

2005-2014 Mustang Pedal Assembly Main Structure & Brake Pedal Instructions



FFP Customs prides itself on not only manufacturing quality parts, but also offering real world, race car solutions. Our Patented Pedal Assembly is another product aimed at improving your experience behind the wheel of your race car. These instructions are designed to make installing your new FFP Customs Pedal Assembly that much easier, so follow along as we guide you through the installation process.



Depending on the pedal assembly you have ordered, each individual pedal will be pre-assembled, as will the pedal assembly's main structure, off which everything is built. So, along with the subassemblies, and Wilwood master cylinder box, we also have hardware bags that go with the appropriate subassembly. With the main structure and brake pedal assembly we include hardware bags for the pedal pad, cowl panel mount, reservoir mount, and brake master cylinder mount, and the brake firewall mount.

First things first, we have shipped you our pedal assembly with some of the components already installed together. This has been done to lessen the intimidation one may feel when receiving a pedal assembly. With many subassemblies pre-built, we hope this makes the final installation much more understandable and easier to follow.

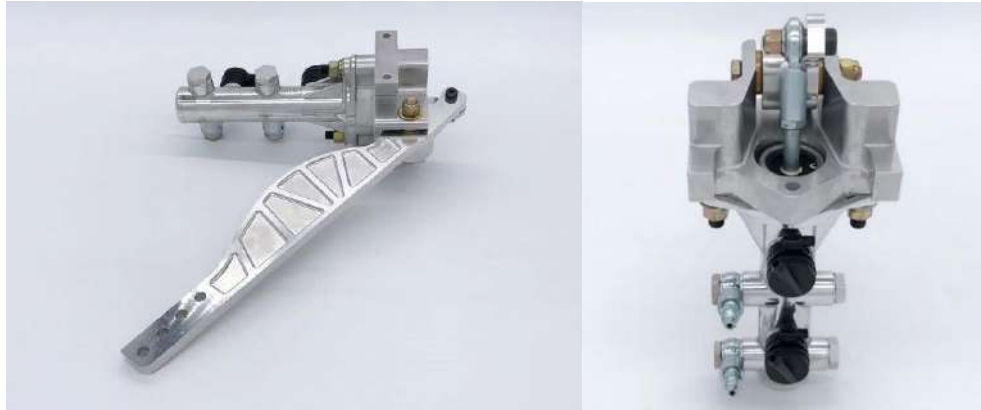
Pedal Assembly Contents

- Pedal Assembly main structure pre-assembled.
- Brake Pedal pre-assembled.
- Clutch Pedal, if applicable, pre-assembled.
- Throttle Pedal, if applicable.
- Pedal Pads for each included pedal.
- Brake Fluid Reservoir Mount.
- Wilwood Master Cylinder.
- Hardware Bags for each component.



The Pedal Assembly's main structure installs using the outside firewall mount and the inside firewall mount. Before you do anything, drill out the brake booster/outside firewall mount holes with a 25/64" drill bit for our hardware. Then, install the body to cowl panel mount (Left) and loosely install it (Center) to your cowl using the supplied hardware from the bag labeled "Cowl Panel Mount." Then take your outside firewall mount, feed it through the 4 holes you just drilled out, and fit the inside firewall mount and main structure to the 2 studs (top holes) and 2 bolts with the outside firewall mount. Then take the main structure's cowl panel and bolt it to the body to cowl panel mount. At this point you can tighten the nuts that attach the outside firewall mount to inside firewall mount. We suggest not tightening any of the other hardware until you have the brake pedal/master cylinder installed.

The main structure is the key to our pedal assembly. Once you have the main structure installed, the rest of the installation is a matter of adding the brake pedal and master cylinder, the throttle pedal, and if applicable, the clutch pedal. The master cylinder bolts to the brake pedal, and then the subassembly is fitted into the main structure. Once a comfortable seating position has been attained, mark the main structure where you want to mount the brake pedal and master cylinder. The brake pedal and master cylinder will need to be removed, and bench bled prior to final assembly. *It should be noted that the bolts used to mount the brake sub assembly to the main structure have a locking thread, so you will feel some tension once you get the bolt started. We've included spring lock washers for these bolts also as a secondary lock.*



Not only is the brake pedal assembly adjustable fore and aft, but you can also adjust pedal pad height, as well, thanks to the extra provisions at the bottom of the brake pedal. As mentioned, the brake pedal and master cylinder mount arrive to you in the box as a subassembly. Attach the included Wilwood master cylinder to the brake pedal subassembly and it is ready to be attached to the main structure. Make sure the pedal has freedom of movement. We include a threaded Heim joint, and shoulder bolt with lock nut to connect the master cylinder to the brake pedal at the top. The Heim joint shoulder bolt and nut needs to be arranged in this fashion to provide clearance for full brake pedal travel (Right). This is looking down at it from overhead. Make sure not to preload the master cylinder or you could cause brake drag.

