

## CHAPTER 46

### CLEANING INSTRUCTIONS – VEHICLE BOOM-LIFT, SELF-PROPELLED (BASIC TELESCOPIC BOOM LIFT & TRACTOR BOOM LIFT MANITOU)

- 46.1 This chapter provides basic and specific cleaning requirements for the following vehicle types:
- a. Section 46-1: Basic Telescopic Boom Lift, and
  - b. Section 46-2: Tractor Boom Lift Manitou.
- 46.2 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.

#### SECTION 46-1: BASIC TELESCOPIC BOOM LIFT

- 46.3 This Section deals with cleaning of the basic Telescopic Boom Lift, and is structured as follows:
- a. external areas,
  - b. engine bay,
  - c. hydraulics,
  - d. suspension, and
  - e. tyres (new, old and spares).

#### External Areas

- 46.4 The cleaning instructions for the Telescopic Boom Lift's exterior, as illustrated in Figure 46-46-1 Figure 46-2, Figure 46-3 and Figure 46-4, include the points detailed in **Table 46-1**.



Figure 46-46-1: Telescopic Boom Lift's Exterior



Figure 46-2: Telescopic Boom Lift's Exterior

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



Figure 46-3: Telescopic Boom Lift's Hydraulic Control Panel



Figure 46-4: Telescopic Boom Lift’s Hydraulic Control Panel Variant

Table 46-1: Cleaning Instructions for the Telescopic Boom Lift’s Exterior

Serial	Comments or Tasks	Technical Time (hours)
1	Remove all CES and clean. Ensure the hold down brackets and the nylon straps and buckle loops are separated and cleaned.	
2	Brake and clutch pedal covers are to be removed to facilitate cleaning and then replaced after inspection.	
3	Clean under the rubber seals on the bonnet, compartments, etc, to ensure there is no seed, soil or insect debris. Any damaged seals should be removed and disposed of.	
4	Remove Dash Panel and Air blow all BRM from behind dash. Remove insulation tape where directed to facilitate cleaning.	
5	Flush out behind mirrors – damaged mirrors are to be removed.	
6	Damaged lights or where light seals are compromised are to be removed and cleaned of all soil, plant or insect matter.	
7	Remove the seats. Seats and bases are to be refitted after inspection.	
8	Remove the mudflaps (if fitted) and clean; if damaged dispose of.	
9	If vehicle is fitted with a winch, remove and clean the winch rope. Clean the winch drum. Ensure winch propeller shafts, uni joints, and pillow block bearing are clean and free from dirt, dust, plant and insect material.	
10	If fitted, remove tread plates on top of front mudguards to facilitate cleaning.	
11	The handbrake dust boot is to be removed and cleaned.	
12	For wiring looms that are bound by insulation tape, remove the insulation tape.	
13	Clean top of fuel tank.	
14	Hand clean the hydraulic control panels (refer Figure 46-3 and Figure 46-4) within the personnel cage and ensure that no water enters the panel.	
	Total	

## Engine Bay

The specific cleaning instructions for Telescopic Boom Lift's engine and engine compartment, as illustrated in Figure 46-5, include those points detailed in

46.5 Table 46-2.



Figure 46-5: Telescopic Boom Lift's Engine Compartment

Table 46-2: Cleaning Instructions for the Telescopic Boom Lift's Engine 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.	
5	Remove the air cleaner flexible line from the air plenum and ensure it is free from insect and plant material.	
6	Remove the air cleaner element and dispose of. Replace the air cleaner element with a new part.	
7	Remove the battery from the compartment and clean the leads.	
8	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.	
9	The radiator cowling may need to be removed to facilitate the cleaning of the radiator.	
10	Flush radiator and oil cooler from both sides to verify fin/core cleanliness.	
11	Loosen radiator shroud to let any loose debris fall through after flushing.	
12	Check either side of radiator for vertical hollow support structures. Flush to verify internal cleanliness if present.	

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<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
13	Check all wiring harnesses for internal cleanliness.	
14	All water reservoirs must be emptied (excluding radiator).	
15	Clean the battery compartment. The battery box should be free of dust, seed, plant and insect material.	
	Total	

**Hydraulics**

46.6 The cleaning instructions for the Telescopic Boom Lift's Hydraulics, as illustrated in Figure 46-6, include the points as detailed in Table 46-3.



**Figure 46-6: Telescopic Boom Lift's Hydraulics**

**CAUTION**  
**HYDRAULIC COMPONENTS**  
Do not use high pressure water or steam to clean the hydraulic system electrical control relays unless under the supervision of a qualified technician

**Table 46-3: Cleaning Instructions for the Telescopic Boom Lift's Hydraulics**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Lifting rams are to be fully extended and cleaned.	
2	Extend the stabilisers, clean the hydraulic cylinder and rod, stabiliser housing and foot assembly.	
3	The hydraulic area is to be cleaned of all grease and oil to ensure there is no soil, plant or insect matter. Lightly regrease working surface only.	
4	The hydraulic control areas are to be either hand wiped or air-cleaned	

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	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.	
	Total	

**Suspension**

46.7 The specific cleaning instructions for Truck Platform Elevating's suspension include those points detailed in Table 46-4.

