



Factory Five Racing, Inc.

Part Number: 14792	Revision: <u>F</u>	Effective Date: <u>06/21/2016</u>	By: <u>J.Ingerslev</u>
--------------------	--------------------	-----------------------------------	------------------------

Wilwood Pedalbox Instructions





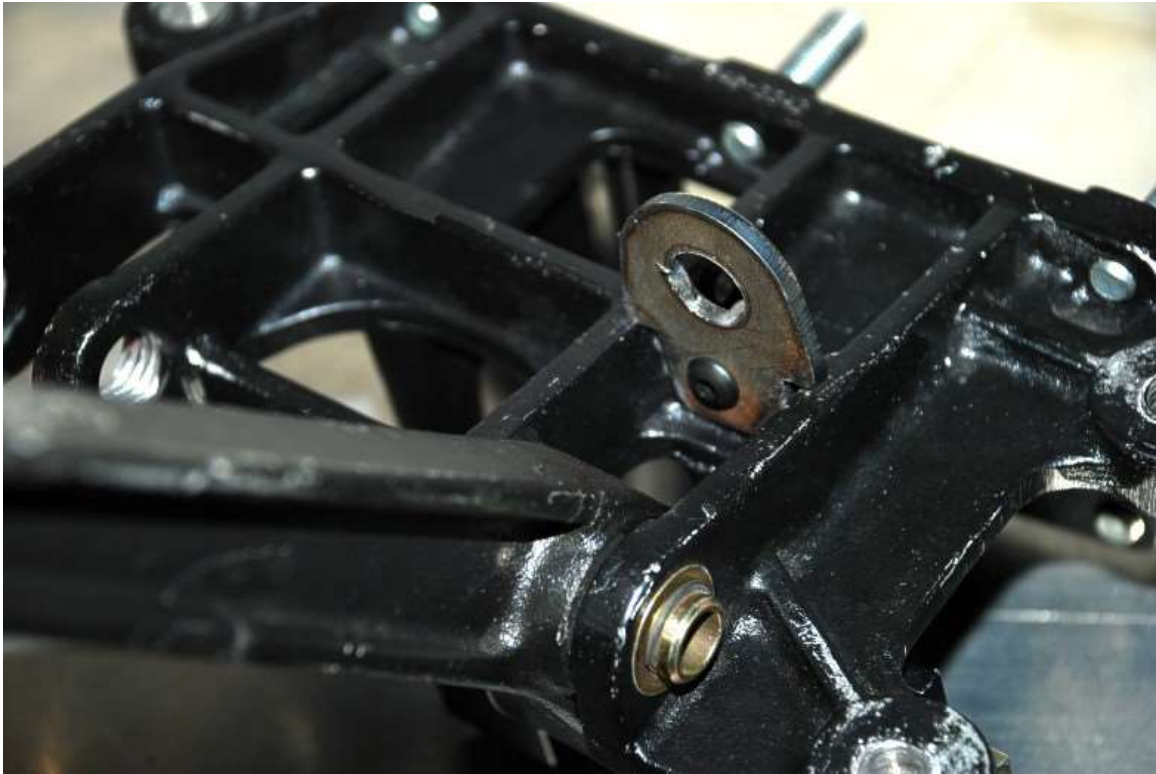
-  $\frac{1}{2}$ " , $\frac{9}{16}$ " sockets, $\frac{1}{4}$ " , $\frac{3}{8}$ " , $\frac{1}{2}$ " wrenches, $\frac{1}{4}$ " drill bit, drill, Philips head screwdriver, $\frac{3}{16}$ " , $\frac{5}{16}$ " Hex Key, snap ring pliers
-  Pedal Components, pedal box hardware.
-  This pedal box is set-up to use either a hydraulic clutch or a cable clutch. The parts and instructions required for a cable clutch installation are included below.

Table of Contents

Brake switch mount	2
Clutch Cable Quadrant	3
Clutch Quadrant stop	7
Frame Installation	8
Master Cylinders	11
Clutch Cable and Firewall Spacer	15
Balance Bar adjustment	17

-  Unpack the pedal box assembly. Now is a good time to paint all of the bare steel brackets.

Brake switch mount



Place the brake switch mount between the brake pedal mount tabs on the side closest to the brake pedal pivot holes and drill a $\frac{3}{16}$ " hole through the brake switch mount hole and the pedal box.



Attach the brake switch mount to the pedal box using the black #10 screw and locknut.

