





Safe Work Instruction	Issue Date: 12/02/10
Flemington Maintenance Centre Battery Lifting Trolley: Safe Working	Review Date: 30/01/11

Document no. SMS-06-SW-1438	Work description This SWI describes the safe working operation of the Battery Lifting Trolley at Flemington Maintenance Centre		
	Scope This SWI applies to the use of the Battery Lifting Trolley at Flemington Maintenance Centre.		
Review date 20/01/2011	References Cox engineering Safe Working instruction booklet OHS Act 2000 OHS Regulations 2001 Chapter 5 AS1418.10 - Cranes, Hoists and Winches, Part 10 – Elevating Work Platforms AS2550.10 Cranes – Safe Use, Part 10 – Elevating Work Platforms SMS-06-GD-0225 Plant SMS-06-GD-0403 Plant Risk Assessment SMS-16-SR-0057 Inspection and testing SMS-06-SW-1239 Electric - Powered Maintenance Vehicle SMS-16-FM-0716 Mobile Plant Pre-start-Daily Checklist SMS-05-SR-0027 Records management SMS-06-PR-0173 Plant and Equipment Lock-out Tag-out		
Responsible supervisor	PPE and precautions	Competencies or qualifications	Licences or permits required
Electrical Foreman	High Visibility Orange clothing or Vest Safety Footwear Safety Eyewear Protective Gloves	Rail Industry Safety Induction (RISI) Site Specific Induction Competency in operating Battery Lifter as per Cox engineering safe working instruction booklet.	
Tools and equipment required :			
	Warning <ul style="list-style-type: none">• To be operated by Authorised persons only• This trolley is for goods lifting only and not for lifting persons• Ensure hands and feet are clear when operating lifting mechanism• Ensure that hands are clear of lifting chain, refer to figure 8• Do not stand on battery tray at any time, slippery surface• Persons are not to pass under raised load at any time• Do not ride on battery trolley while being towed• Do not exceed safe working capacity• Ensure trolley is on solid level surface prior to raising load• Ensure load is correctly balanced• Ensure park brake is engaged prior to stepping onto trolley• Ensure that safety barrier is secured across work platform when in use• Ensure that fold down platform and access steps are secure before moving• Ensure that when towing the trolley you do not exceed 8km/h		
	Warning Batteries are not to be transported on this lifting trolley at any time whilst trolley is being towed. Trolley is for lifting purposes only.		
IF CONTROL MEASURES ARE NOT SUITABLE AND MAJOR CHANGES ARE NEEDED, CONDUCT A RISK ASSESSMENT AND DEVELOP NEW CONTROLS ACCORDING TO SMS-06-PR-0104 WORKPLACE RISK MANAGEMENT .			
	Note Pre work brief and task risk assessment Ensure a pre-work brief and detailed task risk assessment is undertaken with all team members involved in the work activity. If any new/additional team members arrive any time later they must be briefed before they commencing work.		

