



ATD-5682 Heavy-Duty Global Diesel Compression Test Set Manual



- Includes many of the most popular adapters for testing major model heavy-duty trucks and equipment
- 2-1/2" gauge with easy to read red and black graduations
- Contains tester and all the most popular adapters needed to test heavy-duty trucks and equipment
- Adapters to test Cummins, Bedford, Case, Caterpillar®, John Deere®, Fiat Allis, Ford Tractor, GMC, Hino Trucks™, International and Navistar, Isuzu, Mack, Massey-Ferguson, Mercedes, Mitsubishi-Fuso, Onan, Scania, Volvo, Wisconsin and others
- Molded storage case included

WARNING

WARNING: This product contains chemicals, including lead, known to the State of California to cause cancer, birth defects or other reproductive harm. *Wash hands after handling.*

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.



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.



Burn Risk

- Do not touch engine components that are hot.

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%.

10. 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.

11. 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:

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. 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.
4. 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.
5. Attach compression tester to the test adapter. Make sure the locking sleeve on the quick coupler of the tester slides completely into place.
6. 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.

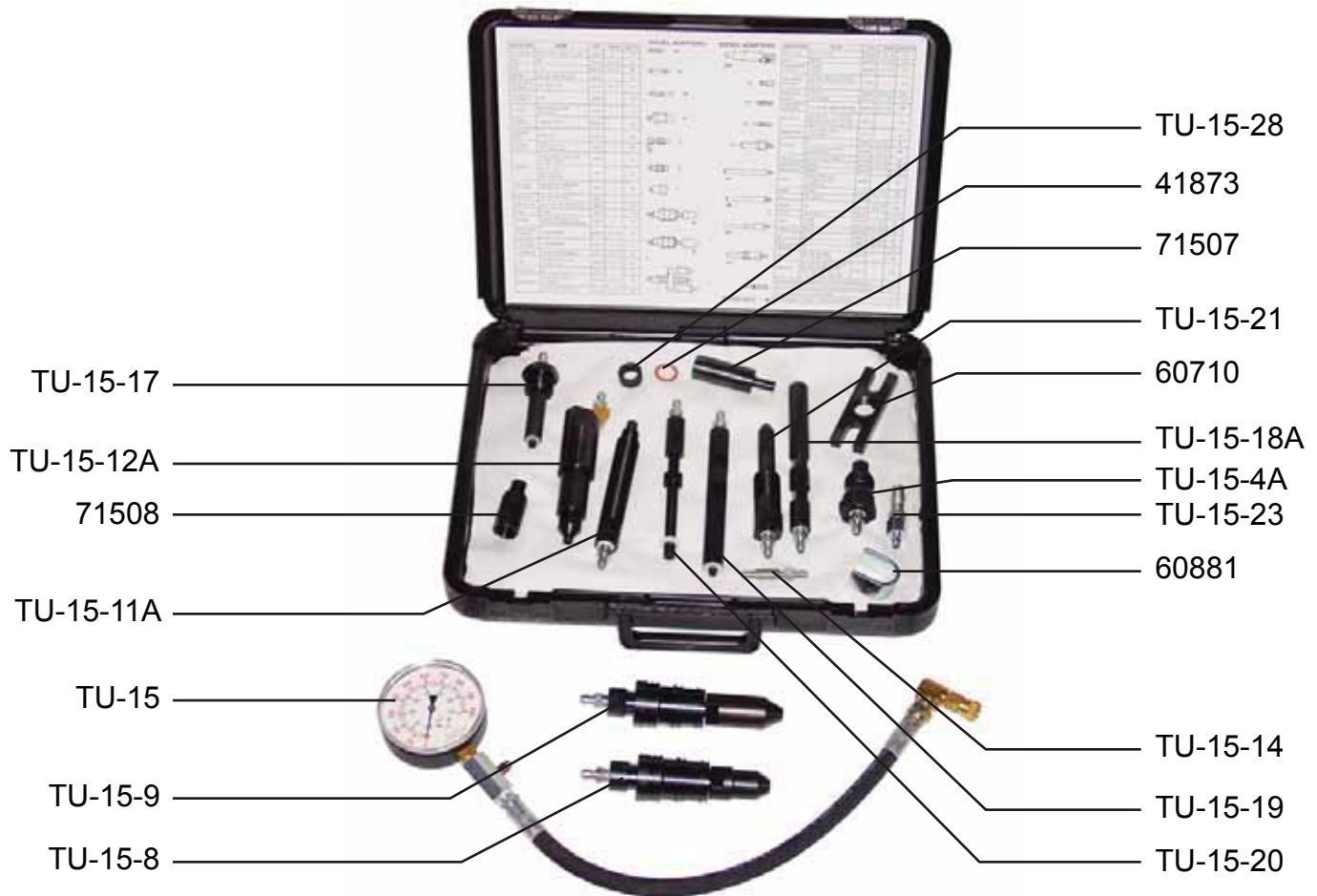
7. Test all cylinders.
8. Compare readings between cylinders. Refer to engine manufacturer's specs. If a specification is not available, variation between cylinders should not exceed 10-15%.
9. If the tester does not hold pressure, the probable cause is foreign matter in the release valve or the valve core in the adapter. Remove valve core and make sure there is no foreign matter holding the valve core open.
10. 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

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Part Number	Description
TU-15-17	Diesel Adapter M24-1.50
TU-15-12A	Diesel Adapter - M24 Injector
71508	Mack Short Injector Assembly
TU-15-11A	Diesel Adapter - M21 Injector
TU-15	Diesel Compression Tester
TU-15-9	Diesel Adapter - 1" Injector
TU-15-8	Diesel Adapter - 7/8" Injector
TU-15-28	Diesel Compression Test Adapter Cummins NCT/NTS
41873	Fiber Washer
71507	Mack Long Injector Assembly

Part Number	Description
TU-15-21	Diesel Adapter - 9/16" Injector
60710	Hold Down for 15-11
TU-15-18A	Diesel Adapter M17 Injector
TU-15-23	Diesel Adapter M12-1.25 Glow Plug
60881	Detroit Horseshoe
TU-15-17	Diesel Adapter M24-1.50 Injector
TU-15-14	Diesel Adapter M10-1.25 Glow Plug
TU-15-19	Diesel Adapter M17 Injector
TU-15-20	Diesel Adapter - 3/8" Injector

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