

Dynamic 67-69C-4 Froward Manual Assembly

Follow these instructions exactly and you will end up with a working Forward Manual Valve Body for a 1967-69 C-4.

Disassemble the core into all its components, checking for damage or previous modifications. If the core has had the channels drilled or machined, discard and use an un touched unit.

1. Wash all components in the jet washer to remove crud and debris.
2. Thoroughly dry the components with air.

Layout

1. Starting with the bottom half of the valve body, mark the channel cuts with a paint marker. Take your time in doing this as the locations are critical.
2. There are two locations that require milling on the Bridgeport.
3. Place the casting aside and move to the upper casting.
4. The upper casting does not require milling.

Machine Work

1. Place the Bottom casting, channel side up in the Mill, clamping it on either side with the dogleg clamps. Make sure you have clearance to all the cuts before securely tightening.
2. Using a ¼" endmill, locate and cut all the slots as marked in the previous section. Be very careful to follow the paint marks and use compressed air to remove chips for better accuracy.
3. Remove the casting.
4. Sand down the both halves flush with the machined casting surface using 320 grit wet/dry paper lubed with ATF on a surface plate.
5. Wash both halves and dry with shop air.

Separator Plate

1. This build requires the re-use of the factory separator plate
2. Using the Master Plate, place the new plate under it and mark the required hole to be enlarged.
3. Make sure the hole circled in the master plate is also on the separator plate to be used.
4. Install a aluminum rivet in the hole shown on the diagram. Drill a 1/16" hole through the rivet center once installed.
5. Deburr and sand both sides of the plate and clean.

Assembly

Top Casting (see Exploded View)

1. Insert a 1/4" steel ball into the Number 1 valve bore followed by the Number 1 valve.
2. Install the short valve followed by the original spring into the Number 2 valve bore. Then install the long Number 2 valve
3. Install the end plate using the original bolts.
4. Drop the small valve into the Number 3 bore with the pin end facing up. Use a small screwdriver to ensure it is fully seated in the bottom of the bore.
5. Insert a 5/16" dia Teflon ball into the bore
6. Insert the Number 3 valve into the bore.
7. Insert the long Number 4 valve into the Number 4 Bore, followed by the short spring, then the small valve.
8. Install the Modified three hole end plate (See Plate Mod Page)with the original bolts.
9. Insert the Pressure Regulator valve into its bore followed by the metal spring seat, New Pressure Springs and the aluminum plug.
10. Bolt in place with the end plate and three screws.
11. Install the Downshift valve on the side of the casting until it is fully seated.
12. Insert a 1/4" dia Teflon Ball and secure it in place with the original metal clip.
13. Remove and discard the spring from the 2-3 Control Valve bore. Reassemble using the original components.
14. Install one .217" diameter ball.

