

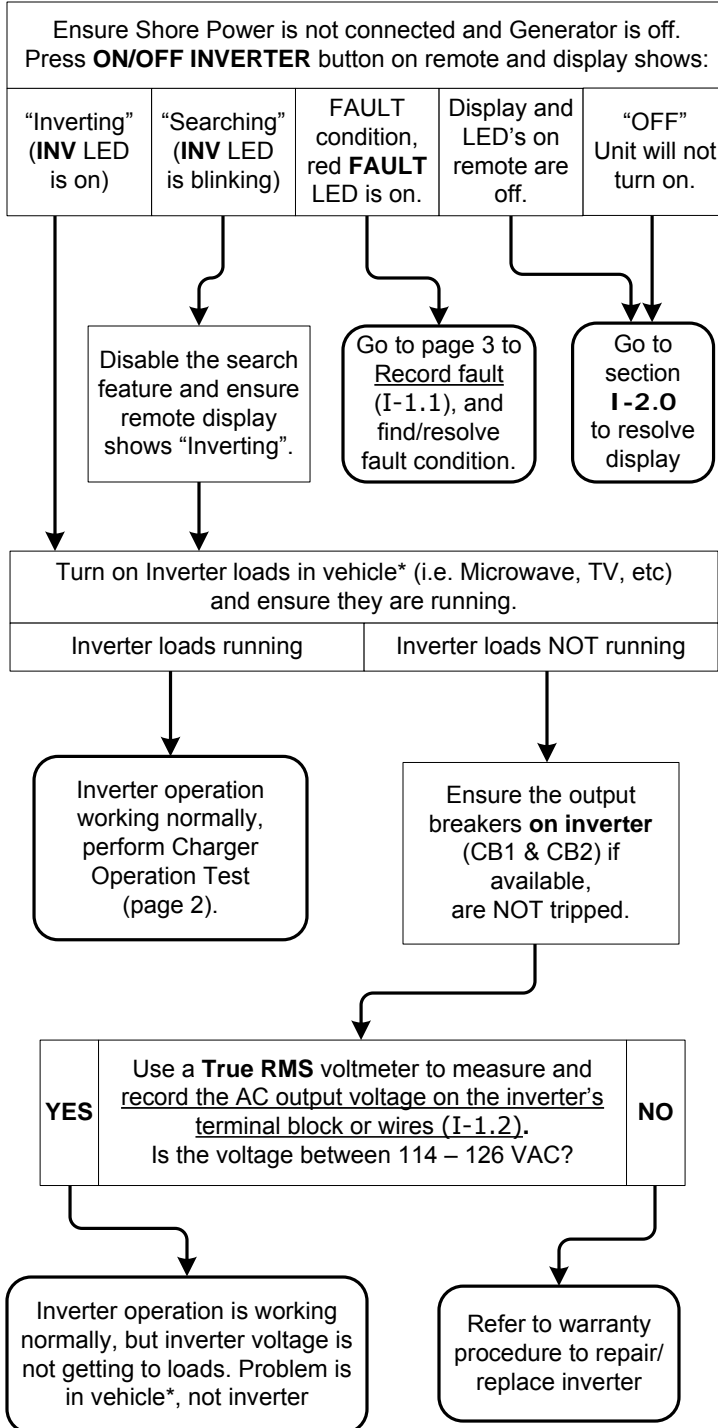
Inverter Operation Test

Note: Call Magnum Energy (425-353-8833) for any issue and to receive an RMA (Return Material Authorization) before replacing the inverter.

Note: Completion of this troubleshooting document (pages 1 -3) is not authorization to cover/pay warranty or labor costs. Warranty/labor coverage is decided after the unit is returned to Magnum Energy and the failure is evaluated.