With the main structure, brake pedal and master cylinder installed, do not tighten everything until you have adjusted it to your liking and bled the master cylinder. With the master cylinder bled and everything firmly attached, the brake pedal portion of the installation is done.



The main structure/brake pedal assembly includes this reservoir mount for the brake master cylinder. This mount is designed to use the roll bar running behind the dash, but if you don't have that, the reservoirs still need to be mounted above the master cylinder for proper operation as they are gravity fed.



These lines, fittings, and brake light switch are included with the pedal assembly. These fittings and lines connect the master cylinder to the bulkhead at the firewall (right). The way we have the fittings laid out here on the bulkhead, you can easily run a line for the rear brakes using the 90-degree fitting, and the other to the Line-Loc and/or front brakes. This layout is just an example of how and where to mount the bulkhead and fittings. The bottom picture is the correct layout for the fittings that screw into the master cylinder. Banjo Bolt, 9/16 ID sealing washer, -3AN Banjo, and 1/2 ID sealing washer.

If you have made it this far, you have completed the installation of the FFP Customs pedal assembly's main structure and brake pedal subassembly. If you have also ordered a throttle pedal and/or clutch pedal subassembly as part of your FFP Customs pedal assembly, we have included separate instruction sheets to also ease the installation of those subassemblies.

If you have any installation concerns or roadblocks, please call us. We would rather you call us for clarification instead of being frustrated with the installation.

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Patented Pedal Assembly 2005-2014 Mustang Throttle Pedal Instructions

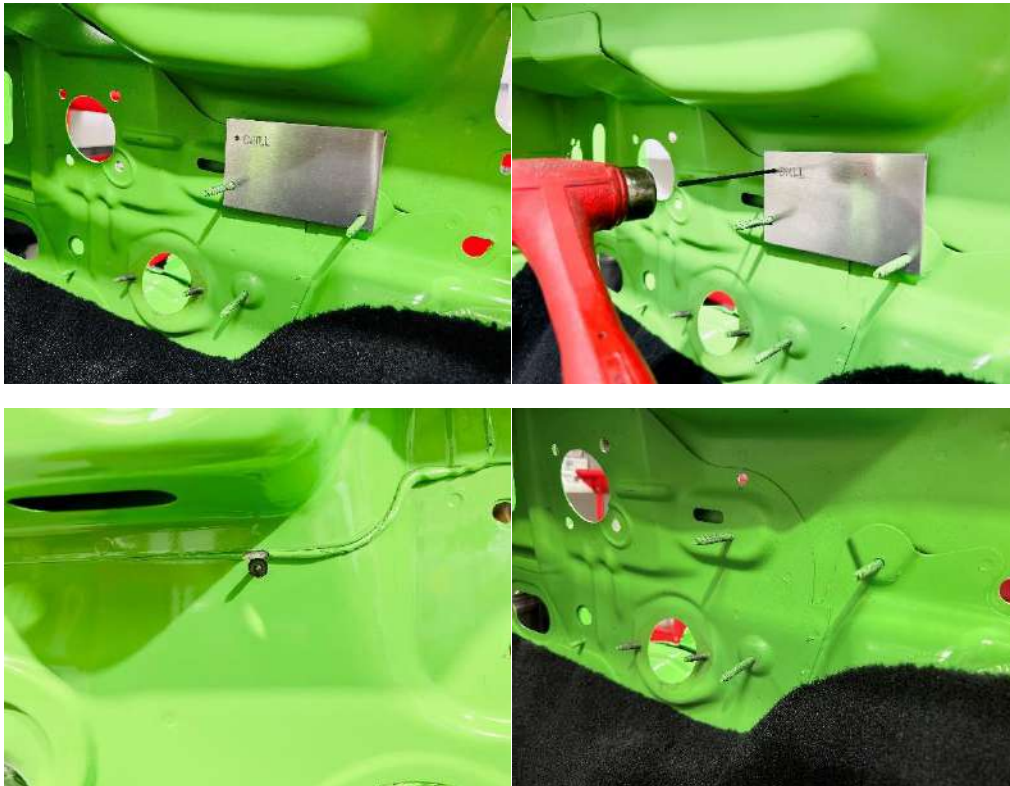


If you are reading this, you have already installed the FFP Customs pedal assembly's main structure and brake pedal subassembly. With that, you can move on to the throttle pedal subassembly. As we have mentioned, everything is built off the pedal assembly's main structure. As such, the throttle pedal uses the main structure as its attaching point.



