

General Motors 52458184

General Motors GM Valve 52458184 Instruction Manual

1. INTRODUCTION

This manual provides essential information for the proper handling, installation, operation, and maintenance of the General Motors GM Valve, part number 52458184. This component is a genuine General Motors replacement part designed to meet original equipment specifications for various vehicle applications. Please read this manual thoroughly before attempting any installation or service.

2. SAFETY INFORMATION

WARNING: Improper installation or handling of automotive components can lead to serious injury or vehicle damage. Always follow safety precautions.

- Always wear appropriate personal protective equipment (PPE), including safety glasses and gloves, when working on vehicles.
- Ensure the vehicle is safely supported on jack stands or a lift before working underneath it.
- Disconnect the vehicle's battery before beginning any electrical work or component replacement to prevent accidental activation or short circuits.
- Refer to the vehicle's specific service manual for detailed instructions and torque specifications relevant to your model.
- If you are not confident in your ability to perform the installation, seek assistance from a qualified automotive technician.

3. PRODUCT OVERVIEW

The GM Valve 52458184 is an original equipment replacement part manufactured by General Motors. It is designed for use in various automotive systems, primarily within the air conditioning and engine cooling systems, depending on the specific vehicle application. This valve is constructed from durable steel or iron, ensuring longevity and reliable performance.

This valve is compatible with a wide range of GM vehicles and engine configurations across various model years.

Specific applications include, but are not limited to, models with 2.0L, 2.2L, 2.4L, 2.5L, 2.8L, 2.9L, 3.4L, 3.5L, 3.6L, 3.7L, 3.8L, 3.9L, 4.3L, 4.8L, 5.3L, 5.7L, 6.0L, 6.2L, 6.6L, and 7.0L engines, spanning model years from 1993 to 2017. It serves as a critical component in regulating fluid or refrigerant flow within its designated system.



Figure 1: General Motors GM Valve 52458184. This image displays the compact, metallic construction of the valve, featuring threaded inlet and outlet connections for secure integration into a vehicle's system.

4. INSTALLATION

Installation of the GM Valve 52458184 requires mechanical aptitude and specific tools. It is highly recommended that installation be performed by a certified automotive technician.

1. **Preparation:** Ensure the vehicle's engine is cool and the ignition is off. Disconnect the negative terminal of the battery. Identify the location of the valve to be replaced.
2. **System Depressurization (if applicable):** If the valve is part of a pressurized system (e.g., A/C refrigerant or cooling system), safely depressurize the system according to the vehicle manufacturer's service manual. This may involve recovering refrigerant or draining coolant.
3. **Removal of Old Valve:** Carefully disconnect any lines or hoses attached to the old valve. Use appropriate wrenches to loosen and remove the old valve. Be prepared for residual fluid leakage.
4. **Inspection:** Inspect the surrounding area, connections, and seals for any damage or wear. Clean mating surfaces thoroughly.
5. **Installation of New Valve:** Apply a suitable thread sealant or lubricant (if recommended by the vehicle manufacturer) to the threaded connections of the new GM Valve 52458184. Install the new valve, ensuring it is correctly oriented.
6. **Tightening:** Tighten the valve connections to the vehicle manufacturer's specified torque values. Overtightening can damage the valve or connections, while undertightening can lead to leaks.
7. **Reconnection:** Reconnect any lines, hoses, or electrical connectors that were removed.
8. **System Recharge/Refill:** If the system was depressurized or drained, recharge or refill it according to the vehicle manufacturer's specifications.
9. **Leak Check:** Perform a thorough leak check using appropriate methods (e.g., leak detector for A/C systems, visual inspection for fluid systems).
10. **Final Steps:** Reconnect the battery. Start the vehicle and check for proper system operation and any warning lights.

5. OPERATION

The GM Valve 52458184 functions as a ball valve within its respective automotive system. Its primary role is to control the flow of fluids or refrigerants. When installed correctly, the valve operates automatically as part of the vehicle's system, responding to commands from the vehicle's control unit or pressure differentials to regulate flow as

needed. Users do not typically interact directly with the valve's operation; its function is integral to the overall system performance, such as maintaining optimal air conditioning pressure or coolant flow.

6. MAINTENANCE

The GM Valve 52458184 is designed to be a maintenance-free component. Regular maintenance of the vehicle's overall system (e.g., A/C system checks, coolant flushes) will help ensure the longevity and proper function of all components, including this valve. Periodically inspect the valve and its connections for any signs of leakage, corrosion, or physical damage. Address any issues promptly to prevent further system damage.

7. TROUBLESHOOTING

If you suspect an issue with the GM Valve 52458184, consider the following general troubleshooting steps. Note that diagnosing specific valve failures often requires specialized tools and expertise.

- **Leaks:** If fluid or refrigerant leaks are detected around the valve, re-check the tightness of connections and the condition of seals. If leaks persist, the valve or its seals may be faulty and require replacement.
- **System Malfunction:** If the vehicle's system (e.g., A/C not cooling, engine overheating) is not performing correctly, the valve might be stuck open or closed, or not regulating flow properly. This often requires diagnostic testing by a qualified technician to confirm valve failure versus other system component issues.
- **Unusual Noises:** While rare for a ball valve, unusual noises could indicate internal damage or improper flow.

Always consult a professional automotive technician for accurate diagnosis and repair of complex automotive system issues.

8. SPECIFICATIONS

Specification	Detail
Brand	General Motors
Model Number	52458184
Material	Steel or Iron
Exterior Finish	Steel or Iron
Valve Type	Ball Valve
Number of Ports	1
Inlet Connection Type	Threaded Connection
Inlet Connection Size	1 inch
Outlet Connection Type	Threaded Connection
Outlet Connection Size	1 inch
Thread Type	Standard
Thread Size	1 inch
Connector Type	Threaded
Item Dimensions (L x W x H)	10 x 7 x 2 inches
Item Weight	4.54 g
Unit Count	1 Count

9. WARRANTY AND SUPPORT

For warranty information regarding your General Motors GM Valve 52458184, please refer to the official General Motors warranty documentation provided with your vehicle or contact an authorized General Motors dealership. Support for this genuine GM part is typically provided through authorized service centers and dealerships.

ASK A QUESTION ABOUT THIS MANUAL

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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.

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