

INSTALLATION INSTRUCTIONS

98-1236

76-Series Master Cylinder

DESCRIPTION

Tilton master cylinders are engineered to provide optimum performance at a moderate cost. The master cylinders are made of lightweight aluminum and have a black anodized coating to prevent wear and corrosion. Tilton master cylinders set the standard for the industry and are a direct replacement for master cylinders that have a 2.25" spaced, 2-bolt mounting pattern.

The 76 Series master cylinders are specifically designed to be assembled with customer-supplied -4AN inlet fittings, hose and remote mount reservoirs. The inlet port is a 7/16-20 thread (-4AN) designed for a crush washer seal. The updated cylinder features dual-outlet ports in a -3AN female taper seat, both at the rear and on the top.

Installation Notes

- A smaller (~4.0 oz) reservoir is recommended for clutch applications and brake systems used in short races where brake pad wear is at a minimum.
- A larger (~7.0 oz) reservoir is recommended for use on brake master cylinders when there is a significant amount of pad wear during an event. The additional reserve capacity can be beneficial in the event of a fluid leak in the system.
- Mount the reservoirs above the calipers to prevent fluid bleed-back from the calipers to the master cylinders.
- Make sure that all of the parts are clean before assembling.

INSTALLATION

Master Cylinder

1. Remove the dust plugs from the master cylinder inlet and outlet ports.
2. The inlet adapter is pre-installed in the master cylinder from Tilton.
If you need to remove the inlet adapter for any reason, the proper torque into the master cylinder body is 25 ft-lb.
3. Select the appropriate inlet fitting for your application and attach the fitting to the inlet adapter.
4. Mount the master cylinder on the vehicle and attach the vehicle brake lines.
5. The master cylinder is shipped with an -AN3 plug installed into the rear outlet.
If use of the rear outlet is desired for your application, the plug can be removed and installed into the top outlet port. In addition, a pressure sensor or bleeder can be installed in place of the plug.

Remote Reservoir

1. Select an appropriately sized remote mount reservoir for your application.
It is recommended that a reservoir with an integral -4AN outlet port is used. Tilton recommends the 3-chamber plastic reservoir (P/N 72-577). Use the reservoir guidelines from the Installation Notes above guidelines for choosing a reservoir size.
2. Determine the location for mounting the remote reservoirs. Be sure to mount the reservoirs above the calipers to prevent fluid bleed-back from the calipers to the master cylinders.
3. Choose a suitable inlet hose which is brake fluid compatible.
4. Be sure that all of the parts are clean before assembling.
5. Install the inlet hose onto the inlet fitting on the master cylinder and onto the outlet fitting of the remote reservoir.

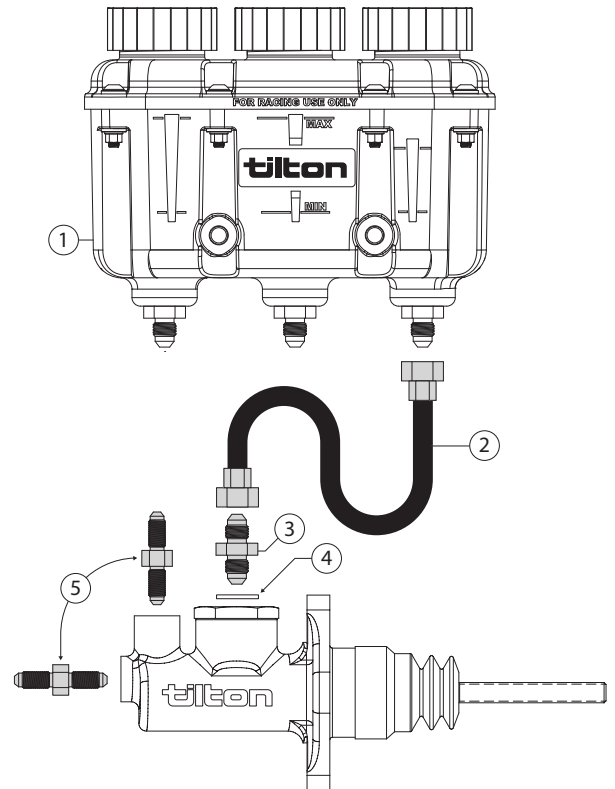
ABS WARNING:

May not be suitable for use with some ABS (anti-lock braking) systems due to the high pressure pulsations that they may send back to the master cylinder, potentially damaging the high-pressure seal.



Typical Plumbing (parts sold separately)

- ① 3-Chamber Reservoir (P/N 72-577)
- ② -AN4 Hose with Female -AN4
- ③ -AN4 Union Fitting or Banjo Fitting
- ④ -AN4 Crush Washer
- ⑤ -AN3 Male Union Fitting or Banjo Fitting



BRAKE BLEEDING

Required Equipment

- Bleeder kit
- Proper wrenches
- An adequate supply of DOT 3 or 4 brake fluid
- If the vehicle has a dual master cylinder brake system then both of the systems must be bled simultaneously. See **Bleeding Order** section for proper order.

Priming Master Cylinder

1. Fill the master cylinder reservoir with brake fluid.
2. Slightly loosen the fitting at the master cylinder.
3. Gently depress and release the brake pedal until fluid emerges.
4. Tighten the fitting.
5. Select the bleeding order that fits your application from **Bleeding Order** section.

Brake Bleeding

1. Fill a clear bottle with enough brake fluid to keep the hose-ends fully submerged.
2. Attach the other end of the plastic bleeder hose to the caliper bleed-screw.
3. Be sure the hoses stay submerged throughout the procedure to prevent sucking air on the return stroke of the pedal.
4. Depress the brake pedal with slow and gentle foot pressure.
5. Open the caliper bleed-screw.
6. Allow the pedal to drop to the fully depressed position.
7. Close the caliper bleed-screw.
8. Allow the pedal to return to the relaxed position.
9. Wait several seconds and then repeat steps 4 through 8 until air has been removed from the system.

MAINTENANCE

The brake system should have the brake fluid replaced and the brake bleeding procedure performed before each event.

MASTER CYLINDER REBUILD KITS

Refer to this table for the appropriate rebuild kit.

BLEEDING ORDER

Fixed calipers, 2 Master Cylinders

1. Front & rear passengers side, inboard
2. Front & rear passengers side, outboard
3. Front & rear drivers side, inboard
4. Front & rear drivers side, outboard

Floating calipers, 2 Master Cylinders

1. Front & rear passengers side
2. Front & rear drivers side

Floating calipers, 1 Master Cylinder

1. Start at the caliper furthest from the master cylinder.
2. Work your way in, bleeding the next closest caliper.

Fixed calipers, 1 Master Cylinder

1. Start at the caliper furthest from the master cylinder. Bleed the inboard side and then the outboard side.
2. Proceed to the next closest caliper.

Upon Completion

After bleeding, minimal brake pedal travel should be observed. Properly bleeding the brakes does not require any power equipment or a massive amount of applied pedal force.