The throttle pedal is sectioned off by itself in the box when you receive the pedal assembly. It uses a throttle pedal stop and hanger that attach it to the main structure. This is the throttle pedal stop and hanger (Right). It attaches to the pedal, which attaches the pedal to the main structure.

Before we get into installing the throttle pedal, we would like to go over the throttle cable locator jig. We are providing this in the kit in hopes of making, aligning the cable to the pedal an easy and simple install, since the 05-14 mustang never came equipped with a cable. Below (left) is a picture of the jig installed on the two upper studs where the factory drive by wire throttle pedal was mounted from the factory. Next take an 1/8" punch and slide it through the hole on the jig (picture to the right). Pay close attention that your punch is level, then mark the fire wall. Now you can remove the jig and drill your mark to the correct size hole for your throttle bulkhead (most of the time a 5/16 hole will work, but please make sure before drilling). You might have to remove some of the factory seam seal (bottom left picture), to allow your bulkhead to sit flat against the fire wall, please do so before final install.



At the top of the throttle pedal is where you attach the throttle cable. Attach the center pivot hole on the throttle pedal to the hanger with the provided hardware that came on the hanger stud (we go over the orientation of the hardware more in depth below). At the bottom of the throttle pedal there are three adjustment holes for the pedal pad. The adjustment holes are designed to help you arrive at the throttle pedal's sweet spot.



The throttle pedal is mounted to the main structure through the throttle stop and hanger mounting arm. Either way you choose to mount the throttle pedal, whichever is easier would be what we recommend. The orientation of the throttle pedal assembly hardware is on the right. You have the stud that is threaded into the mount, a large oil-impregnated bronze bushing, the pedal itself, a small oil-impregnated bronze bushing, flat washer, and lock nut. Do not overtighten the throttle pedal nut because that will keep it from being able to move. Finding the optimum torque setting is up to your individual combination because that setting will vary depending on your return spring setup.

When it comes to the throttle pedal, we do have an optional throttle switch that can be attached to the throttle pedal stop as you can see in the picture above. You can set this up as a wide-open throttle switch to control a nitrous system, or any other system that works off wide open throttle. The switch provision is in the mount, whether you ordered the switch at the time of purchase or not. Therefore, if at the time of purchase, you do not need it, but later you add nitrous or another system needing to see WOT, the switch can still be added to the throttle pedal stop.

The installation of the throttle pedal is straightforward. The most important aspect of the throttle pedal assembly is the tightening of the pedal nut to the mount. You will have to find the happy medium between too tight and too loose to arrive at the proper torque setting. Aside from that, the throttle pedal is a simple, Bolt On & Go installation.



The photo above shows how the optional Throttle Toe Hook is mounted to our pedals using the 2 small holes in the middle of the pedal. This feature is useful in applications where the driver needs to be able to close throttle blade using a push-pull style cable or solid linkage.



With all the different throttle cable lengths and applications, we do not include one with our pedal assembly. However, this Lokar cable is an example of what we recommend. The Lokar TC-1000U36 is a 36" cable, which may work for some of you, while others may need a longer or shorter throttle cable. The throttle cable attaches to the top of the throttle pedal using the supplied clevis, goes through the firewall, and then attaches to your car's throttle linkage.

If you have made it this far, you have now installed the main structure, brake pedal assembly and throttle pedal assembly. If you are installing a clutch, brake, and throttle pedal assembly, you still have a little work to do. However, if you are installing a brake and throttle-only pedal assembly, you are ready for a blast down the track.

Remember, if you have any questions, feel free to contact us via phone or social media. We would rather you contact us for clarification instead of being frustrated with the installation.

