

REKLUSE MOTOR SPORTS

The Left-Hand Rear Brake Kit

INSTALLATION & USER'S GUIDE

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INSTALLATION TIPS

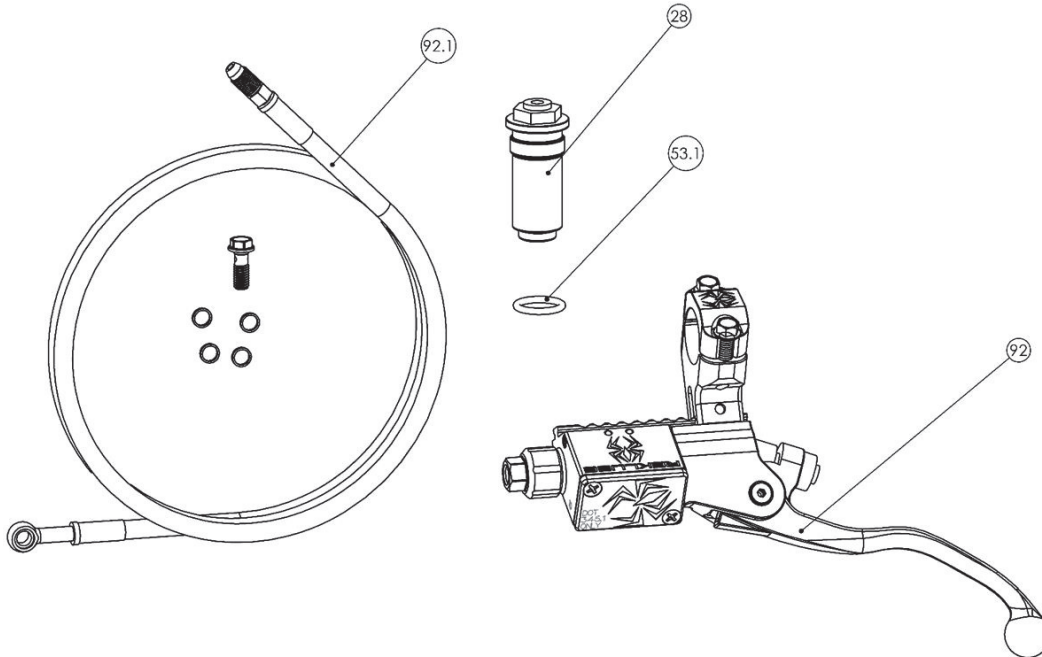
- Carefully read and be sure to understand the Safety Information document that accompanies this product before proceeding.
- Before beginning the installation, Rekluse recommends reading this entire document and watching the **Brake Kit Installation Video** on our website under the “Videos” section of the “Support” page: <http://www.rekluse.com/videos.shtml>
- Make sure your rear brake pads have at least 50% life left, and that they are in good condition along with the rotor. Rekluse recommends installing with new brake pads with this kit for best performance.
- This brake kit is compatible with these brake fluid types: **DOT 3, DOT 4, & DOT 5.1**
Check your manufacturer’s specifications for the specific recommended fluid type and follow the safety precautions listed on the fluid container. **DO NOT use DOT 5 fluid** (which is a silicone-based fluid) or any mineral oil-based fluids.
- For street-legal models with bulky switch/gauge clusters on the left handlebar (such as KTM’s EXC models) it may be advantageous to purchase a lower-profile (skinnier) multifunction switch cluster to acquire extra room for mounting the brake master cylinder.
- Be sure to wear proper eye protection and rubber gloves when handling brake fluids and oils.
- Check your local regulations regarding brake fluid disposal and suitable containers for storing it.
- The brake bleeding procedure is best performed by two people, one at the rear caliper and one at the master cylinder on the handlebar. See “BLEEDING THE SYSTEM” section for more details.

TOOLS NEEDED

- 2.5 and 3 mm Allen Wrenches
- 8mm, 10, & 17mm End Wrenches
- 21mm End Wrench for Brembo brake systems
-or- 7mm End Wrench for Nissin brake systems
- Torque Wrench (in-lb or N-m)



INCLUDED PARTS



Item	Item Type	Qty
28	Brake Reservoir Sleeve (design varies by bike model)	1
53.1	Rubber O-ring (only 1 is used, 1 extra is included)	2
92.1	Brake Line Kit	1
	Banjo Bolt	1
	Rubber Square-Ring Seal (only 2 are used, 2 extra are included)	4
	Brake Line with Banjo Fitting	1
92	Master Cylinder Assembly	1
Not Shown	Zip Tie - (to secure brake line routing)	4
Not Shown	Bleed Kit - Syringe and Tube Assembly with threaded bleed fitting	1

Visit Rekluse.com/support for a full parts fiche illustration and part numbers.