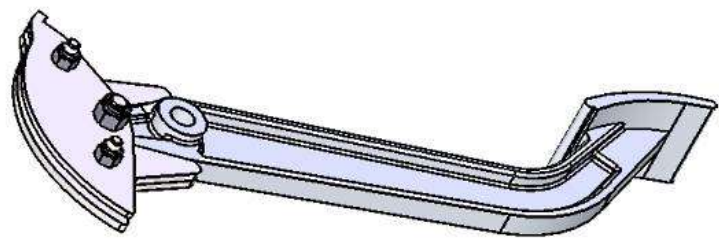
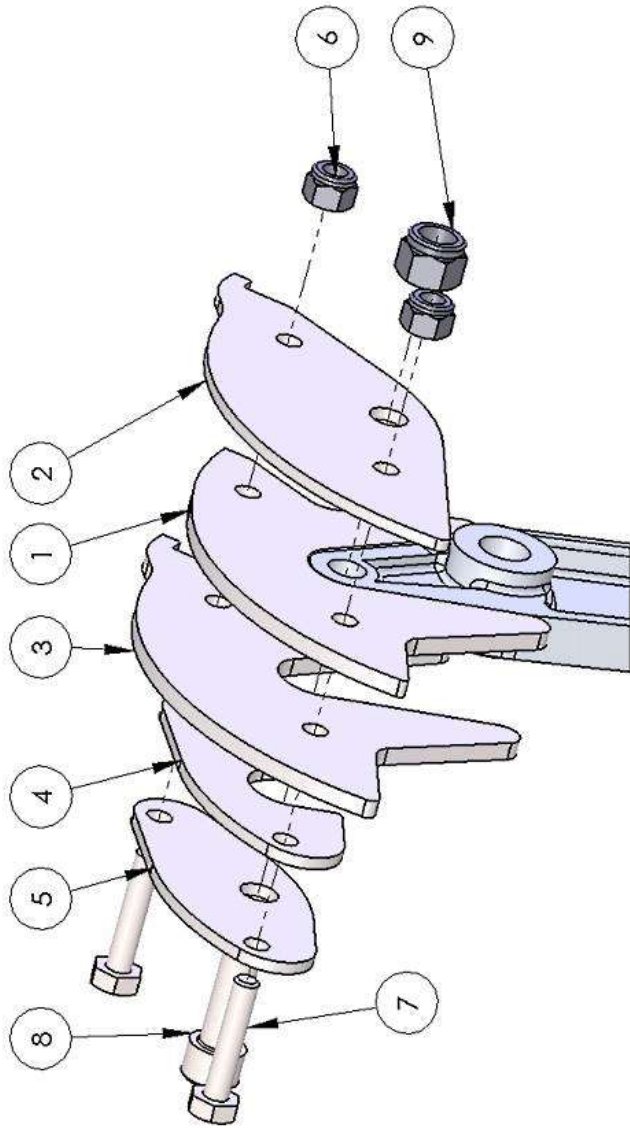


Use snap ring pliers to remove the clevis at the top of the clutch pedal.

Clutch Cable Quadrant

✖ $\frac{3}{16}$ " , $\frac{5}{16}$ " hex keys, $\frac{1}{2}$ " , $\frac{9}{16}$ " wrenches, $\frac{1}{2}$ " socket, ratchet, file

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	15608	CABLE PIVOT PLATE	1
2	15609	INSIDE QUADRANT SIDE PLATE	1
3	15610	LEFT CABLE SIDE PLATE	1
4	15611	PEDAL SPACER PLATE	1
5	15612	OUTSIDE QUADRANT SIDE PLATE	1
6	10802	NYLON INSERT LOCKNUT	2
7	H8OLT 0.2500-20x1.25x0.75-N		2
8	HX-3HCS 0.375-16x1.25x1.25-N		1
9	13964	NYLON INSERT LOCKNUT, 3/8-16 UNC	1



REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	4/15/14	

5

REV

DATE

10/4/13

NAME

JJ

DRAWN

COMMENTS:

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES

TOLERANCES:

TWO PLACE DECIMAL ±0.01

THREE PLACE DECIMAL ±0.005

FOUR PLACE DECIMAL ±0.001

MATERIAL

STEEL

FINISH

ROADSTER

COUPE

HOT ROD

USED ON

APPLICATION

PROPERTY AND CONFIDENTIAL

THE INFORMATION CONTAINED IN THIS

DRAWING IS THE SOLE PROPERTY OF

FACILITY FIVE RACING, INC. ANY

REPRODUCTION IN PART OR AS A WHOLE

WITHOUT THE WRITTEN PERMISSION OF

FACILITY FIVE RACING, INC. IS

PROHIBITED.

Factory Five Racing, Inc.

TITLE:

WILWOOD CLUTCH QUADRANT ASSEMBLY

SIZE

DWG. NO.

