Suggested Alternator Installation on Vehicle Testing

ALTERNATOR INSTALLATION **PART#:_____ DATE:_____**

BASIC CHARGING SYSTEM - TECHNICIAN Evaluating_____ UNIT#_____

ENGINE-OFF TESTING

1) **Environment, visual check for External Contaminants such as oil** _____

2) **Mounting Hardware (Bolts) & Surfaces** _____

3) **Alignment, Pulley & Belt Alignment** _____
(NOTE: Misaligned belts, or pulleys can cause vibration at certain RPM & stress bearings, castings & mounts.)

4) **Pulley, Grooves & Alignment** _____
(NOTE: Check for worn grooves & correct alignment. ie) check for correct spacing between fan & pulley)

5) **Belts, Check for wear, glazing and oil soaked** _____

7) **Is Alternator belt driven from crank pulley or auxiliary pulley, if so check auxiliary belts**_____

8) **Belt Tensioner, Check for wear, resistance-stiffness & sticking** _____

9) **Battery Load Test, Disconnect to test Individually**

Battery #1	Battery #2	Battery #3	Battery #4
Load Test_____	Load Test_____	Load Test_____	Load Test_____

10) **Battery Voltage (State of Charge)**

Battery #1	Battery #2	Battery #3	Battery #4
Volts_____	Volts_____	Volts _____	Volts_____

NOTE: REPLACE DEFECTIVE or SWOLEN BATTERIES
DO NOT RUN ALTERNATOR IF BATTERY VOLTAGE IS LESS THAN 12.4V (24.8V)

11) **Cables & Terminal Ends at Alternator** _____
Must be clean & Tight – no corrosion – not frayed – not swollen - file or sand good but dirty terminal ends

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Suggested Alternator Installation on Vehicle Testing (continued...)

12) **Adapter plug ends** must be clean & tight fitting with no heat marks or order replacement adapter plug _____

13) **Cables & Terminal Ends at Battery** _____
Must be clean & Tight – no corrosion – not frayed – not swollen -, file or sand good but dirty terminal ends

ENGINE-ON TESTING (Start Engine Increase to High Idle about 1500RPM)

14) **Alternator Voltage** _____(should be between 13.8 & 14.7 Volts, 27.5 & 29.4 Volts for 24V system)
Connect Test Leads On Alternator Output & Ground Terminals On Alternator – All Accessories Off

15) **Battery Voltage** _____(should be between 13.4 & 14.7 Volts, 26.8 & 29.4 Volts for 24V system)
Connect Test Leads On The Batteries–Test under same conditions as previous test, Accessories Off

16) **Voltage Differential (Drop)**_____(Maximum Allowable Differential is .5 Volt)
(Alternator Voltage #14 minus Battery Voltage #15) (If a loss (drop) of more than .5 volt is present repair and/or replace existing circuits and/or supplement existing cables with additional cables from alternator positive and negative posts to battery).

17) **Integrity of Cab Gauge Reading Volts**_____ (Note differential if any from actual readings at Batteries & in Cab gauge Reading. Poor Gauge & Cabling To Cab, Dash & Gauge can result in misdiagnosis)

18) **Additional Tests To Consider: 1) AMP output test 2) Stationary draw Test**
3) Alternator Temp - excesssive heat (no-load).

IMPORTANT: The information contained in this sheet is for trained, professional technicians with proper tools, equipment & training to perform the maintenance described above. The above is suggested only; you should not assume the above applies to your equipment.

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