

# Gen2 HD Master Cylinder Install Guide for 370Z/G37S (New April 2017)

## Required Items:

- Metric Flare Nut Wrenches (just 10mm size is used for factory lines)
- Standard Flare Nut Wrenches for –AN Fittings (7/16” and 9/16” used)
- Needle Nose Pliers to remove clips/clamps.
- Jack + Jack Stand (Post Style Vehicle Lift Not recommended - initial portions of install require under dash access to remove and re-install clutch pedal assembly.)
- Small and Medium Size Flat Blade Screw Drivers (to remove body push-pin clips)
- Philips Screw Driver (Medium Tip Size)
- 10mm Standard Socket.
- 12mm Deep Socket, Ratchet and extensions.
- Shop Towels, Disposable Rags or Paper Towels
- Large Syringe, Turkey Baster, or other suction device to remove old fluid from reservoir.
- (1) Pint Bottle of DOT 3 or new spec DOT 5.1 Brake Fluid (DO NOT USE DOT 5 Silicone Fluid)

*RJM HD Clutch Master Cylinders are fully compatible with DOT 4 spec fluids but may require more frequent fluid changes to maintain the higher boil point advantage. DOT4 fluid starts with a higher dry boiling point but temp rating degrades faster than a comparable DOT 3 in use which results in a greatly reduced boiling point after only a few months. It's recommended to Run a Quality DOT3 or DOT5.1 Spec Fluid instead.*

## Installation Procedure:

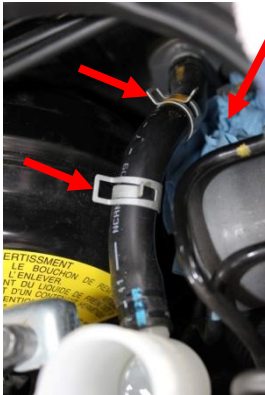
(Park on a level and solid surface with clear access around the front driver side)

- 1) Jack the front left side of the car up from the lift point (under the driver's door post).
- 2) Remove the front left wheel and set aside.
- 3) Place a Jack Stand under lower control arm just behind the lower ball joint and carefully lower the car onto the stand. Make sure the stand is stable and standing level with all 4 feet on the ground before removing the lack.
- 4) Next locate and remove the plastic (push-pin) body clips holding the rear half of the inner fender liner in place. Use a small flat blade screw driver to carefully lift the center of pop-up buttons and then carefully pull the body of the clip out of the fender liner. (See Photo #1 Below)
- 5) Locate and Remove the Philips screws where the liner meets the lower side molding along with the small 10mm bolt. (See photo #2 Below)
- 6) Locate and remove the plastic pin that is hidden where the liner wraps under the car near the jacking point. (See Photo #3 Below)
- 7) Carefully work the liner out of the wheel well and set it aside with the fasteners.



- 8) Next go under the hood and remove the access cover over the clutch/brake area along with the trim that surrounds the cover. This trim surround is held with several more pop-up clips and once removed will lift out allowing much greater access to the master cylinder area.

- 9) Open the clutch fluid reservoir and use a suction tool remove as much of the old fluid as possible to prevent large amounts of fluid leaking out when removing the reservoir hose.



- 10) Using pliers squeeze the tabs on the reservoir line clamps to release them and move them towards the center of the line.

- 11) Pack lots of shop towels, rags or paper towels under/around the master cylinder to catch any remaining fluid as you pull the reservoir line off the master cylinder end first.

- 12) Finish by carefully working the hose from the reservoir side as well. Careful not to crack the plastic reservoir nipple. (Note the orientation of the molded hose bends for re-installation later)

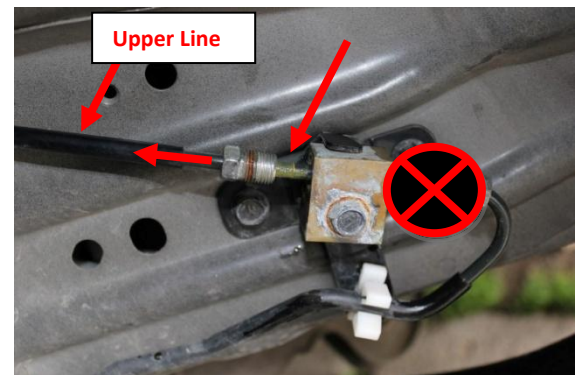


- 13) Next with the packing still under/around the master cylinder use a 10mm Flare Nut Wrench remove the factory hard line from the right side of the master cylinder. (Note: paper towel packing has been removed for photo clarity)



