

2005 Ford Focus ZX5 S**2005 ELECTRICAL Battery Mounting And Cables - Focus****2005 ELECTRICAL****Battery Mounting And Cables - Focus****SPECIFICATIONS****GENERAL SPECIFICATIONS****GENERAL SPECIFICATIONS**

Item	Specification
Battery	
Voltage	12 volts
Cold cranking amps	500 CCA (standard)
Cold cranking amps	590 CCA (optional)
Battery amps rating	52 amp/hr (standard)
Battery amps rating	60 amp/hr (optional)

TORQUE SPECIFICATIONS**TORQUE SPECIFICATIONS**

Description	Nm	lb-ft	lb-in
Auxiliary battery terminal nut	5	-	44
Battery cable bracket nuts	9	-	80
Battery cable terminal nut	5	-	44
Battery hold down clamp bolt	12	9	-
Battery tray nuts and bolt	12	9	-
Body ground cable bolt	12	9	-
Engine ground cable bolt (2.0L/2.3L)	47	35	-
Generator B+ terminal nut	8	-	71
Starter motor B+ terminal nut	12	9	-
Starter motor solenoid terminal nut	6	-	53

DESCRIPTION AND OPERATION

BATTERY AND CABLES

Vehicles are equipped with a 12-volt maintenance-free battery.

The battery and cable system consists of the following components:

- Battery
- Battery cable assembly
- Battery tray

Ford Motor Company strongly recommends that lead-acid batteries be returned to an authorized recycling facility for disposal.



A0003971

Fig. 1: Identifying Lead Acid Battery Recycling Label
Courtesy of FORD MOTOR CO.

DIAGNOSIS AND TESTING

BATTERY

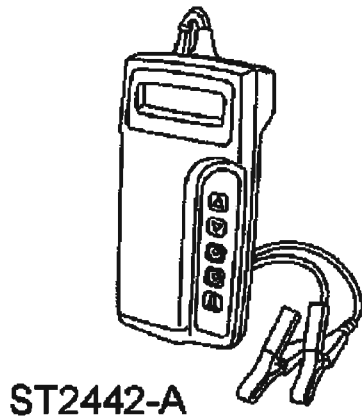
Special Tool(s)

SPECIAL TOOLS DESCRIPTION

	Micro 490 Digital Battery Analyzer 162-00004
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2005 Ford Focus ZX5 S

2005 ELECTRICAL Battery Mounting And Cables - Focus



Inspection and Verification

1. Verify the customer concern by operating the system.
2. Visually inspect for obvious signs of mechanical or electrical damage.

VISUAL INSPECTION CHART

Mechanical	Electrical
<ul style="list-style-type: none">• Battery• Battery mounting	<ul style="list-style-type: none">• Battery cables• Battery posts

3. If an obvious cause for a concern is found, correct the cause before proceeding to the next step.
4. If the fault is not visually evident, proceed to the pinpoint test.

Pinpoint Tests

PINPOINT TEST A: BATTERY CONDITION TEST

A1 TEST BATTERY CONDITION

NOTE: No battery with a red test-eye should be replaced. The red eye only means the battery is discharged, not necessarily defective.

NOTE: Failure to fully charge the battery before retesting may cause false readings.

- Verify the battery condition using the Battery Analyzer.
- Is the battery OK?

Yes : Does the meter read, GOOD BATTERY? RETURN the battery to service.

REFER to **CHARGING SYSTEM - GENERAL INFORMATION** .

Does the meter read, GOOD-RECHARGE? CHARGE the battery and RETURN to service. REFER to **CHARGING SYSTEM - GENERAL INFORMATION** .

Does the meter read, CHARGE & RETEST? Fully CHARGE the battery and RETEST.

No : Does the meter read, REPLACE BATTERY? INSTALL a new battery.

Does the meter read, BAD CELL-REPLACE? INSTALL a new battery.

GENERAL PROCEDURES

BATTERY DISCONNECT

WARNING: Batteries normally produce explosive gases. Therefore, do not allow flames, sparks, or lighted substances to come near the battery. When charging or working near a battery, always shield your face and protect your eyes. Always provide adequate ventilation. Failure to follow these instructions may result in personal injury.

WARNING: To avoid accidental deployment and possible injury, the backup power supply must be depleted before repairing or installing any front or side air bag supplemental restraint system (SRS) components and before repairing, installing, adjusting or striking components near the front or side air bag sensors, such as the doors, instrument panel, console, door latches, strikers, seats and hood latches. Failure to follow these procedures may result in personal injury. Refer to the **AIR BAG AND SAFETY BELT PRETENSIONER SUPPLEMENTAL RESTRAINT SYSTEM (SRS)** to determine the location of the front air bag sensors. To deplete the backup power supply energy, disconnect the battery ground cable and wait at least one minute. Be sure to disconnect auxiliary batteries and power supplies (if equipped). Failure to follow these instructions may result in personal injury.

WARNING: Keep batteries out of the reach of children. Batteries contain sulfuric acid. Avoid contact with skin, eyes or clothing. Also, shield your eyes when working near the battery to protect against possible splashing of the acid

solution. In case of acid contact with the skin or eyes, flush immediately with water for a minimum of 15 minutes and get prompt medical attention. If acid is swallowed, call a physician immediately. Failure to follow these instructions may result in personal injury.

WARNING: When lifting a battery, excessive pressure on the end walls could cause acid to spew through the vent caps, resulting in personal injury. Lift with a battery carrier or with your hands on opposite corners. Failure to follow these instructions may result in personal injury.

1. If equipped, remove the battery cover.

NOTE: When the battery is disconnected and reconnected, some abnormal drive symptoms may occur while the vehicle relearns its adaptive strategy. The vehicle may need to be driven to relearn its strategy.

