



USE AND MAINTENANCE MANUAL

ROLL CLAMP

TYPE 343 SF | 343 SM

TABLE OF CONTENTS



ATTENTION



**READ THIS USE AND MAINTENANCE MANUAL CAREFULLY BEFORE
COMMISSIONING THE MACHINE**

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1 SAFETY REGULATIONS FOR THE OPERATOR



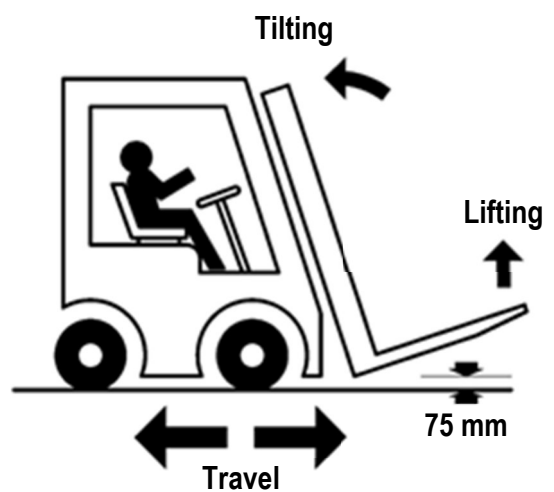
Do not transport passengers



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. – "ROLL CLAMPS TYPE 343 SF / 343 SM COILS" 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:

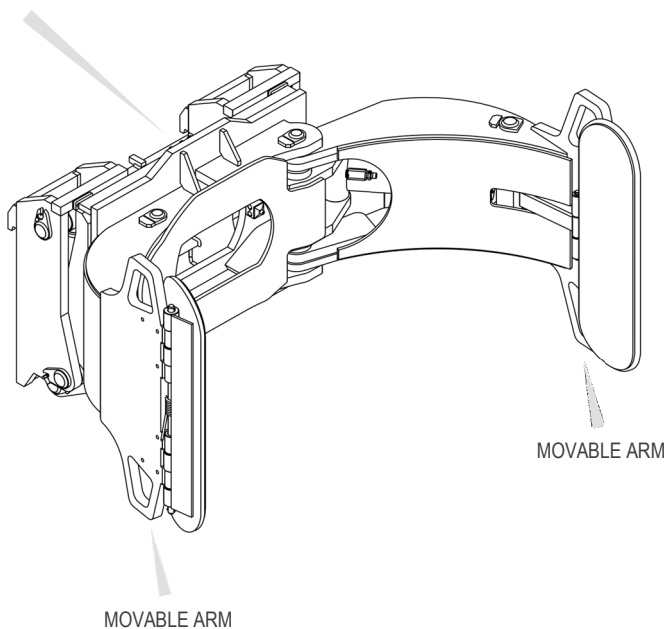
- Improper use of equipment;
- Use of equipment by untrained personnel;
- Use contrary to any national or international regulations;
- Inadequate scheduled maintenance;
- Unauthorised intervention or modification;
- Use of non-original and/or non-model specific spare parts;
- Full or partial non-compliance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