DOCUMENT OVERVIEW

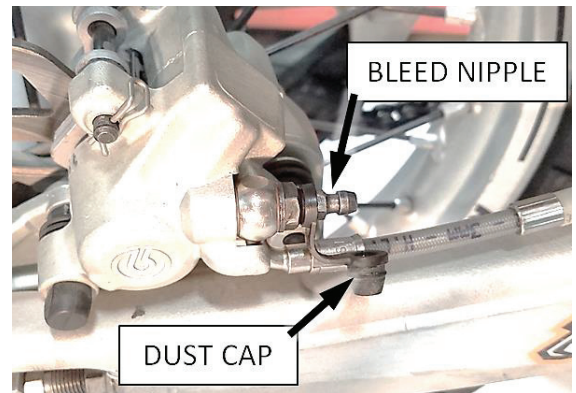
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BIKE PREP & DISASSEMBLY

1. Stand the bike upright on a center stand.
2. Remove the fuel tank from the bike (*excluding newer Yamaha models whose fuel tanks are under the seat*). This will aid with routing the brake line along the frame and with the process of bleeding the whole system.
3. Loosen and remove the rear master cylinder reservoir cap.
 - For Brembo cylinders, use a 21mm end wrench and turn the cap counterclockwise.
 - For Nissin cylinders (shown below), an 7mm wrench or socket will remove the cap bolts.



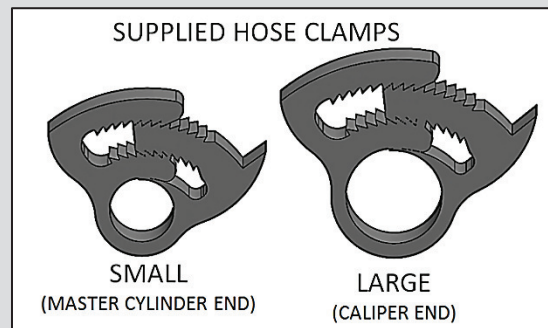
4. Surround the caliper with disposable rags to protect the brake pads and rotor from any spilled brake fluid.
5. Remove the dust cap on the rear caliper bleed nipple and, clean the bleed nipple of any debris.



6. Place an 8mm box end wrench over the bleed nipple



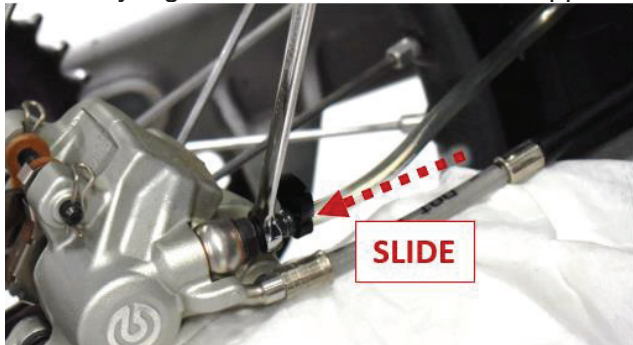
NOTE: There are two identical syringes and two plastic hose clamps (sized slightly differently) provided in the bleed kit. These clamps will help secure the syringe tubing to the fittings while bleeding. The larger-diameter clamp will be used at the caliper end while the smaller clamp will be used at the master cylinder end.



- Slide the large tubing clamp over the hose on one of the syringes (but don't clamp it yet), then slip the syringe hose over the caliper bleed nipple.



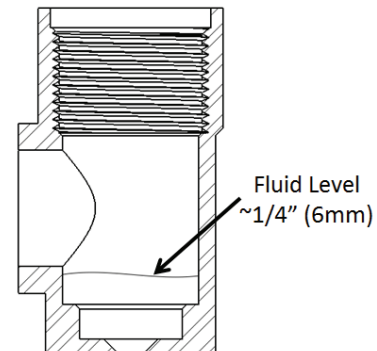
- Slide the large hose clamp over the area of the syringe tube that is on the bleed nipple.



- Fill the foot master cylinder with brake fluid
- Keeping the caliper bleed nipple closed, rapidly pump the foot brake pedal 8-10 times, ensuring the pedal is returning all the way to the upward position between pumps.
- On the last pump of the foot pedal, hold the pedal down with significant force and crack the caliper bleed nipple, allowing the pressure to release into the syringe. Close

the bleed nipple prior to releasing the foot pedal

- Repeat steps 9-11 until the syringe on the caliper is nearly full.
- If the fluid in the syringe at this point is dirty, discolored, or otherwise contaminated, remove the syringe from the bike and dispose of the fluid. Re-install the syringe, then skip to step 9 again.
- Perform steps 10 and 11 until the master cylinder reservoir has minimal fluid — about $\frac{1}{4}$ " (6mm).



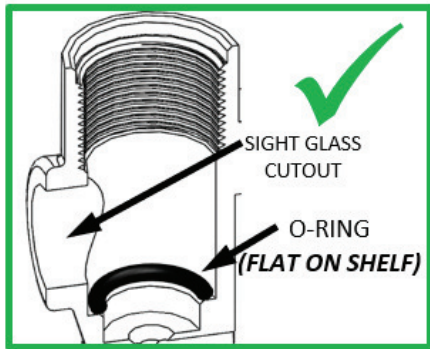
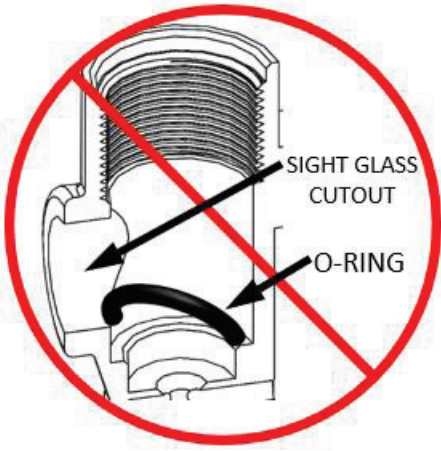
- Insert one of the included O-rings into the reservoir of the stock rear master cylinder. Place the O-ring flat on top of the ledge at the bottom of the reservoir.