2. Disconnect the battery ground cable.
3. Disconnect the positive battery cable.
4. To install, reverse the removal procedure.

REMOVAL AND INSTALLATION

BATTERY

Removal and Installation

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1. Disconnect the battery. For additional information, Refer to **BATTERY DISCONNECT**.
2. Remove the battery hold-down clamp bolt and position the clamp assembly aside.

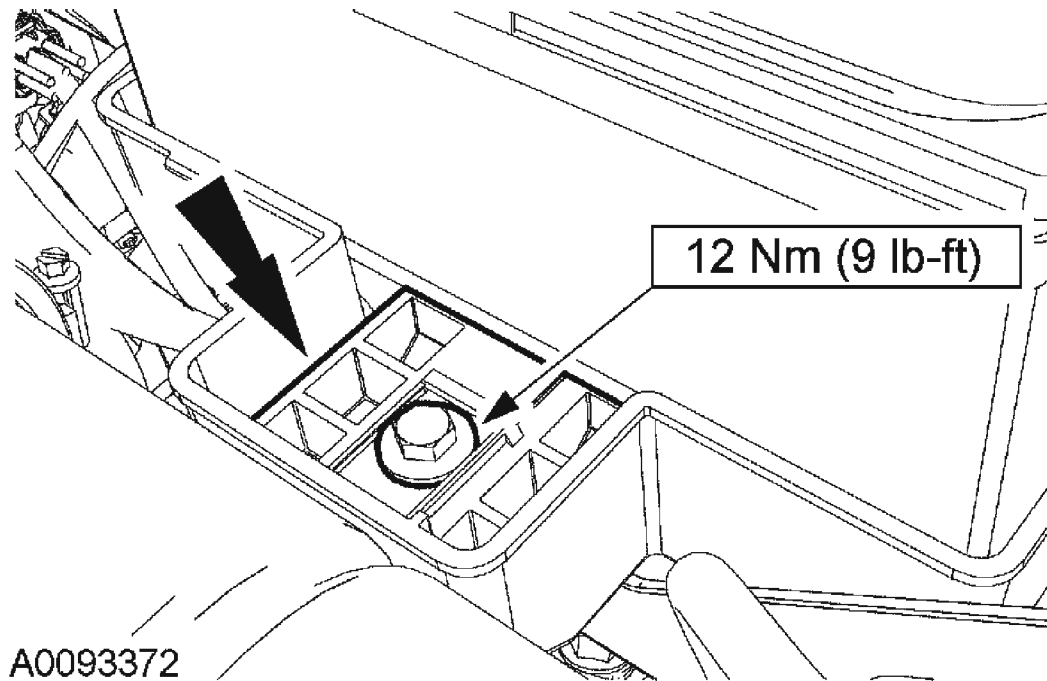


Fig. 2: Removing Battery Hold-Down Clamp Bolt
Courtesy of FORD MOTOR CO.

3. Remove the battery.

NOTE: If installing the standard 52 amp/hour battery, make sure it is positioned as far to the left of the battery tray (to the right when viewing from the front of the vehicle) as possible. This allows the battery tray to provide the maximum support/clamping to the battery and also positions the battery away from the engine.

4. To install, reverse the removal procedure.

BATTERY TRAY

Removal and Installation

1. Remove the battery. For additional information, Refer to **BATTERY**.
2. Remove the nuts and bolt, and the battery tray.

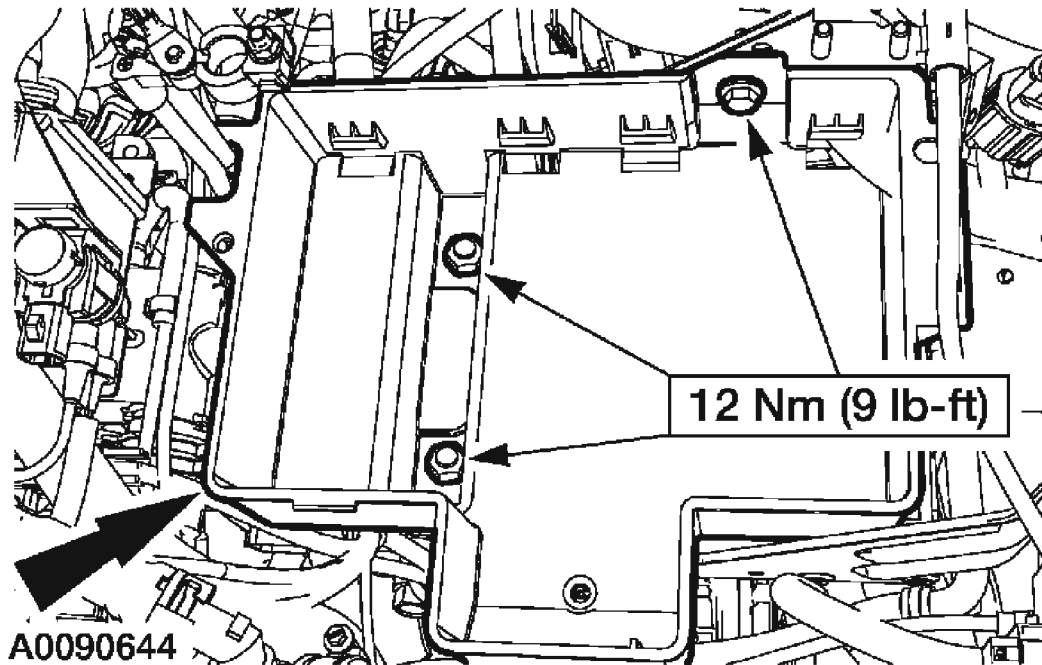


Fig. 3: Removing Battery Tray
Courtesy of FORD MOTOR CO.

