ATiB MATERIAL HANDLING

USE AND MAINTENANCE MANUAL

CRANE JIB TYPE 980 |

CRANE JIB WITH EXTENDING ARM TYPE 975 |

FORK MOUNTED CRANE JIB WITH EXTENDING ARM TYPE 976

I-D02-01-49 - Rev.2

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⚠ ATTENTION ⚠

READ THIS USE AND MAINTENANCE MANUAL CAREFULLY BEFORE COMMISSIONING THE MACHINE

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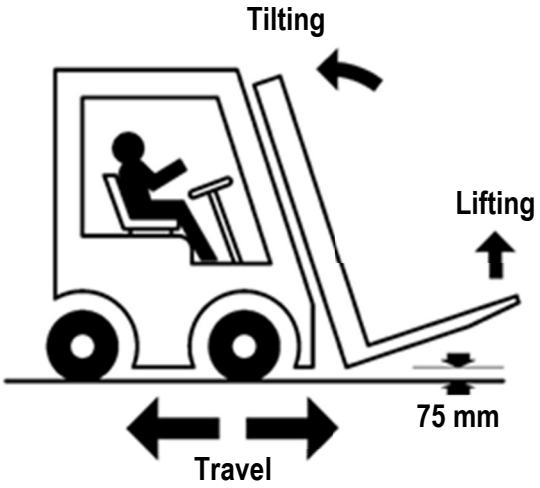
1 SAFETY REGULATIONS FOR THE OPERATOR

Do not transport passengers

Do not cross the upright

Do not stand under the load



2 INTRODUCTION

2.1 Use and Storage of the Manual

This "Use and Instruction Manual" (hereinafter referred to as the Manual) is issued together with the A.T.I.B. equipment. – "CRANE JIB TYPE 980 | CRANE JIB WITH EXTENDING ARM TYPE 975 | FORK MOUNTED CRANE JIB WITH EXTENDING ARM TYPE 976" in accordance with DIRECTIVE 2006/42/EC of the European Parliament and of the Council of 17/05/2006 and subsequent additions.

The following indications are essential for correct use of the equipment and must be brought to the attention of the personnel assigned to installation, use, maintenance and repair.

This Manual must be considered an integral part of the equipment and must be kept until it is dismantled in an accessible, protected and dry place and must be available for quick reference.

In the event of loss and/or damage, the user can request a copy from the manufacturer.

The manufacturer reserves the right to modify this manual without prior notice and without the obligation to update previously distributed copies.

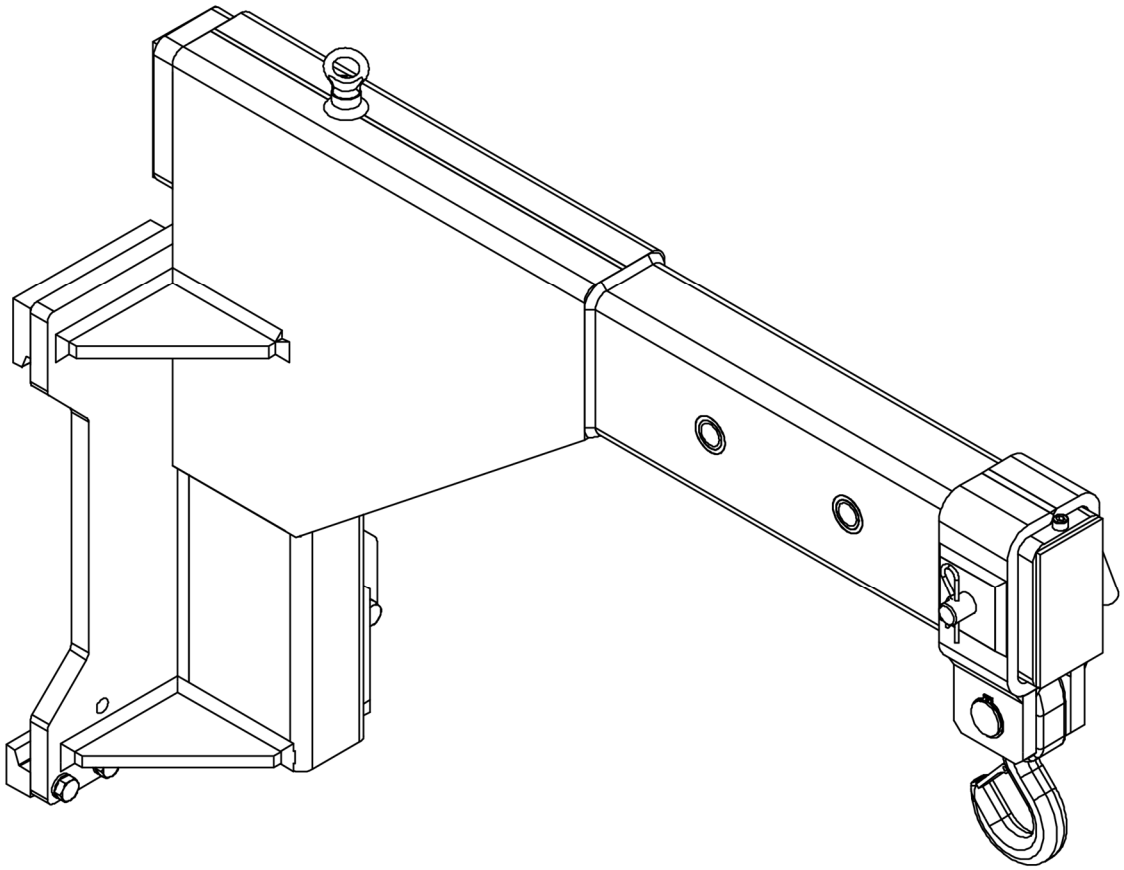
The manufacturer is exempted from any responsibility in the event of:

- Improper use of equipment;
- Use of equipment by untrained personnel;
- Use contrary to any national or international regulations;
- Inadequate scheduled maintenance;
- Unauthorised intervention or modification;
- Use of non-original and/or non-model specific spare parts;
- Full or partial non-compliance with instructions;
- Exceptional events.

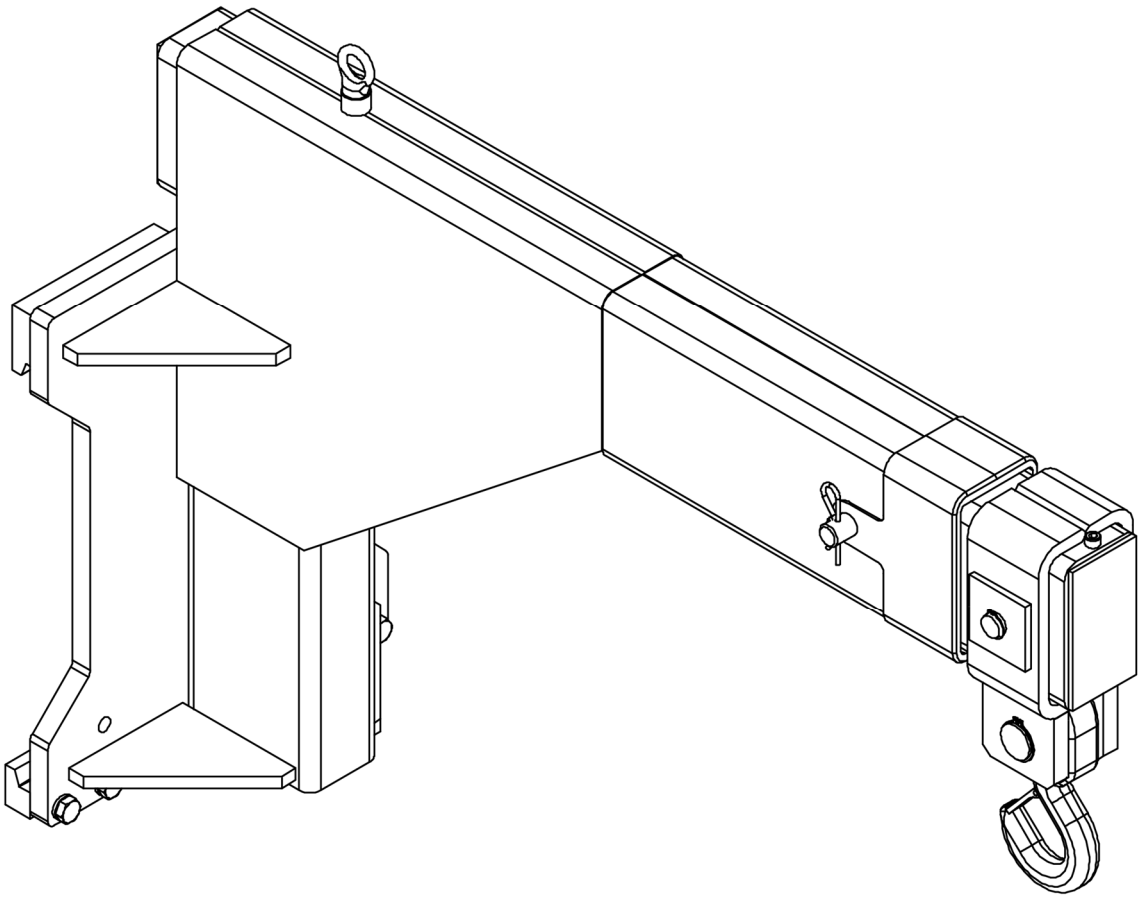
The nominal capacity of the forklift truck/equipment combination has been set by the original manufacturer of the forklift truck and may be less than that indicated on the equipment plate.
Consult forklift truck plate (Directive 2006/42/EC).