NOTE: The O-ring has a tendency to get stuck on the sight-glass cutout when inserting it, which will cause it to tear when the sleeve is installed in the following steps.

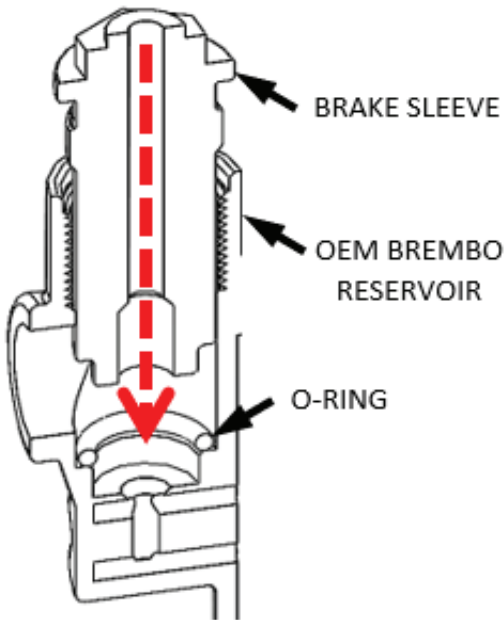
Take care to install the O-ring flat against the bottom shelf of the reservoir, past the sight-glass cutout. Improper O-ring installation will cause the system to leak and ultimately fail.

One extra O-ring is included in the kit.

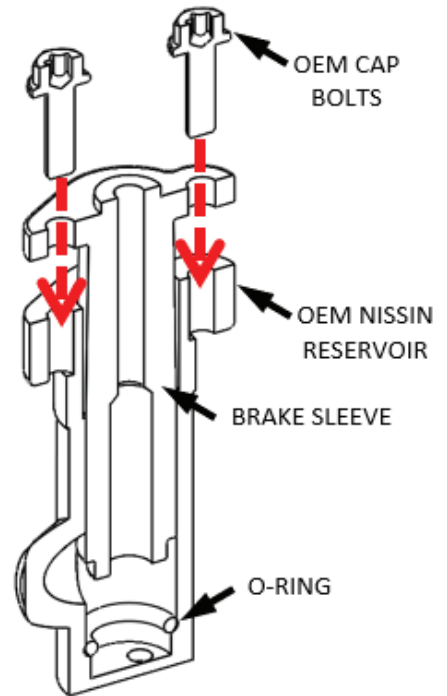


16. Install the Rekluse Brake Sleeve into the rear master cylinder.

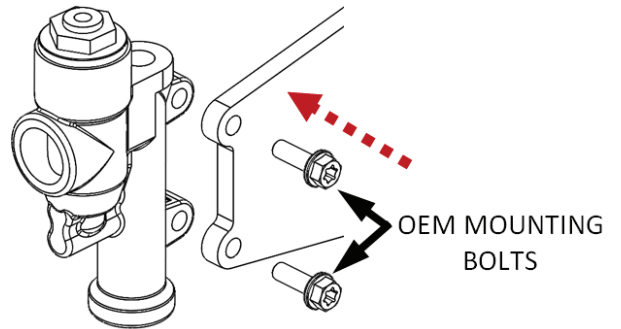
For Brembo cylinders: Thread the sleeve into the reservoir of the master cylinder and tighten with a 17mm end wrench to compress and seal the O-Ring.



For Nissin cylinders: Reuse your two stock reservoir cap bolts and tighten with a 7mm wrench or socket to OEM spec.



17. If it was previously removed, re-secure the rear master cylinder body to the bike frame using Loctite® 243 (blue) or similar thread-locking compound.

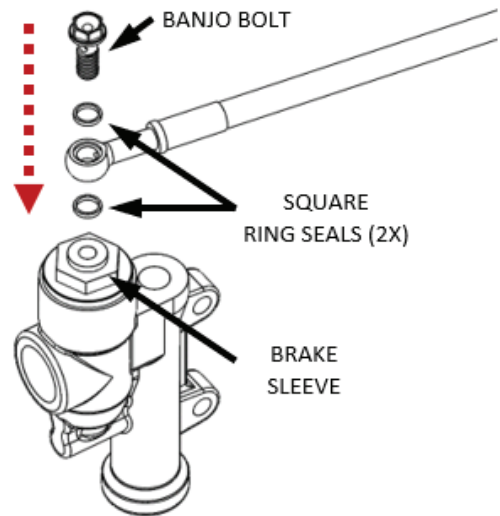
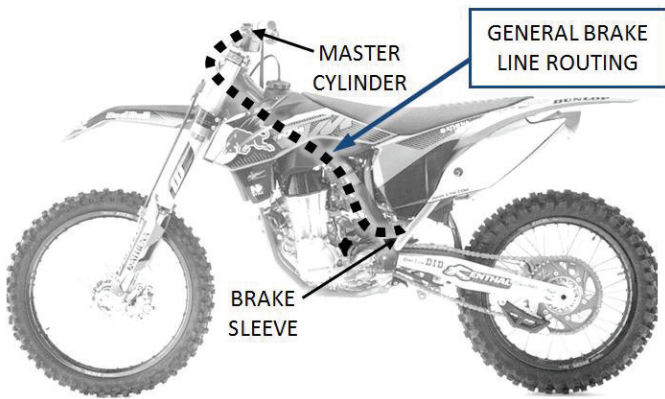


18. Starting from the front number plate with the banjo end of the brake line, route the new brake line beside the clutch cable (or hydraulic clutch line) along the left side of the frame. Continue behind the engine and cross over to the right side of the frame in front of the rear shock.

