

## CHAPTER 38

### CLEANING INSTRUCTIONS – GROUND POWER UNITS (GPUS)

#### VARIOUS

- 38.1 This chapter provides basic and specific cleaning requirements for selected GSE. Where there is a specific requirement or need to highlight particular problem areas detailed cleaning guides are provided as tables and figures in this chapter.
- 38.2 While Ground Power Units (GPUs) may appear to be quite innocuous, they are complex pieces of machinery. While all contamination and BRM must be removed, the main areas of concern are:
- a. external areas;
  - b. engines and radiators;
  - c. electronics;
  - d. power cables;
  - e. batteries; and
  - f. tarpaulins;
- 38.3 All points are not specific to all Ground Power Units (GPUs).

#### External Areas

- 38.4 The cleaning instructions for Ground Power Units external areas include the points detailed in Table 38-1.

**Table 38–1: GPUs External Areas**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Ensure all compartment doors are closed prior to any external cleaning	
2	The exterior of the loadbank can be washed with water but extreme caution must be made to ensure that no water reaches the internal areas.	
3	Clean under the rubber seals on the doors, compartments, etc to ensure there is no seed, soil or insect debris. Any damaged door seals should be removed and disposed of.	
4	Remove the grill and high-pressure air or pick clean the radiator to ensure there are no seed or insect debris embedded. Inspect behind number plate and tactical signage, and flush hollow tubing on brush guard.	
5	Damaged lights or where light seals are compromised are to be removed and cleaned of all soil, plant or insect matter.	
6	If possible, the outer canopy is to be removed after the external areas	

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
	have been cleaned to allow for cleaning and inspection of the internal areas. The removal of the canopy is only to be conducted on advice and under the supervision of a qualified technician	
7	Prior to re-assembly of the canopy (if applicable), the canopy is to be inspected to ensure it has remained free of BRM.	

### Engines and Radiators

38.5 The cleaning instructions for Ground Power Units engines include the points detailed in Table 38-2.

**Table 38–2: GPUs Engines**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Clean the engine compartment and engine to ensure they are free of dust, built up dirt and grease, insect and plant material.	
2	Ensure any engine openings / breathers are taped or plugged to stop ingress of water.	2.0
3	Ensure the starter motor and alternator are covered and taped to stop ingress of water.	2.0
4	Do not direct high-pressure water jets at any of the engine openings/breathers, or at any of the electrical/electronic components.	0.5
5	Remove the air cleaner element and dispose of. Replace the air cleaner element with a new part.	
6	Remove the grill (if applicable) and high-pressure air or pick clean the radiator to ensure there are no seed or insect debris embedded. Inspect behind number plate and tactical signage.	0.5
7	The radiator cowling may need to be removed to facilitate the cleaning of the radiator.	
8	Flush radiator and oil cooler from both sides to verify fin/core cleanliness.	
9	Loosen radiator shroud to let any loose debris fall through after flushing.	
10	Check either side of radiator for vertical hollow support structures. Flush to verify internal cleanliness if present.	
11	Check all wiring harnesses for internal cleanliness.	
12	All water reservoirs must be emptied (excluding radiator).	

### Electronics

38.6 The cleaning instructions for Ground Power Units electronics include the points detailed in Table 38-3.

**EXTREME CAUTION  
ELECTRICAL COMPONENTS**

Do not use water or steam to clean any interiors areas of the GPU's engine compartments – Use air clean only and only under the supervision of a qualified technician

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Use air clean only and only under the supervision of a qualified technician	

### Power Cables

38.7 The cleaning instructions for Ground Power Units power cables include the points detailed in Table 38-4.

**Table 38-4: GPUs Power Cables**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	All power cables are to be fully extended and cleaned to ensure they are free of BRM	
2	Plastic-coated cabling should be wiped down and all cable ties removed.	
3	Electrical tape, which has been used to secure cabling, is to be removed and destroyed, as this provides an ideal area for plant and soil particles to collect	
4	The power cable compartment is to be cleaned are free of BRM	

### Batteries

38.8 The cleaning instructions for Ground Power Units suspension include the points detailed in Table 38-5.

**Table 38-5: GPUs Batteries**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Remove the batteries from the compartment and clean.	
2	Clean the battery boxes and cradles and ensure they are free of dirt, dust, plant and insect material.	
3	Where possible/practical re-fit batteries only after inspection by DA.	

### Tarpaulins

38.9 The cleaning instructions for the tarpaulins include the points detailed in Table 38-6.

**Table 38-6: Cleaning Instructions for Tarpaulins**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	All tarpaulins are to be given a brush down, brush scrubbing and hose cleaning, paying particular attention to the seam areas and then hung so as not to contact the ground for drying	
2	All ropes and universal dispatch straps are to be extended to their full length and wiped or washed clean of all soil, plant and insect matter  Attention to attachment points and fixtures and tension devices is required  Personnel are to inspect and remove all twigs, foliage, and so on that	

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38-4

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
	has become embedded in the rope fibres	
3	Velcro panels and seams (where fitted) are to be brushed and washed to ensure all seed, plant and soil material is removed	
4	Canvas bags are to be turned inside out and checked for burrs, seeds and insects;	
5	Where fitted, poles, knuckles and pegs are to be subject to a high-pressure water clean to remove all soil, plant and insect matter (ants, spiders and mud wasps are of particular concern)	
6	If tarpaulins have not been used during the entire deployment, then the requirement is for all tarpaulins to be unrolled, brushed and swept clean to ensure no vermin or insect infestation and then subject to an inspection	

Annexes:

- A. Cleaning Instructions - Aircraft Ground Power Units Wheeled
- B. Cleaning Instructions - Domestic Ground Power Units Skid or Pallet Mounted
- C. Cleaning Instructions - Domestic Ground Power Units Wheeled

## ANNEX A TO CHAPTER 38

### CLEANING INSTRUCTIONS – AIRCRAFT GROUND POWER UNITS

1. This annex provides basic and specific cleaning requirements for selected GSE. Where there is a specific requirement or need to highlight particular problem areas detailed cleaning guides are provided as tables and figures in this annex.
2. The cleaning requirements that follow are in addition to those points for aircraft ground power units included in Chapter 38 of this publication.
3. All points are not specific to all Aircraft GPUs.

#### External Areas

4. The cleaning instructions for Aircraft GPU's include the points detailed in Table 38A-1.

**Table 38A-1: Aircraft GPU's External Areas**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	If possible, the outer canopy is to be removed to allow for cleaning and inspection of the internal areas. The removal of the canopy is only to be conducted on advice and under the supervision of a qualified technician	
2	The external canopy is to be washed and be and free of soil, plant and insect material.	
3	Prior to re-assembly of the canopy (if applicable), the canopy is to be inspected to ensure it has remained free of BRM.	
4	Refer to Chapter 38 for detailed cleaning guidelines.	

#### Engine and Engine Bay

5. The cleaning instructions for Ground Power Units engine and engine bay include the points detailed in Table 38A-2.

**EXTREME CAUTION**  
**ELECTRICAL COMPONENTS**  
 Do not use water or steam to clean any interiors areas of the GPU's engine compartments – Use air clean only and only under the supervision of a qualified technician

**Table 38A-2: Ground Power Units (GPUs) Engine and Engine Bay**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Clean the engine compartment and engine to ensure they are free of dust, built up dirt and grease, insect and plant material.	

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
2	Remove the air cleaner element and dispose of. Replace the air cleaner element with a new part.	
3	Remove the grill (if applicable) and high-pressure air or pick clean the radiator to ensure there are no seed or insect debris embedded. Inspect behind number plate and tactical signage.	
4	Refer to Chapter 38 for detailed cleaning guidelines.	

**Electronics**

**EXTREME CAUTION**  
**ELECTRICAL COMPONENTS**

Do not use water or steam to clean any interiors areas of the GPU's engine compartments – Use air clean only and only under the supervision of a qualified technician

6. The cleaning instructions for Aircraft GPU's electronics include the points detailed in Table 38A-3.

**Table 38A-3: Aircraft GPU's Electronics**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Do not use water or steam to clean any interiors areas of the GPU's compartments.	
2	Refer to Chapter 38 for detailed cleaning guidelines.	

**Suspension**

7. The cleaning instructions for Aircraft GPU's suspension include the points detailed in Table 38A-4.

**Table 38A-4: Aircraft GPU's Suspension**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Ensure axles and mounts on chassis are clean and free of soil, plant and insect material.	
2	Mud and other debris collect in the inside area on the inner side of the wheel. Ensure that this area is cleaned well.	
3	Ensure axles and mounts on chassis are clean and free of soil, plant and insect material.	

**Drawbar**

8. The cleaning instructions for under a Aircraft GPU's drawbar include the points detailed in Table 38A-5.

**Table 38A-5: Cleaning Instructions for the Aircraft GPU's Drawbar**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	High-pressure water clean around the fittings using a flexible nozzle as is necessary to get into all areas.	

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
2	If a turntable is fitted, degrease the area and clean with high-pressure water to ensure there is no soil, plant or insect matter.	
3	The swivel points on the drawbar are to be cleaned using a high-pressure water cleaner.	
4	The drawbar is to be inspected for drain holes and flushed through.	
5	All underside hollow members are to be subject to high-pressure water using a flexible nozzle to remove all soil, plant and insect matter.	
6	All grease and oil is to be removed to ensure freedom from BRM. Required areas may be re-greased or re-oiled after they have been inspected.	

**Tyres (New, Old and Spares)**

9. The cleaning instructions for Tyres (New, Old and Spares), if applicable, include the points detailed in Table 38A-6.

**38A-6: Cleaning Instructions for Tyres (New, Old and Spares)**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	All tyres are to be washed and scrubbed to remove all BRM.	
2	Damaged tyres are to be inspected and their suitability for return to Australia determined. If necessary, damaged tyres (for example, perished, cracked or split) are to be removed and disposed of in accordance with the tyre disposal policy.	
3	Cracked tyres have the risk of containing BRM therefore perished tyres are to be subject to disposal.	
4	All tyres are to be treated with an approved residual insecticide after cleaning	
5	Fitted tyres that are damaged should be replaced with new tyres.	
6	Used and fitted tyres on rims are to be individually verified that the tyres are on rims, inflated with beading sealed and that the tyres are clean, free of water and other BRM.	
7	Tyres that are not fitted to rims are to be stored in such a manner that water cannot collect inside the tyre. The preferred DA solution is that tyres are stored within containers. Tyres not fitted on rims will require fumigation on return to Australia.	
8	DA considers a Non-Commercial consignment of tyres to contain a maximum of 8 tyres (inclusive of the wheels on the vehicle) and be imported with an accompanying vehicle. If tyres are to be transported back to Australia in containers or crates, please refer to the DA BICON (Biosecurity Import Conditions system) internet site ( <a href="http://www.agriculture.gov.au/import/online-services/bicon">http://www.agriculture.gov.au/import/online-services/bicon</a> ) for the commodity "tyres".	