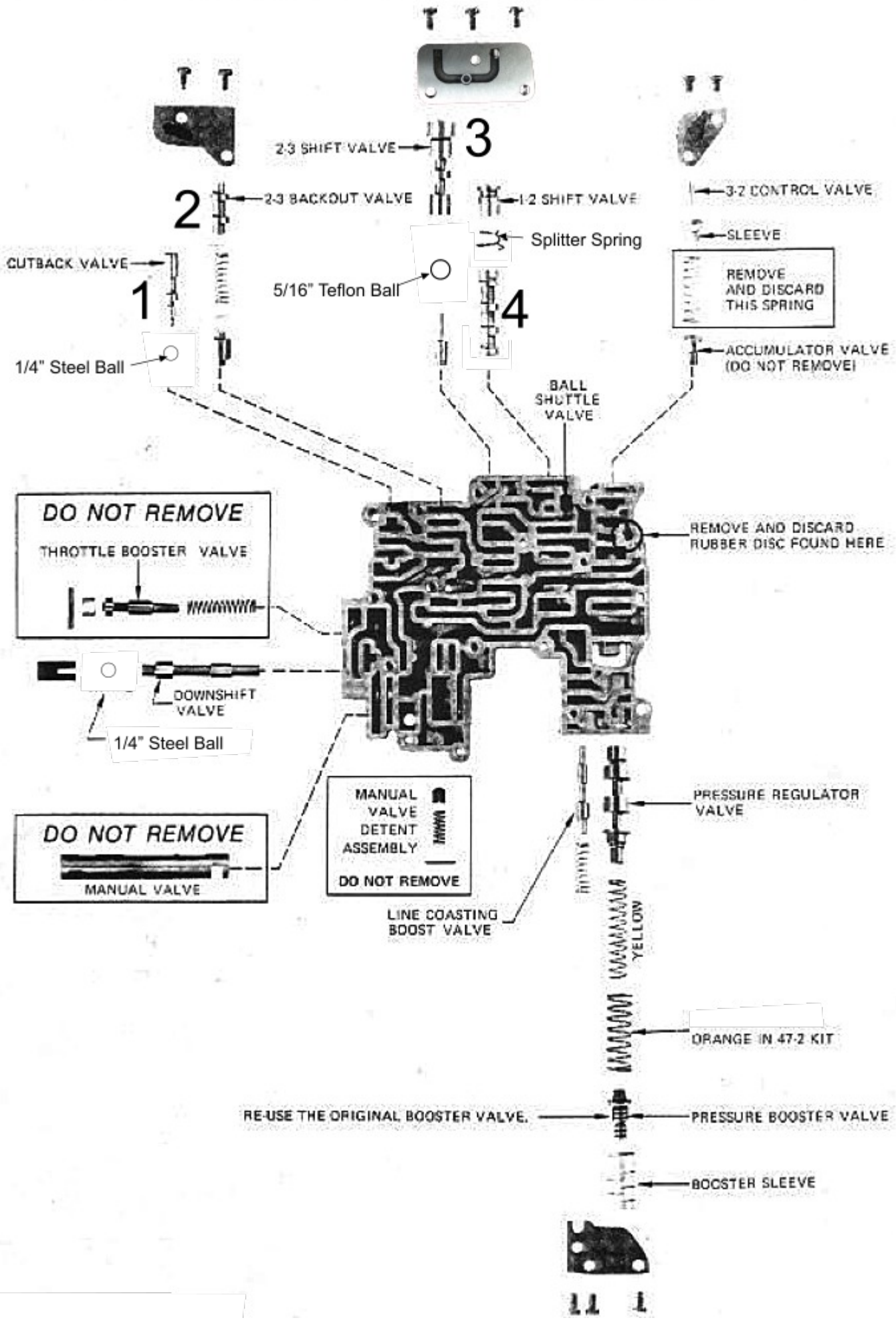
Bottom Casting

1. Install a 1/4" Metal Ball onto a short spring and install it ball side up in the lower channel.
2. Lay the modified separator plate on top, lining up the ball with the hole in the plate.
3. Install the plate support on the assembly making sure to put the studded bolt to the inside of the two hole plate.

Final Assembly

1. Place the top casting on top of the bottom casting/separator plate assembly.
2. Locate in place using the 2 long valve body bolts, Hand tighten at this time.
3. Flip the assembly over and install the short bolts through the casting into the top casting.
4. Tighten firmly but not too tight.
5. Install a new filter using the medium length screws and tighten.
6. Flip the assembly back over and tighten the two bolts installed first.
7. Dyno test for pressure and function.

REVA MJL 5-18-20



2-3 SHIFT VALVE 3

2-3 BACKOUT VALVE 2

1-2 SHIFT VALVE
Splitter Spring

3-2 CONTROL VALVE

SLEEVE

CUTBACK VALVE 1

5/16" Teflon Ball

REMOVE AND DISCARD THIS SPRING

1/4" Steel Ball

4

ACCUMULATOR VALVE (DO NOT REMOVE)

