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Gates 22227

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MODEL: 22227

Introduction

This manual provides essential information for the proper installation, operation, and maintenance of your Gates 22227 Premium Molded Coolant Hose. This hose is designed to meet OEM-quality specifications for various coolant applications, including upper, lower, bypass, and heater connections. Adhering to these instructions will help ensure optimal performance and longevity of your vehicle's cooling system.



Image: Gates 22227 Premium Molded Coolant Hose, a black, curved rubber hose designed for vehicle cooling systems.

Product Features

- Specifically-engineered materials resist collapse under vacuum.
- Engineered to resist electrochemical degradation, a primary cause of hose failure.
- Pre-shaped to fit specific applications, ensuring perfectly sealed conditions.
- Constructed with an EPDM tube, synthetic fiber knit reinforcement, and a heat-, ozone-, and chemical coolant-resistant EPDM cover.
- Meets requirements of SAE 20R4, class D2 and DIN 73411, class A (except for tolerances).

Setup and Installation

Installation of coolant hoses requires careful attention to detail and adherence to safety protocols. It is recommended that installation be performed by a qualified automotive technician. Always consult your vehicle's specific service manual for detailed instructions and torque specifications.

1. **Safety First:** Ensure the engine is cool and the vehicle is securely supported on jack stands. Disconnect the battery's negative terminal.
2. **Drain Coolant:** Place a suitable drain pan under the radiator and open the drain cock to completely drain the cooling system.
3. **Remove Old Hose:** Loosen the clamps securing the old coolant hose. Carefully remove the hose, being mindful of any remaining coolant.
4. **Inspect Connections:** Clean the connection points on the radiator and engine block. Inspect for corrosion or damage.
5. **Install New Hose:** Position the Gates 22227 hose, ensuring it is properly seated without kinks or twists. Secure with new hose clamps, tightening to the manufacturer's specifications.
6. **Refill Coolant:** Close the radiator drain cock. Refill the cooling system with the appropriate type and amount of coolant as specified in your vehicle's manual.
7. **Bleed Air:** Start the engine and allow it to reach operating temperature with the heater on high. Monitor the coolant level and add more as needed to remove any trapped air.
8. **Check for Leaks:** After the engine has cooled, recheck the coolant level and inspect all connections for leaks.

Video: "Protect the Ride - Don't Forget Your Coolant Hoses" by Gates US Auto. This video emphasizes the importance of regularly checking and replacing coolant hoses as part of preventative maintenance.

Operating Principles

The Gates 22227 Premium Molded Coolant Hose is a critical component of your vehicle's cooling system, which is responsible for regulating engine temperature. Modern vehicle engines operate most efficiently around 200°F (93°C). The cooling system, comprising the water pump, thermostat, radiator, and coolant hoses, works in unison to quickly bring the engine to its optimal operating temperature and maintain it.

Coolant hoses facilitate the flow of coolant between the engine and the radiator. The upper hose typically carries hot coolant from the engine to the radiator for cooling, while the lower hose returns the cooled fluid to the engine. Any failure in these hoses can disrupt coolant flow, leading to engine overheating and potential damage.

Video: "Protect the Ride - Properly Maintain Your Cooling System" by Gates US Auto. This video explains how the cooling system components, including hoses, work together to maintain optimal engine temperature.

Maintenance

Regular inspection and timely replacement of coolant hoses are crucial for preventing cooling system failures. Hoses are subjected to extreme temperatures, pressure, and vibrations, which can cause them to degrade over time. It is recommended to inspect your coolant hoses periodically for signs of wear, such as:

- Cracks or splits in the rubber.
- Hardening or softening of the hose material.
- Bulges or swelling.
- Leaks around the clamps or along the hose body.
- Fraying or damage to the outer cover.

Many manufacturers recommend replacing coolant hoses at specific mileage intervals, often around 90,000 to 120,000

miles, or every 5-7 years, even if they appear to be in good condition. This preventative measure helps avoid unexpected breakdowns.

Video: "Protect the Ride - Your High Mileage Vehicle" by Gates US Auto. This video highlights the importance of maintenance at high mileage intervals, including checking coolant hoses.

Troubleshooting

If you experience issues with your vehicle's cooling system, such as overheating or coolant leaks, the coolant hoses may be a contributing factor. Here are some common troubleshooting steps:

- **Coolant Leak:** Visually inspect all hoses and connections for drips or wet spots. A puddle under your vehicle often indicates a leak.
- **Collapsed Hose:** A hose that appears flattened or sucked inward when the engine is cool may indicate a vacuum issue or internal damage.
- **Swollen or Bulging Hose:** This can be a sign of internal pressure buildup or material degradation, indicating the hose is failing.
- **Overheating Engine:** While many factors can cause overheating, a failing coolant hose restricting flow or leaking coolant is a common culprit.

If any of these symptoms are observed, it is crucial to address them promptly to prevent further engine damage. Replace any damaged hoses immediately. If you are unsure about the cause of a cooling system problem, consult a professional technician.

Specifications

Specification	Detail
Brand	Gates
Model	Premium Molded Coolant Hose
Item Model Number	22227
Manufacturer Part Number	22227
OEM Part Number	4682394
Material	EPDM, Synthetic Fiber
Item Weight	9.4 ounces (0.59 Pounds)
UPC	072053199741

Warranty Information

Gates products are manufactured to high-quality standards. For specific warranty details regarding your Gates 22227 Premium Molded Coolant Hose, please refer to the warranty documentation included with your purchase or visit the official Gates website. Keep your proof of purchase for any warranty claims.

Support and Contact

For technical assistance, product inquiries, or to locate authorized Gates distributors, please visit the official Gates website or contact their customer support. You can also utilize the Gates NaviGates app for quick access to part numbers

and product solutions.

Video: "Introducing NaviGates - An Online and App Based Catalog" by Gates US Auto. This video introduces the NaviGates app, a tool for finding Gates parts and product information.