2.2 Equipment Description

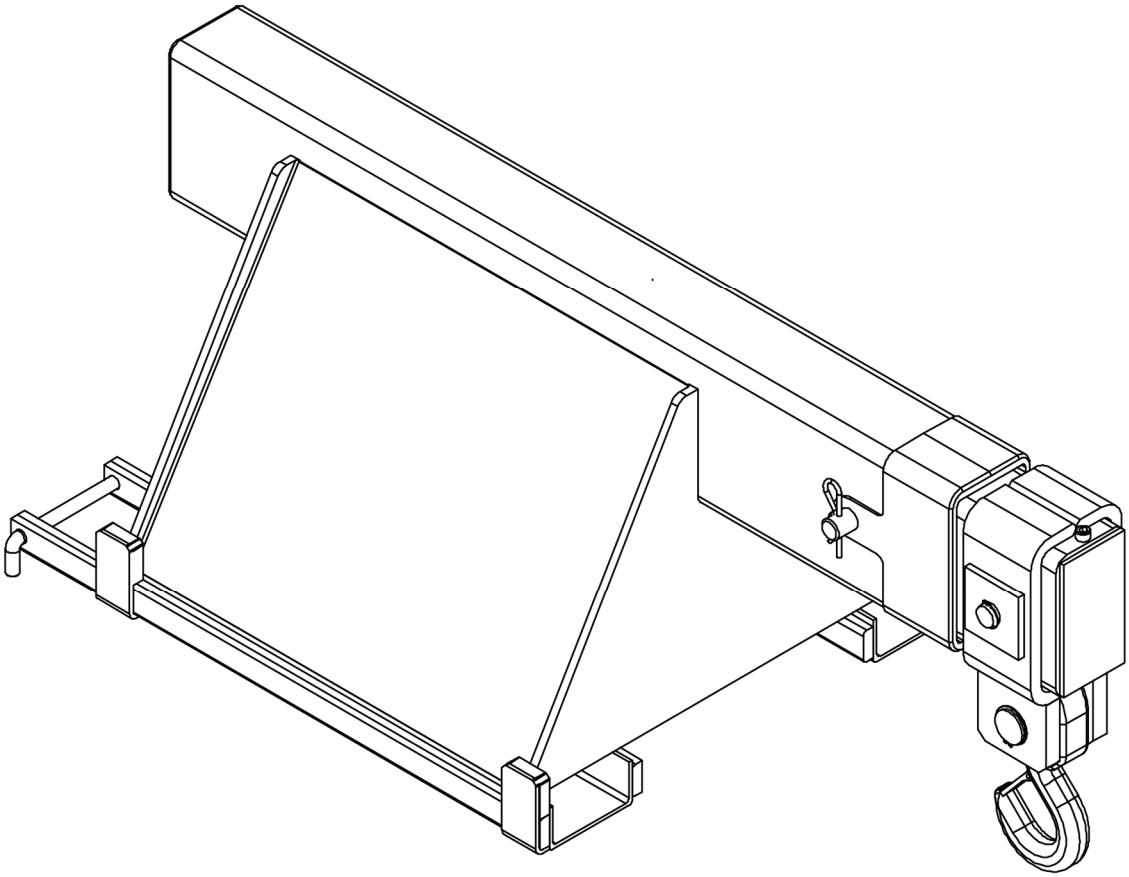
980



975



976



All the A.T.I.B. equipment – "CRANE JIB TYPE 980 | CRANE JIB WITH EXTENDING ARM TYPE 975 | FORK MOUNTED CRANE JIB WITH EXTENDING ARM TYPE 976" is identified by means of an adhesive plate (see *Table 1*) positioned on the equipment (see *Figure 1* and *Figure 2).* The position of the identification plate may vary depending on the equipment. Always refer to the serial number.

980 / 975

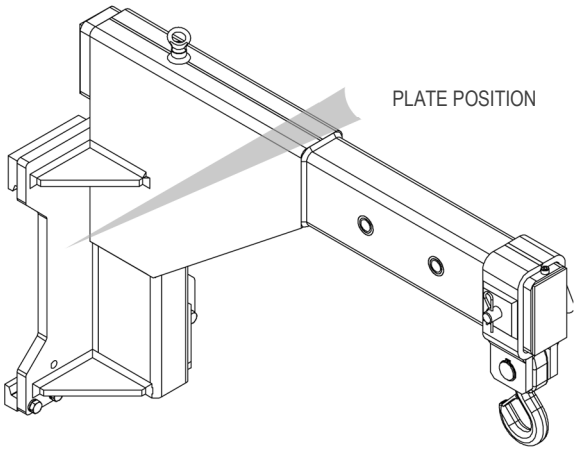


Figure 1

976

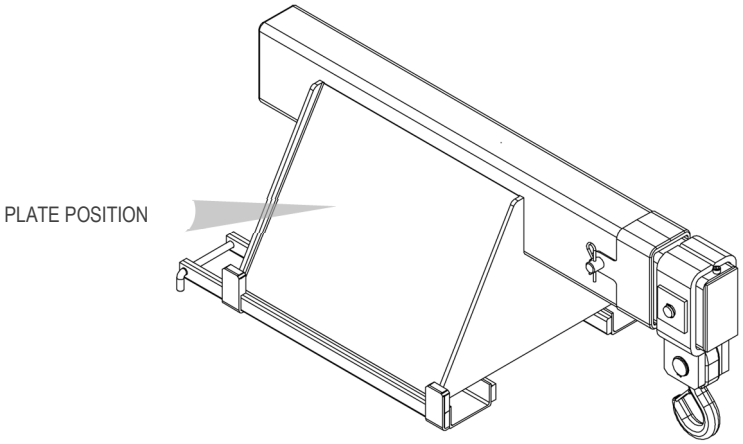


Figure 2

1. TIPO / TYPE	**8. PORTATA NOMINALE / NOMINAL CAPACITY**	**kg/mm**	**11. COPPIA MAX / MAX. TORQUE**	**daNm**
2. CODICE / CODE	**9. PORTATA IN SERRAGGIO / CLAMPING CAPACITY**	**kg/mm**	A.T.I.B.	CE
3. MATRICOLA N° / SERIAL N°				
4. ANNO DI COSTRUZIONE / YEAR OF MANUFACTURE	**10. PRESSIONE MAX. DI ESERCIZIO / MAX. OPERATING PRESSURE**	**bar**	**A.T.I.B. S.r.l.** Via Quinzanese snc, 25020 Dello (BS) - ITALY +39 030 9771711 info@atib.com - **atib.com**	
5. PESO / WEIGHT				
6. SPESSORE / THICKNESS	**NOTE: OSSERVARE I LIMITI DI PORTATA DELL'INSIEME CARRELLO CON ATTREZZATURA / WARNING: OBSERVE THE NOMINAL CAPACITY OF TRUCK AND ATTACHMENT COMBINED**			
7. CENTRO DI GRAVITÀ / CENTER OF GRAVITY				

Table 1

1. **TYPE**
   It indicates the equipment model as shown in the catalogue.
2. **CODE**
   Indicates the equipment ordering code.
3. **SERIAL N°**
   It progressively identifies the individual equipment.
   In the event that the plate is missing/damaged, or for any information, always refer to the serial number.
4. **YEAR OF MANUFACTURE**
   Indicates the year of manufacture.
5. **WEIGHT**
   Indicates the weight of the equipment in kg.
6. **THICKNESS**
   Indicates the thickness of the equipment in mm.
7. **CENTRE OF GRAVITY**
   Indicates the distance in mm of the *CG* centre of gravity of the equipment from the support plane of the fork-holder plate.
8. **NOMINAL CAPACITY**
   Indicates the maximum load applicable to the lifting equipment and the maximum centre of gravity of the load itself.
9. **CLAMPING CAPACITY**
   Not applicable to this equipment.
10. **MAX. OPERATING PRESSURE**
    Not applicable to this equipment.
11. **MAX. TORQUE**
    Not applicable to this equipment.