**Appendices:**

1. Cleaning Instructions – 45kVA Aircraft Ground Power Units
2. Cleaning Instructions - Hobart 90kVA Aircraft Ground Power Units

3. Cleaning Instructions - Modra 90kVA Aircraft Ground Power Units
4. Cleaning Instructions - Houchin 22kVA Aircraft Ground Power Units
5. Cleaning Instructions - G5006-2 30 kVA Aircraft Ground Power Units
6. Cleaning Instructions – APM 90 kVA, 400Hz Aircraft Ground Power Units



## APPENDIX 1 TO ANNEX A TO CHAPTER 38

### CLEANING INSTRUCTIONS – 45KVA AIRCRAFT GROUND POWER UNITS

1. This appendix provides basic and specific cleaning requirements for selected GSE. Where there is a specific requirement or need to highlight particular problem areas detailed cleaning guides are provided as tables and figures in this appendix.
2. The cleaning requirements that follow are in addition to those points for aircraft ground power units included in Chapter 38 and Annex A to Chapter 38 of this publication.

#### External Areas

3. The cleaning instructions for 45kVA GPU's, illustrated in Figures 38A1-1 to 38A1-3, include the points detailed in Table 38A1-1.



Figure 38A1-1: Aircraft GPU 45 kVA, 400Hz



Figure 38A1-2: Aircraft 45 kVA, 400Hz GPU Canopy Removed



Figure 38-3: Aircraft 45 kVA, 400Hz GPU Drawbar Assembly

**Table 38A1-1: Aircraft GPU's External Areas**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Clean the canopy of the GPU (if using water – only low pressure water is to be used)	
2	Ensure the louvers on both sides of the GPU are washed and free of BRM (refer Figure 38C1-3)	
3	Remove the spare wheel (refer Figure 38C1-4) and clean as per Tyres (New, Old and Spares) below	
4	Ensure all grease is removed from the towbar and that the towbar arm is flushed with water.	

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
5	The outer canopy is to be removed after the external areas have been cleaned to allow for cleaning and inspection of the internal areas. The removal of the canopy is only to be conducted on advice and under the supervision of a qualified technician (refer Figure 38C1-5)	
6	Refer to Chapter 38 and Annex A to Chapter 38 for detailed cleaning guidelines.	

### Electronics

- The cleaning instructions for Aircraft GPU's electronics, illustrated in Figures 38A1-4 to 38A1-7, include the points detailed in Table 38A1-2.

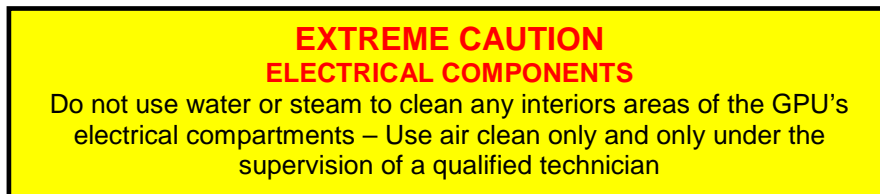


Figure 38–4: Aircraft GPU 45 kVA, 400Hz Control Panel



Figure 38A1-5: Aircraft GPU 45 kVA, 400Hz Electronics



Figure 38A1-6: Aircraft GPU 45 kVA, 400Hz Electronic Connectors in Engine Bay



Figure 38A1-7: Aircraft GPU 45 kVA, 400Hz Rectify Pack

**Table 38A1-2: 45 kVA, 400Hz GPUs Electronics**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Use air clean only and clean only under the supervision of a qualified technician	

### Engine and Engine Bay

- The cleaning instructions for 45kVA GPU's engine and engine bay, illustrated in Figures 38A1-8 to 38A1-10, include the points detailed in Table 38A1-3.





Figure 38A1-8: Aircraft GPU 45 kVA, 400Hz Engine Bay Left Side



Figure 38A1-9: Aircraft 45 kVA, 400Hz GPU Engine Bay Right Side



Figure 38A1-10: Aircraft 45 kVA, 400Hz GPU Engine

**Table 38A1-3: Aircraft 45 kVA, 400Hz GPU's Engine Areas**

**CAUTION**  
**ELECTRICAL COMPONENTS**

Do not use water or steam to clean any interiors areas of the GPU's engine compartments – Use air clean only and only under the supervision of a qualified technician

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Do not use water or steam to clean any interiors areas of the GPU's engine compartments – Use air clean only and only under the supervision of a qualified technician	
2	Refer to Chapter 38 and Annex A to Chapter 38 for detailed cleaning guidelines.	

**Battery**

6. The cleaning instructions for 45kVA GPU's battery, illustrated in Figure 38A1-11, include the points detailed in Table 38A1-4.



Table 38A1-11: Aircraft 45 kVA, 400Hz GPU's Battery

**Table 38A1-4: Aircraft 45 kVA, 400Hz GPU's Battery Bay**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Remove the batteries from the vehicle and clean.	
2	Clean the battery boxes and cradles and ensure they are free of dirt, dust, plant and insect material.	

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
3	Refer to Chapter 38 and Annex A to Chapter 38 for detailed cleaning guidelines.	

### Cables

7. The cleaning instructions for 45kVA GPU's cables, illustrated in Figures 38A1-12, include the points detailed in Table 38A1-5.



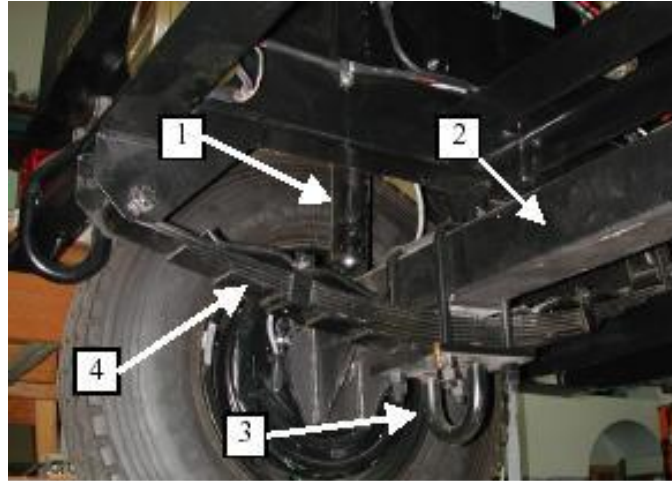
Figure 38A1-12: Aircraft GPU 45 kVA, 400Hz Cables

**Table 38A1-5: Aircraft GPU's Cables**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Refer to Chapter 38 and Annex A to Chapter 38 for detailed cleaning guidelines.	

### Suspension

8. The cleaning instructions for 45 kVA, 400Hz GPU's suspension, illustrated in Figure 38A1-13, include the points detailed in Table 38A1-6.



1.	Shock Absorber
2.	Rear Axle
3.	Axle Tie Down Loop (Road Transport)
4.	Leaf Spring

Figure 38A1-13: 45 kVA, 400Hz GPU 45 Suspension

**Table 38A1-6: 45 kVA, 400Hz GPUs Suspension**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Refer to Annex A to Chapter 38 for detailed cleaning guidelines.	



## APPENDIX 2 TO ANNEX A TO CHAPTER 38

### CLEANING INSTRUCTIONS – HOBART 90KVA AIRCRAFT

### GROUND POWER UNITS

1. This appendix provides basic and specific cleaning requirements for selected GSE. Where there is a specific requirement or need to highlight particular problem areas detailed cleaning guides are provided as tables and figures in this appendix.
2. The cleaning requirements that follow are in addition to those points for aircraft ground power units included in Chapter 38 and Annex A to Chapter 38 of this publication.

#### External Areas

3. The cleaning instructions for Hobart 90kVA GPU's, illustrated in Figures 38A2-1 to 38A2-3, include the points detailed in Table 38A2-1.



Figure 38A2–1: Hobart 90 kVA GPU



Figure 38A2-2: Hobart 90 kVA GPU Front



Figure 38A2-3: Hobart 90 kVA GPU DC Pack

Table 38A2-1: Hobart 90 kVA GPU's External Areas

Serial	Comments or Tasks	Technical Time (hours)
1	All panels are to be opened to facilitate cleaning and inspection.	

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
2	The DC Pack (if fitted) is to be inspected to ensure it is free of free of soil, plant and insect material. (refer Figure 38A2-3)	
3	Refer to Chapter 38 and Annex A to Chapter 38 for detailed cleaning guidelines.	

### Electronics

4. The cleaning instructions for Hobart 90 kVA GPU's electronics, illustrated in Figure 38A2-4, include the points detailed in Table 38A2-2.



Figure 38A2-4: Hobart 90 kVA GPU Control Panel

### EXTREME CAUTION ELECTRICAL COMPONENTS

Do not use water or steam to clean any interiors areas of the GPU's engine compartments – Use air clean only and only under the supervision of a qualified technician

Table 38A2-2: Hobart 90 kVA GPUs Electronics

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Use air clean only and only under the supervision of a qualified technician	

### Engine and Engine Bay

5. The cleaning instructions for the Hobart 90 kVA GPU's engine and engine bay, illustrated in Figure 38A2-5, include the points detailed in Table 38A2-3.



Figure 38A2-5: Hobart 90 kVA GPU's Control Panel

**Table 38A2-3: Hobart 90 kVA GPU's Engine Areas**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Refer to Chapter 38 and Annex A to Chapter 38 for detailed cleaning guidelines.	

**Cables**

6. The cleaning instructions for Hobart 90 kVA GPU's cables, illustrated in Figure 38A2-6, include the points detailed in Table 38A2-4.



Figure 38A2-6: Hobart 90 kVA GPU's Cables

**Table 38A2-4: Hobart 90 kVA GPU's Cables**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Refer to Chapter 38 and Annex A to Chapter 38 for detailed cleaning guidelines.	



## APPENDIX 3 TO ANNEX A TO CHAPTER 38

### CLEANING INSTRUCTIONS – MODRA 90KVA GROUND POWER UNITS

1. This appendix provides basic and specific cleaning requirements for selected GSE. Where there is a specific requirement or need to highlight particular problem areas detailed cleaning guides are provided as tables and figures in this appendix.
2. The cleaning requirements that follow are in addition to those points for aircraft ground power units included in Chapter 38 and Annex A to Chapter 38 of this publication.

#### External Areas

3. The cleaning instructions for Modra GPU's, illustrated in Figures 38A3-1 to 38A3-4, include the points detailed in Table 38A3-1.



