

CHAPTER 9

CLEANING INSTRUCTIONS – UNIMOG

- 9.1** This chapter provides basic and specific cleaning requirements for selected vehicles. 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.
- 9.2** This Section deals with the cleaning of the basic Unimog vehicle. The section is structured as follows:
- a. external areas;
 - b. underside;
 - c. cabin;
 - d. cabin holes
 - e. front areas;
 - f. under tray;
 - g. tray checker panel;
 - h. chassis;
 - i. chassis support tubes;
 - j. cross members;
 - k. chassis cross members;
 - l. chassis cavities;
 - m. sump;
 - n. torque tube wiring looms and air lines
 - o. chassis air lines and wiring looms;
 - p. suspension;
 - q. engine and transmission;
 - r. battery box;
 - s. winch, wire ropes and slings;
 - t. tarpaulins;
 - u. camouflage nets; and
 - v. tyres (new, old and spares).

External Areas

9.3 The cleaning instructions for the Unimog's external areas, as illustrated in Figure 9-1, include the points detailed in Table 9-1.

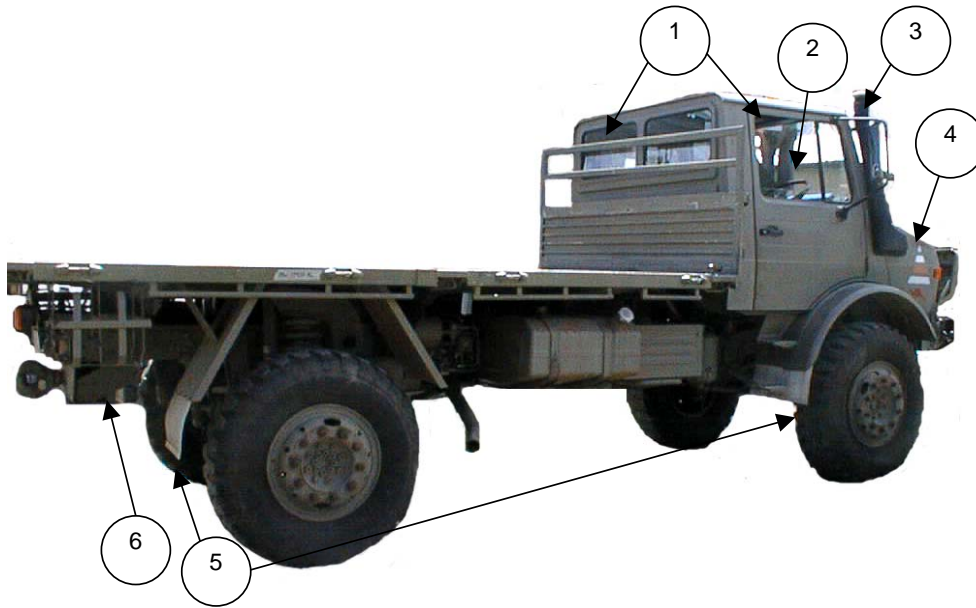


Figure 9-1: Unimog's External Areas

Table 9-1: Cleaning Instructions for the Unimog's External Areas

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Clean all rubber seals around the windows and doors.	
2	Remove the cabin seats to facilitate cleaning. Remove the rubber floor matting to clean the cabin floor.	1.5
3	Remove the snorkel to facilitate cleaning.	0.5
4	Remove the bonnet to facilitate cleaning.	
5	Remove the mudflaps and pay attention to cleaning around the attachment points.	
6	Remove Cupola crash pad and any lining to facilitate cleaning and inspection.	
7	Loosen fuel and air tank retaining straps	
8	Remove light covers and flush housing	
9	Clean and inspect channel tubing at cargo tie down points on cargo tray	

Underside

9.4 The cleaning instructions for the Unimog's external areas, as illustrated in Figure 9-2, include the points detailed in Table 9-2.



Figure 9-2: Unimog's Underside Areas

Table 9–2: Cleaning Instructions for the Unimog's Underside Areas

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	All tools are to be fully removed and extended to facilitate cleaning.	
2	All externally fitted items of equipment to be removed and both the items and the mounting brackets to be cleaned of all QRM	1.5
3	Jerry cans are to be removed to facilitate cleaning.	0.5
4	All toolboxes are to be emptied to facilitate cleaning. If required, remove the toolboxes and Jerry can holders to facilitate cleaning of soil, plant and insect debris between the items and the chassis.	
5	Spare tyre to be fully removed and to be cleaned as per "tyres" para.10.9 below.	
6	Tyre cover (if fitted) to be fully removed and to be washed and scrubbed to remove all QRM (refer paragraph 9-23 below).	
7	Frame areas are to be washed with high-pressure water utilising a flexible nozzle.	

Cabin

- 9.5** The cleaning instructions for the Unimog's cabin, as illustrated in Figures 9-3 and 9-4, include the point detailed in Table 9-3.



Figure 9-3: Unimog's Cabin



Figure 9-4: Unimog's Doors

Table 9–3: Cleaning Instructions for the Unimog’s Doors

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Remove the cabin seats to facilitate cleaning.	1.5
2	Remove the rubber floor matting to clean the cabin floor.	
3	Inspect mirror sills and mirrors.	
4	Door trims are to be removed and cleaned	
5	The window and door rubber seals are to be cleaned of all soil, plant and insect matter. Seals on the bonnet area are to be cleaned in a similar fashion.	
6	The seats and the floor mats are to be removed and the cabin floor cleaned.	1.0
7	The cabin area is to be vacuumed and air-blown clean.	
8	Ventilation ducts are to be unscrewed and air-blown clean.	
9	Remove the front cover from the ventilation fan housing and clean the fan housing. All soil, plant and insect matter are to be removed.	
10	Critically inspect the gun mount and manhole (if fitted) to ensure they are free from dirt, dust, plant and insect material.	

Cabin Holes

9.6 The cleaning instructions for the Unimog's cabin holes, as illustrated in Figure 9-5, include the point detailed in Table 9-4.

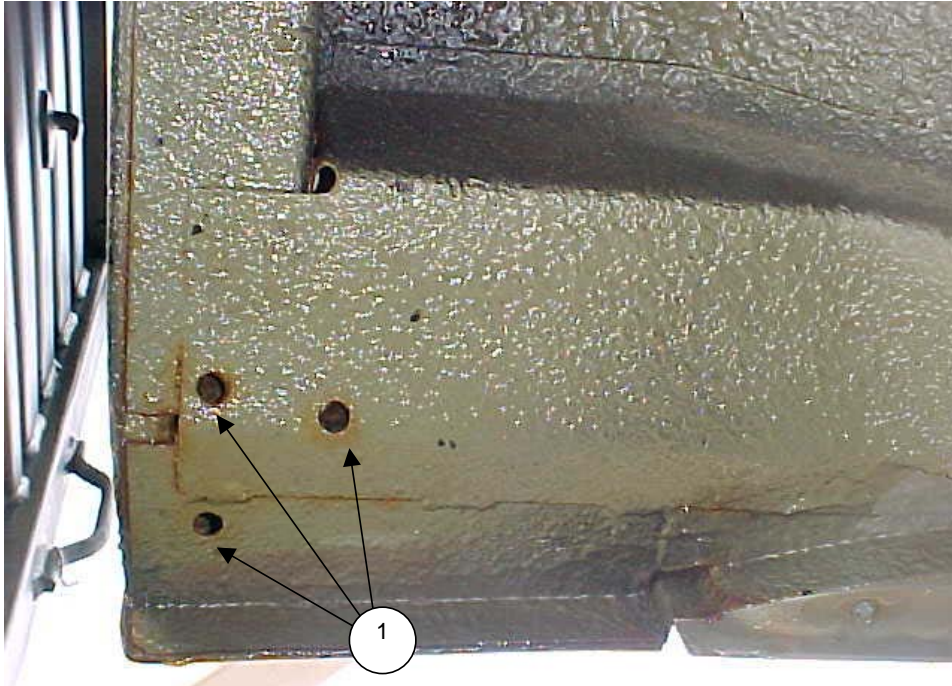


Figure 9-5: Unimog's Cabin Holes

Table 9-4: Cleaning Instructions for the Unimog's Cabin Holes

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	The holes under the cab are to be flushed through to remove all debris.	

Front Areas

9.7 The cleaning instructions for the Unimog's front areas as illustrated in Figure 9-6 include the points detailed in Table 9-5.



Figure 9-6: Unimog's Front Areas

Table 9-5: Cleaning Instructions for the Unimog's Front Areas

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Headlights are to be removed to facilitate cleaning behind them.	1.0
2	The brush guard is to be removed.	0.25
3	The air cleaner element is to be removed and disposed of in accordance with AQIS directions. Clean the ventilation nozzles on the centre top of the dash using low pressure compressed air. Remove the ventilation blower assembly filter element, from the front left-hand side of the cabin, and dispose of in accordance with AQIS directions. Clean out the ventilation blower assembly housing and ensure no dirt, seed or plant material remains. Raise the heating/ventilation flap, on the selected gear indicator panel, and vacuum clean the discharge cavity to remove dust and other foreign material.	
4	The bonnet is to be removed.	
5	Remove the radiator to facilitate cleaning. The radiator is to be high-pressure air-cleaned to remove seed and then washed down by a low-pressure water high-volume wash; Bent radiator grills may require heat treatment to burn any embedded seed material (using heat shrink guns). It may be necessary to use brushes or pick insect and seed matter out from between the veins on the radiators.	

Under Tray

9.8 The cleaning instructions for under the Unimog's tray, as illustrated in Figure 9-7, include the points detailed in Table 9-6.

