	<h1>Standard Operating Procedure</h1>		
	Procedure Name:	Use of Manbox	
	Author:	Steve Smallman	
	Approved By:	Albie Wheeler	
Version	1.0	With Effect from	1/1/12
Review Date	1/1/13	Document Number	SOP 14
Risk Assessment	Name	RA SOP 14 Manbox	
	Date	6/8/12	

1. Aim of procedure

To identify and formalise the risks and control processes involved in use of personnel in workboxes.

2. Scope of application

All personnel involved in the use of workboxes suspended from Wheeler Cranes Cranes.

3. References

AS 2550.1

AS 1418.17

Workcover NSW advice on Manboxes


Draft Code of Practice – Cranes – Safework Australia

4. Pre-requisites

Crane Drivers undertaking this work must hold:

- A National Certificate of Competency/High Risk Work Licence for the size and type of crane used
- A vehicle drivers licence of a suitable class for the crane used.
- A Wheeler Cranes Verification of Competency as a crane driver

Dogmen undertaking this work must hold a National Certificate of Competency/High Risk Work Licence as a dogman, and where supplied by Wheeler Cranes a Wheeler Cranes Verification of Competency.

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5. Procedure

Wheeler Cranes personnel will only use manboxes which comply with the Australian Standards.

The use of manboxes is limited to those situations where it is not reasonably practical to use scaffolding or other equipment designed for the lifting of personnel.

Man box selection

Crane-lifted man boxes will:


1. have the safe working load, tare mass and registration number marked on the man box
2. have fall-arrest anchorage points
3. be attached to the crane using correctly tagged lifting slings and attached to the lifting points by means of hammerlocks or moused shackles
4. where the work box is provided with a door, this will be an inward opening door, self-closing and provided with a latch to prevent accidental
5. have sides not less than one metre high.

Crane Selection

The crane selected for man box work:

1. should have at least two brakes, independent of each other where failure of a brake or any single component in the brake – drive train will not result in loss of control of the load, or a brake acting directly on the hoist drum and a hoisting mechanism or other brake capable of holding the load when not under power
2. will have a minimum rated capacity of at least twice the total load of the workbox and its contents, at the maximum radius for the task to be performed
3. will have a minimum rated capacity of at least 1000 kg at the maximum radius for the task to be performed
4. will be fitted with an upper hoist limit (anti-two block) that stops operation of the hoist, luff and telescope functions of the crane, or be designed so that two-blocking cannot damage any part of the crane or lifting gear
5. will have levers and foot pedals are to be fitted with a constant pressure system that stops the crane's motions when the operator removes pressure from the controls
6. if fitted with a free fall facility, the free fall function is to be locked out with a keyed lock out.
7. be adequately maintained and monitored.
8. Where a crane has a single brake acting directly on the drum, the braking efficiency of the hoisting drive train should be tested by hoisting and holding a load:
 - a. equivalent to the line pull of the hoist winch, or
 - b. not less than twice the maximum hoisted load.

In either case the crane should hoist and hold a load that is not less than 200% of the maximum hoisted load. With the load stationary, all power and hydraulic/pneumatic power should be released and the brake 'backed-off' or isolated to the extent it no longer applies a restraining force. The load is then monitored for movement or creep. The drive train is

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considered to be a satisfactory braking system if no movement or creep is detected over a 5 minute testing period.

Using a manbox

The **CRANE** will:

1. Be fitted with a safety hook
2. Be fitted with controls that return to neutral when released. Releasing of the controls must stop the manbox from being lowered.
3. Be fitted with a positive free fall lockout designed to prevent the lockout being accidentally disengaged and the manbox being lowered under free fall.
4. Be selected to ensure that the crane has a minimum working capacity of 1000kg at the working radius and not less than twice the maximum load of the manbox and its load.
5. Only be used for the manbox work while the manbox is lifted. No other load will simultaneously raised, lowered or suspended.
6. Controlled by an operator sitting in the control cabin at all times when a manbox is attached to the crane.
7. Carry out all movements under power. All movements will be controlled to ensure no sudden change of direction or speed in any direction.
8. Be fitted with a UHF radio capable of communicating with personnel in the manbox.
9. Not travel while personnel are suspended in the manbox.