- 14) Locate the brass junction point in the fender well and remove the Upper hard line using a 10mm Flare Nut Wrench (Tip- Use shop towels underneath the fitting to catch any fluid that leaks). **Do Not Disconnect the Lower Line running to the transmission.**

- 15) Use two small flat blade screw drivers or pliers to carefully release the Upper hard line from the white plastic clip holding the line to the fender. This is located about half way up the line from the fitting you just removed. Do not pry on the line as this will break the clips, the white tabs need to be compressed outwards away from the tube to allow it to release.



## **Remove Clutch Pedal : Initial Steps for All**

- Start by lifting the left side door sill trim up near where it meets the left kick panel.
- Pop out the clips holding the kick panel along the front door edge and remove the plastic nut down by the firewall to remove the kick panel. This will gain you more access to remove the clutch pedal assembly.
- Once the kick panel is out lay the door trim back down so it doesn't get damaged while working or by closing the door.
- Roll the Driver seat fully back to gain as much working room as possible.

### **For Removing a Factory Pedal Assembly:**

- Start by using a 12mm wrench and loosen the lock nut on the clutch rod, located directly behind the clevis fork that connects the pedal arm to the master cylinder.
- Remove the pin from the gold clevis and set it + the hairpin clip aside.
- Unplug both the upper and lower clutch switches (Depress the blue tabs and pull plugs out.)
- Use pliers to release the clip holding the wiring to the RH side of the pedal assembly.
- Use a 12mm deep socket to remove the two nuts holding the assembly to the firewall.
- Use a 12mm socket to remove the upper dash bolt and the pedal assembly can now be guided out from under the dash and set aside for now with the nuts & bolt you removed.

**[Go To >Master Cylinder Installation Continued \(Page 4\)](#)**

### **For Removing RJM Rev 1 or Rev 2 Series Pedal Assembly:**

- Start by using a 12mm wrench and loosen the lock nut on the clutch rod, located directly behind the clevis fork that connects the pedal arm to the master cylinder.
- Loosen the AFP lock bolt using a 3/16 Allan Key located on the RH side of AFP adjuster mechanism just behind the spring hold down tab.
- Remove the clip, pin, washers and small bearings from the black clevis. Set them aside.
- Unplug both the upper and lower clutch switches (Depress the blue tabs and pull plugs out.)
- Use pliers to cut the zip tie holding the wiring to the RH side of the pedal assembly.
- Use a 7/16 socket to loosen the two side tension bolts that lock the center section of the bracket just enough that you can move the center section (don't remove them completely)
- Now remove the large hairpin clip on the RH side and push/pull the large pivot pin out of the pedal assembly to remove the pedal arm from the bracket.
- Next push the center sliding section fully upwards so you can better access the firewall nuts.
- Use a 12mm deep socket to remove the two nuts holding the assembly to the firewall.
- Use a 12mm socket to remove the upper dash bolt and the pedal assembly can now be guided out from under the dash and set aside for now with the nuts & bolt you removed.
- Take the two white spacers off the master cylinder studs and set them with the assembly to be reinstalled later.

**[Go To >Master Cylinder Installation Continued \(Page 4\)](#)**

### **For Removing RJM Rev 3 Series Pedal Assemblies:**

- Start by using a 12mm wrench and loosen the lock nut on the clutch rod, located directly behind the clevis fork that connects the pedal arm to the master cylinder.
- Remove the pin from the gold clevis and set it + the hairpin clip aside.
- Unplug both the upper and lower clutch switches (Depress the blue tabs and pull plugs out.)
- Use a 7/16 socket to loosen the two side tension bolts that lock the center section of the bracket just enough that you can move the center section (don't remove them completely)
- Push the center sliding section fully upwards so you can better access the firewall nuts.
- Use a 12mm deep socket to remove the two nuts holding the assembly to the firewall.
- Use a 12mm socket to remove the upper dash bolt and the pedal assembly can now be guided out from under the dash and set aside for now with the nuts & bolt you removed.
- Take the two white spacers off the master cylinder studs and set them with the assembly to be reinstalled later.