A 15613

REV

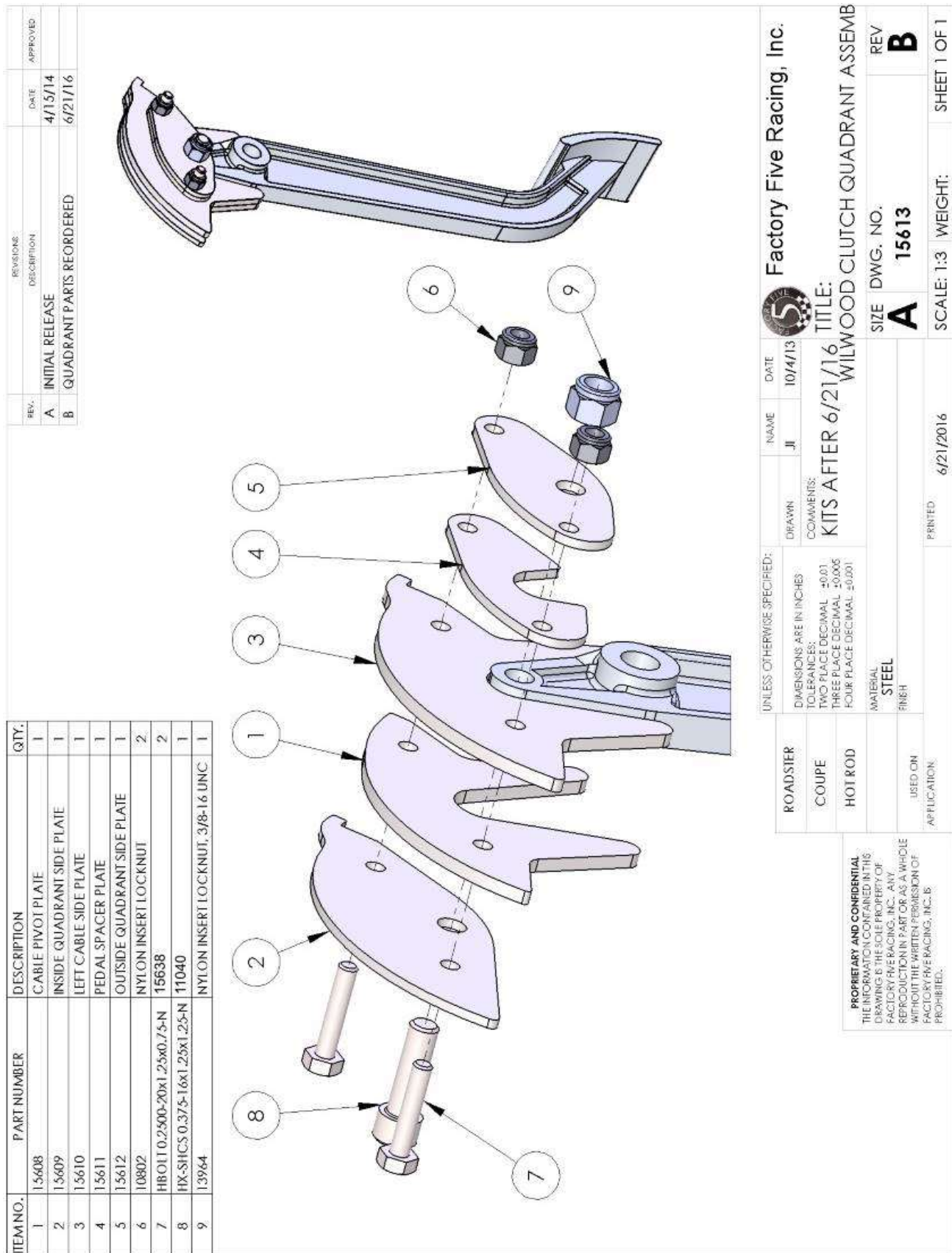
A

SCALE: 1:3

WEIGHT:

SHEET 1 OF 1

Quadrant assembly order for kits older than 6/21/16

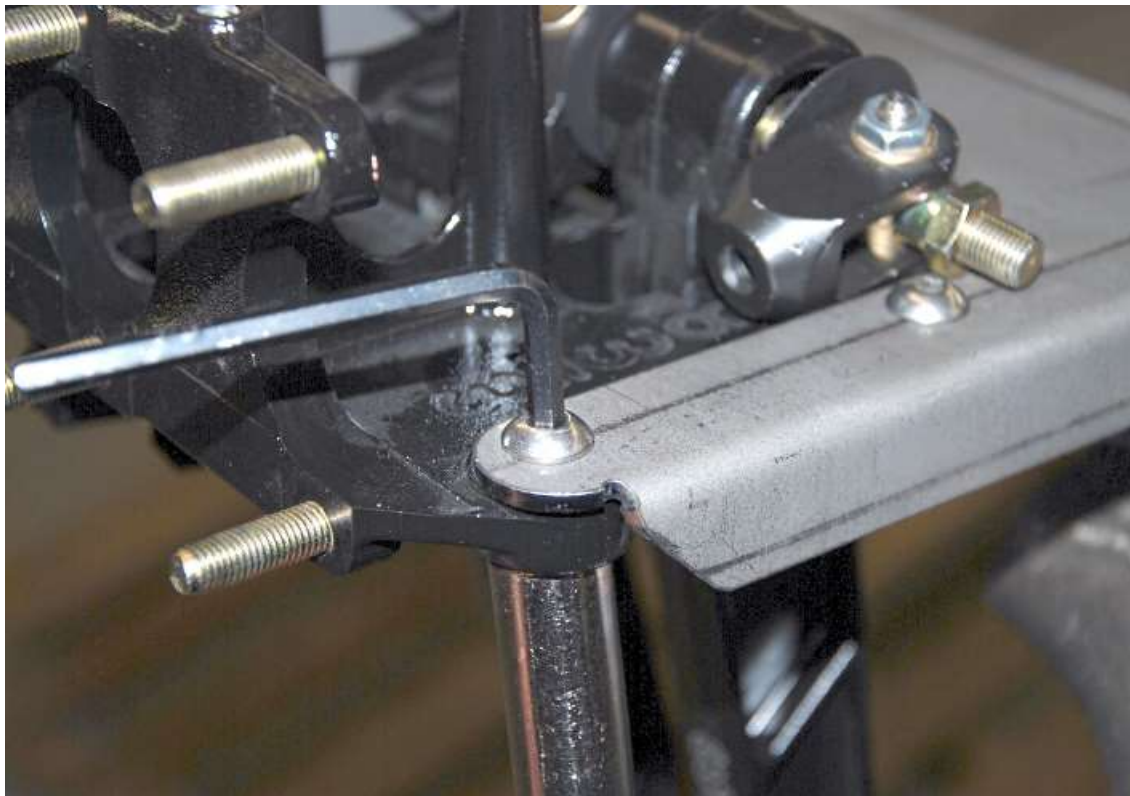


Quadrant assembly order for kits newer than 6/21/16.

