



# PHARMA DEVILS

## ENGINEERING DEPARTMENT

### STANDARD OPERATING PROCEDURE

<b>Department:</b> Engineering	<b>SOP No.:</b>
<b>Title:</b> Preventive Maintenance of Diesel Generator Set	<b>Effective Date:</b>
<b>Supersedes:</b> Nil	<b>Review Date:</b>
<b>Issue Date:</b>	<b>Page No.:</b>

#### 1.0 Revision History

Rev. No.	Details of changes	Reason for change
00	NIL	NEW SOP

#### 2.0 Objective

2.1 The Objective of this SOP is to describe the procedure for preventive maintenance of Diesel Generator (DG) Set.

#### 3.0 Scope

3.1 This SOP is applicable for the preventive maintenance of Diesel Generator installed in Utility Block .

#### 4.0 RESPONSIBILITY:

4.1 The Maintenance Operator shall be responsible:

4.1.1 To carry out preventive maintenance of equipment.

4.1.2 To report any deviation and/or deficiency observed during preventive maintenance.

4.1.3 To maintain the record of all checks.

4.2 The Maintenance Engineer shall be responsible:

4.2.1 To get the preventive maintenance done as per annual maintenance planner.

4.2.2 To check the preventive maintenance activity is carried out and deviations and/or Deficiencies are complied as per requirement.



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#### 5.0 Accountability

Head –Engineering Services

#### 6.0 PROCEDURE:

##### 6.1 PRIMARY CHECKS:

- 6.1.1 Check the tightness of battery connection.
- 6.1.2 Check the specific gravity of the individual cell.
- 6.1.3 Check the battery voltage.

##### 6.2 CAUTION:

- 6.2.1 Before carrying out preventive maintenance, switch 'off' the mains, remove fuses and display the 'Under Maintenance' board.

##### 6.3 MONTHLY PREVENTIVE MAINTENANCE ACTIVITIES:

- 6.3.1 Clean the aluminum fins of radiator, using fresh water.
- 6.3.2 Check the condition of oil filter. Replace it if required.
- 6.3.3 Change the engine oil (15W40). If required, replaced it.
- 6.3.4 Check all electrical connections for tightness and insulation damage. Rectify it, if required.
- 6.3.5 Check the alignment of Dynamo motor. Rectify it, if required.
- 6.3.6 Check the belt condition. Replace it, if required.
- 6.3.7 Check all the nuts and bolts for tightness and damages. Rectify it, if required.
- 6.3.8 Take a running trail and check for any abnormal noise and vibrations. Rectify it, if required.
- 6.3.9 Maintain the record of all checks in checklist. (Annexure-1).

##### 6.4 SIX MONTHLY PREVENTIVE MAINTENANCE ACTIVITIES:

- 6.4.1 Clean the aluminum fins of radiator, using fresh water.
- 6.4.2 Ensure the connection of Automatic Voltage Regulator (AVR).



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**6.4.3** Check the condition of gasket. Replace it, if required.

**6.4.4** Check all bus bar joints for tightness. Rectify it, if required.

**6.4.5** Maintain the record of all checks in checklist. (Annexure-2).

#### **7.0 ANNEXURES:**

Annexure-1 : Monthly Preventive Maintenance Checklist for DG Set.

Annexure-2 : Six Monthly Preventive Maintenance Checklist for DG Set.

#### **8.0 References (S)**

NIL

#### **9.0 Glossary**

SOP : Standard Operating procedure

No : Number

AVR : Automatic Voltage Regulator

DG : Diesel Generator



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#### ANNEXURE-01

#### Monthly Preventive Maintenance Checklist for DG Set

<b>EQUIPMENT CODE:</b>	<b>LOCATION:</b>	<b>MONTH:</b>
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S. No.	DESCRIPTION	OBSERVATIONS/ REMARKS
1.	Clean the aluminum fins of radiator, using fresh water.	
2.	Check the condition of oil filter. Replace it if required.	
3.	Change the engine oil (15W40). If required, replaced it.	
4.	Check all electrical connections for tightness and insulation damage. Rectify it, if required.	
5.	Check the alignment of Dynamo motor. Rectify it, if required.	
6.	Check the belt condition. Replace it, if required.	
7.	Check all the nuts and bolts for tightness and damages. Rectify it, if required.	
8.	Take a running trail and check for any abnormal noise and vibrations. Rectify it, if required.	

#### FORMAT NO.:

<b>Done by:</b> (Operator)		<b>Done on:</b>	
<b>Checked by:</b> (Engineer)		<b>Next due on:</b>	
<b>Verified by:</b> (Concerned Department)			

**FREQUENCY :- MONTHLY PREVENTIVE MAINTENANCE**

**CAUTION : BEFORE CARRYING OUT PREVENTIVE MAINTENANCE, SWITCH OFF THE MAINS, REMOVE FUSE AND DISPLAY THE UNDER MAINTENANCE BOARD.**



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#### ANNEXURE-02

#### Six Monthly Preventive Maintenance Checklist for DG Set

<b>EQUIPMENT CODE:</b>	<b>LOCATION:</b>	<b>MONTH:</b>
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S. No.	DESCRIPTION	OBSERVATIONS/ REMARKS
1.	Clean the aluminum fins of radiator, using fresh water.	
2.	Ensure the connection of Automatic Voltage Regulator (AVR).	
3.	Check the condition of gasket. Replace it, if required.	
4.	Check all bus bar joints for tightness. Rectify it, if required.	

FORMAT No.:

<b>Done by:</b> <b>(Operator)</b>		<b>Done on:</b>	
<b>Checked by:</b> <b>(Engineer)</b>		<b>Next due on:</b>	
<b>Verified by:</b> <b>(Concerned Department)</b>			

**FREQUENCY :- SIX MONTHLY PREVENTIVE MAINTENANCE**

**CAUTION : BEFORE CARRYING OUT PREVENTIVE MAINTENANCE, SWITCH OFF THE MAINS, REMOVE FUSE AND DISPLAY THE UNDER MAINTENANCE BOARD.**