

GMC WESTERN STATES – EXPERIENCE PUEBLO

September 17-21, 2015

Colorado State Fairgrounds



Tech Session – September 18, 2015

Keep that Onan Running

By Gary Bovee



Tips to Get that Onan Running



Electrical Trouble Shooting Demo

By Duane Simmons

GMC MOTORHOME
INTERNATIONAL CLUB



GMC ONAN POWER DRAWER
ELECTRICAL TROUBLE SHOOTING
DEMO

WHEN ALL ELSE FAILS
READ THE MAINTENANCE MANUAL

GMC MOTORHOME
INTERNATIONAL CLUB



GMC ONAN POWER DRAWER
ELECTRICAL TROUBLE SHOOTING
DEMO

PREPARED BY: DUANE M SIMMONS
MARCH 21, 2004
SPRING CONVENTION....LAS VEGAS, NV

TROUBLE SHOOTING AID

- General Repair Comments
- No A/C Power Output
- Will Not Respond To Stop Switch
- RC Panel Is Non-Functional
- No Starter Action

Onan Control Board Trouble Shooting Aid

ONAN CONTROL BOARD OPERATION DATA FORM: TROUBLE SHOOTING AID

- | | | <u>Measured Value</u> |
|---|--------------------------------|-----------------------|
| 1) Remove Board Cover & Spray/Soak Wire Terminals with 2-26 | | |
| 2) Measure DC Voltage between <u>Terminals 5 & 1</u> | (s/b ~ 12.8 v dc) | _____ v dc |
| 3) Measure DC Voltage between <u>Terminals 8 & 1</u> | (s/b ~ 12.8 v dc) | _____ v dc |
| 4) W/Starter engaged, measure dc voltage <u>Term. 10 & 1</u> | (s/b 10.5 v dc min.) | _____ v dc |
| 5) Jumper <u>Terminals 9 to 5</u> , Hear Fuel Pump & Start Onan | FUEL PUMP RUN YES_____ NO_____ | |
| NOTE: If No Start: Ignition, Fuel supply or wiring problem | START YES_____ NO_____ | |
| 6a) W/Onan Running, Measure AC Voltage between <u>Term. 8 & 11</u> | (s/b 26 to 31 v AC) | _____ v ac |
| 6b) Measure DC Voltage between <u>Term. 12 & 11</u> | (s/b near zero) | _____ v dc |
| 6c) Measure DC Voltage between <u>Upper Term. 1 & 2</u> | (s/b ~ 12 v dc) | _____ v dc |
| 6d) Remove the jumper.....does the Onan continue to run ???? | RUN Yes_____ No_____ | |
| 7a) Stop Onan & measure DC Voltage between <u>Term. 12 & 11</u> | (s/b ~ 12.8 v dc) | _____ v dc |
| 7b) Pull wire from <u>Term. 12</u>Try to Start | START YES_____ NO_____* | |
| 8a) Stop Onan & measure DC Voltage between <u>Upper Term. 1 & 2</u> | (s/b ~ zero v dc) | _____ v dc |
| 8b) Pull wire from <u>UPPER Term. 1 , 2 & 3</u>Try to Start | START YES_____ NO_____* | |

NOTE: 1) *If STEPS 1 THRU 6 (except 6d) is OK & Step 7 & 8 is No Start: Suspect Control Board !!!

2) "S/B~" Means "Should Be Approximate value"

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ONAN CONTROL BOARD OPERATION