Assemble the clutch quadrant to the Wilwood clutch pedal as shown above.

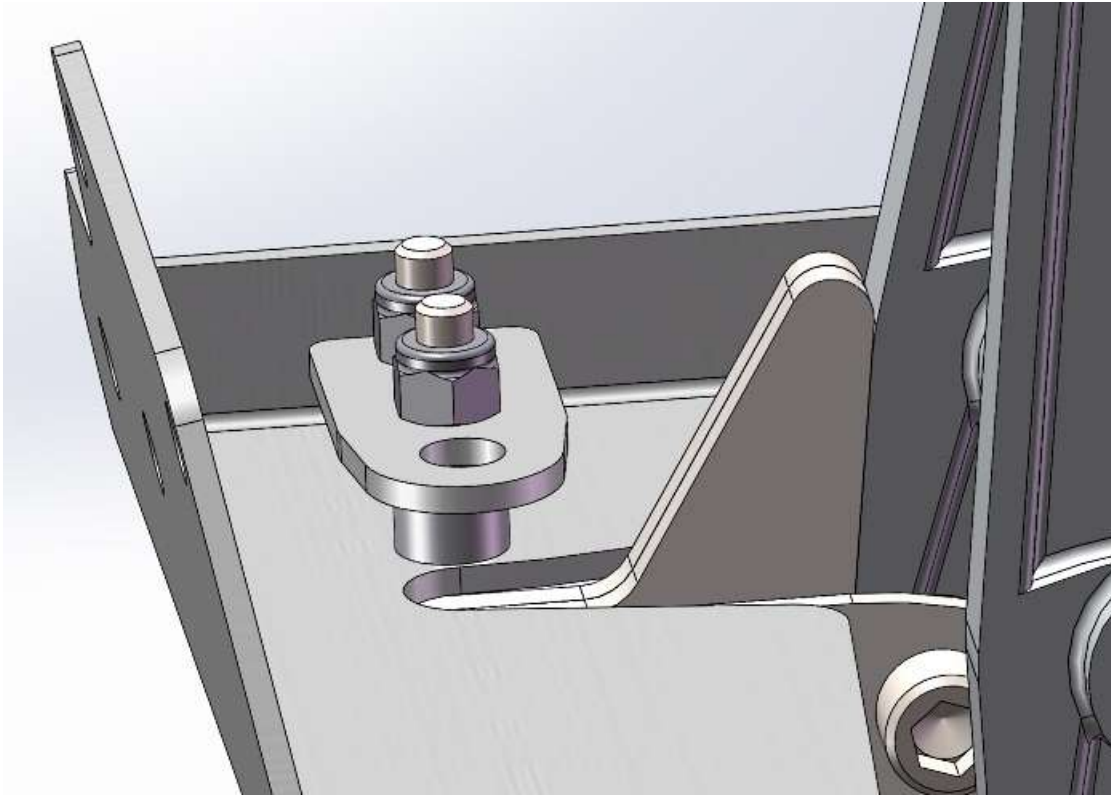


If necessary use a file to remove the forging centerline so the $\frac{3}{8}$ " bolt can go through the clutch pedal hole.



Attach the Wilwood pedals to the underside of the mounting bracket using four $\frac{5}{16}$ " Button head screws, locknuts, $\frac{3}{16}$ " hex key and $\frac{1}{2}$ " wrench.