Figure 38A3-1: Modra 90 kVA GPU





Figure 38A3-2: Modra Aircraft GPU 90 kVA Engine Bay and Connector Hoses



Figure 38A3-3: Modra Aircraft GPU 90 kVA Front



Figure 38A3-4: Modra Aircraft GPU 90 kVA Rear



Table 38A3-1: Modra GPU's External Areas

Serial	Comments or Tasks	Technical Time (hours)
1	Clean the engine compartment and engine to ensure they are free of dust, built up dirt and grease, insect and plant material.	
2	Refer to Chapter 38 and Annex A to Chapter 38 for detailed cleaning guidelines.	

### Electronics

4. The cleaning instructions for Modra 90 kVA GPU's electronics, illustrated in Figures 38A3-5 and 38A3-6, include the points detailed in Table 38A3-2.

**CAUTION**  
**ELECTRICAL COMPONENTS**  
 Do not use water or steam to clean any interiors areas of the GPU's engine compartments – Use air clean only and only under the supervision of a qualified technician



Figure 38A3-5: Modra 90 kVA GPU's Control Panel - External (Left) and Electronics (Right)



Figure 38A3-6: Modra 90 kVA GPU's Control Panel Cooling Fan

**Table 38A3–2: Modra GPUs Electronics**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Use air clean only and only under the supervision of a qualified technician	

#### **Engine and Engine Bay**

5. The cleaning instructions for the Modra 90 kVA GPU's engine and engine bay, illustrated in Figures 38A3-7 to 38A3-9, include the points detailed in Table 38A3-3.

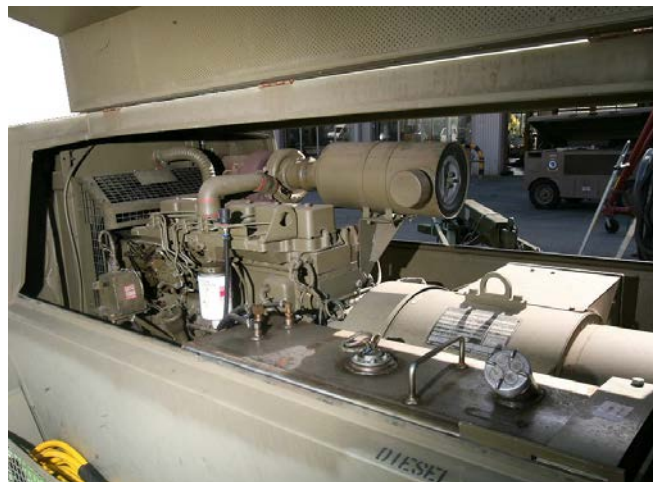


Figure 38A3–7: Modra 90 kVA GPU's Engine Bay Compartment



Figure 38A3-8: Modra 90 kVA GPU's Engine Bay



Figure 38A3-9: Modra 90 kVA GPU's Engine

**Table 38A3-3: Modra 90 kVA GPU's Engine Areas**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Clean the engine compartment and engine to ensure they are free of dust, built up dirt and grease, insect and plant material.	
2	Remove the air cleaner element and dispose of. Replace the air cleaner element with a new part.	
3	Refer to Chapter 38 and Annex A to Chapter 38 for detailed cleaning guidelines.	

**Cables**

6. The cleaning instructions for Modra 90 kVA GPU's cables, illustrated in Figures 38A3-10, include the points detailed in Table 38A3-4.

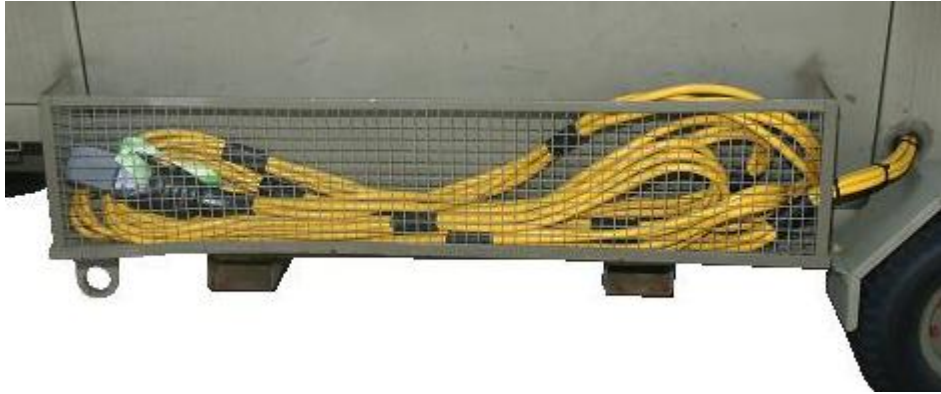


Figure 38A3-10: Modra 90 kVA GPU's Cables

**Table 38A3-4: Modra 90 kVA GPU's Cables**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Refer to Chapter 38 and Annex A to Chapter 38 for detailed cleaning guidelines.	

## APPENDIX 4 TO ANNEX A TO CHAPTER 38

### CLEANING INSTRUCTIONS – HOUCHIN 22KVA GROUND POWER UNITS

1. This appendix provides basic and specific cleaning requirements for selected GSE. Where there is a specific requirement or need to highlight particular problem areas detailed cleaning guides are provided as tables and figures in this appendix.
2. The cleaning requirements that follow are in addition to those points for aircraft ground power units included in Chapter 38 and Annex A to Chapter 38 of this publication.

#### External Areas

3. The cleaning instructions for Houchin 22 kVA GPU's, as illustrated in Figure 38A4-1, include the points detailed in Table 38A4-1.



Figure 38A4-1: Houchin 22 kVA GPU

Table 38A4-1: Houchin 22 kVA GPU's External Areas

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Clean the canopy of the GPU (if using water – only low pressure water is to be used)	
2	Ensure the louvers on both sides of the GPU are washed and free of BRM.	



<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
3	Refer to Chapter 38 and Annex A to Chapter 38 for detailed cleaning guidelines.	

### Electronics

4. The cleaning instructions for Houchin 22 kVA GPU's electronics, as illustrated in Figures 38A4-2 to 38A4-5, include the points detailed in Table 38A4-2.



Figure 38A4-2: Houchin 22 kVA GPU's Control Panel



Figure 38A4-3: Houchin 22 kVA GPU's Control Panel Internal



Figure 38A4-4: Houchin 22 kVA GPU's Control Panel Internal Electronics



Figure 38A4-5: Houchin 22 kVA GPU's Solenoid Valves

**Table 38A4–2: Houchin 22 kVA GPUs Electronics**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Use air clean only and only under the supervision of a qualified technician	
2	Refer to Chapter 38 and Annex A to Chapter 38 for detailed cleaning guidelines.	

## Engine and Engine Bay

5. The cleaning instructions for the Houchin 22 kVA GPU's engine and engine bay, as illustrated in Figure 38A4-6, include the points detailed in Table 38A4-3.



Figure 38A4-6: Houchin 22 kVA GPU's Engine

**Table 38A4-3: Houchin 22 kVA GPU's Engine Areas**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Clean the engine compartment and engine to ensure they are free of dust, built up dirt and grease, insect and plant material.	
2	Refer to Chapter 38 and Annex A to Chapter 38 for detailed cleaning guidelines.	

## Battery Bay

6. The cleaning instructions for Houchin 22 kVA GPU's battery bay, as illustrated in Figure 38A4-7, include the points detailed in Table 38A4-4.



Figure 38A4-7: Houchin 22 kVA GPU's Battery Bay



**Table 38A4-4: Houchin 22 kVA GPU's Battery Bay**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Refer to Chapter 38 and Annex A to Chapter 38 for detailed cleaning guidelines.	



## APPENDIX 5 TO ANNEX A TO CHAPTER 38

### CLEANING INSTRUCTIONS – G5006-2 30 KVA GPU AIRCRAFT

### GROUND POWER UNITS

1. This chapter provides basic and specific cleaning requirements for selected GSE. Where there is a specific requirement or need to highlight particular problem areas detailed cleaning guides are provided as tables and figures in this appendix.
2. The cleaning requirements that follow are in addition to those points for aircraft ground power units included in Chapter 38 and Annex A to Chapter 38 of this publication.

#### External Areas

3. The cleaning instructions for G5006-2 30 kVA GPU's, illustrated in Figure 38A5-1, include the points detailed in Table 38A5-1.



Figure 38A5-1: Aircraft G5006-2 30 kVA GPU

**Table 38A5-1: Aircraft G5006-2 30 kVA GPU's External Areas**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Clean the canopy of the GPU (if using water – only low pressure water is to be used)	
2	Ensure the louvers on both sides of the GPU are washed and free of BRM.	
3	Refer to Chapter 38 and Annex A to Chapter 38 for detailed cleaning guidelines.	

## Electronics

4. The cleaning instructions for Aircraft G5006-2 30 kVA GPU's electronics, illustrated in Figure 38A5-2, include the points detailed in Table 38A5-2.

**EXTREME CAUTION  
ELECTRICAL COMPONENTS**

Do not use water or steam to clean any interiors areas of the GPU's electrical compartments – Use air clean only and only under the supervision of a qualified technician



Figure 38A5-2: Aircraft G5006-2 30 kVA GPU's Control Panel

**Table 38A5-2: G5006-2 30 kVA GPUs Electronics**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Use air clean only and only under the supervision of a qualified technician	

## Engine and Engine Bay

5. The cleaning instructions for G5006-2 30 kVA GPU's engine and engine bay, illustrated in Figure 38A5-3, include the points detailed in Table 38A5-3.



Figure 38A5-3: Aircraft G5006-2 30 kVA GPU's Engine Bay

**Table 38A5-3: Aircraft G5006-2 30 kVA GPU's Engine Areas**

**CAUTION**  
**ELECTRICAL COMPONENTS**  
 Do not use water or steam to clean any interiors areas of the GPU's engine compartments – Use air clean only and only under the supervision of a qualified technician

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Do not use water or steam to clean any interiors areas of the GPU's engine compartments – Use air clean only and only under the supervision of a qualified technician	
2	Refer to Chapter 38 and Annex A to Chapter 38 for detailed cleaning guidelines.	

**Battery**

6. The cleaning instructions for G5006-2 30 kVA GPU's battery, illustrated in Figure 38A5-4, include the points detailed in Table 38A5-4.

**Figure 38A5-4: Aircraft G5006-2 30 kVA GPU's Battery Bay****Table 38A5-4: Aircraft G5006-2 30 kVA GPU's Battery Bay**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Remove the batteries from the vehicle and clean.	
2	Clean the battery boxes and cradles and ensure they are free of dirt, dust, plant and insect material.	
3	Refer to Chapter 38 and Annex A to Chapter 38 for detailed cleaning guidelines.	

**Cables**

7. The cleaning instructions for Aircraft G5006-2 30 kVA GPU's cables, illustrated in Figure 38A5-5, include the points detailed in Table 38A5-5.



Figure 38A5-5: Aircraft G5006-2 30 kVA GPU's Cables

**Table 38A5-5: Aircraft G5006-2 30 kVA GPU's Cables**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Refer to Chapter 38 and Annex A to Chapter 38 for detailed cleaning guidelines.	