**[Go To >Master Cylinder Installation Continued \(Page 4\)](#)**



## Master Cylinder Installation Continued

- 16.) Go under the hood and guide the factory master cylinder off the firewall and out of the car. You may need to maneuver it around to find the correct path for removal so it clears everything coming out.

**NOTE:** For G35 Sedans 07-08 and G37's with original master cylinder you may have a slightly different style master to those found on the 370Z. This odd MC has a protrusion on the bottom which hits the ABS bracket when you attempt to remove it. If you run into this early style factory master cylinder you'll need to remove the master cylinder studs from the interior side of the firewall and remove the clevis fork before you can pull the master cylinder from the car. To do this you'll need either a stud puller tool



(follow instructions with the tool) or two of the master cylinder nuts using the following procedure:

Thread two MC nuts onto the stud you want to remove. Tighten the two nuts into each other using both a 12mm wrench and your 12mm socket combined very firmly. Now use your 12mm wrench on the bottom nut and turn the stud counter clockwise. The stud should break free and start turning out of the master cylinder. Once the stud is out use your wrench and ratchet again to get the nuts back off. Repeat this process for the 2<sup>nd</sup> stud.

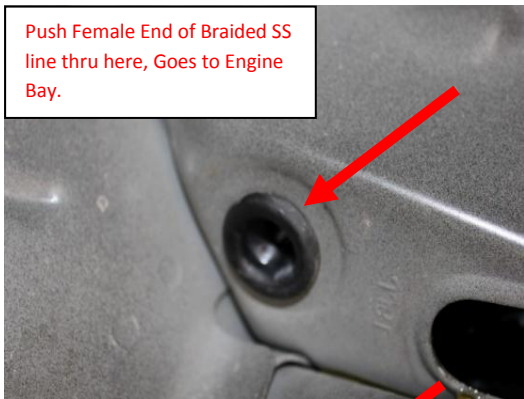
**Photo is for Reference Only – Shown out of the car for clarity.**



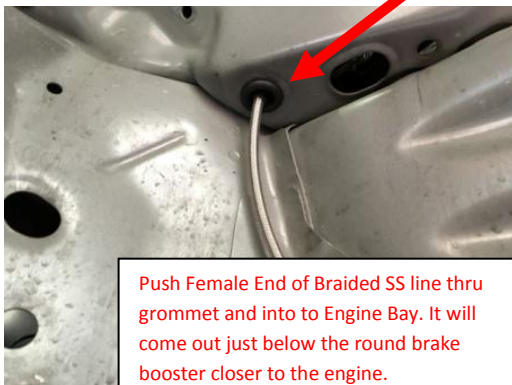
- 17.) With the master cylinder out you can carefully pull the upper hard line up and out of the car from the top side where the master cylinder is. Pull the line carefully up thru the frame and work it carefully out. It may take a bit to work all the kinks/bends thru the frame but it should come out fairly easily. A little bending or flexing of the line may be required to get past certain points which is perfectly OK, just be gentle and don't kink or cut the tube getting it out.

**Not Note:** the rubber grommet may pop out of the fender as the line is pulled out. If this happens simply slide it off the line and work it back into the hole in the frame from the wheel well side so it's in place for the next steps (see photos below for reference)

Push Female End of Braided SS line thru here, Goes to Engine Bay.



- 18.) Next push the open (female) end of the new braided stainless steel line thru the grommet opening in the frame (Opposite end of new line has a Male fitting pre-installed and goes to brass junction block).



Push Female End of Braided SS line thru grommet and into to Engine Bay. It will come out just below the round brake booster closer to the engine.