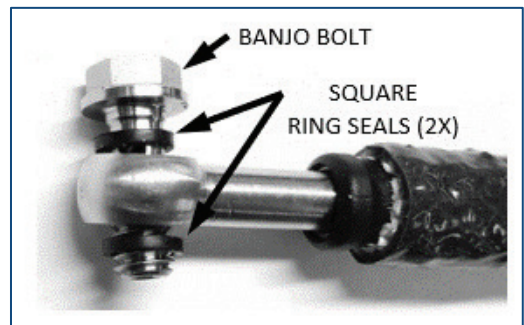
If the brake line is too long for this routing, you may route it from the number plate along the right side of the frame and then cross over to the left side behind the cylinder head, then behind the carburetor or throttle body and cross over to the right side of the frame in front of the rear shock. The key is to make sure the hose is away from the exhaust and is not pinched by the tank once installed.



19. From the Brake Line Kit, install the fittings at the rear master cylinder as shown. The banjo fitting on the line should be sandwiched between two square-ring seals on the banjo bolt.

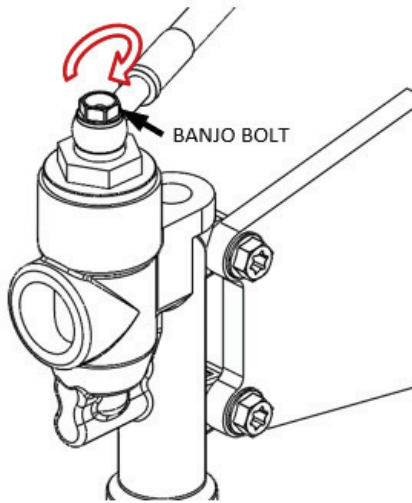


NOTE: Do not secure the brake line with the zip-ties until the bleeding procedure has been completed. This avoids creating low points in the system for air to be trapped when bleeding.



NOTE: Only two square-ring seals will be used. Extra square-ring seals are included in the kit in case any are lost or torn.

20. Ensuring that the line will not contact any moving parts or the exhaust pipe, tighten the banjo bolt to **60 in-lb (7 N-m)**.



21. Using an 8mm socket, mount the Rekluse Master Cylinder onto the left handlebar. This does not have to be its permanent mounted location but is a good location for routing the brake line and bleeding the system.

It can be helpful to remove the clutch master cylinder from the bar after installing the line to assist in the bleeding of the Rekluse master cylinder.



Do NOT move the engine kill switch in a manner which makes it inaccessible for proper use in emergency situations.

22. With the Rekluse Master Cylinder mounted on the handlebar, insert the line fitting and tighten to **15 ft*lbs (20N-m)**.



BLEEDING THE SYSTEM

See the *Brake Kit Installation* video online at rekluse.com/support/videos for visual instructions

The brake system will first be “back-bled” from the lowest point (rear caliper) to the highest (Rekluse Master Cylinder bleed port). Then it will be pushed back through from the top down.



NOTE: Be sure to use new or like-new brake pads and rotor. If your pads or rotor are worn, you must re-bleed after replacing them.

See *MAINTENANCE* section for further details.

Stage 1 – Preparation for Bleeding

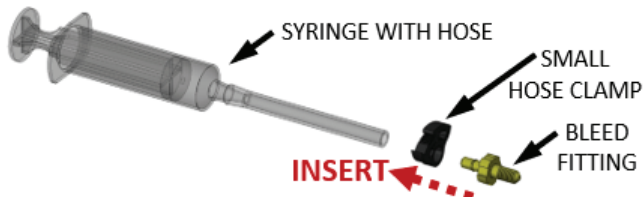
23. Orient the filled syringe at the caliper (filled from step 12) so that the plunger is facing upward and tap on the hose to ensure any air bubbles rise to the top and out of the tubing.



24. At the Rekluse Master Cylinder, remove the top bleed port screw using a 2.5mm Allen



25. Slide the small hose clamp onto the unused syringe, followed by the supplied Bleed Fitting, but do not crimp the hose clamp yet.



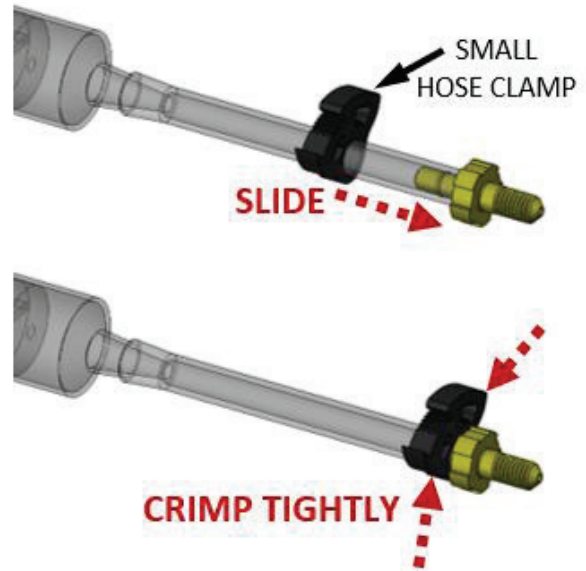
26. Thread the Bleed Fitting (now attached to the syringe hose) into the bleed port in the

Rekluse Master Cylinder. This syringe *will not* have any brake fluid in it at this point.

