

Installing Rear Calipers On 1987 & Up Softail Models

Installing a rear caliper requires the removal of the rear wheel. Using a suit-able lift, raise the motorcycle high enough off the ground to allow you to remove the rear wheel assembly.

Warning

Center the motorcycle on the lift so that it will not fall while you are working on it.

Loosen brake line at caliper.

Photo 1: Remove the stock rear brake caliper, rear wheel and caliper mount per instructions on page 7 — photo 1. Slide the PM caliper mounting bracket onto the lug on the swingarm.

Photo 2: Raise the wheel up into position in the frame, slip the drive belt onto the rear pulley, slide the axle through the swingarm, the caliper mount, the axle spacer, the wheel and the axle spacers that were used on the drive side of the wheel. Next, with the axle adjuster screws loosened up as far as they will go, slide the wheel assembly as far forward as it will go. You need to do this to allow for clearance to install the caliper mounting bolts.

Photo 3: Set the caliper onto the mounting bracket and over the rotor and attach it with two 3/8-16 X 1" button head cap screws; tighten the screws only hand tight at this time. Slide the wheel into its normal operating position, tighten up the axle nut and check the centering of the caliper over the rotor. Measure the caliper's offset from the rotor's centerline and setup the amount of shims needed to correct it. Next loosen the axle nut, slide the axle forward, remove the caliper mounting bolts and insert the shims between the caliper and the caliper mount. Reinstall the caliper mounting bolts with 3/8" star lock washers and tighten the bolts to 25 ft.lbs.

Photo 4: Adjust the wheel, per the service manual so that it is centered in the swingarm and so that the drive belt is correctly tensioned. On the bottom of the caliper mount is a hex head bolt and jam nut that clamps the mount to the lug on the swingarm, tighten this bolt up to 10 ft. lbs. Next, tighten the jam nut onto the caliper mount. This bolt and jam nut takes the place of the rubber stopper used on the stock caliper mount.

Photo 5: Remove the end of the brake line from the stock caliper; you will need a 3/8"12 point socket wrench or box end wrench to remove the banjo bolt from the stock caliper. Attach the end of the brake line to the new PM caliper using the PM supplied seal washers, one washer goes on each side of the banjo fitting; apply a dab of grease to the washers to prevent leaks. Lastly, bleed the brake system as described on page 10.



PHOTO 1



PHOTO 2



PHOTO 3



PHOTO 4



PHOTO 5

Completing The Brake Installation

Attaching The Brake Line

First tape handle bar master lever 1/2 way closed. This will prevent fluid from free flowing from hose. Remove the end of the brake line from the stock caliper; you will need a 3/8" 12 point socket wrench or box end wrench to remove the banjo bolt from the stock caliper. Working rapidly, so that an excessive amount of brake fluid does not run out of the end of the brake hose, attach the end of the brake line to the new PM caliper using the PM supplied seal washers, one washer goes on each side of the banjo fitting; see Photo 1.

_____ Note _____

Position the banjo fitting so that the brake hose does not rub on the front fender or other part of the motorcycle.

Tighten banjo bolt to 10 ft.lbs. of torque.

Bleeding The Brake System

You will find it is easier to bleed the brake system if you have a helper. First, fill the master cylinder with manufactures suggested brake fluid and put the cover back on the master cylinder. Attach a short length of rubber hose to the bleeder screw on the brake caliper, see Photo 2; put the other end of the hose into a coffee can or other suitable catch can. Have your helper pull in on the front brake lever or push down on the rear brake pedal 5 times, see Photo 3. At the end of the 5th stroke, have your helper hold the brake lever in or pedal down. While the helper holds the lever/pedal, open the bleeder fitting on the caliper, you will need a 1/4" end wrench for this. Air and brake fluid should come out of the end of the hose that is connected to the bleeder fitting. After the air and brake fluid have stopped coming out of the hose, close the bleeder fitting; your helper can now release the brake lever/pedal. This action will force the air that is trapped in the brake system out the bleeder screw, because the brake system can contain more air than you can expel in one bleeding; you will need to repeat this procedure more than once. Check the fluid level in the master cylinder after each bleeding, don't let the master cylinder run dry as this will push air back into the brake system which will require the bleeding procedure to be started over again.

_____ Note _____

Do not over tighten the bleeder screw.

Warning

Failing to bleed all the air out of the brake system will impede the performance of the brakes.



PHOTO 1



PHOTO 2



PHOTO 3



COMPLETED FRONT BRAKE CALIPER INSTALLATION