

TO: Service Locations

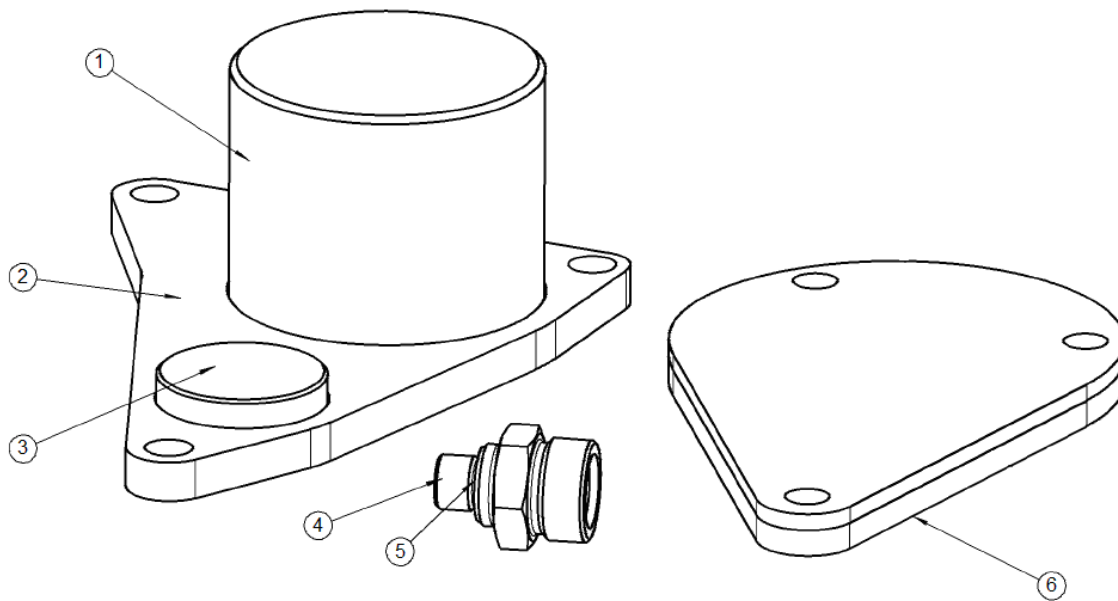
FROM: Service Operations

SUBJECT: **W470589169100 – DD Platform APT gearbox pressure test tool**

### ISSUE

The Detroit™ Special Tools team has released an APT gearbox pressure test tool for the DD Platform engines. This essential tool will be automatically shipped and invoiced to certified service locations. The tool enables technicians to accurately determine if an APT gearbox is leaking oil.

### REQUIRED ACTION

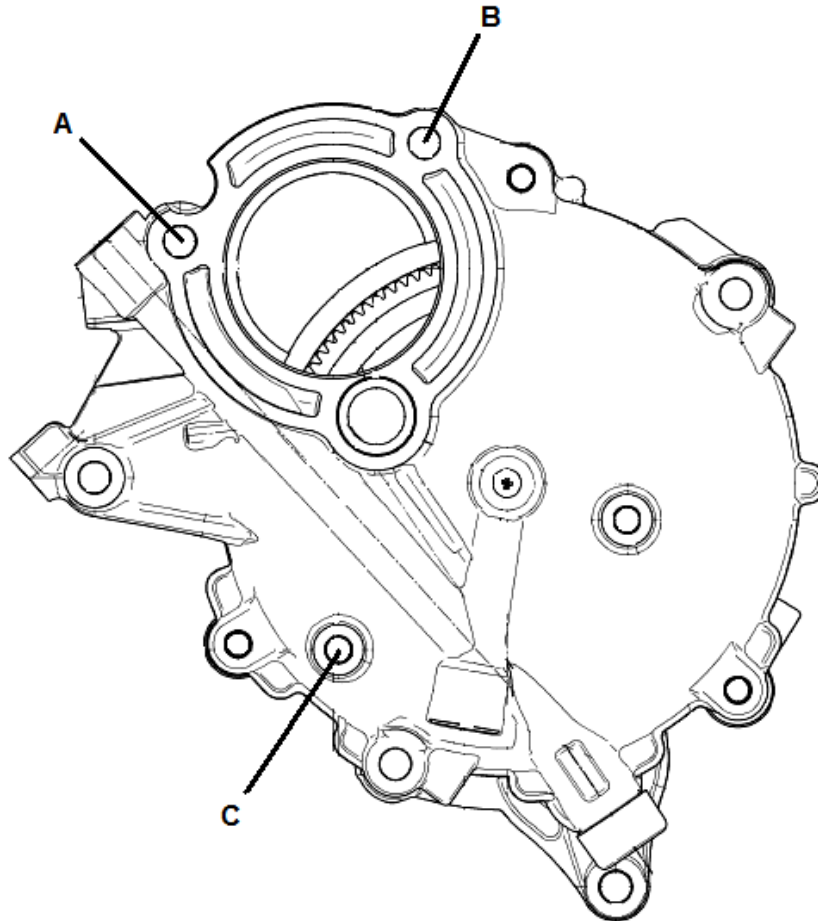


(Mounting bolts not shown)