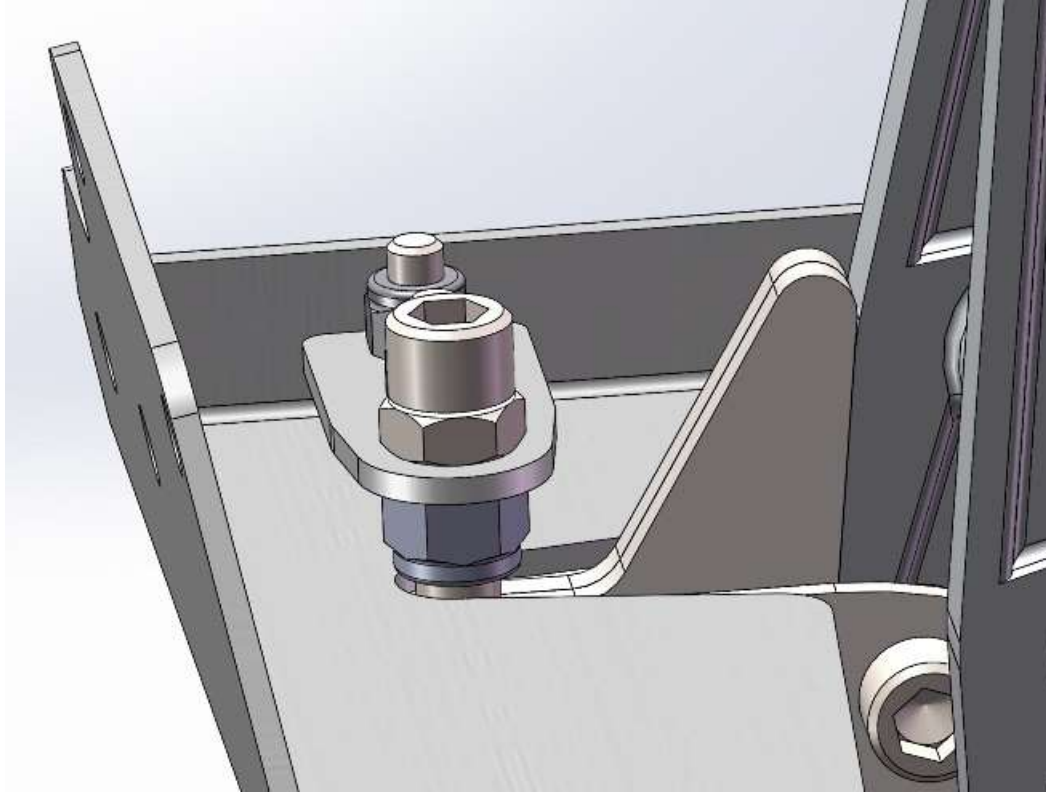
Clutch Quadrant stop



Attach the Clutch pedal stop mount to the bottom of the pedal box using two $\frac{1}{4}$ " socket head screws, spacers and locknuts.



Thread the jam nut onto the $\frac{3}{8}$ "x 1.25" screw provided in the quadrant box.



From the underside, push the screw through the quadrant pedal stop mount plate and hand tighten the locknut on the screw.

Frame Installation

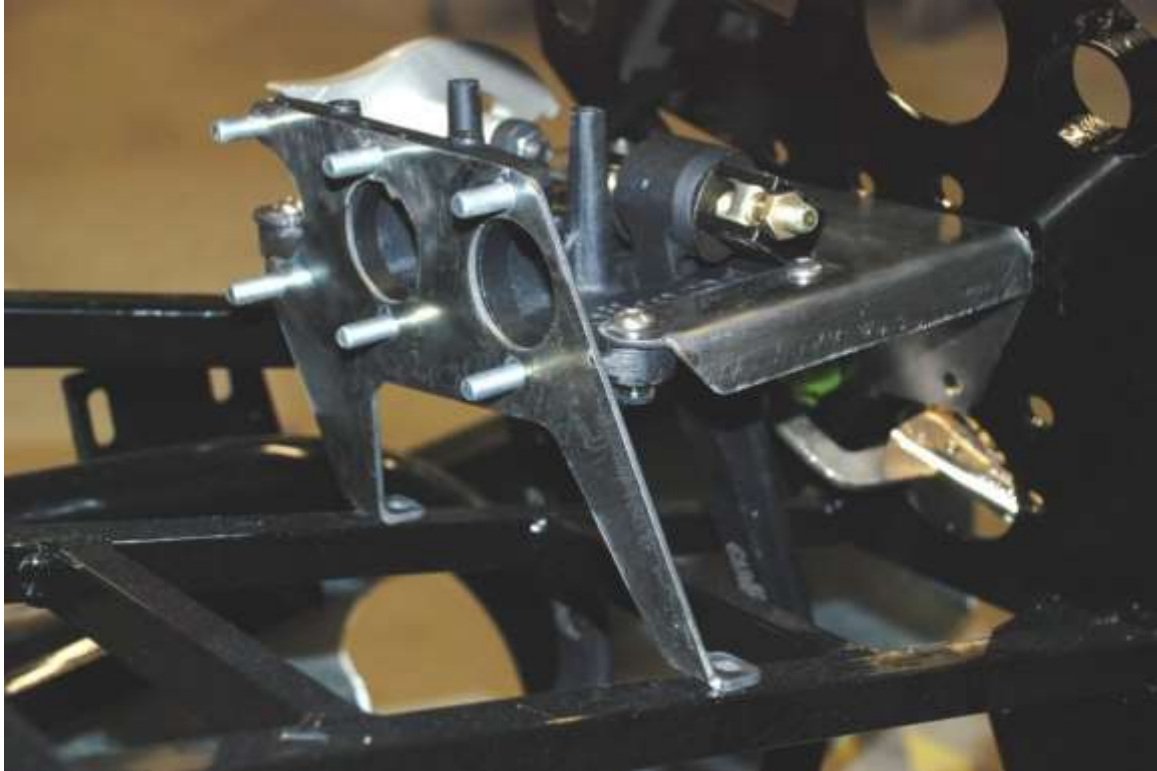
Place the pedal box assembly in the driver's footbox. Make sure that the brake pedal goes in front of the $\frac{3}{4}$ " cross tube on the frame.



Unpack the pedal box hardware from the secondary chassis components box.



Insert three $\frac{3}{8}$ " x 1" socket head screws from the pedal box hardware assembly and the one included in this pedal assembly through the front of the footbox and through the pedal box mount.