Prepared By: Duane M. Simmons

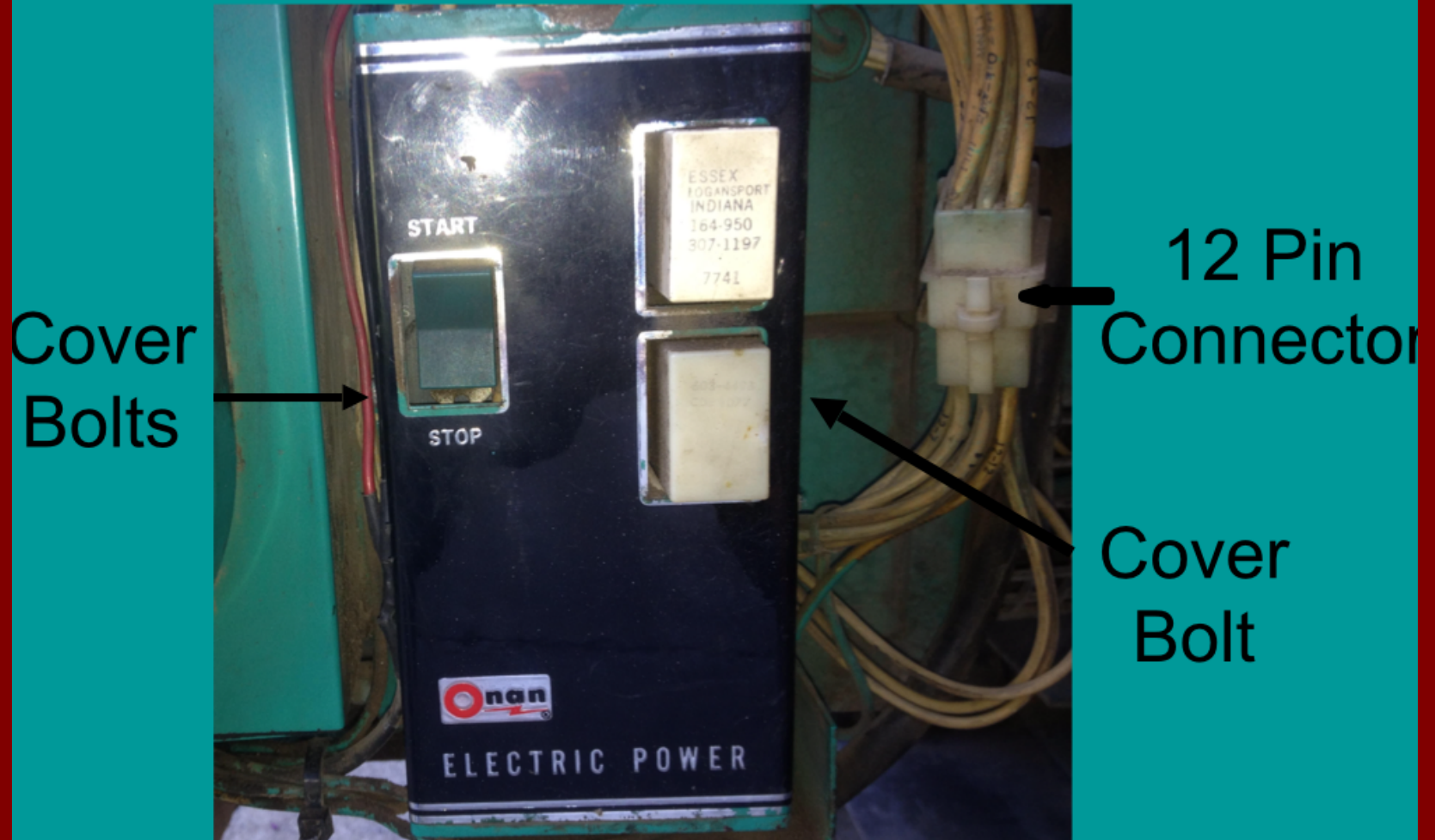
Onan Control Board Operation

- Control Board Schematics
- Emergency Start/Stop Procedure
- LOP Circuit Test Procedure
- Remote Control Panel Fuel Priming Circuit
- General Repair Procedures

Onan Control Board Operation Trouble Shooting Aids

- Try's To Run With Start Switch On
- Will Not Try To Run (Starter OK)
- Remote Control Panel Is Non-Functional
- No Starter Action
- No Response To Stop Switch

