

Speedway Motors 10410564

Speedway Motors Compact Electric Power Disc Brake Master Cylinder and Booster

Model: 10410564

Brand: Speedway Motors

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your Speedway Motors Compact Electric Power Disc Brake Master Cylinder and Booster. This system is designed to provide reliable power braking for vehicles, particularly those with engines that produce low vacuum or are equipped with boosted applications. Please read this manual thoroughly before beginning any installation or operation to ensure safety and optimal performance.

2. PRODUCT OVERVIEW AND FEATURES

The Speedway Motors Compact Electric Power Disc Brake Master Cylinder and Booster system offers a modern solution for enhancing braking performance. It integrates an electric power brake booster with a compact master cylinder, providing significant stopping power without relying on engine vacuum.

Key Features:

- **Enhanced Braking:** Provides power brakes for engines with large cams, low vacuum, or boosted applications.
- **Remote Mounting:** The 12-volt electric power brake booster unit can be remotely mounted below the master cylinder level, allowing for a cleaner firewall appearance.
- **Compact Design:** The master cylinder's small size allows for flexible installation on the firewall, under the dash, or under the floor.
- **Disc Brake Compatibility:** Features a 1 3/16" bore master cylinder suitable for disc front and rear brake systems.
- **Wide Caliper Support:** Compatible with various brake calipers, including 4-piston and 6-piston designs.
- **High Pressure Output:** Capable of delivering up to 2000 psi of fluid pressure to the brake calipers, matching or exceeding most vacuum-boosted systems.



Figure 1: Speedway Motors Compact Electric Power Disc Brake Master Cylinder and Booster components.



COMPATIBILITY

1 3/16" bore master cylinder is for use with disc front and rear brake systems and is compatible with nearly any brake caliper from stock to aftermarket including 4 piston and 6 piston calipers

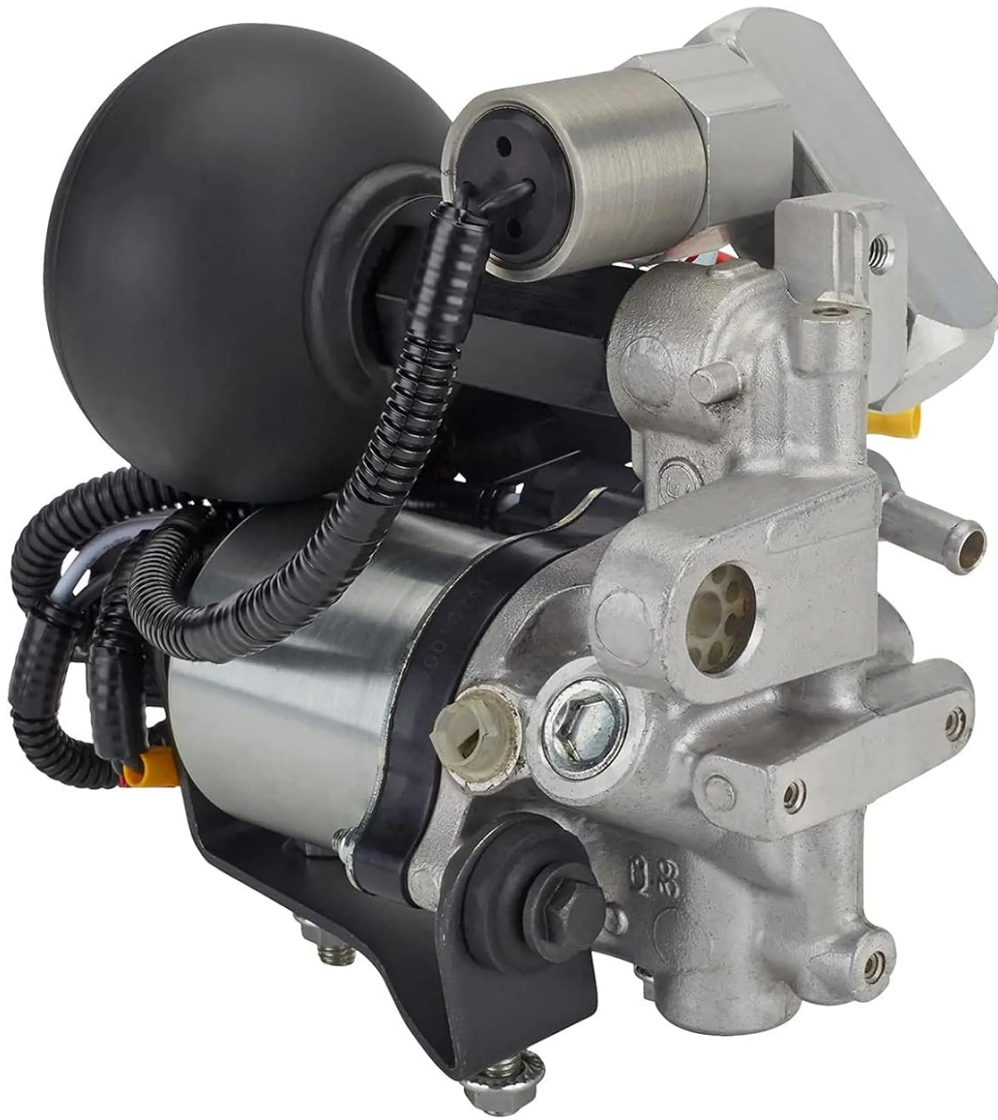
Figure 2: The 1 3/16" bore master cylinder is compatible with various disc brake calipers.



