

900 Series Firewall-mount Pedal Assembly

DESCRIPTION

Minimizing friction and flex in the pedal assembly and the master cylinders maximizes driver control. The Tilton overhung pedal assembly with forward mounted master cylinders effectively handles these critical issues. In addition this assembly is highly adjustable for different drivers and tracks, easy to install and maintain, and does all of this in a very lightweight package.

MASTER CYLINDER AND PEDAL ASSEMBLY INSTALLATION

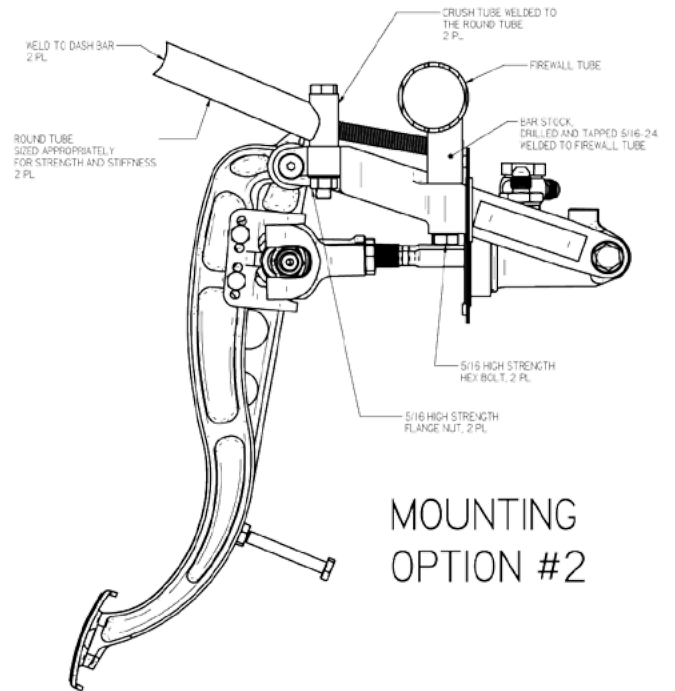
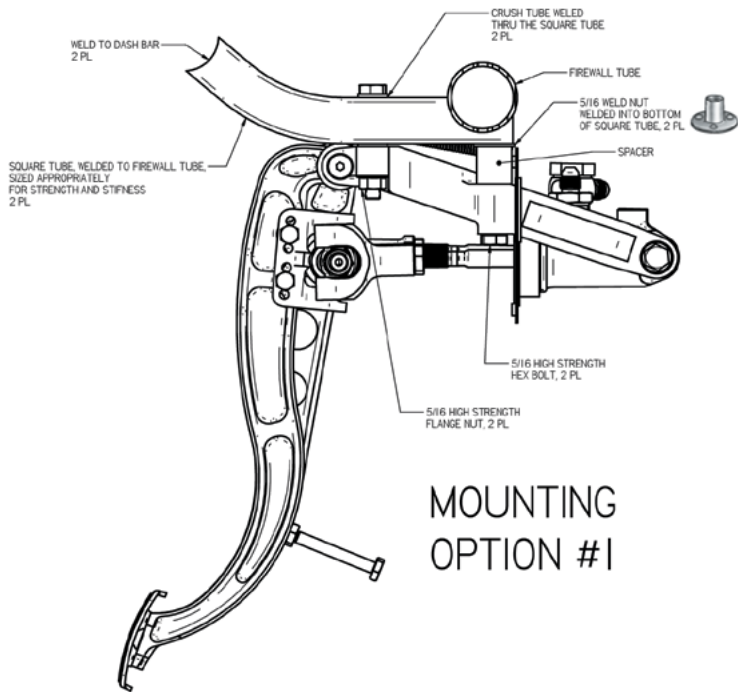
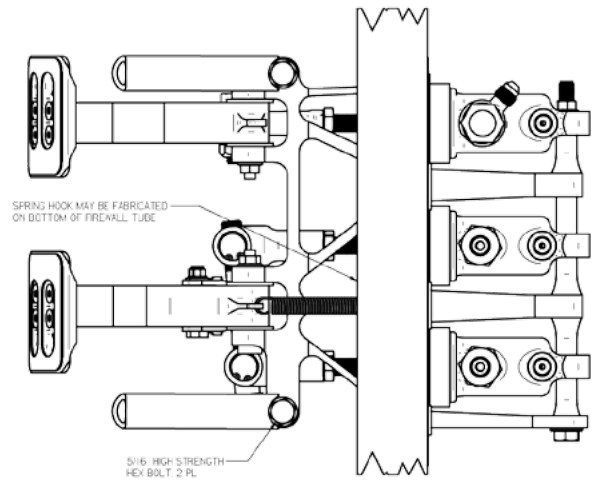
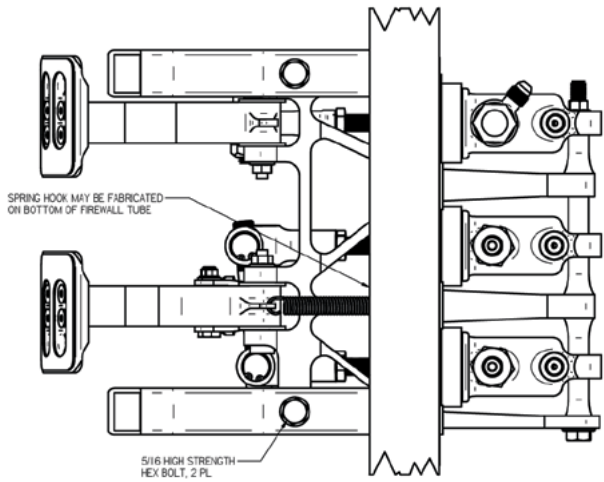
1. A pedal assembly can only be as rigid as its mounting system in the car.
See **Mounting Options** on page 2 for suggested mounting techniques.
2. Use of the Tilton firewall plate (P/N: 72-799) will allow the entire assembly with master cylinders to be installed as one unit. See **Mounting Options on page 2** for firewall modification instructions.
3. Select the brake pedal motion ratio (6.25:1, 5.37:1, 4.70:1). They are marked on the balance bar mount. Make sure that the balance bar mount is firmly against the back face of the brake pedal and tighten the two fasteners to **72 in-lbs**.
4. The balance bar clevises are of two different lengths. The longer clevis is used with the master cylinder for the front brakes. If you wish to reverse the position of the clevises do it now.
