

RJM Rev 4 AFP Pedal Assembly Installation Guide for 350Z(03-08), G35 Coupe(03-07) & G35 Sedan (03-06)

Install General Info:

- Average Installation time of the pedal assembly should take around 1.5 Hrs working at a casual pace for DIY Installs to be ready for the first test drive.
- Some additional time may be required for fine tuning after test driving depending on how you like the initial setup recommended in this guide.
- Installation of this pedal assembly is mostly a Nuts & Bolts operation so anyone with a set of sockets and some basic hand tools can do this installation.
- Installation is meant to be a DIY Project and doing the installation yourself means you'll learn how everything works and you'll be able fine tune it exactly to your liking. It's my experience that customers who do so have a far greater satisfaction.
- **I've received many stories lately of customers paying reputable shops excessive amounts for very basic installs and then being sent home with little or no setup/tuning done. These customers are then stuck trying to adjust the pedals on their own and in many cases end up fixing setup problems left behind by sloppy installs. So please do not get yourself into this situation and consider installing my product DIY as intended or with the help of a handy friend.**
- The hardest part of the installation is working in the confined space under the dash. There is no way around this fact and I've tried to make the install steps easy as possible to help this.
- Installation should be performed on Level Ground. Parking Brake Applied.
- Have the driver's seat rolled all the way back and the steering wheel full up before you start.

Shop Installs:

- Shop Installs should cost about 1hr of shop labor for the basic installation of the RJM pedal assembly to be ready for test driving and further tuning if needed.
- Ask upfront if they are willing to work with you on tuning after the install, if they do not agree to this Find Another Shop!
- Allow an additional 30-40 minutes of shop labor for test driving the car and have the Tech make all final adjustments.
- Do Not leave the shop until they have worked with you to make sure everything feels right & is to your liking.
- Tuning requires the same tools & basic level of technical ability as installations so beware any shop that would send you home to attempt further tuning of the pedal on your own.

**** Note On Bleeding Clutch System****

If you are attempting the pump/hold method of bleeding the hydraulic system with the RJM Pedal installed you must reduce the AFP setting to 0% restoring full stroke to the master cylinder in order to get full strokes and get all the air out. Failure to do so won't allow proper bleeding of the clutch hydraulic system. If installing the RJM Pedal at the same time as a new Clutch, MC, CSC or SS Line it's recommended to install and bleed the system first with the OEM pedal and install the RJM Pedal once everything has been bled and checked for proper operation.

Tools & Required Items: (Have these ready Before starting)

- Standard 3/8 Drive Ratchet.
- Long 3/8 Drive Extension or (2) Short ones.
- 12mm Deep Socket
- 12mm Short Socket
- Channel Lock or Needle Nose Pliers
- 7/16 Socket
- 12mm Wrench
- 14mm Wrench
- 17mm Wrench
- 3/16" Allen Key or Allen Socket
- Work light or Flashlight you can position under the dash to help see.
- Blanket or other padding to kneel on while working.
- A second Blanket or Bath towel folded over the door sill to pad your ribs & side.
- A Butter Knife or a Thin Flat Blade Screw Driver.
- Cup of hot water with a little dish soap (helps with pedal pad install)

Getting Started:

Go ahead and put your light up under the dash so you can get a good look at the factory pedal. The pedal is only held in by (2) Nuts and (1) Upper Bolt. The Clutch rod simply gets unpinned, the 2 switches get unplugged and then the whole pedal assembly can be guided out from under the dash. The installation of the new pedal unit is a little more involved but is basically just the reverse operation with some specific setup steps and adjustments along the way. If you should encounter any questions or issues during your install please don't hesitate to contact me and I'll get back to you as soon as possible.

Removing the Dead Pedal & LH Kick Panel:



1.) Start by removing the dead pedal. To do this grab in the top center and pull towards yourself. The clip will disengage from the floor. Next grab the bottom and pull it up as well. If you see round black plastic pieces sticking up from the floor then spin these off the little studs welded to the floor and snap them back into the holes in the bottom of the dead pedal.



2.) Now gently pull up the Door Sill Trim starting at the front where it meets the dash Panel. Just work this up a little at a time and the clips will release.

