

FORD EXP-1050 Series

QUICK REFERENCE CARD

SAFETY

Before starting the test visually inspect the battery for cracked, buckled, or leaking case. If you see any of these defects, replace the battery. If the electrolyte level is too low, add distilled water and fully charge the battery.

CHARGING AND TESTING IN GENERAL

For charging we recommend using the Midtronics ChargeXpress PRO series or GRX-3000 series. These chargers are allowed to charge the battery in the vehicle, connected to the electrical system.

CHARGING IN VEHICLE

When the battery is charged in vehicle the battery can be tested immediately. If the battery tester recognizes surface charge it will instruct to switch on a load, like turning on the lights, blower, etc. This action will remove the surface charge and allows you to accurately test the battery.

CHARGING OUT OF VEHICLE

In general we would advise to test and charge the battery in vehicle. When the battery is charged outside the vehicle and immediately tested after charging there can be a surface charge on the battery. In this case the battery tester cannot take away the surface charge. For this reason the battery should rest for at least 8-12 hours before testing the battery again. When the decision is REPLACE BATTERY, please wait. When the decision is GOOD BATTERY, please continue.

12V BATTERY TEST

1. BATTERY LOCATION Select UNDER HOOD, UNDER SEAT, or OUT OF VEHICLE.

UNDER HOOD / UNDER SEAT

2. TEST LOCATION Select BATTERY POST, JUMP START POST, or JUMPER POST (BMS).

3. BATTERY RATING Select the battery rating.

The availability of the selected rating in SLI and EFB offers a screen to select the battery type under test. When the battery under test is not pre-listed proceed with MANUAL ENTRY.

- 1. BATTERY TYPE**
- 2. RATING UNITS**
- 3. SELECT CCA**

MANUAL ENTRY

Select SLI, AGM, or EFB

Select SAE, EN, EN2, JIS, DIN, or IEC.

Select the battery CCA value. You can use the arrows to scroll and select a value or type the value using the alphanumeric keypad. Press ENTER to confirm the value. In case the battery uses a JIS number you identify it by means of an alphanumeric code. Example: 55D23.

4. Press NEXT to start the test

The temperature question is only asked when it can influence the test result.

24V SYSTEM TEST

BATTERY TEST

Select BATTERY TEST or GENERATE PAIR.

Select SLI or AGM.

Select SAE, EN, EN2, JIS, DIN, or IEC.

Select the battery rating.

The temperature question is asked when it can influence the test result.

- 5. TESTING** Connect to battery 2.
6. Press NEXT to start the test.

GENERATE PAIR

Select SLI or AGM.

Select SAE, EN, EN2, JIS, DIN, or IEC.

Select the battery rating.

The temperature question is asked when it can influence the test result.

- 4. TESTING** Connect to battery 2.
5. Press NEXT to start the test.

FORD EXP-1050 Series

QUICK REFERENCE CARD

BATTERY TEST RESULTS

GOOD BATTERY	The battery is OK to use.
GOOD - RECHARGE	The battery is OK but needs to be fully charged with an external charger. After charge the battery can return to service.
CHARGE & RETEST	Fully charge the battery with an external charger and repeat the test. If the battery is not fully charged it could lead to incorrect test results.
REPLACE BATTERY	Before replacing the battery perform a system test to analyse the complete system.
UNCONFIRMED RESULT	Retest the battery directly at the battery post. Disconnect or remove the battery to access it.
FROZEN BATTERY	Let the battery warm before testing or charging.

GENERATE PAIR RESULTS

IN BALANCE	Batteries are in balance and OK for use.
OUT OF BALANCE	Batteries are not equally charged or healthy. Look into the individual battery results for the required action.
CHARGE	Fully charge the pair and retest.
REPLACE	Replace the pair.

DEEP SCAN

In some cases the tester may need to further analyze the battery to determine whether the battery should be replaced or it has a significant chance to be recovered. It will then conduct a Deep Scan Test of the battery for a few seconds. After the test the results are displayed on the display, part of the test can also be a 5 minute dynamic response test. To perform this test an Amp clamp is needed.

STARTER SYSTEM RESULTS

CRANKING NORMAL	The cranking voltage is normal and battery is charged.
LOW VOLTAGE	The cranking voltage is low and battery is charged.
CHARGE BATTERY	The cranking voltage is low and the battery is discharged. Charge battery and repeat the test.
REPLACE BATTERY	Replace the battery. Press ENTER to perform the CHARGING test.
LOW CRANKING AMPS	The cranking voltage is high but cranking current is low.
CRANKING SKIPPED	Engine was not detected, but the engine did start.

CHARGING SYSTEM RESULTS

NO PROBLEMS	The charging system is OK.
NO VOLTAGE	The alternator is not providing charging current to the battery.
LOW VOLTAGE	The alternator is not providing enough current to power the system's electrical loads and charge the battery.
HIGH VOLTAGE	The voltage output from the alternator to the battery exceeds the normal limits of a functioning regulator.
EXCESSIVE RIPPLE	One or more diodes in the alternator aren't functioning or there's stator damage, which is shown by an excessive amount of AC ripple current supplied to the battery.
PHASE OPEN	The tester has detected an open phase within the alternator.
DIODE OPEN	The tester has detected an open diode within the alternator.
DIODE SHORT	The tester has detected a shorted diode within the alternator.

QUALITY CONTROL TEST

Select the QC test mode: STOCK CONTROL or COMPOUND TEST. The next screen allows you to erase the memory or continue to test. In case of the COMPOUND TEST: select the BATTERY LOCATION, TEST LOCATION, BATTERY RATING (either predefined - batteries can be added or deleted in the UTILITY MENU under BATTERY LIST, or via manual input), BATTERY TYPE, and the VOLTAGE. When a STOCK CONTROL test is performed: enter the BATTERY TYPE, RATING UNITS, BATTERY RATING, CAPACITY and VOLTAGE.

FORD EXP-1050 Series

QUICK REFERENCE CARD

BEFORE / AFTER CHARGE

In some cases the tester needs to know if the battery has been charged before the test. Select **BEFORE CHARGING** when the battery has not been charged. Select **AFTER CHARGE** when the battery has been fully charged with an external charger.

UTILITY MENU

Options to set are:

CONFIG TESTER, DISPLAY, CONFIG PRINTER, SHOP INFO, COUPON, EDIT COUPON, LANGUAGE, FORMAT CARD, UPDATE, and BATTERY MENU.

The CONFIG TESTER menu allows you to set the following parameters: DATE AND TIME, TEMPERATURE UNITS, and WRITE FAIL.

TROUBLESHOOTING

SYSTEM NOISE / CHECK CONSUMERS

The tester has detected system noise, most likely there are consumers switched on in the vehicle. Switch off all consumers in the vehicle and remove the key from the ignition. The tester will automatically resume testing.

UNSTABLE BATTERY

A discharged battery can have rest activity in it that is detected by the tester. Fully charge the battery and repeat test.

SURFACE CHARGE

The battery can hold a surface charge if the engine has been running or after the battery has been charged. The tester may prompt you to remove the surface charge before it displays a test result.

1. Follow the instructions indicating when to turn the headlights on and off (IN-VEHICLE)
2. The tester will resume testing after it detects that the surface charge is removed

TEMPERATURE COMPENSATION

Every EXP has a temperature sensor that can be used to measure the temperature of the battery. This question appears when the temperature influences the *State of Health*-decision.



Advancing
Battery Management

P/N 167-000708A GB

www.midtronics.com
info-europe@midtronics.com