NOTE: If the fitting leaks after being tightened hand tight, then pliers can be used to tighten the fitting into the housing. Be careful not to over-tighten and snap the fitting off in the housing.



27. Slide the hose clamp down over the bleed fitting and crimp the hose clamp to secure the hose to the bleed fitting.

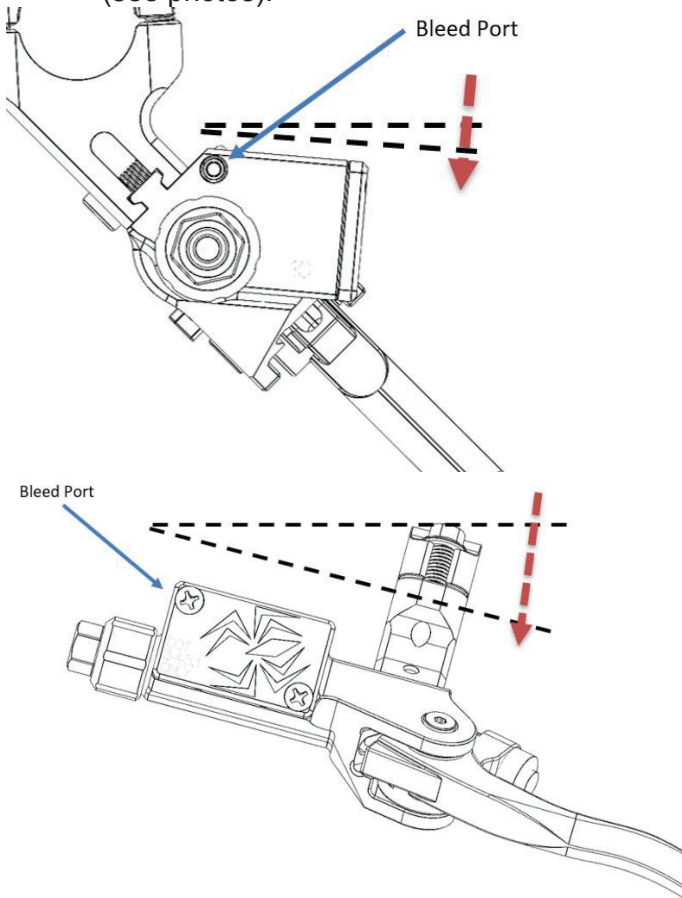


Stage 2 – Bleeding the System

NOTE: The Master Cylinder cap will **NOT** be removed in this process. The Rekluse Master Cylinder cannot be properly bled with the cap off.

28. At this point, it is necessary to have the bleed port on the Rekluse Master Cylinder at the highest point of the reservoir. This can be achieved with the Master Cylinder mounted on the bars by having the front tilted down

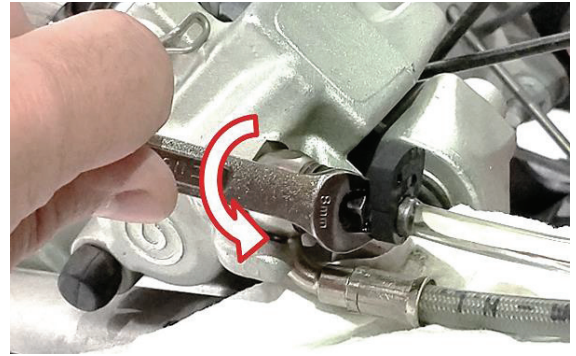
slightly, and with the bars turned such that the right side of the housing is angled upward (see photos).



NOTE: This can also be achieved by removing the housing from the bars and being allowed to hang in a proper orientation



29. While applying light pressure with the syringe, use an 8mm wrench to loosen the bleed nipple 1/2-turn.

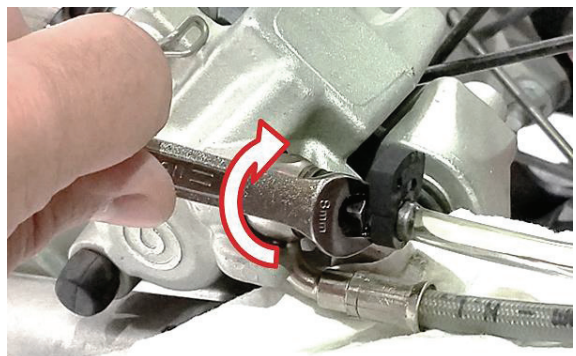


Then, slowly start to push fluid through the system with the syringe at the caliper.



30. Keep pushing fluid through the system while it starts to fill the syringe up at the Master Cylinder. Push until no more air bubbles are coming out of the Master Cylinder bleed port, then close the bleed nipple at the caliper.

NOTE: It can be helpful to tap the brake lines and Master Cylinder while back bleeding, pumping the lever rapidly, and rotating the master cylinder around off the handlebar.



31. Ensuring that the caliper bleed nipple is closed and there are no air bubbles in the syringe hose at the Rekluse Master Cylinder, apply pressure to the Master Cylinder syringe while opening the caliper bleed nipple, allowing the fluid in the Master Cylinder syringe to travel down to the syringe on the caliper.

Keep reversing the direction of pushing fluid from one syringe and then the other, until no more air bubbles are trapped in the system.