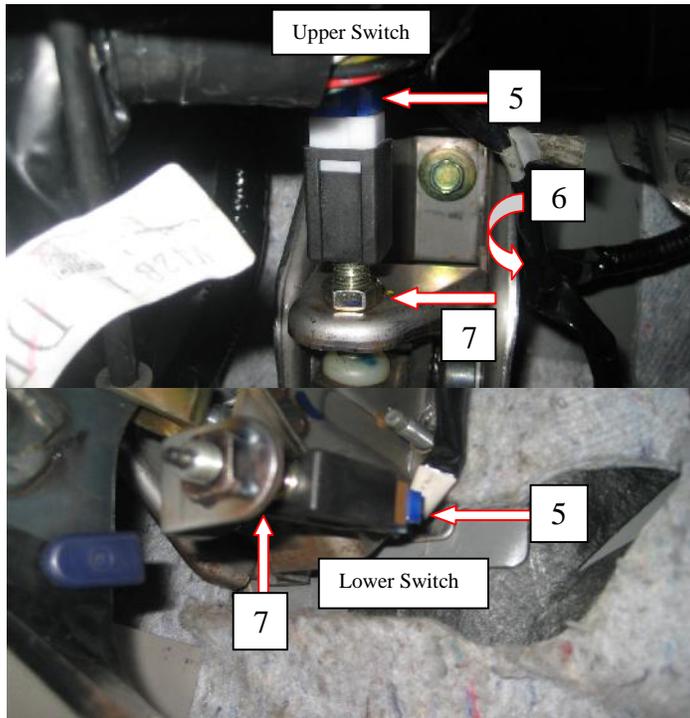


3.) Next Remove the Black Plastic Nut holding the corner tab of the LH Kicker Panel to the floor using your fingers or some pliers to get it started.



4.) Remove the small hatch cover in the center of the kicker panel to get a better grip and start gently pulling the panel outwards. Work from the top corner closest to you along the door edge and the clips will start popping free. Once you've worked down the edge you can pull the panel out and set it outside the car along with the center hatch.

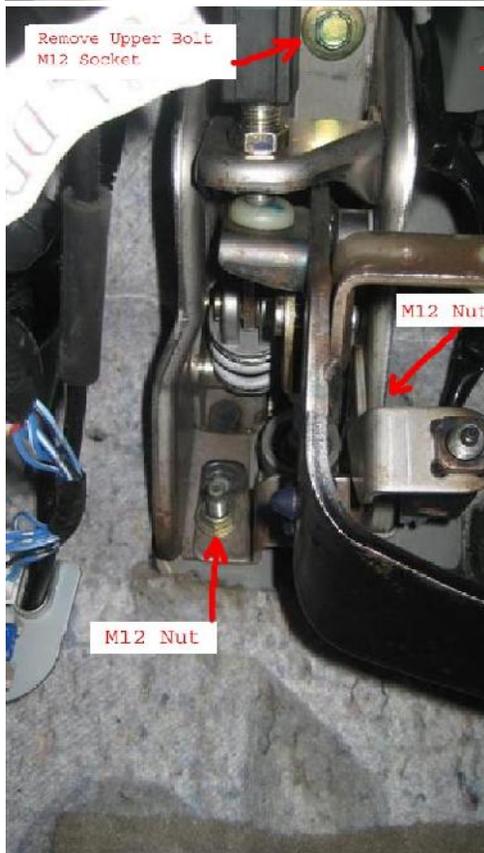
Removing the OEM Pedal Assembly:



- 5.) Find & Depress the **Blue** release tab on each switch while gently pulling the blue wiring plug out. If the upper switch is hard to reach for unclipping leave it until later when the bracket is being dropped down from the firewall.
- 6.) Now using needle nose pliers or some side cutters you can locate the black clip holding the switch wires to the right side of the clutch bracket. Pry it out from the base until the clip pops free or you may simply snip it off with side cutters as it's not being reused.
- 7.) Next Take a 14mm Wrench and Loosen the gold retaining nut on each of the switches. They will be very tight and doing this while the pedal is still bolted up makes it easier now than once it's removed.



