



Improving Life and Overhaul Interval Of Our Generators to 20,000 Hours

◆ Importance of proper Installation, Operation and Maintenance cannot be overemphasized:

- ◆ **Today** generators are an inevitable requirement to overcome power outages and triumph over the resultant hindrances to business continuity. While generators are manufactured and meant to last and are convenient and easy to use, they can also be hazardous to life and property if standard procedures and adequate precautions are not followed during installation, operation and maintenance.
- ◆ ESL offers useful insight to the customers to meet the challenges of uninterrupted, unhindered supply of power to the customer's installation and facilities. We always recommend using a certified technician or electrician for any type of work on a power generator with adequate experience of the same. We provide general tips and guidelines only, best practice always suggests consulting the manufacturer and owner's manual to ensure specific guidelines are followed and the generator is operated in a safe working environment.
- ◆ If adherence is made to these guidelines, for most power applications in Pakistan, diesel generators can start and assume full-rated load in less than 10 seconds, and they typically can go 20,000 hours or more between major overhauls.

◆ Installation Procedures

- ◆ ESL recommends that the equipments should always be installed, serviced and repaired only by Authorized Service Dealers, or competent, qualified and certified technicians. They should have a thorough knowledge of and always comply with standard operating procedures, applicable codes and regulations. No compromise, in this regard, should be made as it may amount to a penny wise, pound-foolish approach and may seriously impair the performance, reliability, durability and life cycle cost of your expensive capital equipment.

1. Upon unpacking the generator from shipping cartons, first conduct a thorough inspection to detect any damage that may have occurred during shipment.
2. Check whether the rated amperage / wattage capacity of the unit is adequate to handle all the intended loads during a power outage. If required, the critical loads may be grouped together and wired independently into an exclusive distribution panel.
3. The unit should be placed outdoors in a protective enclosure, where sufficient air for cooling and ventilation is available in an unobstructed manner. The generator should be placed on a level surface, which is non-combustible and non-conducting, a little above ground level to prevent contact from rising water levels.
4. The generator should be installed in close proximity to the location of the transfer switch and the fuel supply, to reduce the required length of cabling and piping respectively. You may be required to seek a permit if you intend to store a large fuel tank.
5. A grounding lug is usually provided for grounding the frame and external conducting parts of the equipment. It is essential to consult a qualified electrician to determine grounding requirements and follow procedures that meet local regulations.
6. All batteries must be completely charged before they are inserted into the generator.
7. Similar care must be ensured while unpacking and installing the transfer switch. The switch should be wall-mounted and all the points must be in level with each other to prevent distortion of the switch.
8. The unit should be connected to the electrical system supplied by the utility only by means of the automatic transfer switch. This will ensure isolation between the generator's electric system and the utility distribution system. Also, back-feed can occur wherein an improperly connected generator begins to feed electricity back into the power lines which will damage the unit and cause injury or death to the operating personnel. In the absence of a transfer switch, the safest option is to plug the essential appliances directly into the generator.