- 19.) Once the female fitting is pushed fully thru the grommet, feed the rest of the line up towards the engine bay to give yourself more length to work with up above when connecting it to the master cylinder. **DO Not connect the line to the Brass Block at this time.**

20.) Now get the new master cylinder and remove the rubber shipping caps to prepare it for install along with removing the two nuts loosely threaded onto the main mounting studs. **Note: Some assembly fluid may leak out once the covers are off so grab a rag or paper towels if needed to catch any drips.**

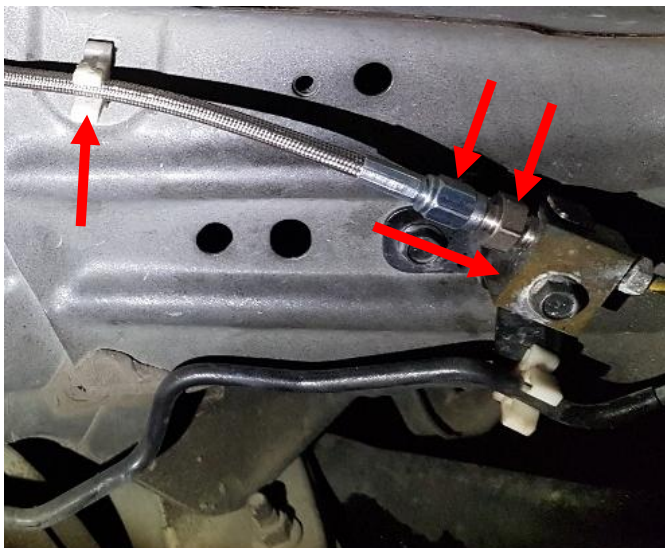


17.) 21.) Find the end of the braided SS line you just pushed thru the frame and pull it up. With the cylinder still in the open (above where it goes onto the firewall), Thread the line end onto the outlet port of the new master cylinder. Tighten the fitting firmly with a 7/16" or 11mm Flare Nut wrench.



22.) Make sure the new Firewall gasket is still in place on the studs and then guide the master cylinder down into place on the firewall. You'll need to guide the new cylinder down along with the new line. Make sure the master cylinder passes thru the firewall openings and is fully seated into place, flat against the firewall. Once on the firewall you can pull any excess braided stainless line back down into the wheel well area.

23.) Get the factory reservoir hose you removed earlier **(note orientation)** and push the master cylinder end fully onto the inlet port of the new cylinder. Slide the clamp down with pliers to hold the line securely. Then push the other end of the hose over the reservoir outlet nipple and slide the top clamp in place to hold it.



24.) Go to the wheel well area and thread the Line adapter into the top port of the brass junction where the factory hard line was removed **(this adapter fitting came loosely threaded into the supplied braided line)**. Tighten the adapter fitting firmly into the brass block with a 9/16" or 14mm Metric Flare Nut Wrench (Either is fine)

25.) Next thread the braided hose fitting down just finger tight. You don't want this line sealed up yet or it'll hinder the initial bleeding process.

## **Re-Installation of Clutch Pedal : See Steps Specific to Your Pedal Assembly**

**\*\*\* If Installing a NEW RJM Pedal Unit at this time, please see the correct RJM Pedal Installation Guide for your Unit (Rev1, 2 or 3 for 370Z/G37) to get your RJM pedal setup and installed correctly. Once you reach the point of test driving with the RJM Pedal Installation you will need to first complete the clutch system bleed procedures outlined below BEFORE continuing with pedal tuning.\*\*\***

### **If Re-installing an OEM Factory Pedal**

- Thread the OE gold clevis fork onto the new MC rod about half way down on the available threads.
- Maneuver the pedal assembly back into place on the firewall making sure the gold clevis fork slots over the pedal arm so it's lined up and ready to install the pin later.
- Install the upper dash bolt loosely using a 12mm socket and extensions.
- Now install the two stud nuts finger tight.
- Using a 12mm deep socket tightening the two master cylinder nuts evenly in steps until both are secured firmly. **Failure to tighten them evenly can damage the cylinder or cause it not to sit straight/flat against the firewall.**
- Tighten the upper dash bolt firmly using a 12mm.
- Plug the two clutch switches back into their respective switches and clip the wiring back into the RH side of the assembly.
- Now check how the clevis lines up with the hole in the pedal arm. You need to adjust the clutch rod length by threading the rod in or out until the clevis pin can simply slip in place without any tension when the clevis is lined up with the hole in the pedal arm. Turn the clutch rod counter clockwise to make the linkage longer or turn it clockwise to make the linkage shorter as needed. **Failure to adjust the clutch rod correctly will cause issues with the new master cylinder and could potentially make bleeding the system difficult or impossible later.**
- Slip the clevis pin in place and follow by installing the hairpin clip to hold it.
- **Spin the lock nut behind the clevis until it meets the clevis and tighten firmly with a 12mm wrench. Always ensure this nut is firmly tightened before proceeding to drive the vehicle!**