## APPENDIX 6 TO ANNEX A TO CHAPTER 38

### CLEANING INSTRUCTIONS – 90 KVA/400HZ GROUND POWER UNITS

1. This chapter provides basic and specific cleaning requirements for selected GSE. Where there is a specific requirement or need to highlight particular problem areas detailed cleaning guides are provided as tables and figures in this Appendix.
2. The cleaning requirements that follow are in addition to those points for aircraft ground power units included in Chapter 38 and Annex C to Chapter 38 of this publication.

#### External Areas

3. The cleaning instructions for 90 kVA/400Hz GPU's, illustrated in Figure 38A6-1, include the points detailed in Table 38A6-1.



Figure 38A6-1: 90 kVA/400Hz GPU

Table 38A6-1: 90 kVA/400Hz GPU's External Areas

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	<b>Detailed cleaning instructions for these systems are to be advised.</b>	
2	Refer to Chapter 38 and Annex A to Chapter 38 for cleaning guidelines.	

#### Electronics

4. The cleaning instructions for 90 kVA/400Hz GPU's electronics include the points detailed in Table 38A6-2.

**EXTREME CAUTION  
ELECTRICAL COMPONENTS**

Do not use water or steam to clean any interiors areas of the GPU's engine compartments – Use air clean only and only under the supervision of a qualified technician

**Table 38A6-2: 90 kVA/400Hz GPUs Electronics**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Use air clean only and only under the supervision of a qualified technician	
2	<b>Detailed cleaning instructions for these systems are to be advised.</b>	

**Engine and Engine Bay**

5. The cleaning instructions for 90 kVA/400Hz GPU's Engine include the points detailed in Table 38A6-3.

**CAUTION  
ELECTRICAL COMPONENTS**

Do not use water or steam to clean any interiors areas of the GPU's engine compartments – Use air clean only and only under the supervision of a qualified technician

**Table 38A6-3: 90 kVA/400Hz GPUs Engine**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Use air clean only and only under the supervision of a qualified technician	
2	<b>Detailed cleaning instructions for these systems are to be advised.</b>	



## ANNEX B TO CHAPTER 38

### CLEANING INSTRUCTIONS – DOMESTIC GROUND POWER UNITS, SKID OR PALLET MOUNTED

1. This annex provides basic and specific cleaning requirements for selected GSE. Where there is a specific requirement or need to highlight particular problem areas detailed cleaning guides are provided as tables and figures in this annex.
2. The cleaning requirements that follow are in addition to those points for aircraft ground power units included in Chapter 38 of this publication.
3. All points are not specific to all Ground Power Units (GPUs).

#### External Areas

4. The cleaning instructions for Ground Power Units include the points detailed in Table 38B-1.

**Table 38B-1: Ground Power Units (GPUs) External Areas**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Clean the canopy of the GPU (if using water – only low pressure water is to be used)	
2	Ensure louvers of the GPU are washed and free of BRM	
3	Remove the spare wheel.	
4	Refer to Chapter 38 for detailed cleaning guidelines.	

#### Engine and Engine Bay

5. The cleaning instructions for Ground Power Units engine and engine bay include the points detailed in Table 38B-2.

**EXTREME CAUTION  
ELECTRICAL COMPONENTS**

Do not use water or steam to clean any interiors areas of the GPU's engine compartments – Use air clean only and only under the supervision of a qualified technician

**Table 38B-2: Ground Power Units (GPUs) Engine and Engine Bay**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Clean the engine compartment and engine to ensure they are free of dust, built up dirt and grease, insect and plant material.	
2	Remove the air cleaner element and dispose of. Replace the air cleaner element with a new part.	
3	Remove the grill (if applicable) and high-pressure air or pick clean the radiator to ensure there are no seed or insect debris embedded.	

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
	Inspect behind number plate and tactical signage.	
4	Refer to Chapter 38 for detailed cleaning guidelines.	

**Electronics**

6. The cleaning instructions for Ground Power Units internal areas include the points detailed in Table 38B-3.

<p><b>EXTREME CAUTION</b>  <b>ELECTRICAL COMPONENTS</b></p> <p>Do not use water or steam to clean any interiors areas of the GPU's engine compartments – Use air clean only and only under the supervision of a qualified technician</p>
--

**Table 38B–3: Ground Power Units (GPUs) Electronics**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Do not use water or steam to clean any interiors areas of the GPU's compartments.	
2	Refer to Chapter 38 for detailed cleaning guidelines.	

**Pallets/Skid Steers**

7. The cleaning instructions for Ground Power Units pallet/skid steer include the points detailed in Table 38B-3.

**Table 38B–3: Ground Power Units (GPUs)**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Clean all recesses and access points pallet stands, pallet interlocks, twist lock tie-down points, power outlets)	
2	Ensure the forklift pockets are free of dirt, plant and other debris.	
3	Ensure underside area of the pallet/skid steer has been cleaned and is free of BRM	

**Appendices:**

1. Cleaning Instructions - 180 kVA 50-400Hz - Skid Mounted Ground Power Units
2. Cleaning Instructions - 90 kVA 50-400Hz - Skid Mounted Ground Power Units
3. Cleaning Instructions - 60 kVA 50-400Hz - Skid Mounted Ground Power Units
4. Cleaning Instructions - 30 kVA 50-400Hz - Skid Mounted Ground Power Units

## APPENDIX 1 TO ANNEX B TO CHAPTER 38

### CLEANING INSTRUCTIONS – 180 KVA PALLET MOUNTED

### GROUND POWER UNITS

1. This chapter provides basic and specific cleaning requirements for selected GSE. Where there is a specific requirement or need to highlight particular problem areas detailed cleaning guides are provided as tables and figures in this Appendix.
2. The cleaning requirements that follow are in addition to those points for aircraft ground power units included in Chapter 38 and Annex B to Chapter 38 of this publication.

#### External Areas

3. The cleaning instructions for 180 KVA 50 Hz Pallet Mounted GPU's, illustrated in Figures 38B1-1 to 38B1-4, include the points detailed in Table 38B1-1.



Figure 38B1-1: 180 KVA 50 Hz Pallet Mounted GPU



Figure 38B1-2: 180 KVA 50 Hz Pallet Mounted GPU Rear



Figure 38B1-3: 180 KVA 50 Hz Pallet Mounted GPU Canopy



Figure 38B1-4: 180 KVA 50 Hz Pallet Mounted GPU Canopy Removed

**Table 38B1-1: 180 KVA 50 Hz Pallet Mounted GPU's External Areas**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Clean the canopy of the GPU (if using water – only low pressure water is to be used)	
2	Ensure the louvers on both sides of the GPU are washed and free of BRM.	
3	The outer canopy is to be removed to allow for cleaning and inspection of the internal areas. The removal of the canopy is only to be conducted on advice and under the supervision of a qualified technician (refer Figure 38B1-4)	
4	Refer to Chapter 38 and Annex B to Chapter 38 for detailed cleaning guidelines.	

**Engine**

4. The cleaning instructions for 180 KVA 50 Hz Pallet Mounted GPU's engine, illustrated in Figures 38B1-5 to 38B1-7, include the points detailed in Table 38B1-2.

**EXTREME CAUTION  
ELECTRICAL COMPONENTS**

Do not use water or steam to clean any interiors areas of the GPU's engine compartment as delicate electronic equipment is fitted in close proximity – Clean only under the supervision of a qualified technician



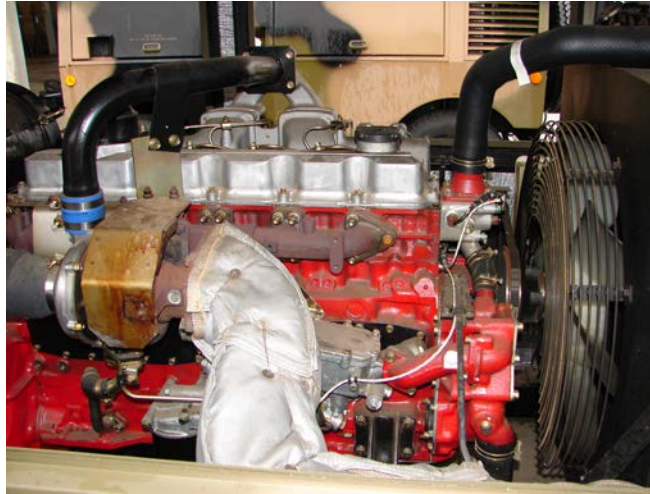


Figure 38B1-5: 180 KVA 50 Hz Pallet Mounted GPU's Engine



Figure 38B1-6: 180 KVA 50 Hz Pallet Mounted GPU's Engine Exhaust

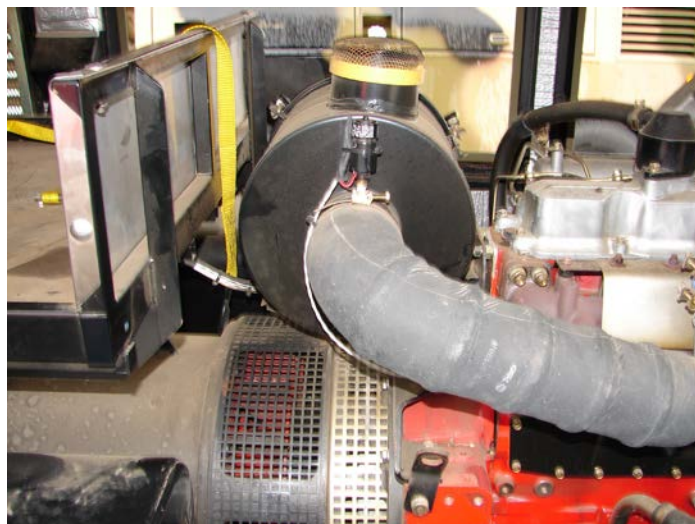


Figure 38B1-7: 180 KVA 50 Hz Pallet Mounted GPU's Air Filter



**Table 38B1-2: 180 KVA 50 Hz Pallet Mounted GPU's Engine**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Clean the engine compartment and engine to ensure they are free of dust, built up dirt and grease, insect and plant material.	
2	Use air clean only and only under the supervision of a qualified technician	
3	Refer to Chapter 38 and Annex B to Chapter 38 for detailed cleaning guidelines.	

**Electronics**

5. The cleaning instructions for 180 KVA 50 Hz Pallet Mounted GPU's electronics, illustrated in Figures 38B1-8 and 38B1-9, include the points detailed in Table 38B1-3.