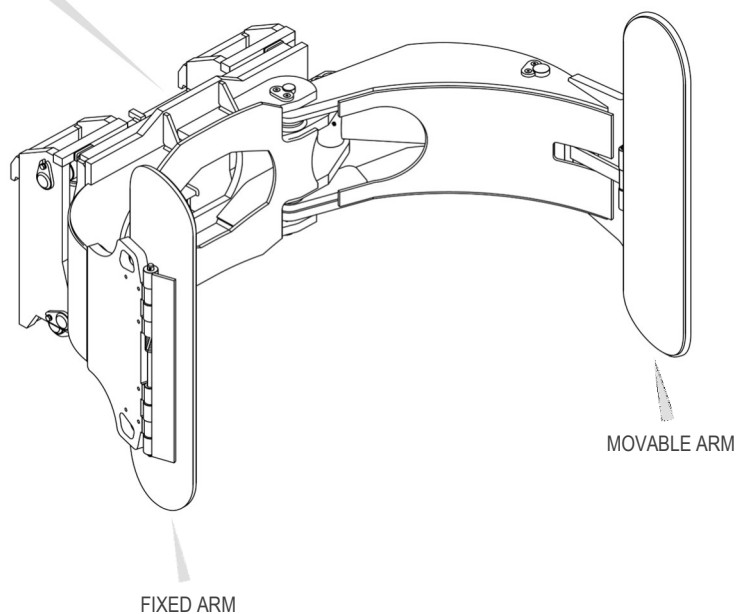
TYPE 343 SM

TILTING STRUCTURE



TYPE 343 SF

TILTING STRUCTURE



All the A.T.I.B. equipment - "ROLL CLAMPS TYPE 343 SF / 343 SM COILS" is identified by means of an adhesive plate (see Table 1) positioned on the front of the structure (see Figure 1), always refer to the serial number.

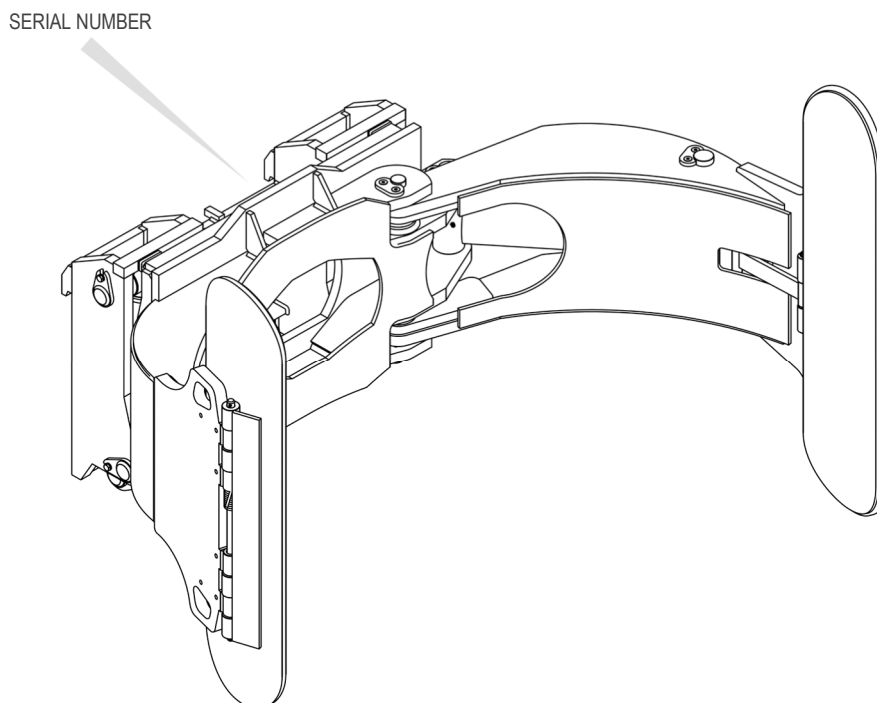


Figure 1



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		
3. MATRICOLA N° / SERIAL N°				
4. ANNO DI COSTRUZIONE / YEAR OF MANUFACTURE	10. PRESSIONE MAX. DI ESERCIZIO / MAX. OPERATING PRESSURE	bar		
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				
			A.T.I.B. S.r.l. Via Quinzanese snc, 25020 Dello (BS) - ITALY +39 030 9771711 info@atib.com - atib.com	

Table 1

1. **TYPE**
Indicates 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 or is damaged, the serial number is also stamped on the profile for connection to the fork-holder plate; 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**
Indicates the maximum pressure expressed in bar at which the equipment can work.
11. **MAX. TORQUE**
Not applicable to this equipment.

The A.T.I.B. equipment - "ROLL CLAMP TYPE 343 SF / 343 SM" has been conceived, designed and constructed to allow the tightening, lifting and front tilting of 90° of rolls of paper or similar material.

This equipment must be attached to the fork carriage of the forklift truck and connected to the distributor via a hydraulic circuit.

The opening/closing movement of the jaws and 90° front tilting is carried out by means of kinematics driven by hydraulic cylinders that allow the radial movement of the jaws themselves and the tilting of the structure to which they are applied.

The coupling components are made in compliance with the ISO 2328 standard.