### **Go To > Bleeding the System**

### **For RJM Rev 1 or Rev 2 Pedal Assembly Re-Install**

***(For a more detailed instruction set with photos for the following steps please reference the RJM 370Z/G37 Rev2 Pedal Install Guide)***

- Thread the black clevis fork onto the new MC rod about half way down on the available threads.
- Install a white firewall spacer over each of the master cylinder studs.
- Maneuver the pedal bracket back into place on the firewall and install the two stud nuts finger tight to hold the pedal assembly in place on the firewall.
- Next install the upper dash bolt loosely using a 12mm socket and extensions.
- Using your 12mm deep socket go back and tighten the two master cylinder nuts firmly.
- Followed by tightening the upper dash bolt firmly.
- Line up the pedal arm (with spring) for reinstallation into the bracket making sure the black clevis fork slots over the pedal arm so it's lined up and ready to install the pin later.
- If you still have the short install pin supplied with the RJM pedal (used as a tool to aid holding the pedal arm in place from the right side) you can install it now. While holding the pedal arm lined up slide the large pivot pin in from the left side so it goes thru the assembly, thru the arm and out the other side of the assembly. Reinstall the large hairpin clip on the right side to hold the pivot pin.
- Plug the two clutch switches back into their respective switches and zip tie the wiring back onto the RH side of the assembly.
- Adjust the center sliding section of the bracket up or down as needed to where the clevis hole is lined up vertically with the clevis pin hole in the pedal arm so the master cylinder gets a straight push in/out.

- While holding the height where it needs to be lightly tighten each of the two side tension bolts just until the sliding section is locked. Now check the side-side play in the pedal arm. Tighten the two bolts together evenly in small increments while checking the side-side play in the pedal arm. When the side play just disappears you want to back off by ¼ turn each to ensure the pedal arm is still moving freely. Over tightening the two side bolts will pinch the bearings and cause problems with the pedal not returning fully or being very stiff. It takes very little to fully lock the sliding center section.
  - Slip a clevis bearing into each side of the clevis fork and now check how the clevis lines up with the hole in the pedal arm. You need to adjust the clutch rod to where the clevis pin can simply slip in place without any tension on it with the pedal fully up. Turn the clutch rod counter clockwise to make the linkage longer or turn it clockwise to make the linkage shorter as needed. Failure to adjust the clutch rod correctly will cause issues with the new master cylinder not balancing fluid correctly to the reservoir and will make bleeding the system difficult or impossible later.
  - Once the rod is adjusted correctly slip the clevis pin in place with a washer on each side and install the hairpin clip to hold it all together.
  - Press the pedal arm down about half way and tighten the AFP Lock Bolt on the right side of the upper arm assembly to lock the AFP setting from changing and to reduce linkage slack to a minimum.
  - **Spin the lock nut behind the clevis until it meets the clevis and tighten firmly with a 12mm wrench.** Always ensure this nut is firmly tightened before proceeding to drive the vehicle!
- Go To > Bleeding the System**

#### **For RJM Rev 3.x Pedal Assembly Reinstallation**

*(For a more detailed instruction set with photos for these following steps please reference the RJM 370Z/G37 Rev3.x Pedal Install Guide)*