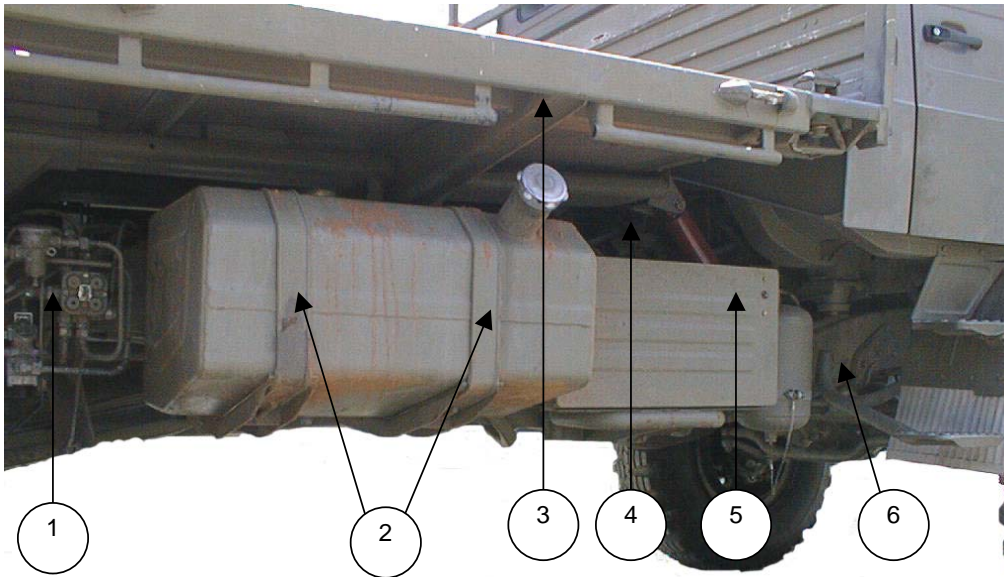


Figure 9-7: Under the Unimog's Tray

Table 9-6: Cleaning Instructions for Under the Unimog's Tray

<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.	
2	Remove the tank straps to facilitate cleaning.	1.0
3	Clean all the supporting members for the floor area. The wooden floor is to be lifted to allow inspection and to facilitate cleaning of the chassis cross members and underside of the floor. If the wooden floor plates are cracked, gouged or damaged, they are to be disposed of in accordance with AQIS directions.	2.0
4	The underside hollow cross members are to be subject to high-pressure water using a flexible nozzle to remove all soil, plant and insect matter.	
5	Remove the driver's step to facilitate cleaning where the step attaches to the vehicle. Additionally, the hollow tube is to be subject to a high-pressure water clean and, if necessary, drill a hole near the step point to provide an exit point for water and debris.	0.5

Tray Checker Panel

9.9 The cleaning instructions for the Unimog's tray checker panel, as illustrated in Figure 9-8, include the points detailed in Table 9-7.

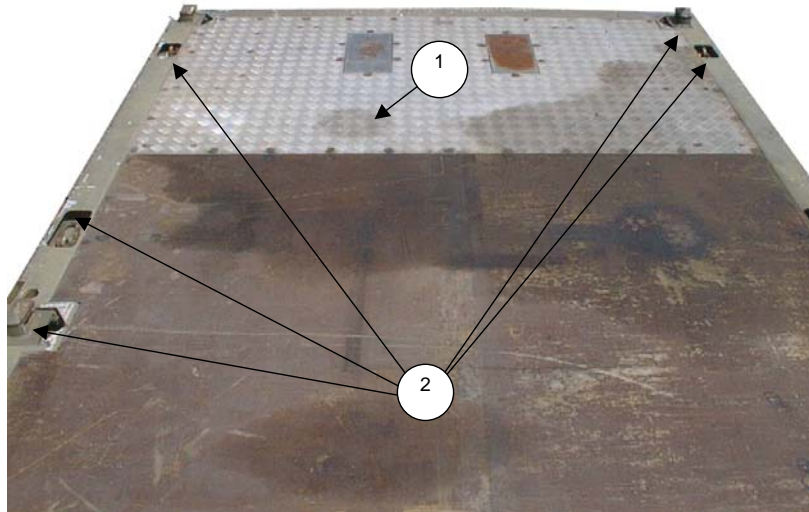


Figure 9-8: Unimog's Tray Checker Panel

Table 9-7: Cleaning Instructions for the Unimog's Tray Checker Panel

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Where evidence of QRM has been found the checker plate is to be seperated from the Wooden floor to facilitate cleaning. Remove the checker plate to facilitate cleaning and an AQIS inspection underneath. Timber floor panels passed by AQIS inspectors will require fumigation action upon entry to Australia and will not be refitted to vehicle.	1.0
2	Use a high-pressure water clean on the attachment points on the cargo tray.	

Chassis

9.10 The cleaning instructions for the Unimog's chassis, as illustrated in Figure 9-9, include the points detailed in Table 9–8.



Figure 9-9: Unimog Chassis

Table 9–8: Cleaning Instructions for the Unimog's Chassis

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	The chassis rail on the vehicle has open areas which collect debris. The area is to be flushed behind the plate using a flexible nozzle and moving around to ensure all areas behind the plate are cleaned until the water is observed to be clear on exit.	
2	Loosen and clean air line restraining straps. Foam covering may require to be disposed of if heavily contaminated.	

Chassis Support Tubes

9.11 The cleaning instructions for the Unimog's chassis support tubes, as illustrated in Figure 9-10, include the point detailed in Table 9-9.

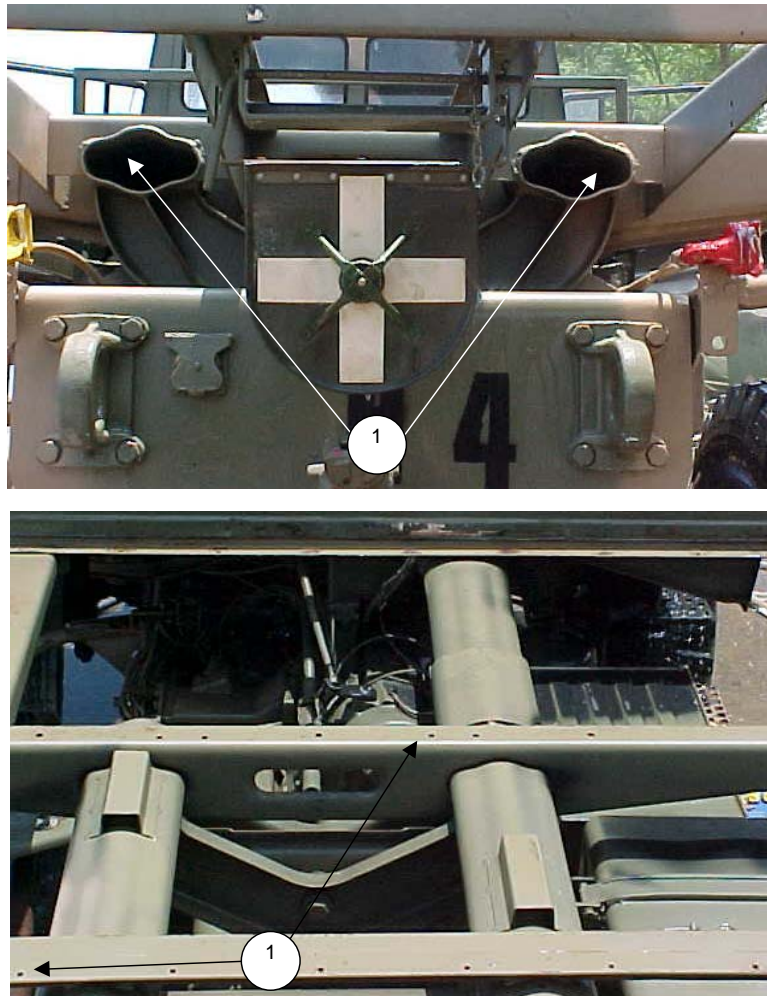


Figure 9-10: Unimog's Chassis Support Tubes

Table 9-9: Cleaning Instructions for the Unimog's Chassis Support Tubes

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	The rear view of the chassis support tubes are to be flushed out. The right-hand tube has a closed end and may require extensive flushing. Some vehicles have been modified and have drilled holes at the cabin end of the tube to allow water to drain out.	

Cross Members

9.12 The cleaning instructions for the Unimog's cross members, as illustrated in Figure 9-11, include the point detailed in Table 9-10.

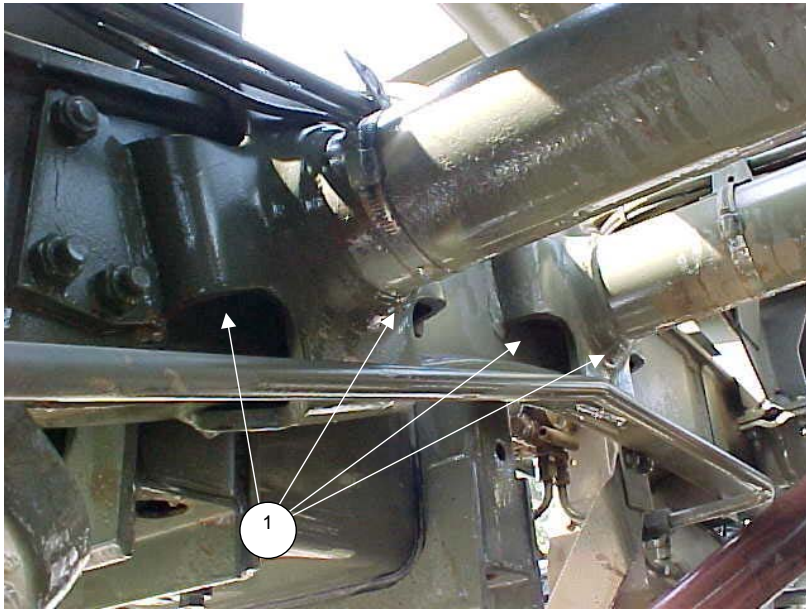


Figure 9-11: Unimog's Cross Members

Table 9-10: Cleaning Instructions for the Unimog's Cross Members

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	The mounting brackets for the cross members collect debris that requires flushing using a flexible nozzle.	

Chassis Cross Member

9.13 The cleaning instructions for the Unimog chassis cross member, as illustrated in Figure 9-12, include the point detailed in Table 9–11.

