A.B.N. 66 005 749 431
32-34 Quality Drive | P.O. Box 4116BC | Dandenong South Vic 3164
P: 61 3 9706 4550 | F: 61 3 9706 4515
E: reception@gmj.com.au | W: www.gmj.com.au

MAJOR INSPECTIONS TO AS2550.10
GENERAL GUIDANCE
JULY 2015

1. SCOPE

This document is a general guidance for major inspections and repairs of GMJ Mobile Elevated Work Platforms (MEWPs) to the requirements of AS2550.10 and other relevant standards as applicable. The purpose of this document is to provide a guideline to ensure an efficient inspection/repair. Due to the many models and configurations available, this document should only be used as a guide. This document is to be read in conjunction with the specific major inspection requirements for each model.

Vehicle mounted MEWPs should be subject to a roadworthy inspection prior to being returned to service. Modifications to the vehicle or chassis must be undertaken in accordance with the Australian Design Rules (ADR) for vehicles, the Vehicle Service Bulletin 6 (VSB6), as well as the Australian Standard for Mobile Elevated Work Platforms AS/NZS 1418.10. Any vehicle modification must be inspected by a recognized road traffic signatory per the applicable state regulations.

2. INSPECTION PERIODS

The general frequency of inspection is 10 years and every 5 years thereafter, subject to viability and overall condition. Extreme environment and use may dictate more frequent inspections.

3. RESPONSIBILITIES

The organization undertaking the major inspection should:

(a) Follow the directions provided by the manufacturer.

(b) Undertake the inspection and repairs in accordance with the procedures supplied in AS2550.10.

(c) Report and record all anomalies.

(d) Provide or source the necessary personnel with suitable skills and experience to perform:

- (i) A general overview of the equipment
- (ii) Disassembly and inspection
- (iii) Repairs
- (iv) Modifications
- (v) Reassembly
- (vi) Testing
- (vii) Reporting

(e) Provide all tools and equipment to perform the inspection and any repairs that may be necessary.

Special tools are generally limited to torque wrenches, hydraulic pressure gauges and a multimeter. Test apparatus as required for Non Destructive Testing (NDT), and insulation testing is usually performed by inspection agencies contracted by the repairer.

(f) Source materials and replacement parts.

(g) Be able to provide test weights, slings, rigging gear or load cells as required. Test weights must be of a known and verifiable mass. Load cells must be within the current calibration certificate dates.

(h) Prepare and provide records of the inspection.

A.B.N. 66 005 749 431
32-34 Quality Drive | P.O. Box 4116BC | Dandenong South Vic 3164
P: 61 3 9706 4550 | F: 61 3 9706 4515
E: reception@gmj.com.au | W: www.gmj.com.au

4. INSPECTION

4.1 General overview of the MEWP

a) Operate the unit through all motions. Note discrepancies in motion, pivot clearances and backlash. Observe and record hydraulic pressures, accumulator cut in/cut out times and general operating condition.

b) Check slew ring axial play (max 3mm).

c) Document observations and report major defects.

4.2 Disassembly and inspection

a) Dismantle unit. Dismantling must expose all pivot pins and operating links and rods. Dismantle stabilisers.

b) Inspect all components, record condition and reject as necessary. Major defects shall be reported for further engineering assessment as to their cause.

c) NDT (principally Magnetic Particle Inspection) of structural areas must be done on bare metal and according to sketches and/or specifications provided. The NDT organisation should mark off all areas inspected on the sketches provided and this should be provided with the NDT report. The inspection criterion is “no detectable defects”. The NDT organisation may specify alternative methods, provided that this is advised. 100% visual inspection is required. NOTE: Visual inspection also means an inspection for signs of wear, or deformation.

d) Dismantle and inspect accumulator (if fitted). Inspect according to AS3788.

e) Inspect chassis mount connections.

f) Inspect the condition of the fibreglass insert where applicable – for booms in a poor condition or which have been involved in an accident, an Acoustic Emission Test should be performed.