The A.T.I.B. equipment – "CRANE TYPE 980 – 975 - 976" has been conceived, designed and constructed to allow the handling of suspended loads through the use of belts or chains.

This equipment must be applied to the forklift truck carriage (980/975) or directly to the forks (976).

In type 980, the arm is fixed and it is only the hook holder support that moves, while for types 975 and 976 it is the entire arm (with the hook and its support attached) that moves to the desired position.

Fork carriage coupling components are manufactured in accordance with ISO 2328.

3 INSTALLATION

Checking the Nominal Capacity of the Equipment

To check the nominal capacity of the clamp, consult the plate on the clamp itself (See *Table 1* on page *7*).

⚠ ATTENTION ⚠

Ensure that the driver of the forklift truck is aware of the maximum capacity of the equipment so that they do NOT constitute a hazard to themselves or to persons working in proximity.

The forklift truck manufacturer is responsible for calculating the residual load capacity of the truck/equipment combination.

3.1 Installation Procedure

980 / 975

3.1.1 Installing the Equipment - 980 / 975 - Hooked

1. Prior to installation, check the condition of the fork carriage, ensuring that the lower profile is smooth.

2. Also make sure that the profiles of the fork-holder plate are not deformed, in order to ensure good coupling with the equipment.

3. Remove the lower couplings from the equipment (see *Figure 3*).

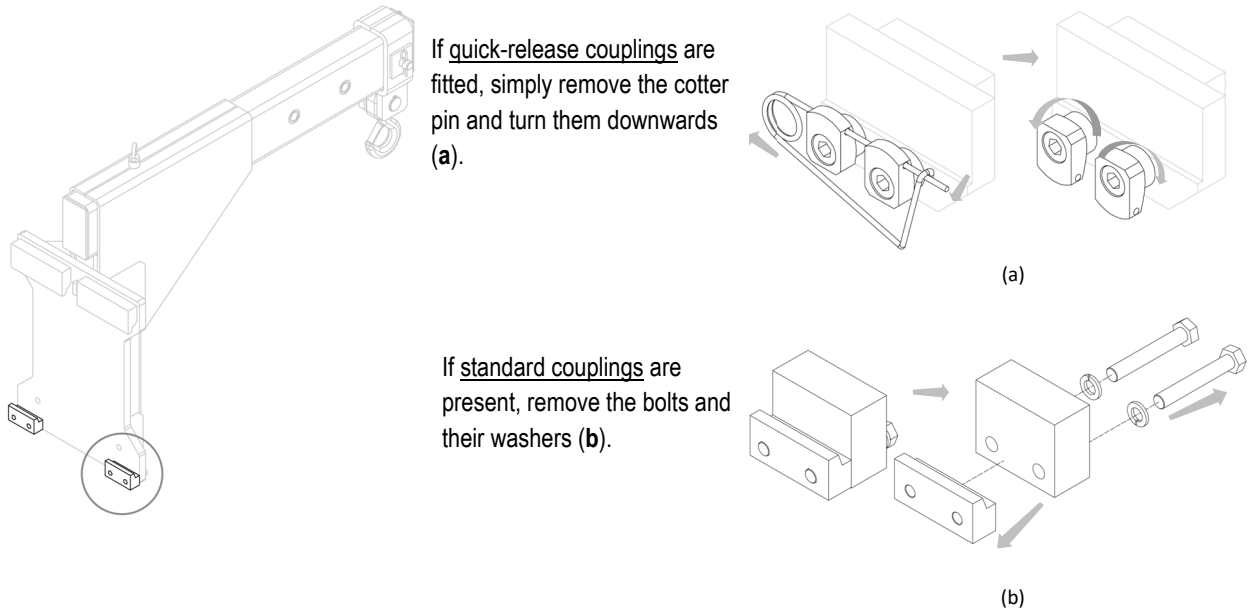


Figure 3

4. For handling, use belts or chains appropriately sized with regard to the weight of the equipment indicated on the plate (see *Figure 1* and *Table 1* on page *7*).

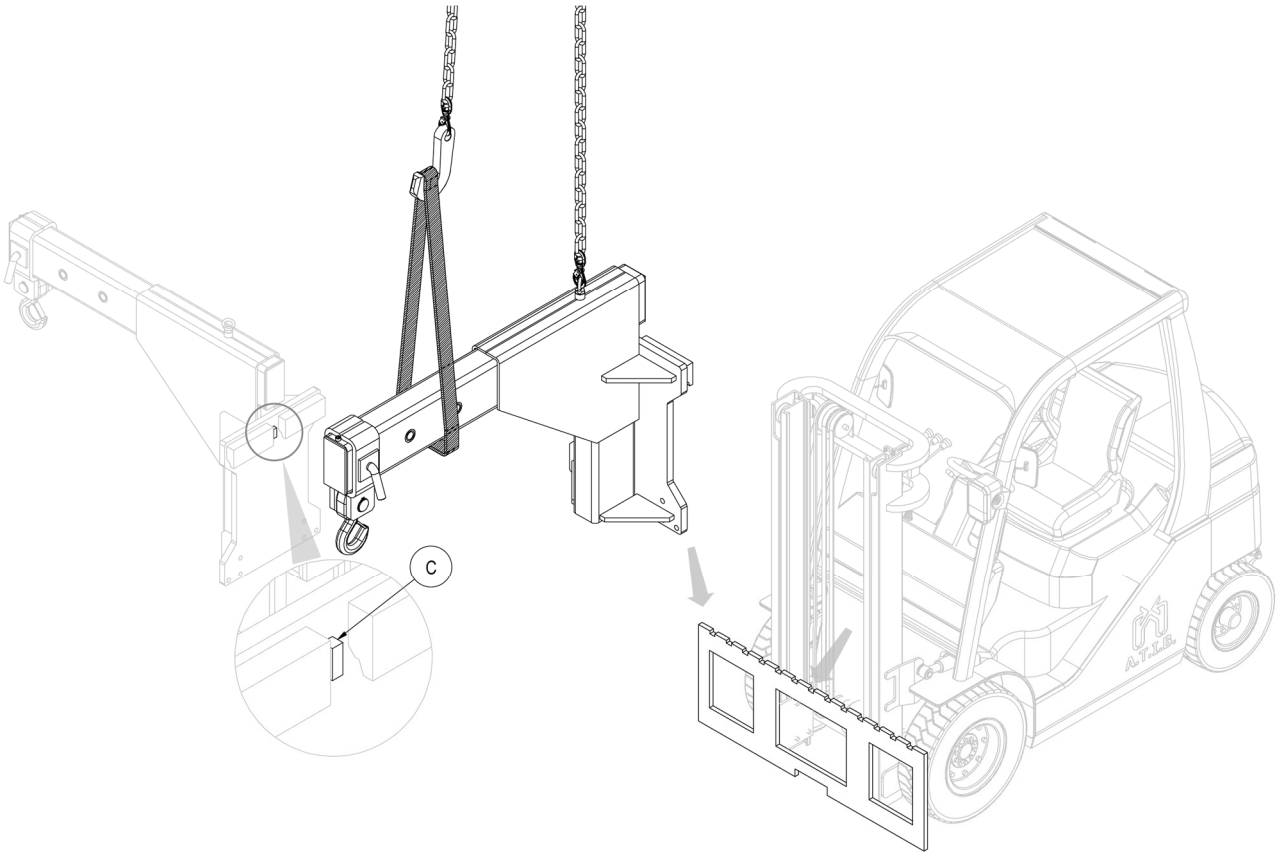


Figure 4

5. With an overhead crane or a hoist of sufficient capacity, place the equipment on the fork carriage plate, taking care to engage the centring pin **C** in its central notch (see *Figure 4*).

6. Tighter the 2 lower couplings **G** so that the body of the couplings remains coupled to the lower fork carriage plate **P** (with max. 1.5mm clearance, see *Figure 5*), and tightening with the torque indicated in *Table 2*.

