

Coolant System

This engine is shipped from the factory filled with a 50-50 mix of automotive ethylene-glycol anti-freeze and water. This will provide optimum year round protection against freezing, boiling and corrosion. The coolant system incorporates an optional water heater that operates when ambient temperature is below 80 °F (26.6 °C) AND utility power is present at the transfer switch. Periodically check coolant level as described in the operator's manual.

Battery

The installer must supply and install a valve-regulated rechargeable starting battery. The starting battery MUST conform to the specifications shown in this chart.

Battery Specifications	
Volts	12 Volt DC
Amps (MIN)	650 CCA (cold cranking amps)
Type	VRLA (Valve Regulated Lead Acid)
Terminal Hardware	Post
Dimensions (MAX):	
Width	7.5 inches (191 mm)
Length	11.25 inches (286 mm)
Height	10.0 inches (254 mm)

Install the battery as described in *Servicing the Battery* in the *Maintenance* section of the operator's manual. Always make sure the **NEGATIVE** cable is connected last.

⚠ WARNING Battery posts, terminals and related accessories contain lead and lead compounds - chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

Fuel Supply System

Ensure that all fuel pipe connections are tight, secure and without leaks.

Ensure that all gas line shutoff valves are **OPEN** and that adequate fuel pressure is available whenever automatic operation is desired.

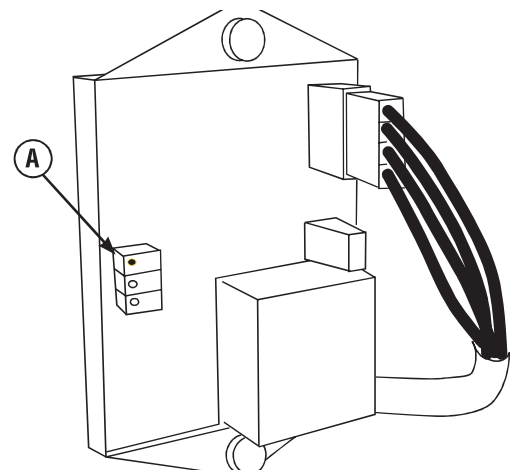
Initial Start-up (No Load)

Unit has been set-up for NG or LP vapor operation at the factory. Fuel conversion, if needed, must be completed prior to performing these steps.

Before operating the generator or placing it into service, inspect the entire installation carefully. Then begin testing the system without any electrical loads connected, as follows:

1. Connect an accurate AC voltmeter and a frequency meter to check generator output at load side of circuit breaker.
2. Set generator's circuit breaker to its **ON** (closed) position.
3. Confirm 15 Amp fuse is installed in system control panel.

4. Set generator's system switch to **AUTO**.
5. Push and hold **MANUAL OVER-RIDE** button on control panel for about six seconds. Engine will start.
When the generator is started for the very first time, it will require that air in the gaseous fuel lines be purged. This may take a few minutes.
6. Listen for unusual noises, vibration or other indications of abnormal operation. Check for oil or coolant leaks while engine runs.
7. Using a phase rotation meter, verify generator output at load side of circuit breaker matches utility power.
8. Let engine warm up for about five minutes to allow internal temperatures to stabilize.
9. No-load voltage should be 238 - 244 Volts for 240V generators and 206-210 volts for 208V generators. Frequency should be 59.8 - 60.2 Hz.
If AC voltage is outside these ranges, perform the generator adjustment, Steps 12 and 13 below.
10. Check generator output between each of the generator connection lugs and the neutral lug. In all cases, voltage reading should be 117 - 123 Volts for 208V generators and 136-142 for 240V generators.
DO NOT proceed until you are certain that generator AC voltage is correct and within the stated limits. Generator frequency is fixed and not adjustable.
11. If voltage and frequency values are correct, proceed to step 13.
12. Connect voltmeter as described in step 1 above.
13. While observing voltmeter, adjust alternator voltage control **(A)** for 240 volts for 240V generators and 208 volts for 208V generators. DO NOT adjust either of the other alternator controls.
14. Push and hold **MANUAL OVER-RIDE** button on control panel until engine stops.



15. Install alternator circuit breaker enclosure cover.