Kohler Decision Monitor

Section 2
OPERATION

Controls — Figures 2-1, 2-2

- **Selector Switch** (Voltmeter-Ammeter) — selects generator output circuits to be measured. If switched to a point with three circuit lead labels, voltage is measured between the upper two leads and amperage on the lower lead. If switched to a point with two circuit labels, voltage only is measured. With switch in OFF position, AC voltmeter and ammeter will not register.

NOTE

Indicated switch positions will vary among single and three phase models with different voltages.

- **Regulator Rheostat** — used to fine-adjust generator output voltage.
- **Lamp Test** — used to test indicator lamps.
- **Reset** — must be pressed to allow engine restart after fault shut-down or emergency stop.
- **Emergency Stop** — will shut down generator set immediately.
- **Generator Switch** — AUTO position, allows start-up by automatic transfer or remote start-stop switch. TEST position, used for exercise runs or for normal start-up without automatic transfer switch. CENTER OFF position, used to prevent automatic start-up while servicing set, making non-emergency manual stops, or resetting system.

NOTE

Switch in CENTER OFF position will prevent start-up by automatic transfer or remote start-stop switch.

Indicators

- **Frequency Meter** — measures frequency (HERTZ) of generator output voltage.

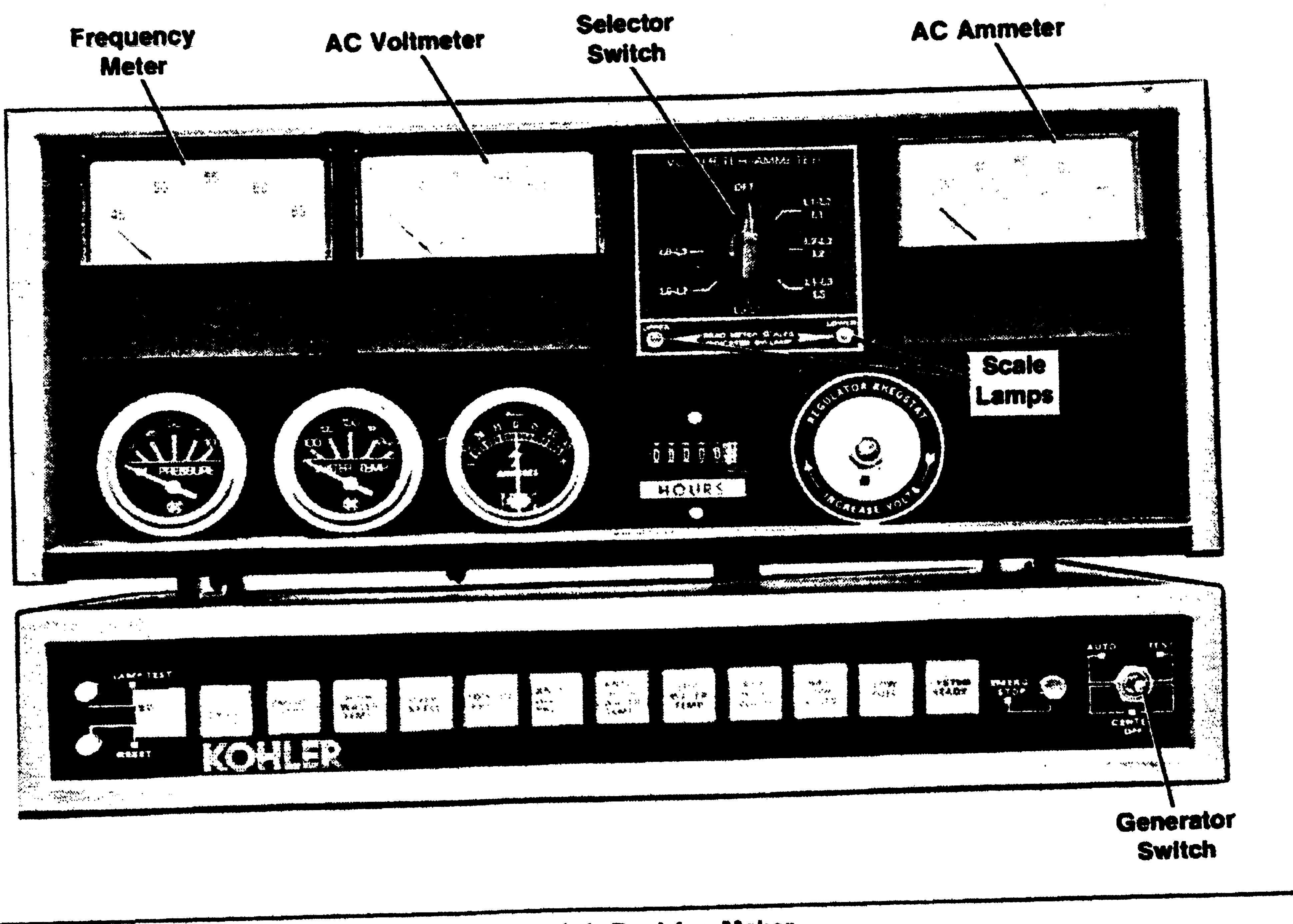

Figure 2-1. Decision Maker

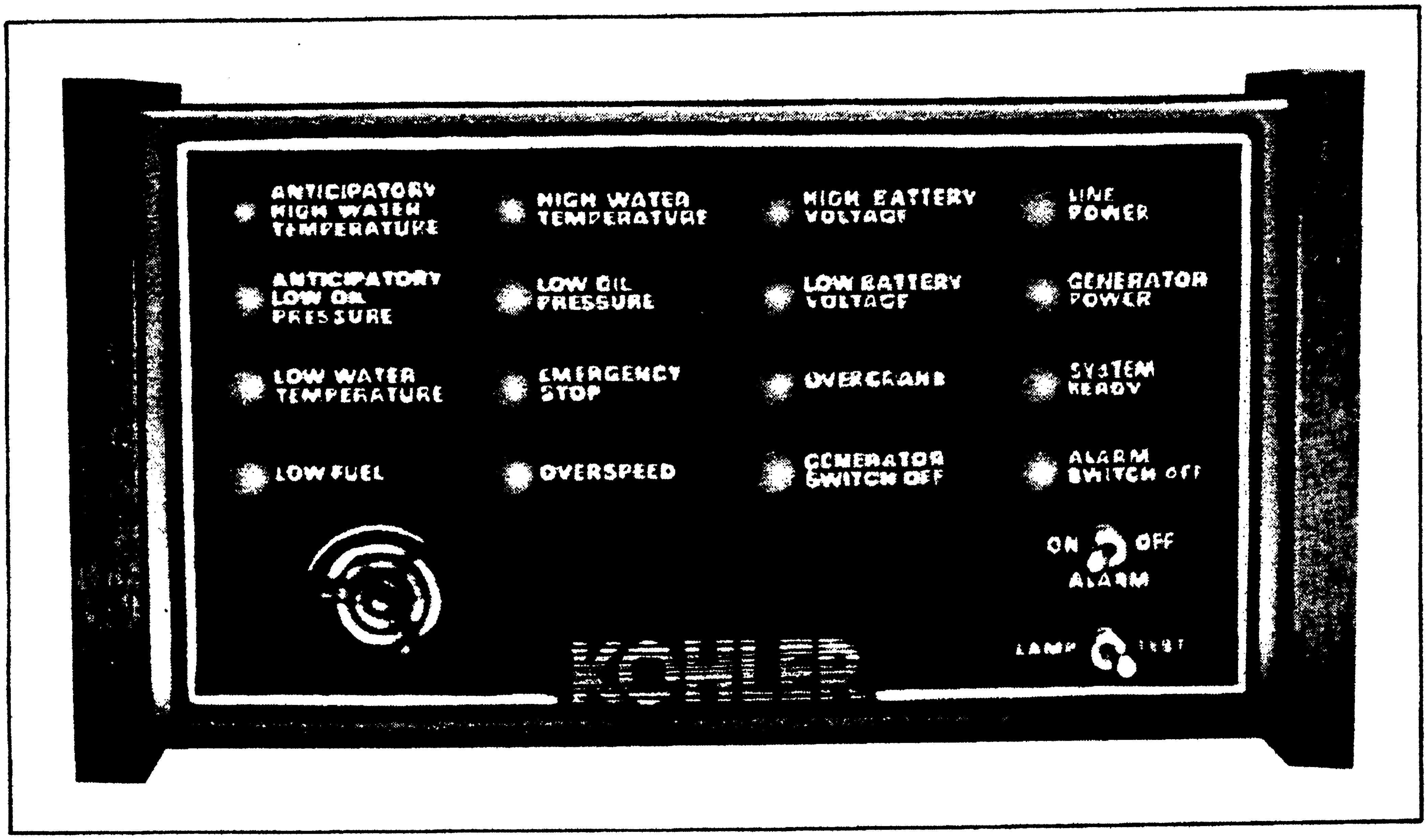

Figure 2-2. Decision Monitor (remote annuciator) Option

Indicators (Continued)