CLASS	THREAD	TIGHTENING TORQUE
ISO II	**M12**	**90 Nm**
ISO III	**M14**	**140 Nm**
ISO IV	**M16**	**220 Nm**

Table 2

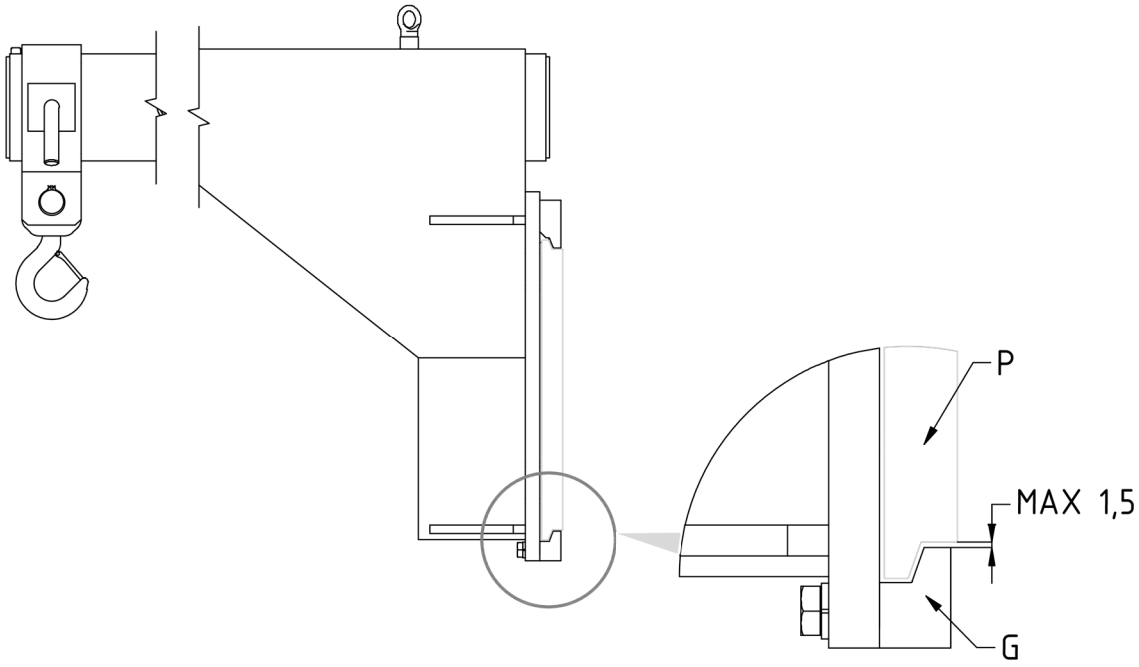


Figure 5

3.1.2 Installing the Equipment - 976 - Fork mounted

976

1. Prior to installation, check the condition of the forks, making sure that the profiles are smooth.

2. In addition, ensure that the profiles are not deformed, in order to facilitate good coupling with the equipment.

3. Check the condition of the pipes, replacing those in a poor condition.

4. Remove, if already installed, the fork stops (see *Figure 6*).

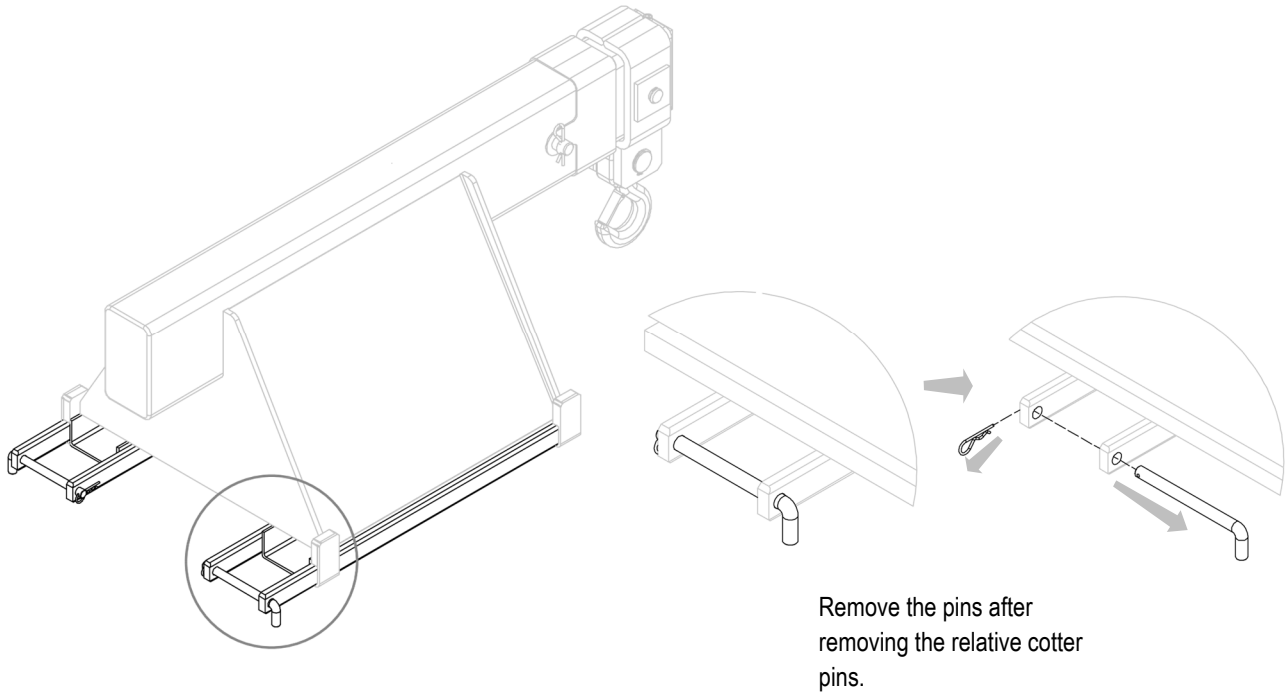


Figure 6

5. Fork the equipment (see *Figure 7* and *Figure 8*).

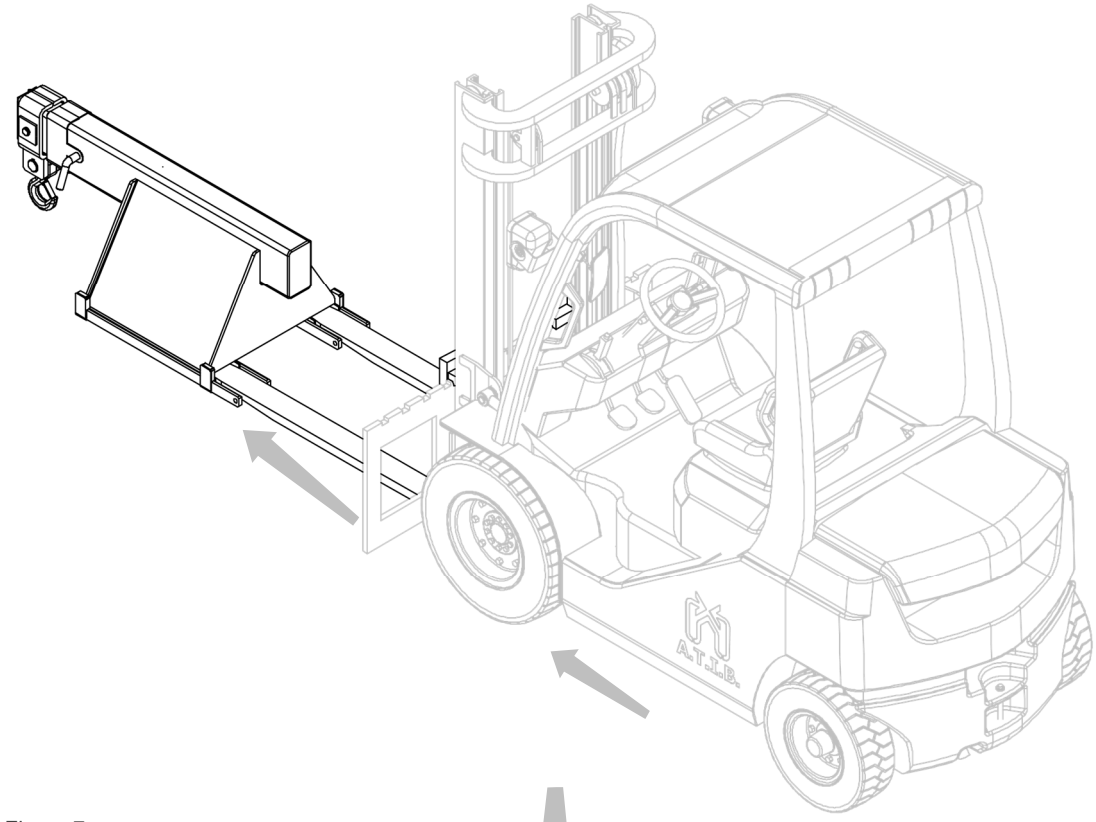


Figure 7

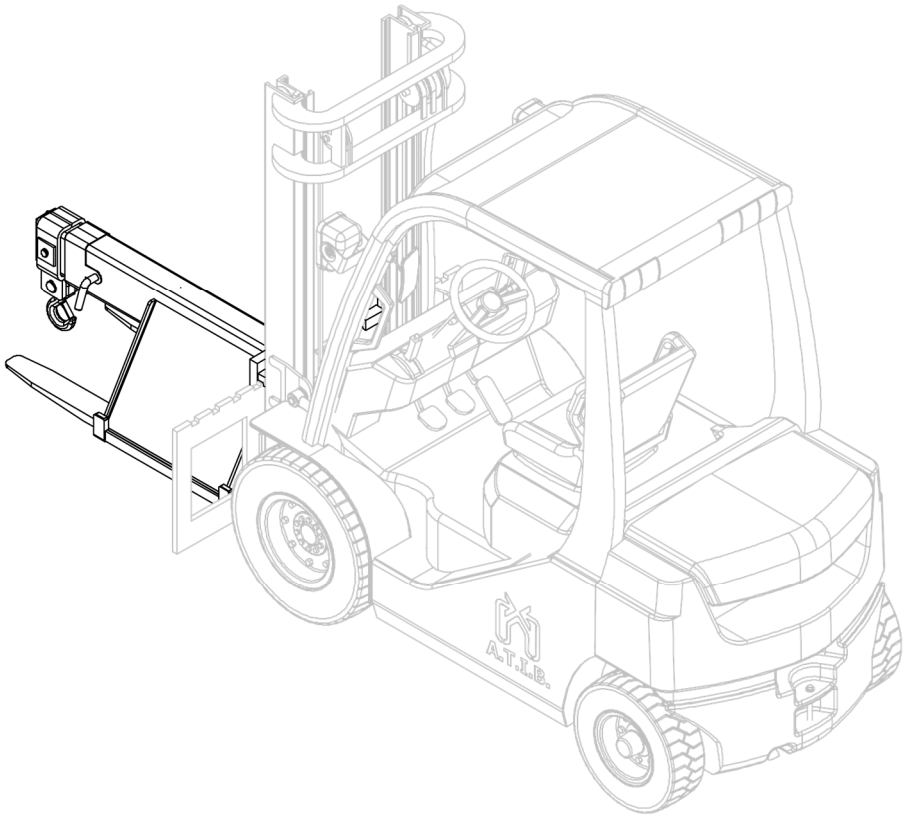


Figure 8

6. Close the fork stops (see *Figure 9*).

