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When ordering parts, please, always state:

- a) Unit serial number,
- b) Date of delivery,
- c) Required part reference and quantity

NOTE: Together with the Instruction we supply the “*EC*” *Conformity Certificate* and all documents, which are in a transparent envelope secured to the attachment.

The customer, and therefore the company which owns the attachment shall make sure that the installation instructions are strictly followed, and make sure that the correct working conditions and the maintenance terms are followed as listed.

The non-compliance with of the above mentioned implies the “improper use” by the end user, lifting from all responsibilities the manufacturer, in accordance with the foreseen safety rules.

The basic rules which have been followed are listed on the “*EC* *Conformity Certificate*”, while all derived and reference rules, as the sector quality rules prescribed (ISO 9001) as well as the analysis of risks, are part of the technical leaflet filed by the Technical Department at BOLZONI S.p.A.

1 MOUNTING INSTRUCTIONS

- a. Make sure that the central notch on lift truck carriage is undamaged and the truck carriage is plane and smooth.
 - b. Place the attachment in vertical position.
 - c. Remove the lower hooks and fix provisionally the feed circuit hoses in order to avoid any pinching or damage while mounting the revolving carriage on the truck.
 - d. Install the attachment on the truck, lining up the positioning lug, placed under the reduction unit, with the central notch.
 - e. Fix the lower hooks and tighten the screws with a torque from 80 to 120 Nm in accordance with FEM mounting class.
 - f. Check the distributor attachment hydraulic circuit. The internal feeding hoses diameter has to be at least 8 mm.
 - g. Connect the hoses of feeling group with hydraulic motor and with the invert a bin feeding group. The connection fittings to the motor are conical and mounted with Teflon tape. We recommend to tighten cautiously without exceeding a 60Nm torque.
- In accordance with the rules, check the following:
- rotation clockwise pulling the rotation lever;
 - rotation not clockwise pushing the rotation lever;
 - closing of the plate pulling the invert a bin lever;
 - opening the plate pushing the invert a bin lever.
- h. Operate the revolving carriage a few times and check all the circuit to locate any oil leaks. In case of oil leaking suitably tighten connectors after having cleaned all parts.
 - i. Take away the lateral security screws on the frontal truck carriage and mount the original truck forks on the attachment; assemble the security screws in order to avoid an accidental fork fall from the truck carriage.

2 USING YOUR ATTACHMENT

2.1 RECOMMENDATIONS

- a. The weight and load centre of gravity do not have to exceed the capacity shown on the label; load centre of gravity increase (due o higher load dimensions) should correspond to a proportional load weight reduction, in order not to pass the maximum momentum.
- b. Enter with forks into the load as centrally as possible.
- c. Regulate the camping force with the pressure relief valve on the attachment, according to the type of load container; avoid to act a too high pressure in order not to stress uselessly the structure.
- d. Make sure that the free charge, when revolving, remains in the designed place, than revolve only in correspondence of the available space.
- e. Rotate the load at slow speed.
- f. Maintain the load at a medium lifted position (checking the best visibility), in order to have better lift truck stability while operating.
- g. Carefully operate the control lever to avoid shocks on the hydraulic circuit and on the structure.
- h. Ad just lift truck speed taking into consideration the nature of the load and also the difficulties due to obstacles and to lack of space.
- i. Ad just travel speed to allow for round conditions to avoid unnecessary shocks and instability.

2.2 OPERATIONS OR MANOEUVRES TO BE AVOIDED:

- handling loads that exceed the actual lifting powers mentioned on the plate which is applied to the truck;
- Lift an unstable load;
- Lift a load on a single fork, even if of reduced weight;
- Move a nearby load with goods on the forks;
- Reverse the rotation of the attachment with load, without leaving the control lever in 0 position for one second;
- Drive the lift truck at high speed, with the load at high elevations;

2.3 OPERATIONS OR MANOUVRES NOT ALLOWED

- Use the attachment for purposes different from the original ones;
- Take on loads heavier than maximum allowed;
- Drive the lift truck in precarious visibility conditions due to a bulky load;
- Transport people on the lift truck or on the forks;
- Camper with attachment during its side rotating or clamping;
- Stand in working area of attachment or of lift truck;
- Use of the equipment when its structure is deformed (even slightly) or anyway in case of bad working (excessive play, jerkily movement, etc.).