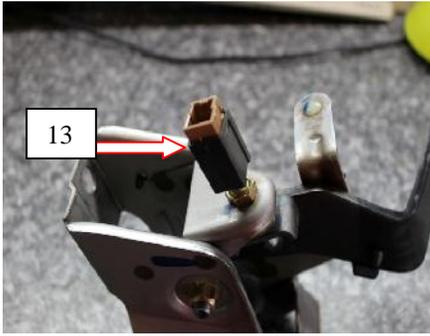
- 8.) Locate the hairpin clip holding the pin in the clevis fork and simply pull it out with needle nose pliers. Push the gold colored clevis pin out of the clutch fork (make sure not to drop it) and set it aside along with the hairpin clip. These are not being reused.



- 9.) Now remove the two nuts holding the bracket to the master cylinder studs and the upper dash bolt using a 12mm deep socket. Use a long extension or several short ones on your ratchet as needed to reach each location.
- 10.) Next maneuver the factory bracket forwards and down off the firewall. Lifting it off the Master cylinder studs and then carefully guide it out from under the dash. This may take a little moving around until you find the correct angle and path to let the assembly drop out. It also helps to push the large bundles of wires that are near the upper switch out of your way as it comes down.
- 11.) Now take the factory pedal unit to a suitable table or work space along with the new RJM Pedal to swap a few things over.

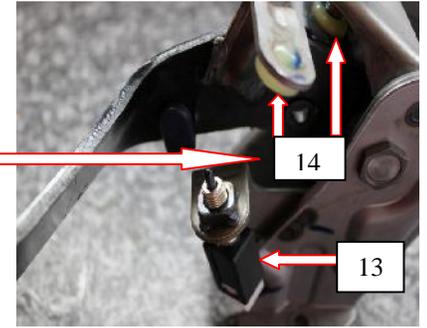
****Warning- Be extremely careful around the factory pedal as the OEM Return/Assist spring mechanism is powerful and snaps up or down like a mouse trap at the tipping points. If you accidentally get your fingers in the wrong place and trip the spring it could easily smash a finger. Please use caution as you work on the factory pedal.**

Remove Required Parts from OEM Pedal:



13.) Unscrew the upper and lower safety switches from the OEM pedal.

14.) Remove the upper & lower switch bumpers by pushing them out from the back side of the factory pedal locations. Needle Nose Pliers work well- Squeeze them from the top & bottom in the center with the pliers and twist up slightly and they'll push right out



15.) Use pliers to squeeze the back of the blue stop bumper and push it out of its hole in the factory pedal arm.



16.) Next carefully pull the pedal cover from the factory pedal starting at the top left corner by rolling the rubber lip back out of the way and pulling the cover off.



You can now set the factory pedal assembly aside as you're done with it.

Preparing the New RJM Pedal:

17.) On the new assembly start by cutting the zip tie installed to hold the arm down during shipping and gently let the pedal arm come up under spring tension. Discard the piece of tape covering the stop bolt.



18.) Take the Blue Stop bumper and press it thru the hole on the new pedal arm as shown so the flat face is on the Left Side.

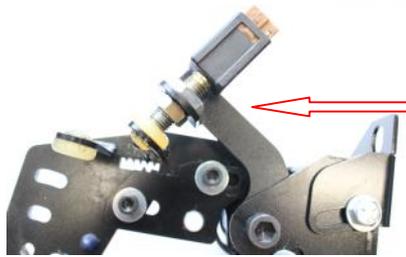
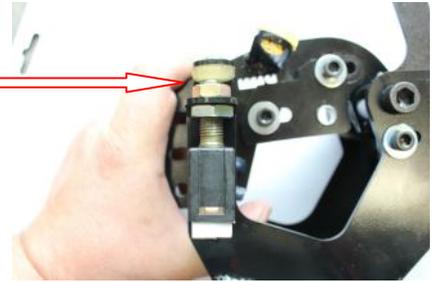
19.) Next you can install the Round Switch Bumpers in their respective holes in the RJM Pedal. Give them a twist as you push them down into the holes to make them go in easier or use pliers to squeeze them into the holes. Watch the orientation: Upper tab the bumper faces UP and lower tab the bumper faces DOWN.





20.) Spin the factory lock nut off both switches and swap them for the larger lock nuts supplied in the kit.

21.) Install the White Starter Safety switch into the lower position in the new bracket followed by an oem switch lock nut. Set the switch so that when the arm is held fully down against the stop bolt (with Blue stop in place) that the rubber bumper and the threaded metal body of the switch touch. Tighten the lock nuts using a 14mm and 17mm wrench together.

