# Piling Rig Minimum Standards

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## FEATURE REQUIREMENTS

### MINIMUM REQUIREMENTS – MOBILE EQUIPMENT

#### ENCLOSED, SEALED, AIR CONDITIONED CABIN (WHERE AVAILABLE FOR THAT MACHINE SIZE AND TYPE; OTHERWISE RISK ASSESSED)

- OEM designed and fitted cabin, with air conditioning suitable for conditions. If equipment isn’t fitted with an air conditioned cabin, a risk assessment should be completed.

#### FIRE EXTINGUISHER & BRACKET

- A minimum 4.5kg dry chemical (ABE) for all locations, within inspection/test requirements and charged. The extinguisher/s should be:
  - Fitted in a secure, easily accessible location
  - Fitted with legible instructions and coloured correctly (i.e. red with white band)
  - Fitted with a pressure gauge and hose to assist accessing awkward areas
  - Maintained in accordance with AS 1851
  - Minimum 1kg dry chemical (class ABE) shall be located in the cabin and clearly identified.

  Note - This is a minimum requirement. Specific requirements for extinguisher type and/or capacity will be defined by certain work activities or sites

#### FLASHING AMBER BEACON (360 DEGREES)

- At least one amber beacon is fitted, with easily accessible on/off toggle switch to operate. The beacon shall be mounted as near as possible to the top of the equipment and be clearly visible in normal daylight up to a distance of 200 metres (and closing) in all directions.

#### REVERSE / TRAVEL / SLEWING ALARM (BEEP OR SQUAWK)

- Fitted to central, unobstructed area of equipment. The alarm’s noise level range shall be 87 to 112 dB(a) measured at a distance of 1 metre from the alarm. The alarm shall active each time equipment movement is present (dependent on requirement and feature of alarm fitted i.e. reversing alarm) and not be fitted with an on/off feature.

#### WARNING SIGNAGE AFFIXED IN CABIN (FOR APPLICABLE EQUIPMENT)

- Ensure overhead power line, underground cables and equipment minimum clearance height warning signage is affixed in cabin; clearly visible to operator.

#### LOCKABLE BATTERY ISOLATION SWITCH C/W IDENTIFICATION DECAL

- A means of immobilising the equipment by isolating the battery so the equipment cannot be started and/or operated by an unauthorised person. The isolation switch must be lockable, resistant to weather and clearly identified (i.e. isolator decal).

  Required Colour: Battery Isolator – Red
### EMERGENCY STOP/S (WITH DECAL) EASILY AND SAFELY ACCESSIBLE FROM OUTSIDE PLANT

As per National Standard for Plant NOHSC: 1010 (1994), clause 14, sub section (a), (b) and (c) emergency stop devices must:

(a) Be prominent, clearly and durably marked and immediately accessible to each operator of the plant; and

(b) Have handles, bars or push buttons which are coloured red.

(c) Not be able to be affected by electrical or electronic circuit malfunction.

(d) Are of "stop and Lock-off" type: so that the plant cannot be restarted after an emergency unless the stop control has been reset.

**Location:** Emergency stop devices shall be positioned for easy access and for non-hazardous operation by the operator.

### GUARDING (ENGINE, ROTARY PARTS, HEAT SHIELDS, SOUND CLADDING)

Guarding is in place, mitigating operator exposure to moving and/or hot parts and conform to National Standard for Plant NOHSC: 1010 (1994), clause 7, 8, 9 & 10 and, in addition, Select Plant Hire E-G-8-0533i Equipment Safe Guarding Standard.

### SAFETY SIGNAGE/DECALS IN PLACE FOR SWL, ACCESS/PINCH POINTS, WARNINGS, EMERGENCY, ETC.

Safe Working Load limits (SWL), warning decals near crush/pinch points, etc.

### HANDRAILS ON UPPER DECKS WHERE PERSONNEL ACCESS IS REQUIRED

Suitably designed hand rails (edge protection) shall be fitted to prevent falls from height occurring when utilising upper decks. They shall be a minimum of 1m high, with gaps of less than 450mm between each mid rail, toe boards installed (minimum 100mm wide), manufactured from metal.

### SAFE ACCESS ONTO MACHINES (THREE POINTS OF CONTACT)

Suitably designed access with hand rails shall be fitted to prevent trips and falls from height occurring when accessing plant and equipment. They shall be manufactured from metal only.

### SEATBELT FITTED

Shall be operational and meet Australian Standards. A sign should be prominently displayed in every cabin, warning the operator to wear the seatbelt provided.

### UHF RADIO AND AERIAL FITTED AND OPERATIONAL

An operational UHF radio shall be fitted in the operator cab and be easily accessible. A compatible aerial shall be fitted securely to the equipment.

### RATED CAPACITY

Should be marked “maximum rated capacity displayed for auxiliary line/s”

### ANTI-TWO BLOCK (AUXILLARY LINE)

Anti two-blocking devices are electrical sensing devices. They are installed on the Rig to prevent the “hammer” from hitting the sheave.
Auxiliary line restraint device is fitted:

The auxiliary line device will engineered by the machine designer & manufacturer and or other engineering service provider to applicable Australian standards or EN standards if applicable.