**EXTREME CAUTION**  
**ELECTRICAL COMPONENTS**  
 Do not use water or steam to clean any interiors areas of the GPU's engine compartments – Use air clean only and only under the supervision of a qualified technician



Figure 38B1-8: 180 KVA 50 Hz Pallet Mounted GPU's Cable Connectors



Figure 38B1-9: 180 KVA 50 Hz Pallet Mounted GPU's Control Panel

**Table 38B1-3: 180 KVA 50 Hz Pallet Mounted GPU's Electronics**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Use air clean only and only under the supervision of a qualified technician	

**Battery**

6. The cleaning instructions for 180 KVA 50 Hz Pallet Mounted GPU's battery, illustrated in Figure 38B1-10, include the points detailed in Table 38A1-4.



Table 38A1-10: 180 KVA 50 Hz Pallet Mounted GPU's Battery

**Table 38A1-4: 180 KVA 50 Hz Pallet Mounted GPU's Battery Bay**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Remove the batteries from the vehicle and clean.	
2	Clean the battery boxes and cradles and ensure they are free of dirt, dust, plant and insect material.	
3	Refer to Chapter 38 and Annex B to Chapter 38 for detailed cleaning guidelines.	



## APPENDIX 2 ANNEX B TO CHAPTER 38

### CLEANING INSTRUCTIONS – 120 KVA PALLET MOUNTED

### GROUND POWER UNITS

1. This chapter provides basic and specific cleaning requirements for selected GSE. Where there is a specific requirement or need to highlight particular problem areas detailed cleaning guides are provided as tables and figures in this Appendix.
2. The cleaning requirements that follow are in addition to those points for aircraft ground power units included in Chapter 38 and Annex B to Chapter 38 of this publication.

#### External Areas

3. The cleaning instructions for 120 KVA Pallet Mounted GPU's, illustrated in Figures 38B2-1 to 38B2-5, include the points detailed in Table 38B2-1.



Figure 38B2-1: 120 KVA Pallet Mounted GPU Front



Figure 38B2-2: 120 KVA Pallet Mounted GPU Front Doors Opened



Figure 38B2-3: 120 KVA Pallet Mounted GPU Control Panel Door and Air Vents



Figure 38B2-4: 120 KVA Pallet Mounted GPU Rear Access



Figure 38B2-5: 120 KVA Pallet Mounted GPU Canopy Release



Table 38B2-1: 120 KVA Pallet Mounted GPU's External Areas

Serial	Comments or Tasks	Technical Time (hours)
1	Clean the canopy of the GPU (if using water – only low pressure water is to be used)	
2	Ensure the louvers on both sides of the GPU are washed and free of BRM (refer Figure 38B2-3 and 38B2-4)	
3	Ensure all grease is removed from the towbar and that the towbar arm is flushed with water.	
4	Refer to Chapter 38 and Annex B to Chapter 38 for detailed cleaning guidelines.	

### Engine

4. The cleaning instructions for 120 KVA Pallet Mounted GPU's engine, illustrated in Figures 38B2-6 to 38B2-9, include the points detailed in Table 38B2-2.

#### EXTREME CAUTION ELECTRICAL COMPONENTS

Do not use water or steam to clean any interiors areas of the GPU's engine compartment as delicate electronic equipment is fitted in close proximity – Clean only under the supervision of a qualified technician



Figure 38B2-6: 120 KVA Pallet Mounted GPU's Engine Bay



Figure 38B2-7: 120 KVA Pallet Mounted GPU's Engine Exhaust



Figure 38B2-8: 120 KVA Pallet Mounted GPU's Engine Radiator



Figure 38B2-9: 120 KVA Pallet Mounted GPU's Air Filter

**Table 38B2-2: 120 KVA Pallet Mounted GPU's Electronics**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Clean the engine compartment and engine to ensure they are free of dust, built up dirt and grease, insect and plant material.	
2	Use air clean only and only under the supervision of a qualified technician	
3	Refer to Chapter 38 and Annex B to Chapter 38 for detailed cleaning guidelines.	

## Electronics

5. The cleaning instructions for 120 KVA Pallet Mounted GPU's electronics, illustrated in Figures 38B2-10 and 38B2-11, include the points detailed in Table 38B2-3.

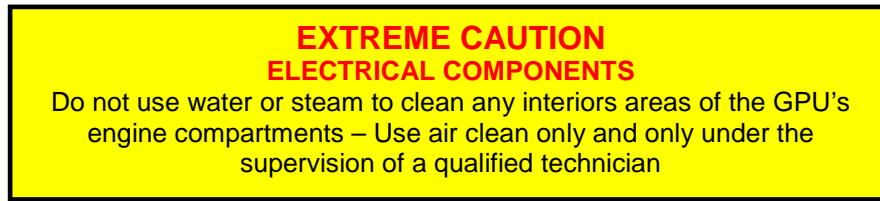


Figure 38B2-10: 120 KVA GPU's Control Panel and Rear Panel Electronics



Figure 38B2-11: 120 KVA GPU's Power Outlet Connectors (Left) and Solenoids (Right)

**Table 38B2-3: 120 KVA Pallet Mounted GPU's Electronics**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Use air clean only and only under the supervision of a qualified technician	

**Battery**

6. The cleaning instructions for 120 KVA Pallet Mounted GPU's battery, illustrated in Figures 38B2-12, include the points detailed in Table 38 B2-4.



Table 38 B2-12: 120 KVA Pallet Mounted GPU's Battery

**Table 38 B2-4: 120 KVA Pallet Mounted GPU's Battery Bay**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Remove the batteries from the vehicle and clean.	
2	Clean the battery boxes and cradles and ensure they are free of dirt, dust, plant and insect material.	
3	Refer to Chapter 38 and Annex B to Chapter 38 for detailed cleaning guidelines.	



## APPENDIX 3 ANNEX B TO CHAPTER 38

### CLEANING INSTRUCTIONS – 60 KVA PALLET MOUNTED

### GROUND POWER UNITS

1. This appendix provides basic and specific cleaning requirements for selected GSE. Where there is a specific requirement or need to highlight particular problem areas detailed cleaning guides are provided as tables and figures in this appendix.
2. The cleaning requirements that follow are in addition to those points for aircraft ground power units included in Chapter 38 and Annex B to Chapter 38 of this publication.

#### External Areas

3. The cleaning instructions for 60 KVA Pallet Mounted GPU's, illustrated in Figures 38B3-1 to 38B3-4, include the points detailed in Table 38B3-1.



Figure 38B3-1: 60 KVA Pallet Mounted GPU



Figure 38B3-2: 60 KVA GPU Control Panel Door and Vents



Figure 38B3-3: 60 KVA GPU Fuel Tank and Air Vents



Figure 38B3-4: 60 KVA Pallet Mounted GPU Air Vents

**Table 38B3-1: 60 KVA Pallet Mounted GPU's External Areas**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Clean the canopy of the GPU (if using water – only low pressure water is to be used)	
2	Ensure the louvers on both sides of the GPU are washed and free of BRM (refer Figure 38B3-2 and 38B3-4)	
3	Ensure all grease is removed from the towbar and that the towbar arm is flushed with water.	
4	Refer to Chapter 38 and Annex B to Chapter 38 for detailed cleaning guidelines.	

**Engine**

4. The cleaning instructions for 60 KVA Pallet Mounted GPU's engine, illustrated in Figures 38B3-4 to 38B3-8, include the points detailed in Table 38B3-2.



**EXTREME CAUTION  
ELECTRICAL COMPONENTS**

Do not use water or steam to clean any interiors areas of the GPU's engine compartment as delicate electronic equipment is fitted in close proximity – Clean only under the supervision of a qualified technician

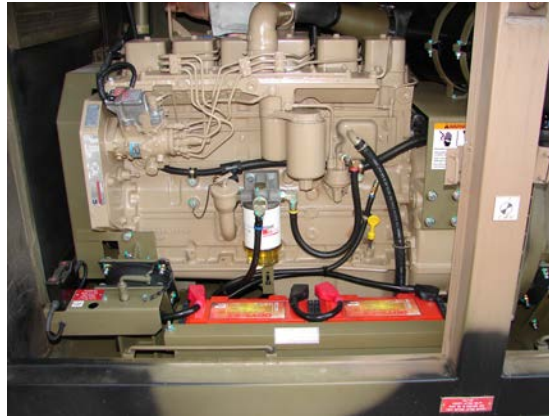


Figure 38B3-5: 60 KVA Pallet Mounted GPU's Engine



Figure 38B3-6: 60 KVA Pallet Mounted GPU's Engine Air Filter



Figure 38B3-7: 60 KVA Pallet Mounted GPU's Engine Exhaust

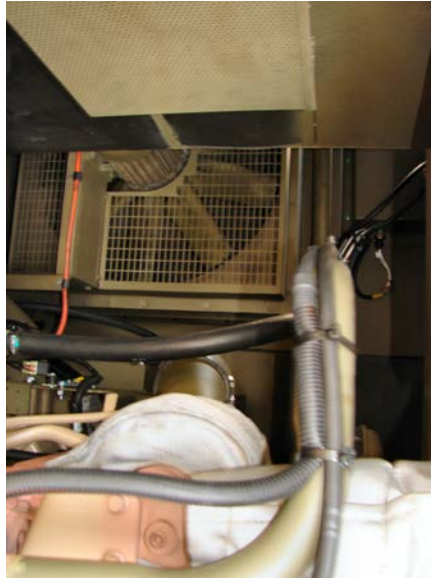


Figure 38B3-8: 60 KVA Pallet Mounted GPU's Radiator

**Table 38B3-2: 60 KVA Pallet Mounted GPU's Electronics**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Clean the engine compartment and engine to ensure they are free of dust, built up dirt and grease, insect and plant material.	
2	Use air clean only and only under the supervision of a qualified technician	
3	Refer to Chapter 38 and Annex B to Chapter 38 for detailed cleaning guidelines.	

**Electronics**

5. The cleaning instructions for 60 KVA Pallet Mounted GPU's electronics, illustrated in Figures 38B3-9 and 38B3-10, include the points detailed in Table 38B3-3.

**EXTREME CAUTION  
ELECTRICAL COMPONENTS**

Do not use water or steam to clean any interiors areas of the GPU's engine compartments – Use air clean only and only under the supervision of a qualified technician



Figure 38B3-8: 60 KVA Pallet Mounted GPU's Cable Connectors



Figure 38B3-9: 60 KVA Pallet Mounted GPU's Control Panel

**Table 38B3-3: 60 KVA Pallet Mounted GPU's Electronics**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Use air clean only and only under the supervision of a qualified technician	

**Battery**

6. The cleaning instructions for 60 KVA Pallet Mounted GPU's battery include the points detailed in Table 38B3-4.

**Table 38B3-4: 60 KVA Pallet Mounted GPU's Battery Bay**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Remove the batteries from the vehicle and clean.	
2	Clean the battery boxes and cradles and ensure they are free of dirt,	

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38B3-6

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
	dust, plant and insect material.	
3	Refer to Chapter 38 and Annex B to Chapter 38 for detailed cleaning guidelines.	

