pressure by

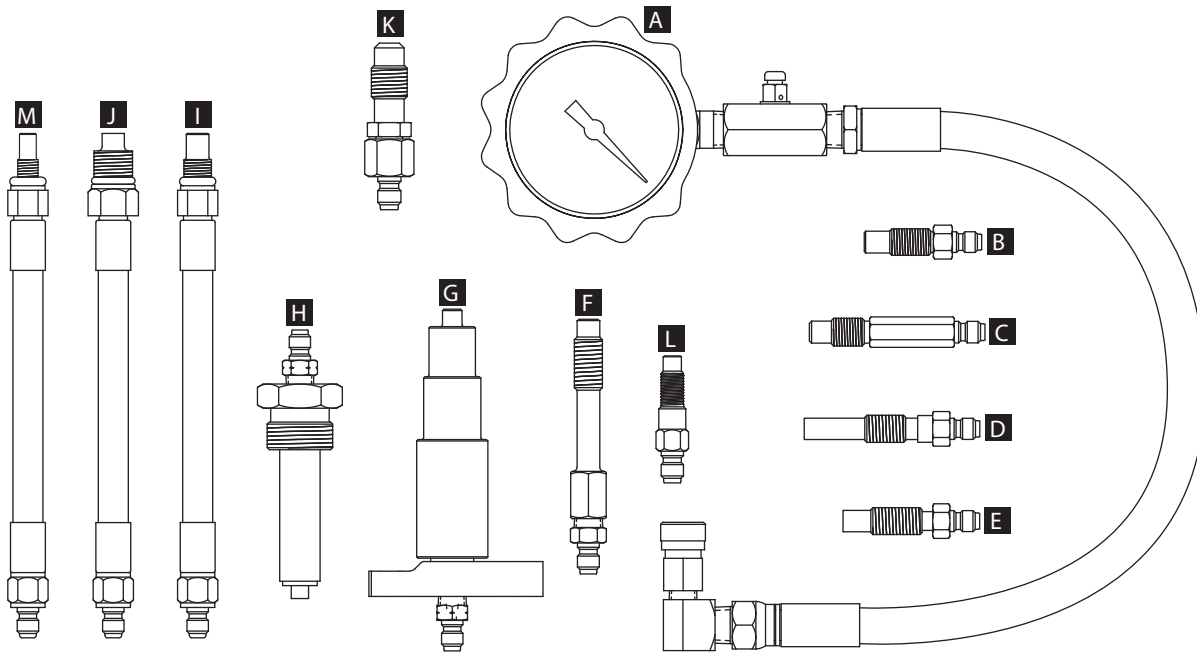
pushing deflator that is below the gauge. NOTE: To extend the life of the schrader valve in the adapter, wait at least thirty seconds after the engine stops rotating before releasing pressure.

- Test all cylinders.
- Compare readings between cylinders. Refer to engine manufacturer's specs. If a specification is not available, variation between cylinders should not exceed 10-15%.
- If the tester does not hold pressure, the probable cause is foreign matter in the release valve or the valve core in the adapter. Remove valve core and make sure there is no foreign matter holding the valve core open.
- If the valve core needs replacing, use a compression tester valve core. See replacement parts (below). Do not use a tire valve core.

REPLACEMENT PARTS

For Diesel Adapters:		For TU-15:	
Part No.	Description	Part No.	Description
70120	Quick Coupler Plug Assembly	11501	90° Street Elbow
41751	Valve Core	25001	2.5" Gauge, 1000 PSI
41852	Nylon Washer 5, 6, 8, 9, 11A	33165	Hydraulic Hose
41861	Nylon Washer 17	41302	Quick Coupler Female
41862	Nylon Washer 18A, 19	41351	Deflator Valve
41863	Nylon Washer 20, 26, 27	41455	Snap-in Lens
43103	O-ring 22A	41873	Nylon Washer
43141	O-ring 24	60610	Connector