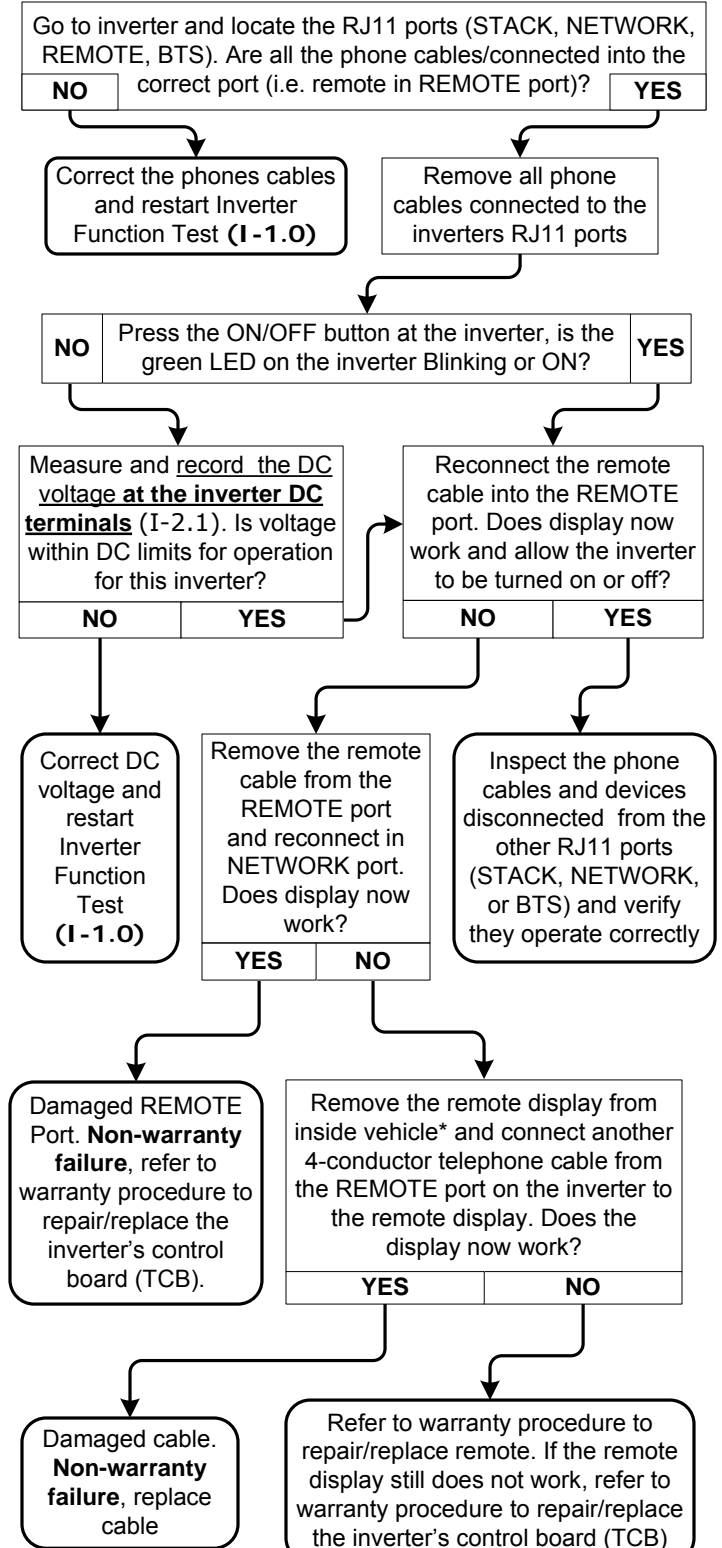


(I-1.0) Inverter Function:



*vehicle = Boat, Recreational Vehicle (RV) or truck.