## **APPENDIX 4 ANNEX B TO CHAPTER 38**

### **CLEANING INSTRUCTIONS – 30 KVA PALLET MOUNTED**

### **GROUND POWER UNITS**

1. This appendix provides basic and specific cleaning requirements for selected GSE. Where there is a specific requirement or need to highlight particular problem areas detailed cleaning guides are provided as tables and figures in this Appendix.
2. The cleaning requirements that follow are in addition to those points for aircraft ground power units included in Chapter 38 and Annex B to Chapter 38 of this publication.

#### **External Areas**

3. The cleaning instructions for 30 KVA Pallet Mounted GPU's, illustrated in Figures 38B4-1 to 38B4-3, include the points detailed in Table 38B4-1.



Figure 38B4-1: 30 KVA Pallet Mounted GPU



Figure 38B4-2: 30 KVA GPU Exhaust Fan End



Figure 38B4-3: 30 KVA Pallet Mounted GPU's Control Panel External

**Table 38B4-1: 30 KVA Pallet Mounted GPU's External Areas**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Clean the canopy of the GPU (if using water – only low pressure water is to be used)	
2	Ensure all grease is removed from the towbar and that the towbar arm is flushed with water.	
3	Refer to Chapter 38 and Annex B to Chapter 38 for detailed cleaning guidelines.	

**Engine**

4. The cleaning instructions for 30 KVA Pallet Mounted GPU's engine, illustrated in Figures 38B4-4 to 38B4-7, include the points detailed in Table 38B4-2.



**EXTREME CAUTION  
ELECTRICAL COMPONENTS**

Do not use water or steam to clean any interiors areas of the GPU's engine compartment as delicate electronic equipment is fitted in close proximity – Clean only under the supervision of a qualified technician



Figure 38B4-4: 30 KVA Pallet Mounted GPU's Engine



Figure 38B4-5: 30 KVA Pallet Mounted GPU's Engine Oil Filters



Figure 38B4-6: 30 KVA Pallet Mounted GPU's Engine Exhaust



Figure 38B4-7: 30 KVA Pallet Mounted GPU's Fuel Tank and Hose Connectors

**Table 38B4-2: 30 KVA Pallet Mounted GPU's Electronics**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Clean the engine compartment and engine to ensure they are free of dust, built up dirt and grease, insect and plant material.	
2	Use air clean only and only under the supervision of a qualified technician	
3	Refer to Chapter 38 and Annex B to Chapter 38 for detailed cleaning guidelines.	

#### **Electronics**

5. The cleaning instructions for 30 KVA Pallet Mounted GPU's electronics, illustrated in Figures 38B4-8 to 38B4-10, include the points detailed in Table 38B4-3.

#### **EXTREME CAUTION ELECTRICAL COMPONENTS**

Do not use water or steam to clean any interiors areas of the GPU's engine compartments – Use air clean only and only under the supervision of a qualified technician



Figure 38B4-8: 30 KVA Pallet Mounted GPU's Control Panel



Figure 38B4-9: 30 KVA Pallet Mounted GPU's Instrument Panel



Figure 38B4-10: 30 KVA Pallet Mounted GPU's Electrical Power Box

**Table 38B4-3: 30 KVA Pallet Mounted GPU's Electronics**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Use air clean only and only under the supervision of a qualified technician	

**Battery**

6. The cleaning instructions for 30 KVA Pallet Mounted GPU's battery, illustrated in Figure 38B4-11, include the points detailed in Table 38 B4-4.

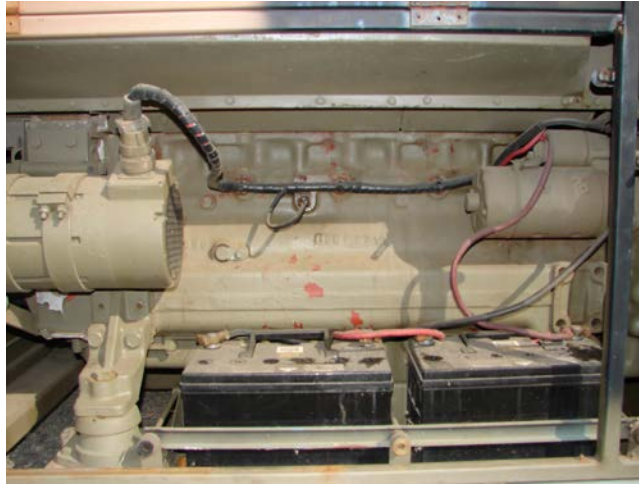


Figure 38B4-11: 30 KVA Pallet Mounted GPU's Battery Bay

**Table 38 B4-4: 30 KVA Pallet Mounted GPU's Battery Bay**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Remove the batteries from the vehicle and clean.	
2	Clean the battery boxes and cradles and ensure they are free of dirt, dust, plant and insect material.	
3	Refer to Chapter 38 and Annex B to Chapter 38 for detailed cleaning guidelines.	

## ANNEX C TO CHAPTER 38

### CLEANING INSTRUCTIONS – DOMESTIC GROUND POWER UNITS (GPU'S) WHEELED

1. This annex provides basic and specific cleaning requirements for selected GSE. Where there is a specific requirement or need to highlight particular problem areas detailed cleaning guides are provided as tables and figures in this annex.
2. The cleaning requirements that follow are in addition to those points for aircraft ground power units included in Chapter 38 of this publication.
3. All points are not specific to all Ground Power Units (GPUs).

#### External Areas

4. The cleaning instructions for Domestic GPU's External Areas include the points detailed in Table 38C-1.

**Table 38C–1: Domestic GPU's External Areas**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	If possible, the outer canopy is to be removed to allow for cleaning and inspection of the internal areas. The removal of the canopy is only to be conducted on advice and under the supervision of a qualified technician	
2	The external canopy is to be washed and be and free of soil, plant and insect material.	
3	Prior to re-assembly of the canopy (if applicable), the canopy is to be inspected to ensure it has remained free of BRM.	
4	Refer to Chapter 38 for detailed cleaning guidelines.	

#### Engine and Engine Bay

5. The cleaning instructions for Domestic GPU's engine and engine bay include the points detailed in Table 38C-2.

**EXTREME CAUTION  
ELECTRICAL COMPONENTS**

Do not use water or steam to clean any interiors areas of the GPU's engine compartments – Use air clean only and only under the supervision of a qualified technician

**Table 38C–2: Domestic GPU's Engine and Engine Bay**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Clean the engine compartment and engine to ensure they are free of dust, built up dirt and grease, insect and plant material.	



<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
2	Remove the air cleaner element and dispose of. Replace the air cleaner element with a new part.	
3	Remove the grill (if applicable) and high-pressure air or pick clean the radiator to ensure there are no seed or insect debris embedded. Inspect behind number plate and tactical signage.	
4	Refer to Chapter 38 for detailed cleaning guidelines.	

**Electronics**

**EXTREME CAUTION**  
**ELECTRICAL COMPONENTS**

Do not use water or steam to clean any interiors areas of the GPU's engine compartments – Use air clean only and only under the supervision of a qualified technician

6. The cleaning instructions for Domestic GPU's electronics include the points detailed in Table 38C-3.

**Table 38C-3: Domestic GPU's Electronics**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Do not use water or steam to clean any interiors areas of the GPU's compartments.	
2	Refer to Chapter 38 for detailed cleaning guidelines.	

**Suspension**

7. The cleaning instructions for Domestic GPU's suspension include the points detailed in Table 38C-4.

**Table 38C-4: Domestic GPU's Suspension**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Ensure axles and mounts on chassis are clean and free of soil, plant and insect material.	
2	Mud and other debris collect in the inside area on the inner side of the wheel. Ensure that this area is cleaned well.	
3	Ensure axles and mounts on chassis are clean and free of soil, plant and insect material.	

**Drawbar**

8. The cleaning instructions for under a Domestic GPU's drawbar include the points detailed in Table 38C-5.

**Table 38C-5: Cleaning Instructions for the Domestic GPU's Drawbar**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	High-pressure water clean around the fittings using a flexible nozzle as is necessary to get into all areas.	



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38C-3

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
2	If a turntable is fitted, degrease the area and clean with high-pressure water to ensure there is no soil, plant or insect matter.	
3	The swivel points on the drawbar are to be cleaned using a high-pressure water cleaner.	
4	The drawbar is to be inspected for drain holes and flushed through.	
5	All underside hollow members are to be subject to high-pressure water using a flexible nozzle to remove all soil, plant and insect matter.	
6	All grease and oil is to be removed to ensure freedom from BRM. Required areas may be re-greased or re-oiled after they have been inspected.	

**Tyres (New, Old and Spares)**

9. The cleaning instructions for Tyres (New, Old and Spares), if applicable, include the points detailed in Table 38C-6.

**38C-6: Cleaning Instructions for Tyres (New, Old and Spares)**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	All tyres are to be washed and scrubbed to remove all BRM.	
2	Damaged tyres are to be inspected and their suitability for return to Australia determined. If necessary, damaged tyres (for example, perished, cracked or split) are to be removed and disposed of in accordance with the tyre disposal policy.	
3	Cracked tyres have the risk of containing BRM therefore perished tyres are to be subject to disposal.	
4	All tyres are to be treated with an approved residual insecticide after cleaning.	
5	Fitted tyres that are damaged should be replaced with new tyres.	
6	Used and fitted tyres on rims are to be individually verified that the tyres are on rims, inflated with beading sealed and that the tyres are clean, free of water and other BRM.	
7	Tyres that are not fitted to rims are to be stored in such a manner that water cannot collect inside the tyre. The preferred DA solution is that tyres are stored within containers. Tyres not fitted on rims will require fumigation on return to Australia.	
8	DA considers a Non-Commercial consignment of tyres to contain a maximum of 8 tyres (inclusive of the wheels on the vehicle) and be imported with an accompanying vehicle. If tyres are to be transported back to Australia in containers or crates, please refer to the DA BICON (Biosecurity Import Conditions system) internet site ( <a href="http://www.agriculture.gov.au/import/online-services/bicon">http://www.agriculture.gov.au/import/online-services/bicon</a> ) for the commodity "tyres".	

**Appendices:**

1. Cleaning Instructions - 30 kVA/50HZ Ground Power Units
2. Cleaning Instructions - 60 kVA/50HZ Ground Power Units

3. Cleaning Instructions - 140 kVA/50HZ Ground Power Units
4. Cleaning Instructions - 180 kVA/50HZ Ground Power Units

## APPENDIX 1 ANNEX C TO CHAPTER 38

### CLEANING INSTRUCTIONS – 30 KVA/50HZ GROUND POWER UNITS

1. This chapter provides basic and specific cleaning requirements for selected GSE. Where there is a specific requirement or need to highlight particular problem areas detailed cleaning guides are provided as tables and figures in this Appendix.
2. The cleaning requirements that follow are in addition to those points for aircraft ground power units included in Chapter 38 and Annex C to Chapter 38 of this publication.