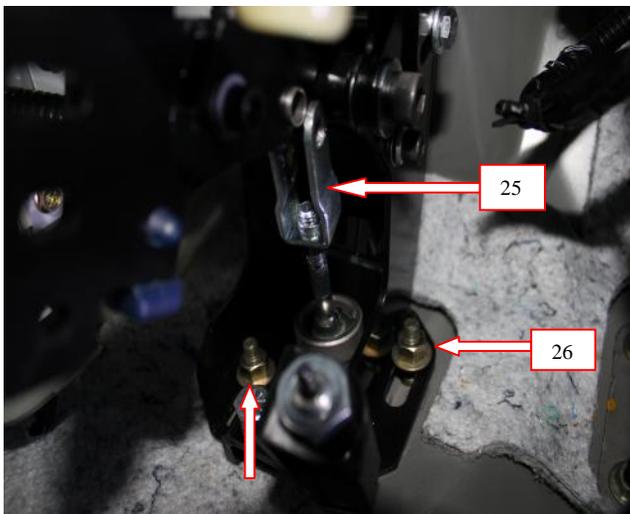


22.) Next install the Brown Cruise Control switch into the upper switch mount followed by an oem switch lock nut. Set this switch so there is an equal amount of threading on either side of the metal tab and tighten both lock nuts using your 14mm & 17mm wrenches together.

23.) Place the OEM pedal pad cover in some hot soapy water for a couple minutes to soften up the rubber. Then wet the new pedal arm pad with some soapy water as well to help make things slide on easier. Now slide the pedal cover onto the new pedal arm starting at the narrow end and pushing the cover on firmly to get the cover seated at the bottom as far it can go before pulling/pushing/working the sides and top lip of the cover around the edges of the pedal pad to fully seat it in place. Use a thin flat blade screwdriver or a butter knife to work along the edges, rolling the edges up and around the pedal as needed.

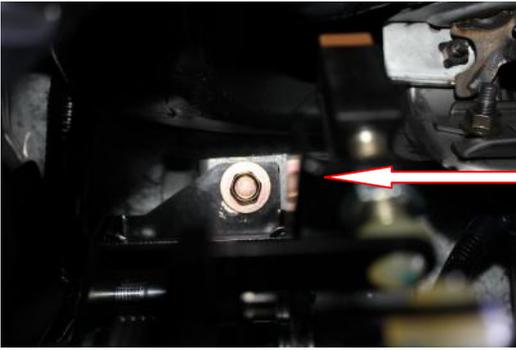
Install New Pedal into Car:

24.) Take the pedal arm and remove the 3 nuts, 3 lock washers and 3 flat washers from the bolts and set them in the foot well of the car along with the prepared pedal assembly and the lower pedal arm section. Locate the two stud nuts, the upper dash bolt, a short M12 socket and a long 3/8 drive extension so they are ready for the next steps.



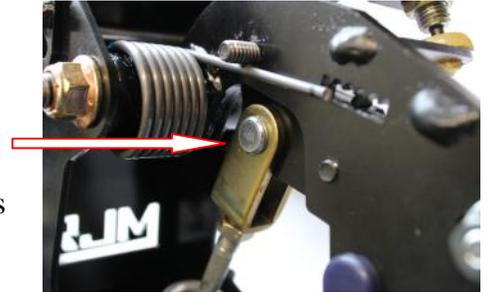
25.) Take the main bracket and guide it under the dash into position over the master cylinder studs so they are lined up thru the slotted holes in the bracket. As you get the bracket in place the oem clevis fork **must be** slotted around the pedal arm so it's ready to be pinned in place later. If the clevis is shoved off to one side or the other as the bracket goes onto the firewall it can't be lined up later.

26.) Now while still holding the bracket up with one hand, start the first stud nut onto the upper right hand stud spinning it down most of the way with your fingers. Then start the second one again going most of the way down by finger as it should spin on easy.