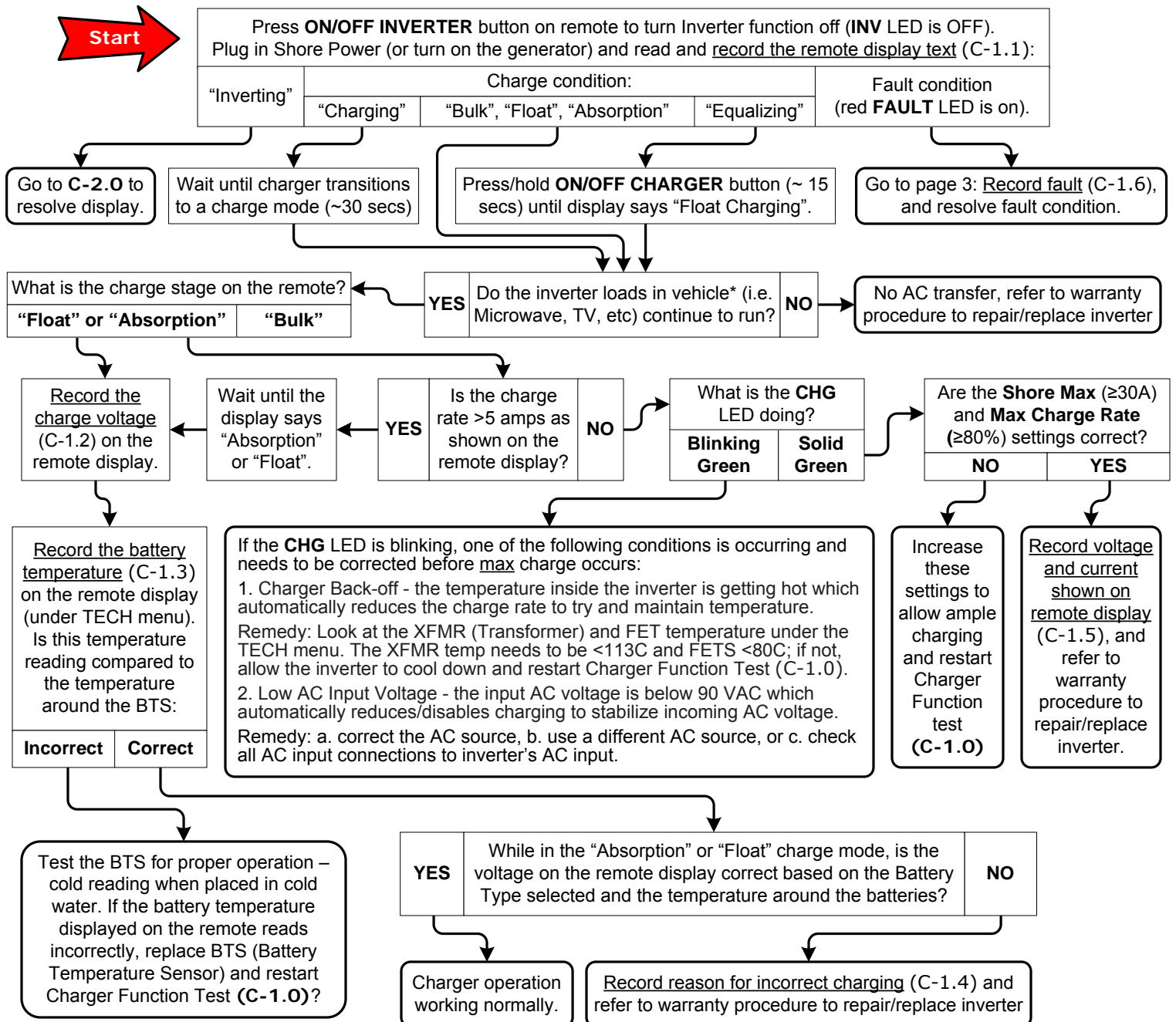
(I-2.0) Remote display and LED's are off, or inverter will not turn on from remote:



Charger Operation Test

(C-1.0) Charger Function:

Note: Ensure the inverter function operates correctly (see Inverter Operation Test) before performing the Charger Operation Test.



(C-2.0) Remote display says “Inverting”:

Go to Inverter, measure and record AC voltage at the input of the inverter (C-2.1). Is the voltage between 90 and 132 VAC?

NO

YES

Correct AC voltage and restart Charger Function Test (C-1.0).

Reset breaker and restart Charger Function Test (C-1.0).

Is the 30A input breaker on inverter popped out (open)?

YES

NO

1. Disconnect Shore Power and ensure the generator is off.
2. Ensure the inverter is turned off.
3. Remove the AC input and output wires from the inverter.
4. Record the resistance between the AC1 Hot In to the AC Neutral In at the inverter (C-2.2). Is the resistance 350-450 Ω?