5. Set the center-to-center distance on the two balance bar clevises at **2.60"**. A good place to start is with both clevises equally spaced from the pedal (middle balance bar position).
6. Remove the long bolt that mounts the three master cylinders. Remove the four master cylinder spacers from the frame.
7. If you are using the Tilton firewall plate (P/N: 72-799), slip it into place on the pedal assembly now. After installation of the pedal assembly into the car, the plate will be on the driver's side of the firewall with the perimeter seal against the firewall.
8. Reinstall the two center master cylinder spacers in the frame. A small amount of RTV will keep the spacers in place during assembly.
9. It is best to install the master cylinders on the pedal assembly before placing the assembly in the car. Push the master cylinder hex end cap through the rubber boots in the firewall plate, reinstall the mounting bolt through the three master cylinders, and tighten the nut to 120 in-lbs.
10. Thread the three pushrods in the clevises eight revolutions. This will be **.333"**. Final pedal position adjustment will be made later.
11. Since the brake pushrods are threaded equal amounts and the clevises have two different lengths, the balance bar will be at a 5° angle. This is by design and will be addressed in the **Pedal Positioning** section.
12. Mount the pedal assembly into the car. Use of high strength fasteners and safety wire for the four mounting bolts is recommended.
13. From inside the engine compartment, tighten the firewall plate in place.