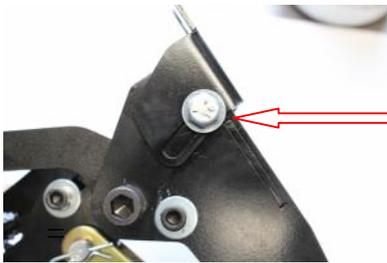


27.) Take the short M12 socket + a long extension to use as a handle and place the upper bolt into the socket ready to install. Now maneuver the upper dash mount plate so it lines up with the hole in the dash support. You can also loosen the cross bolt holding the upper mount plate with a 7/16 wrench if needed so it can be more easily moved into position. Once you can see the mount is lined up to the hole you can start the upper bolt and spin it in 90% of the way by hand turning the long extension.

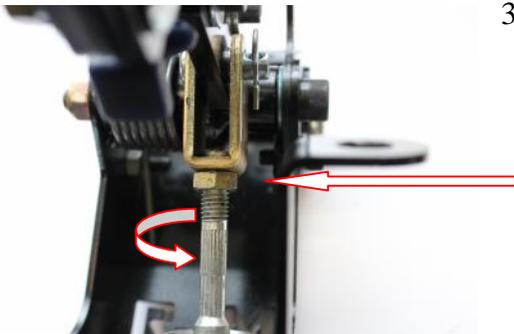
28.) Next find the new **Silver** clevis pin and hairpin clip provided with the kit. Now lineup the oem clevis fork with the bushing hole in the upper pedal arm and insert the Silver pin from Left to Right thru the arm to pin the clevis in place. Finish by inserting the new hairpin clip on the right side of the clevis to hold it in place using some needle nose pliers to make this easier.



29.) Now get a Deep 12mm socket, long extension and ratchet ready for this step. Moving the bracket up or down alters the angle of the clutch rod which needs to push straight in/out of the master cylinder. Move the bracket to where the rod looks to be going straight into the master cylinder and tighten the upper right stud nut firmly, followed by tightening the lower left stud nut firmly and finish by tightening the upper dash bolt. *(See Reference Photos at Steps 26 & 27)*



30.) Use a 7/16 wrench or socket on your ratchet and tighten the upper right cross bolt that clamps the upper dash mount to the main bracket. This only needs to be snugged up + half turn. Don't crank this down overly tight or it could start to collapse the main bracket or strip the threaded nut on the other side. *(Shown out of the car for clarity)*



31.) Use a 12mm wrench and loosen the lock nut on the clutch rod, behind the clevis fork.
 For the OEM Master Cylinder Only- Thread the rod Left (Counter Clockwise) until the tip of the rod is flush to the inside of the clevis and retighten the lock nut firmly.
 For Wilwood/Tilton – Thread the rod about 3 turns Left (Counter Clockwise) to raise the pedal a bit.
This is for initial setup only and can be adjusted later once the friction point height is established during first startup.



32.) Now you can adjust the upper switch so that the button is fully depressed with the pedal up. You'll need a 3/16 Allan Key for this. Press the arm down lightly and note the small amount of slack in the linkage before the master cylinder rod actually moves. Next squeeze the upper switch mount into the rubber bumper and rotate the whole arm down slightly to just take up the linkage slack. While holding the pedal there, tighten the upper switch mount lock bolt with the Allan Key to hold the position.

**** NOTE : The Upper Switch much be re-adjusted per the above procedure after every change to the AFP or clutch rod settings. Failure to do so can keep the Master Cylinder from fully returning to the top of its stroke which can cause problems. ****