- Thread the OE gold clevis or RJM HD Clevis fork onto the new MC rod about half way down on the available threads.
  - Install a white firewall spacer over each of the master cylinder studs.
  - Maneuver the pedal assembly back into place on the firewall making sure the clevis fork slots over the pedal arm so it's lined up and ready to install the pin later.
  - Install the two stud nuts finger tight to hold the pedal assembly in place on the firewall.
  - Next install the upper dash bolt loosely using a 12mm socket and extensions.
  - Using your 12mm deep socket go back and tighten the two master cylinder nuts firmly.
  - Followed by tightening the upper dash bolt firmly.
  - Adjust the center sliding section of the bracket up or down as needed to where the clevis hole is lined up vertically with the clevis pin hole in the pedal arm so the master cylinder gets a straight push in/out. While holding the height where it needs to be tighten each of the two side tension bolts lightly until the sliding section is just locked up + ½ turn each. Check that pedal arm is still moving freely and springs back. Over tightening the two side bolts will pinch the bearings and cause problems with the pedal not returning fully or being very stiff. It takes very little to fully lock the sliding center section.
  - Now check how the clevis lines up with the hole in the pedal arm. You need to adjust the clutch rod to where the clevis pin can simply slip in place without any tension on it with the pedal fully up. Turn the clutch rod counter clockwise to make the linkage longer or turn it clockwise to make the linkage shorter as needed. Failure to adjust the clutch rod correctly will cause issues with the new master cylinder not balancing fluid correctly to the reservoir and will make bleeding the system difficult or impossible later.
  - Once the rod is adjusted correctly slip the clevis pin in place and install the hairpin clip to hold it.
  - **Spin the lock nut behind the clevis until it meets the clevis and tighten firmly with a 12mm wrench.** Failure to firmly tighten the clevis lock nut could lead to a dangerous uncoupling of the rod from the clevis end while driving. Always ensure this nut is tight before proceeding to drive the vehicle.
- Go To > Bleeding the System**



## **Bleeding the System**

26.) Refill the clutch reservoir to the Max line with a performance oriented high temp brake fluid of DOT3/4/5.1 spec. Keep adding fluid until the air bubbles stop and the reservoir is full. Set the lid upside down to cover the reservoir to prevent any dirt/debris from falling in but not seal it. Sealing the cap will prevent proper bleeding.

27.) Go to the wheel well with some shop towels or rags in hand, loosen the fitting that was left finger tight previously and watch the end of the braided stainless line for fluid to appear. This may take a few minutes for fluid to gravity feed down to this point.

29.) Once you see fluid has made it down to the brass union you can very lightly tighten the braided line fitting with a 7/16" or 11mm Flare Nut Wrench.

**At this point there are a couple different ways to bleed the system depending on what work you've done and what tools you have available:**

**1.) Manual Quick Bleed – To Junction: Page #9 of Install Document.**

For those who are only installing the HD Master or HD Master + RJM Pedal without the aid of a Motive Power Bleeder Tool.

**2.) Power Quick Bleed – To Junction: Page #9 of Install Document.**

For those who are only installing an HD Master or HD Master + RJM Pedal with access to a Motive Power Bleeder with 1101 Reservoir Adapter.

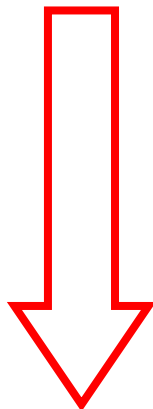
**3.) Full Manual Bleed – To Transmission: Page #10 of Install Document.**

For those who are installing the new Master along with any other clutch system parts installed at the transmission (New clutch/Slave/Aftermarket Clutch Line to Slave, etc) without the aid of a Motive Power Bleeder Tool.

**4.) Full Power Bleed – To Transmission: Page #10 of Install Document.**

For those who are installing the new Master along with any other clutch system parts installed at the transmission (New clutch/Slave/Aftermarket Clutch Line to Slave, etc) with access to a Motive Power Bleeder Tool with 1101 Reservoir Adapter.

**See the Following Pages for Complete Details on Bleed Procedures**





### **3.) Manual Quick Bleed Procedure – To Junction Point**

The **Quick Bleed** procedure applies only to stand alone installations of the master cylinder where no other components in the clutch system have been opened up below the brass union block.

**Starting with the braided line in the wheel well lightly tightened:**

**Step 1.)** Have a partner push the clutch pedal in and hold it fully down until they are told to release it.

**Step 2.)** Once they have pumped the pedal – Crack the fitting open with rags or paper towel around the area to collect any fluid that sprays/leaks out. You should immediately hear air and fluid escaping the line. Once it stops lightly tighten the fitting again.