3 INSTALLATION

Checking the Nominal Capacity of the Equipment

Installation must always be carried out on forklifts or shuttles with a load capacity less than or equal to that of the mast, and the installer is responsible for the load capacity of the forklift/mast or shuttle/mast assembly, which must be indicated on the forklift's identification plate.



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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.

Checking the Operating Pressure and Oil Flow Rate

A.T.I.B. recommends observing the hydraulic flow rates and operating pressures provided in Table 2, to optimise the operation of the equipment and avoid issues during work or commissioning. Values are for indicative purposes only and may vary depending on the equipment.

TYPE and ISO	FLOW RATE (l/min)		Operating pressure Maximum (Bar)
	Clamping	Tilting	
343SF / 343SM ISO II	25	20	175
343SF / 343SM ISO III	30	20	175
343SF / 343SM ISO IV	35	25	175

Table 2



ATTENTION!!



OBSERVE THE MAXIMUM WORKING PRESSURES

3.1 Installation Procedure

3.1.1 Installing the Equipment

TYPE 343 SF / 343

1. Prior to installation, check the condition of the fork carriage, ensuring that the lower profile is smooth which may otherwise affect the sliding of the lower pads.
2. In addition, ensure that the fork carriage profiles are not deformed in order to facilitate good coupling with the sideshift equipment.
3. Check the condition of the pipes, replacing those in a poor condition.
4. Remove the lower couplings from the equipment.
5. Only eyebolts can be used for handling, which must be screwed into the holes provided on the sides.
For this purpose, straps or chains that are suitably sized for the weight of the equipment as indicated on the plate must be used.
6. Then hook on the equipment using the eyebolts and, using an overhead crane or hoist of sufficient capacity, position the equipment on the fork carriage plate, taking care to position it correctly.
7. Tighten the 2 lower couplings so that the body of the couplings remains coupled to the lower fork carriage plate, tightening with the torque indicated in Table 3

Table 3

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

8. Connect the hydraulic circuit, making sure that the operating pressure of the lines is greater than or equal to that indicated on the identification plate (see Table 1 and Table 2). See the hydraulic functions indicated in Table 4

Equipment functions	Lever movement
Jaw tightening	Pull
Jaw opening	Push
Vertical axis reel tilting	Pull
Horizontal axis reel tilting	Push

Table 4

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 lift loads by clamping them between the two forks.
4. Do not attempt to move loads sideways by dragging them across the floor.
5. Do not exceed the maximum pressure indicated on the rating plate.
6. Operate the equipment from the forklift truck driver's seat using only a single operator.
7. Operate the sideshift control lever gently to avoid water hammer as far as possible.
8. 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.
9. Carry out maintenance and/or repairs with the forklift truck stationary and the hydraulic circuit inactive, using appropriate means of protection (gloves, safety shoes, etc.).
10. Only operate cylinder rods when they are correctly fitted on the equipment;
The rods may otherwise be ejected at great speed by the elevated oil pressures.

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

If the equipment is subject to slight errors in the synchronisation of movement between the two forks, operator intervention is required to nullify the displacement differences, which will increment over time.

The operator simply needs to hold one of the two forks at the end of the opening or closing stroke for the time required for the other fork to recoup the accumulated difference in displacement.

All A.T.I.B. roll clamps are designed and manufactured with a load positioned with respect to its centre of gravity, at a certain distance from the front plane of the equipment.

If the distance of the centre of gravity from the front part of the equipment needs to be increased, the weight of the load must be reduced.

In this case, consult the chart shown in Table 5, where, as a 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.

The continuous line is to be considered for equipment declared with a 500mm centre of gravity load.

The dashed line is to be used for equipment declared with a 600mm centre of gravity load.