Control Board Cover



Harbor Freight Digital Multimeter



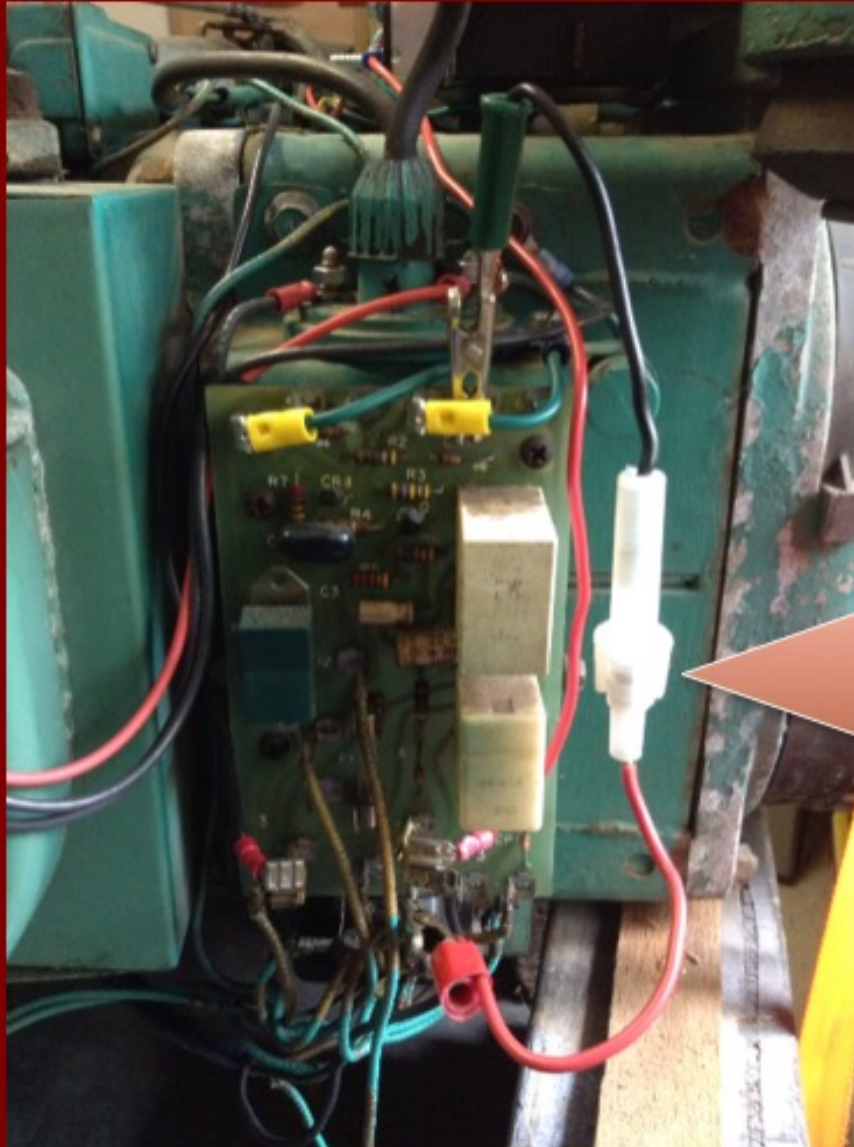
CRC 2-26



Onan Control Board



Jumping 5 to 9



5 amp Fuse

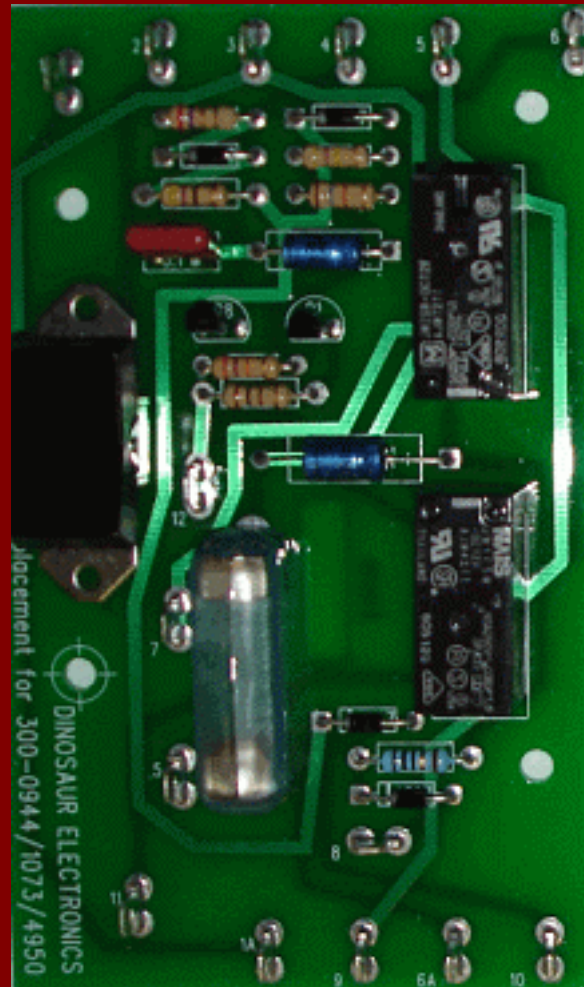