#### External Areas

3. The cleaning instructions for 30 KVA/50HZ GPU's, illustrated in Figures 38C1-1 to 38C1-5, include the points detailed in Table 38C1-1.



Figure 38C1-1: 30 KVA/50HZ GPU



Figure 38C1-2: 30 KVA/50HZ GPU



Figure 38C1-3: 30 KVA/50HZ GPU Louvre



Figure 38C1-4: 30 KVA/50HZ GPU Spare Tyre and Towbar



Figure 38C1-5: 30 KVA/50HZ GPU Canopy Removed

**Table 38C1-1: 30 KVA/50HZ GPU's External Areas**

Serial	Comments or Tasks	Technical Time (hours)
1	Clean the canopy of the GPU (if using water – only low pressure water is to be used)	
2	Ensure the louvers on both sides of the GPU are washed and free of BRM .	
3	The outer canopy is to be removed to allow for cleaning and inspection of the internal areas. The removal of the canopy is only to be conducted on advice and under the supervision of a qualified technician (refer Figure 38C1-3)	
4	Refer to Chapter 38 and Annex C to Chapter 38 for detailed cleaning guidelines.	

**Electronics**

4. The cleaning instructions for 30 KVA/50HZ GPU's electronics, illustrated in Figures 38C1-6 and 38C1-7, include the points detailed in Table 38C1-2.

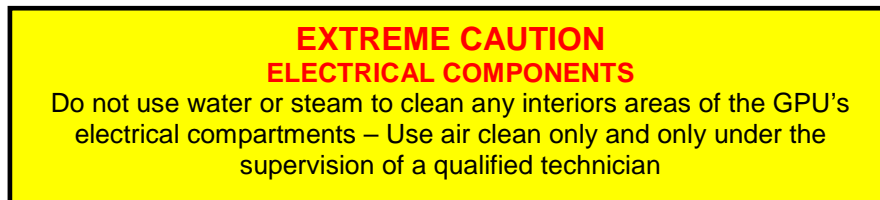


Figure 38C1-6: 30 KVA/50HZ GPU Control Panel



Figure 38C1-7: 30 KVA/50HZ GPU Example of Electronics



**Table 38C1-2: 30 KVA/50HZ GPUs Electronics**

Serial	Comments or Tasks	Technical Time (hours)
1	Use air clean only and only under the supervision of a qualified technician	

### Engine and Engine Bay

5. The cleaning instructions for 30 KVA/50HZ GPU's Engine, illustrated in Figure 38C1-8, include the points detailed in Table 38C1-3.

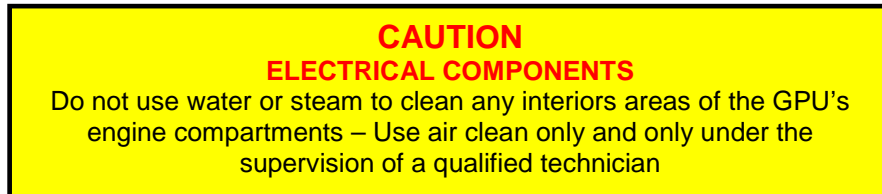


Figure 38C1-8: 30 KVA/50HZ GPU 45 kVA, 400Hz Engine

**Table 38C1-3: 30 KVA/50HZ GPUs Engine**

Serial	Comments or Tasks	Technical Time (hours)
1	Clean the engine compartment and engine to ensure they are free of dust, built up dirt and grease, insect and plant material.	
2	Use air clean only and only under the supervision of a qualified technician	
3	Refer to Chapter 38 and Annex C to Chapter 38 for detailed cleaning guidelines.	

### Batteries

6. The cleaning instructions for 60 KVA/50HZ GPU's suspension, illustrated in Figure 38C1-9, include the points detailed in Table 38C1-4.





Figure 38C1-9: 30 KVA/50HZ GPU 45 kVA, 400Hz Batteries

**Table 38C1-4: 30 KVA/50HZ GPUs Batteries**

Serial	Comments or Tasks	Technical Time (hours)
1	Remove the batteries from the vehicle and clean.	
2	Clean the battery boxes and cradles and ensure they are free of dirt, dust, plant and insect material.	
3	Refer to Chapter 38 and Annex C to Chapter 38 for detailed cleaning guidelines.	

**Cables**

7. The cleaning instructions for 30 KVA/50HZ GPU's cables, illustrated in Figure 38C1-10, include the points detailed in Table 38C1-5.



Figure 38C1-10: 30 KVA/50HZ GPU 45 kVA, 400Hz Cables

**Table 38C1-5: 30 KVA/50HZ GPUs Cables**

Serial	Comments or Tasks	Technical Time (hours)
1	Refer to Chapter 38 and Annex C to Chapter 38 for detailed cleaning guidelines.	

## Suspension

8. The cleaning instructions for 30 KVA/50HZ GPU's suspension, illustrated in Figure 38C1-11, include the points detailed in Table 38C1-6.

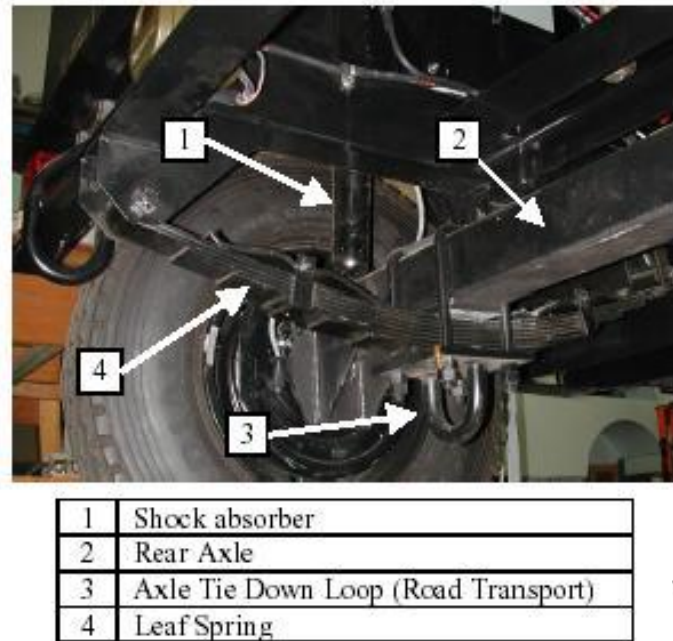


Figure 38C1-11: 30 KVA/50HZ GPU 45 kVA, 400Hz Suspension

**Table 38C1-6: 30 KVA/50HZ GPUs Suspension**

Serial	Comments or Tasks	Technical Time (hours)
1	Ensure suspension rocker beam mounts and shock absorbers on chassis are clean and free of soil, plant and insect material.	
2	Refer to Chapter 38 and Annex C to Chapter 38 for detailed cleaning guidelines.	

## APPENDIX 2 TO ANNEX C TO CHAPTER 38

### CLEANING INSTRUCTIONS – 60 KVA/50HZ GROUND POWER UNITS

1. This chapter provides basic and specific cleaning requirements for selected GSE. Where there is a specific requirement or need to highlight particular problem areas detailed cleaning guides are provided as tables and figures in this Appendix.
2. The cleaning requirements that follow are in addition to those points for aircraft ground power units included in Chapter 38 and Annex C to Chapter 38 of this publication.

#### External Areas

3. The cleaning instructions for 60 kVA/50HZ GPU's, illustrated in Figures 38C2-1 to 38C2-3, include the points detailed in Table 38C2-1.



Figure 38C2-1: 60 kVA/50HZ GPU



Figure 38C2-2: 60 kVA/50HZ GPU Canopy Removed



Figure 38C2-3: 60 kVA/50HZ GPU Spare Tyre and Towbar

**Table 38C2-1: 60 kVA/50HZ GPU's External Areas**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Clean the canopy of the GPU (if using water – only low pressure water is to be used)	
2	Ensure the louvers on both sides of the GPU are washed and free of BRM .	
3	The outer canopy is to be removed to allow for cleaning and inspection of the internal areas. The removal of the canopy is only to be conducted on advice and under the supervision of a qualified technician (refer Figure 38C2-1)	
4	Refer to Chapter 38 and Annex C to Chapter 38 for detailed cleaning guidelines.	

**Electronics**

4. The cleaning instructions for 60 kVA/50HZ GPU's electronics, illustrated in Figures 38C2-4 and 38C2-5, include the points detailed in Table 38C2-2.

**EXTREME CAUTION  
ELECTRICAL COMPONENTS**

Do not use water or steam to clean any interiors areas of the GPU's electrical compartments – Use air clean only and only under the supervision of a qualified technician



Figure 38C2-4: 60 kVA/50HZ GPU Control Box with Canopy Removed



Table 38C2-5: 60 kVA/50HZ GPU's Control Panel

Table 38C2-2: 60 kVA/50HZ GPU's External Areas

Serial	Comments or Tasks	Technical Time (hours)
1	Use air clean only and only under the supervision of a qualified technician	

### Engine and Engine Bay

- The cleaning instructions for 60 KVA/50HZ GPU's Engine, illustrated in Figure 38C2-6, include the points detailed in Table 38C2-3.

**CAUTION**  
**ELECTRICAL COMPONENTS**

Do not use water or steam to clean any interiors areas of the GPU's engine compartments – Use air clean only and only under the supervision of a qualified technician





Figure 38C2-6: 60 KVA/50HZ GPU 45 kVA, 400Hz Engine

**Table 38C2-3: 60 KVA/50HZ GPUs Engine**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Clean the engine compartment and engine to ensure they are free of dust, built up dirt and grease, insect and plant material.	
2	Use air clean only and only under the supervision of a qualified technician	
3	Refer to Chapter 38 and Annex C to Chapter 38 for detailed cleaning guidelines.	

**Batteries**

6. The cleaning instructions for 60 KVA/50HZ GPU's suspension, illustrated in Figure 38C2-7, include the points detailed in Table 38C2-4.



Figure 38C2-7: 60 KVA/50HZ GPU 45 kVA, 400Hz Batteries



**Table 38C2-4: 60 KVA/50HZ GPUs Batteries**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Remove the batteries from the vehicle and clean.	
2	Clean the battery boxes and cradles and ensure they are free of dirt, dust, plant and insect material.	
3	Refer to Chapter 38 and Annex C to Chapter 38 for detailed cleaning guidelines..	

**Cables**

7. The cleaning instructions for 60 KVA/50HZ GPU's cables, illustrated in Figure 38C2-8, include the points detailed in Table 38C2-5.