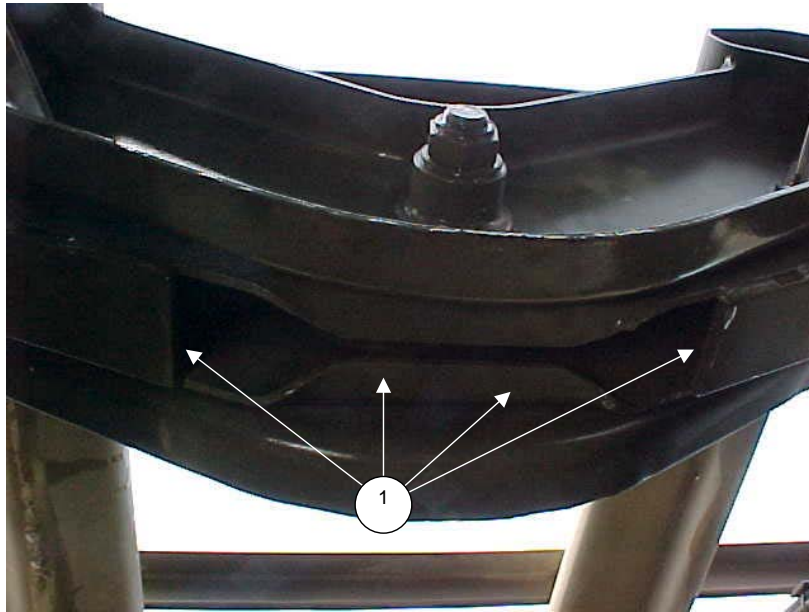


Figure 9-12: Unimog Chassis Cross Member

Table 9–11: Cleaning Instructions for the Unimog’s Chassis Cross Member

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	The chassis cross member collects debris that requires flushing using a flexible nozzle.	

Chassis Cavities

9.14 The cleaning instructions for the Unimog chassis cavities, as illustrated in Figure 9-13, include the point detailed in Table 9–12.

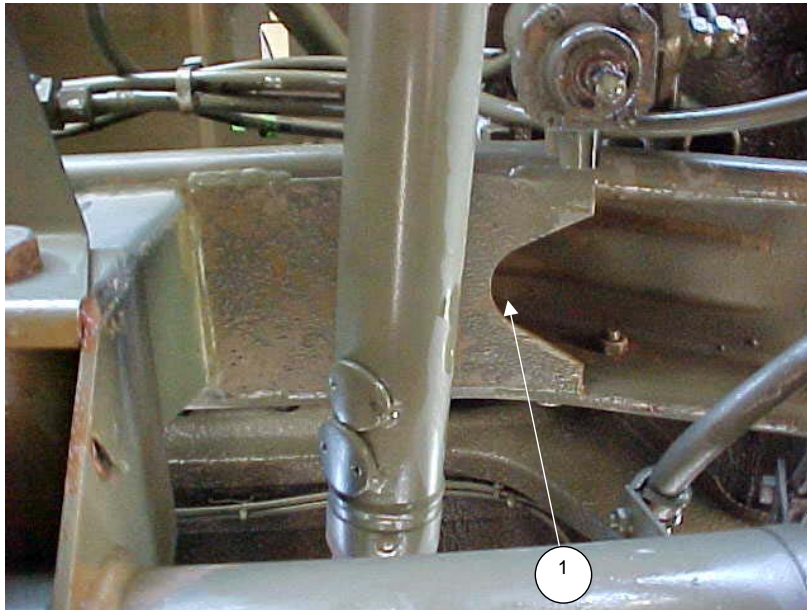


Figure 9-13: Unimog's Chassis Cavities

Table 9–12: Cleaning Instructions for the Unimog's Chassis Cavities

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	All soil and debris is to be removed from the chassis cavities.	
2	Remove plastic ties to expose grouped cables and air lines for inspection	

Sump

9.15 The cleaning instructions for the Unimog sump, as illustrated in Figure 9-14, include the point detailed in Table 9-13.



Figure 9-14: Unimog Sump

Table 9-13: Cleaning Instructions for the Unimog's Sump

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Grease and oil from the front of the sump and on the back of the flywheel housing is to be removed.	

Torque Tube Wiring Looms and Air Lines

9.16 The cleaning instructions for the Unimog's wiring looms and air lines, as illustrated in Figure 9-15, include the point detailed in Table 9-14.

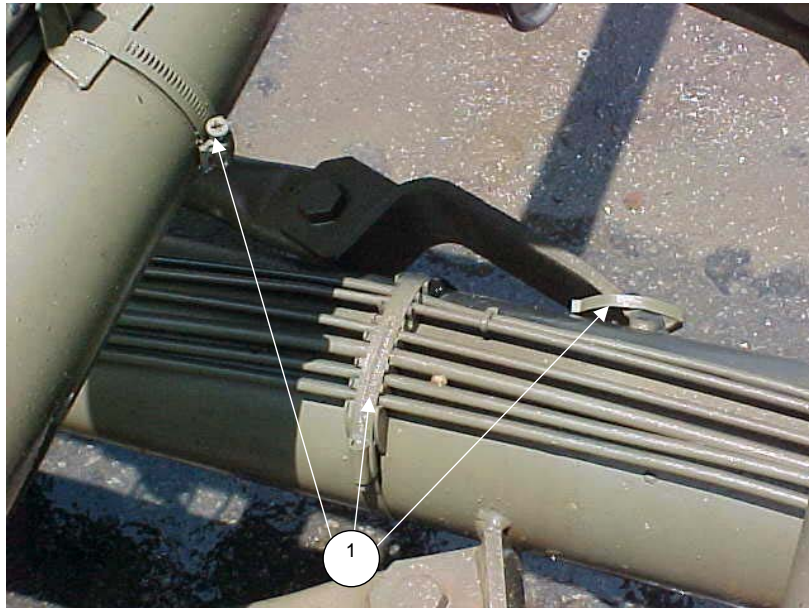


Figure 9-15: Unimog's Wiring Looms and Air Lines

Table 9-14: Cleaning Instructions for the Unimog's Wiring Looms and Air lines

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Loosen hose clamps and mounting channels and clean in between all air lines on the torque tube.	

Chassis Air Lines and Wiring Looms

9.17 The cleaning instructions for the Unimog's cables, as illustrated in Figure 9-16, include the point detailed in Table 9-15.

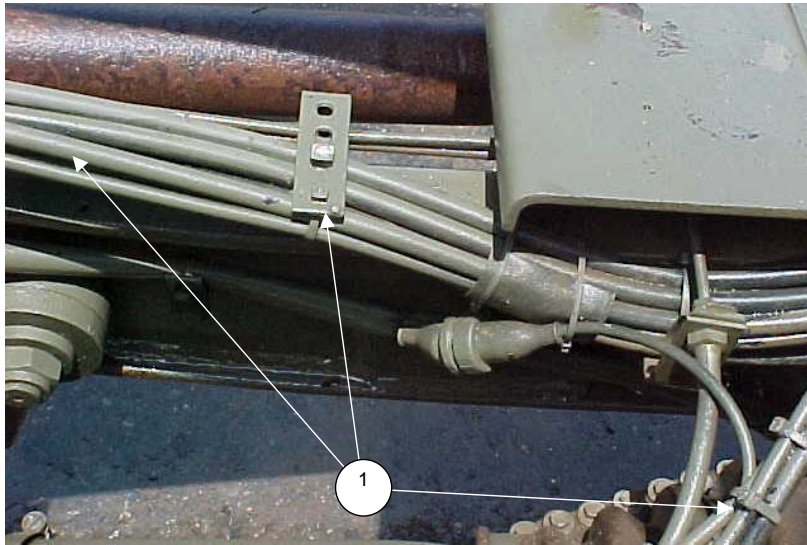


Figure 9-16: Unimog's Cables

Table 9-15: Cleaning Instructions for the Unimog's Cables

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Clean in between all cables, paying attention to where the cable ties are located and between the cable and vehicle.	

Suspension

9.18 The specific cleaning instructions for Unimog's suspension include those points detailed in Figure 9-17 and Table 9–16.



Figure 9-17: Unimog's Suspension

Table 9–16: Cleaning Instructions for the Unimog's Suspension

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Ensure suspension rocker beam mounts on chassis are clean and free of soil, plant and insect material.	
2	Mud and other debris collect in the spring seat, where the spring is mounted to the axle assembly, and are difficult to remove from the base of the springs. Ensure that this area is cleaned well.	
3	Mud and other debris collect in the inside area on the inner side of the wheel. Ensure that this area is cleaned well.	
4	Ensure axles and mounts on chassis are clean and free of soil, plant and insect material.	

Engine and Transmission

- 9.19 The specific cleaning instructions for Unimog's engine and transmission include those points detailed in Figure 9-18 and Table 9-17.



Figure 9-18: Unimog's Engine and Transmission

Table 9-17: Cleaning Instructions for the Unimog's Engine and Transmission Compartment

<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.	
3	Ensure the starter motor and alternator are covered and taped to stop ingress of water.	
4	Do not direct high-pressure water jets at any of the engine openings/breathers, or at any of the electrical/electronic components	

Battery Box

9.20 The cleaning instructions for the Unimog's battery box, as illustrated in Figure 9-19, include the point detailed in Table 9-18.



Figure 9-19: Unimog's Battery Box

Table 9-18: Cleaning Instructions for the Unimog's Battery Box

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	The battery box support member is to be flushed through using a flexible nozzle until clear water is seen to exit.	
2	Flush support bases and tubing underneath battery box.	

Winches, Wire Ropes and Slings

9.21 The cleaning instructions for Winches, Wire Ropes and Slings, as illustrated in Figures 9-20 and 9-21, include the point detailed in Table 9–19.



Figure 9-20: Unimog's Winch Assembly



Figure 9-21: Unimog's Winch Assembly Underside

Table 9–19: Cleaning Instructions for Winches, Wire Ropes and Slings

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	All items are to be extended to full length and subject to a high-pressure water clean using degreaser, if required, to remove all soil, plant and insect matter	
2	The winch drum is also to be degreased and subject to a high-pressure water clean	
3	All winch ropes, wire ropes and slings are to be re-oiled after inspection. An application of a protective covering (plastic bag) may be required to protect the refurbished ropes and cables	

Tarpaulins

9.22 The cleaning instructions for the tarpaulins include the points detailed in Table 9-20.

Table 9–20: Cleaning Instructions for the Tarpaulin Areas

<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 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 AQIS inspection	

Camouflage Nets

9.23 The cleaning instructions for camouflage nets include the points detailed in Table 9-21.

Table 9–21: Cleaning Instructions for Camouflage Nets

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Removal of grass and debris may be achieved by use of a petrol powered blower/vacuum in the first instance, use of water should be avoided	
2	Heavily soiled camouflage nets may require further scrubbing and a dip in an approved detergent/ disinfectant (one in 20 solution). This has been achieved in the past by using trailers with required additive	
3	Depending on the degree of contamination and diligence in the cleaning process, camouflage nets may require three or more trailer dips to achieve the required AQIS clearance	
4	Drying is to be achieved by hanging the camouflage net so that it does not come into contact with the ground	
5	Nets are to be inspected to ensure that all plant material is removed	
6	Camouflage poles are to be brushed or swept clean; and metal joiners are to be removed cleaned and inspected by AQIS officers	

Tyres (New, Old and Spares)

9.24 The cleaning instructions for Tyres (New, Old and Spares), as illustrated in 9-22, include the points detailed in Table 9-22.