COMPACT DESIGN

Master cylinder size is small enough that it can be located on the firewall, under the dash, or under the floor which provides you with a variety of options for installation

Figure 3: The compact design of the master cylinder allows for versatile installation locations.

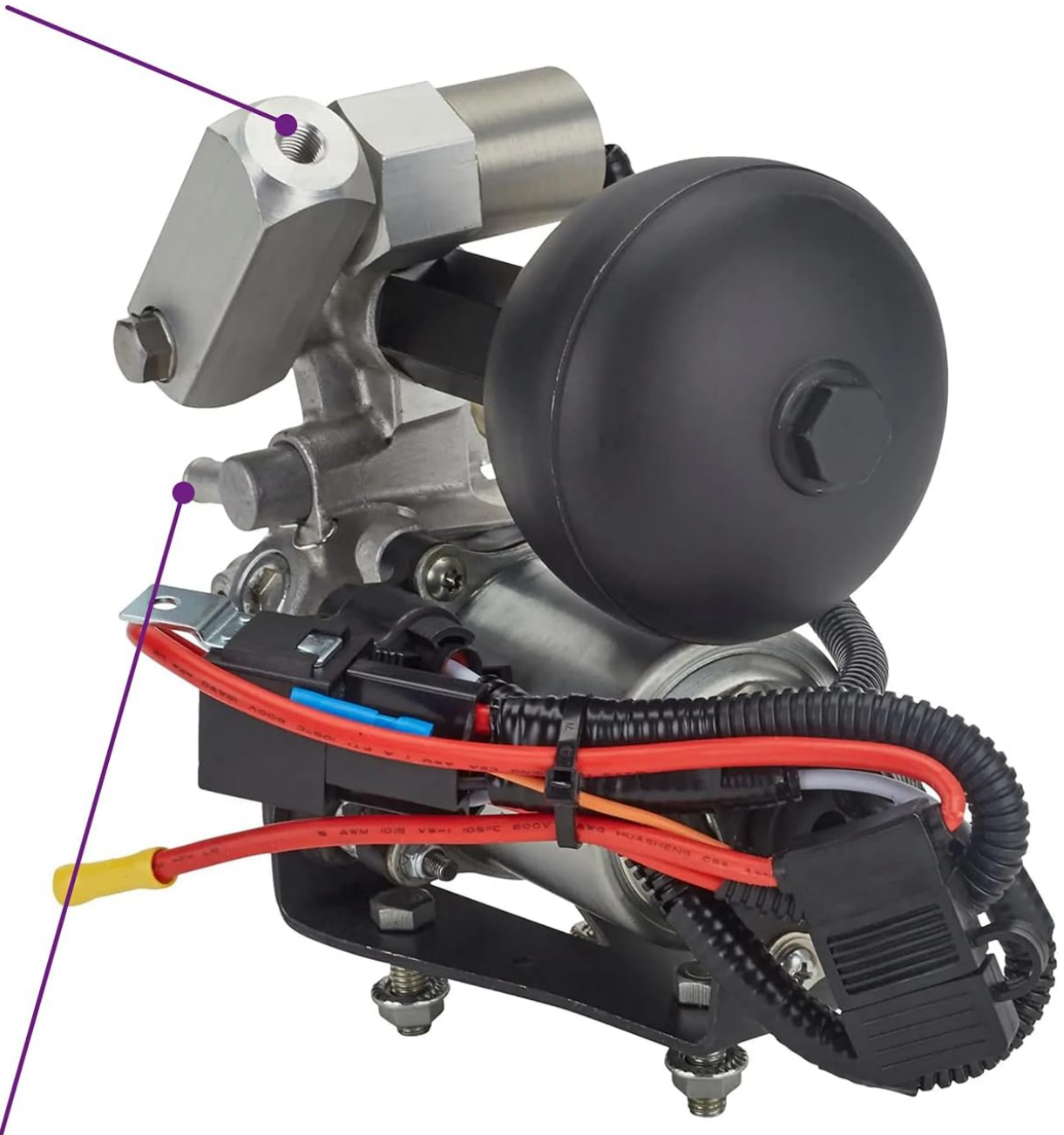


ELECTRIC POWER BOOSTER

12 volt electric power booster unit can be remote mounted anywhere below the level of the master cylinder and will clean up the firewall appearance on your car

Figure 4: The electric power booster unit provides consistent brake pressure.

3/8"-24 IFF High Pressure Outlet



3/8" Hose Barb Low Pressure Inlet

Figure 5: Detailed view of the electric power booster showing the 3/8"-24 IFF High Pressure Outlet and 3/8" Hose Barb Low Pressure Inlet.

3. SAFETY INFORMATION

Working on vehicle brake systems requires caution and proper procedures. Failure to follow safety guidelines can result in serious injury or damage to your vehicle.

- Always disconnect the vehicle's battery before performing any electrical work.
- Wear appropriate personal protective equipment (PPE), including safety glasses and gloves.
- Ensure the vehicle is securely supported on jack stands before working underneath it.
- Brake fluid is corrosive. Avoid contact with skin, eyes, and painted surfaces. Clean up spills immediately.
- If you are unsure about any part of the installation process, consult a qualified automotive technician.
- Proper bleeding of the brake system is critical for safe operation. Ensure all air is removed from the lines.

4. INSTALLATION

The installation of the electric power brake master cylinder and booster requires mechanical and electrical knowledge. It is recommended to have a service manual for your specific vehicle model.

4.1 Mounting the Master Cylinder