- **AC Voltmeter** — measures voltage across output leads indicated by selector switch.
- **Scale Lamps (upper lower)** — indicate voltmeter and/or ammeter scales to be read.
- **AC Ammeter** — measures amperage from output leads indicated by selector switch.
- **Oil Pressure** — measures engine oil pressure.
- **Water Temperature** — measures engine coolant temperature.
- **DC Ammeter** — measures charge/discharge rates of engine alternator and starting battery(ies).
- **Hourmeter** — records total generator set operating hours for reference in maintenance scheduling.
- **Switch Off** — lamp flashes when generator switch is in CENTER OFF position. Lamp will not light when LAMP TEST button is pushed and generator switch is in AUTO or TEST position.
- **Overcrank** — lamp lights if engine fails to start within preset cranking period.
- **Emerg. Stop** — lamp lights if EMERG. STOP button has been pushed.
- **High Water Temp.** — lamp lights if set has shut down due to high engine coolant temperature.
- **Overspeed** — lamp lights if set shuts down due to overspeed.
- **Low Oil Press.** — lamp lights if set shuts down due to loss of engine oil pressure.
- **Antic. Low Oil Press.*** — lamp lights if engine oil pressure approaches shut-down level.
- **Antic. High Water Temp.*** — lamp lights if engine coolant temperature approaches shut-down level.
- **Low Water Temp.*** — lamp lights if optional engine block heater is not working and/or water temperature may be too low (below 70° F, 21° C) for 10-second startup.
- **Bat. High Volts*** — lamp lights if battery or charging voltage exceeds normal (will also light if over voltage occurs due to battery charger malfunction while set is not operating).
- **Bat. Low Volts*** — lamp lights if battery or charging voltage drops below normal (will also light if under voltage occurs due to battery or charger malfunction while set is not operating).
- **Low Fuel*** — lamp lights if fuel tank level approaches empty.
- **System Ready*** — lamp lights when GENERATOR SWITCH is in AUTO or TEST positions and system senses no faults.

* Optional

Decision Monitor (remote annunciator) Option Indicators

Decision Monitors have the same lamp indicators as the Decision Maker Controller, plus the following (See Figure 2-2):

- **Line Power** — indicates commercial utility power in use.
- **Generator Power** — indicates generator power in use.
- **Alarm Switch Off** — indicates ALARM switch in OFF position.
- **Alarm Switch** — controls alarm horn on Decision Monitor.
- **Alarm Horn** — sounds if any fault or anticipatory condition occurs.

An alarm horn and alarm horn switch may be installed on the generator set.

Prestart Checks

The following items should be checked before each start-up of manually controlled generator sets or at regular intervals on sets equipped with Automatic Transfer Panels which automatically start and stop the generator set.

⚠ WARNING

UNIT STARTS WITHOUT NOTICE! Units with Automatic Transfer Switches start automatically. Potential injury or electrocution can result. Turn Generator Master Switch on controller to OFF position, and remove battery cables (remove negative lead first and reconnect it last) to disable generator set before working on any equipment connected to generator.

OIL LEVEL: Check and add oil as necessary to bring the level up to the full mark on the dipstick.

COOLANT LEVEL: (radiator, and heat exchanger cooled sets): Allow engine to cool. Remove the filler cap and add coolant as needed to bring the level up to the full point. CAUTION: Remove filler cap slowly.

DRIVE BELTS: Make visual check of radiator fan, water pump, and battery charging alternator belts to make sure they are tight and in good condition. See engine operation manual for adjustments.

AIR CLEANER: Inspect components to make sure they are tight and in proper position.

FUEL LEVEL: Make sure there is an adequate supply — keep tanks full to allow operation for extended periods.

BATTERY: Check connections and level of electrolyte inside battery — add distilled water as needed.

NOTE

Battery negative (-) connection must be made to a good ground.

EXHAUST SYSTEM: Check to make sure components are tight and in good condition.

OPERATING AREA: Check to make sure no obstructions block the flow of cooling air. Also make sure that the area is clean, and that rags, tools, etc., are not left on or near the generator set. Clean the intake and outlet screens.

LAMP TEST: Press the lamp test button and check to make sure all lamps on your controller and annunciator are working.

Starting (See Figure 2-3)

Test

Use generator switch TEST position to test run generator set, or for normal start-up if set is not connected to an automatic transfer or remote start-stop switch.

Moving switch into TEST position will initiate cyclic cranking (2 to 20 second periods) for up to 75 seconds to start engine.

Automatic

Use generator switch AUTO position to allow start-up from an automatic transfer switch or remote start-stop switch.

Stopping (See Figure 2-3)

Use generator switch CENTER OFF position to make non-emergency manual stops.

1. Disconnect load from generator set.
2. Move generator switch to CENTER OFF position. Set will stop after 5-minute (approx.) cool-down period.