


**Large Panoramic
7.8" Wide LCD
Display**

Large Panoramic 7.8” Wide LCD Display

General

Most of the electrical tests require the following tools.

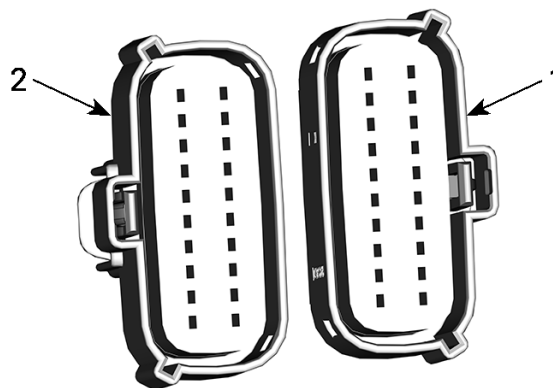
Fluke 115 Multimeter (P/N 529035868)	
Test light	

Refer to *Wiring Diagram Information* for diagnostic tips on troubleshooting electrical problems.

NOTICE

It is recommended to always disconnect the battery when replacing any electrical component. Always disconnect battery as specified, BLACK (-) cable first.

This digital display has two connectors.










1. Connector CL_A
2. Connector CL_B

Indicator Lamps Description

Important information about vehicle condition is displayed on the multifunction gauge. When starting the engine, always look at the gauge for any indicator lamps or special messages.

Depending on the vehicle, not all the indicator lamps and messages will be applicable.

Indicator Lamps (Malfunctions)			
Indicator Lamp	Message	Cause	What to Do...
N/A	BAD KEY	Defective key	– Replace key.
	WRONG KEY	Wrong key	– Use the right key for the vehicle.
	CHECK KEY	Problem of reading key	– Verify and replace key if necessary.
	HIGH ENGINE TEMPERATURE	Engine or exhaust system is overheating or faulty sensor	<ul style="list-style-type: none"> – Stop and wait for engine/exhaust system to cool off. – Check for leaks. – Check coolant level and adjust.
	LO BATT VOLT or HI BATT VOLT	Low/high battery voltage	<ul style="list-style-type: none"> – Check charging system. – Check battery connections.
 (ON)	CHECK ENGINE	Engine management component malfunction	<ul style="list-style-type: none"> – Stop the engine. – Connect the vehicle to the BRP diagnostic software (BUDS2). – Check faults codes and perform recommended actions.

Indicator Lamps (Malfunctions)			
Indicator Lamp	Message	Cause	What to Do...
 (Flashing)	LIMP HOME MODE	Important engine management component malfunction	– Diagnose using the BRP diagnostic software (BUDS2).
	LOW OIL - STOP ENGINE	Low oil pressure	– Check for oil leaks. – Check oil level and adjust.
	IBR MODULE ERROR	Light is steady with a buzzer and a check engine light	– Refer to <i>iBR, Reverse and VTS</i> subsection
	-	Light is flashing	
	-	Light is steady with no buzzer	
 (Flashing)	---	Faulty sensor	– Check sensor. – Check sensor connection to cluster.
N/A = Not Applicable			

Message Display Information	
HIGH EXHAUST TEMPERATURE	High exhaust temperature detected
HIGH ENGINE TEMPERATURE	High engine temperature detected
CHECK ENGINE	Engine system malfunction or maintenance required
LIMP HOME MODE	Major fault detected, engine power limited
FUEL SENSOR FAULT	Fuel level sensor fault
WATER TEMP SENSOR DEFECTIVE	Problem with water temperature sensor, not sending water temperature info.
IBR MODULE ERROR	iBR system malfunction
MAINTENANCE REQUIRED	Watercraft maintenance required

When a digital warning appears, it will show the warning for 6 seconds and then the warning will disappear for 15 minutes. During the 15 minutes, only the indicator lamps will be activated.

Troubleshooting

DIAGNOSTIC TIPS

IMPORTANT: When solving an electrical problem, the first thing to do is to check the battery condition as well as its cables and connections.

Make sure the battery is fully charged or install a power pack for any tests that involves a prolonged "key ON" period. If battery voltage gets too low, not only test results can be altered, but the vehicle electrical system may not operate normally.

Pay attention to ground wires. They could become loose or corroded which causes them to act as an additional load in a circuit, dropping voltage and reducing current to components. Some components may be grounded through their outer casing and mounted hardware. This should also be considered.

Electrical Connectors

Pay particular attention to ensure that pins are not out of their connectors, loose, or damaged. The troubleshooting procedures may not cover problems resulting from one of these causes.

NOTICE

Ensure all terminals are properly crimped on wires and connector housings are properly fastened. When replacing any electric or electronic part(s), always check electrical connections. Make sure that they are clean, corrosion-free, tight and make good contact. The voltage and current might be too weak to go through dirty or corroded connector pins or terminals.