YES

NO

No charging, refer to warranty procedure to repair/replace inverter

Damaged Input PTC/transformer, due to incorrect AC input. **Non-warranty failure**, remove inverter and have repaired.

Recorded Values

Recorded Values - Inverter Operation Test

I-1.1: What is the Fault Condition shown **on the remote display**? _____

I-1.2: What is the RMS voltage measured **at the inverter's AC output**? _____

I-2.1: What is the DC voltage **at the inverter DC terminals**? _____

Recorded Values - Charger Operation Test

C-1.1: After plugging in Shore Power (or turn on the generator), what does the remote display read? _____

C-1.2: What is the "Absorb" or "Float" charge voltage shown on the remote display? _____

C-1.3: What is the Battery temperature reading shown on the remote display (under TECH menu)? _____

C-1.4: Write down the reason to repair/replace the inverter for incorrect charging: _____

C-1.5: What is the DC voltage and current shown **on the remote display** (must be in "Bulk" charge mode)? _____

C-1.6: What is the Fault Condition shown **on the remote display**? _____

C-2.1: What is the AC voltage measured **directly at the inverter's input**? _____

C-2.2: What is the resistance between the **AC1 Hot In** to the **AC neutral In** directly at the inverter? _____

Install Info

Name of troubleshooting technician: _____ Date: _____

Dealership: _____ Phone: _____ WO / RO #: _____

Inverter Info: Model: _____ Serial Number: _____ MFG Qtr/Year: _____

Vehicle Info: Model: _____ VIN/SN: _____ MFG Year: _____

Fault Conditions

AC Overload: a load (or short) on the inverter's AC output is larger than the inverter can safely handle. Remove the excessive AC load from the inverter's AC output and perform a manual restart.

AC Backfeed (or Backfeed Fault): has detected an AC voltage source on the inverter's AC output. Remove the external AC voltage from the inverter's AC output and perform an inverter reset.

Overcurrent (or DC Overload): has detected a load (or short) on the inverter's AC output that is larger than the inverter can safely handle. Remove the excessive load from the inverter's AC output and perform a manual restart.

FET Overload: the internal FETs heated up very quickly beyond a safe operating condition - usually caused by a load/short on the AC output that is larger than the inverter can safely handle. After the AC load (or short) is removed, perform an inverter reset, if fault immediately returns - unit requires repair.

High AC Volts: AC voltage on the inverter's AC input is higher than normal > 151 Vac while charging. The inverter will automatically restart after the high external AC voltage is disconnected from inverter's AC input.

Low Battery: The battery voltage is less than the LBCO setting. Once battery voltage ≥ 12.5 vdc (12-volt models) or ≥ 25.0 vdc (24-volt models), the inverter will automatically restart. Plug into shore power (or turn on gen) to begin charging.

Internal Bridge (or Internal Fault -1): a fault shutdown to protect internal FET Bridge circuit. Perform an inverter reset, if fault immediately returns - unit requires repair.

Internal Charger: a fault shutdown to protect internal charger circuit. Perform an inverter reset, if fault immediately returns - unit requires repair.

Internal NTC (or Internal Fault - 2): a fault shutdown to protect internal NTC circuit. Perform an inverter reset, if fault immediately returns - unit requires repair.

Internal Relay: a fault shutdown to protect internal Relay Transfer circuit. Perform an inverter reset, if fault immediately returns - unit requires repair.

Overtemp: the inverter FET's and/or transformer have exceeded a safe operating temperature, the inverter will automatically restart once the inverter has cooled down.

Unknown fault: a fault not recognized by the remote - the remote requires newer revision to determine fault.

Manual Restart: press and release power switch on inverter (or ON/OFF INVERTER button on remote).

Inverter Reset: Soft RESET = press and hold power switch on inverter >15 seconds until the inverter's green LED rapidly flashes (MS Series requires rev ≥ 1.1 , other Series require rev. ≥ 3.4). Hard RESET = remove all AC/DC from unit and reconnect.