

New

## MASTER CYLINDERS

Building on decades of experience using reverse engineering to remanufacture brake products, CARDONE engineers have meticulously designed our CARDONE New Master Cylinders to match O.E. performance standards. Supplied with new O.E.-quality seals and cups, each unit is endurance-tested to ensure perfect fit, function and reliable performance.

- New O.E.-quality seals and cups are installed to prevent leakage and ensure like-new performance and reliability. All rubber meets S.A.E. specifications.
- A bleeding kit is supplied to make the bleeding process faster and easier (where applicable).
- Bores meet critical micro-finish specifications to eliminate pitting and corrosion, which could cause premature failure.
- Cast-iron master cylinders feature a premium protective coating to minimize rust, extending on-car and on-shelf life.
- Piston assemblies are height-gauged to meet O.E. performance (where applicable).
- Plastic reservoirs are vacuum-tested to ensure proper function (where applicable).

### Good Maintenance Practices

- To ensure proper brake system performance, it is advised that brake fluid and hoses be inspected every 10,000 - 15,000 miles. Refer to a vehicle specific service manual for fluid replacement intervals. Most manufacturers recommend replacing the fluid every 2 years.

- Product Description
- Features and Benefits
- Good Maintenance Practices
- Signs of Wear and Troubleshooting
- FAQs



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Tech Service: 888-280-8324

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## Signs of Wear and Troubleshooting

- Brake warning light illuminated
- Check engine light illuminated on modern vehicles
- Inoperable brake pedal
- Abnormal brake pedal feedback
- Brake pedal slowly travels to the floor
- Excessive pedal travel
- Contaminated fluid
- Leaks

## FAQs

### What type of fluid should I use: DOT 3, DOT 4 or DOT 5?

- As a rule, always use the brake fluid recommended by the O.E. which is stamped on the master cylinder lid. Note: Always use new fluid from a sealed container.

### What's the difference between Dot 3, 4 and 5?

- Dot 3 and 4 are Glycol-based fluids and Dot 5 is a silicone-based fluid.

### Does a step bore style master cylinder require a specific bleeding process?

- The first step to bench bleeding a step bore is to slowly depress the master cylinder piston, then release slowly and wait 20 seconds before depressing again. NEVER pump piston/pedal with a step bore style master cylinder. Follow the same process on the vehicle.

### My original master cylinder leaked out of the back of the piston into the booster area. Why?

- Check booster for a defective push rod seal. If this seal is bad, it could drain the brake fluid out of the master cylinder.

### I replaced the master cylinder and now the pedal is high and hard. Why?

- The master cylinder is working correctly. Check for a faulty brake booster or frozen wheel cylinder/caliper.

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## **The brake pedal is low and spongy. Is it a bad master cylinder?**

- First, check for air in the system. Make sure master cylinder is level when bleeding. Air will compress in a hydraulic system causing a low pedal. Then, check for brake hose swelling or expanding under pressure. Next, check brake drums/discs for proper specifications. Finally, check brake material.

## **One side of my front brakes won't release, why?**

- This is caused by a problem with the caliper or a brake hose.

## **What causes the car to pull to one side during braking?**

- Check the steering and suspension. Inspect both calipers for binding or sticky slides or pins. Check brake lining for oil/grease or uneven wear. Inspect brake hoses for restriction. Check for proper tire pressure.

## **What causes the brakes to lock up after only a couple of miles?**

- Replace all brake fluid. Brake fluid is hygroscopic which means it absorbs moisture. Too much water in brake fluid will cause vapor lock and apply pressure to the wheels. Also check for proper push rod adjustments and stop light/cruise control switch adjustments.

## **Why is the piston stuck inside the bore of my master cylinder?**

- Most likely, the fluid in the system is contaminated. The most common form of contamination occurs when petroleum-based fluid has been accidentally introduced into the brake system. If that has happened it is almost certain that all rubber components in the brake system (hoses, seals, bladders) will need to be replaced after the system is thoroughly flushed. If the contamination is due to moisture, rust and/or dirt, it might be possible to restore operation by flushing the system and replacing the brake fluid with fresh, clean fluid. Always use the manufacturer-recommended brake fluid from a sealed container.

## **How can I test a master cylinder to see if it's bypassing?**

- Simply plug the master cylinder ports and press the brake pedal. If the master cylinder is bypassing, the pedal will go down. If the pedal stops hard, the master cylinder is OK.

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