



**Installation Manual v1.1:
The ATS Arc-flow Intake Manifold
98.5-05 Dodge-Cummins 5.9**

Please read all instructions before installation.

Thank you for purchasing the ATS Arc-flow Intake Manifold. This manual is to assist you with your installation. If installing for a customer, *please pass this manual on to your customer* for future reference.



Figure 1 - 24 Valve and CR Arc Flow Kit Contents

Note: Torque manifold bolts to **13 ft-lb.**

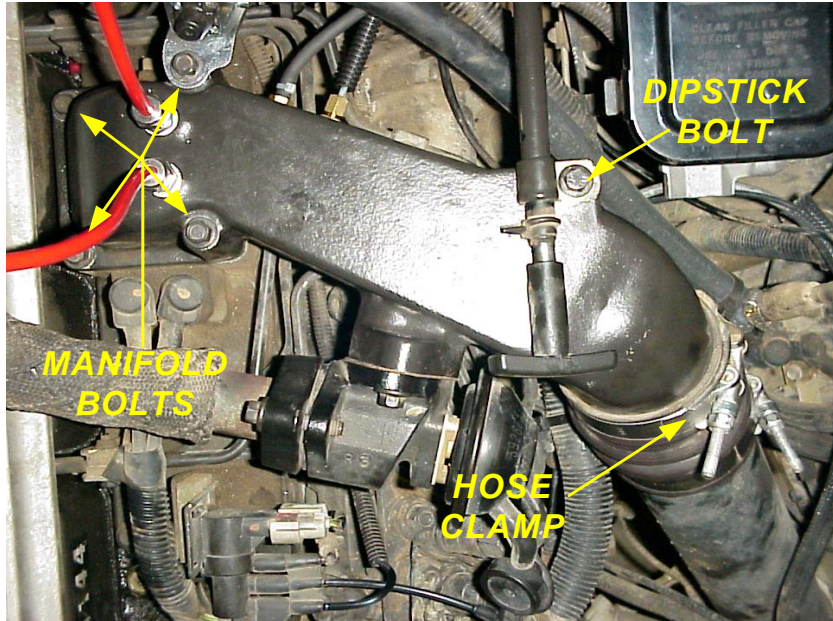


Figure 2 - Dodge 12V Intake Manifold

NOTE: *Figure 2* shows a factory Dodge intake manifold. This is a 12V Cummins with California emissions (EGR). Other manifolds may look slightly different, but the same install steps apply.

1. Remove the bolt that holds engine oil dipstick tube to the manifold.
2. If there are any taps or fittings in your original intake manifold, (propane or water injection, etc.) remove them now. The ATS Arc-flow has pre-tapped holes for these and other fittings for your convenience.
3. Loosen the clamps that hold the hose from the intercooler to the intake manifold.
4. Use a **10mm** socket and remove the four bolts that hold the manifold to the engine and lift the manifold off of the engine. Leave the gasket to be reused. If there are any ground wires that are being held in place by these bolts, take note of where they go and set them aside, we will reinstall these with the new manifold.
5. **Take care to insure that no debris falls into the intercooler pipe or into the engine.**
6. Put the Arc-flow manifold into position. Install the supplied bolts. *Place the rubber washer between the manifold and the steel washer.* If you originally had a ground wire on one of the manifold bolts, reinstall it in the same position. *Place the ground wire in contact with the steel washer or the bolt head.*



Figure 3 - Installing Ground Wire, Note Rubber Washer Below Ring Terminal

7. Tighten the manifold bolts to **13 ft-lb** (do not over-tighten) using a size **6mm** Allen wrench/socket. For the best possible seal, tighten the four bolts evenly (tighten all four a little at a time).
8. Reattach the hose and tighten the hose clamps.
9. If your original manifold had any fittings (propane or water injection, etc), reinstall them into the Arc-flow's tapped holes, we recommend that you use a thread sealant such as thread tape. Install and/or make sure that all plugs are tight.
10. Reattach the engine oil dipstick tube to the Arc-flow manifold using the supplied 5/16" socket head cap screw and 5/16" washer. You may have to modify the tube with gentle bends to compensate for the larger manifold.



Figure 4 - Arc-Flow Intake Manifold After Installation

Note: *Figure 4* shows a 24V Cummins, but 12V and Commonrail models look similar.

11. ATS recommends rechecking the manifold bolts' torque after the vehicle has been used to insure the best possible seal.

Bill of Materials

1. (1) Arc Flow Intake Manifold INT-D-98.5-05 DODGE
2. (2) Intake manifold 180mm Bolt 0141737
3. (2) Intake Manifold 85mm Bolt 39614
4. (4) 8mm Flat Washer FW8MM
5. (4) 8mm Seal Washer SW8MM
6. (5) 1/8" NPT Pipe Plug 4534K41
7. (1) 5/16"-18 x 1/2" Socket Head Cap Screw 7728
8. (1) 5/16" Flat Washer 88446
9. (1) Graphite Intake Gasket INTGASKT
10. (2) ATS Stickers