3. To install, reverse the removal procedure.

BATTERY CABLES

Removal and Installation

All cables

1. Remove the battery tray. For additional information, Refer to **BATTERY TRAY**.
2. Remove the air cleaner assembly. For additional information, refer to **INTAKE AIR DISTRIBUTION AND FILTERING**.

Negative battery cable

3. Remove the body ground cable bolt.

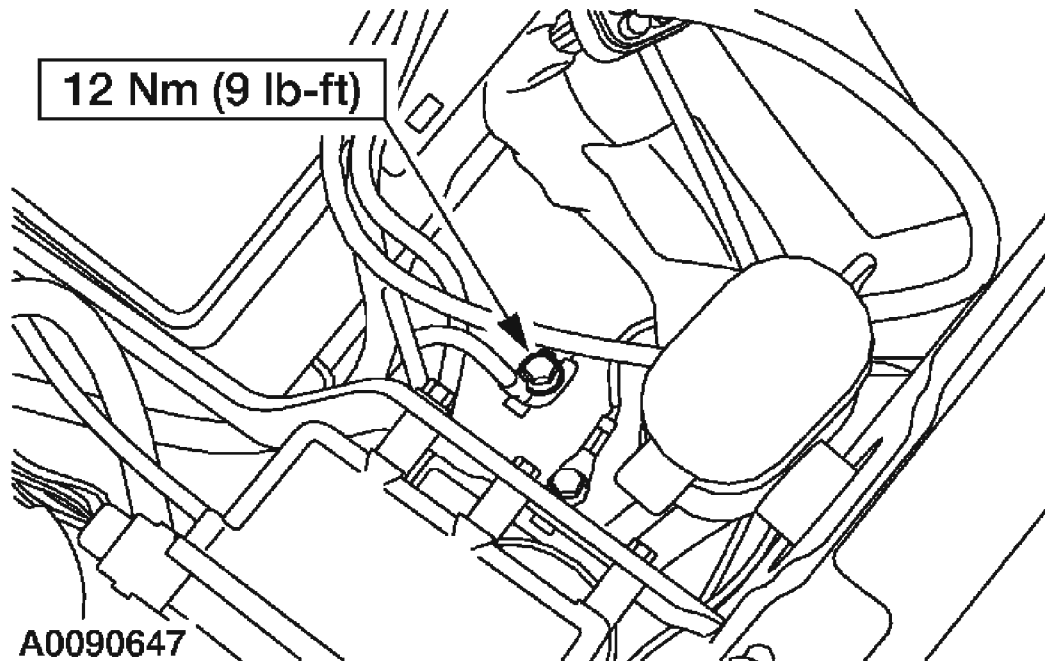


Fig. 4: Removing Body Ground Cable Bolt
Courtesy of FORD MOTOR CO.

4. Remove the auxiliary battery ground terminal nut and separate the auxiliary battery cables from the ground cable end.

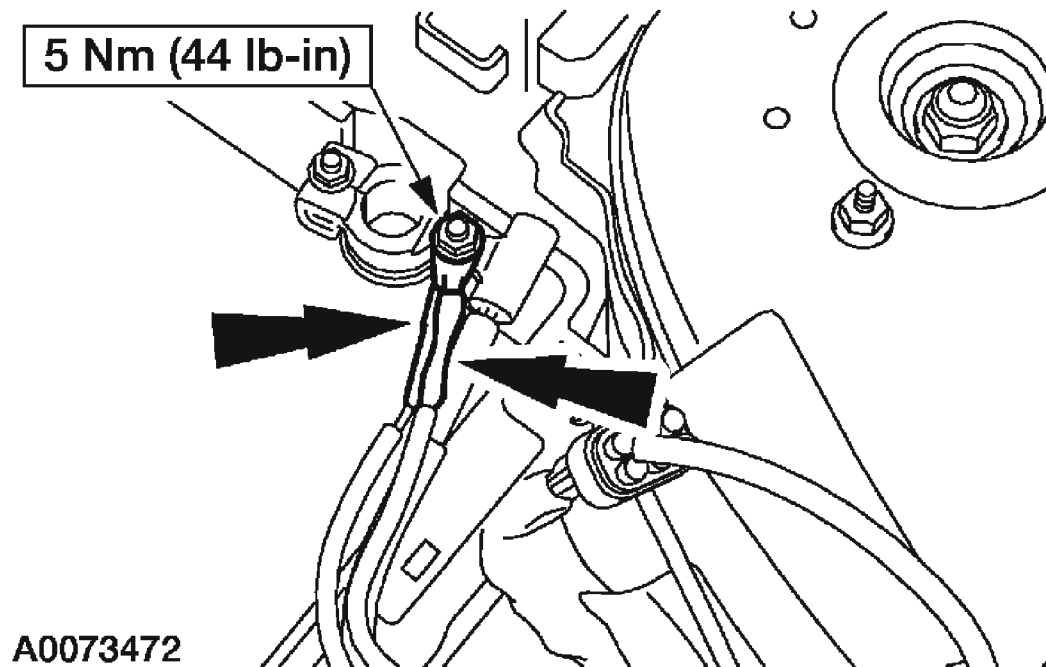


Fig. 5: Removing Auxiliary Battery Ground Terminal Nut And Separating Auxiliary Battery Cables From Ground Cable End
Courtesy of FORD MOTOR CO.