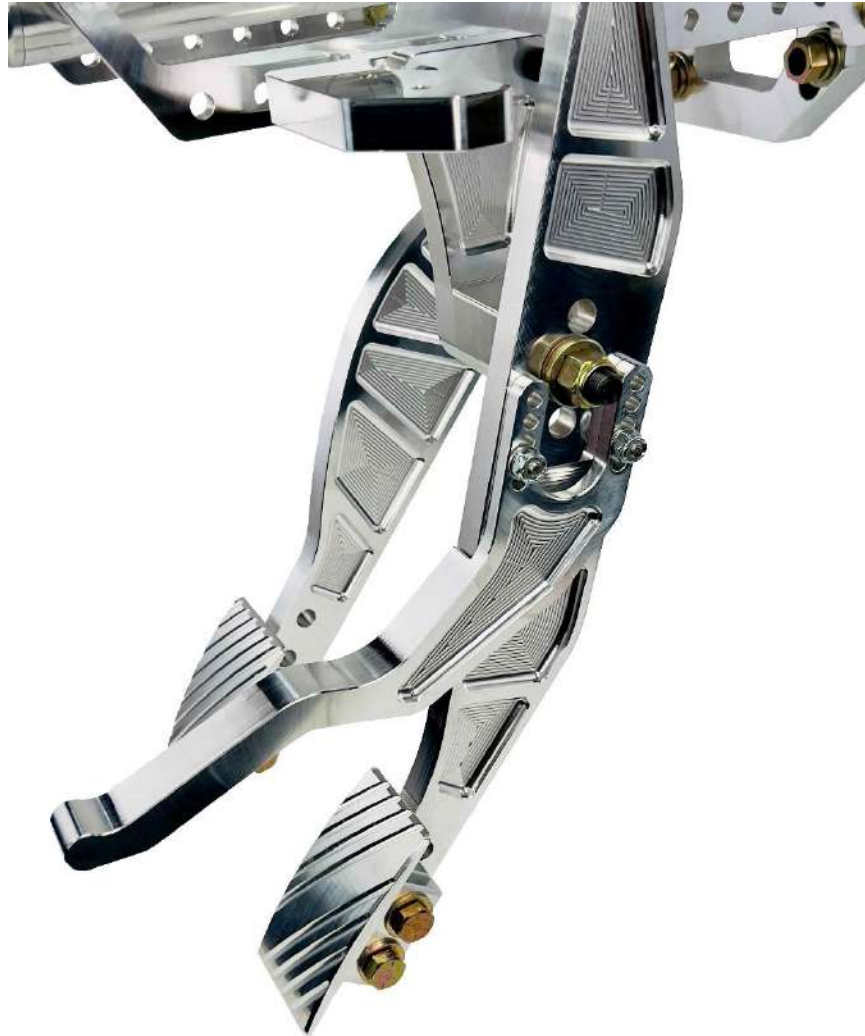
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Toe Hook Installation



FFP Customs is always looking to improve the pedal assembly to accommodate all driver needs while still maintaining a smooth and headache free installation. The FFP toe hook allows drivers to have full control of their throttle when using a solid linkage/cable. This lets the driver manually close their throttle body(s) with the movement of their foot. The installation of the toe hook is simple, using only two 10-32 bolts, two 10-32 nylock nuts, and two 10-32 washers.



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There are a couple of things to pay attention to when installing the FFP toe hook. Firstly, make sure the cut out of the toe hook mates to the pedal so that the toe hook is centered over where your foot would be. Secondly, make sure the nut and washer side of the bolt is on the same side as the pocket design to prevent any interference with the throttle; correct orientation of hardware can be seen in the above pictures. Once you have the toe hook mounted, you are ready to put the throttle pedal pad on, mount the entire subassembly to the main structure, and test how it feels. If you don't like the way it fits the contour of your foot, luckily the FFP toe hook has 5 different height settings to help accommodate every driver.

Like all our products, these adjustable toe hooks are designed to bolt on with little drama or confusion. The straightforward installation of this toe hook should only take a few minutes, using basic hand tools.

If you have made it this far, we trust you have installed the FFP adjustable toe hook with relative ease. However, if you have hit a snag or have questions, don't hesitate to contact us via phone or social media. We would rather you call us for clarification instead of being frustrated with the installation.

Like all FFP Customs products, this toe hook was designed and made here in the USA.