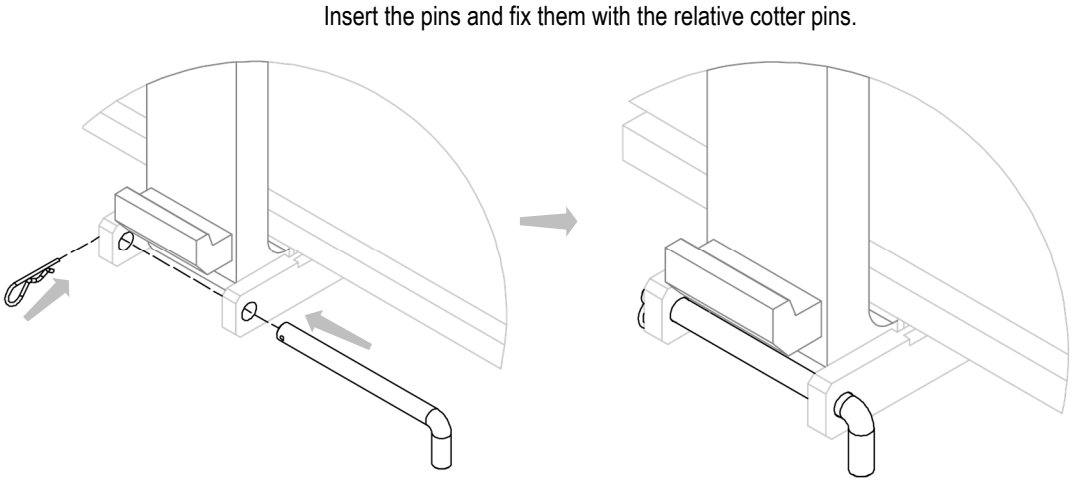


Figure 9

7. Check the correct locking of the forks.

3.2 Positioning the Hook - 980

980

To move the hook to the desired position, proceed as follows:

- 1/2 = Remove the pin, with the relative cotter pin, which locks the hook structure;
- 3/4 = Move the hook with the relative structure to the desired position, then re-lock it with the previously removed pin and cotter pin.

For reference, see *Figure 10*.

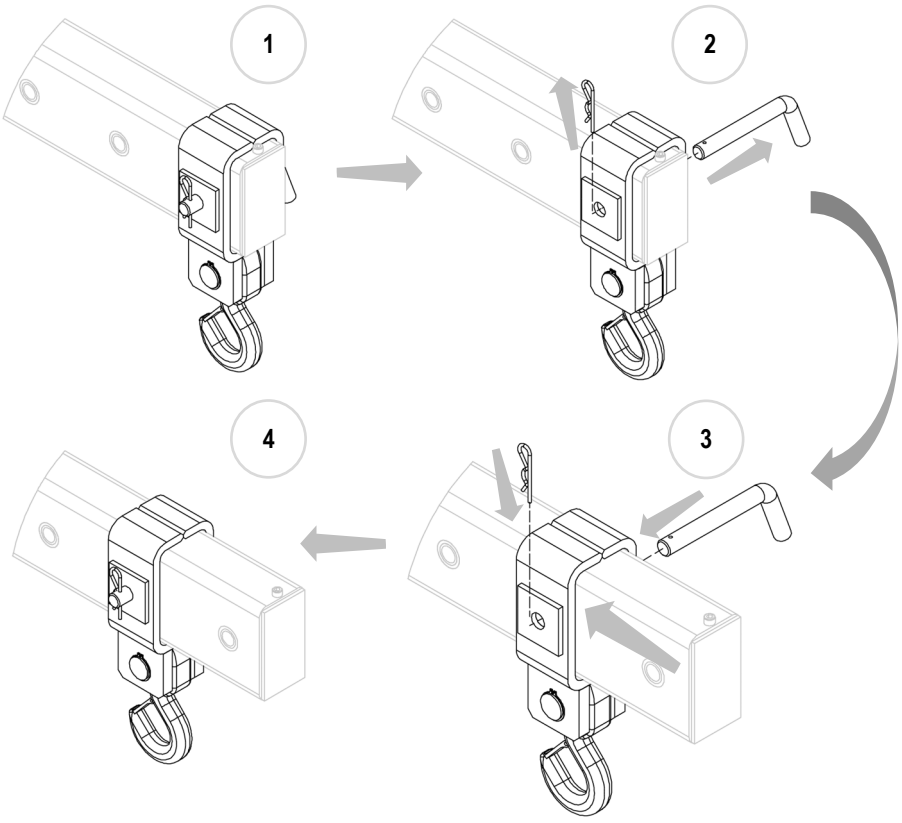


Figure 10

3.3 Positioning the Arm with Hook - 975 / 796

975 / 976

To move the arm to the desired position, proceed as follows:

- 1/2 = Remove the pin, with the relative cotter pin, which locks the arm;
- 3/4 = Move the arm with the hook to the desired position, then lock it again with the previously removed pin and cotter pin.

For reference, see *Figure 11*.