**Step 3.)** Tell your partner they can release the pedal and allow it to come up fully for a few seconds.

**Step 4.)** Top off Reservoir if necessary. **Do Not Allow it to go below the Min Line at any Point.**

**Repeat Steps 1 to 4 until you no longer see air/bubbles escaping and are getting only fresh fluid out.**

**Step 5.)** Firmly tighten the line, top off the reservoir a final time and install the reservoir cap.

**Step 6.)** To make sure any remaining air is purged out to the reservoir you'll need to slowly and deliberately pump the clutch pedal a few times. At this point the pedal should feel like it's building good pressure while pumping.

**Pump and Hold Fully Down for 5 seconds. Release at normal clutch speed after the 5 Count.**

**Stop with the Pedal Fully Up (foot right off the pedal) for a 10 count between pumps.**

**Repeat 5-10 Times.**

At this point if everything went well you should have a nice firm clutch pedal with no softness at the top for OEM pedal units and no more than  $\frac{1}{2}$ " to  $\frac{3}{4}$ " of soft travel at the top for RJM Pedal Units. Please note if you've just installed a new RJM Pedal along with the new master cylinder then the pedal feel at the top will be softer than you were used to. With the design of the RJM HD Master Cylinder any small amount of air left in the upper lines after this procedure will quickly and automatically get purged from the system as you start driving it or continue to slowly pump it.

### **2.) Power Quick Bleed Procedure – To Junction Point**

The **Power Quick Bleed** procedure applies only to stand alone installations of the master cylinder where no other components in the clutch system have been opened up below the brass union block and a Motive Power Bleeder (Or Equivalent) is being used.

**Starting with the braided line in the wheel well lightly tightened:**

**Step 1.)** Attach the Motive Power Bleeder to the Reservoir Following Manufacturers Directions.

**Step 2.)** Fill with brake fluid and pressurize the system to about 15 PSI.

**Step 3.)** Have a partner push the clutch pedal in and hold it fully down until they are told to release it.

**Step 4.)** Once they have pumped the pedal – Crack the fitting open with rags or paper towel around the area to collect any fluid that sprays/leaks out. You should immediately hear air and fluid escaping the line. Once you get a solid stream of fluid (no more bubbling) close the fitting firmly.

**Step 5.)** Tell your partner they can release the pedal.

**Step 6.)** Now pump the pedal Slowly and Deliberately 5-10 strokes while the pressure bleeder is still attached, pausing for a 5 second count at the top and bottom of each stroke.

**Step 7.)** Depressurize and remove the Motive Power Bleeder.

**Step 8.)** Top off or drain the reservoir to the Max line as required and install the reservoir cap.

At this point if everything went well you should have a nice firm clutch pedal with no softness at the top for OEM pedal units and no more than  $\frac{1}{2}$ " to  $\frac{3}{4}$ " of soft travel at the top for RJM Pedal Units. Please note if you've just installed a new RJM Pedal along with the new master cylinder then the pedal feel at the top will be softer than you were used to. With the design of the RJM HD Master Cylinder any small amount of air left in the upper lines after this procedure will quickly and automatically get purged from the system as you start driving it

### **3.) Full Manual Clutch System Bleed**

If you've installed other clutch components at the same time as installing the RJM HD CMC then you'll need to complete a full bleed. Start by fully tightening the fittings at the brass junction block area and perform a Full System Bleed from the Transmission Bleed Port Under the Car.

#### **Full Bleed using an RJM Clutch Pedal Assembly:**

**\*\*\* If doing a Full bleed from the transmission port using a Manual Bleed Method (Pump/Hold) you MUST setup the RJM Pedal for AFP Setting of 0% while bleeding, thread clutch rod OUT for maximum pedal height and Adjust clutch rod angle to ensure the master cylinder rod is stroking straight in/out of the cylinder. Failure to adjust rod angle can bind the linkage and cause damage the cylinder. See Appropriate RJM Pedal Install Guide's Tuning Section for specific instructions on adjusting these points. The above will provide the cylinder with maximum stroke to help push all air from the system down to the transmission bleed port. Failure to do this will make bleeding from the transmission port extremely difficult if not done\*\*\***

**Step 1.)** Have a partner push the clutch pedal in and hold it fully down until they are told to release it.

**Step 2.)** Attach a small length of clear hose that fits the nipple on your transmission bleed port and have a small catch can ready to collect fluid as you bleed the system.