The master cylinder is designed for compact installation. It can be mounted on the firewall, under the dash, or under the floor, depending on your vehicle's configuration and available space. Ensure the mounting surface is strong enough to support the unit and withstand braking forces.

1. Select a mounting location that allows for easy access for fluid checks and maintenance.
2. Ensure adequate clearance for brake lines and the pushrod connection to the pedal.
3. Secure the master cylinder using appropriate hardware, ensuring a stable and rigid mount.

4.2 Mounting the Electric Power Booster

The 12-volt electric power brake booster unit is designed for remote mounting. It must be mounted at a level lower than the master cylinder to facilitate proper fluid flow and bleeding. The compact size of the booster unit (under 7 inches long, 6-1/4 inches high, and 4-1/4 inches wide) offers flexibility in placement.

1. Choose a location that is protected from excessive heat, moisture, and road debris.
2. Ensure the booster is mounted securely to prevent movement during vehicle operation.
3. Route the high-pressure and low-pressure lines from the booster to the master cylinder, ensuring they are not kinked or exposed to sharp edges.

4.3 Brake Line Connections

Connect the brake lines from the master cylinder to the vehicle's brake system. Ensure all connections are tight and free of leaks. The master cylinder is designed for disc front and rear brake systems.

4.4 Electrical Connections

Connect the 12-volt electric power brake booster to a fused, switched 12-volt power source. Ensure the wiring is of appropriate gauge for the current draw and protected from heat and abrasion. Consult the wiring diagram provided with your specific unit for detailed connections.

5. SETUP

5.1 Brake Fluid

Use only DOT 3 or DOT 4 brake fluid as specified by your vehicle manufacturer. Do not mix different types of brake fluid. Fill the master cylinder reservoir to the maximum fill line.