**Table 46-4: Cleaning Instructions for the Truck Platform Elevating'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.	
	Total	

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

46.8 Cleaning instructions for Tyres (new, old and spares) are detailed in Table 46-5.

**Table 46-5: 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 not fitted to rims are to be stored in such a manner that water cannot collect inside the tyre. The preferred DA solution is to store tyres within containers. Tyres not fitted on rims will require fumigation on return to Australia.	



<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
8	DA considers a Non-Commercial consignment of tyres to contain a maximum of 8 tyres (inclusive of the wheels on the vehicle) and may 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".	
	Total	

## SECTION 46-2: TRACTOR BOOM LIFT MANITOU

46.9 This Section deals with cleaning of the Tractor Boom Lift Manitou, a super-heavy high-rise forklift (Figures 46-7, 46-8 and 46-9). Cleaning instructions for the generic telescopic boom lift in Section 46-1 will apply, complemented by specific aspects of the Manitou as follows:

- a. external areas,
- b. engine,
- c. hydraulics,
- d. suspension, and
- e. tyres (new, old and spares).

### External Areas

46.10 Generic cleaning instructions for the Tractor Boom Lift Manitou external areas are detailed in **Table 46-1**, together with points specific to the Manitou in Table 46-6.

**Table 46-6: Cleaning Instructions for the Tractor Boom Lift Manitou – External Areas**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	After cleaning the interior of the cabin as detailed in <b>Table 46-1</b> , close the cabin door – see Figure 46-9 - and steam clean the exterior of the cabin and the access steps.	
2	<b>Partially raise the boom to expose the underside of the forks and its supporting framework (</b> Figure 46-8) and clean.	
3	With the engine bay and battery compartment doors closed, clean the upper body chassis.	
4	Remove the mudflaps and clean: if damaged dispose of.	
5	Clean the Auxiliary Compressor mounted above the left rear wheel – see Figure 46-10.	
6	Degrease and steam clean the rear mounted auxiliary condenser/radiator (Figure 46-11). Do not use high pressure cleaner directly onto the condenser/radiator core.	
	Total	



**Figure 46-7: Tractor Boom Lift Manitou – Boom Fully Lowered  
Forks Retracted**



**Figure 46-8: Tractor Boom Lift Manitou – Boom Partially Raised  
Forks Retracted**





**Figure 46-9: Tractor Boom Lift Manitou – Boom Fully Raised  
Forks Fully Extended**



**Figure 46-10: Cabin and Steps – Door Open**



Figure 46-11: Auxiliary Compressor for Tyre Inflation



Figure 46-12: Tractor Boom Lift Manitou Rear Auxiliary Condenser/Radiator

**Engine**

Generic cleaning instructions for the Tractor Boom Lift Manitou engine are detailed in

46.11 Table 46-2, together with points specific to the Manitou in Table 46-7.

**Table 46-7: Cleaning Instructions for Tractor Boom Lift Manitou – Engine**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	Open the engine compartment on the right side of the vehicle (Fig 46-13)	
2	Do not use high pressure cleaner directly onto the main engine condenser/radiator cores (Figure 46-134).	
3	Remove and dispose of air cleaner element. Replace air cleaner element with a new part.	
4	Open the door to the battery compartment on the left side of the vehicle (Figure 46-145). Remove the battery (upper centre of photo), clean and degrease terminals and leads, and replace.	

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<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
5	The remainder of the battery compartment, which is quite large, is a natural repository for dust, seed, plant and insect material. Ensure it is cleaned thoroughly.	
6.	Check all wiring harnesses for cleanliness.	
	Total	



**Figure 46-13: Tractor Boom Lift Manitou – Engine Bay Right Side**



**Figure 46-14: Engine Bay Condenser/Compressor**



**Figure 46-15: Battery Compartment**

**Hydraulics**

**Generic cleaning instructions for the Tractor Boom Lift Manitou hydraulics are detailed in**

46.12 Table 46-3, together with points specific to the Manitou in Table 46-8.

**Table 46-8: Tractor Boom Lift Manitou – Hydraulics**

<i>Serial</i>	<i>Comments or Tasks</i>	<i>Technical Time (hours)</i>
1	All hydraulic controls are located in the cabin. They should have been either hand wiped or air-cleaned under the supervision of a qualified technician when the cabin was cleaned.	
2	The hydraulic area, including the pump and junction box, is in the centre of the vehicle behind the main boom. Clean this area of all grease and oil to ensure there is no soil, plant or insect matter. Lightly regrease working surface only.	
3	All electrical and hydraulic lines and looms are to be separated and all grease and soil debris cleaned from in between and under them.	
4	Fully raise the boom and fully extend the fork ( Figure 46-9) to expose the hydraulic rams for cleaning. As the rig will be quite high, gantries may be required to reach them.	
	Total	

**Suspension**

46.13 Cleaning instructions for the Tractor Boom Lift Manitou - suspension are the same as those for the Telescopic Boom Lift detailed in Table 46-4.

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

46.14 Cleaning instructions for Tyres (new, old and spares) are detailed in Table 46-5.