



## Installation Instructions – Air Delivery Module

### I. *General Notes*

**Warning:** When discharging to atmosphere the EPR or -20 hose is capable of generating #300 - #400 of force. All connections and mounting brackets must be properly secured prior to system operation.

- Hose lengths should be kept as short and straight as possible. Tight bend radii and/or excessive hose length will result in excessive pressure drop (line losses), thus decreasing the maximum power capability of a system.
- -20 hose should be protected with grommets wherever it passes through bulkheads or firewalls.
- -20 hose should be routed away from suspension and exhaust system components. Ideally it should not be isolated as much as possible from any heat source to maximize performance.
- Distance between the Safety Shut-off Valve and the EPR and between the EPR and Ejector should be kept as short as practical to maximize transient performance.
- The Safety Shut-off vent tube will release air @ 60 – 80 psig during system operation. It should be mounted so that it does not discharge air directly onto other components that may be affected.
- Preferable mounting orientation of the Safety Shut-off is Pilot Solenoid side up, with the top +/- 15° of horizontal.
- Preferable mounting orientation of the EPR is with the butterfly shaft +/- 15° of horizontal.
- Preferable mounting orientation of the Ejector is with the butterfly shaft +/- 15° of horizontal.



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### ***II. Ejector Installation***

It is desirable to locate the Ejector 20 – 30 inches upstream of your Throttle Body or carburetor. In many cases maintaining this distance is not practical, at a minimum efforts should be made to eliminate or minimize ducting bends near the inlet of the carburetor or throttle body.

In creating inlet ducting the usage of Mandrel bent aluminum elbows and silicone hose couplings such as those available from [www.GlobalTechEng.com](http://www.GlobalTechEng.com) and [www.TurboHoses.com](http://www.TurboHoses.com) are recommended.

In applications that use a Holley square bore carburetor or 4150 style throttle body, shorter Ejector to Carburetor/Throttle Body distances can be better tolerated by using a CAS 1:4 Diffuser.

Once a mounting location has been identified, the Ejector should be secured using the mounting boss located on the underside of the unit.

### ***III. Safety Shut-off & EPR Installation***

It is desirable to close couple the lock-off and EPR and locate them in close proximity to the Ejector. There are no hard and fast rules on this but, generally speaking a maximum distance between EPR and ejector of 12-in to 16-in is desirable. If possible connecting the two together using a Fml-Fml adaptor is desirable.

Due to the large forces generated from the rapid discharge of high pressure air the Safety Shut-off and EPR must be secured directly to the vehicle. Sturdy mounting brackets are included with both components to facilitate mounting.

### ***IV. Medium Pressure Hose Installation***

The -20 Medium Pressure Hose uses conventional 3-piece ends that are user installed. Straight and 90° hose ends are available. Routing of hose should be conducted according to the suggestions provided in the “General Information” segment of this document. Detailed instructions on how to install Hose Ends are contained in a separate document titled “3-piece Hose Installation”.

### ***V. Isolation Valve Hose Installation***

The Ejector Isolation Valve is pneumatically operated via pressure signal sourced at the outlet of the Safety Shut-off Valve. This is communicated through a -3 AN hose that connects the Isolation Valve Actuator to the outlet port of the Safety Shut-off Valve. Length of this hose should be kept as short as practicle.