Figure 9-22: Unimog's Wheel

Table 9–22: 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 QRM.	
2	Damaged tyres are to be inspected by AQIS, who will determine their suitability for return to Australia. 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 QRM 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 quarantine risk material.	
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 AQIS solution is that tyres are stored within containers. Tyres not fitted on rims will require fumigation on return to Australia.	
8	AQIS 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 AQIS internet site (http://www.daff.gov.au/) ICON (Import Conditions Database) for the commodity "tyres".	

ANNEXES:

- A. Cleaning Instructions – Unimog Dump
- B. Cleaning Instructions – Unimog Medium Recovery Vehicle (MRV)
- C. Cleaning Instructions – Unimog Tank & Pump Assemblies
- D. Cleaning Instructions – Unimog Maintenance Shelter (UMS)
- E. Cleaning Instructions – Unimog Special Forces Long Range Sustainment Vehicle (LRSV)
- F. Cleaning Instructions – Unimog Radar
- G. Cleaning Instructions – Unimog Gun Tractors
- H. Cleaning Instructions – Unimog Cargo Crane Variant
- I. Cleaning Instructions – Unimog Troop Carrier
- J. Cleaning Checklist – Unimog

ANNEX A TO CHAPTER 9

CLEANING INSTRUCTIONS – UNIMOG DUMP

1. This Annex provides specific cleaning requirements for selected vehicles. 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 the Unimog vehicle included in Chapter 9 of this publication.

External Areas

3. The cleaning instructions for the Unimog dump's external areas, as illustrated in Figure 9A-1, include the points detailed in Table 9A-1.



Figure 9A-1: Unimog Dump

Table 9A-1: Cleaning Instructions for the Unimog Dump's External Areas

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Remove the mudflaps and pay attention to cleaning around the attachment points.	
2	The dump body is to be raised to extend the hydraulic ram for cleaning. The dump body is to be locked in the raised position. Clean the chassis rails and exposed vehicle components under the dump body with high-pressure water.	
3	The box section is to be inspected for damage. If damaged, the box area is to be flushed through with high-pressure water using a flexible nozzle to ensure all soil, plant and insect matter is removed.	
4	The tray face is to be inspected for damage and damaged sections are to be removed to facilitate an inspection to ensure there is no compacted soil embedded.	
5	Refer to Chapter 9 for detailed cleaning guidelines.	

Lower Areas

4. The cleaning instructions for the Unimog dump's lower areas, as illustrated in Figure 9A-2, include the points detailed in Table 9A-2.

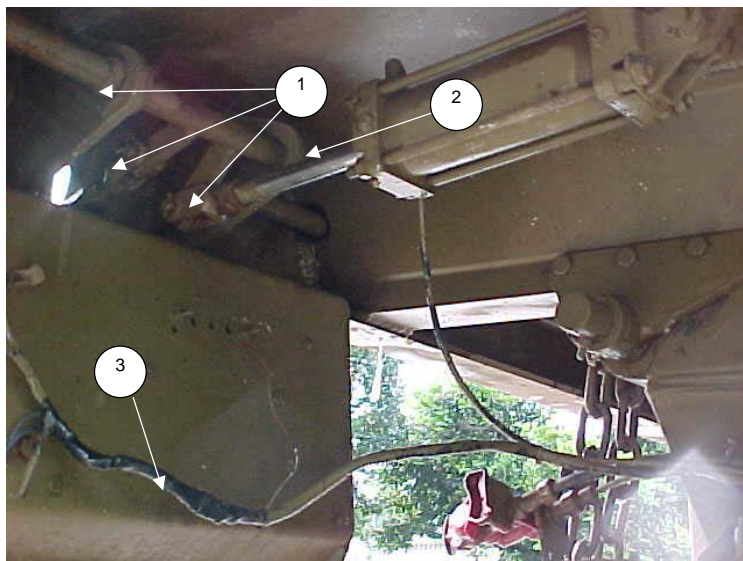


Figure 9A-2: Unimog Dump's Lower Areas

Table 9A-2: Cleaning Instructions for the Unimog Dump's Lower Areas

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	The linkage area for the tailgate is to be cleaned of all grease and contamination by soil, plant and insect material.	
2	The ram is to be extended to facilitate cleaning.	
3	Electrical tape is to be removed to facilitate cleaning between the cables.	

Rear Electrical Cables

5. The cleaning instructions for the Unimog dump's rear electrical cables, as illustrated in Figure 9A-3, include the point detailed in Table 9A-3.



Figure 9A-3: Unimog Dump's Rear Electrical Cables

Table 9A-3: Cleaning Instructions for the Unimog Dump's Rear Electrical Cables

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Electrical tape is to be removed to facilitate cleaning of electrical cables.	

ANNEX B TO CHAPTER 9

CLEANING INSTRUCTIONS – UNIMOG MEDIUM RECOVERY VEHICLE (MRV)

1. This Annex provides specific cleaning requirements for selected vehicles. 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 the Unimog vehicle included in Chapter 9 of this publication.

External Areas

3. The cleaning instructions for the Unimog Medium Recovery Vehicle's external areas, as illustrated in Figures 9B-1 and 9B-2, include the points detailed in Table 9B-1.



Figure 9B-1: Unimog Medium Recovery Vehicle



Figure 9B–2: Unimog Medium Recovery Vehicle's External Areas

Table 9B–1: Cleaning Instructions for the Unimog Medium Recovery Vehicle's External Areas

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Refer to Chapter 9 for detailed cleaning guidelines.	1.25
2	Clean all rubber seals around the windows and doors.	
3	Remove the cabin seats to facilitate cleaning. Remove door trims to clean door cavities.	1.5
4	Remove the snorkel to facilitate cleaning.	
5	Remove the bonnet to facilitate cleaning.	
6	Remove the mudflaps and pay attention to cleaning around the attachment points.	
7	Remove the batteries and clean the battery box, terminals and batteries.	
8	Remove the tank straps to facilitate cleaning.	1.5
9	Remove the toolboxes and Jerry can holders to facilitate cleaning of soil, plant and insect debris between the items and the chassis.	
10	The tray is to be raised to extend the hydraulic ram for cleaning.	
11	The box section is to be inspected for damage. If damaged, the box area is to be drilled and flushed through with high-pressure water using a flexible nozzle to ensure all soil, plant and insect matter is removed.	
12	The tray face is to be inspected for damage and damaged sections are to be removed to facilitate an inspection to ensure there is no compacted soil embedded.	

Palfinger

4. The cleaning instructions for the Unimog Medium Recovery Vehicle's palfinger, as illustrated in Figures 9B-3 and 9B-4, include the points detailed in Table 9B-2.



Figure 9B-3: Unimog Medium Recovery Vehicle's Palfinger 1

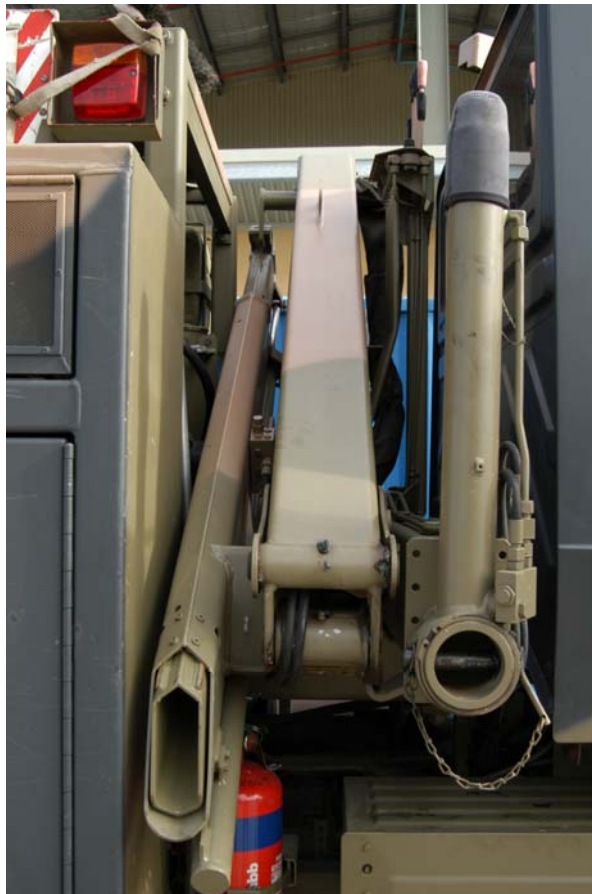


Figure 9B-4: Unimog Medium Recovery Vehicle's Palfinger 2

Table 9B-2: Cleaning Instructions for the Unimog Medium Recovery Vehicle's Palfinger

CAUTION
HYDRAULIC COMPONENTS
Do not use high pressure water or steam to clean the hydraulics or hydraulic control areas unless under the supervision of a qualified technician

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	The linkage area for the tailgate is to be cleaned of all grease and contamination by soil, plant and insect material.	
2	The ram is to be extended to facilitate cleaning.	
3	Electrical tape is to be removed to facilitate cleaning between the cables.	

Recovery Boom

5. The cleaning instructions for the Unimog Medium Recovery Vehicle's recovery boom, as illustrated in Figure 9B-5, include the points detailed in Table 9B-3.



Figure 9B-5: Unimog Medium Recovery Vehicle's Recovery Boom

Table 9B-3: Cleaning Instructions for the Unimog Medium Recovery Vehicle's Recovery Boom

CAUTION
HYDRAULIC COMPONENTS
 Do not use high pressure water or steam to clean the hydraulics or hydraulic control areas unless under the supervision of a qualified technician

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	The linkage area is to be cleaned of all grease and contamination by soil, plant and insect material.	
2	The ram is to be extended to facilitate cleaning.	
3	Electrical tape is to be removed to facilitate cleaning between the cables.	