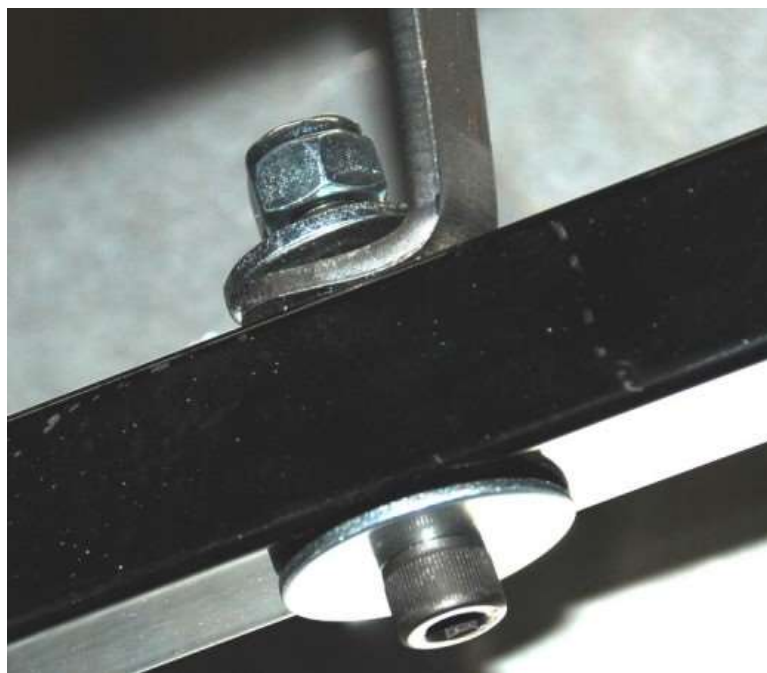
Push the rear pedal box mount onto the master cylinder mount studs and use a few of the jam nuts from the Wilwood pedal assembly to temporarily hold the rear mount in place.



Tighten two of the front $\frac{3}{8}$ " screws then use a marker to mark the locations of the rear mount holes on the $\frac{3}{4}$ " tubes.



Loosen the bolts and remove the pedal box assembly from the footbox then use a 1/4" drill bit and drill to drill through the 3/4" tubes at the locations marked for the rear mount.



Reinstall the pedal box assembly in the driver's footbox; use the 1/4"x 1.50" screws from the pedal box fastener assembly with a fender washer next to the head. Leave all the hardware hand tight.

Master Cylinders

✂ 6mm socket, 1/2" deep socket, ratchet, 1/2" wrench

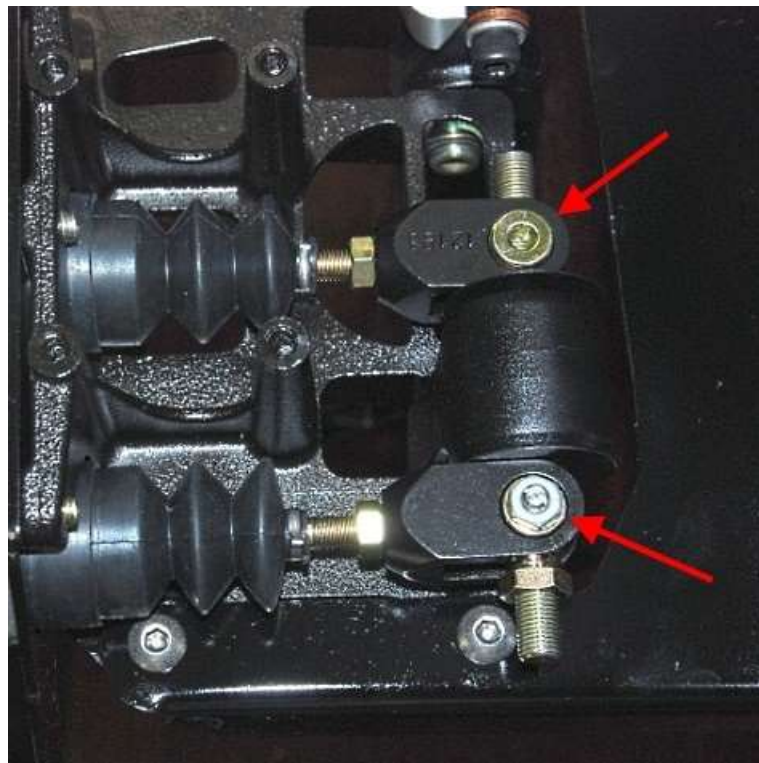
Master cylinders



Screw the 90° brake line adapter into the end of the master cylinder making sure that the opening points up when tight.



Put one of the master cylinders onto one of the brake master cylinder mounts and turn the threaded shaft into the threaded mount on the brake pedal. As a starting point, thread the shaft in until you can see it is flush on the other side of the mount.



The brake pedal master cylinder pushrod mounts are different from each other. Only one has a screw and nut. This is normal.



