



INSTALLATION INSTRUCTIONS

MAKE: Dodge
MODEL: RAM 2500/3500
YEAR: 1994-1998
ENGINE: L6-5.9L (td) Cummins

BladeRunner Exhaust Manifold 46-40044 (Ported, Ductile Iron)



Parts Included:

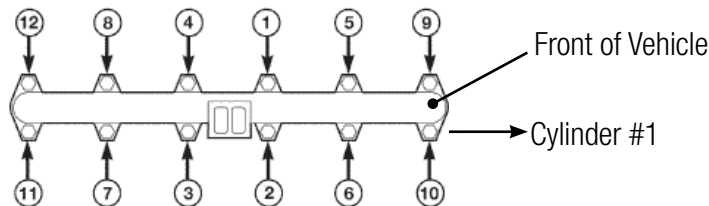
- Exhaust Manifold (x1)
- Water line bracket (x1)
- EGR Block off plate (x1)
- M8x1.25x16mm Bolt (x1)
- M8 Flat Washer (x1)
- Gasket Set (x1)
- M10x1.50x65mm (x9)
- Socket head plug 1/8" NPT (x2)
- Spacer, Steel (x10)
- Elbow Inverted Flange w/ Straight fitting (x1)
- M10x1.50x95mm Stud - 31mm/16mm (x1)
- M10x1.50x50mm Stud -20mm /20mm (x2)
- M10x1.50x40mm Stud (x2)
- M10x1.50 Flange Nut (x4)
- M10x1.50 Small Flange Nut (x6)
- M10x1.50x60mm Stud (x2)

Tools Needed:

- 3/4 wrench
- 5/8 wrench
- 7/16 socket/wrench
- 11/16 socket/wrench
- 8mm socket/wrench
- 10mm socket/wrench
- 13mm socket/wrench
- 15mm socket/wrench
- Torque wrench
- Scraper (gasket remover)
- Socket driver
- Socket driver extension
- 5/16 socket/nut driver
- 3/16 Allen Wrench

CAUTION: Allow time for your vehicle to cool down prior to installation. When working on or under your vehicle proceed with caution. Engine bays may reach high temperatures and may cause serious burns. Wear protective safety equipment; eye goggles and gloves to ensure a safe installation. aFe Power recommends professional installation on our products.

1. Disconnect both of the battery cables.
2. Remove EGR and EGR tube (if equipped). Install the block off plate onto the intake manifold.
3. Remove air filter housing and air intake tube from the vehicle.
4. Remove turbo from the vehicle by disconnecting the exhaust down-pipe, turbo outlet, oil supply line, oil return line, and the four nuts holding the turbo to the stock exhaust manifold.
5. Disconnect the water line bracket from the exhaust manifold and the clamp holding the water lines together.
6. Remove the stock exhaust manifold by removing the twelve manifold bolts using a 13mm socket.
7. Scrape and clean the mating surfaces on the head and the turbo for a better seal.
8. Install the two supplied M10x1.50x40mm studs into the tapped holes in the turbo flange on the new aFe exhaust manifold.
9. Install the two supplied M10x1.50x50mm (20mm-20mm) studs into the top two center bolt holes(cylinder 3&4) on the head.
10. Install the aFe exhaust manifold using the nine M10x1.50x65mm bolts, one M10x1.50x95mm stud, ten supplied spacers, three M10x1.50mm flange nuts and six exhaust manifold gaskets. Apply anti-seize to the bolts before installing. The M10x1.50x95mm stud is installed in the top front bolt hole (cylinder #1). Install one M10x1.50 flange nut on the stud after the spacer. Install two M10x1.50mm flange nuts onto the studs installed in step 9. Tighten the bolts by using the recommend factory torque procedure as shown. **Tighten to 32 ft.-lbs.**



11. Install the supplied 1/8" NPT plugs into the exhaust manifold.
 12. Install the new bracket for the waterline on the M10x1.50x95mm stud installed in step 10 using a M10x1.50mm flange nut and the factory bolt and tighten. The remaining clamps can be installed in the factory locations using the factory hardware.
 13. Reinstall the turbo with six M10x1.50mm small flange nuts and M10x1.50x60mm studs. Tighten using a 15mm wrench and a socket.
 14. The oil supply line for the turbo will have to be removed and flipped over so that the 90° bend is on the oil filter housing and the straight end is at the turbo. Install the new inverted flare elbow on the turbo and connect it to the oil supply line using the supplied straight fitting.
 15. Reinstall the exhaust down-pipe, turbo outlet, oil supply line, oil return line using the factory hardware.
- Note:** aFe recommends replacement of old gaskets (not supplied).
16. Reinstall the air intake tube and air filter housing.
 17. Reconnect the batteries. Your installation is now complete. Thank you for choosing aFe Power.

***Note:** Retighten all connections after approximately 100-200 miles

***Note:** Factory gaskets part numbers: **EGR Gasket: 4882883 Turbo flange gasket: 4429357 Oil return line: 500332AD**

***Note:** This product is not CARB exempt at this time and is not legal for sale in California or use on vehicles registered with the California Department of Motor Vehicles.