

CHAPTER 45

CLEANING INSTRUCTIONS – DEPLOYABLE MAINTENANCE VEHICLE (DMV) LARGE

- 45.1 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.
- 45.2 This Section deals with the cleaning of the DMV large vehicle. The section is structured as follows:
- a. external areas;
 - b. cabin
 - c. suspension;
 - d. engine bay;
 - e. battery box;
 - f. rear compartment;
 - g. tarpaulins;
 - h. camouflage nets; and
 - i. tyres (new, old and spares).

External Areas

- 45.3 The cleaning instructions for the DMV's external areas, as illustrated in Figures 45-1 to 45-6, include the points detailed in Table 45-1.



Figure 45-1: DMV's External Areas



Figure 45-2: DMV's External Side Compartments



Figure 45-3: DMV's Portable Generator Compartment



Figure 45-4: DMV's Portable Generator Slide Out Tray



Figure 45-5: DMV's 4X4 All Terrain Vehicle Stowage Compartment



Figure 45-6: DMV's Jerry Can Compartment

Table 45-1: Cleaning Instructions for the DMV'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 the toolboxes and Jerry can holders to facilitate cleaning of soil, plant and insect debris between the items and the chassis.	
7	Remove crash pad and any lining to facilitate cleaning and inspection.	
8	Loosen fuel and air tank retaining straps	
9	Remove light covers and flush housing	

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<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
10	Clean and inspect channel tubing at cargo tie down points on cargo tray	
11	Headlights are to be removed to facilitate cleaning behind them.	1.0
12	The brush guard is to be removed.	0.25
13	The air cleaner element is to be removed and disposed of.	
14	Raise the heating/ventilation flap, on the selected gear indicator panel, and vacuum clean the discharge cavity to remove dust and other foreign material.	

Cabin

45.4 The cleaning instructions for the DMV's cabin include those points detailed in Table 45-2.

Table 45-2: Cleaning Instructions for the DMV's Cabin

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	The cabin area is to be vacuumed and air-blown clean.	
2	The velcro around the windscreen is to be brushed clean of all plant, seed and insect matter.	
3	The ventilation system filter is to be removed and cleaned with high-pressure air. Air ducts are to be reverse pressure air-blown clean.	
4	All electrical tape is to be removed and destroyed.	2.0
5	Remove floor and transmission tunnel mats.	
6	Remove floor and transmission tunnel insulation pads.	
7	Remove floor and transmission/bell housing tunnel, access panels (to facilitate cleaning and inspection of the top surfaces of the transmission and the drive shaft assemblies).	
8	Remove driver and passenger seat assemblies to facilitate cleaning. Seats and bases are to be re-fitted after inspection. Do not remove seatbelt assembly. Expose full length of seatbelt and clean by wiping with a dry rag. Remove any access panels under cabin seats. Pay attention to top side of fuel cell when cleaning.	
9	Remove inner door panels from both front doors. Wash door cavity, including the window winding mechanism, and ensure they are free from dirt, dust, seed, plant and insect material. Wash window frame, channels and fillers. Critically inspect all door and window glass channels and fillers to ensure they are clean and free from dirt, dust, seed, plant and insect material. If damaged they are to be removed and disposed of.	
10	Brake and clutch pedal covers are to be removed to facilitate cleaning and then replaced after inspection.	
11	The handbrake dust cover is to be removed.	

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<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
12	Remove upper and lower steering column shrouds and clean steering column mount with compressed air.	
13	Remove dash pad to access ventilation/demist ducts. Thoroughly clean ducts and flex tubing to remove all dust, seed, plant and insect material. Clean inside dash pad and dash wiring with compressed air.	1.0

Suspension

45.5 The specific cleaning instructions for DMV's suspension, as illustrated in Figure 45-1, include those points detailed in Table 45-3.



Figure 45-7: DMV's Front Suspension

Table 45-3: Cleaning Instructions for the DMV'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 Bay

45.6 The specific cleaning instructions for DMV's engine and transmission include those points detailed in Table 45-4.

Table 45-4: Cleaning Instructions for the DMV's Engine and Transmission Compartment

<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.	

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2	Unlock and tilt the cabin to allow access to engine and chassis for cleaning	
3	Clean the engine compartment and engine to ensure they are free of dust, built up dirt and grease, insect and plant material.	
4	Ensure any engine openings / breathers are taped or plugged to stop ingress of water.	2.0
5	Ensure the starter motor and alternator are covered and taped to stop ingress of water.	2.0
6	Do not direct high-pressure water jets at any of the engine openings/breathers, or at any of the electrical/electronic components.	0.5
7	Remove the air cleaner flexible line from the air plenum and ensure it is free from insect and plant material.	
8	Remove the air cleaner element and dispose of. Replace the air cleaner element with a new part.	0.5
9	Remove the battery from the compartment and clean the leads.	
10	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.	
11	The radiator cowling may need to be removed to facilitate the cleaning of the radiator.	
12	Flush radiator and oil cooler from both sides to verify fin/core cleanliness.	
13	Loosen radiator shroud to let any loose debris fall through after flushing.	
14	Check either side of radiator for vertical hollow support structures. Flush to verify internal cleanliness if present.	
15	Check all wiring harnesses for internal cleanliness.	
16	All water reservoirs must be emptied (excluding radiator).	

Battery Box

45.7 The cleaning instructions for the DMV's battery box, as illustrated in Figure 45-7, include those points detailed in Table 45-5.



Figure 45-8: DMV's Battery Box

Table 45-5: Cleaning Instructions for the DMV'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.	

Rear Compartment

45.8 The cleaning instructions for the DMV's cabin, as illustrated in Figures 45-8 to 45-10, include those point detailed in Table 45-6.



Figure45-9: DMV's Rear Compartment



Figure 45-10: DMV's Rear Interior Metal Shelving Storage



Figure 45-11: DMV's Rear Interior Metal Drawer Storage



Figure 45-12: DMV's Rear Exterior Metal Drawer Storage

Table 45-6: Cleaning Instructions for the DMV's Rear Compartment

<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 BRM.	
6	Remove all light lenses and covers on and inside the module to ensure there is no seed, soil or insect debris. Dispose of damaged lights and lenses.	
7	Critically inspect all rubber dust and weather seals on the DMVs side and rear doors to ensure they are not damaged in any way. Any damaged seals should be disposed of.	

Tarpaulins

45.9 The cleaning instructions for the tarpaulins include those points detailed in Table 45-7.

Table 45-7: 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 inspection.	

Camouflage Nets

45.10 The cleaning instructions for camouflage nets include the points detailed in Table 45-8.

45-8: 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 DA 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.	

Tyres (New, Old and Spares)

45.11 The cleaning instructions for Tyres (new, old and spares) include those points detailed in Table 45-9.

Table 45-9: 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 (http://www.agriculture.gov.au/import/online-services/bicon) for the commodity "tyres".	