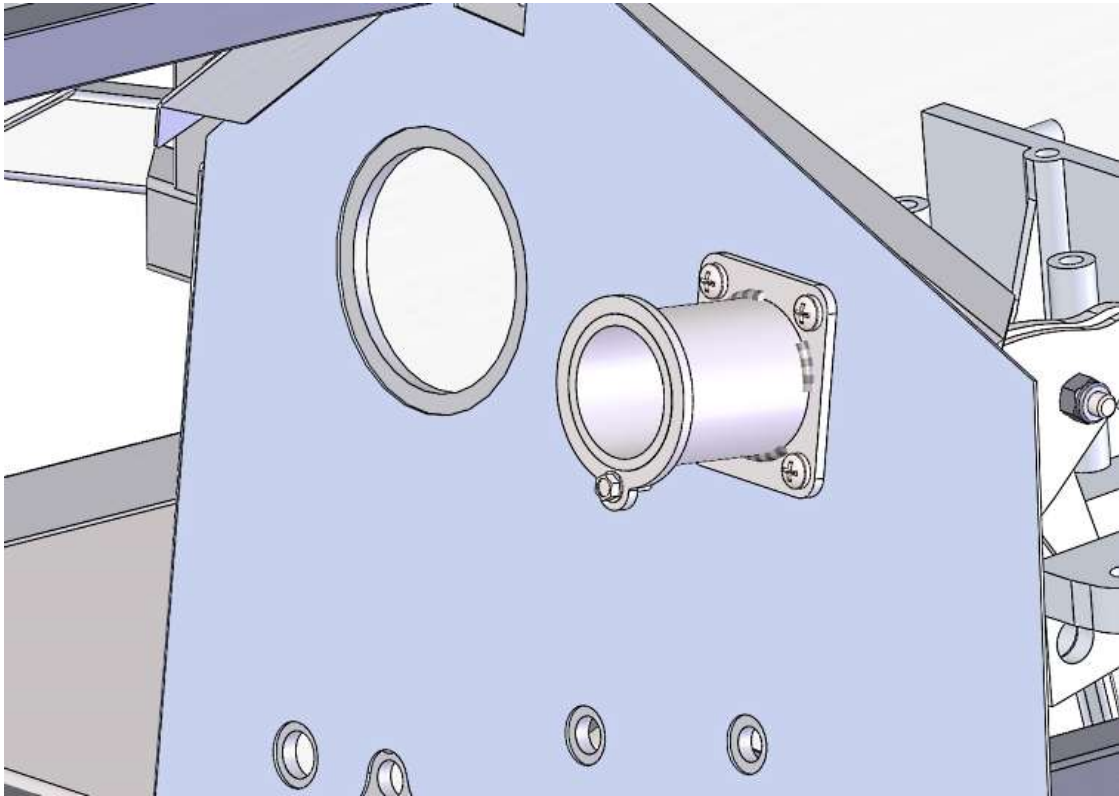
Attach and tighten the locknuts using a 1/2" wrench and 1/2" deep socket holding the master cylinder to the pedal box then repeat for the other master cylinder.



Put the plastic angled inlet adapter with hose clamp on the master cylinders. Use a 6mm socket and ratchet to tighten the hose clamp.

Tighten all the remaining hardware mounting the pedal box to the chassis.

Clutch Cable and Firewall Spacer



Push the firewall spacer into the front of the footbox and attach to the front of the pedal box using the screws provided and a Philips head screwdriver and $\frac{3}{8}$ " wrench.



Slide the clutch cable boss through the firewall spacer and loop the cable over the quadrant.

Attach the clutch cable to the firewall spacer using the small #6 screw provided and 1/4" wrench.



Route the clutch cable down to the bellhousing. Using zip ties or insulated clips tie the cable safely away from the headers and the moving steering components. It can be fastened to the engine using the bracket on the cable to the front lower bolt that holds the starter cable just before it leaves the block or, to the lower engine bay 3/4" tubing.



Make sure that the cable is clear of the hot exhaust header and the steering shaft or the cable may fail prematurely.



Connect the clutch cable to the bellhousing and the clutch fork.

Thread the cable end adjuster nut on so that the cable has no play in it.

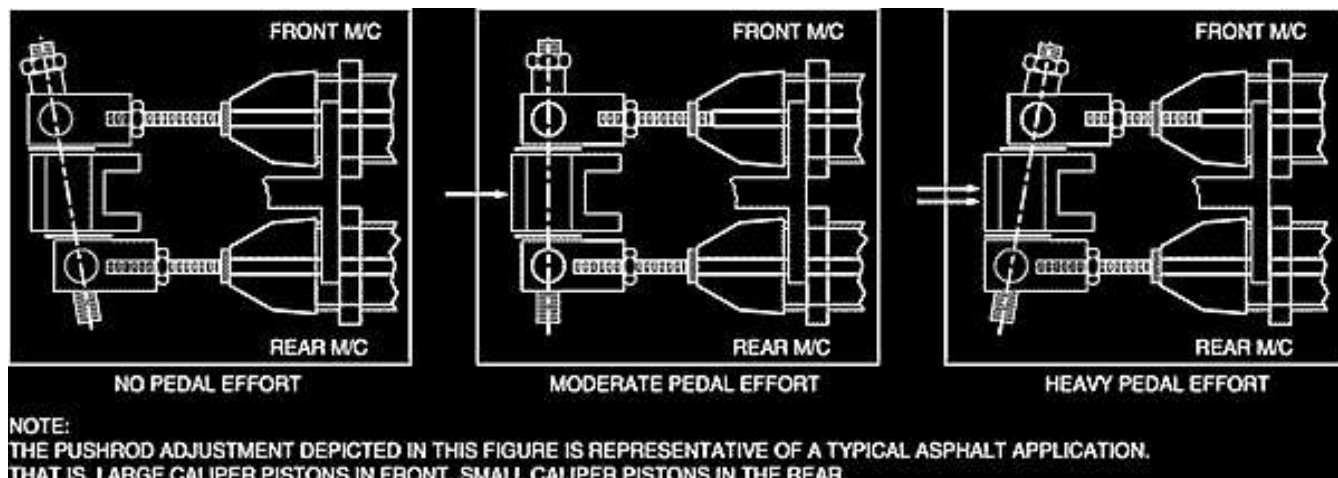
Adjust the pedal closer or further away as desired by screwing the pedal stop screw up or down.

Check the full range of travel for the clutch pedal.

Balance Bar adjustment

The balance bar is an adjustable lever (usually a threaded rod), that pivots on a spherical bearing and uses two separate master cylinders for the front and rear brakes. Most balance bars are part of a pedal assembly that also provides a mounting for the master cylinders. When the balance bar is centered, it pushes equally on both master cylinders creating equal pressure, given that the master cylinders are the same size bore. When adjusted as far as possible toward one master cylinder it will push approximately twice as hard on that cylinder as the other.

