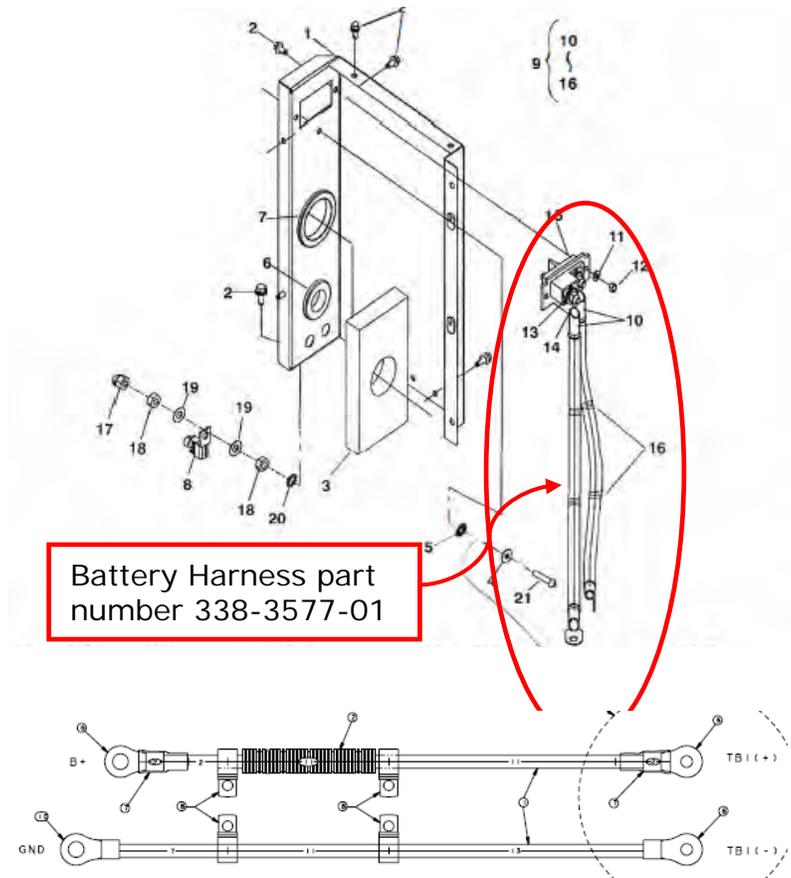


Onan No Start or Hard Start Issue

Assuming that the Onan computer is in working order:

If the Onan engine suddenly stops, in my experience, this is usually due to one of the several sensors on the engine (sea water temp overheat, low oil pressure, etc) telling the engine to shut down. You need to methodically work through each sensor. There are at least 4 different sensors, depending on your model and year.

The sensors may actually be sensing a fault condition; there may be a faulty sensor, or possibly a loose connection at the sensor. You will have to determine what the case is and repair accordingly. The sensors are mostly either normally open or normally closed switches and can be tested using a multi-meter.

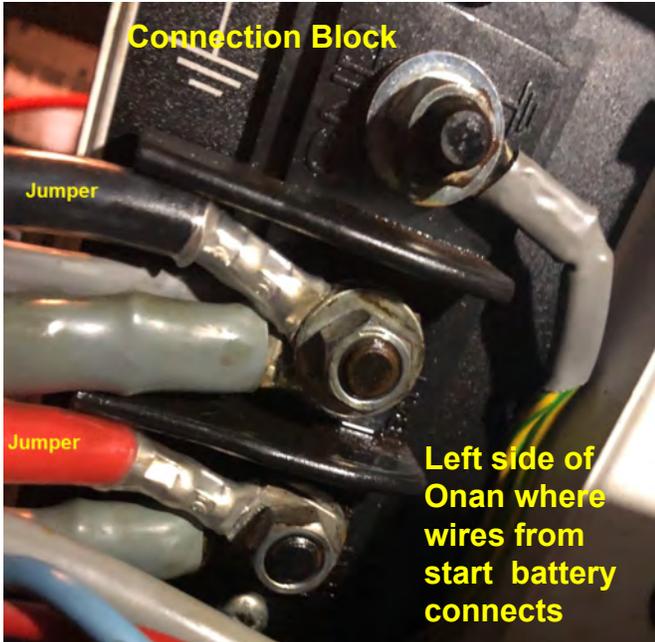


If the engine won't crank (turn over as in trying to start it) then you have one of 5 problems; NOTE: THIS ENGINE HAS TWO STARTER MOTOR SOLENOIDS (aka CONTACTORS). There is one on the (+) Positive side and one on the (-) Negative side. Both solenoids have to work for the starter motor to crank the engine.