Common Things That Shut The Onan Down

- Low oil level
- Low fuel level - less than 1/4 tank

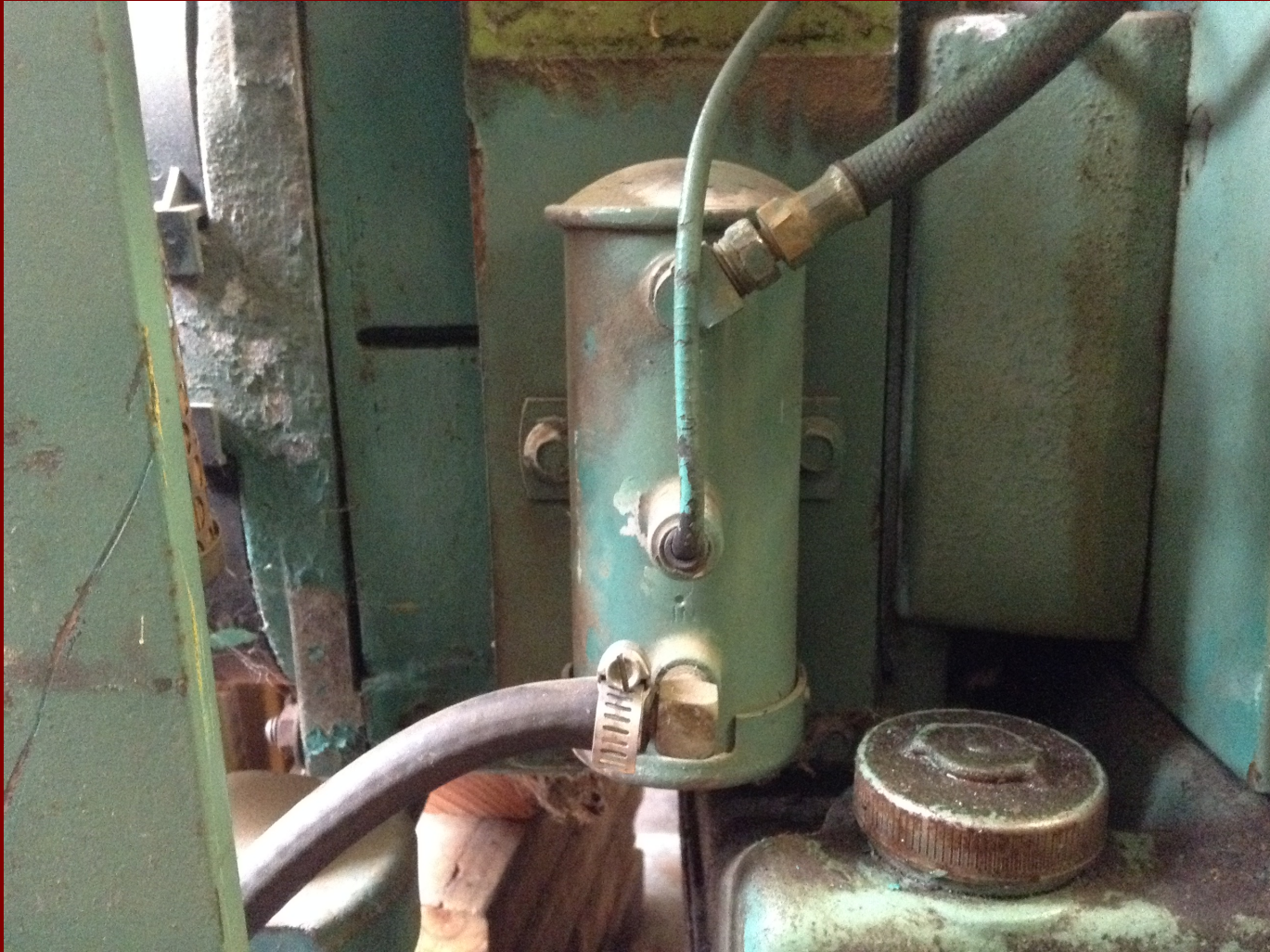
Oil Pressure Switch



Dinosaur Control Board



Fuel Pump



Circuit Breaker



Points & Condenser