5. Release the negative battery cable locator.

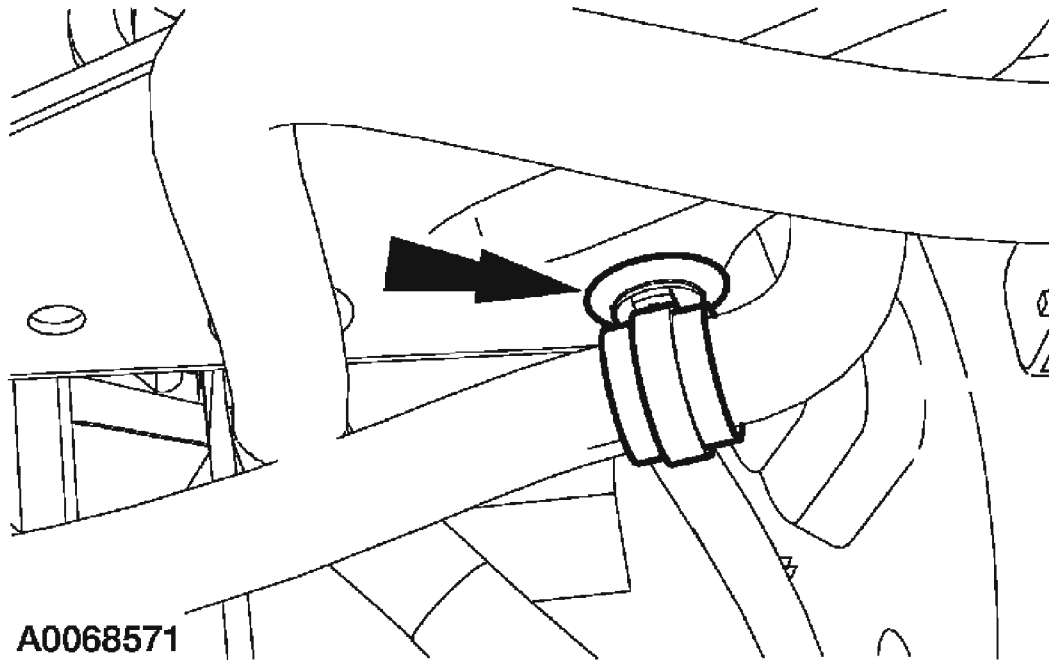


Fig. 6: Removing Negative Battery Cable Locator
Courtesy of FORD MOTOR CO.

6. Remove the engine ground cable bolt and the ground cable.

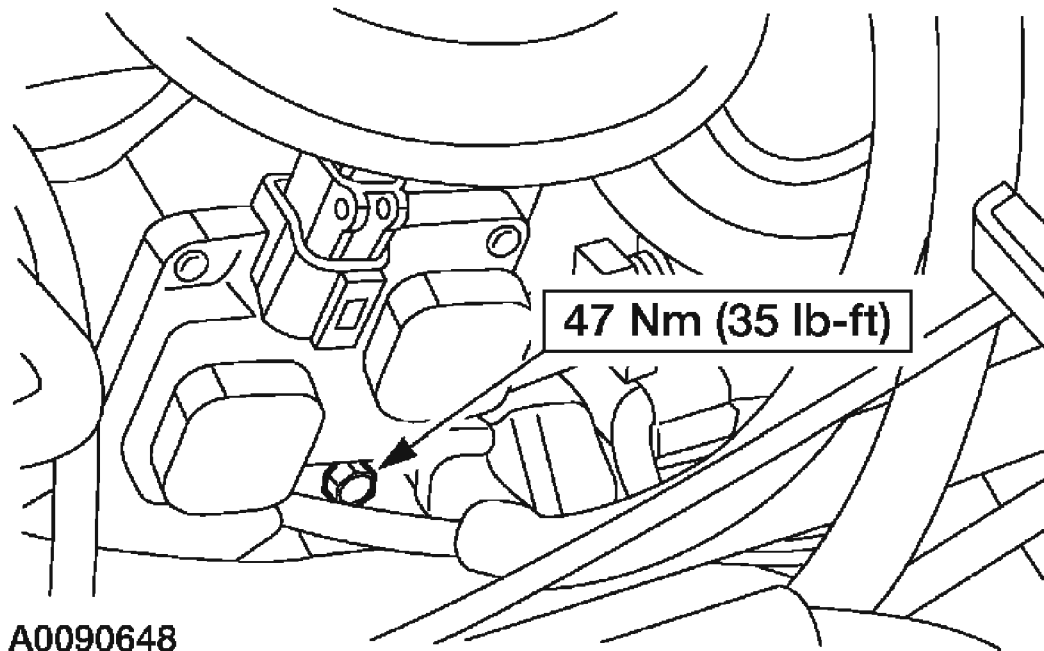


Fig. 7: Removing Engine Ground Cable Bolt And Ground Cable
Courtesy of FORD MOTOR CO.

Positive battery cable

7. Remove the auxiliary positive battery terminal nut and separate the auxiliary battery cables from the positive cable end.