Stage 3 – Checking Pressurization

32. At this point, the brake lever should be functioning fully and there should be significant pressure in the system with every lever pull. If the lever feels spongy or soft, repeat stage 2 until there is significant lever pressure.

NOTE: If the Master Cylinder was removed from the bar to bleed the system, you will need to re mount it on the bar to feel the lever pull.

33. Confirm the operation of both the foot pedal and hand lever.

NOTE: It may be necessary to re-bleed the system after the first ride for best performance, as riding tends to help loosen any remaining air bubbles in the brake system.

Stage 4 – System Top-Off and Sealing

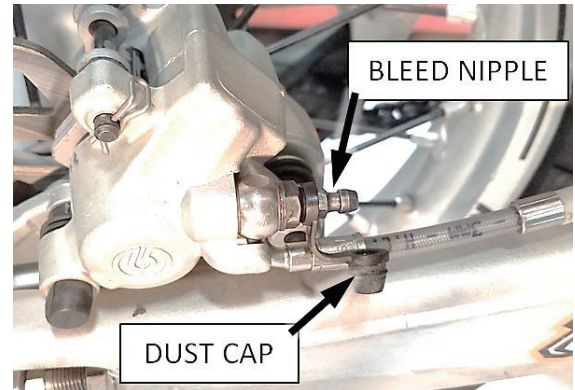
34. Once all the air is bled from the system, place rags around the bleed port of the Rekluse Master Cylinder to avoid fluid spillage in the next step.

35. Unscrew the bleed fitting from the Master Cylinder.

36. Using the syringe at the caliper, *gently* force a small amount of fluid to top-off the Master Cylinder bleed port and reinstall the Bleed Port Screw using

NOTE: Fluid should be flush at the bleed port when installing screw.

37. With the bleed nipple tightly closed at the caliper, remove the 8mm end wrench, syringe hose and replace the dust cap on the bleed nipple.



NOTE: Do not discard any items from your Bleed Kit, as you will reuse them when performing future maintenance on your brake system. See MAINTENANCE section for info.

38. Check all brake line fittings for leaks.

39. Slide rubber boot over fitting on Rekluse Master Cylinder

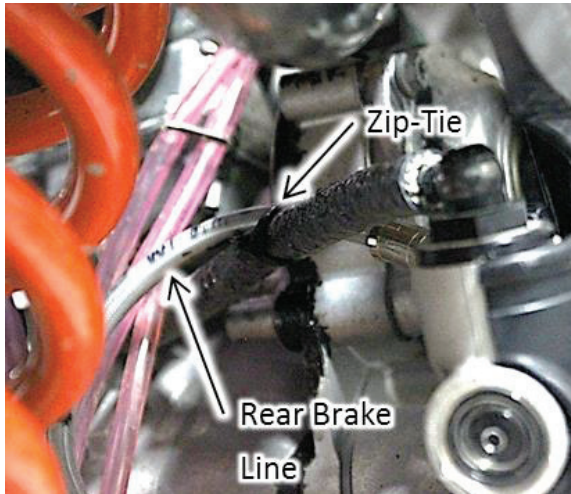


FINAL INSTALLATION

40. Use one of the included zip-ties and zip-tie keepers to anchor the brake line away from the exhaust pipe and rear shock. Securing it to the OEM rear brake line near the shock with a zip-tie and then securing it to the hydraulic clutch line (or clutch cable) upward along the frame using the other provided zip-ties is one popular method.

NOTE: The brake line comes preassembled with a length of thermal shielding on the banjo end. Make sure that this shielding is slid down the line toward the banjo before securing the line with zip-ties. The

shield is intended to protect the brake line from the heat of the exhaust pipe.