Electronic Ignition



Electronic Ignition Kit



Fuel Solenoid



Remove Regulator



Testing The Onan's Alternator

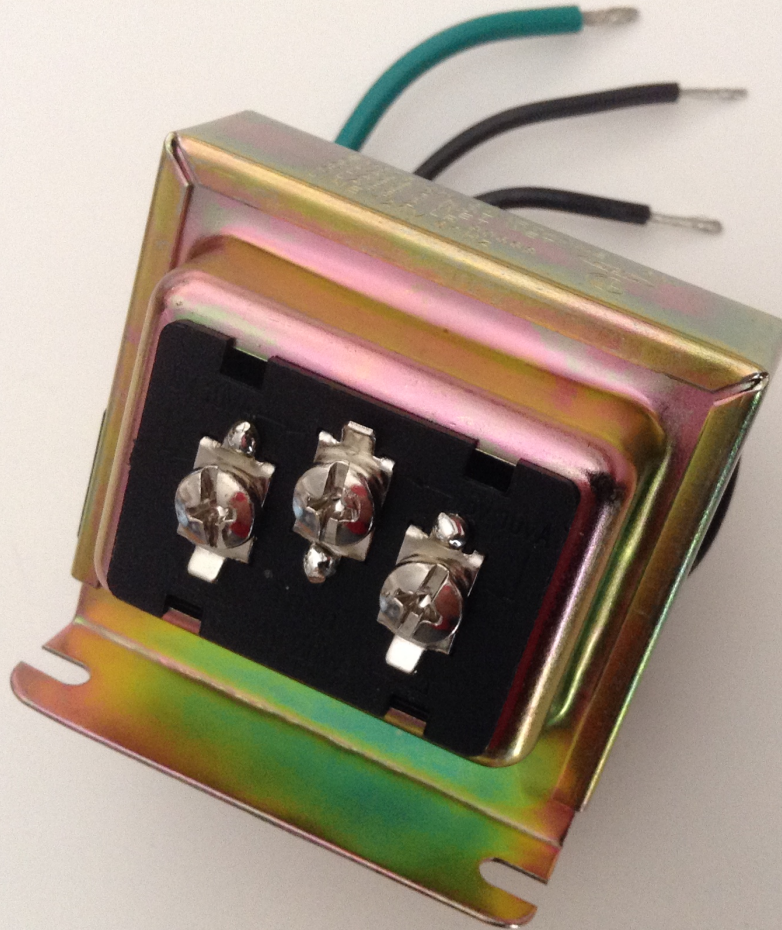
6a) W/Onan Running, Measure AC
Voltage Between Terminals 8 & 11