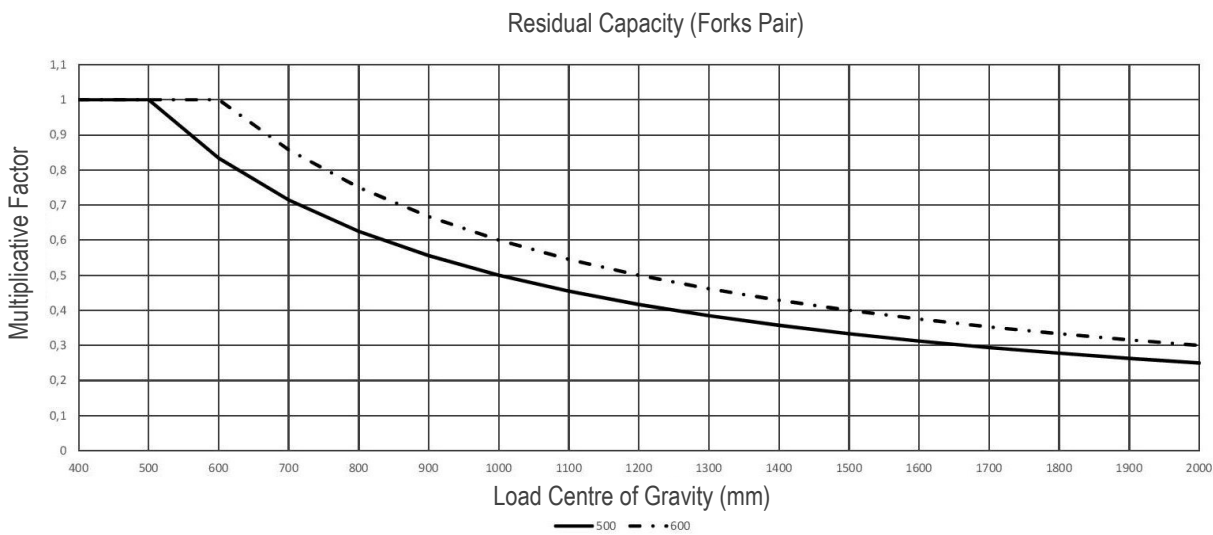


Table 1

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.



Rotation of the load is not permitted while in motion.

The nominal capacity of the forklift truck/mast 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).

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 or shuttle 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 collect 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.

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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 condition of the hydraulic connections (lines and fittings), replacing worn parts if necessary.
2. Check the tightening torque of the bolts of the lower retaining couplings of the equipment, ensuring that it is as indicated in Table 3 and, if necessary, adjust the bolts holding them in place.
3. Check the clearance between the lower part of the fork carriage plate and the lower equipment couplings.
4. Check that the fork locking bolts are correctly tightened. If necessary, tighten.
5. Clean and lubricate all sliding parts and hinges, stepping up intervention in the event of use in particularly harsh conditions.
6. Check the integrity of the plate springs and replace them if damaged.

5.2 Maintenance Every 300 Hours

1. Check the condition of the swing bushes. If an excessively worn component is detected, replace the entire component assembly
2. Carry out the additional operations listed in the previous point (Point 5.1)

5.3 Maintenance Every 1000 Hours

1. Dismantle the cylinders, replacing the seals in case of oil leaks and the rods if scored; for disassembly, the equipment must be positioned with the axis vertical.
2. Carry out the additional operations listed in the previous point (Point 5.25.1)

6 DISASSEMBLY AND REASSEMBLY PROCEDURES

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.

6.1.1 Disassembly and replacement of equipment and cylinders

343 SF / 343 SM

1. Position the trolley with the mast vertical and no load;
2. Remove the equipment from the forklift using the attachment points indicated in Figure 2;