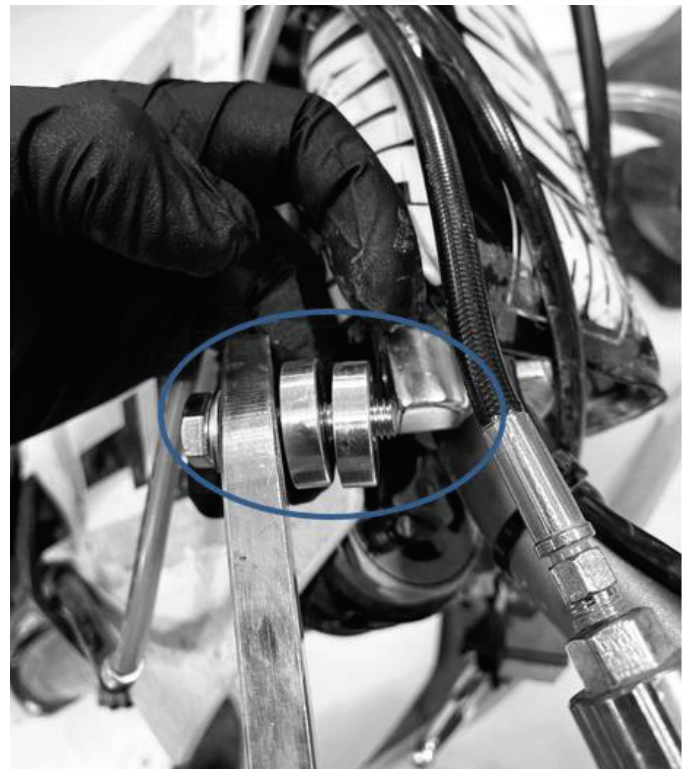
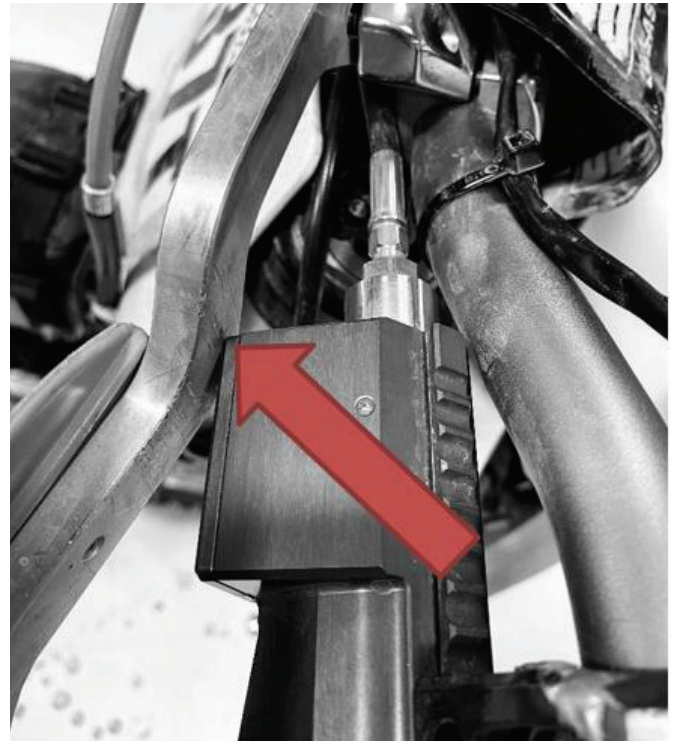
41. Reinstall the clutch lever perch (whether cable or hydraulic) and adjust to find your desirable position of the two levers before tightening the clamps.

NOTE: Be sure to leave enough clearance for proper actuation of the clutch and brake lever.



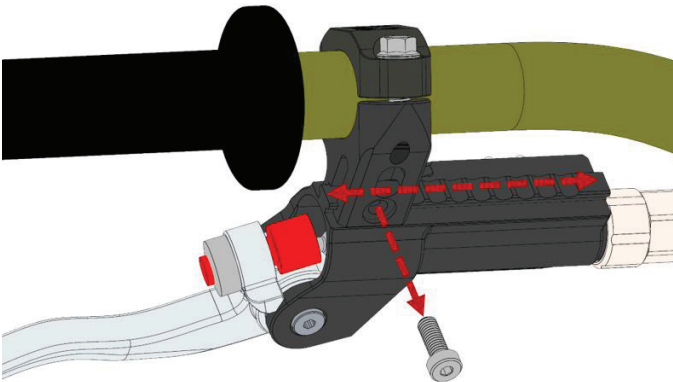
NOTE: The Rekluse Master Cylinder can be mounted **above or below** the stock clutch lever depending on your preference and riding style, however it has been designed primarily for **below** mounting.

NOTE: Some hand guards and bark-busters may need to be adjusted or modified to achieve the desired lever positions. Shown is an example of where spacing washers were used to space out a bark buster spar to clear the master cylinder:

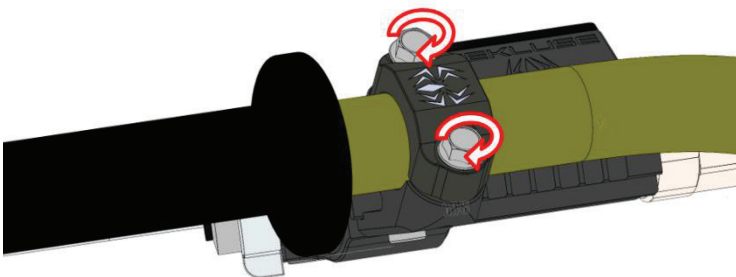




NOTE: The master cylinder body can be moved laterally (left and right) in the bar mount by removing the stainless-steel Allen screw. Once adjusted, reinsert the screw and torque to 26 in-lbs (3N-m)



42. After determining the desired lever positions, including the clutch lever perch, re-tighten



the handlebar clamps evenly. Tighten the Master Cylinder clamp screws to desired tautness of mount, up to **7 ft-lbs (10N-m)**.

43. Check rotation of the handlebars to ensure there is no binding or pinching.

44. If the brake rotor was contaminated with any brake fluid during the bleeding process, use brake-cleaning solution or isopropyl alcohol to clean it.

WARNING

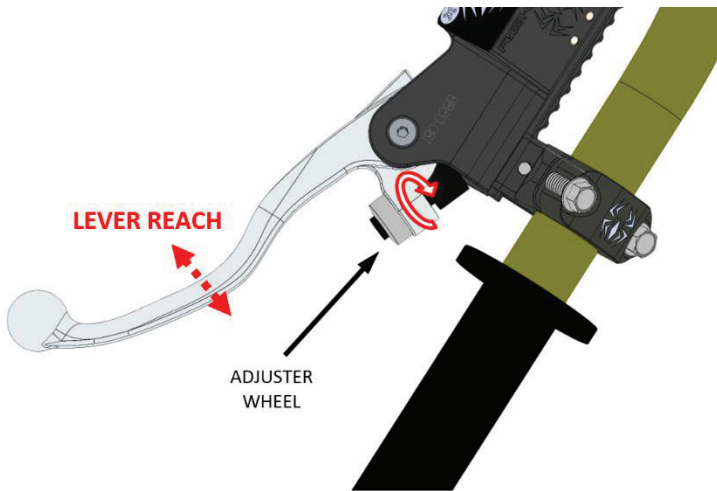
If the brake pads or rotor become contaminated with brake fluid, poor brake performance will result.