**Step 3.)** Once they have pumped the pedal – Crack the bleed fitting open at the transmission with the hose attached. You should see air and fluid escaping the line. Once it stops lightly tighten the fitting again.

**Step 4.)** Tell your partner they can release the pedal and allow it to come up fully for a few seconds.

**Step 5.)** Top off Reservoir if necessary. **Do Not Allow it to go below the Min Line at any Point.**

**Repeat Steps 1 to 4 until you no longer see any air/bubbles coming out and are getting only fresh fluid.**

**Step 6.)** Firmly tighten the line, top off the reservoir a final time and install the reservoir cap.

**Step 7.)** To make sure any remaining air is purged out to the reservoir you'll need to slowly and deliberately pump the clutch pedal a few times. At this point the pedal should feel like it's building good pressure while pumping.

**Pump and Hold Fully Down for 5 seconds. Release at normal clutch speed after the 5 Count.**

**Stop with the Pedal Fully Up (foot right off the pedal) for a 10 count between pumps.**

**Repeat 5-10 Times.**

At this point if everything went well you should have a nice firm clutch pedal with no softness at the top for OEM pedal units and no more than ½" to ¾" of soft travel at the top for RJM Pedal Units. Please note if you've just installed a new RJM Pedal along with the new master cylinder then the pedal feel at the top will be softer than you were used to. With the design of the RJM HD Master Cylinder any small amount of air left in the upper lines after this procedure will quickly and automatically get purged from the system as you start driving it or continue to slowly pump it.

### **4.) Full Power Bleed Procedure – To Transmission**

If you've installed other clutch components at the same time as installing the RJM HD CMC then you'll need to complete a full bleed. Start by fully tightening the fittings at the brass junction block area and perform a Full System Bleed from the Transmission Bleed Port Under the Car.

**Step 1.)** Attach the Motive Power Bleeder to the Reservoir Following Manufacturers Directions.

**Step 2.)** Fill with brake fluid and pressurize the system to about 15 PSI.

**Step 3.)** Located the transmission bleed port and attach a small length of clear hose for bleeding.

**Step 4.)** Have a partner push the clutch pedal in and hold it fully down until they are told to release it.

**Step 5.)** Once they have pumped the pedal – Crack the fitting open with small hose attached and draining into a catch can to collect any fluid that sprays/leaks out. You should immediately see air and fluid escaping the line. Once you get a solid stream of fluid (no more bubbles) close the fitting firmly.

**Step 6.)** Tell your partner they can release the pedal.

**Step 7.)** Now pump the pedal Slowly and Deliberately 5-10 strokes while the pressure bleeder is still attached, pausing for a 5 second count at the top and bottom of each stroke.

**Step 8.)** Depressurize and remove the Motive Power Bleeder.

**Step 9.)** Top off or drain the reservoir to the Max line as required and install the reservoir cap.

At this point if everything went well you should have a nice firm clutch pedal with no softness at the top for OEM pedal units and no more than ½" to ¾" of soft travel at the top for RJM Pedal Units. **Please note if you've just installed a new RJM Pedal along with the new master cylinder then the pedal feel at the top will be softer then you were used to.** With the design of the RJM HD Master Cylinder any small amount of air left in the upper lines after this procedure will quickly and automatically get purged from the system as you start driving it.

## **Finishing Up:**

26.) After ensuring all fittings are tight you can work the inner fender liner back into the wheel opening.

27.) Maneuver the liner around so that everything lines up with their respective holes and start re-installing the push pin fasteners first to hold it in place. Follow with the 10mm bolts and finally install the two Philips screws.

28.) Lift the car with your jack at the front left lift point and remove your jack stand.

29.) Re-Install the wheel and properly torque the lug nuts to factory spec.  
(Retighten all lugs a second time after 50-100 miles of driving)

Thank you for your Purchase of an RJM Performance Product. Should you encounter any issues or have any questions please don't hesitate to contact us for support. Please send all emails to [Ryan@RJMPPerformance.com](mailto:Ryan@RJMPPerformance.com) and I'll get back to you as soon as possible.