Lower Areas

6. The cleaning instructions for the Unimog Medium Recovery Vehicle's lower areas, as illustrated in Figure 9B-6, include the points detailed in Table 9B-4.



Figure 9B-6: Unimog Medium Recovery Vehicle's Lower Areas

Table 9B-4: Cleaning Instructions for the Unimog Medium Recovery Vehicle's Lower Areas

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	The linkage area for the tailgate is to be cleaned of all grease and contamination by soil, plant and insect material.	
2	The ram is to be extended to facilitate cleaning.	
3	Electrical tape is to be removed to facilitate cleaning between the cables.	

Battery Box

7. The cleaning instructions for the Unimog's battery box, as illustrated in Figure 9B-7, include the point detailed in Table 9B-5.



Figure 9B-7: Unimog MRV Battery Box

Table 9–5: Cleaning Instructions for the Unimog's Battery Box

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	The battery box support member is to be flushed through using a flexible nozzle until clear water is seen to exit.	
2	Flush support bases and tubing underneath battery box.	

Winch Ropes, Wire Ropes and Slings

8. The cleaning instructions for Winch Ropes, Wire Ropes and Slings, as illustrated in Figure 9B-8 to 9B-10; include the points detailed in Table 9B-6.



Figure 9B-8: Unimog Medium Recovery Vehicle's Winch Cable Pulley System

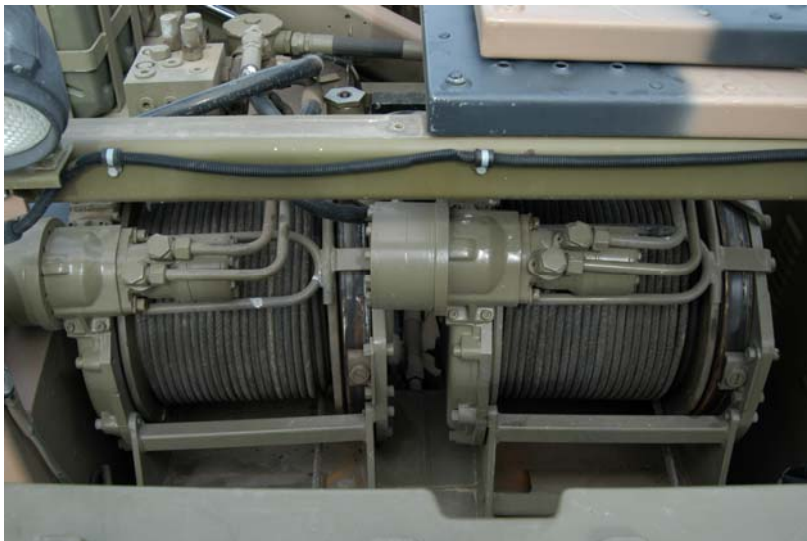


Figure 9B-9: Unimog Medium Recovery Vehicle's Winch Drums



Figure 9B–10: Unimog Medium Recovery Vehicle's Winch Cable Channel

Table 9B–6: Cleaning Instructions for Winch Ropes, Wire Ropes and Slings

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	All items are to be extended to full length and subject to a high-pressure water clean using degreaser, if required, to remove all soil, plant and insect matter	
2	The winch drum is also to be degreased and subject to a high-pressure water clean	
3	All winch ropes, wire ropes and slings are to be re-oiled after inspection. An application of a protective covering (plastic bag) may be required to protect the refurbished ropes and cables	

Tool Boxes/ Storage Bins

9. The cleaning instructions for the Unimog Medium Recovery Vehicle's Tool Boxes/Storage Bins, as illustrated in Figures 9B-11 to 9B-14, include the point detailed in Table 9B-7.



Figure 9B-11: Unimog Medium Recovery Vehicle's Tool Boxes Drivers Side 1



Figure 9B–12: Unimog Medium Recovery Vehicle's Tool Boxes Drivers Side 2



Figure 9B–13: Unimog Medium Recovery Vehicle's Tool Boxes Passengers Side 1



Figure 9B–14: Unimog Medium Recovery Vehicle's Tool Boxes Passengers Side 2

Table 9B–7: Cleaning Instructions for the Unimog Medium Recovery Vehicle's Tool Boxes/Storage Bins

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Toolboxes and tool bins are to be emptied and brushed, air-blown and wiped clean.	
2	Tools are to be wiped clean and lightly oiled after inspection	
3	Clean all rubber seals around the doors.	

ANNEX C TO CHAPTER 9

CLEANING INSTRUCTIONS – UNIMOG TANK AND PUMP

ASSEMBLIES

1. This Annex provides specific cleaning requirements for selected vehicles. 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 the Unimog vehicle included in Chapter 9 of this publication.

External Areas

3. The cleaning instructions for the Unimog tank and pump assemblies' external areas, as illustrated in Figures 9C-1 to 9C-3, include the points detailed in Table 9C-1.



Figure 9C-1: Unimog Tank and Pump Assemblies' External Areas

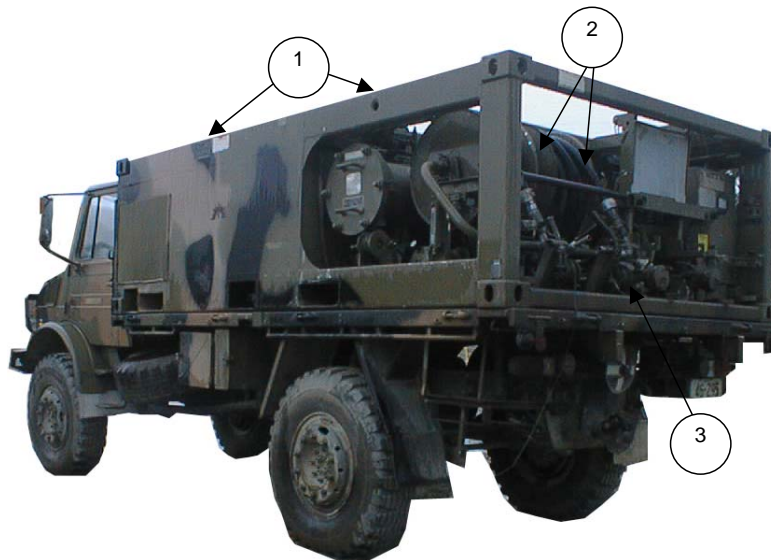


Figure 9C-2: Unimog Tank and Pump Assemblies' Rear Angle



Figure 9C-3: Unimog Tank and Pump Assemblies' Rear

Table 9C-1: Cleaning Instructions for the Unimog Tank and Pump Assemblies' External Areas

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Remove the tank and pump assembly from the parent vehicle to facilitate cleaning. Vehicle to be cleaned as per Chapter 9 - Unimog of this publication	0.7
2	Ensure the forklift pockets are free of dirt, plant and other debris.	
3	Ensure twist lock recesses are clean and free of plant and insect material	
4	Refer to Chapter 9 for detailed cleaning guidelines.	

Tank and Pump Assembly

4. The cleaning instructions for the Unimog tank and pump assemblies' rear external areas, as illustrated in Figures 9C-4 to 9C-10, include the points detailed in Table 9C-2.



Figure 9C-4: Unimog Tank and Pump Assembly Tyne Slots



Figure 9C-5: Unimog Tank and Pump Assembly Connector Hoses



Figure 9C-6: Unimog Tank and Pump Assembly Top Area



Figure 9C-7: Unimog Tank and Pump Assembly Coupling Connectors



Figure 9C-8: Unimog Tank and Pump Assembly Hose Reel Side-on



Figure 9C-9: Unimog Tank and Pump Assembly Hose Reels and Controls



Figure 9C-10: Unimog Tank and Pump Assembly Pump - No Grill Variant



Figure 9C-11: Unimog Tank and Pump Assembly Pump - Grill Variant

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9C-7

Table 11N-2: Cleaning Instructions for the Unimog Tank and Pump Assemblies' Rear External Areas

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	The top of tank and pump assemblies are to be cleaned, paying particular attention to areas where foliage may have collected. All seed, plant, insect and animal matter is to be removed.	
2	All hoses are to be unrolled to their full length and wiped clean of all contaminants to ensure there is no soil, plant or insect material.	
3	The equipment area is to be thoroughly cleaned, so removal of some equipment attachments may be necessary to achieve this.	
2	Clean all hose couplings and hose coupling assembly with a high-pressure water cleaner (refer Figure 10C-7).	
3	Unroll all hoses and clean all oil and grease material to ensure there is no soil, plant or insect matter. Clean hose assembly with a high-pressure water cleaner (refer Figures 10C-8 and 9C-9).	
4	CES bins are to be emptied to facilitate cleaning with high-pressure water.	
4	The pump assembly is to be cleaned and inspected to ensure freedom from QRM (refer Figures 9C-10 and 9C-11).	
5	Remove all panels and doors to allow access to internal areas for cleaning.	
6	Remove covers to clean out all soil, plant, insect matter and to check for animal nests and presence of animals.	
7	Linings may need to be disposed of if they cannot be brought to an acceptable standard	
8	The inside radiator to be air-blown and, if necessary, picked clean of all insect and seed matter.	
9	Heat and soundproofing on panels is to be cleaned and washed or removed as necessary to achieve the required standard	
10	Clean the exhaust grill of all seed and plant material.	
11	Remove air cleaner element and dispose of in accordance with AQIS directions. Ensure air cleaner housing is clean of dust, soil, insect and plant material.	
12	Replace air cleaner element with new part.	
13	Remove the batteries and clean the battery and battery casings, cradle and housing compartment of all soil, plant and insect matter.	
14	Hose out or remove the conduit to ensure there is no soil, plant and insect matter caught between cables.	

ANNEX D TO CHAPTER 9

CLEANING INSTRUCTIONS – UNIMOG MAINTENANCE SHELTER (MMS)

1. This Annex provides specific cleaning requirements for selected vehicles. 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 the Unimog vehicle included in Chapter 9 of this publication.