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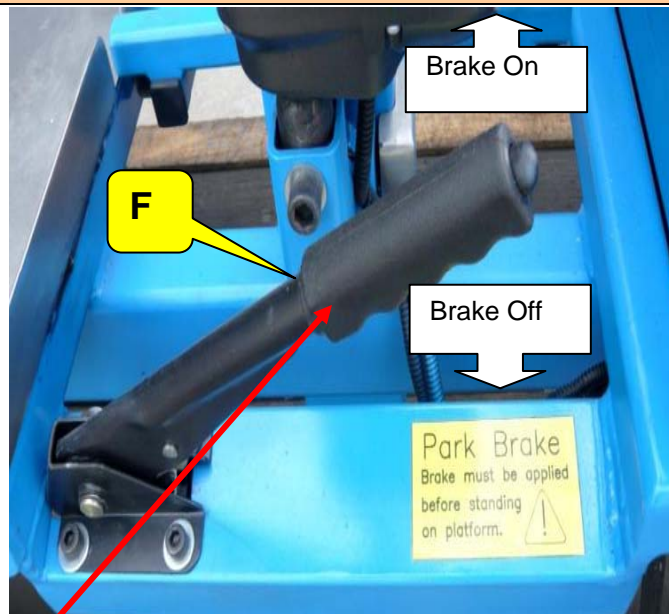
Pre Start Check	<p>Carry out a pre-start check using <u>SMS-16-FM-0716 Mobile Plant Pre-start-Daily Checklist</u>, at least once per shift, or before each use, if used less than once per shift</p> <p>The record of this inspection is to be provided to line management and retained in accordance with <u>SMS-05-SR-0027 Records Management</u></p>
	<p>Warning</p> <ul style="list-style-type: none"> Failure to undertake a pre-start inspection could result in injury as a result of equipment malfunction If the lifting trolley is damaged, malfunctioning or otherwise not safe to use, tag and/or lock it out, in accordance with <u>SMS-06-PR-0173 Plant and Equipment Lock-out Tag-out</u>, and notify your Line Manager as soon as practicable
Safe Operation of Battery Lifting Trolley	<ul style="list-style-type: none"> Never enter a restricted area without first seeking permission from the shunter/s or Operations Manager. Ensure ground is even and level before lifting batteries onto train. Apply park brake before commencing lifting, refer to figure 1, "F" heading "Operation". Ensure that the battery is fully charged before lifting Ensure that only trained and competent personnel operate lifting trolley
Hitching the Lifting Trolley to the Electric-Powered Maintenance Vehicle	<ul style="list-style-type: none"> Ensure that lifting trolley is securely attached to electric-powered maintenance vehicle using the towing hitch on the lifting trolley before towing, refer to figure 1, heading "Hitching Trolley" Unlatch the spring bolt holding the hitching arm in place, refer to figure 2, heading "Hitching" The lifting trolley hitching arm must be connected to the electric-powered maintenance vehicle via the pin on the tow bar of the maintenance vehicle and secured, refer to electric-powered maintenance vehicle towbar and pin figure 3, heading "Hitching Trolley" Do not ride or place items on lifting trolley whilst being towed. Upon completion of work transport to storage area, unhook lifting trolley, ensure that the towing hitch is secured to the spring bolt, refer to figure 2, heading "Hitching Trolley"
Battery Trolley Lifting Procedure	<ul style="list-style-type: none"> Ensure hand brake is on; refer to figure 1 "F", heading "Operation". Note, use the manual hand brake when manoeuvring and steadying trolley by hand, refer to figure 2 "E" heading "Operation". Before assessing platform, lower hinged platform and ensure that step is in the downward position and secured, refer to figure 3, heading "Operation". After boarding the trolley, secure the safety barrier arm, refer to figure 4, heading "Operation". Insert lifting trolley key and turn to start, refer to figure 5 "D", heading "Operation". After ensuring that the load is secure press to "white button" with up arrow in black, refer to figure 6, "B", heading "Operation" to operate the upward motion of the lifting trolley, do not over extend. After load has been removed press the "black down" button with down arrow in white, refer to figure 6, "C", heading "Operation" and bring the lift platform to a rest. Ensure the platform is completely lowered Ensure fingers and hands are free/clear of lifting chain guard, refer to figure 9, heading "Operations" In case of an emergency, press the red emergency stop button "A", figure 6, Heading "Operation". Note, to re-engage power twist and turn red button. After use ensure that the folding personnel platform and step is securely raised, (refer to figure 7, heading "Operation") including securing the safety barrier arm (figure 8, heading "Operation") and engaging the hand brake figure 1, "F" heading "Operation" whilst stored and not in use.

Flemington Maintenance Centre Battery Lifting Trolley: Safe Working

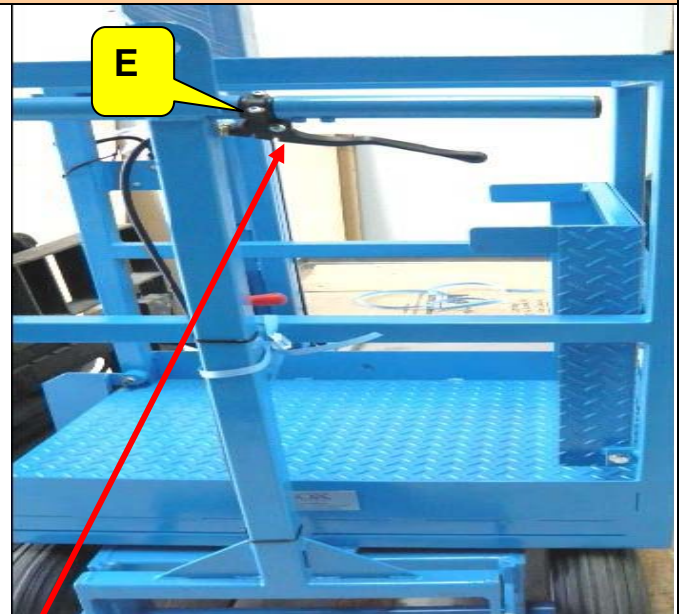
Legend

A = Emergency Stop Button
B = Up Button
C = Down Button

C = Down Button
D = Key Switch on Off Position
E = Manual Hand Brake
F = Trolley Lift Hand Break

OPERATION**Figure 1**

Ensure hand brake is engaged when trolley is in use.
Release hand brake when towing trolley.