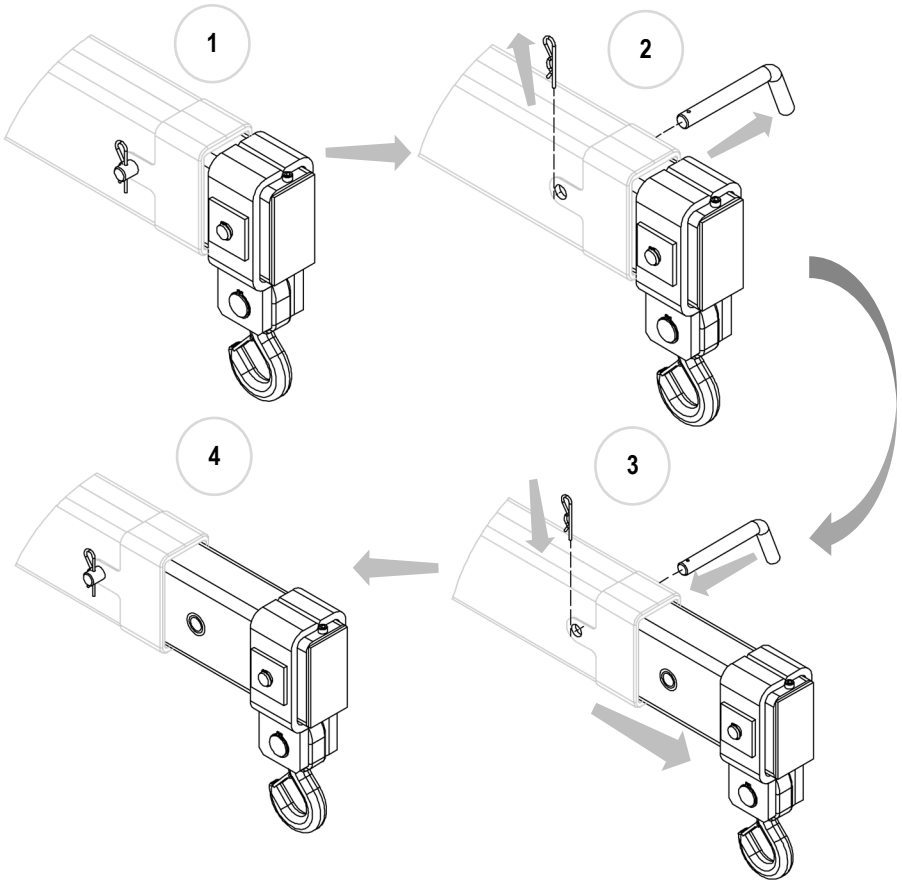


Figure 11

4 RULES GOVERNING USE

Before using the equipment, check the tightness of the piping and the correctness of assembly and also the connection by performing a dozen preliminary operations.

The following instructions must be followed when using the equipment:

1. Observe the capacity limits of the equipment.
2. Do not operate the equipment when persons or animals are within range of the forklift truck.
3. Do not attempt to move loads sideways by dragging them across the floor.
4. Do not exceed the maximum pressure indicated on the rating plate.
5. Operate the equipment from the forklift truck driver's seat using only a single operator.
6. Operate the control lever gently, avoiding water hammer as far as possible.
7. All operations relating to installation, use and maintenance must be carried out by specialist personnel using suitable equipment for the type of work to be carried out.
8. Carry out maintenance and/or repairs with the forklift truck stationary and the hydraulic circuit inactive, using appropriate protection (gloves, safety shoes, etc.).

The weighted sound pressure level is less than 70 dB (A).

All A.T.I.B. equipment is designed and manufactured according to a load positioned (with respect to its centre of gravity) at a certain distance from the vertical plane of the fork.

If the distance of the centre of gravity needs to be increased, the weight of the load must be reduced.
In this case, consult the chart shown in *Figure 12*, where, as the distance from the centre of gravity increases (x-axis line), a multiplicative factor is included for load reduction purposes (y-axis line).

The multiplicative factor, obtained on the basis of the desired centre of gravity position, will be multiplied with the nominal capacity of the equipment. The product of this multiplication will be the actual transportable load.

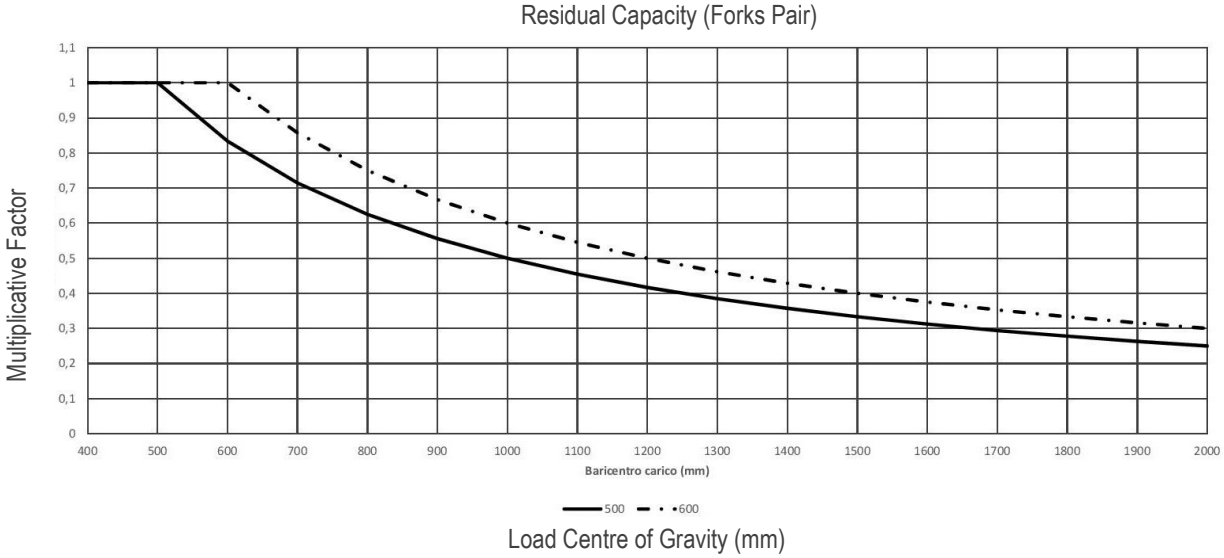


Figure 12

NOTE: calculations are valid only for "stable" loads. Contact the manufacturer for transporting liquid containers.

It is advisable to consult the manufacturer of the forklift truck to check the residual capacity of the forklift truck-equipment assembly.

The condition of the road surface, the speed at which the load is handled and the elevation may all affect the load's grip, which must be taken into account on a case-by-case basis.

Displacing the load whilst in motion is prohibited.
Handling the load with the mast raised off the ground is only permitted when returning the load to the centre of the mast.

The nominal capacity of the forklift truck/equipment combination is established by the original manufacturer of the forklift truck and may be less than that indicated on the equipment plate.

Consult forklift truck plate (Directive 2006/42/EC).

4.1 Handling Loads

Avoid handling and/or sideshift of the forklift truck/equipment with a load that is excessively high off the ground, as this may affect its stability.

Avoid displacing/handling unstable loads.

Avoid displacing/handling loads with an uncentred centre of gravity.

5 PERIODIC MAINTENANCE

Failure to comply with the rules and intervals established for maintenance will compromise the correct operation of the equipment and will void the conditions of the warranty.

All maintenance operations must be carried out with the forklift truck stationary and the hydraulic circuit disconnected and depressurised. The entire maintenance area must be barricaded using regulation protection devices and, if the cylinders require disassembly, a tray or container must be provided to catch the oil present in the cylinder.

To prevent issues when using the equipment, A.T.I.B. recommends changing the hydraulic oil and filters regularly and keeping the system as clean as possible during maintenance operations.

⚠ ATTENTION ⚠

Hydraulic parts may be very hot. Use suitable protective equipment.
Watch out for leakage. High-pressure oil can injure eyes and skin. Wear protective eyewear that includes side shields.
Do not remove valves, lines or other potentially pressurised parts when this is active.

5.1 Maintenance Every 100 Hours

1. Check the tightening torque of the bolts of the lower retaining hooks of the equipment, ensuring that it is as indicated in *Table 2* (page *12*) and, if necessary, adjust the bolts holding them in place.
2. Check the clearance between the lower part of the fork carriage plate and the lower equipment couplings, checking that it is as indicated in *Figure 5* on page *12*, and, if necessary, tighten the screws that support them as indicated in *Table 2* on page *12*.
3. Check the correct locking of the fork stops.

5.2 Maintenance Every 1000 Hours

1. Carry out a thorough inspection of the equipment. If possible, this should be carried out by qualified personnel who are able to identify any issues that may compromise the safety and efficiency of the equipment. There may be a number of defects, such as the following:

   - Check the condition of all equipment components (couplings, cotter pins, snap rings, etc.) to ensure that they are in good condition and replace any worn parts;

   - Check the condition of sliding and working surfaces and replace/repair if damaged;

   Check for any breaks/cracks at the welded joints and, if any damaged components are found, contact A.T.I.B.