TROUBLESHOOTING

1. GAUGE FUNCTIONS INOPERATIVE OR WORKING INTERMITTENTLY

Power supply or ground problem

- *Check power supply and ground circuits.*

Procedures

Testing the Multifunction Gauge

Before beginning any troubleshooting, test or repair, always check for fault codes.

1. Check for fault codes using BUDS2.
2. Record all fault codes, then erase them.
3. Perform a complete shutdown of the electrical system and reactivate it.
4. Check fault codes. If a previous fault codes reappears, perform the required service actions.

Testing the Multifunction Gauge Using BRP Diagnostic Software (BUDS2)

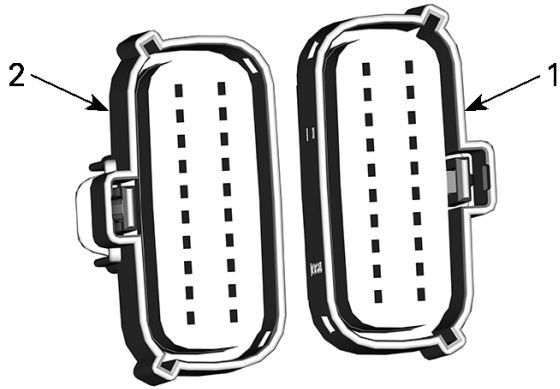
1. Connect the vehicle to the latest applicable BRP diagnostic software version. Refer to *Communication Tools* subsection.
2. In BUDS2, go to:
 - **Functions** page
 - **Cluster** button
 - **Routines - Execute Cluster WOW test.**
3. All indications will come and stay ON so that you can verify each indication.

NOTE: The **WOW Test** only tests the display LEDs and LCD. It does not test the actual circuit functions related to each indication.

Testing the Multifunction Gauge Power Input

If the multifunction gauge is inoperative, first check for fault codes with BRP Diagnostic Software, record all faults then erase them. Reactivate the electrical system and recheck for faults. If any fault code appears, perform service actions required. Refer to *Communications Tools* subsection.

1. Remove multifunction gauge. Refer to procedure in *Body* subsection.
2. Perform the test at multifunction gauge connector as per following illustration and tables.



1. Connector CL_A
2. Connector CL_B

Figure 1. Multifunction Gauge Connector (Pin-Out)



MULTIFUNCTION GAUGE CONNECTOR (PIN-OUT)

Multifunction Gauge Power Test			
CL_A connector	Battery	Ignition Position	Results
Pin 1	Negative (-) post	Any	Close to battery voltage
Pin 11		ON	Close to battery voltage

If there is no power at pin 1, check fuse F10 and the related circuit.

If there is no power at pin 11, check fuse F7, MAIN relay RY1, and the related circuit.

If the power test is within specification, continue with *Testing the Multifunction Gauge Ground Circuit*.

Testing the Multifunction Gauge Ground Circuit

1. Test as per the following table.

Multifunction Gauge Ground Test		
CL_A Connector	Battery	Result
Pin 2	Negative (-) post	Close to 1 Ω

2. If the ground at pin 2 is not within specification, check the related circuit.

3. If the ground tested to specification, continue with *Testing the Multifunction Gauge CAN Circuit*.

Testing the Multifunction Gauge CAN Circuit

1. Locate the DLC (Diagnostic Link Connector). Refer to *Communication Tools*.
2. Test as per the following table.

Multifunction Gauge CAN Wire Test		
CL_A Connector	DLC	Results
Pin 13 (CAN HI)	Pin 1	Close to 0.4 Ω
Pin 14 (CAN LO)	Pin 2	Close to 0.4 Ω

If the CAN wire verification test fails, check the related circuit.

If the multifunction gauge functions, however there is a suspected communication problem with another component, perform this test between the multifunction gauge and that component.

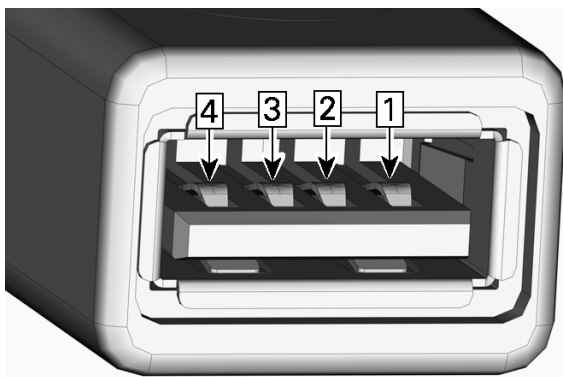
If the multifunction gauge power, ground and CAN verification tests are all to specifications and the multifunction gauge is inoperative, replace the multifunction gauge.