- 33.) Now take the lower pedal arm and hold it in place against the right side of the upper pedal arm while pushing the 3 carriage head bolts thru from right to left. Follow by putting a flat washer, lock washer and a nut onto each of the bolts finger tight. Now rotate the arm up to where the pedal pad is about ¼” to ½” above the brake pedal and tighten all 3 nuts until they are snug + ¼ turn to hold position. Do not over torque these as they can stretch and snap off if over tightened.
- 34.) Now you can finish up by plugging in each of the switches wiring plugs.
Note: If these plugs happen to get swapped top to bottom the car simply won't start with the pedal down. If you have this happen simply swap the plugs around to correct this.
- 35.) Now clear your tools up and prepare to start the car for the first test. You can leave the trim panels off for now until the very end. Adjust the seat so you're comfortable and pump the pedal a few times. It should feel smooth and linear without any clicking.
- 36.) **Important Shift into Neutral -> BEFORE <- Starting the Engine if not already there.**
- 37.) Once the engine is started its time to test the clutch is fully disengaging. Depress the clutch fully, wait a few seconds and then move the shifter into first gear. If you encounter unusual resistance or a grind going from neutral into 1st gear then **Stop and go to Step 39!**
- 38.) If it felt ok in step 37 you can now take the parking brake off and check to see where the friction point is up from the floor on level ground. Shift into 1st once more and very slowly lift the pedal until you feel the clutch start to catch. A good rule of thumb is to have the friction point between 1” - 2” up from the floor to ensure complete clutch disengagement. **If lower than 1” up see Step 39.** If the friction point is good then proceed to Step 40 and see the Tuning Section of the Guide for final adjustments after test driving the car.
- 39.) **Friction Point is too Low:**
- With Factory master cylinder you'll need to reduce the AFP setting a little and test again.
See Tuning Section – Lowering AFP Setting
 - With Wilwood/Tilton master cylinder you can first adjust the clutch rod to raise the pedal higher and if still not enough you'll need to reduce AFP setting.
See Tuning Section – Clutch Rod Adjustment Higher Pedal.
- 40.) Reinstall the LH trim panel by aligning it with the door edge and snapping back into place. Followed by the plastic nut near the dead pedal. Then snap the door sill back down and you're all done.

Thank you for Purchasing an RJM Performance Product. Enjoy!

Tuning Section and FAQ's

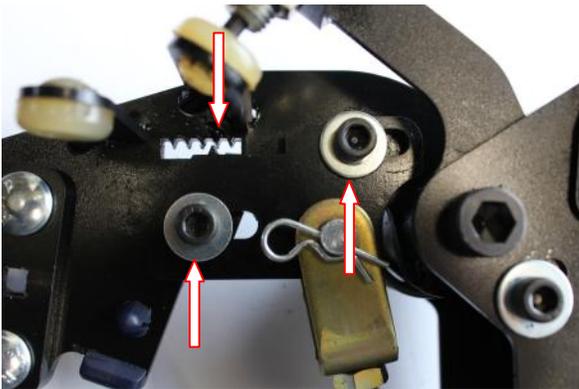
AFP Setting Information: The lowest setting is considered 0% AFP and is equivalent to the factory pedal assembly for leverage & master cylinder stroke. The highest setting is considered 100% AFP and is simply the maximum adjustment available in this design with increased pedal leverage and decreased master cylinder stroke over stock. There is a viewing window in the arm with triangular teeth that line up with a pointer on the AFP slider plate. Each tooth represents 25% AFP. So the left most tooth is 0% and the right most tooth is 100%. **The AFP setting on Rev 4 comes Pre-Set to the recommended starting position of 70% AFP.**

Raising the AFP Setting: (Slide Plate Moves Towards the Pivot Point)

- Raising AFP causes a Lowering of the Initial Friction Point.
- Increases Pedal Leverage Ratio, making the clutch feel Lighter.
- Widens the Modulation Zone, making the clutch easier to modulate.
- Reduces Master Cylinder Stroke (Cause if lower friction point)
- Max is 100% AFP and only for Aftermarket Clutches with short engagement.
- Above 75% is Not recommended with a Factory Clutch or poor disengagement could occur.

Lowering the AFP Setting: (Slide Plate Moves Away from the Pivot Point)

- Lowering AFP causes a Raise the Initial Friction Point.
- Decreases Pedal Leverage Ratio, making the clutch feel Heavier.
- Narrows the Modulation Zone, making the clutch more on/off & harder to modulate like stock.
- Minimum is 0% Same as Stock Pedal.
- If friction point is too low and there is no clutch rod adjustment left AFP must be lowered.