The operations & maintenance manual for the piling/foundation rig Is to be upgraded to reflect the operational changes when using the Additional auxiliary line device.

Examples

- Electrical limit switch which cuts out the auxiliary line hoisting function.
- Load cell based measuring system installed for the pile and auxiliary winches. This is to inform the operator of the amount of line pull on the winches or the hook load. This system must be fitted with Fuse type mechanism (Designed to progressively fail in a safe and controlled manner).
- Expanding flat web assembly designed to progressively fail in a safe and controlled manner.
- Hydraulic winch with integrated valve system that allows for minimal line pull. Homing point for wire rope – indicates auxiliary line not attached – RED light indication to operator i.e. auxiliary line not stored safely When whip line attached – removed from homing point – GREEN light indication to the operator.

**ADDITIONAL LORA REQUIREMENTS**

**ASSET IDENTIFICATION STICKERS (SELECT OWNED ASSETS ONLY)**

- **Asset Decals:** Black lettering on a white background, non-reflective adhesive backed decal
- **Suggested Size:** 200 x 100mm
- **Installation:** Evenly applied to LH and RH side of asset

**DOCUMENTATION MINIMUM REQUIREMENTS (paper or electronic - must be available at the time of mobilisation)**

**ANNUAL SERVICE / MAJOR SERVICE**

Certificates of annual / major service (including NDT records)

**PLANT RISK ASSESSMENT**

Specific to make and model of equipment.

**OPERATORS MANUAL**

OEM operators manual available and in good condition.

**DAILY PRE-START BOOK**

Specific to category of equipment.

**SERVICE HISTORY**

Previous 3 months of preventative maintenance and repairs.

**CHANGE MANAGEMENT**

Change management documents available for any modifications

**LIFTING DEVICES REGISTER**

Lifting devices register and certificates

**STRUCTURAL REPORT**

Structural NDT test report for rig, not exceeding 12mths.

**HOIST ROPE MILL CERTIFICATE**

A Mill Certificate which is produced by the steel manufacturer will provide all the relevant information to ensure compliance. E.g rope test results, wire test results, type and grade of rope.

**PILESafe**

12 Monthly Drilling and piling assessment. carried out by an independent assessor. Green sticker fitted.

**WEED AND SEED**

A statutory declaration for all Plant and Equipment that they are clean and free from weed and seeds. This is to confirm that the Plant and Equipment has not gone through areas with weed and in particular (parthenium weed or giant rat's-tail grass). If the item has gone through areas of this weed, a clean down certificate will be required.

**PROJECT / CLIENT SPECIFIC REQUIREMENTS**

Items that may be required as determined by the project and/or client.

**SPILL KIT**

General purpose spill kit design to assist in small fluid (i.e. oil or coolant) spills. The spill kit bag shall be weather proof to avoid damaging contents.
## Piling Rig Minimum Standards

**FALLING OBJECT PROTECTION (FOPS) FITTED AND CERTIFIED (PLACARD WITH SERIAL NUMBER / CERTIFICATE)**

FOPs must be compliant to AS 2294.1. Example of applications where FOPS may be required:
- Demolition
- Forestry
- Tunnel works

FOPS:

- Compliance label must be permanently fitted to structure/cabin, easy to read and contain following information as minimum:
  - Name and address of manufacturer or guard constructor
  - Identification number of guard (if any)
  - Machine make, model(s), or serial number(s) the guard is designed to fit
  - Reference to the relevant standard the guard conforms to (i.e. ISO 3449), plus the performance level (i.e. Level 1)
  - Any other information deemed relevant by the manufacturer.

Note: For demolition work, ISO 3449:2005 and ISO 10262 recommend FOPS Level 2 protection is fitted.

**TOOL BOX**

Storage solution to keep equipment and tools securely and safety packed away.

Note: Loaded tool box/s weight and vehicle GVM shall be considered.

**CALL SIGNS (HIGH VIS OR STANDARD)**

Used for communication purposes between road users.

Call Sign Decals: Typically, black lettering on a reflective yellow high vis background (high vis version) or black lettering on silver or white non-reflective background (standard, non-mine spec)

**Suggested Size:** 500 x 250mm

**Installation:** Evenly applied to LH, RH and rear of asset

**FIRE SUPPRESSION SYSTEM**

The fire suppression system fitted should meet or exceed ATS 5387.7-2006 and be capable of activating on detection of fire both automatically and manually from the cabin and ground level.

**REFLECTIVE TAPE**

- **Material:** The tape shall be weather resistant with a reflective surface and adhesive back
- **Size:** Minimum 50mm wide
- **Installation:** One strip evenly applied to all sides of the equipment

**LOCKABLE STARTER ISOLATION SWITCH C/W IDENTIFICATION DECAL**

A means of immobilising the equipment starter. The isolation switch must be lockable, resistant to weather and clearly identified.

**Required Colour:** Starter Isolator – Yellow

**WEED AND SEED**

A statutory declaration for all Plant and Equipment that they are clean and free from weed and seeds. This is to confirm that the Plant and Equipment has not gone through areas with weed and in particular (parthenium weed or giant rat's-tail grass). If the item has gone through areas of this weed, a clean down certificate will be required.