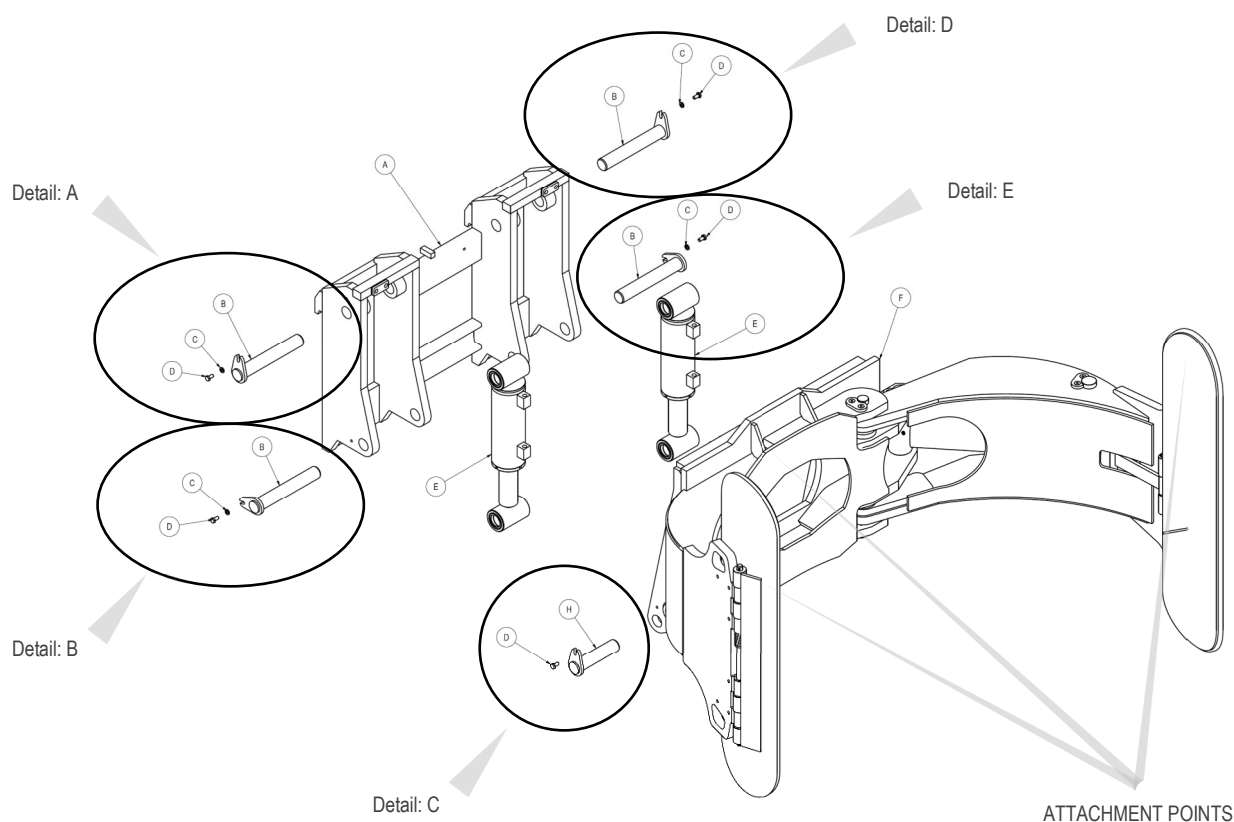


Figure 2

3. Keep the equipment safe using the attachment points indicated in Figure 2;

- Using the appropriate spanner, unscrew screw "D" and remove pin "B" as indicated in detail A and D Figure 3. In detail, the upper cylinder fixing pin to the fixed structure is indicated;

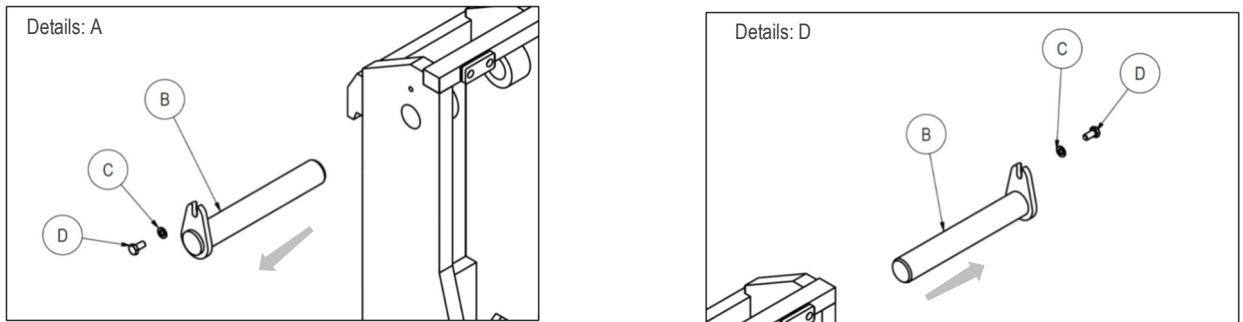


Figure 2

- Using the appropriate spanner, unscrew screw "D" and remove pin "B" as indicated in detail B and E Figure 4. In detail, the pin fixing the tilting structure to the fixed structure is indicated;

