

Additional Services: Battery Replacement Service



If at any time service cannot be completed due to a service failure or interrupted service, top-side and bottom-side technicians must immediately go to second checks and close the pit covers.

Battery Replacement Service

Battery replacement may be performed in conjunction with the following services:

Services

- Coolant replacement service (with jump box)
- Gearbox drain & fill service (after starter and alternator test is complete)
- Serpentine belt replacement
- AC Service

Perform Starter and Charging System Test

Step

1. Move to the driver-side door. Be sure the driver's window is open.



Oil change must be completed prior to the starter and charging system test.

2. Hook tester to battery.

- Follow the prompts to fully retest the battery.
- Press **SYSTEM** to test the starter and charging system.
- Press **NO** when the tester asks if the amp clamp is connected.
- Follow the prompts to continue the test.



Throughout the test you will be prompted to start the vehicle.

CALL OUT: "Clear for zoom, Bay__!" each time the vehicle is started.



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Battery Tester Display Terms

While performing the test, the analyzer will display various prompts that require action. Follow the key of terms provided below:

| Analyzer Display: | Action Required: |
|----------------------------|--|
| TURN ALL VEHICLE LOADS OFF | Turn off blowers, the interior lights, exterior lights, wipers, the radio and any load-producing device |
| IDLE ENGINE | Allow engine to run in PARK position |
| REV ENGINE WITH LOADS OFF | Ask the guest to gradually increase the RPM until the analyzer tells you to HOLD the rev level as the bar on the display crosses the target line. |
| ENGINE REV NOT DETECTED | Some eight-cylinder and older vehicles idle at a high level after starting, allowing the analyzer to detect the rev automatically without your having to increase the RPM. |
| LOADS ON | Turn on blowers to high and high beam headlights |
| REV ENGINE WITH LOADS ON | Ask the guest to gradually increase the RPM until the analyzer tells you to HOLD the rev level as the bar on the display crosses the target line. |



Step

3. If the results read CRANKING NORMAL, press NEXT to continue the test. If any other result displays, let the CSR know that there may be a problem with the starter. The guest should have the starter checked at a dealer.

a. Press NEXT to begin the alternator test.

4. Results will display.

a. If the display reads NO PROBLEMS, press PRINT to print the report and provide it to the CSR. Let the CSR know that we can proceed with a replacement.

b. If any other result displays, let the CSR know there may be a problem with the alternator or starter. The guest should have it checked at a dealer.

Perform Battery Replacement

Step

1. Verify that the proper battery is in stock.

2. Put on the proper safety equipment.



REQUIRED: Safety glasses, safety goggles, PVC gloves, and top-side gloves.

NOTE: PVC gloves and goggles must be worn when any battery is being lifted or transported. Top-side gloves and safety glasses must be worn throughout the remainder of the battery service.

3. **CALL OUT:** "Battery service, Bay_!"

4. Use only approved battery tools throughout the service, including the tool-kit, sealer and terminal puller.



DO NOT store safety equipment with battery replacement tools.



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Step

5. Verify that all battery loads are switched OFF.

a. For example: Heat/AC, radio, DVD player, etc...

6. Inspect condition of battery terminals and hold down.

a. Inform customer of any conditions that may interfere with service or if the battery is leaking.



DO NOT change the battery if there are leaks.

7. Determine type of battery (top or side terminal).

8. Install the memory saver.



Failure to install the memory saver will result in the following:

- Power windows and moon roofs will loose function.
- Radio presets, clock settings, and navigation systems logs will be erased.
- May activate the vehicle security system.
- Power train control modules will loose all adjustment data, which will result in poor shifting.

9. **Top-terminal batteries:** Always remove **NEGATIVE** terminals first. Loosen bolts and remove terminals with the puller.

a. **Side-terminal batteries:** remove bolts.

10. Move the battery cables away from battery to allow for clearance to remove the battery.



DO NOT allow the positive terminal to come into contact with any metal part of the vehicle. This will cause the fuse to blow in the memory saver and the vehicle's computer memory will be lost.

11. Remove the battery hold down.

12. Make sure the battery caps are firmly seated.

13. Remove the battery from vehicle being careful not to tip or drop the battery.

PVC gloves and goggles must be worn at this step.



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| Step | |
|--|--|
| 14. Call out: “Clear for battery cleaning, Bay_!” a. Verify clear before cleaning terminals. | |
| 15. Clean the terminals with proper battery brush. | |
| 16. Clean the battery box if necessary. a. Call out: “Clear for battery cleaning, Bay_!” b. Verify clear before cleaning battery box. |  <p>DO NOT use water, washer fluid or carbonated beverages to clean the battery box or terminals.</p> |
| 17. Punch the date code label with the current month and year for warranty purposes. | |
| 18. Install the new battery. | <p>After this step the PVC gloves and goggles may be removed.</p> |
| 19. Install the battery hold down. | |
| 20. Install the battery terminals, POSITIVE FIRST . |  <p>Make sure the battery polarity is correct. Reverse polarity will cause vehicle damage. Reverse polarity is when the battery is hooked up in reverse order. The positive terminal is connected to the negative battery post, and the negative terminal is connected to the positive battery post.</p> |
| 21. Remove memory saver. | |
| 22. Spray the terminals with sealer to prevent corrosion. | |
| 23. Start the vehicle and check for proper operation. |  <p>Some vehicles may take a few minutes to relearn engine functions after battery service if the memory saver did not retain vehicle’s memory.</p> |
| 24. Place the old battery (core) on the core rack. | <p>PVC gloves and goggles must be worn for this step.</p> |
| 25. Visually inspect the core rack area for leaks. | |



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Step

26. If you find a core is leaking on the rack, follow these procedures:

- a. Put baking soda on the bottom of the storage tub.
- b. Place the leaking battery in the storage tub.
- c. Place storage tub on the core rack.
- d. Send entire containment tub with the route driver during the next scheduled delivery.
- e. Replace the containment tub.

Steps

Minnesota locations must have containment for all cores.

1. Place the core in the battery box.
2. Secure the lid.
3. Place the battery box on the rack.
4. At core pick-up, remove the cores from the battery boxes and stack the boxes for reuse.



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