External Areas

3. The cleaning instructions for the Unimog Shelters' external areas, as illustrated in Figures 9D-1 and 9D-2, include the points detailed in Table 9D-1.



Figure 9D-1: Unimog Shelters' External Areas

Table 9D-1: Cleaning Instructions for the Unimog Shelters' External Areas

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Clean vehicle as per Chapter 9	
2	Remove all external CES and clean individually.	
3	Lower rear tray platform (refer Figure 9D-2) and clean all areas ensuring freedom from QRM.	



Figure 9D-2: Unimog Shelters' Rear Areas

Internal Areas

4. The cleaning instructions for the Unimog Shelters internal areas include the points detailed in Table 9D-2.

Table 9D-2: Cleaning Instructions for the Unimog Shelters' Internal Areas

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Remove all shelving and cupboard frames to ensure there is no seed, soil or insect debris	
2	Toolboxes and tool bins are to be emptied and brushed, air-blown and wiped clean. Clean individual drawers and frames and ensure there is no seed, soil or insect debris.	
3	Remove floor panels (if applicable) underneath cupboards. Remove dirt, dust, seed, and plant material that may collect at the point where the floor panel meets the support members of the module	
4	The equipment area is to be thoroughly cleaned: removal of some equipment attachments may be necessary to achieve this.	
5	Floor or bench mounted machinery may need to be removed to ensure that cavities and areas underneath the bases are free of QRM.	
6	Remove all light lenses and covers on and inside the module to ensure there is no seed, soil or insect debris (refer to Figures 6D-5). Dispose of damaged lights and lenses in accordance with AQIS instructions.	
7	Critically inspect all rubber dust and weather seals on the shelters side and rear doors to ensure they are not damaged in any way. Any damaged seals should be disposed in accordance with AQIS instructions.	



Figure 9D-3: Unimog Maintenance Shelter

ANNEX E TO CHAPTER 9

CLEANING INSTRUCTIONS – UNIMOG SPECIAL FORCES LONG RANGE SUSTAINMENT VEHICLE

1. This Annex provides specific cleaning requirements for selected vehicles. 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 the Unimog vehicle included in Chapter 9 of this publication.

External Areas

3. The cleaning instructions for the Unimog Special Forces Long Range Sustainment Vehicle's external areas, as illustrated in Figure 9E-1, include the points detailed in Table 9E-1.



Figure 9E-1: Unimog Special Forces Long Range Sustainment Vehicle's External Areas



Figure 9E-2: Unimog Special Forces Long Range Sustainment Vehicle's External Areas

Table 9E-1: Cleaning Instructions for the Unimog Special Forces Long Range Sustainment Vehicle's External Areas

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Clean all rubber seals around the windows and doors.	1.25
2	WARNING FOR ALL ARMoured GLASS: Wash by hand with warm, soapy water ONLY (Directions for cleaning can be found on the glass)	
3	Remove the cabin seats to facilitate cleaning. Remove door trims to clean door cavities.	
4	Remove the snorkel to facilitate cleaning.	1.5
5	Remove the bonnet to facilitate cleaning.	
6	Remove the mudflaps and pay attention to cleaning around the attachment points.	
7	Remove the batteries and clean the battery box, terminals and batteries.	
8	Remove the tank straps to facilitate cleaning.	
9	Remove the toolboxes and Jerry can holders to facilitate cleaning of soil, plant and insect debris between the items and the chassis.	1.5
10	The tray is to be raised to extend the hydraulic ram for cleaning.	
11	The box section is to be inspected for damage. If damaged, the box area is to be drilled and flushed through with high-pressure water using a flexible nozzle to ensure all soil, plant and insect matter is removed.	
12	The tray face is to be inspected for damage and damaged sections are to be removed to facilitate an inspection to ensure there is no compacted soil embedded.	

Spare Tyre Mount

4. The cleaning instructions for the spare tyre mount include the points detailed in Table 9E-2.



Figure 9E-3: Unimog Long Range Sustainment Vehicle's Spare Tyre Mount

Table 9E-2: Cleaning Instructions for the Spare Tyre Mount

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	All tools are to be fully removed and extended to facilitate cleaning.	
2	Tyre to be fully removed and to be cleaned as per "Tyres (New, Old and Spares)" below.	
3	Tyre cover (if fitted) to be fully removed and to be washed and scrubbed to remove all QRM.	
4	All externally fitted items of equipment to be removed and both the items and the mounting brackets to be cleaned of all QRM	
5	Frame areas are to be washed with high-pressure water utilising a flexible nozzle.	

Tool Boxes/ Storage Bins

5. The cleaning instructions for the Unimog Special Forces Long Range Sustainment Vehicle's Tool Boxes/Storage Bins include the point detailed in Table 9E-3.

Table 9E-3: Cleaning Instructions for the Unimog Special Forces Long Range Sustainment Vehicle's Tool Boxes/Storage Bins

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Toolboxes and tool bins are to be emptied and brushed, air-blown and wiped clean.	
2	Tools are to be wiped clean and lightly oiled after inspection	
3	Clean all rubber seals around the doors.	
4	All steel frame-work is to be cleaned.	
5	Grip tape on climbing surfaces is to be cleaned and inspected to ensure freedom from soil, plants and seeds.	
6	Nylon bushes and guides are to be inspected for freedom from QRM	
7	All tarpaulins fitted for weather protection 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	
8	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 has become embedded in the rope fibres	

ANNEX F TO CHAPTER 9

CLEANING INSTRUCTIONS – UNIMOG RADAR

1. This Annex provides specific cleaning requirements for selected vehicles. 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 the Unimog vehicle included in Chapter 9 of this publication.

Unimog Radar Cleaning Instructions

3. The cleaning instructions for the Unimog Radar, as illustrated in Figure 9F-1, include the points detailed in Table 9F-1.



Figure 9F-1: Unimog Radar

Table 9F-1: Cleaning Instructions for the Unimog Radar

EXTREME CAUTION
ELECTRICAL COMPONENTS
Do not use water or steam to clean any interiors areas of the radar or radar controls unless under the supervision of a qualified technician

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	The dish is to be cleaned down with water to remove all soil, plant and insect matter. Attention is to be paid to small areas where foliage, seeds and insect material can become lodged.	
2	Attachment points and frames are to be cleaned, and attention is to be paid to the hollow tube areas.	
3	Electronic equipment is to be air-hose cleaned and brushed down with brushes to remove soil and insect debris. Filters are to be removed and cleaned where fitted. All cables are to be unwound and wiped down, paying attention to connectors.	
4	Mounting frames that are fixed to the floor are to be moved to facilitate cleaning and inspection. Equipment is to be dismantled to facilitate cleaning.	
5	All multi-pair cable is to be wiped clean over the entire length including connectors. Conduit is to be cleaned by a high-pressure water clean or removed to facilitate cleaning and inspection by AQIS.	

Hydraulics

4. The specific cleaning instructions for Unimog Radar hydraulics, illustrated in Figure 9F-2, include those points detailed in Table 9F-2



Figure 9F-2: Unimog Radar Extended

Table 9F-2: Cleaning Instructions for the Unimog Radar hydraulics

CAUTION
HYDRAULIC COMPONENTS
 Do not use high pressure water or steam to clean the hydraulics or hydraulic control areas unless under the supervision of a qualified technician

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Lifting rams are to be fully extended and cleaned.	1.0
2	Extend stabilisers, clean the hydraulic cylinder and rod, stabiliser housing and foot assembly.	1.5
3	The hydraulic area is to be cleaned of all grease and oil to ensure there is no soil, plant or insect matter. Regrease lightly after AQIS inspection to working surface only.	
4	The hydraulic control areas are to be either hand wiped or air-cleaned unless under the supervision of a qualified technician	
5	Check under all hydraulic looming for cleanliness	
6	All electrical and hydraulic lines are to be separated and all grease and soil debris cleaned from in between them.	

Supports and Stands

5. The cleaning instructions for the Unimog Radar supports and stands, as illustrated in Figure 9F-3 include the points detailed in Table 9F-3.



Figure 9F-3: Unimog Radar Stands

Table 9F-3: Cleaning Instructions for the Supports and Stands

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Attachment points and frames are to be cleaned, and attention is to be paid to the hollow tube areas.	
2	Supports are to be cleaned with a high-pressure water cleaner.	
3	Stands are to be removed and subject to high-pressure water cleaner, paying attention to the threaded area.	
4	Special attention is to be paid to the foot plates which are to be with a high-pressure water cleaner.	
5	Forklift pockets, in the base of the shelter, are to be cleaned and free of dirt, dust, plant and insect material.	

ANNEX G TO CHAPTER 9

CLEANING INSTRUCTIONS – UNIMOG GUN TRACTOR

1. This Chapter provides specific cleaning requirements for selected vehicles. 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 the Unimog vehicle included in Chapter 9 of this publication.

External Areas

3. The cleaning instructions for the Unimog Gun Tractors' external areas, as illustrated in Figure 9G-1, include the points detailed in Table 9G-1.