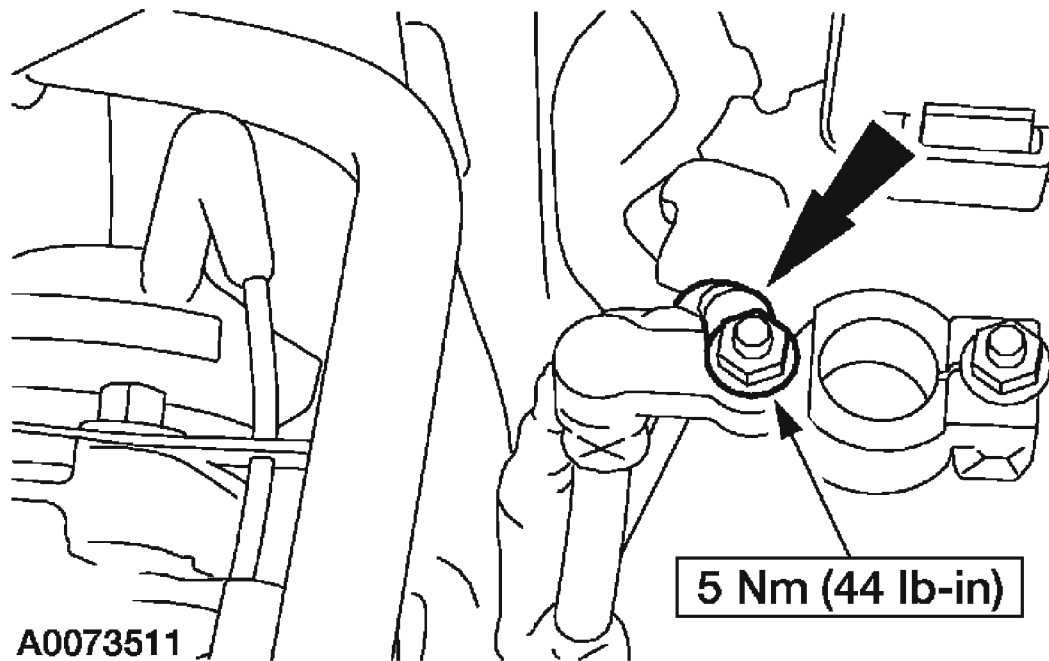


Fig. 8: Removing Auxiliary Positive Battery Terminal Nut And Separating Auxiliary Battery Cables From Positive Cable End
Courtesy of FORD MOTOR CO.

8. Release the positive battery cable locators.

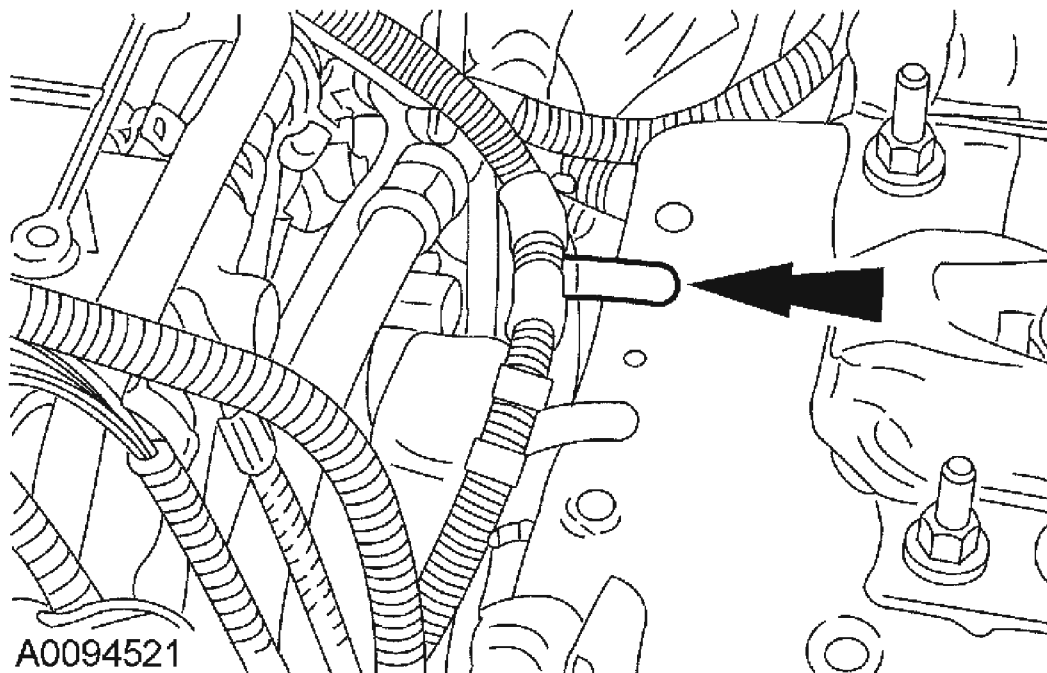


Fig. 9: Removing Positive Battery Cable Locators
Courtesy of FORD MOTOR CO.