BALL SHUTTLE VALVE

DO NOT REMOVE
THROTTLE BOOSTER VALVE

REMOVE AND DISCARD RUBBER DISC FOUND HERE

1/4" Steel Ball
DOWNSHIFT VALVE

DO NOT REMOVE
MANUAL VALVE

MANUAL VALVE DETENT ASSEMBLY
DO NOT REMOVE

PRESSURE REGULATOR VALVE

LINE COASTING BOOST VALVE

YELLOW

ORANGE IN 47-2 KIT

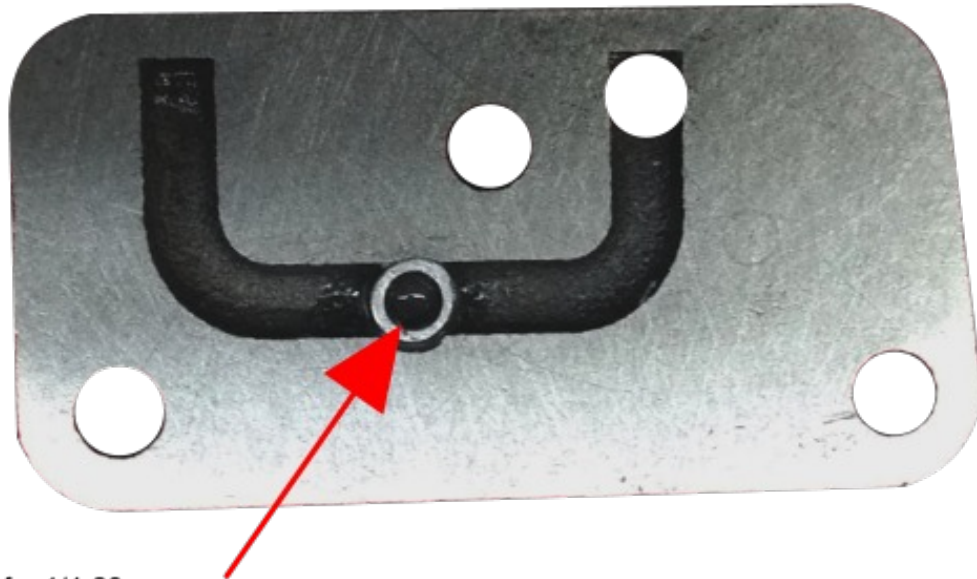
RE-USE THE ORIGINAL BOOSTER VALVE.