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Patented Pedal Assembly 2005-2014 Mustang Clutch Pedal Instructions

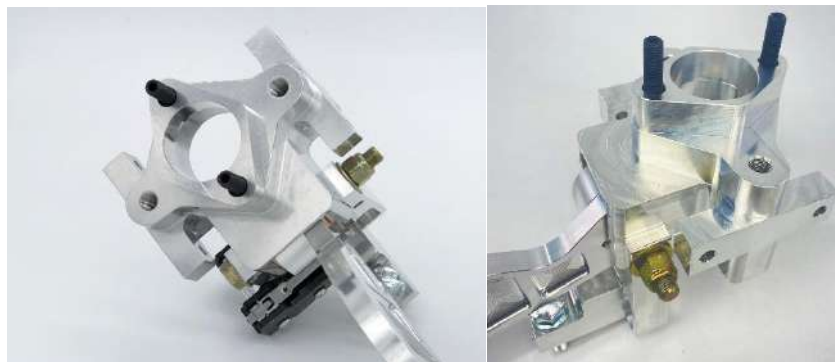


If you are reading this, you have already installed the FFP Customs pedal assembly's main structure, brake pedal subassembly, and most likely, the throttle pedal subassembly. The last piece of the FFP Customs patented pedal assembly is the clutch pedal subassembly. As we have mentioned, everything is built off the pedal assembly's main structure. As such, the clutch pedal uses the main structure as its attaching point.

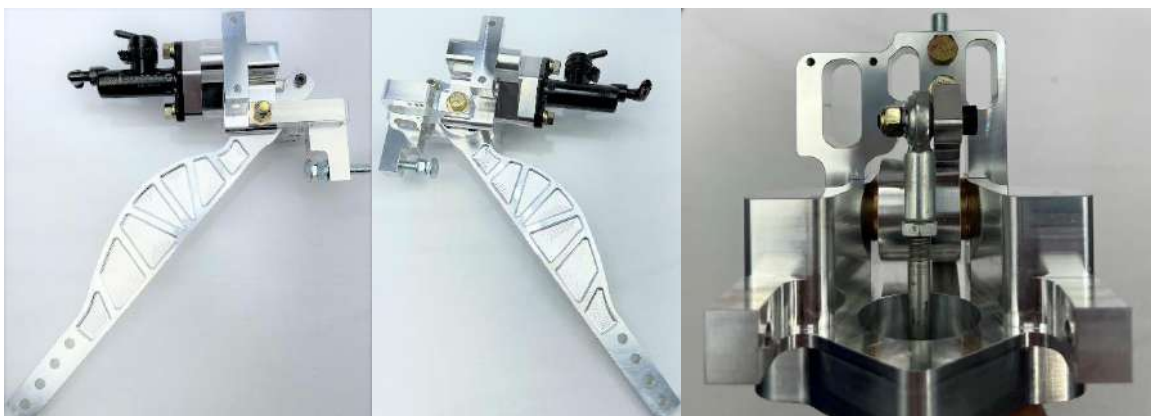


The clutch pedal is sectioned off by itself in the box when you receive the pedal assembly. It uses a mount like that of the brake pedal to attach it to the main structure. We include labeled hardware bags for the pedal pad, reservoir mount, and clutch master cylinder mount.

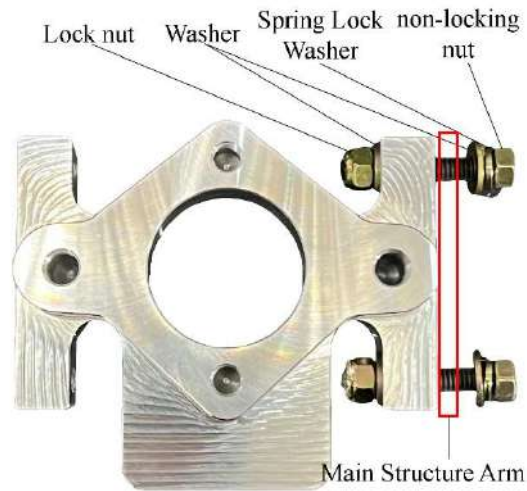
The clutch pedal subassembly consists of the clutch pedal, master cylinder mount, clutch pedal stop, and a neutral safety switch mount and switch. A Wilwood master cylinder is included with the kit, but it must be assembled, bled, and then installed onto the pedal assembly's main structure.