Testing the Multifunction Gauge USB Power Voltage

1. Test as per the following table.

Multifunction Gauge USB Power Voltage Test At USB Connector		
USB Connector	Battery	Results
Pin 1	Negative (-) post	Close to 5 V

Figure 2. USB Connector Pinout



USB CONNECTOR PINOUT

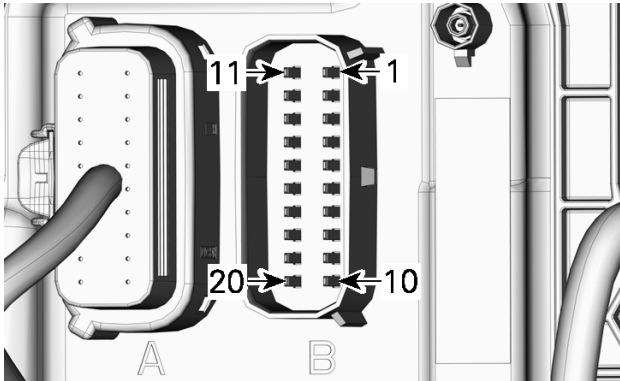
1. Pin 1 (5V)
2. Pin 2 (Data -)
3. Pin 3 (Data +)
4. Pin 4 (Ground)

If result is not as per specification, continue with the following steps.

2. Disconnect connector CL_B from the gauge.
3. Test as per the following table.

Multifunction Gauge USB Power Voltage Test At Gauge		
CL_B Connector	Battery	Results
Pin 20	Negative (-) post	Close to 5 V

Figure 3. CL_B Connector



CL_B CONNECTOR

If result is not as per specification, test with a new gauge.

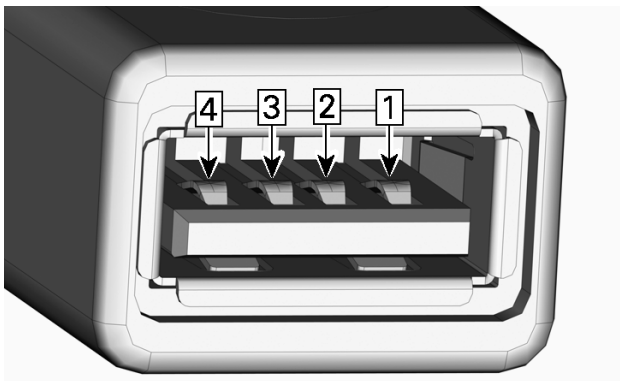
If result is good, carry out a *Testing the Multifunction Gauge USB Circuit*.

Testing the Multifunction Gauge USB Ground Circuit

1. Test as per the following table.

Multifunction Gauge USB Ground Circuit Test At USB Connector		
USB Connector	Battery	Results
Pin 4	Negative (-) post	Close to 1.5 Ω

Figure 4. USB Connector Pinout



USB CONNECTOR PINOUT

1. Pin 1 (5V)
2. Pin 2 (Data -)
3. Pin 3 (Data +)
4. Pin 4 (Ground)

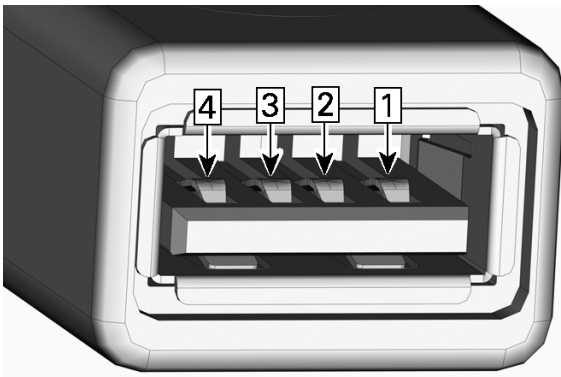
If result is not within specification, check the related circuit.

Testing the Multifunction Gauge USB Circuit

1. Disconnect connector CL_B from the gauge.
2. Test as per the following table.

Multifunction Gauge USB Ground Circuit Test At USB Connector		
CL_B Connector	USB Connector	Results
Pin 20	Pin 1 (5V)	Close to 0.4 Ω
Pin 9	Pin 2 (Data -)	
Pin 8	Pin 3 (Data +)	
Pin 10	Pin 4 (Ground)	

Figure 5. USB Connector Pinout



USB CONNECTOR PINOUT

1. Pin 1 (5V)
2. Pin 2 (Data -)
3. Pin 3 (Data +)
4. Pin 4 (Ground)

If result is not within specification, check the related circuit.

Vehicle Hour Meter Transfer

If the multifunction gauge was replaced, connect the vehicle to the latest applicable BRP diagnostic software version and apply any available updates. Refer to *Communication Tools* subsection. When updates are completed, perform the following:

1. In BUDS2, go to:
 - **Settings** page
 - **Cluster** button
 - **Settings** tab.
2. Select **Increase Odometer Mileage**.
3. Click on the upper right arrow in the green circle.
4. Read carefully the on-screen instructions before clicking in the value box.
5. Enter the new mileage if it is different from the indicated one.
6. Press SET button.
7. Press the WRITE TOTAL button.
8. Select OK to confirm the mileage.

9. Close the window.

Setting Language and Units of Measurement

1. In BUDS2, go to:

- **Settings** page
- **Cluster** button
- **Settings** tab
- **Configure Language and Units.**