



Engineering Guidance Note

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AFITA-0025

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Attachment Selection and Forklift Compatibility

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SCOPE

A fork truck can be fitted with attachments for handling different types of loads. The primary load handling device is a pair of forks or tines which are mounted on the carriage of the forklift.

The carriage is located in front of the mast and is the primary part of the forklift that accepts an attachment. Attachments may also be mounted on the forks directly (refer to EGN-005).

The suitability of attachments for use with a forklift depends on the final calculated capacity of the truck in combination with the attachment. It is therefore important to consult the forklift manufacturer or authorised representative to determine this new capacity.

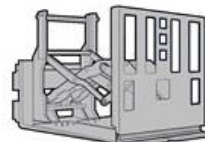
Typical attachments include but not limited are as follows:

- Sideshift
- Sideshift Fork Positioners
- 360 Rotating Forks
- Fork Clamps
- Twin Pallet Handler
- Paper Roll Clamp
- Push/Pull
- Appliance/Carton Clamp
- Bale Clamp

The illustration below shows how a forklift's final capacity is derived once an attachment is fitted.



Lift Truck
2500kg @ 600mm



Attachment
2045kg @ 600mm



Example only

Lift Truck with Attachment
1850kg @ 600mm

Capacity of Lift Truck and Attachment combination may be less than the Attachment Nameplate capacity shown, refer to your Lift Truck Nameplate.

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Australian Standard AS2359.6 requires particular information to be published on the data plate affixed to attachments designed to be used with Industrial Truck.

This Engineering Guidance Note details the information required on attachment data plates and the recommended information that should be published in attachment equipment manufactures catalogues and data sheets to enable correct selection by users.

Attachments fall into the following general groups:

Carriage mount

- Hydraulic controlled
- Mechanical

Quick Fork Mount


- Hydraulic controlled
- Mechanical

Depending on the type of attachment and mounting style the information required to allow selection of, and capacity rating of the truck with the attachment, will vary.

Basic Information for Selection	The basic information required to select an attachment: <ol style="list-style-type: none"> 1. Type of load to be handled 2. Dimension of load to be handled 3. Weight of load to be handled 4. Mounting Type required
Carriage Mount Attachments	Information required for selection: <ol style="list-style-type: none"> 1. Carriage ITA Class, eg, 2 3, 4 etc 2. Minimum carriage width for the attachment to mount 3. Number of Hydraulic functions (hydraulic attachment) 4. Minimum pressure and Flow rate (hydraulic attachment)
Quick Fork Mount Attachments	Information required for selection: <ol style="list-style-type: none"> 1. Fork pocket dimensions, to suit class, eg, 2 3, 4 etc <ol style="list-style-type: none"> a. Fork pocket open or closed end 2. Minimum/Maximum fork spread required 3. Number of Hydraulic functions (hydraulic attachment) 4. Minimum pressure and Flow rate (hydraulic attachment)
Information for Determination of truck Capacity	Information required for determination of the trucks capacity when an attachment is fitted: <ol style="list-style-type: none"> 1. Weight of attachment (kg) 2. Capacity of attachment (kg) 3. Load centre distance for rated capacity (mm) 4. Effective Thickness / Lost Load Distance (mm) 5. Horizontal Centre of Gravity (mm) 6. Vertical Centre of Gravity (mm) 7. Lateral Centre of Gravity (mm)

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	<p>8. Maximum side shift distance (mm) for attachments with side shift function</p> <p>Note: some attachments may have more than one orientation/configuration. In these instance the rating should be based on the orientation/configuration with the lowest capacity.</p>
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Information required on attachment data plates is defined in AS2359.6-2013
<p>AS 2350.6-2013 Clause 6.3.1.2 Removeable Attachments states:</p> <p>Removable attachments shall be marked legibly and indelibly (e.g. weather-proofed, profiled letters) with at least the following details:</p> <p>a) name and address of the attachment manufacturer or his authorized representative;</p> <p>b) model or type;</p> <p>c) serial number and year of manufacture;</p> <p>d) mass of attachment, which may vary from the stated figure by up to $\pm 5\%$ or 200 kg, whichever is the lower of the two;</p> <p>e) distance of the centre of gravity of the attachment from its mounting face on the truck;</p> <p>f) rated capacity;</p> <p>g) in the case of hydraulically or pneumatically operated attachments, the maximum operating pressure recommended by the attachment manufacturer;</p> <p>h) load centre, if applicable;</p> <p>i) lost load centre distance;</p> <p>j) the instruction "The capacity of the truck and attachment combination shall be complied with".</p>

Information for Equipment Catalogues
<p>Equipment catalogues providing information on attachments for Industrial Trucks should provide, as a minimum the following information to assist with the selection of an attachment:</p> <ol style="list-style-type: none"> 1. Type of attachment and model designation, eg Clamp, rotator, fork positioner etc. 2. Capacity (SWL) of the attachment 3. ITA carriage type, if carriage mounted 4. Fork spread for Quick Fork Mount attachment 5. Number of hydraulic functions 6. Recommended pressure and flow rate for operation 7. Weight of attachment (kg) 8. Capacity of attachment (kg) 9. Load centre distance for rated capacity (mm) 10. Effective Thickness / Lost Load Distance (mm) 11. Horizontal Centre of Gravity (mm) 12. Vertical Centre of Gravity (mm) 13. Lateral Centre of Gravity (mm) 14. Maximum side shift distance (mm) for attachments with side shift function 15. Statement indicating Industrial Truck manufacturer or their agent must approve the use of the attachment, and is responsible for approving and making changes to capacity plate

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16. Special requirements as defined in AS2359 for particular attachments

Requirements for Particular Attachments

AS2359 require particular treatment of the following attachments

1. Maintenance cages
2. Jibs for handling suspended loads
3. Extension (Slipper) forks

Maintenance Cage

Maintenance cages shall only be used with High Lift Reach or Counterbalance trucks, where:

1. Reach truck minimum capacity is 1000 kg; or 3x the total of the maintenance cage mass and capacity, whichever is the greater.
2. Counterbalance truck minimum capacity is 1800 kg; or 5x the total of the maintenance cage mass and capacity, whichever is the greater.
3. Truck be equipped with a feature to lockout/disable auxiliary functions when the maintenance cage is in use.

Jibs

The actual capacity rating of the truck with the jib installed shall be derated to 80% of the calculated capacity to compensate for the dynamic effects of the suspended load.

Extension (Slipper) Forks

Extension forks have the following requirements:

1. The parent supporting fork shall have a minimum length equal to 60% of the extension fork length
2. The internal width of the extension fork shall be of a dimension have a total clearance of minimum of 10 mm and a maximum of 10% of the fork blade width.
 - a. For example, for a 125 mm wide fork the extension fork internal pocket width shall be 135 to 137.5 mm

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