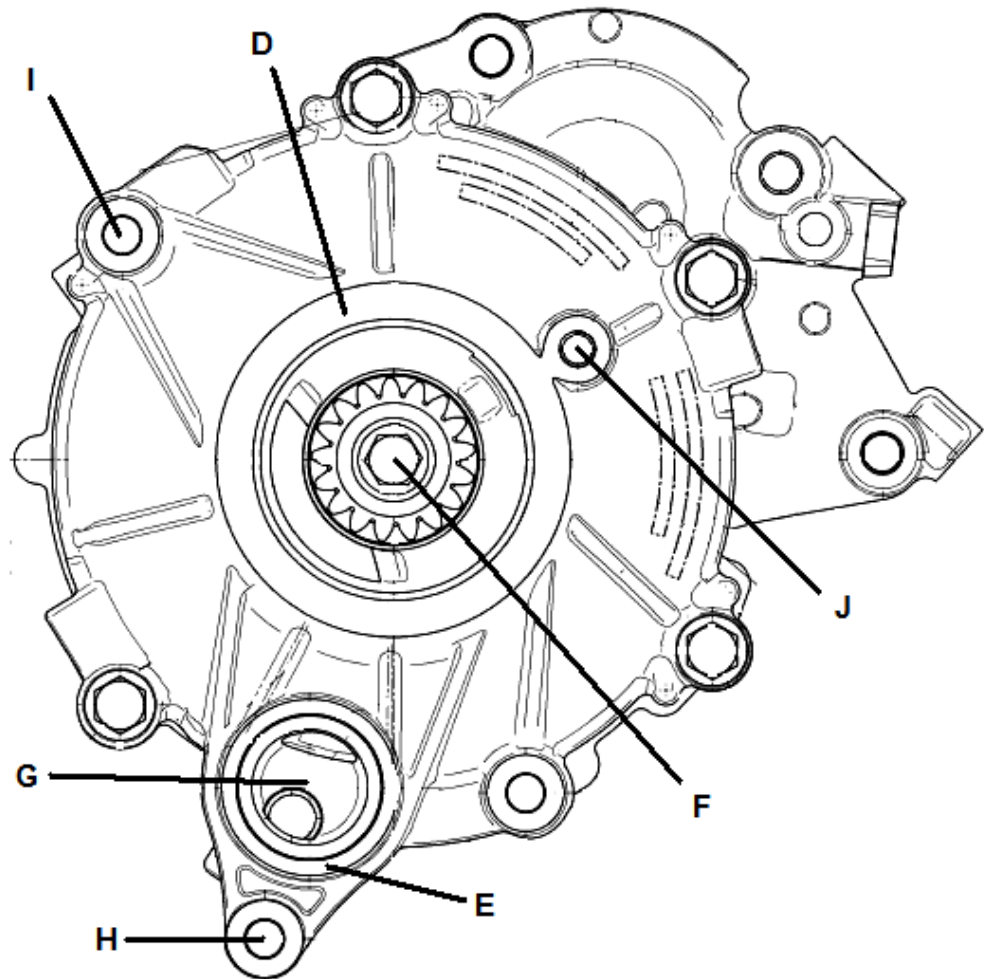
1. Axial Power Turbine Gear Cover
2. Rear Cover Plate
3. Oil Drain Cover
4. Air Line Adapter
5. O-ring
6. Front Padded Cover Plate

## NOTE:

1. Remove the APT gearbox from the engine; inspect all sealing surfaces, gears, and mounting gaskets for damage. Replace the APT gearbox if damaged.
2. Ensure the sealing surfaces have been cleaned using a mild detergent.
3. Inspect all the seals included with the APT pressure test tool. If damaged, contact the Detroit™ Special Tools Group, contact information can be found on [DDCSN/tools/mechanical/contacts](http://DDCSN/tools/mechanical/contacts).
4. Place gearbox on a clean surface with access to compressed shop air.



5. Install the front padded cover plate (6) face down on the APT gearbox with the supplied bolts to seal the opening for the APT output gear.
  - a. Hole (A) uses the 100mm long bolt with a nut.
  - b. Hole (B) uses the 75mm long bolt with a nut.
  - c. Hole (C) uses the 35mm long bolt threaded into the APT gearbox.
  - d. Torque all bolts until the seal begins to compress.



6. Remove the O-rings from APT turbine gear (F) and oil drain passage (E).
7. Place the oil drain cover (2) around the oil drain passage (E).
8. Place the APT turbine gear cover (1) around the APT turbine gear (D).
9. Install the rear cover plate with the recessed areas face down with the remaining hardware.
  - a. Hole (H) uses the 40mm long bolt with a nut.
  - b. Hole (I) uses the 130mm long bolt with a nut.
  - c. Hole (J) uses the 30mm long bolt threaded into the APT gearbox.
  - d. Torque all bolts until the seals begin to compress.
10. Install the air line adapter (4) with the O-ring (5) into the oil supply opening on the APT gearbox. Torque to 40 N·m (30 lb·ft).
11. Install tool J-48710 to the air line adapter with the regulator and shut-off valve closed. Connect to shop air.

 **WARNING:****EYE INJURY**

**To avoid injury from flying debris when using compressed air, wear adequate eye protection (face shield or safety goggles) and do not exceed 40 psi (276 kPa) air pressure.**

12. Open the shut-off valve and gradually allow air to enter the APT gearbox until the pressure reaches 30 psi.
13. Close the shut-off valve and disconnect the shop air.
14. Allow the gearbox to sit for 10 minutes and monitor the air pressure gauge; if it does not leak, reinstall the gearbox on the engine.
15. If the gearbox leaks, conduct the pressure test again and submerge in water to identify the source of the leak.
16. If the seals on the tool are leaking, an additional amount of torque can be added to the bolts.
17. If the APT gearbox is leaking, replace as necessary.

**ADDITIONAL INFORMATION**

Ordering Information:

Additional tools can be ordered through Paragon using a DDE supplier prefix.

- DDE W470589169100 – DD Platform APT gearbox pressure test tool.

**CONTACT INFORMATION**

Please contact the Detroit™ Customer Support Center at 800-445-1980 or email [csc@daimler.com](mailto:csc@daimler.com) if you have any questions.