**Figure 2**

Manual hand brake for use when manoeuvring and steadying trolley by hand.

**Figure 3**

Ensure Brake is engaged prior to stepping onto trolley.

Ensure that platform and steps are in lowered position/s when in use.

**Figure 4**

Ensure that safety barrier arm is secured (closed) when standing on work platform.

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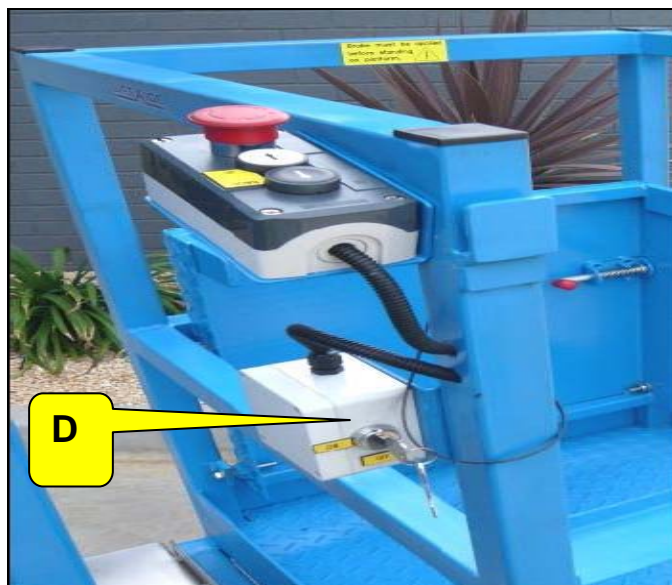


Figure 5

Control panel

Refer to "D" Key switch on and off

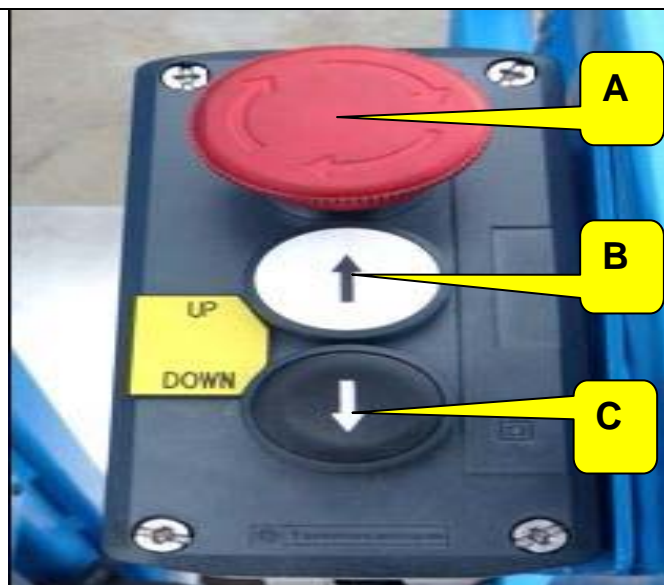


Figure 6

Control Panel

Press and hold White button "B" to raise lifting tray.
Press and hold black button "C" to lower lifting tray.
Push Red Button "A" for Emergency cut off. To re-engage power twist red button.



Figure 7

Ensure that folding platform and folding step is secured using the spring latch,



Figure 8

Ensure that Safety barrier arm is in normal (open) position prior to accessing work platform.

**Flemington Maintenance Centre Battery Lifting
Trolley: Safe Working****Figure 9**

Ensure that hands and fingers are clear of the lifting chain guard.