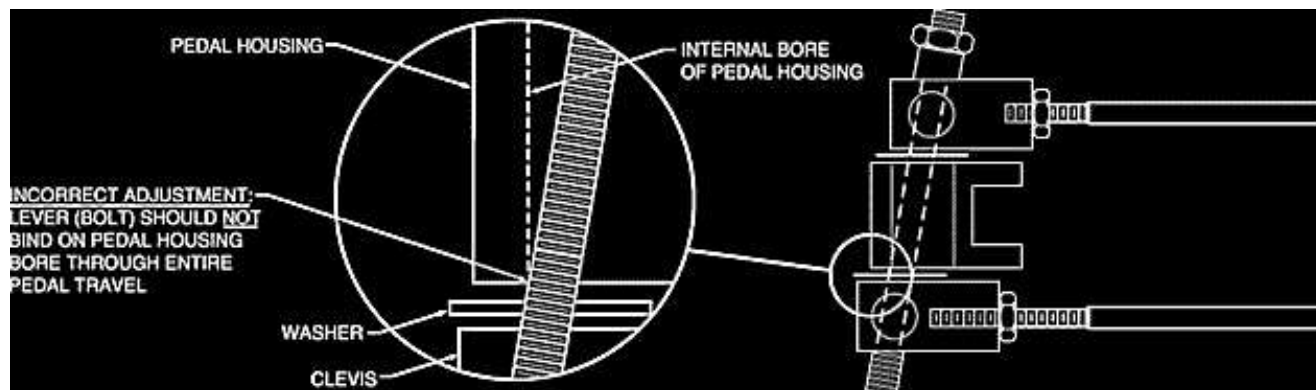
To set up the balance bar, thread the master cylinder pushrods through their respective clevises to obtain the desired position. Threading one pushrod into its respective clevis means threading the other one out the same amount.



Sometimes this will lead to a “cocked” balance bar when the pedal is in the relaxed position, “no pedal effort”. This is acceptable as long as each master cylinder pushrod is completely free of pressure when the pedal is relaxed.

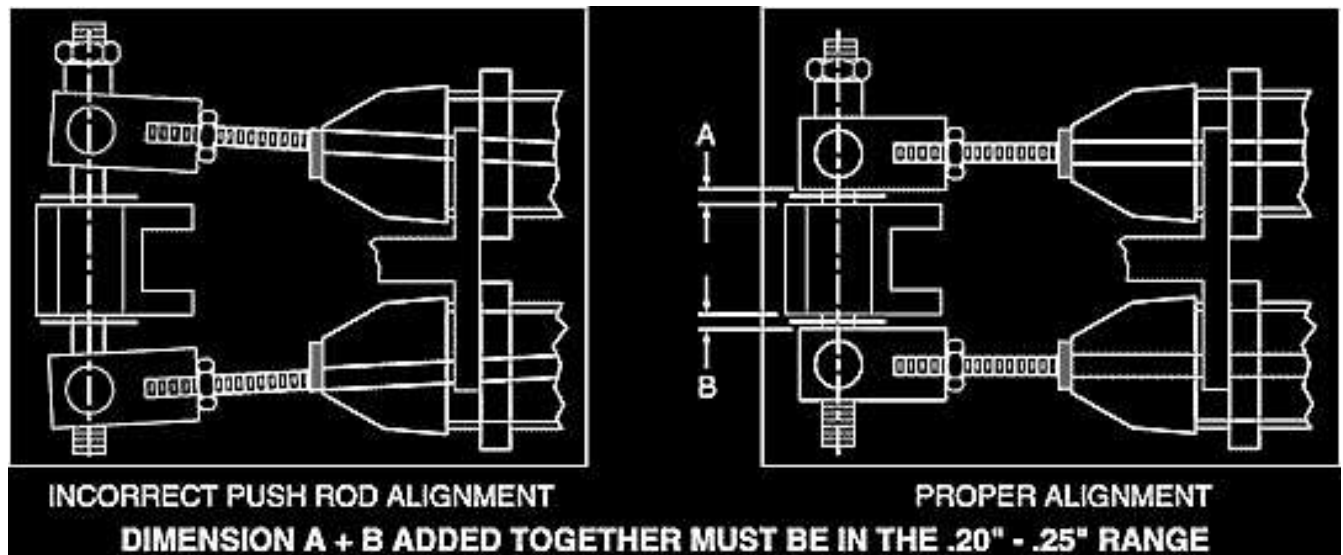


The pushrod adjustment depicted in the figure is representative of a typical asphalt application. That is, large caliper pistons in front, small caliper pistons in the rear.



It is important that the operation of the balance bar functions without interference by over adjustment. This can occur when a clevis jams against the side of the pedal or the lever (bolt) hits the pedal bore during any point of pedal travel.

Lever movement should be unimpeded throughout pedal travel. In the neutral position, clevises should have between .20” - .25” total clearance between the side of the pedal. The large washers between the pedal and clevis should remain loose.



Make sure that the master cylinder pushrods remain true in relationship to the cylinder during entire pedal travel; pushrods should not be pushing master cylinder pistons at an angle.



In its non-depressed position, the pedal and balance bar should allow the pushrod of the master cylinders to fully return. This can be checked by feeling pushrods for very slight movement, not loose movement. Master cylinder pistons should be against the retaining snap ring (under boot).