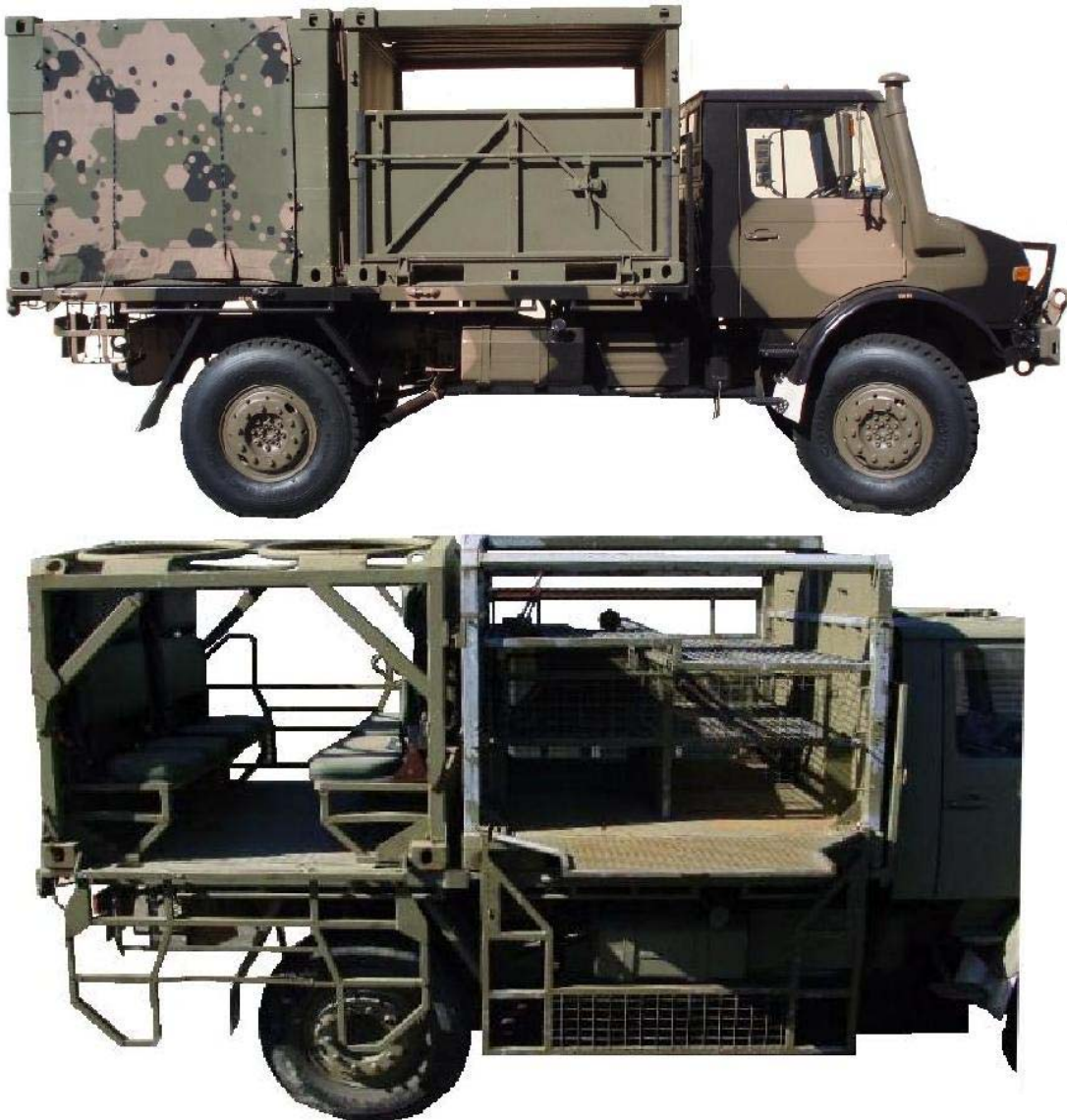


Figure 9G-1: Unimog Gun Tractor's External Areas

Table 9G-1: Cleaning Instructions for the Unimog Shelters' External Areas

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	For ease of cleaning and inspection, the personnel and cargo modules are to be removed from the Unimog prior to cleaning.	
	Refer to Chapter 9 for detailed cleaning guidelines.	0.7

Personnel Module

4. The cleaning instructions for the Unimog Gun Tractor's Personnel Module, as illustrated in Figures 9G-2 to 9G-4, include the points detailed in Table 9G-2.



Figure 9G-2: Unimog Gun Tractor's Personnel Module

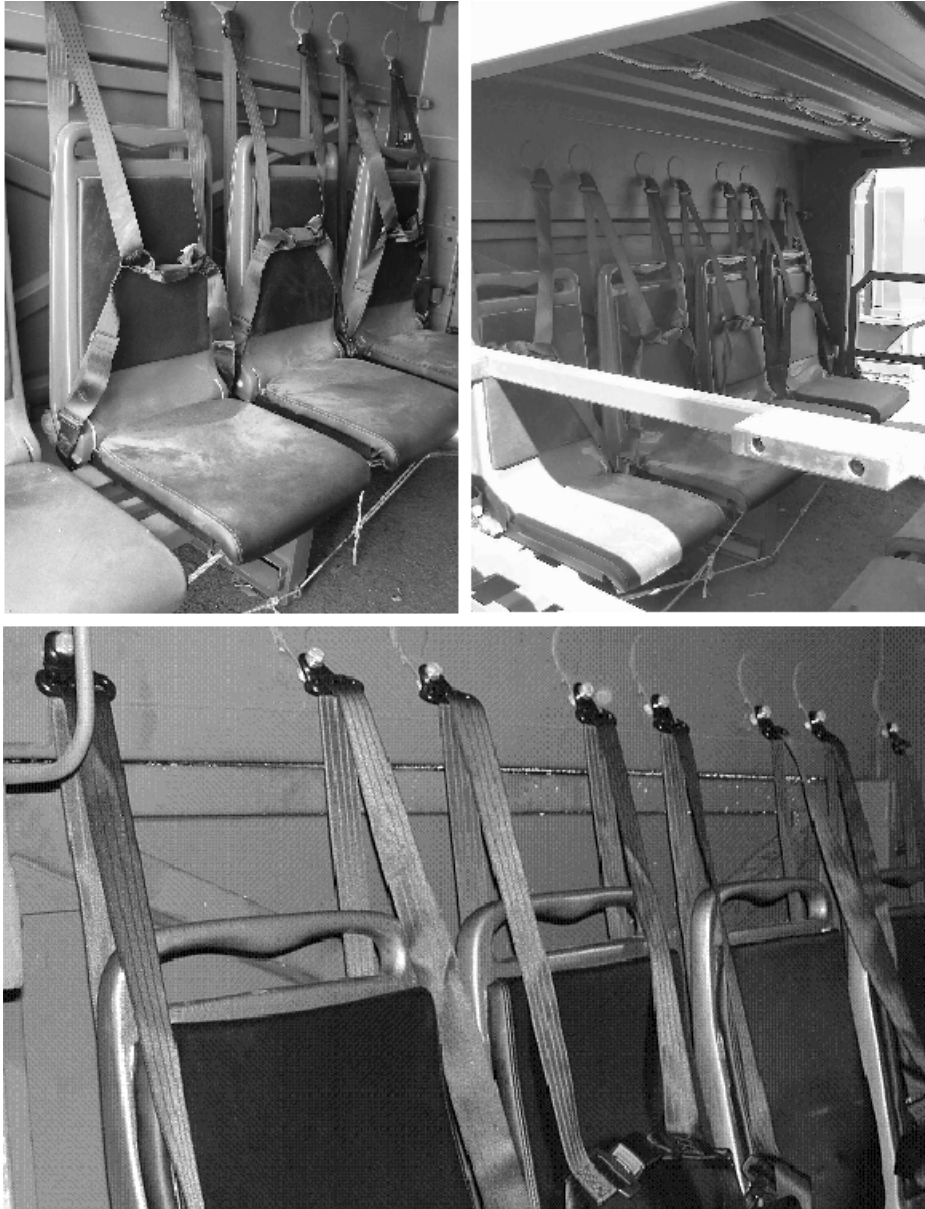


Figure 9G-3: Unimog Gun Tractor's Personnel Seating



Figure 9G-4: Unimog Gun Tractor's Personnel Seating

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Table 9G-2: Cleaning Instructions for the Unimog Gun Tractor's Personnel Module

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Seat cushions are to be removed and cleaned. Damaged seat cushions are to be disposed of in accordance with AQIS directions.	
2	The hard moulded plastic seats are to be cleaned to ensure freedom from QRM. (refer Figures 9G-3)	
3	Seatbelts are to be fully extended and wiped clean.	
4	Ropes fitted for restraint of equipment and to provide handholds	
5	Plastic floor matting (if fitted) is to be removed and will require a high-pressure water clean to remove all soil, plant and insect matter. If the mat is damaged or badly soiled, disposal in-country is recommended.	
6	Grip tape on climbing surfaces is to be cleaned and inspected to ensure freedom from soil, plants and seeds.	
7	Foam and rubber weather seals are to be inspected to ensure freedom from QRM	
8	Standard plastic butt boxes and clips for rifles are to be cleaned. for drying	
9	All tarpaulins fitted for weather protection 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	
10	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 has become embedded in the rope fibres	
11	Critically inspect the gun mount and manhole to ensure they are free from dirt, dust, plant and insect material (refer Figure 9G-4).	

Stores Container

5. The cleaning instructions for the Unimog Gun Tractor's Stores Container, as illustrated in Figures 9G-5 and 9G-6, include the points detailed in Table 9G-3.



Figure 9G-5: Unimog Gun Tractor's Stores Container



Figure 9G-6: Unimog Gun Tractor's Stores Platform and Ladder

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Table 9G-3: Cleaning Instructions for the Unimog Gun Tractor's Stores Container

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	All steel frame-work is to be cleaned. Special attention is to be made to the access ladder that comes in direct contact with the ground. Ensure all are washed clean of all soil, plant and insect matter	
2	Grip tape on climbing surfaces is to be cleaned and inspected to ensure freedom from soil, plants and seeds.	
3	Nylon bushes and guides are to be inspected for freedom from QRM	
4	All tarpaulins fitted for weather protection 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	
5	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 has become embedded in the rope fibres	

ANNEX H TO CHAPTER 9

CLEANING INSTRUCTIONS – CARGO CRANE VARIANT

1. This Annex provides specific cleaning requirements for selected vehicles. 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 the Unimog vehicle included in Chapter 9 of this publication.

External Areas

3. The cleaning instructions for the Unimog cargo with crane's external areas, as illustrated in Figure 9H-1, include the points detailed in Table 9H-1.



Figure 9H-1: Unimog Cargo with Crane

Table 9H-1: Cleaning Instructions for the Unimog Cargo with Crane's External Areas

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1.	Refer to Chapter 9 for detailed cleaning guidelines.	

Cargo Crane

4. The cleaning instructions for the Unimog Cargo Crane vehicle's areas as illustrated in Figure 9H-2, include the points detailed in Table 9H-2.



Figure 9H-2: Unimog Cargo with Crane - Hoist Side

Table 9H-2: Cleaning Instructions for the Unimog Cargo Crane

CAUTION
HYDRAULIC COMPONENTS
 Do not use high pressure water or steam to clean the hydraulics or hydraulic control areas unless under the supervision of a qualified technician

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Lifting rams are to be fully extended and cleaned.	1.0
2	Extend stabilisers, clean the hydraulic cylinder and rod, stabiliser housing and foot assembly.	1.5
3	The hydraulic area is to be cleaned of all grease and oil to ensure there is no soil, plant or insect matter. Regrease lightly after AQIS inspection to working surface only.	
4	The hydraulic control areas are to be either hand wiped or air-cleaned unless under the supervision of a qualified technician	
5	Check under all hydraulic looms for cleanliness	
6	All electrical and hydraulic lines are to be separated and all grease and soil debris cleaned from in between them.	

