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ACDelco D580

ACDelco GM Original Equipment D580 (12558948) Ignition Coil Instruction Manual

Model: D580 (12558948)

1. PRODUCT OVERVIEW

The ACDelco GM Original Equipment D580 (12558948) Ignition Coil is a critical component in your vehicle's ignition system. It transforms the battery's low voltage into the thousands of volts required to create an electric spark in the spark plugs, igniting the fuel-air mixture in the engine's cylinders. This process is essential for starting and running the engine efficiently.



Figure 1: ACDelco D580 Ignition Coil, a key component for engine ignition.

2. KEY FEATURES

- **GM Original Equipment:** Designed, engineered, and tested to rigorous standards, ensuring optimal performance and reliability.
- **High-Quality Construction:** Manufactured with durable materials to withstand the harsh engine environment.
- **Efficient Spark Delivery:** Engineered to provide consistent and strong spark energy for efficient combustion.
- **Vehicle Specific Fit:** Ensures precise fitment and function for compatible vehicle models.

3. COMPATIBILITY

This ignition coil is designed for specific vehicle applications. Always verify compatibility with your vehicle's make, model, and year before installation. Refer to your vehicle's service manual or consult a qualified technician for precise fitment information.

OEM Part Number: 12558948

Vehicle Service Type: Car

4. INSTALLATION INSTRUCTIONS

Safety First: Always disconnect the vehicle's battery before performing any maintenance or installation. Wear appropriate safety gear, including gloves and eye protection. If you are unsure about any step, consult a professional mechanic.

- 1. Locate the Ignition Coils:** Identify the ignition coils on your engine. Their location can vary by vehicle model.
- 2. Disconnect Electrical Connector:** Carefully disconnect the electrical connector from the ignition coil by pressing the release tab and pulling.
- 3. Remove Mounting Bolts:** Use the appropriate wrench or socket to remove any mounting bolts securing the ignition coil.
- 4. Remove Old Coil:** Gently pull the old ignition coil straight up to remove it from the spark plug well. Inspect the spark plug and spark plug well for any oil, coolant, or debris.
- 5. Install New Coil:** Insert the new ACDelco D580 Ignition Coil into the spark plug well, ensuring it seats properly.
- 6. Secure Mounting Bolts:** Reinstall and tighten the mounting bolts to the manufacturer's specified torque.
- 7. Reconnect Electrical Connector:** Reconnect the electrical connector until it clicks into place.
- 8. Repeat for All Coils:** If replacing multiple coils, repeat these steps for each one.
- 9. Reconnect Battery:** Reconnect the vehicle's battery.
- 10. Test Operation:** Start the engine and check for proper operation and any diagnostic trouble codes.



Figure 2: Side view and electrical connector of the ACDelco D580 Ignition Coil, showing key features for installation.

5. OPERATING PRINCIPLES

The ignition coil operates by using electromagnetic induction to generate high voltage. When the engine's computer (ECM) sends a signal, current flows through the coil's primary winding, creating a magnetic field. When the current is interrupted, the magnetic field collapses, inducing a much higher voltage in the secondary winding. This high

voltage is then sent to the spark plug, creating the spark necessary for combustion. A properly functioning ignition coil ensures consistent spark delivery, contributing to smooth engine operation, optimal fuel efficiency, and reduced emissions.

6. MAINTENANCE

Ignition coils are generally maintenance-free components. However, regular inspection of your vehicle's ignition system can help identify potential issues early:

- **Inspect Spark Plugs:** Replace spark plugs according to your vehicle manufacturer's recommendations. Worn spark plugs can put additional strain on ignition coils.
- **Check Electrical Connections:** Periodically inspect the electrical connectors to the ignition coils for corrosion or looseness.
- **Monitor Engine Performance:** Pay attention to any changes in engine performance, such as misfires, rough idle, or decreased fuel economy, which could indicate an issue with an ignition coil.

7. TROUBLESHOOTING

If you experience issues with your vehicle's ignition system, consider the following common symptoms and potential solutions:

Symptom	Possible Cause	Solution
Engine Misfire / Rough Idle	Faulty ignition coil, worn spark plug, or wiring issue.	Inspect and test ignition coils and spark plugs. Replace as needed. Check wiring for damage.
Check Engine Light (CEL)	Diagnostic Trouble Code (DTC) related to ignition system.	Scan for DTCs using an OBD-II scanner. Address the specific code.
Decreased Fuel Economy	Inefficient combustion due to weak spark.	Ensure all ignition components (coils, plugs) are functioning correctly.
Hard Starting	Insufficient spark to ignite fuel.	Check battery, starter, and ignition system components.

For persistent issues, it is recommended to seek assistance from a certified automotive technician.

8. SPECIFICATIONS

- **Brand:** ACDelco
- **Model:** D580
- **OEM Part Number:** 12558948
- **Item Weight:** 0.71 Pounds (approx. 11.4 ounces)
- **Product Dimensions (L x W x H):** 4.2 x 4.1 x 2.1 inches
- **Connector Gender:** Male
- **Automotive Fit Type:** Vehicle Specific Fit
- **UPC:** 036666874921

9. WARRANTY AND SUPPORT

ACDelco GM Original Equipment parts are backed by a 24 Month / Unlimited Mile Limited Warranty. For specific

warranty details and terms, please refer to the official ACDelco warranty documentation or visit the ACDelco website. For technical support or further assistance, please contact ACDelco customer service or consult an authorized service center.

For more information, visit the official [ACDelco Store](#).