OPERATING PROCEDURE
STANDBY GENERATOR EG-73-37 TEST: START/RUN

APPLICATION

- Starting and running EG-73-37 for no-load testing every four weeks and after maintenance or repairs.
- Connecting and disconnecting the test load bank for load testing per OPER-111.
- EG-73-37 supplies emergency power to buildings 6, 34, 37, and 80. The generator is located inside Bldg 37, lower level, west side.
- Applies to Plant Maintenance Technicians and Facilities Electricians trained in the operation of electric generators.

SPECIAL INSTRUCTIONS

- Avoid extended periods of no-load operation to prevent "wet stacking," which severely reduces the power that the engine can deliver.
- Work Steps A cover the NO LOAD TEST.
- Work Steps B cover connecting the test load bank to this standby generator for the performance of OPER- 111: ENGINE GENERATOR LOAD TEST.
- Work Steps C contain specific instructions for the disconnecting of the test load bank.
- Contact: Building Manager
- Special Equipment: Flashlight, safety glasses, and hearing protection. Load bank with 4/0 test leads, one 9/16" socket, one 9/16" open wrench, Phillips head screwdriver.

WORK STEPS A: No Load Test

1. Check electrolyte level in battery, and fluid levels in crankcase and radiator. Add fluid as required.
    - The switch gauge is at the top left side of the radiator.
2. Fill in PRE-START CHECK columns in log. The log is on the desk to the left of the generator.
3. Move control switch to MAN position. Engine will crank and start in a few seconds.
4. Under ENGINE IN OPERATION columns in log, record:
    - Oil pressure
    - Water temperature
    - Battery charge rate
    - Put a slash mark and leave a space after entries for oil pressure and water temperature. This allows room for "hot" running data for these items (see Step 9 below).
5. Under GENERATOR IN OPERATION columns in log, record:
    - Generator voltage
    - Frequency readings

6. Run engine long enough for normal operating temperatures to be reached. Then check for abnormal noises and fluid leakage.
    - Check pipe, welds, gaskets, and joints.
    - Ensure exhaust pipes are not heating surrounding areas excessively.
7. Check for:
    - Exhaust problems.
    - Coolant leakage.
    - Fuel leakage.
    - Oil leakage.

    CAUTION: Do not permit any flame, cigarette, or other ignition source near the fuel system
8. Check fuel lines, filters, and fittings. Check flexible sections for cuts, cracks and abrasions. Ensure they are not rubbing against anything that could cause breakage.
    - If you find fuel leaks, shut unit down for repair.
9. Before securing the engine, record the following In the ENGINE IN OPERATION column:
    - Oil pressure
    - Water temperature
    - Battery charge rate
10. Move control switch to **AUTO** position. Engine will stop.
11. Enter total hours in log under ENGINE OPERATION.

WORK STEPS B: Connection of Load Bank

1. In *OPER-111: Generator Load Test*, carry out Work Steps 1 through 4.
2. Remove cover on junction box marked TEST LEADS to connect leads.
3. Attach 4/0 leads to female quick disconnects.
4. Connect test leads to load tester.
    - Verify correct phase connections.
5. Place **GENERATOR OUTPUT** breaker handle in **CLOSED** position.
6. Return to *OPER-111*, Work Step 5.

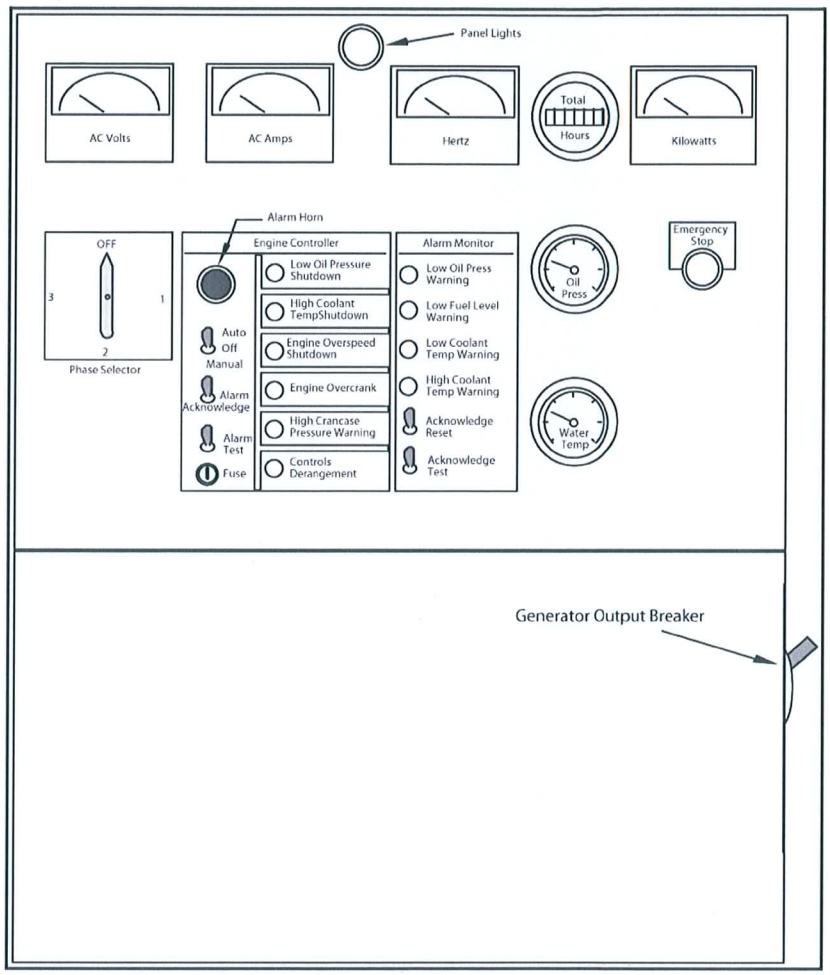
WORK STEPS C: Disconnection of Load Bank

1. In *OPER-111*, carry out Work Step 16.
2. Disconnect 4/0 leads from Female quick disconnects.
3. Verify that connections are secure. Tape end of Female quick disconnects to prevent possible short circuit.
4. Replace cover.

5. Return to OPER-111: Generator Load Test, Step 17.

REFERENCES

1. OPER-111: Generator Load Test.



EG-73-37 Control Panel

CONDITION CODE: COMMENT:

10 - No defects found
11 - Minor repair required
12 - Major repair required
13 - Replacement required

RESPONSIBILITIES AND CONTROLS

Provide signature lines as follows:

Rev. No.	SME/Title	Approved/Title	Date	Effective Date
1	James Murphy Jim Murphy Maintenance Supervisor	Ken Fletcher Ken Fletcher Operations Department Head	5-22-09	5-22-09