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|  | **APARNA PROPERTY MANAGEMENT SERVICES PRIVATE LIMITED**  **STANDARD OPERATING PROCEDURE FOR CHANGEOVER OPERATION** |

**Objective:**

To establish a procedure for Changeover from EB to DG vice versa during power failure.

**Policy:**

To ensure the changeover process during power failure for which the PLC was installed.

**Responsibility:**

On duty Technician.

**Procedures:**

**Auto operation:**

1. Check Auto/Manual selector switch is in Auto mode.
2. Check for uninterrupted power supply for PLC
3. When power fails ensure that EB breaker is open.
4. Check below conditions for proper functioning of changeover operation.

|  |  |  |  |
| --- | --- | --- | --- |
| **EB Breaker** | **Bus Coupler** | **DG 1 Breaker** | **DG 2 Breaker** |
| ON | ON | OFF | OFF |
| OFF | ON | ON | OFF |
| OFF | ON | OFF | ON |
| OFF | OFF | ON | ON |

**Manual Operation:**

1. Check Auto/Manual selector switch is in Manual mode.
2. When power fails ensure that EB breaker is open.
3. Check below conditions for proper functioning of changeover operation.

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| --- | --- | --- | --- |
| **EB Breaker** | **Bus Coupler** | **DG 1 Breaker** | **DG 2 Breaker** |
| ON | ON | OFF | OFF |
| OFF | ON | ON | OFF |
| OFF | ON | OFF | ON |
| OFF | OFF | ON | ON |

1. If the load is more than the designated load, switch OFF Bus-coupler in main LT panel.

**Manual Operation through EGCP:**

1. Select ‘MANUAL’ mode in EGCP on DG control panel. And press ‘Clear’ button to reset alarms if there are any.
2. Press ‘START’ button and hold it till such time engine attains required RPM (Protection Green LED should come on).
3. Once the Voltage is developed, press ‘ON’ button in EGCP to close the DG-ACB.
4. When EB power returns, check the condition of EB power, such as voltage, frequency, if found normal and stable press ‘OFF’ button in EGCP to open the DG-ACB.
5. Then close EB Circuit Breaker as required transferring the load.
6. Then after 3 minutes, press ‘STOP’ button in EGCP to stop the engine.

# Safety Precautions

1. Check and ensure canopy lights are always in working condition.
2. Check and ensure the emergency stop button is functional.
3. Ensure all safety guards are kept intact.
4. Ensure strict vigilance, supervision while carrying out activities like welding which may lead to fire.
5. DO NOT touch any part/ carry out any maintenance while DG set is in running condition.
6. Check and ensure the Doors of the canopy are closed while the DG is in running condition.
7. Strictly follow Lock Out, Tag Out procedure while carrying out maintenance.
8. DO NOT Open the radiator cap while the DG set is running or in hot condition.
9. Check and ensure the floor, parts are free from grease, lube oil, diesel where maintenance is carried out to avoid slipping.
10. Check and ensure there is no spillage of Diesel/Lube oil. If observed, place a metallic tray to collect the same.
11. Check and ensure adequate numbers of appropriate serviceable Fire Extinguishers /sand buckets are placed in the DG yard.

**Revision Guide:**

Any change in the system needs review of SOP.

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| **Rev : 02** | **Prepared By** | **Approved By** |
| **Date:01.01.2018** |  |  |