9. Disconnect the starter motor solenoid in-line electrical connector.

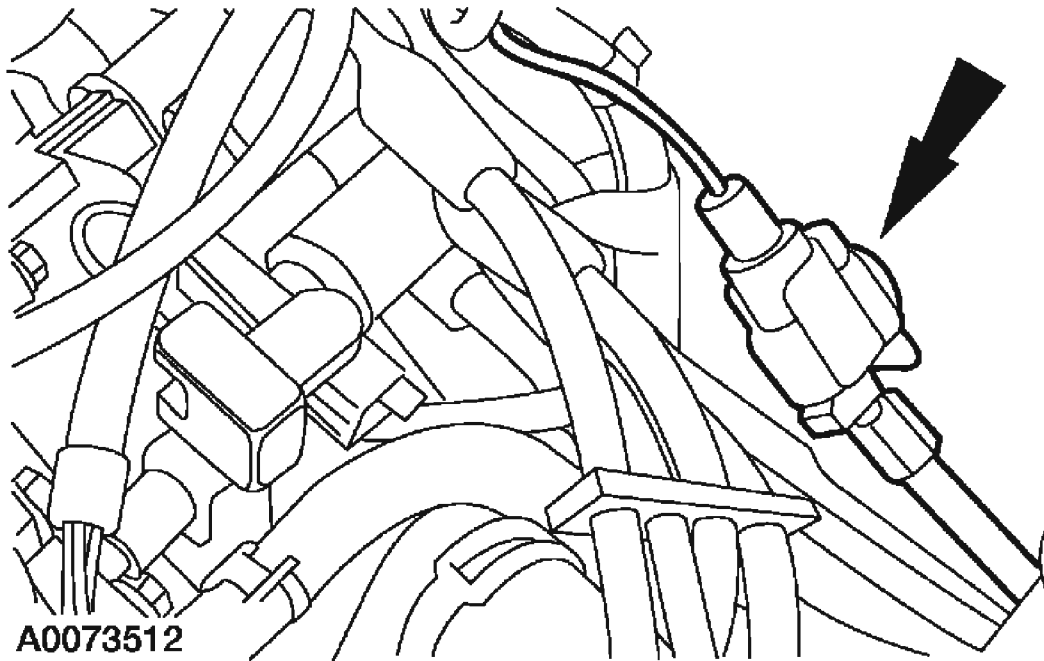


Fig. 10: Disconnecting Starter Motor Solenoid In-Line Electrical Connector
Courtesy of FORD MOTOR CO.

10. Raise and support the vehicle. For additional information, refer to **JACKING AND LIFTING** .

NOTE: The starter motor B+ terminal nut should be replaced whenever it is loosened or removed from the starter terminal.

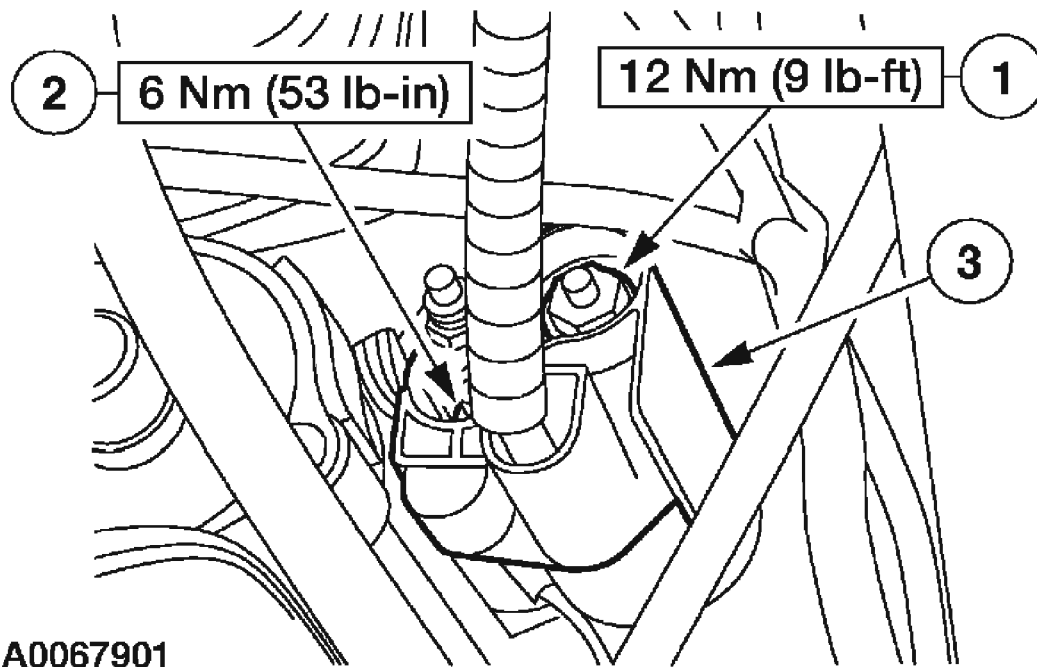


Fig. 11: Disconnecting Starter Motor Electrical Connectors
Courtesy of FORD MOTOR CO.

11. Disconnect the starter motor electrical connectors.
 1. Remove and discard the starter motor B+ terminal nut.
 2. Remove the starter motor solenoid terminal nut.
 3. Release the electrical connectors from the starter motor solenoid.

NOTE: The generator B+ terminal nut should be replaced whenever it is loosened or removed from the generator terminal.