5.2 Bleeding the Brake System

Properly bleeding the brake system is crucial for safe operation. Air in the brake lines will result in a spongy pedal and reduced braking effectiveness.

1. Begin bleeding at the wheel furthest from the master cylinder and work your way to the closest.
2. Follow standard brake bleeding procedures, ensuring no air bubbles are present in the fluid exiting the bleed screws.
3. Maintain the brake fluid level in the master cylinder reservoir throughout the bleeding process.

6. OPERATING INSTRUCTIONS

Once installed and bled, the electric power brake system operates automatically. When the brake pedal is depressed, the electric booster activates to provide hydraulic pressure assist, reducing the effort required to stop the vehicle.

- The brake pedal should feel firm and consistent.
- Any unusual noises, vibrations, or changes in pedal feel should be investigated immediately.

7. MAINTENANCE

Regular maintenance ensures the longevity and safe operation of your electric power brake system.

- **Brake Fluid Level:** Check the brake fluid level in the master cylinder reservoir regularly (e.g., every oil change). Top off with the correct type of fluid if necessary.
- **Fluid Condition:** Inspect brake fluid for discoloration or contamination. If the fluid appears dark or murky, it may be time for a brake fluid flush.
- **Leak Inspection:** Periodically inspect all brake lines, connections, and the master cylinder/booster unit for any signs of leaks. Address any leaks immediately.
- **Component Integrity:** Check mounting hardware for tightness and inspect the booster and master cylinder for any physical damage or corrosion.

8. TROUBLESHOOTING

This section addresses common issues you might encounter with your electric power brake system.

8.1 Soft or Spongy Brake Pedal

- **Possible Cause:** Air in the brake lines.
- **Solution:** Re-bleed the entire brake system thoroughly.
- **Possible Cause:** Low brake fluid level.
- **Solution:** Check and top off brake fluid. Inspect for leaks.

8.2 Hard Brake Pedal (Lack of Power Assist)

- **Possible Cause:** Electrical issue with the electric booster (no power, faulty motor).
- **Solution:** Check electrical connections, fuse, and power supply to the booster. Test the booster motor if possible.
- **Possible Cause:** Faulty electric booster unit.
- **Solution:** Consult a professional for diagnosis and potential replacement.

8.3 Brake Fluid Leaks

- **Possible Cause:** Loose fittings or damaged brake lines.
- **Solution:** Inspect all connections and lines. Tighten loose fittings or replace damaged components.
- **Possible Cause:** Faulty master cylinder or booster seals.
- **Solution:** Professional diagnosis and repair or replacement may be necessary.

9. SPECIFICATIONS

Specification	Value
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Model Number	10410564
Master Cylinder Bore Size	1 3/16 inches
Maximum Fluid Pressure Output	Up to 2000 psi
Operating Voltage	12 Volts
Master Cylinder Dimensions (L x W x H)	9-1/4 x 3-3/8 x 4-1/8 inches
Booster Unit Dimensions (L x H x W)	Under 7 x 6-1/4 x 4-1/4 inches
Recommended Brake Fluid	DOT 3 or DOT 4

10. WARRANTY AND SUPPORT

For specific warranty information and technical support regarding your Speedway Motors Compact Electric Power Disc Brake Master Cylinder and Booster, please refer to the documentation included with your purchase or contact Speedway Motors directly. Keep your proof of purchase for warranty claims.

Speedway Motors Contact Information: Please visit the official Speedway Motors website or refer to your product packaging for the most current contact details.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Answered questions about this manual

Why is my brake pedal hard and lacking power assist on the Speedway Motors 10410564 Compact Electric Power Brake system?

According to the troubleshooting guide for the Speedway Motors 10410564, a hard brake pedal typically indicates a lack of power assist. Since you mentioned the motor appears to be functioning, please check the following:Electrical...

[Read full answer](#)

Why is my Speedway Motors 10410564 Compact Electric Power Brake Master Cylinder ejecting oil through the small hole in the cover?

If your Speedway Motors 10410564 master cylinder is ejecting brake fluid (oil) through the small vent hole in the cover, it typically indicates one of the following issues:Overfilled Reservoir: If the reservoir is filled...

[Read full answer](#)