



Consumer & Industrial

GEEP-395I

Instruction

Long Term Storage

Custom 8000 Motors and Generators

These Instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation, operation or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes, the matter should be referred to GE Industrial Control Systems.

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Long Term Storage

Receiving

Whenever traffic clearance allows, the machine is shipped from the factory as an assembled unit ready for installation. Sole plates (or slide rails), if ordered, are bolted to machine feet. Occasionally some accessory items are shipped separately. All packing lists should be carefully checked to assure all items have been received, each unit should be carefully inspected upon arrival. Any damage should be photographed, documented and then reported immediately to the carrier and to the nearest General Electric office.

Storage

The machine must be always stored indoor.

If, at the time of purchase, it was specified that the motor be packaged for long-term storage, the package should be left intact during the period of storage.

Connect space heaters to adequate power source.

If not originally package for long term storage, adequate precautions must be taken to protect it while in storage. The following instructions are provided as a guide for storage. Full compliance with these instructions is required to maintain the warranty.

To prevent condensation energize the machine's space heaters to keep the machine temperature above the dew point of the surrounding air. During periods of extreme cold or rapid temperature decrease, the space heaters may not be adequate to maintain this temperature differential. Therefore, safe supplementary space heating may be required. NOTE: Even in climate-controlled warehouse, it would be a good practice to energize the space heaters.

Once every two (2) months, take and record megger reading of the winding insulation resistance. Investigate any significant drop in insulation resistance.

During manufacturing, testing, and preparation for shipment basic precautions are taken by the factory to guard against corrosion of the bearing journals and shaft extension. The shaft extension is treated with a heavy coating of rust inhibitor. All machines with oil-lubricated bearings are operated and tested at the factory with a rust-inhibiting oil in the lubrication system.

Although the machines are shipped without oil, a rust-inhibiting film remains on the critical bearing Surfaces during transit and for up to two (2) months of normal storage.

Motors with anti-friction bearings are greased at factory:

Ball bearing and roller bearing motor shafts are to be rotated manually every two (2) months.

Sleeve bearing motors are tested using an oil containing a rust inhibitor. Prior to shipment, the oil is drained. If the motor is stored more than one (1) month, the oil reservoirs must be refilled to the indicated level with the specified lubricant.

Once every two (2) months, the shaft should be rotated at least thirty (30) revolutions to re-circulate the oil, on large motors this operation would require the use of lever in order to allow rotation of the shaft. The shaft sometime is too heavy to be rotated by hand, so the use of a lever would help. This is done this way at the factory. In general the motors can be rotated by hand. In some specific cases depending on size and type bearing GE would suggest that the warehouse contact the factory for special instructions.

If the original rust preventative coating on the machined surface of the shaft is removed it should be re-coated with a suitable rust preventative coating, such as Tectyl or Cosmoline, to prevent rusting (shaft extension and any exposed machined surfaces).

Machines equipped with brushes should have the brushes lifted in the brush holders so they are not in contact with the collectors.

Keep records of all inspections carried out, if the machine is stored for more (1) year then a GE Service technician should be hired to performed full inspection of the motor.

Outdoor storage is not recommended. Aside from all the possibilities of external weather conditions, erection conditions, environmental conditions etc., which can affect an idle machine, variations in temperature and humidity can cause condensation throughout the unit, producing rust and corrosion on metal parts as well as deterioration of the electrical insulation. If outdoor storage cannot be avoided, contact the factory through the nearest



General Electric office giving full information on the circumstances and explaining steps to be taken to protect the machine. Failure to protect the machine may invalidate the warranty.

The storage facility must provide protection from contact with rain, hail, snow, blowing sand or dirt, accumulations of ground water, corrosive fumes and infestation by vermin or insects. Continuous or severe intermittent floor vibration should be avoided. Electrical service for space heater and illumination should be provided. There should be fire detection and a fire-fighting plan. The machines must not be stored where they are liable to accidental damage or exposed to weld spatter, exhaust fumes or dirt. If necessary, erect suitable guards or separating walls to provide adequate protection. Avoid storage in an atmosphere containing corrosive gases, particularly chlorine, sulphur dioxide and nitrous oxides.

The machine in storage should be inspected periodically and inspection records maintained. The following tests and inspections are designed to reveal deterioration or failure of protective systems (shelter, coatings and temperature control), of the machine without delay. Inspect the storage area for compliance to the above criteria and inspect the stored machine for the following:

1. Physical damage.

2. Cleanliness.

3. Signs of condensation.

4. Integrity of protective coatings.

5. Condition of paint - discoloration.

6. Signs of vermin or insect activity.

7. Satisfactory space heater operation. It is recommended that an alarm system be in place to operate on interruption of power to the space heaters. Alarms should be responded to immediately.

8. Record the ambient temperature and relative humidity adjacent to the machine, the winding temperature (utilizing the RTD's), the insulation resistance and the polarization index. Refer to the section entitled Insulation Resistance on instruction book for information on determining the insulation resistance and polarization index.

Experience has shown that adequate precautions during storage will avoid costly deterioration of parts and lengthy maintenance procedures at installation and start-up.