Should measure 26- 31 v AC

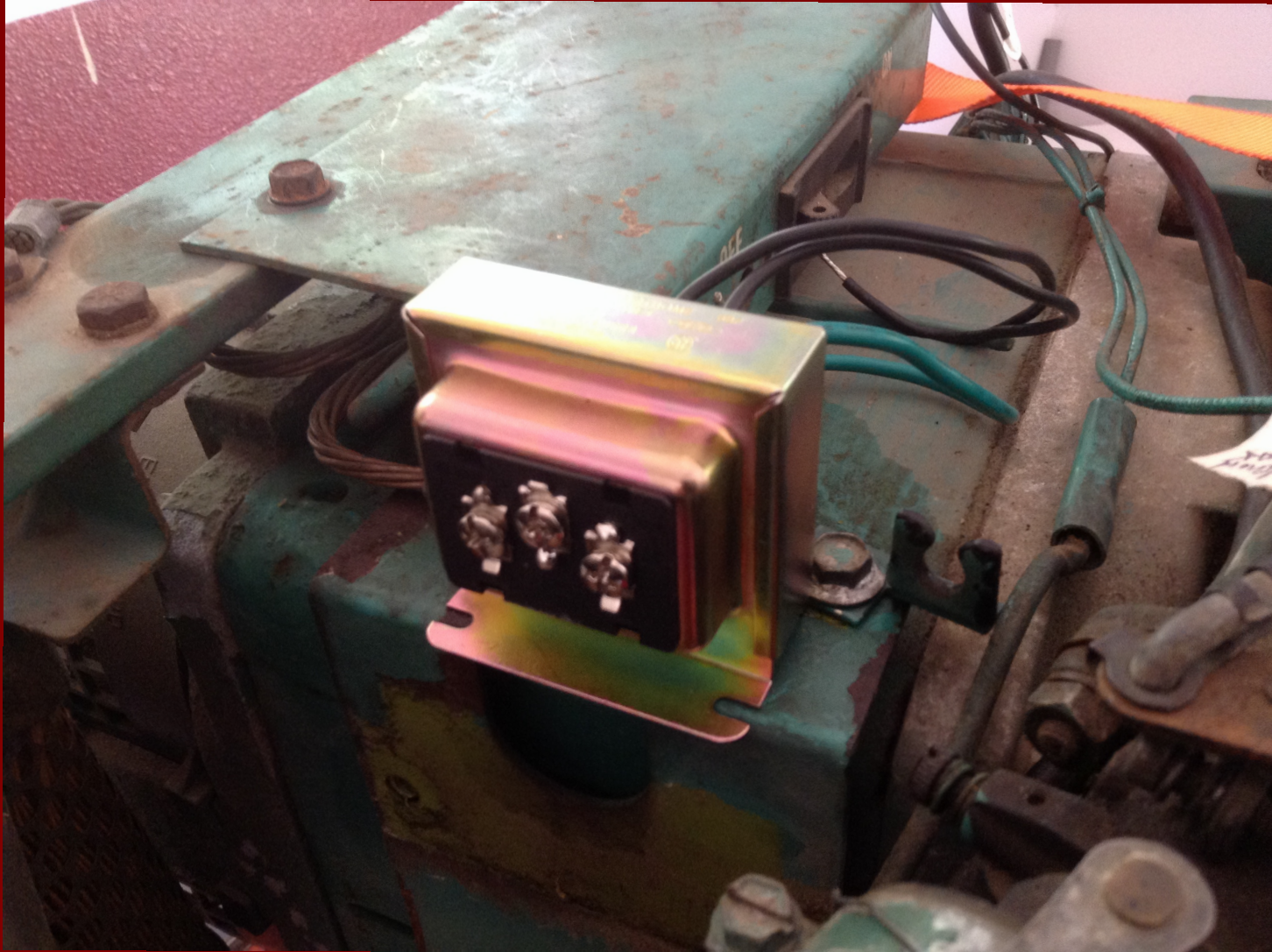
Repairs



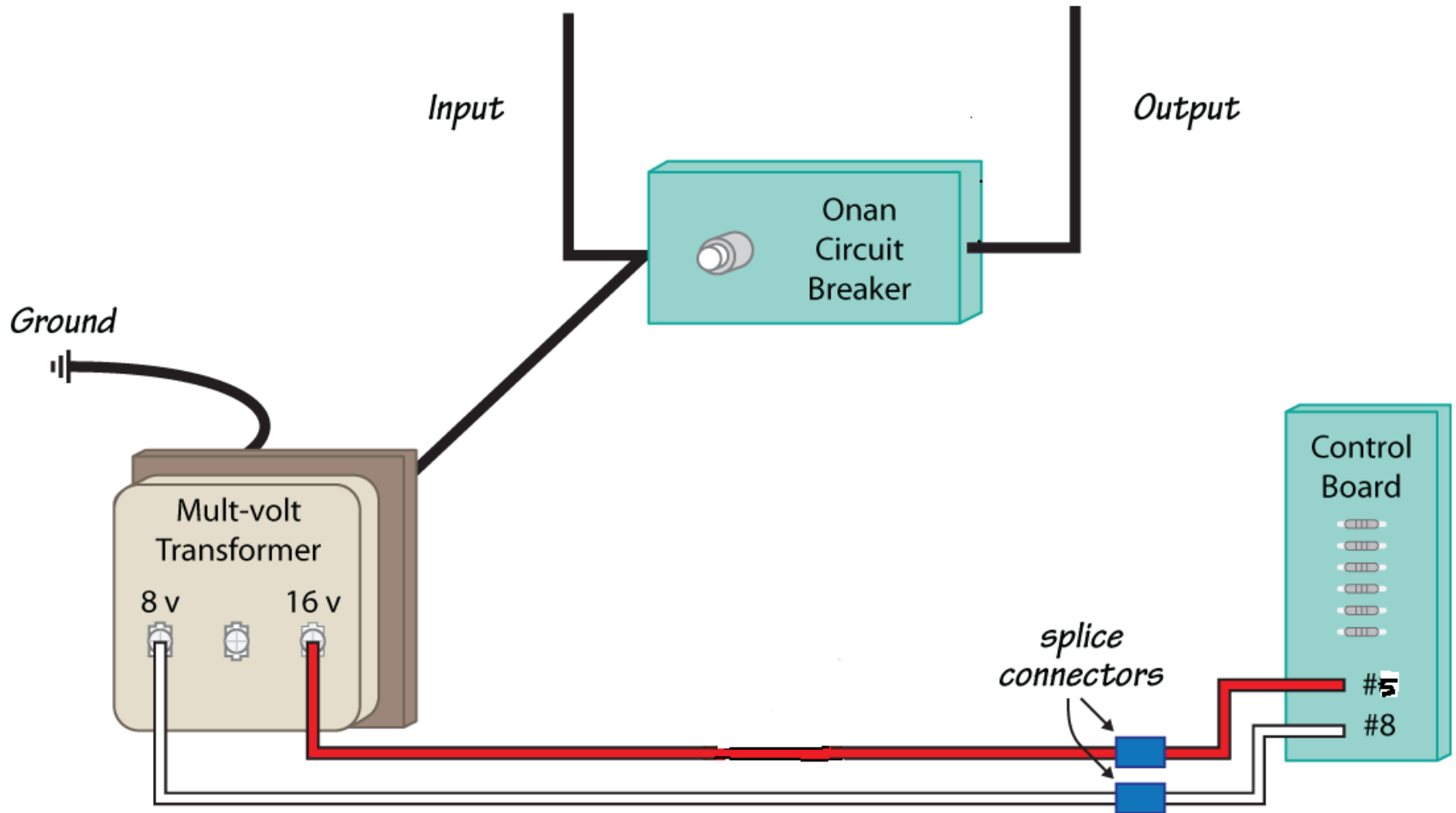
Doorbell Alarm (24 Volt)



Doorbell Transformer Installed



Transformer Wiring Diagram



Conclusion

- Run your Onan - The worst thing you can do is let it sit!
- Go to www.gmcidiotsguide.com and checkout Chapter 5 - Trouble Shooting the Onan