1. **Faulty Solenoid (contactor)**, positive side (12 VDC), check to see if you have 12 volts on the supply side of this contractor, then see if you have 12 volts on the output side of the contractor while someone tries to crank the motor with the start switch, if you have 12 volts in and 12 volts out when activated then this contactor is OK next ,
2. **Faulty negative Solenoid (contractor)** (starter to ground on the tray). This contactor is mounted below the starter motor and is somewhat out of sight unless you bend way over. If you bypass this contactor you will NOT harm your engine. If bypassing this contactor allows the engine to crank when the start switch is activated then you either have a bad ground or a faulty ground side contactor.
3. **Faulty Starter Motor**. If you can measure 12 volts on the supply to the starter motor with your multimeter when the start switch is activated and you have a known good ground side contactor and known good positive side contactor, yet the motor won't crank, then your starter motor is faulty. Just to verify this you can remove the starter motor and take it to a shop to have it tested and/or repaired.
4. **Faulty Starter Switch**. If you don't see 12 volts on the control line to the contractors (both + and - side contractors) when the start switch is activated, then you probably have a faulty starter switch.

Continued on next page

Onan No Start or Hard Start Issue continued



5. **Faulty Battery Harness** part number 338-3577-01. A workaround is to fabricate jumper wires using appropriate sized copper wire and ring terminals (probably at least 8mm diameter) from the negative connection block on the outside of the Onan to the battery-side of the negative solenoid. If this jumper does not solve the hard start issue, fabricate and add a jumper for the positive side.

Fabricate two jumper wires:

1 red 3 foot with crimped ring terminals on each end

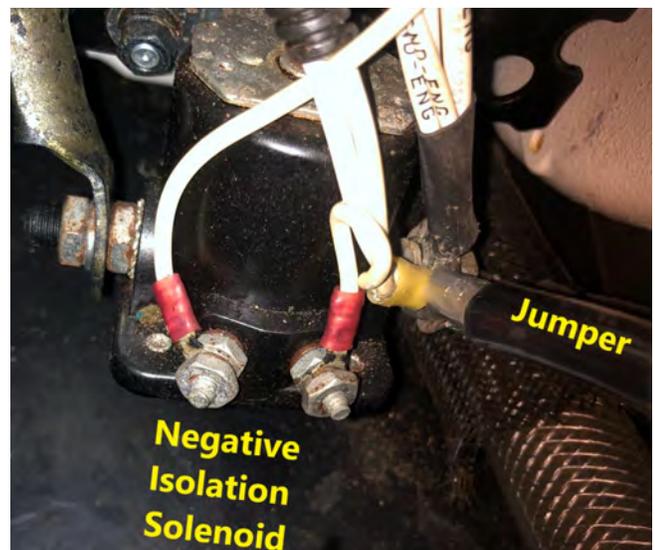
1 black 3 foot with a crimped ring terminals on each end



PROCEDURE: With your battery switches off, connect the Black Jumper (one you just fabricated) to the Connection Block on the same terminal that the black battery wire connects. Remove the block nut and add the new jumper wire, then tighten the nut. Route the other end of your black jumper to the terminal on the Negative Isolation Solenoid where the pair of white wires connect ...leave the white wires in place. Before you connect this jumper, check to see that continuity exists between the Negative on the Connection Block and the large terminal with 2 white wires on the Negative Start Solenoid. If you have continuity, you have the correct large post. BTW, on the other side of the Negative start solenoid the post is connected to the engine block. Test the Onan. If this does not solve the issue, connect the red jumper as follows:



Connect the red jumper to the Onan left side Connection Block where the red battery wire connects. Remove the block nut and add the new jumper wire, then tighten the nut. Route the other end to the terminal on the Positive Starter Solenoid, where the Onan pair of white wires connect. Leave the white wires in place. Before you connect this jumper, check to see that continuity exists between the Positive on the Connection Block and the large terminal with 2 white wires on the Positive Starter Solenoid. If you have continuity, you have the correct large post. BTW, on the other side of the Positive Starter Solenoid the post is connected to the Starter. Test the Onan.



Add a fuse to the Negative or Positive Start Battery post.