2. Carry out the additional operations listed in the previous points (point *5.1*).

N.B. Reduce intervals in the event of use under particularly harsh conditions

6 DISASSEMBLY PROCEDURE

All maintenance operations must be carried out with the forklift truck stationary and the hydraulic circuit disconnected and depressurised. The entire maintenance area must be barricaded using regulation protection devices and, if the cylinders require disassembly, a tray or container must be provided to catch the oil present in the cylinder.

6.1 Removing the Equipment from the Forklift Truck

980 / 975

6.1.1 Removing the Equipment - 980 / 975 Hooked

1. Remove the lower couplings from the structure (see *Figure 3* on page *10).*
2. For handling, use straps/chains that are suitably sized in relation to the weight of the equipment as indicated on the plate.
3. Then lift the equipment with an overhead crane or hoist of sufficient capacity and remove it from the forklift (see *Figure 4* on page *11*).

976

6.1.2 Removing the Equipment - 976 - Fork mounted

1. Remove the fork stops as shown in *Figure 6* on page *13.*
2. With the equipment supported or sufficiently raised, reverse the forklift truck and remove it from the forks.

6.2 Removing the Hook Support - TYPE 980

1. Remove the pin, with the relative cotter pin, which holds the hook support to the arm.
2. Remove the hook support after unscrewing the set screw.

For reference, see *Figure 13* and *Figure 14*.

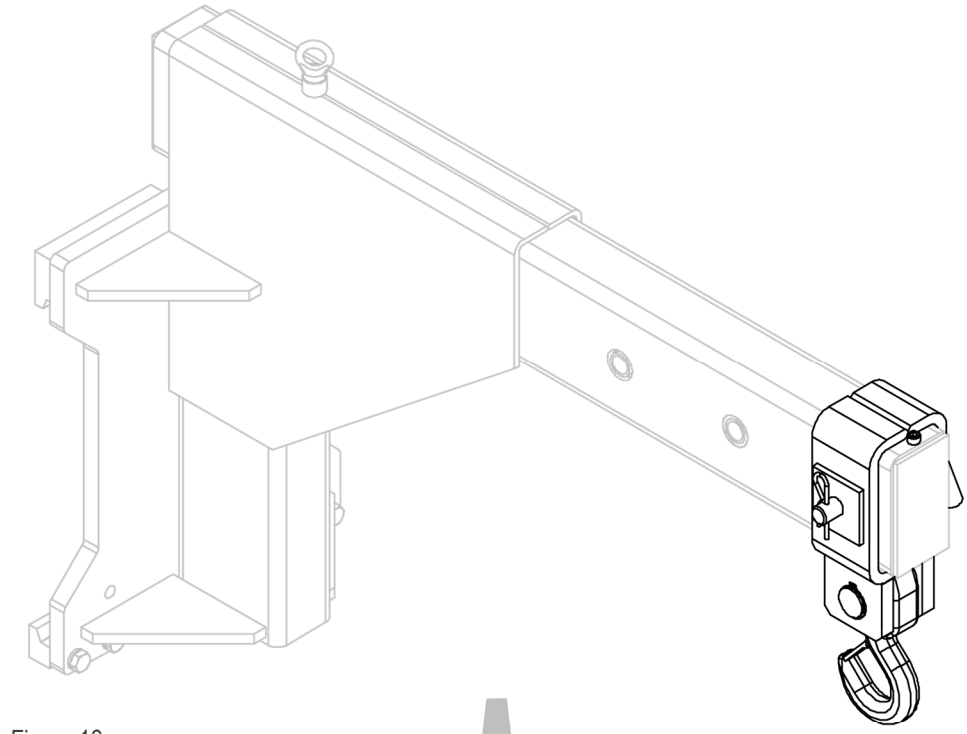


Figure 13

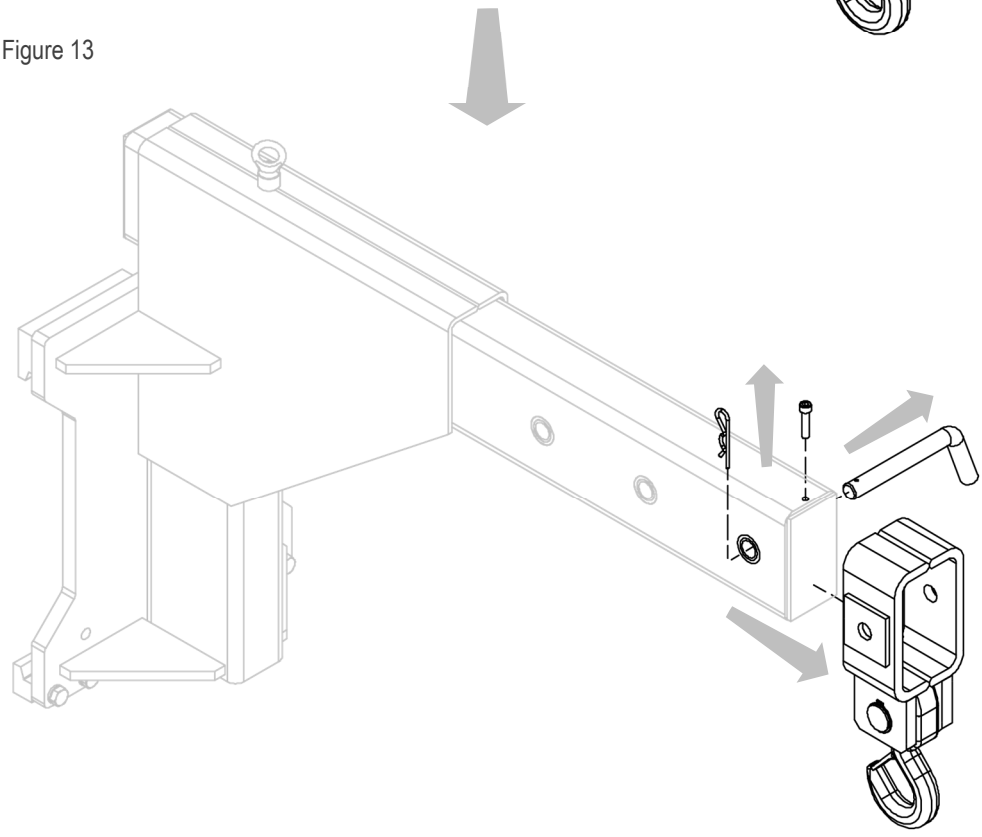


Figure 14

6.3 Removing the Hook Support - TYPE 975 / 976

1. Remove the pin, with its snap rings, which holds the hook support to the relative arm.
2. Remove the hook support after unscrewing the set screw.

For reference, see *Figure 15* and *Figure 16*.