The brake rotor can be cleaned, but the pads are compromised if they become contaminated. New pads must be installed if contamination occurs.

45. Reinstall the bike's fuel tank and seat, along with any other components that were removed during the installation process.

LEVER REACH ADJUSTMENT

To adjust the brake lever toward or away from the handlebar, turn the adjuster wheel located at the push rod cup to obtain desired ergonomic position.



WARNING

Failure to become familiar with Rekluse Left Hand Rear Brake operation before use can cause death, serious injury, and/or property damage.

Do NOT attempt to operate a Rekluse Left Hand Rear Brake equipped vehicle on unfamiliar terrain until you are completely familiarized with the operation of this product.

First practice operating Rekluse Left Hand Rear Brake equipped vehicles in a safe area free of obstructions.

TROUBLESHOOTING

Symptom	Solution
Bleeding: Spongy MC Lever	Re-bleed the system, taking extra care to get all of the air out of the master cylinder by rotating and tapping on it. All air in the system must be removed!

MAINTENANCE

1. Before every ride, check to be sure that your brake lever and pedal have sufficient fluid pressure. Also, check that the Rekluse Master Cylinder's adjustment mechanisms and pivot joints are free of dirt and debris and that they operate smoothly.
2. Periodically, it may be necessary to lubricate the pivot joints of the master cylinder. Graphite dry-lube or white lithium grease both work well.
3. After hard use, if the master cylinder lever does not return to full extension or it takes too long to do so, it may become necessary to lubricate the master cylinder piston and seals. Use silicone-based grease such as Molykote® 111 to lubricate the piston and seals, and then re-bleed the system after reassembly.
4. The following rebuild and replacement kits and parts are available for purchase separately from Rekluse:
 - Replacement Lever Kit:
Includes lever, pivot bushing, and return spring
 - Piston Rebuild Kit:
Includes seals, spring, and grease.
 - Replacement Dust Boot
 - Replacement Bleed Screw
 - Replacement Cap Screws
 - Replacement Reservoir Bladder

Bleeding: Leaking fluid around the rear master cylinder	The brake sleeve O-ring may be torn or seated incorrectly in the rear master cylinder reservoir. Disassemble and inspect for any tears or pinched spots in the O-ring. A spare O-ring is included in your kit. Replace it if necessary.
Bleeding: Fluid will not push through the system (hydro-locked)	Either the brake line is plugged or pinched somewhere, there is debris in the system, or the Master Cylinder port is blocked by its piston. <ol style="list-style-type: none"> 1. Ensure that the system is bled up to the rear master cylinder by loosening the banjo bolt and pushing fluid until it flows out around the banjo bolt without bubbles. 2. Confirm that the Rekluse Master Cylinder lever is not being depressed by a hand guard or something else on the handlebars. 3. Check to see that the line is not blocked or pinched by decoupling it from the Rekluse Master Cylinder and pushing fluid. If fluid does not flow freely, try to flush the line or order a new one.
Bleeding: System will not pressurize (lever remains spongy after re-bleeding)	It is likely that air is trapped in a low spot of the brake line. One common area for this to happen is near the rear shock where the line dips underneath the intake. Try to position the line in a way that this section slopes upward, and air can travel up the line. Remove the MC from the bars and hold it high in the air, pulling it tight to get the line as straight and vertical as possible. Repeat stages 2-5 of the bleeding process, shaking and tapping the lower sections of the line to loosen any air bubbles.
Rear Wheel Not Locking / Poor Braking Performance	The brake pads and/or rotor may have been contaminated with brake fluid during the bleeding process. Clean the area with isopropyl alcohol or a quality brake-cleaning spray. If this does not help, replace the pads and/or rotor (once brake-pad friction material is exposed to brake fluid, it will absorb it and is permanently compromised).
Spongy Foot Pedal	If re-bleeding does not solve this, you may have torn the O-ring in the rear master cylinder. Replace the O-ring and add about 1/4" (6mm) of brake fluid to the reservoir before reinstalling the Rekluse Brake Sleeve and re-bleeding.
During or after riding, lever gets spongy or performance lessens	Likely, a small amount of air was trapped in the Rekluse Master Cylinder after bleeding, and vibrations created during the ride allowed the air to enter the pressurized brake line. To ensure that no air is trapped in the Master Cylinder, re-bleed the system and be sure to top-off the bleed port as described in Stage 5 of the bleeding process.
Squeaky Lever Pivots	Lubricate the pivot joints using either a graphite dry lubricant or white lithium grease.
Worn-out Lever Pivots	If you have worn your pivots to the point that they are loose and/or your lever is sloppy, a replacement lever and pivot kit can be purchased from Rekluse.
Lever Not Returning	Lubricate the Master Cylinder piston and seals using silicone-based grease. Re-bleed the system after reassembly of the master cylinder.

REKLUSE®



Rekluse Motor Sports, Inc.
12000 W Franklin Rd
Boise, Idaho 83709
208-426-0659
customerservice@rekluse.com