PEDAL POSITIONING

1. Thread the clutch master cylinder pushrod in until the desired pedal height is achieved.
Keep at least **.300"** of pushrod threaded into the clevis. Tighten the pushrod locking nut.
2. If your hydraulic release bearing requires the use of a positive stop, a bolt that threads into the back of the clutch pedal and a locking nut have been provided. You may need to use a bolt of a different length.
See your hydraulic release bearing instructions for adjusting the pedal stop.
3. Adjust the brake pedal height by threading both brake master cylinder pushrods in or out of the clevises equal amounts.
Keep at least **.300"** of pushrod threaded into the clevises. Tighten the two pushrod locknuts once the proper pedal position is achieved. The pushrod has two flats to accept a 5/16" wrench.
4. The front master cylinder will require more stroke to operate than the rear once the system has been bled. After bleeding, check to make sure the balance bar is parallel with the firewall when the brakes have been applied with the normal wheel locking force. If not, loosen the locknuts, readjust, and retighten the locknuts.
5. The footpad positions can be adjusted left and right in **.26"** increments. The bolt pattern is offset, so, turning the pad 180° allows the smaller increments. **Always use all four mounting screws per pad and a removable thread locking compound.**



MOUNTING OPTIONS



BALANCE BAR ADJUSTMENT

Fixed position - If a remote adjuster will not be used remove the set screw in the right end of the balance bar and snug the balance bar locking nut up against the right clevis pivot. **Only one locking nut is required.**

Remote Cable Adjuster - The right end of the balance bar has been drilled to accept the remote adjuster cable directly. No coupler is required. Slip the end of the cable into the end of the balance bar and tighten the setscrew.

Right Angle Adjuster - To solve cable routing problems use right angle adjuster part number 72-561. This is a small protected bevel gear drive unit that will allow the cable to approach the balance bar at a 90 degree angle.

PORTS

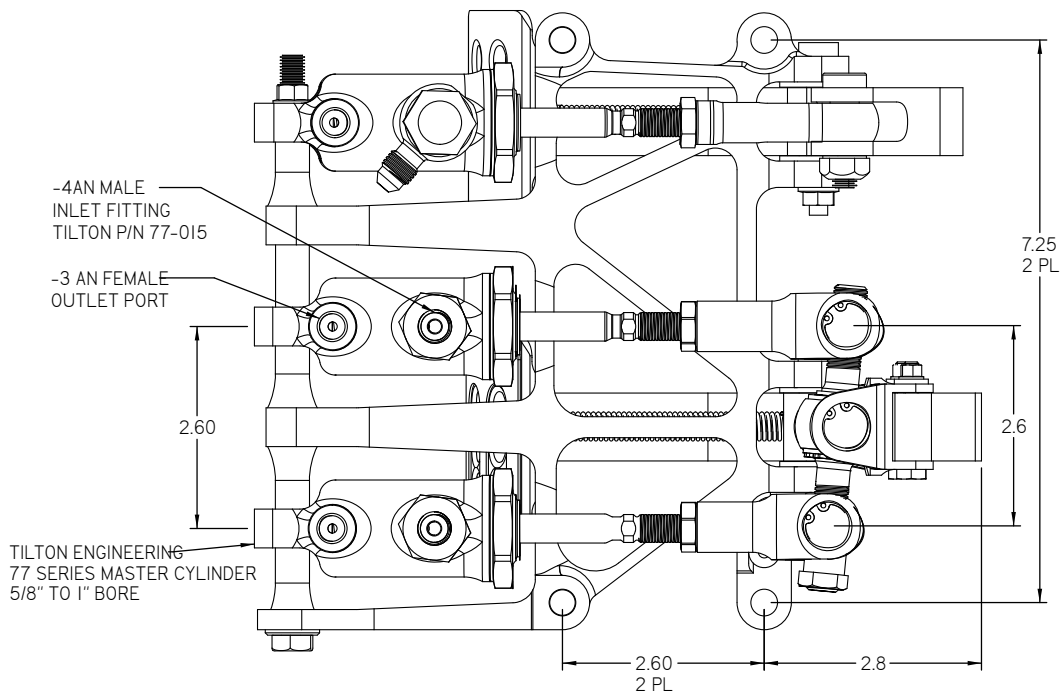
Inlet: -6AN, crush washer seal. Connection fittings (-6AN crush washer to -4AN male taper) are sold separately, available from Tilton (P/N 77-015). Comparable Goodridge fittings are acceptable as well.

Outlet: -3AN, crush washer or tapered seat seal.

CUTOFF PORT TRAVEL

As delivered, the Tilton 77 Series master cylinder has been blueprinted for a cutoff port travel distance within the range of **.030" to .050"**. This can be altered by changing the thickness of the sealing ring located between the master cylinder body and the end cap (visible from outside). Increasing the thickness of this seal increases the cutoff port travel an equal amount. Reducing the thickness reduces it by an equal amount. Seal kits of varying thicknesses are available from Tilton. It is recommended not to reuse the shims since work hardening of the shim material can prevent proper sealing in the future.

INLET FITTINGS ARE NOT INCLUDED WITH MASTER CYLINDERS. SUITABLE FITTINGS FOR YOUR PARTICULAR INSTALLATION MUST BE PURCHASED SEPERATELY.



DIMENSION INFORMATION

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