Figure 38C2-8: 60 KVA/50HZ GPU 45 kVA, 400Hz Cables

**Table 38C2-5: 60 KVA/50HZ GPUs Cables**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Refer to Chapter 38 and Annex C to Chapter 38 for detailed cleaning guidelines.	

**Suspension**

8. The cleaning instructions for 60 KVA/50HZ GPU's suspension, illustrated in Figure 38C2-9, include the points detailed in Table 38C2-6.

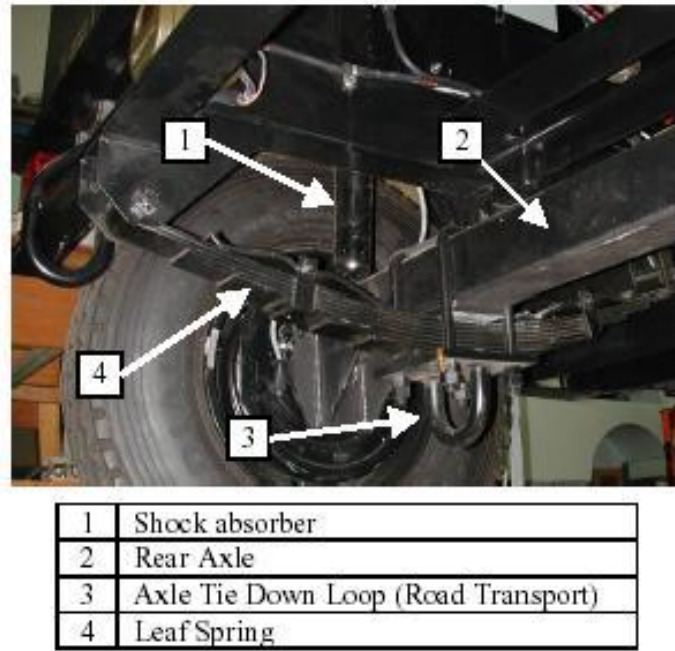


Figure 38C2-9: 60 KVA/50HZ GPU 45 kVA, 400Hz Suspension

**Table 38C2-6: 60 KVA/50HZ GPUs Suspension**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Ensure axles and mounts on chassis are clean and free of soil, plant and insect material.	
2	Ensure suspension rocker beam mounts and shock absorbers on chassis are clean and free of soil, plant and insect material.	
3	Refer to Chapter 38 and Annex C to Chapter 38 for detailed cleaning guidelines.	

## APPENDIX 3 TO ANNEX C TO CHAPTER 38

### CLEANING INSTRUCTIONS – 140 KVA/50HZ GROUND POWER UNITS

1. This chapter provides basic and specific cleaning requirements for selected GSE. Where there is a specific requirement or need to highlight particular problem areas detailed cleaning guides are provided as tables and figures in this Appendix.
2. The cleaning requirements that follow are in addition to those points for aircraft ground power units included in Chapter 38 and Annex C to Chapter 38 of this publication.

#### External Areas

3. The cleaning instructions for 140 kVA/50Hz GPU's, illustrated in Figure 38C3-1, include the points detailed in Table 38C3-1.



Figure 38C3-1: 140 kVA/50Hz GPU Control Panel

**Table 38C3-1: 140 kVA/50Hz GPU's External Areas**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Clean the canopy of the GPU (if using water – only low pressure water is to be used)	
2	Ensure the louvers on both sides of the GPU are washed and free of BRM.	
3	The outer canopy is to be removed to allow for cleaning and inspection	

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
	of the internal areas. The removal of the canopy is only to be conducted on advice and under the supervision of a qualified technician.	
4	Refer to Chapter 38 and Annex C to Chapter 38 for detailed cleaning guidelines.	

**Electronics**

4. The cleaning instructions for 140 kVA/50Hz GPU's electronics include the points detailed in Table 38C3-2.

**EXTREME CAUTION  
ELECTRICAL COMPONENTS**

Do not use water or steam to clean any interiors areas of the GPU's electrical compartments – Use air clean only and only under the supervision of a qualified technician

**Table 38C3-2: 140 kVA/50Hz GPUs Electronics**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Use air clean only and only under the supervision of a qualified technician	
2	<b>Detailed cleaning instructions for these systems are to be advised.</b>	

**Engine and Engine Bay**

5. The cleaning instructions for 140 KVA/50HZ GPU's Engine include the points detailed in Table 38C3-3.

**CAUTION  
ELECTRICAL COMPONENTS**

Do not use water or steam to clean any interiors areas of the GPU's engine compartments – Use air clean only and only under the supervision of a qualified technician

**Table 38C3-3: 140 KVA/50HZ GPUs Engine**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Use air clean only and only under the supervision of a qualified technician	
2	<b>Detailed cleaning instructions for these systems are to be advised.</b>	

## APPENDIX 4 TO ANNEX C TO CHAPTER 38

### CLEANING INSTRUCTIONS – 180 KVA/50HZ GROUND POWER UNITS

1. This chapter provides basic and specific cleaning requirements for selected GSE. Where there is a specific requirement or need to highlight particular problem areas detailed cleaning guides are provided as tables and figures in this Appendix.
2. The cleaning requirements that follow are in addition to those points for aircraft ground power units included in Chapter 38 and Annex C to Chapter 38 of this publication.

#### External Areas

3. The cleaning instructions for 180 kVA/50Hz GPU's, illustrated in Figures 38C4-1 to 38C4-3, include the points detailed in Table 38C4-1.



Figure 38C4-1:180 kVA/50Hz GPU



Figure 38C4-2:180 kVA/50Hz GPU Louver



Figure 38C4-3: 180 kVA/50Hz GPU Canopy Removed

**Table 38C4-1: 180 kVA/50Hz GPU's External Areas**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Clean the canopy of the GPU (if using water – only low pressure water is to be used)	
2	Ensure the louvers on both sides of the GPU are washed and free of BRM .	
3	The outer canopy is to be removed to allow for cleaning and inspection of the internal areas. The removal of the canopy is only to be conducted on advice and under the supervision of a qualified technician (refer Figure 38C4-3)	
4	Refer to Chapter 38 and Annex C to Chapter 38 for detailed cleaning guidelines.	

**Electronics**

4. The cleaning instructions for 180 kVA/50Hz GPU's electronics, illustrated in Figures 38C4-4 to 38C4-6, include the points detailed in Table 38C4-2.

**EXTREME CAUTION  
ELECTRICAL COMPONENTS**

Do not use water or steam to clean any interiors areas of the GPU's electrical compartments – Use air clean only and only under the supervision of a qualified technician





1.	Control Cabinet
2.	Power Cabinet

Figure 38C4-4:180 kVA/50Hz GPU Electronic Controls



Figure 38C4-5:180 kVA/50Hz GPU Control Cabinet



Figure 38C4-6:180 kVA/50Hz GPU Rear Power Panel

**Table 38C4-2:180 kVA/50Hz GPUs Electronics**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Use air clean only and only under the supervision of a qualified technician	

**Engine and Engine Bay**

5. The cleaning instructions for 180 KVA/50HZ GPU's Engine, illustrated in Figure 38C4-7, include the points detailed in Table 38C4-3.



Figure 38C4-7: 180 KVA/50HZ GPU 45 kVA, 400Hz Engine

**Table 38C4-3: 180 KVA/50HZ GPUs Engine**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Clean the engine compartment and engine to ensure they are free of dust, built up dirt and grease, insect and plant material.	
2	Use air clean only and only under the supervision of a qualified technician	
3	Refer to Chapter 38 and Annex C to Chapter 38 for detailed cleaning guidelines.	

**Battery**

6. The cleaning instructions for 180 KVA/50HZ GPU's battery, illustrated in Figure 38C4-8, include the points detailed in Table 38C4-4.

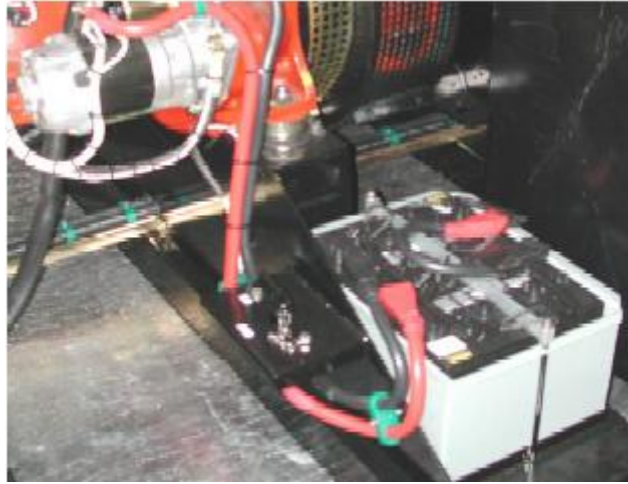


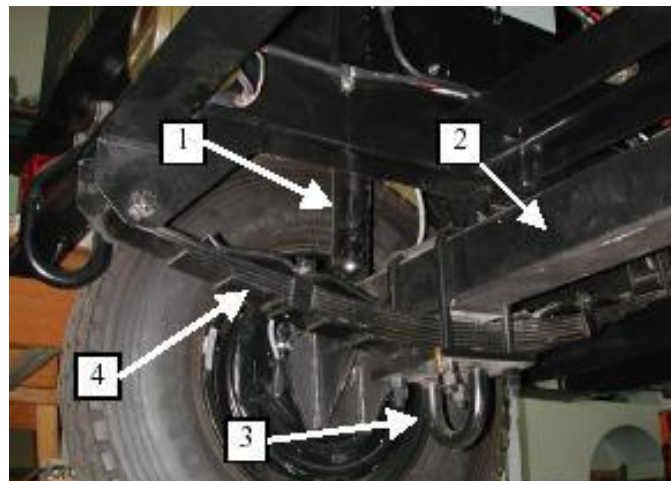
Figure 38C4-8: 180 KVA/50HZ GPU 45 kVA, 400Hz Battery

**Table 38C4-4: 180 KVA/50HZ GPUs Battery**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Remove the batteries from the vehicle and clean.	
2	Clean the battery boxes and cradles and ensure they are free of dirt, dust, plant and insect material.	
3	Refer to Chapter 38 and Annex C to Chapter 38 for detailed cleaning guidelines.	

**Suspension**

7. The cleaning instructions for 180 KVA/50HZ GPU's suspension, illustrated in Figure 38C4-9, include the points detailed in Table 38C4-5.



1.	Shock Absorber
2.	Rear Axle
3.	Axle Tie Down Loop (Road Transport)
4.	Leaf Spring

Figure 38C4-9: 180 KVA/50HZ GPU 45 kVA, 400Hz Suspension

**Table 38C4-9: 180 KVA/50HZ GPUs Suspension**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Ensure axles and mounts on chassis are clean and free of soil, plant and insect material.	
2	Refer to Chapter 38 and Annex C to Chapter 38 for detailed cleaning guidelines.	