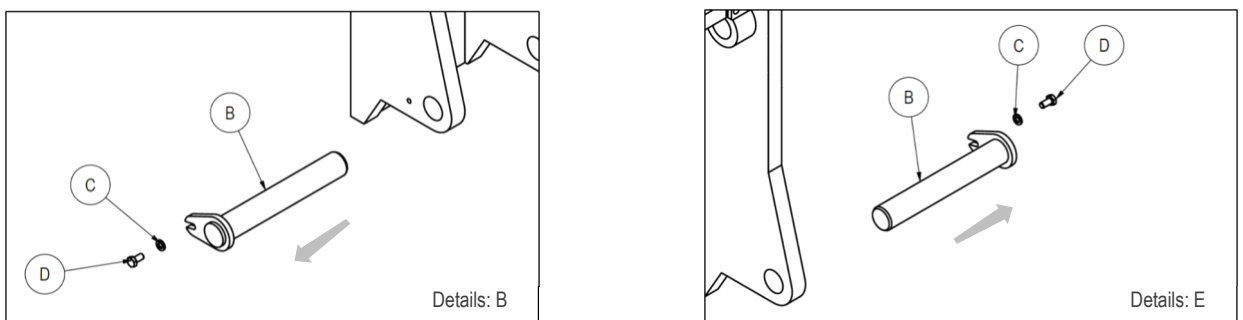


Figure 3

- After extracting the pins as indicated in point 5, with a fastening band or straps, lock the cylinders (reference and Figure 2) to the front structure.



If the cylinders are not fixed to the structure, during the removal of the front part, the cylinders could rotate and compromise the safety of the operation as well as the safety of the operator.

7. After removing the front structure, remove the safety straps or straps that secure the cylinders to the front structure and remove the cylinder fixing pins as shown in detail C

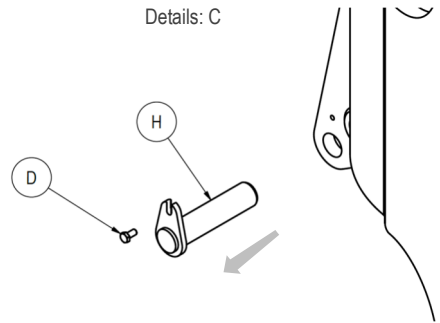


Figure 4

6.1.2 Disassembly and replacement of cylinder bushes

343 SF / 343 SM

1. Follow the disassembly operations as indicated in chapter 6.1.1.
2. After removing the cylinders, using a rubberised hammer, remove the bushes "I" see Figure 6.

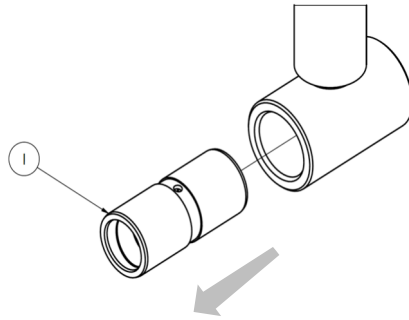


Figure 5

6.1.3 Reassembly

1. For reassembly operations, carry out the operations indicated in the previous chapters beginning with 6.1.2 and then 6.1.1.

7 TROUBLESHOOTING

7.1 Probable Faults and Solutions

FAULT	CAUSE	SOLUTION
Insufficient clamping force	Calibration of the maximum pressure valve too low	Increase the pressure without exceeding the maximum limit
	Insufficient pressure	Contact the forklift truck manufacturer
	Worn pump	Replace it
	Worn cylinder seals	Replace them
	Insufficient oil in the tank	Fill up
Pressure loss with the load tightened	Oil leakage through the block valve	Disassemble and clean: if necessary, replace
	Oil leakage from the cylinders	Replace the seals or, if necessary, the cylinders
	Oil leakage through the pipes or fittings	Tighten the fittings or replace them
Slow opening and closing	Low oil flow rate	Check the tank level and/or the pump
		Restrictions in the system: search for and remove them
	Insufficient pressure	Adjust the calibration of the maximum pressure valve
	Mechanical deformations of some parts	Repair and replace
	Worn cylinder seals	Replace
	Insufficient oil in the tank	Fill up

Table 6

For further issues, contact A.T.I.B. S.r.l.



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