5. REPAIRS

5.1 Spare Parts

Purchase OEM spare parts where necessary. In circumstance where failure of the component has occurred (as opposed to ordinary wear or corrosion), consult GMJ for specific advice detailing the component and any circumstances that may have contributed to the failure.

5.2 Welding

Repairs to welds etc. should not be undertaken without written procedures provided by the manufacturer or a competent engineer.

5.3 Hydraulics

Any hydraulic components must be replaced with equivalent or superior specification.

5.4 Electrics

Repairs to electric circuits and components must be performed competently and documented and must be in accordance with the relevant wiring/circuit diagrams.

5.5 Access Ways

All points of access must be inspected and repaired to return them to a suitable condition. Consideration must be given to ‘falls from height’ requirements. Guardrails around the tray perimeter should be considered, particularly if lockers have been removed. Care must be taken to ensure that any such addition does not create risk. E.g., crushing or shear hazards associated with the slewing unit.

5.6 Decals and Safety Notices

Repair or replace decals as necessary.

A.B.N. 66 005 749 431
32-34 Quality Drive | P.O. Box 4116BC | Dandenong South Vic 3164
P: 61 3 9706 4550 | F: 61 3 9706 4515
E: reception@gmj.com.au | W: www.gmj.com.au

6. MODIFICATIONS

All modifications shall be undertaken only after assessment and approved by GMJ.

6.1 Upgrades

Generally the MEWP should be modified to comply with the requirements of the latest published relevant standards including AS1418.10 where it is reasonably practicable to do so. A list of the available upgrades for each model is available from the manufacturer.

7. REASSEMBLY

a) Reassemble the unit with care and in accordance with the maintenance manual. Observe all specifications relating to bolt torques and other specifications. Test subassembly installations as practicable. Note: All high tensile fasteners, which have been removed, must be replaced with new ones.

b) Set machine speeds and pressures according to manufacturer's specifications.

c) Check response to controls (correct operation and smooth).

d) Operate unit through all motions and observe freedom of movement of all parts, operating links and rods. Check for fouling/scraping of components and remedy as necessary.

8. TESTING

Test according to the procedure provided for the specific unit. Functional and overload tests must be included. Where a test procedure is not available, an inspection and test plan can be developed and supplied by the manufacturer.

The following standard procedure can be generally used if a specific procedure is not provided.

a) Static load test unit with 125% of SWL for machines manufactured prior to the introduction of AS1418.10 – 2011 (those machines manufactured after that date are tested using 150% of rated capacity).

b) Dynamic load test with the rated capacity through all motions, sufficient to turn the slowest moving part through two revolutions.

c) Stability tests are required on the following units:

   (i) Units that have been fitted to a new truck.

   (ii) Units supported partially or wholly on tyres.

   (iii) Units where the chassis or tray locker arrangement has been modified or replaced.

d) Check cylinder creep using the static test load in the worst configuration for respective cylinders.

e) Check all decals.

f) Functional test all indicators and warning devices.

g) Functional test operation of interlocks.

h) Insulation acceptance test

A.B.N. 66 005 749 431
32-34 Quality Drive | P.O. Box 4116BC | Dandenong South Vic 3164
P: 61 3 9706 4550 | F: 61 3 9706 4515
E: reception@gmj.com.au | W: www.gmj.com.au

9. DOCUMENTATION

It is essential that proper documentation of the major inspection is maintained. The following is a minimum requirement.

a) Record of Non Destructive Examination detailing areas inspected and the result of the examination. Defects recorded and subsequently repaired should be re-examined and a separate report issued indicating conformance.

b) Record of pins replaced.

c) Record of Insulation Acceptance Test

d) Record of Accumulator Inspection (if applicable)

e) Record of Acoustic Emission Test (if specified).

f) Record of load, function and stability test.

g) Descriptive report (or job cards) detailing extent of work undertaken.

h) Record of repairs undertaken.

i) Record of upgrades or modifications performed.