



SAFE WORKING PROCEDURE ON LIFTING PITS

Situation: Where pits are to be lifted into the air for the purpose of transport, loading, unloading and installation, including where pits have been placed together on a truck with the Lifting Holes sitting flush together. This occurs when load space is to be maximised. The following steps should apply.

1. Pins provided by Aus Pits are rated at 3.08 tonne SWL and are suitable for a lift when only half the pin length is penetrating the Lifting Hole (see Photo 1 overleaf).
2. An approved “spreader bar” (see Photo 2 overleaf) must be used to provide a direct vertical lift on the Lifting Pins. This stops stress on the pit walls, but more importantly allows the pits to be easily handled and placed. Aus Pits Lifting Pins or designed equivalent should be used only.
3. Where required, pins can be placed into the lift holes from the inside of the pit walls. Ensure that the chains are fitted to the spreader bar to allow for a straight lift.
4. Where the pits have been placed on a truck with the Lifting Holes sitting flush together, the following is to occur:
 - a) The pins can be placed in the Lifting Holes partially to allow the pit to be lifted approximately 100mm above the tray of the truck.
 - b) While this lift is in process the pit can be turned slowly to allow access ready for the pins to be pushed completely through the Lift Hole penetration.
 - c) The pit can then be placed slowly down on the tray of the truck.
 - d) The lift pins can then be pushed through the wall of the pit to allow the full length of the pin to protrude through the pit wall.
 - e) The pit then can be lifted from the truck tray by the standard safety procedures.

SAFE WORKING PROCEDURE ON INSTALLATION OF PITS

All Aus Pits should be installed in accordance with Aus Pit Specification 7/94 – Installation of Pits.



Pits have designed Lift points and should be lifted from here only.



Details of spreader bar used for lifting.



SPECIFICATION NO. 7/94

INSTALLATION OF PITS

1. Aus Pits pre-cast pits are custom manufactured in accordance with our own manufacturing specifications and are designed to be placed to the relevant levels particular to each pit.

All necessary preparation, care and measurements should be taken before installation.

2. Excavation should provide a clearance from all external faces of the pit, where possible of not less than 400mm.
3. Bedding material and compaction should comply with the particular standard set down by the relevant authority or their appointed officer.

Special consideration should be given to particular situations where unusual ground conditions may apply. In these cases, the project engineer should be consulted for bedding material and compaction requirements.

General acceptance is an approved bedding material compacted to a thickness of not less than 80mm on an earth foundation or 150mm on a rock foundation.

When placing, leveling and compacting bedding material to the correct level, the invert level of the pipe and the base thickness of the pit are to be taken into account.

4. Pits should only be lifted by Aus Pits lifting pins where lifting holes are used or approved lifting clutches when proprietary type anchors are pre-cast into the pit walls or base.

Lifting holes or points marked "LIFT" are provided and pits should only be lifted by these points with approved lifting apparatus.

5. Penetrations are custom cast into the pits walls and are provided to allow easy placement of pipes into the pit walls at the required invert levels.

Pipe installation into pits requires the following steps to be taken:

- a. The pipe is to be placed into the relevant penetration in the pit wall and cut back to be finished flush with the internal wall of the pit.
- b. The pipe should then be sealed in with an approved cement mix. It may be necessary to render around the pipe on the inside of the pit in order to achieve a quality flush finish with the pit wall.

In areas of harsh soil conditions, special grouting materials may be specified by the Works Supervisor.

6. If required by the relevant authority, internal benching should be placed. Internal benching materials and dimensional requirements should be in accordance with the relevant authority specifications.
7. If a structure is manufactured in multiple segments due to size and/or depth or when a cover slab is required to be placed onto the top of a pit structure, it is necessary to seal the segments together to prevent water leakage and ingress.

In these cases, the following steps should be undertaken:

- a. An approved non-shrink grout or mastic type product should be used to seal the segments together.
 - b. The product used should be applied in accordance with the product manufacturer's requirements and should be applied to the pit segment that is already installed. Ensure that no gaps are left in the grout or mastic placement.
 - c. Place the second segment on top of the installed segment. The weight of the units will ensure that a quality bond is achieved.
 - d. The segments should be left undisturbed until the period of curing is completed in accordance with the grout or mastic product manufacturer's recommendations.
8. Backfill around the pits should be carried out to the specifications set down by the relevant authority.

General acceptance is backfill material free from perishable material and lumps placed in layers not exceeding 300mm and compacted to the requirements of the relevant authority.