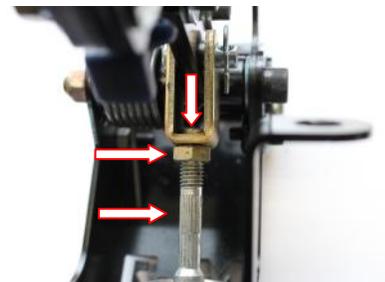
Adjustment Procedure AFP in either direction:

- Loosen the Two AFP Lock Bolts with a 3/16 Allan Key
- Slide the AFP Plate Left to Lower / Right to Raise AFP%
- Once adjusted retighten the Two AFP Lock Bolts Firmly.
- Reset the Upper Switch Gap, See Install Step 32.**
- If changing AFP more than one Tooth in the viewing window in either direction the Clutch Rod Angle must be corrected for by moving the bracket up/down on the firewall. **See Clutch Rod Angle Adjustment Below.**

Clutch Rod Adjustment Information: The clutch rod threads in and out of the clevis to raise and lower the overall pedal height and fine tunes the initial friction point. The 12mm lock nut must be firmly tightened at all times. Driving with this lose could cause the rod to disengage from the clevis over time.

Clutch Rod Adjustment: Lower Pedal - Turning Left (Counter Clockwise)

- Lowers the Initial Friction Point (Only a few turns of adjustment available in total)
- Decreases the overall pedal stroke length.
- Friction point should never be set less than 1" up from the floor.
- Around 1.5" to 2" up is what many will find to be most comfortable.
- Max adjustment is when the rod is threaded fully into the clevis.



Clutch Rod Adjustment: Higher Pedal - Turning Right (Clockwise)

- Raises the Initial Friction Point (Only a few turns of adjustment available in total)
- Increases the overall pedal stroke length.

- Max adjustment is when the tip of the rod is flush with the inside of the clevis.

Clutch Rod Angle Adjustment:

- The clutch rod needs to be set for a straight and level push in/out of the master cylinder anytime there is a change in AFP setting to avoid pushing at an angle or damaging the seals in the master cylinder.

Procedure:

- Loosen the two stud nuts holding the bracket to the firewall with a 12mm socket.
- Loosen the cross bolt clamping the upper mounting plate to the bracket using 7/16 wrench.
- Slide the bracket up or down on the firewall to adjust angle.
- Retighten both nuts firmly and simply snug down the cross bolt + half a turn.

Lower Stop Bolt Information:

- The Rev 4 Pedal Assembly has an adjustable lower stop bolt. This is preset to it's lowest position to give the most pedal stroke available.
- Threading this bolt up will Reduce the overall stroke length and Reduce the Friction Point Height.

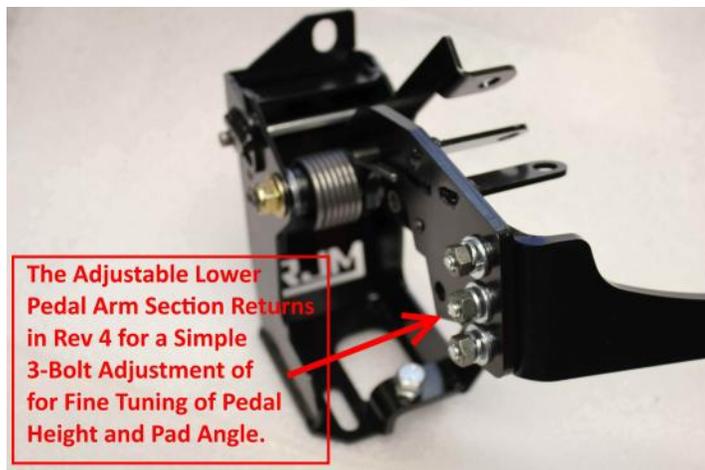


Procedure:

- Loosen the jam nut at the bottom with a 1/2" wrench.
- Thread the bolt up or down.
- Tighten the jam nut with the wrench.
- After Adjustment the Lower Switch Depth Must be Raised.
- Loosen the jam nuts on the lower switch and thread the switch up/down to ensure the button is fully pressed with the arm down against the stop.
- Retighten the switch nuts (14mm & 17mm)

Adjustable Lower Pedal Arm Information: The Rev4 has an adjustable lower pedal arm section that can be rotated up or down to adjust the height of the pedal pad independently of the upper arm. This allows fine tuning of height without any change to the feel of the pedal or friction point height.

To adjust simply loosen the 3 bolts and rotate up or down to desired location. Retighten the bolts until snug + 1/4 turn. Do not over tighten as these can stretch or fracture is over torqued.



The Adjustable Lower Pedal Arm Section Returns in Rev 4 for a Simple 3-Bolt Adjustment of for Fine Tuning of Pedal Height and Pad Angle.