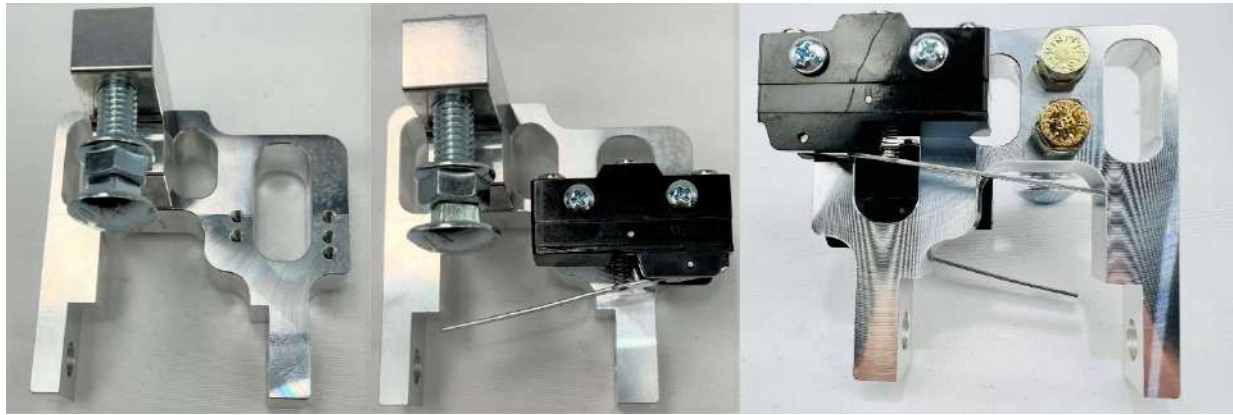
The clutch master cylinder uses this spacer and studs to attach it to the clutch pedal.



With the master cylinder spacer and studs installed into the master cylinder mount, install the Wilwood master cylinder. Make sure the pedal has freedom of movement. We include a threaded Heim joint to connect the master cylinder to the clutch pedal at the top. The Heim joint shoulder bolt and nut needs to be arranged in this fashion to provide clearance for full clutch pedal travel (Right). This is looking down at it from overhead. Make sure not to preload the master cylinder. The 90-degree 1/8" male NPT fitting in the master cylinder is included. Now you are ready to attach it into the main structure. Take the provided hardware from the clutch master cylinder mount bag and attach it to the main structure.



The clutch master cylinder mount uses 2 set screws, 2 lock nuts, 2 spring lock washers, and 2 nuts in the orientation above to mount to the main structure.



When it comes to the clutch pedal, we do have a couple clutch pedal switches that can be attached to the clutch pedal mount. One is a neutral safety switch, which is included with the pedal assembly, and an optional ignition cutoff switch that can be ordered (Part Number Z-15GW-B), as well. The neutral safety switch is adjustable via 5 different mounting holes to accommodate different clutch pedal stroke lengths. This is dependent on your clutch pedal stop's final adjustment. It might be necessary to adjust the neutral safety switch to work with your clutch pedal's stop bolt. There are several mounting options for the neutral safety switch and the neutral safety switch arm can be manipulated to offer even more adjustment. The middle image shows just the neutral safety switch installed, whereas the far-right image shows both switches installed.



The Reservoir Mount either attaches to the roll bar, or you can remotely mount the reservoirs, but they must be mounted above the master cylinder since they are gravity fed. The Wilwood instructions go over this, as well as the bleeding procedure. The picture to the right shows an example of how you can add the clutch reservoir tank to the existing brake reservoir tanks.



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For a clutch car, it would be impossible for us to provide a one-size-fits-all fluid delivery system. We provide a -4 AN steel braided line from the master cylinder to the bulkhead at the firewall, a -4 AN bulkhead fitting, a 90-degree 1/8" male NPT to a -4 AN male fitting that screws into the end of the clutch master cylinder. Wilwood provides the line coming from the reservoir tank to the master cylinder. The bulkhead seen here has fittings for your front and rear brake lines at the top, and the clutch line to the hydraulic control at the transmission on the bottom.

As for bleeding the system, Wilwood does a great job of explaining the bleeding process for the clutch master cylinder so source their instruction sheet within the provided clutch master cylinder box for that information.



Use the hardware marked Pedal Pads to attach the pedal pad to the clutch pedal, and you are done. The completed clutch pedal assembly is probably the last subassembly installed onto the pedal assembly. All lines should be connected and routed to the bulkhead at the firewall.

If you have made it this far, we trust you have installed a complete FFP Customs Patented Pedal Assembly. Remember, if you have any questions, feel free to contact us via phone or social media. We would rather you contact us for clarification instead of being frustrated with the installation.

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