PRESSURE BOOSTER VALVE

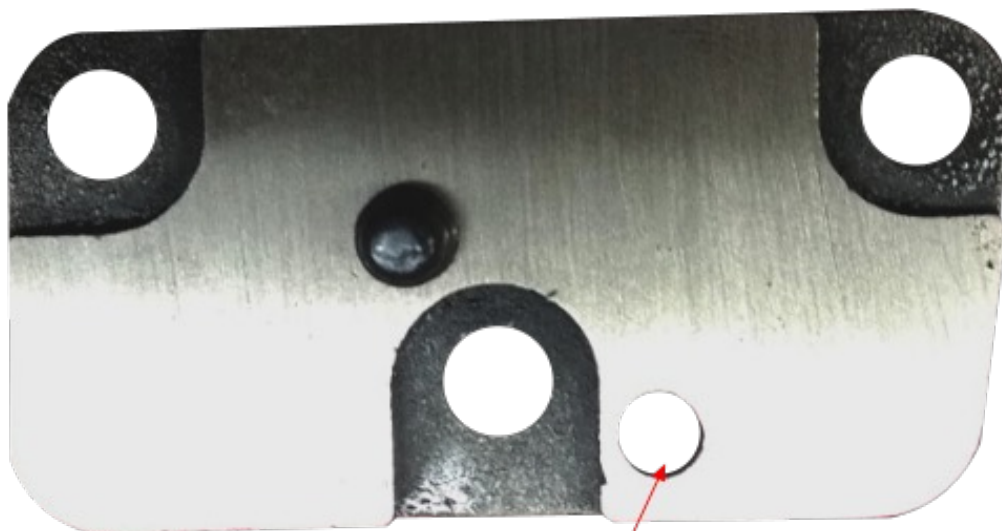
BOOSTER SLEEVE



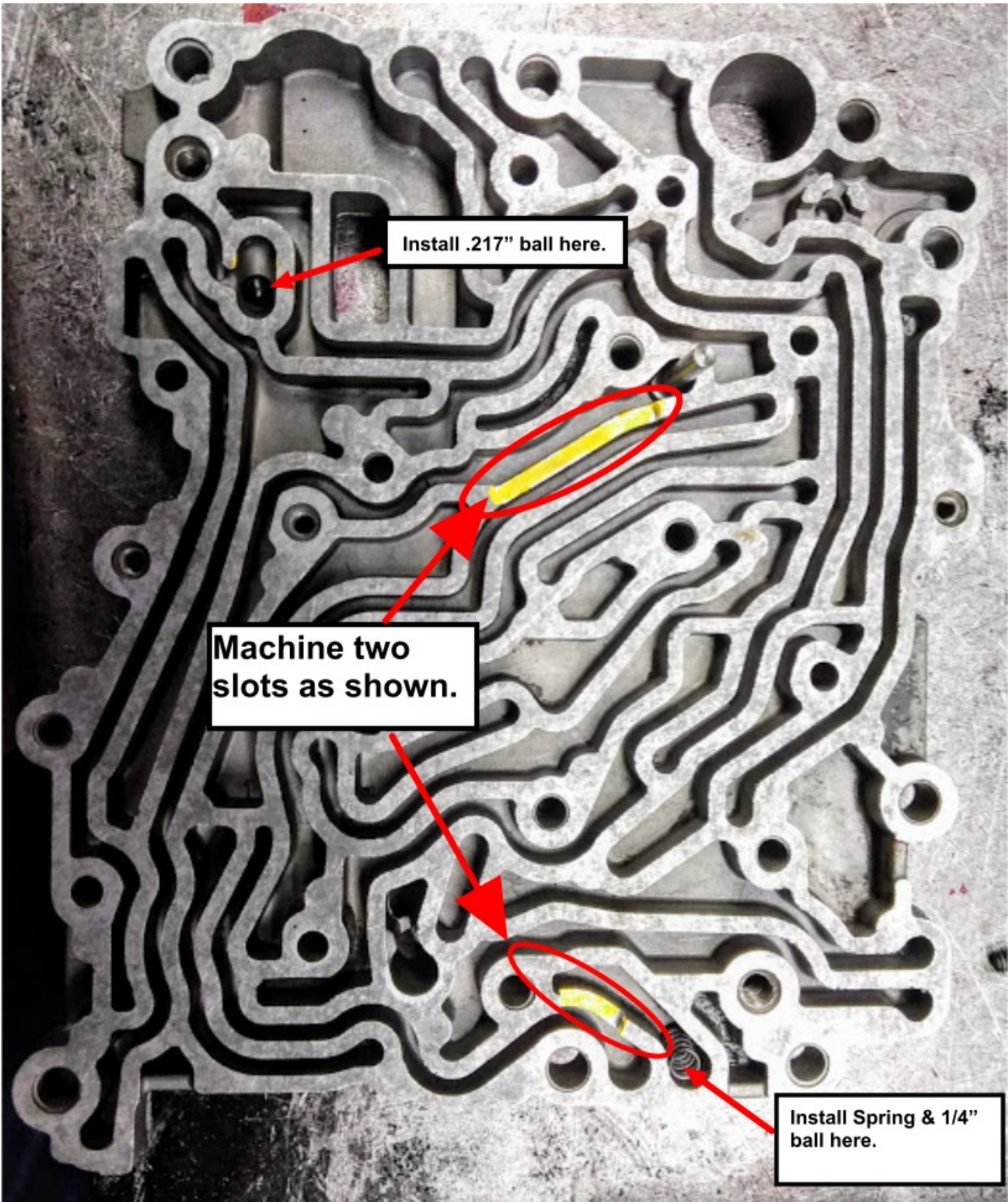
Modifications for 3 Hole End Plate



Drill and Tap for 1/4-28
setscrew, install flush to plate.