The **MANBOX** will:

10. Be constructed in accordance with the applicable standard AS1418.7.
11. Be inspected to ensure that it is fit for purpose.
12. Not be used when winds exceed 7m/s (25kph)
13. Not be used during electrical storms, ice, sleet or other weather that could adversely affect the safety of personnel carried in the manbox.
14. Positively contain personnel carried within the manbox.
15. Be fitted with positive locking attachments on any access/entry points
16. Be fitted with an appropriate anchor point(s) for fall arrest harnesses.
17. Be fitted with suitable interior anchor points for the appropriate restraint of any equipment to be carried, including oxy-acetylene or gas bottles, flammable liquids or any other equipment or stores carried.
18. Be fitted with an appropriate fire extinguisher when flammable liquids or gases are carried.
19. Any Oxy-Acetylene or Oxy-LPG equipment carried must be fitted with flashback arrestors.
20. Have all stores and equipment secured at all times during use.
21. Not be secured to any structure except at designated landing points.



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22. Contain at least one person competent and licenced to act as a dogman. This person will be responsible for the direction of the crane operator.

PERSONNEL using the manbox will:

23. Wear a fall arrest harness complying with AS/NZS 1891.1
24. Attach the lanyard of their fall arrest harness to the designated anchor point
25. Adjust their fall arrest harness to the minimum practical length that permits the work to be carried out.
26. Enter and exit the manbox at ground level only unless a full risk assessment of any landing points above ground level has been undertaken including structural adequacy of landing points.
27. Review this operating procedure and comply with every point within this procedure as an absolute minimum requirement.
28. Satisfy themselves that the manbox has a rated capacity sufficient for the personnel being lifted and the equipment and supplies being carried.
29. Be necessary for the conduct of the task to be undertaken.

The attached checklist will be completed before personnel may attach a manbox to a crane.

6. Approval

Albie Wheeler
Managing Director
13/9/12



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Manbox Checklist

Item	What to check	✓
Date	Manbox ID	
Location	Task	
1	The manbox is constructed in accordance with AS 1418.7	
2	Manbox is fitted with a rated capacity plate	
3	The manbox is rated for at least twice the load of the workbox and its contents Est Gross Mass Box + personnel+equipment _____ x2 _____ is less than Rated Capacity of Manbox _____ from plate	
4	The Crane is rated for twice the estimated load at the maximum working radius Max Operating radius _____m WLL from Load Chart _____T	
5	The Crane is rated for not less than 1 tonne at the maximum working radius	
6	The crane is fitted with a safety hook, or the hook will be moused	
7	The manbox is fitted with harness attachment points and personnel to be lifted are equipped with harnesses	
8	The crane is fitted with a positive free fall lockout	
9	The operation of the doors ensures positive locking.	
10	A separate JSA has been prepared for the work to be undertaken	
11	Communication channels have been established and tested UHF Channel _____	
12	The load including personnel is securely confined within the manbox	
13	Hook swivel and safety clip operational and in good condition	
14	Anti-two block operating	
15	Weather conditions currently suitable - wind 7m/s (25kph), electrical, rain etc	
16	Weather prediction suitable	
17	Visual inspection undertaken	
18	Floor is in good condition, with equipment secured	
19	The inspection records for the manbox are available and have been inspected, are in date and show the manbox as suitable for use	
20	All personnel understand the task to be performed, sequence of events and have participated in a pre-work meeting	
21	The crane operation has been tested including winch brake, slew and vertical motion limiters	
22	There are no reasonably practicable alternate means of performing the task	

Crane Operator _____ /_____/_____

Dogman _____ /_____/_____

Client Rep. _____ /_____/_____