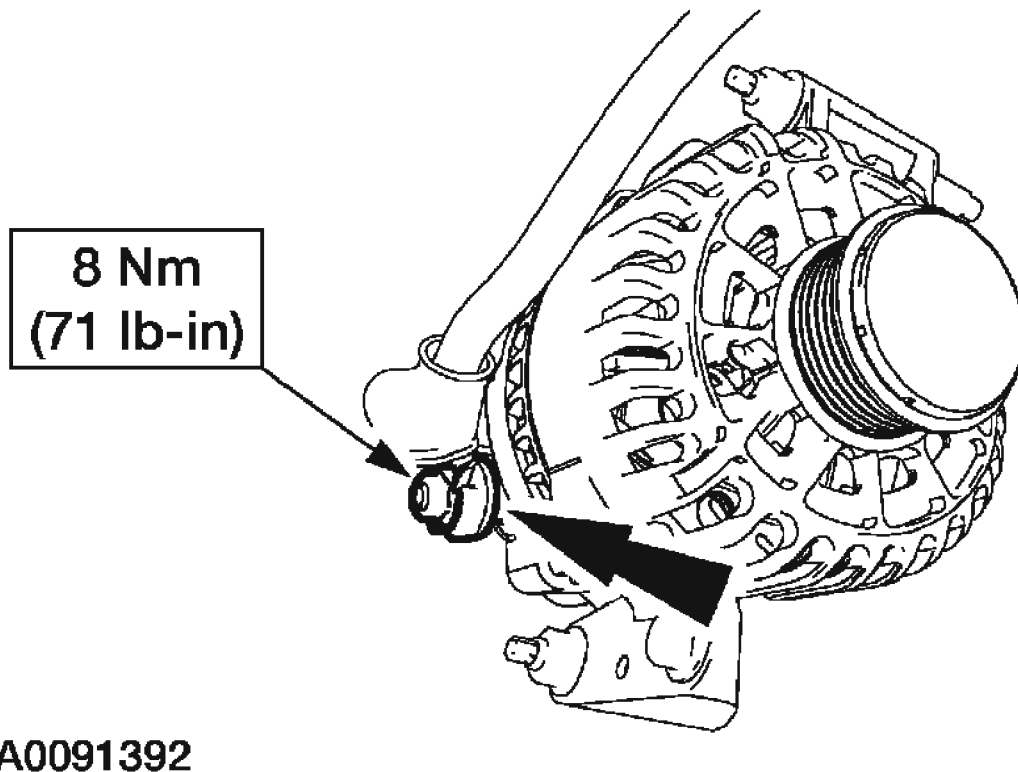


Fig. 12: Removing Generator B+ Terminal Nut And Terminal
Courtesy of FORD MOTOR CO.

12. Remove and discard the generator B+ terminal nut and terminal.

Positive battery cable with PZEV engine

13. Remove the battery cable bracket nut and position the cable aside.

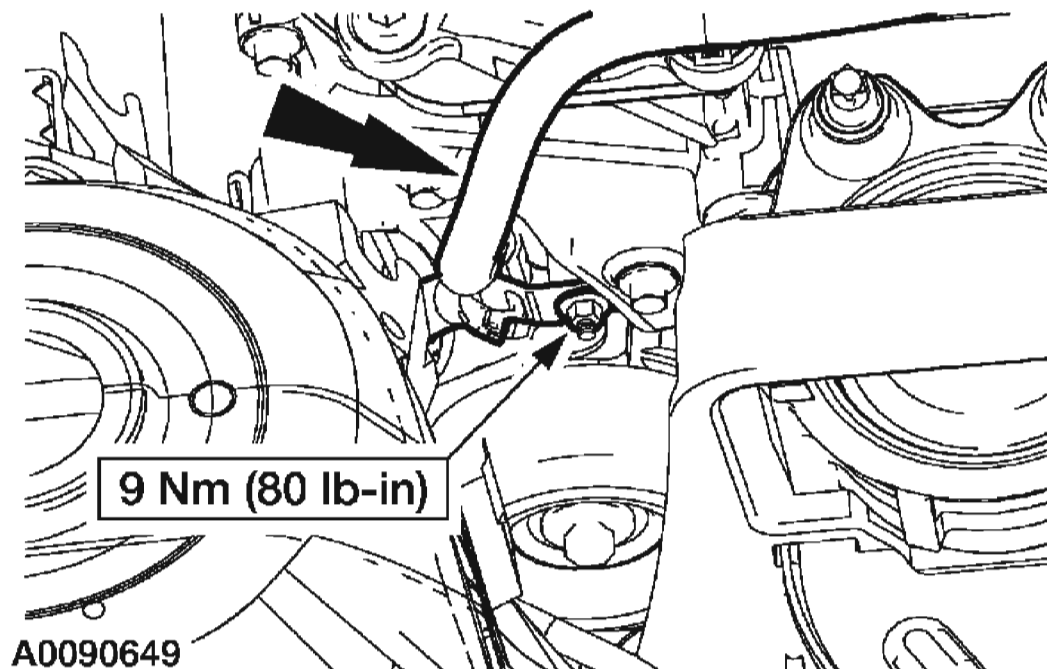


Fig. 13: Removing Battery Cable Bracket Nut
Courtesy of FORD MOTOR CO.

14. Lower the vehicle.
15. Remove the battery cable.
 - Remove the positive battery cable guide nut.
 - Release the positive battery cable locators.

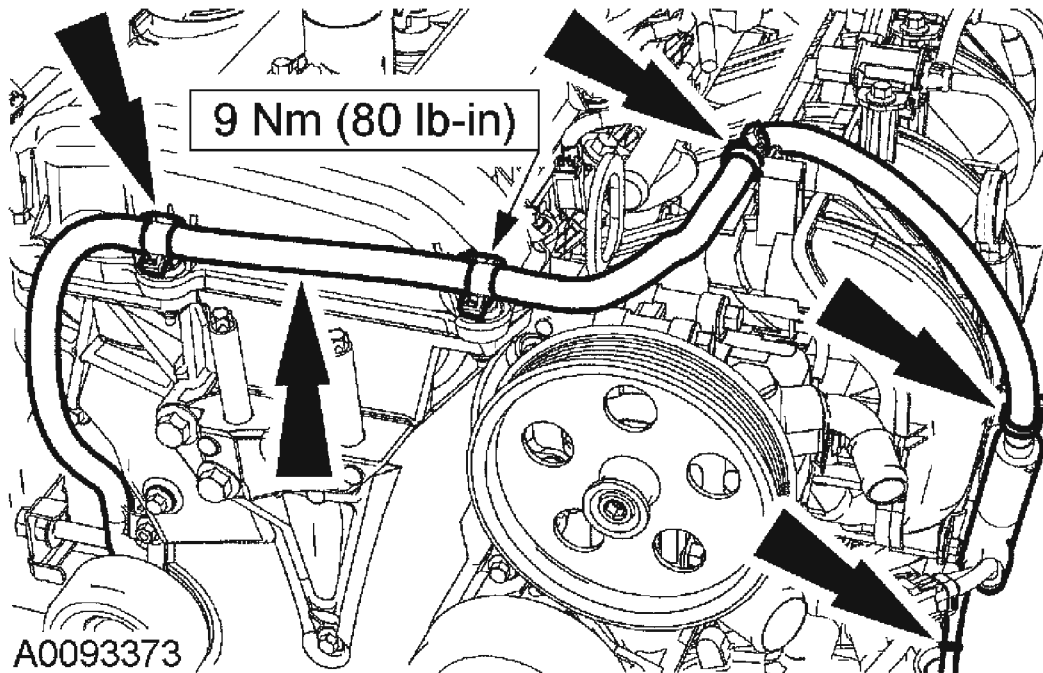


Fig. 14: Removing Battery Cable
Courtesy of FORD MOTOR CO.