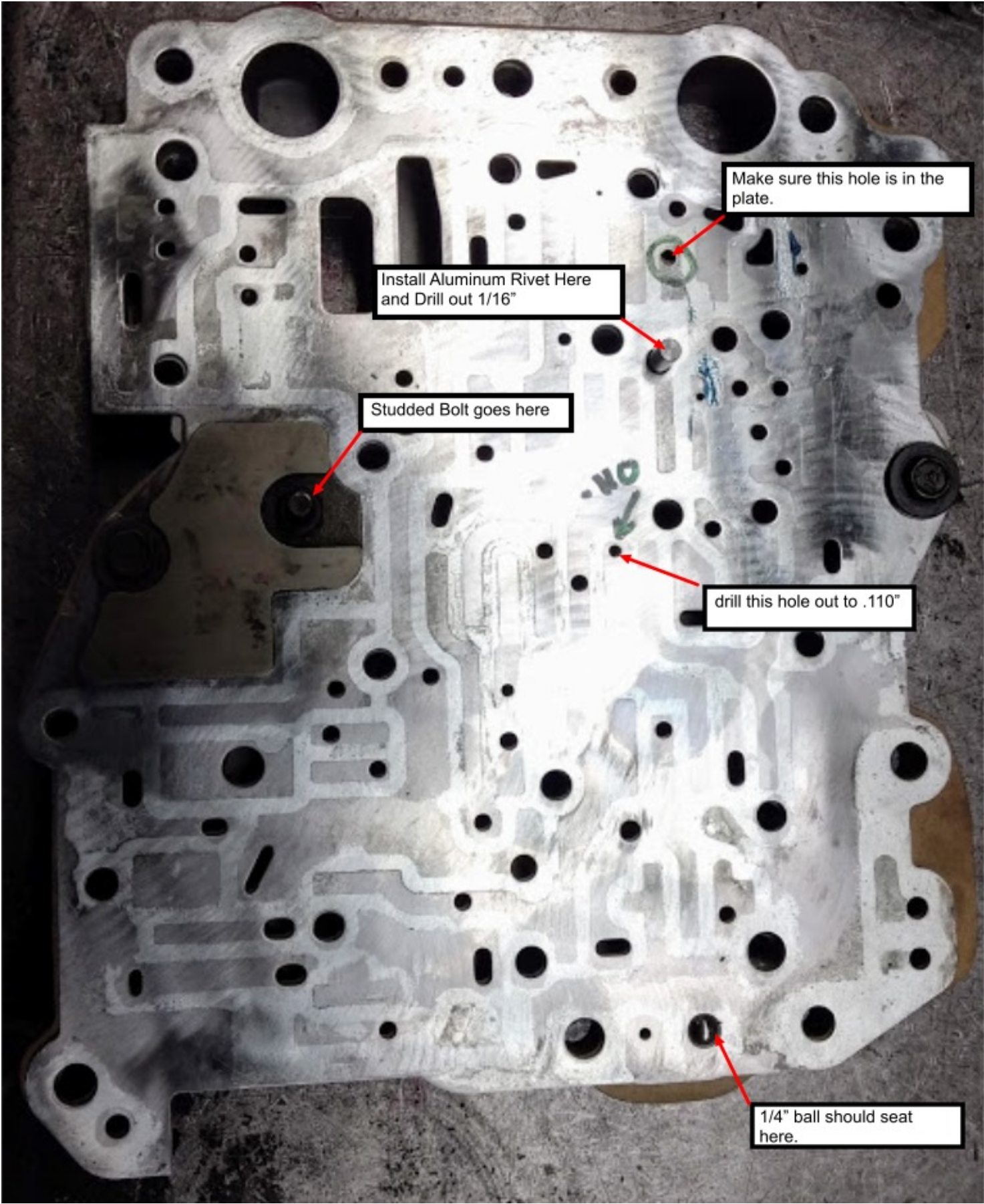
Drill 1/4" hole
in end of slot



Install .217" ball here.

Machine two slots as shown.

Install Spring & 1/4" ball here.



Make sure this hole is in the plate.

Install Aluminum Rivet Here and Drill out 1/16"

Studded Bolt goes here

drill this hole out to .110"

1/4" ball should seat here.