Supports and Stands

5. The cleaning instructions for the Unimog Cargo with Crane's Supports and Stands include the points detailed in Table 9H-3.

Table 9H-3: Cleaning Instructions for the Unimog Cargo with Crane's Supports and Stands

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Attachment points and frames are to be fully extended prior to cleaning.	
2	Supports are to be cleaned with a high-pressure water cleaner and attention is to be paid to the hollow tube areas.	
3	Stands are to be removed and subject to high-pressure water cleaner, paying attention to the threaded area.	
4	Special attention is to be paid to the foot plates which are to be with a high-pressure water cleaner.	

Spare Tyre Mount

6. The cleaning instructions for the spare tyre mount include the points detailed in Table 9H-4.

Table 9H-4: Cleaning Instructions for the Spare Tyre Mount

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	All tools are to be fully removed and extended to facilitate cleaning.	
2	Tyre to be fully removed and to be cleaned as per "Tyres (New, Old and Spares)" below.	
3	Tyre cover (if fitted) to be fully removed and to be washed and scrubbed to remove all QRM.	
4	All externally fitted items of equipment to be removed and both the items and the mounting brackets to be cleaned of all QRM	
5	Frame areas are to be washed with high-pressure water utilising a flexible nozzle.	

ANNEX I TO CHAPTER 9

CLEANING INSTRUCTIONS – UNIMOG TROOP CARRIER

1. This Annex provides specific cleaning requirements for selected vehicles. 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 the Unimog vehicle included in Chapter 9 of this publication.

External Areas

3. The cleaning instructions for the Unimog troop carrier's external areas, as illustrated in Figure 9I-1, include the points detailed in Table 9I-1.



Figure 9I-1: Unimog Troop Carrier

Table 9I-1: Cleaning Instructions for the Unimog Troop Carrier's External Areas

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Remove the mudflaps and pay attention to cleaning around the attachment points.	
2	Refer to Chapter 9 for detailed cleaning guidelines.	

Rear Areas

4. The cleaning instructions for the Unimog Troop Carrier's rear areas, as illustrated in Figure 9I-2, include the points detailed in Table 9I-2.



Figure 9I-2: Unimog Troop Carrier's Rear Areas

Table 9I-2: Cleaning Instructions for the Unimog Troop Carrier's Rear Areas

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Remove the canopy and bows and clean.	
2	Clean the hollow sections of the canopy bows by using flushing through the tubes with a pressure washer.	
3	The linkage area for the tailgate is to be cleaned of all grease and contamination by soil, plant and insect material.	
2	Remove all seating and frames to ensure there is no seed, soil or insect debris.	
3	Clean area underneath floor panel to ensure there is no dirt, dust, seed, and plant material.	
4	Refer to Chapter 9 for detailed cleaning guidelines.	

ANNEX J TO CHAPTER 9
CLEANING CHECKLIST – UNIMOG

All serials may not be specific to all Unimog trucks

Vehicle Registration No:

	External Areas	
1	The snorkel has been removed to facilitate cleaning.	
2	The bonnet has been removed to facilitate cleaning.	
3	The mudflaps have been removed and attachment points cleaned.	
4	The toolboxes and Jerry can holders have been removed to facilitate cleaning of soil, plant and insect debris between the items and the chassis.	
5	Cupola crash pad and any lining removed to facilitate cleaning and inspection.	
6	Fuel and air tank retaining straps loosened and cleaned.	
7	Light covers removed and flushed	
8	Channel tubing at cargo tie down points on cargo tray cleaned and inspected	
9	Headlights removed to facilitate cleaning behind them.	
10	Brush guard removed and cleaned.	
11	The air cleaner element removed and disposed of in accordance with AQIS directions.	
12	The ventilation nozzles on the centre top of the dash cleaned using low pressure compressed air.	
13	The ventilation blower assembly filter element removed from the front left-hand side of the cabin, and disposed of in accordance with AQIS directions. The ventilation blower assembly housing cleaned and free of dirt, seed or plant material remains.	
14	The heating/ventilation flap raised, on the selected gear indicator panel, and the discharge cavity vacuumed to remove dust and other foreign material.	
15	The bonnet has been removed and cleaned.	
16	All apertures, tie-down points, and twist lock housings in tray body flooring have been cleaned with high-pressure water from a front and rear aspect	
17	Straps on the fuel and air tanks have been loosened and tanks cleaned	
18	Batteries and tools have been removed from the battery box and tool attachment points and cleaned	
19	All toolboxes have been emptied and cleaned	
20	Air cleaner elements have been removed and disposed of in accordance with AQIS directions	

21	Jerry cans have been removed and cleaned	
22	The chassis rail on the vehicle has open areas which collect debris. The area has been flushed behind the plate using a flexible nozzle all areas behind the plate are cleaned until the water have been observed to be clear on exit.	
23	Air line restraining straps have been loosened and cleaned. Heavily contaminated Foam covering has been disposed of.	
24	The mounting brackets for the cross members have been flushed using a flexible nozzle.	
25	The chassis cross member have been flushed using a flexible nozzle.	
26	All soil and debris is has been removed from the chassis cavities.	
27	Plastic ties have been removed to expose grouped cables and air lines for inspection	
28	The rear view of the chassis support tubes have been flushed out. The right-hand tube has been extensive flushed.	
29	All cables where the cable ties are located and between the cable and vehicle have been cleaned.	
Cabin		
1	The holes under the cab have been flushed through to remove all debris.	
2	Door trims have been removed and cleaned	
3	Mirror sills and mirrors have been inspected.	
4	Seatbelt assembly has not been removed. The full length of the seatbelt have been exposed and cleaned by wiping with a dry rag	
5	Access panels under cabin seats (including topside of fuel cell) have been cleaned.	
6	Inner door panels from both front doors have been removed and cleaned	
7	Door cavity, including the window winding mechanism, have been pressure washed and cleaned	
8	The window frame, channels and fillers have been pressure washed and cleaned	
9	All rubber seals around the windows and doors have been cleaned.	
10	The cabin seats have been removed to facilitate cleaning.	
11	Rubber floor matting have been removed to clean the cabin floor.	
12	All door and window glass channels and fillers have been inspected and cleaned	
Sump		
1	Grease and oil from the front of the sump and on the back of the flywheel housing have been removed.	
Engine Bay		
1	The engine compartment and engine have been cleaned	
2	All engine openings/breathers have been taped or plugged to stop ingress of water	

3	The starter motor and alternator have been covered and taped to stop ingress of water	
4	No high-pressure water jets were directed at any of the engine openings/breathers, or at any of the electrical/electronic components	
5	The brake booster assembly and pedal pivot housing have been removed and cleaned	
6	The clutch pedal pivot housing cover has been removed and cleaned	
7	Heater assembly has been removed and heater core cleaned	
8	Heater/ventilation fan housing has been cleaned	
9	The air cleaner flexible line from the air plenum in the right-hand front mudguard assembly have been removed and cleaned	
Underneath Areas		
1	High-pressure water cleaning around the fittings using a flexible nozzle has occurred	
2	The tank straps have been removed to facilitate cleaning.	
3	All the supporting members for the floor area have been cleaned.	
4	The wooden floor has been lifted to allow inspection and to facilitate cleaning of the chassis cross members and underside of the floor. Wooden floor plates cracked, gouged or damaged have been disposed of in accordance with AQIS directions.	
5	The underside hollow cross members have been subject to high-pressure water using a flexible nozzle to remove all soil, plant and insect matter.	
Battery Box		
1	The battery box support member has been flushed through using a flexible nozzle until clear water was seen to exit.	
2	The support bases and tubing underneath the battery box have been flushed.	
3	The batteries have been removed and the battery box, terminals and batteries cleaned.	
Tarpaulins		
1	All tarpaulins have been given a brush down, brush scrubbing and hose cleaning, with 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 have been extended to their full length and wiped or washed clean of all soil, plant and insect matter	
3	Attachment points and fixtures and tension devices are free of all soil, plant and insect matter	
4	Personnel are to inspect and remove all twigs, foliage, and so on that has become embedded in the rope fibres	
5	Velcro panels and seams (where fitted) have been brushed and washed to ensure all seed, plant and soil material is removed	
6	All canvas bags have been turned inside out and checked for burrs, seeds and insects;	
7	Where fitted, poles, knuckles and pegs have been subject to a high-pressure water clean to remove all soil, plant and insect matter (ants, spiders and mud wasps are of particular concern)	
8	Unused tarpaulins that have not been used during the entire deployment, have been unrolled, brushed and swept clean to ensure no	

	vermin or insect infestation and then subject to an AQIS inspection	
	Camouflage Nets	
1	All grass and debris have been removed	
2	Heavily soiled camouflage nets have been further scrubbing and a dipped in an approved detergent/ disinfectant (one in 20 solution).	
3	Drying has been achieved by the hanging the camouflage net so that it did not come into contact with the ground	
4	All nets have been inspected to ensure that all plant material is removed	
5	All camouflage poles have been brushed or swept clean; and metal joiners have been removed cleaned and then inspected by AQIS officers	
	Tyres (New, Old and Spares)	
1	All tyres have been washed and scrubbed to remove all QRM	
2	Cracked/ perished tyres have been assessed for disposal	
3	All tyres have been treated with an approved residual insecticide after cleaning	
4	All fitted tyres that were damaged have been replaced with new tyres	
5	Used and fitted tyres on rims have been individually verified that the tyres are on rims, are inflated with beading sealed and that the tyres are clean, free of water and other quarantine risk material	
6	Tyres not fitted to rims have been stored in such a manner that water has not collected inside the tyre	
7	The consignment contains a maximum of 8 tyres and is to be imported with an accompanying vehicle The consignment contains more than a maximum of 8 tyres and will not be imported with an accompanying vehicle (Delete whichever is not applicable)	

Signed

Date:

Name: