Installation Instructions

CommandFlo

Fuel Flow Modifier

Mitsubishi Eclipse 2.0L Turbo
Eagle Talon 2.0L Turbo
Plymouth Laser 2.0L Turbo

Part Number 46056, 46063, 46064

The **B&M CommandFlo Fuel Flow Modifier** has been designed to work on all Mitsubishi Eclipse 2.0L Turbos, Eagle Talon 2.0L Turbos and Plymouth Laser 2.0L Turbos.

The **B&M CommandFlo Fuel Flow Modifier** allows the user to accurately adjust fuel flow (and hence fuel pressure) in response to engine modifications.

Most factory computers will compensate for minor airflow modifications (low restriction intake and exhaust) at part throttle operations but have no way to adjust at WOT (Wide Open Throttle). The results are a lean mixture right where you need *more* fuel! One way to correct this is to adjust fuel flow via fuel pressure. Most people don't understand that by increasing fuel pressure (on a fuel injection system), fuel flow increases. The formula for calculating flow increase based on fuel pressure is:

F1 = Injector Flow (cc/min)
P1 = Current Fuel Pressure (psi)
F2 = New Injector Flow (cc/min)
P2 = New Fuel Pressure (psi)

$$P2 = P1 \times \left(\frac{F2}{F1}\right)^2$$

Example:
We added a high flow exhaust that increases airflow 10%. What pressure should the system be set to?

F1 = 270 cc/min
F2 = 297 cc/min (270 + 10%)
P1 = 43 psi

$$P2 = 43 \text{ psi} \times \left(\frac{297}{270}\right)^2$$

or

P2 = 52 psi

We recommend that you read through the instructions completely before beginning the installation, so you can familiarize yourself with the installation procedure and tools required. Check the tool list at the end of these instructions for the tools required to install your **B&M CommandFlo Fuel Flow Modifier.** Installation of the CommandFlo Fuel Flow Modifier can be accomplished by anyone with minimum mechanical experience. It is however, important to closely follow the instructions.

When installing your CommandFlo Fuel Flow Modifier there are several other **B&M** products you may wish to consider: **B&M Fuel Pressure Gauge Set: #46054**. In order to take full advantage of the ability to adjust the **CommandFlo Fuel Flow Modifier**, it is important to know the exact fuel pressure of your system.

INTRODUCTION

The **B&M CommandFlo Fuel Flow Modifier** can be installed in less than an hour by carefully following the instructions. **Read all instructions first to familiarize yourself with the parts and procedures.** This kit contains all parts necessary to install the fuel flow modifier on all Mitsubishi Eclipse 2.0L Turbos, Eagle Talon 2.0L Turbos and Plymouth Laser 2.0L Turbos.

DISASSEMBLY

We suggest the vehicle be allowed to cool for an hour or two before you begin since you will be working around the fuel system.

CAUTION: THE FUEL SYSTEM CONTAINS FUEL UNDER HIGH PRESSURE EVEN WHEN THE ENGINE IS NOT RUNNING. BE-

FORE DISCONNECTING A FUEL LINE, WRAP THE FITTING WITH A RAG TO PREVENT FUEL SPRAY.

STEP 1. Remove the fuel pump fuse from the fuse box. Try starting the vehicle several times until it will not remain running. This will help relieve pressure in the fuel system. Remove the plug and washer on the top of the fuel filter and attach an accurate pressure gauge. Remove and plug the vacuum line running to the fuel pressure regulator. Replace the fuse and start the vehicle. Note fuel pressure. .

STEP 2. Again, remove the fuel pump fuse from the fuse box. Try starting the vehicle several times until it will not remain running. This will help relieve pressure in the fuel system. Remove the negative battery cable.

STEP 3. Using a pair of pliers, loosen the clamp holding the return fuel line to the fuel pressure regulator. Place a rag over the connection and carefully slide the fuel line off of the regulator.

STEP 4. Using a 10mm socket and short extension, remove the two bolts holding the stock regulator to the fuel rail. Remove the regulator. *Be careful of spraying fuel!*

STEP 5. Remove and inspect the regulator o-ring for tears. Replace if damaged.

STEP 6. Carefully mount the regulator body in a vise. Using a hacksaw, cut off the top of the regulator "hat" and vacuum pipe just below where the vacuum pipe attaches to the "hat." **Be careful:** the top is under pressure from the spring inside! Remove and discard the top and spring (see fig. 1).

STEP 7. Using a file, remove the sharp edges from the regulator.

ASSEMBLY

STEP 8. On the underside of the new **CommandFlo** body, carefully insert the supplied silicone o-ring into the machined groove.

STEP 9. Fully screw the supplied nut onto the supplied 10-24x5/8" hex screw but do not tighten. Then screw the nut/screw assembly into the top of the new **CommandFlo** body until the tip of the screw is flush with the inside boss (screw should not protrude).

STEP 10. Position the supplied piston and spring into the **CommandFlo** body, making sure to seat it on the brass piston. Without dropping the spring, install the **CommandFlo** body onto the stock pressure regulator. Place a drop of Locktite® on each of the four supplied 6-32 bolts and carefully attached the **CommandFlo** base (use caution when installing the screws to avoid stripping out the base). Once the base is attached, align the **CommandFlo** assembly as shown (see fig. 1).

STEP 11. Hand tighten each of the four bolts until the base and body come together. DO NOT OVER TIGHTEN!

STEP 12. Attach the assembly to the fuel rail. Using the 10mm socket, tighten the two bolts to 6 lb-ft.

STEP 13. Slip the return fuel line back onto the regulator and retighten the clamp.

STEP 14. Reinstall the fuel pump fuse and negative battery cable.

STEP 15. Turn the key to on but do not start vehicle. Repeat this three times. Check the regulator for leaking fuel. If there is evidence of a leak, repair before proceeding. NOTE: The **CommandFlo** does not directly connect to the fuel side and thus will not cause the regulator to leak.

STEP 16. Start the vehicle and using a 5/16" open ended wrench, adjust the fuel pressure to the desired value based on the pressure measured before disassembly. Turning the piston clockwise will raise pressure while counter-clockwise will lower pressure. Once the pressure is set, tighten the jam nut using a 3/8" open ended wrench.

STEP 17. Reconnect the factory vacuum line to the new **CommandFlo** vacuum tube.

STEP 18. For nonpermanent type gauge sets, remove the fuel pump fuse from the fuse box. Try starting the vehicle several times until it will not remain running. This will help relieve pressure in the fuel system. Remove the fuel pressure gauge and reinstall the plug and washer on the top of the fuel filter. Replace fuel pump fuse.

STEP 19. Verify that there are no signs of fuel leakage.

Parts List

1	**CommandFlo** Body
1	**CommandFlo** Base
1	Brass Piston
1	Spring
1	Silicone o-ring
4	6-32 Bolts
1	Jam Nut
1	10-24 x 5/8" Hex Screw
1	Tube of Locktite®
1	Instruction Sheet

Tool List

Fuel Pressure Gauge
10mm Socket and Drive
5/16", 3/8" Open Ended Wrench
Pliers
Hacksaw
7/64" Hex Wrench
Rags

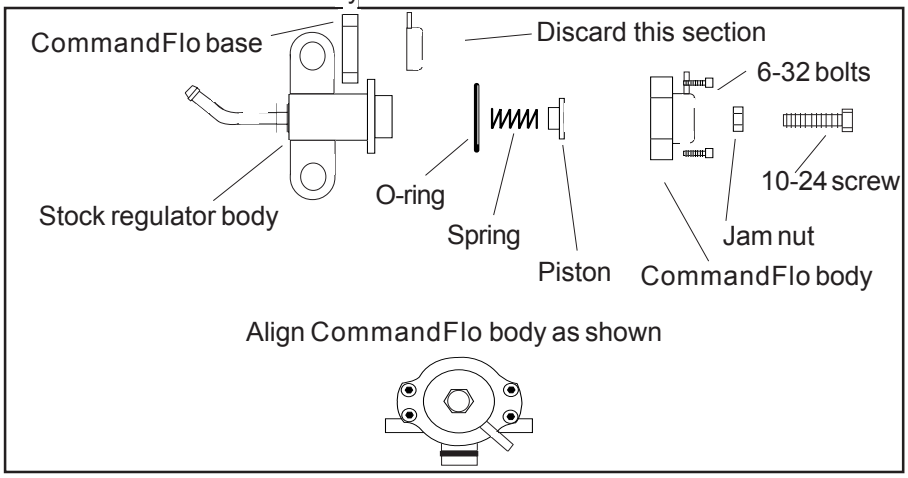

Figure 1