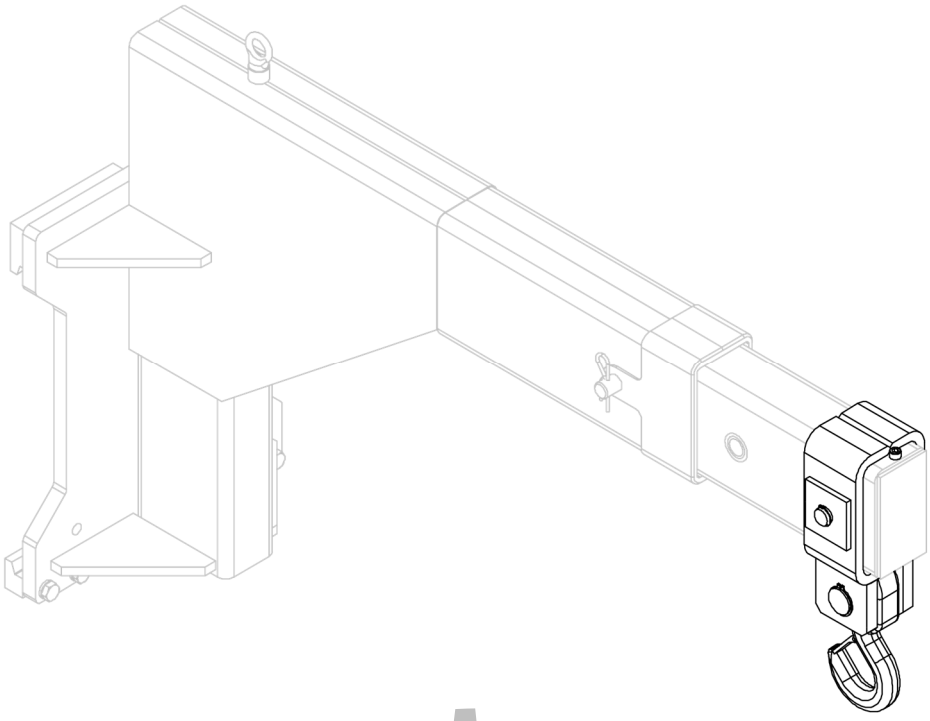


Figure 15

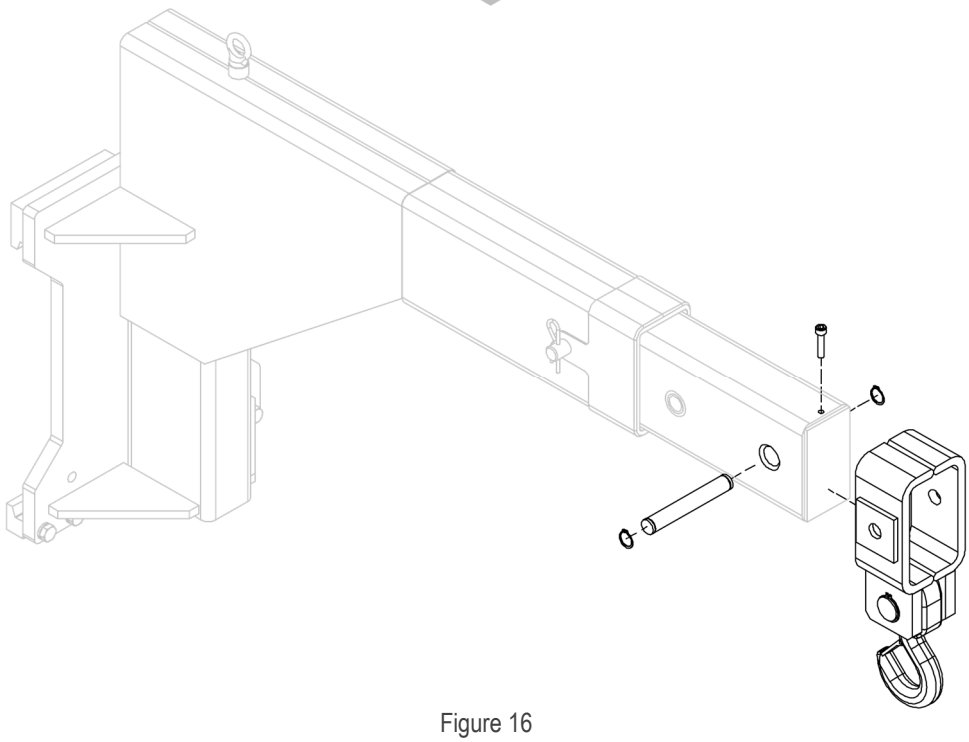


Figure 16

6.4 Removing the Hook

1. Remove the pin, with its snap rings, which holds the hook to its support.
2. Remove the hook.

For reference, see *Figure 17* and *Figure 18*.

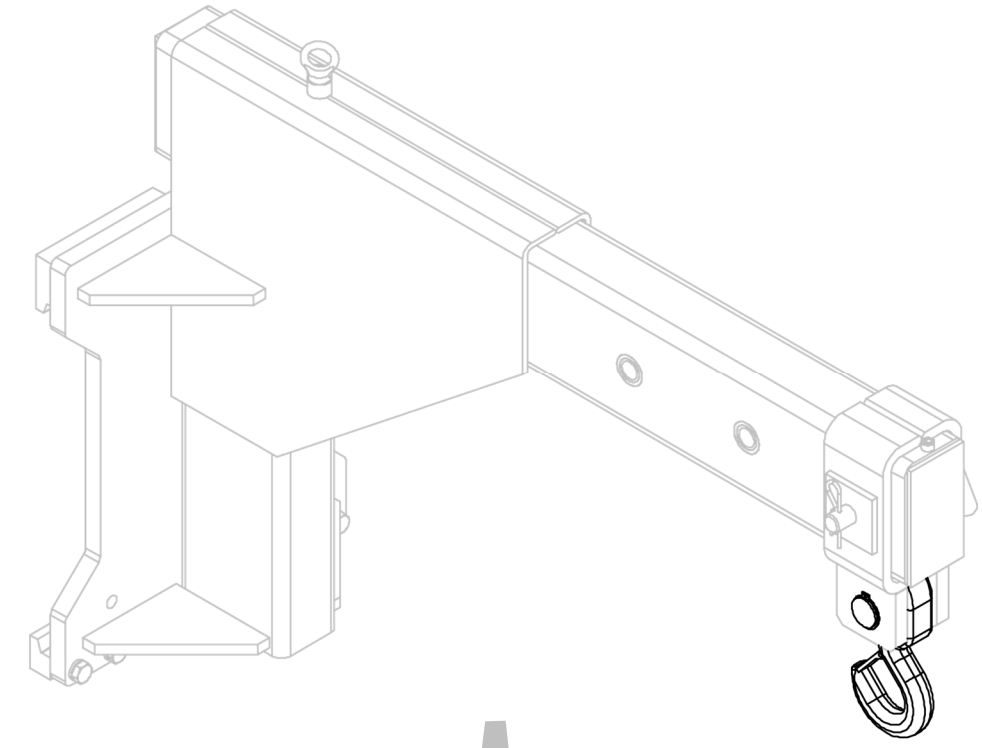


Figure 17

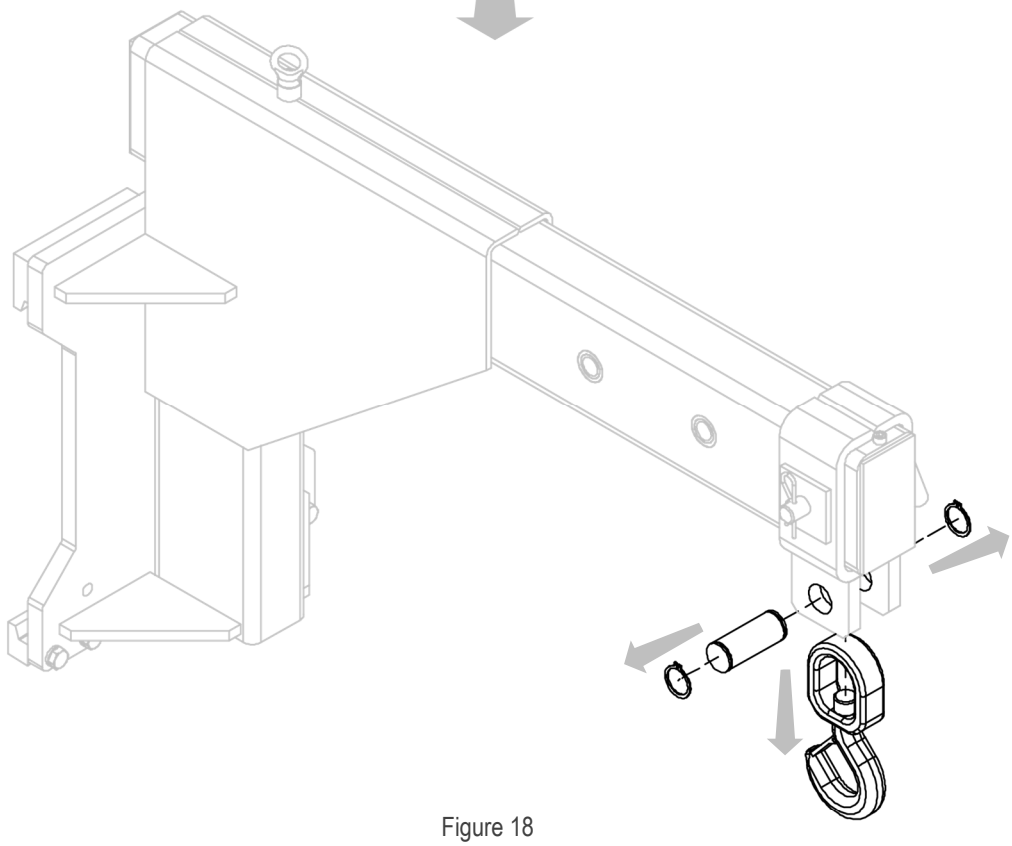


Figure 18

MADE IN ITALY

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