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HITCHING TROLLEY

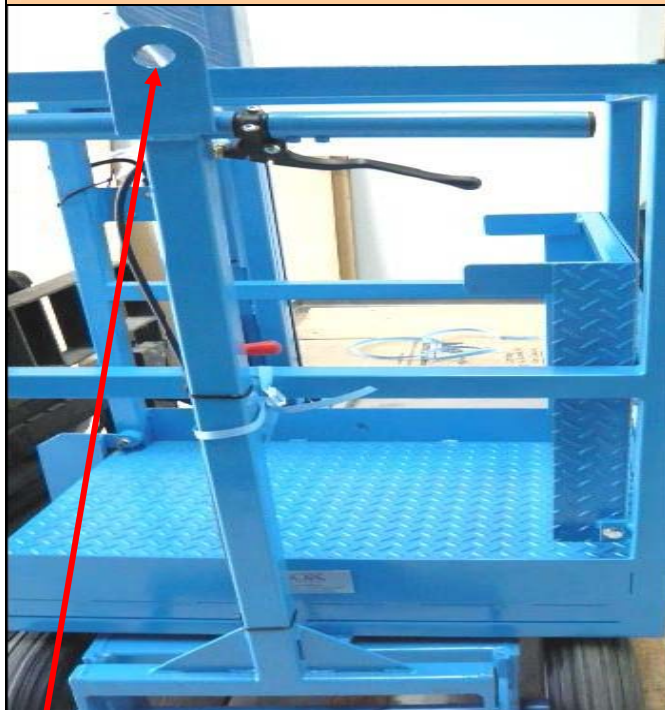


Figure 1

Towing hitch for use with yellow maintenance vehicle.



Figure 2

Spring latch to secure drawbar handle, this can be used for towing with Yellow maintenance vehicle, 8km/h speed limit, as per SMS-06-SW-1239 Electric-Powered Maintenance Vehicle



Figure 3

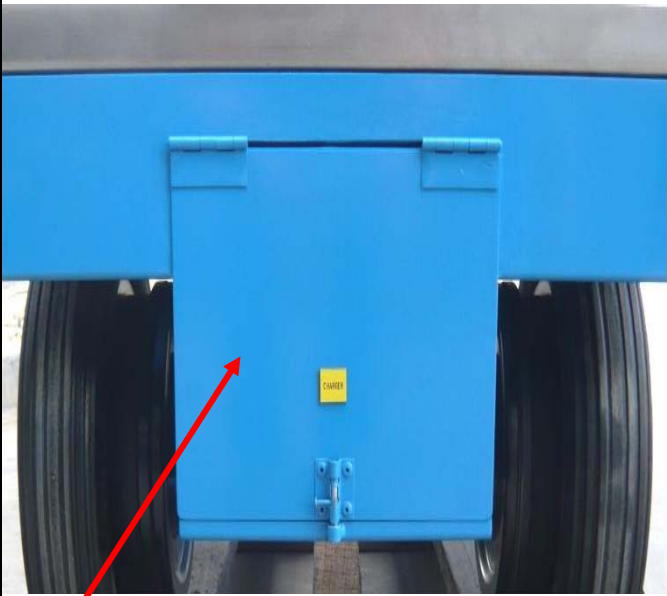

Electric-powered maintenance vehicle towing point



Figure 4

Do not stand on the Battery Trolley (slippery Surface) at anytime.

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CHARGING BATTERY	
	
<p style="text-align: right;">Figure 1</p> <p>Battery compartment at the rear of the trolley. Ensure that the battery cover is closed after charging is completed.</p>	<p style="text-align: right;">Figure 2</p> <p>Ensure, battery is kept fully charged and that the Battery is charged overnight daily. Ensure that battery is replaced with battery of same specifications.</p>
<p>Charging batteries</p>	<ul style="list-style-type: none"> • To recharge battery, open battery casing door, refer to figure 1, heading “Charging Battery”. • Connect a 240v extension lead found on the right hand side of battery housing (refer to figure 2, heading “Charging Battery”) to a 240v outlet, ensure that the lead is free of damage, cuts, gouges and tagging is current. • Leave battery housing door open. • Charge over night. • Batteries must only be charged in a well ventilated, designated area. Refer to site specific documentation. If in doubt, contact your Line Manager • When charging is complete, unplug the charger cable and store in battery housing to minimise damage and secure with barrel bolt, refer to figure 1, heading “Charging Battery”.
<p>Additional controls</p> <ul style="list-style-type: none"> • Additional controls may be required, depending upon the work being carried out. Refer to the relevant SWMS or SWI's and seek assistance from your Line Manager, if required 	