Light Duty Truck Diesel Compression Test Set



ITEM DESCRIPTIONS

A Gauge and Hose Assembly	TU-15A	F M10 x 1.25 Glow Plug Adapter	TU-15-38	K M12 x 1.25 Glow Plug Adapter	TU-15-23
B M10 x 1.00 Glow Plug Adapter	TU-15-1A	G Cummins ISB Injector Adapter	TU-15-26	L M8 x 1.00 Glow Plug Adapter	TU-15-35
C M10 x 1.00 Glow Plug Adapter	TU-15-2A	H M24 x 1.50 Injector Adapter	TU-15-17	M M8 x 1.00 Glow Plug Adapter	TU-15-80
D M10 x 1.25 Glow Plug Adapter	TU-15-3A	I M10 x 1.00 Glow Plug Adapter	TU-15-22A		
E M10 x 1.25 Glow Plug Adapter	TU-15-14	J M14 x 1.25 Glow Plug Adapter	TU-15-24		

APPLICATION	ENGINE	ADAPTER
Caterpillar	3022, 3023, 3024, 3034	E
Caterpillar	3022 (Newer)	L
Caterpillar	3046, 3054 (Newer)	B
Chevrolet/Isuzu Luv/Isuzu	1.8L, 2.2L	D
Cummins	(Up to 2003) ISB 5.9L	G
Cummins	B Series 2.9L, 3.9L, 5.9L	H
Dodge/Cummins	(1989-98) 5.9L	H
Dodge/Cummins	(1998-2004) 5.9L ISB	G
Ford	6.7L Power Stroke Engines	L
Ford/Mazda	(1984-87) 2.0L; (1983-84) 2.2L Escort, Lynx, Ranger, Tempo, Topaz	E
Ford/Mitsubishi	(1985-87) Ranger 2.3L	E
Ford/Navistar	(1994-04) 7.3L Turbo, Power Stroke Engines	I
Ford/Navistar	(Up to 1994) 6.9L and 7.3L	B
Ford/Navistar	6.0L and 6.4L Power Stroke Engines	J
Ford	2011-2015 6.7L Powerstroke	M
General Motors	(1978-85) 4.3L V6, 4.3L V8, 5.7L V8	B
General Motors	(1982-2002) 6.2L and 6.5L V8 True Diesel	C
General Motors	(2001-2005) Duramax 6.6L Turbo Diesel	D
General Motors	(2005-present) Duramax 6.6L Turbo Diesel	F
GMC Truck	W4, W7, W7HV	K
Hino	Medium	K
Hummer H1	(1992-2004) Optimizer 6500 V8 Turbo and 6.2L V8	C
Hummer H1-Alfa	(2005-06) 6.6L Duramax	F
Isuzu/Isuzu Truck	(1992-98) 4HE 1-TC; (1998-present) 6HK 1-TC	D
Isuzu/Isuzu Truck	1.8L, 2.2L, I-Mark, Pick-Up, Trooper	E
J.I. Case	2.9L, 3.9L, 5.9L	H
Jeep	(2005) Liberty 2.8L	C
Kawasaki	Mule 3010 Diesel - Daihatsu Engine	E
Kubota	D650, D1100	E
Kubota	D722, D1105, V1505, V2203	L
Land Rover	(1970s) Some models	J
Land Rover	(1995-Present) 300TDI 2.5L, Discovery, Defender, Range Rover Classic	I
Land Rover	2.5L Turbo Diesel (Pre-TDI)	K
Mazda	(1982-84) B2200 2.2L, (1984-85) 626 2.0L	E
Mercedes-Benz	(2004-05) E320 CDI	B
Mitsubishi	2 and 3 cylinder engines	E
Mitsubishi-Fuso	Medium	E
Navistar/International	6.0L VT365E, Maxx Force 7, 6.4L	J
Navistar/International	6.9L and 7.3L	B
Navistar/International	7.3L T444E	I
Nissan	(1965-71) Cedric 2.2L SD22	E
Nissan	(1981) 810 2.8L (Datsun) RD28, (1982-83) Maxima 2.8L RD28	K
Nissan	(1983-87) Sentra 1.7L CD17	B
Nissan/UD Truck	Medium	E
Perkins	100, 200, 400, and 700 Series	E
Perkins	1100 series engines	I
Sprinter (Mercedes/Freight-liner/Dodge)	2.7L	C
Sprinter (Mercedes/Freight-liner/Dodge)	(2007-Present) 3.0L, OM642/V6	M
Toyota	1.8L	D
Toyota	2.2L	E
Volvo	Models 30's and 40's	K
VW	(1997-05) Golf, (1997-05) Jetta, Jetta wagon, (1998-05) New Beetle, (1996-97) Passat, (2004-05) Touareg	B
Westerbeke	Marine engines	E
Westerbeke	Marine engines	B