Positive battery cable without PZEV engine

16. Release the positive battery cable locator.

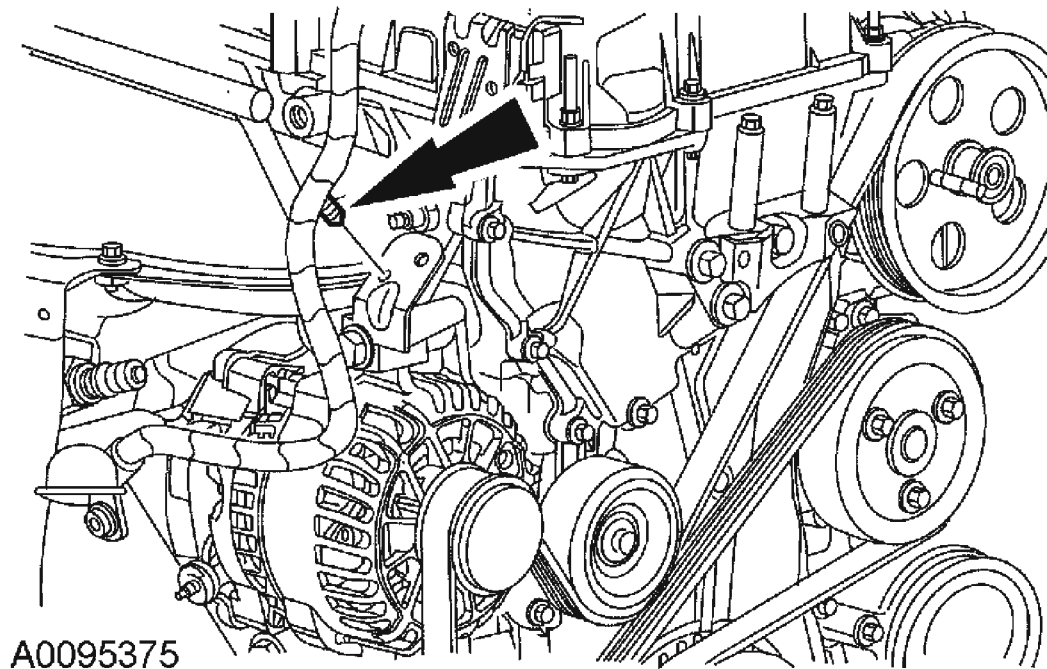


Fig. 15: Removing Positive Battery Cable Locator
Courtesy of FORD MOTOR CO.

17. Lower the vehicle.
18. Remove the positive battery cable.
 - Release the positive battery cable guides

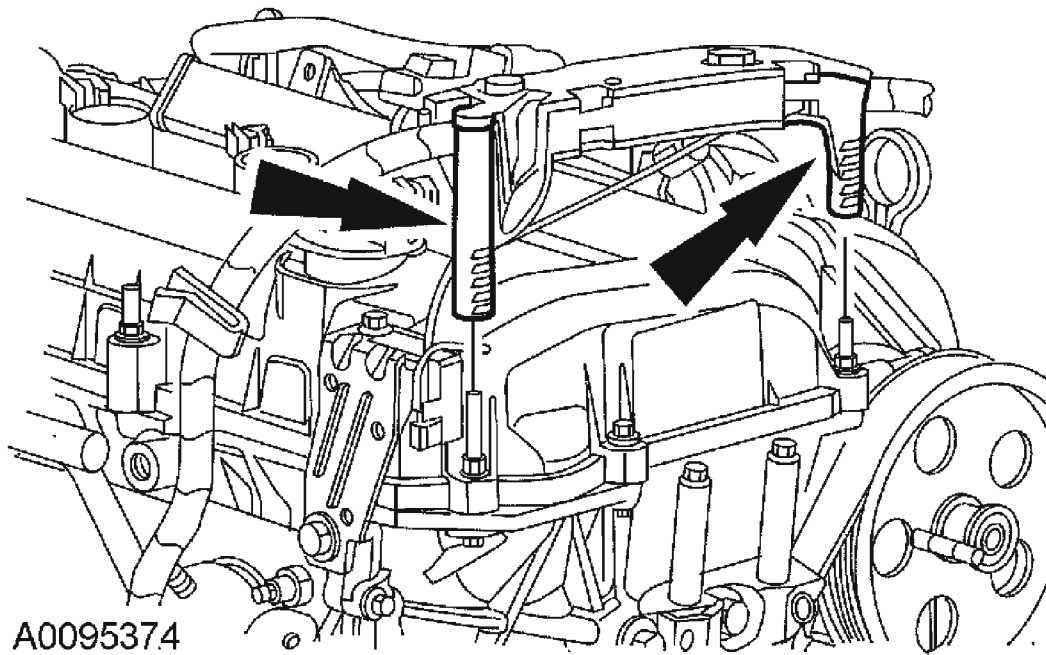


Fig. 16: Removing Positive Battery Cable
Courtesy of FORD MOTOR CO.

All cables

19. To install, reverse the removal procedure.