3 MAINTENANCE

Each 500 hours make the following operations:

1. Inspect the hydraulic lines, eventually replacing the damaged parts.
2. Lubricate the revolving group through the greaser placed on the upper pinion part (on the reduction unit side). It is advisable to use a top quality grease for high pressure (ex. AGIP GR MU/EP2) and to slowly rotate the attachment during the lubricating operation.
3. Check the oil level in the reduction unit. The oil supplied with the attachment is AGIP BLASIA 460.
4. Check the felt seals: a grease clean can be caused by an excessive lubrication or by a worn seal; in this case it is necessary to replace it.

Open the cover in order to replace the felt seal (acting on the frontal screws) and glue with high quality glue (ex. BOSTIK 524 2C).

Each 2000 hours besides the previous operations it is advisable to:

- a. Check the reduction unit, its gear back-slash as it is passing the upper death point with the load; if there is an excessive play, open the pinion cover (after having disassemble the upper cover) and check again. If the play is only between the pinion and the toothed carriage, replace only the pignon otherwise replace the never ending screw, helicoidal wheel.
- b. Check the reduction unit bushings while rotating; an excessive noise or vibrations in the reduction unit area (more clearly seen with opened cover) requires the bushings replacement.
- c. Check the swivel joint tightness; if there is an oil leaking replace the seals, after having disassembled the attachment from the truck, in order to have free entrance to the revolving carriage back part.
The seals are on the central swivel joint, and have to be unthreaded after having disassembled the stirrup.
- d. Check the tightening felt seal on the swivel joint (if the attachment is used in dusty and corrosive environment) if the seal is worn replace it during the general check, because it will be necessary to

completely disassemble the invert a bin from the revolving carriage. To replace the seals follow the instructions on point 4.

- e. Check the leading bushing of the arm fulcrum wear, of the plate and of the cylinder; replace the leading bushings if the fulcrums have too much play and restore the lubrication
- f. Check the plate and rubber coating; provide to replace the pieces if there is ah high plate wear or deformation.

4 GUAISTI E RIMEDI

4.1 Problem: *Slow rotation and /or insufficient torque.*

Origin and corrective actions

1. Air in the circuit: bleed the circuit
2. Obstructions or restrictions in the hydraulic circuit: locate and remove them.
3. Worn hydraulic motor, with oil leak in internal seals and pinions: replace or repair the motor.
4. Reduction in lift truck pressure and oil flow: repair or replace the distributor.
5. Worn lift truck pump: repair or replace.

4.2 Problem: *Rotator jerks at dead centre and when inverted .*

Origin and corrective actions

1. Torque higher than the maximum allowed: reduce the load out of alignment or the load itself.
2. Play between gears: check pinion and worm screw gear and replace worn parts.

4.3 Problem: *External oil leak*

Origin and corrective actions

1. Worn felt seal. It does not effect the attachment operation, it is for cleanliness and to limit lubricant consumption: replace the felt seal gluing it by means of BOSTIK 524 2C.

4.4 Problem: *Too much noise or unusual vibration of reduction unit*

Origin and corrective actions

1. Lift truck feeding hoses with narrow oil passage: replace them.
2. Oil flow slowed down by restrictions or obstructions: locate the causes and remove them.

4.5 Problem: *Insufficient clamping force*

Origin and corrective actions

1. Regulation valve and insufficient adjustment or obstruction: adjust the valve; the pressure increases screwing the hand-wheel. Disassemble and clean all parts if there is an obstruction: adjust the valve; the pressure increases screwing the hand-wheel. Disassemble and clean all parts if there is an obstructions.
2. Internal cylinder leaking: replace junctions; replace the pieces if the cylinder has rifling or seizure.
3. Worn lift truck pump: repair or replace

4.6 Problem: *Pressure decreases after few time*

Origin and corrective actions

1. Blocked or worn check valve: disassemble the valve, replace the worn pieces. Check the pilot piston perfect sliding
2. Internal cylinder leaking: replace junctions.

4.7 Problem: *The plate does not stay at maximum opening*

Origin and corrective actions

1. Internal cylinder leaking : replace junctions
2. The truck distributor element leaks oil: ad just or replace

N.B. If there are any difficulties in servicing, or the fault is different from those listed, please contact BOLZONI after sales service.

5 WARRANTY

BOLZONI S.p.A. guarantees all its products for 12 months, for an 8-hour service per working day, beginning from the shipment date. If the products are used for more than 8 hours per day, the warranty period decreases proportionally. Warranty is limited to the replacement (ex factory *BOLZONI S.p.A.*) of the parts that *Bolzoni SpA* acknowledges as defective because of material or manufacturing flaw and it does not include any labour or travelling expense for the replacement of the said parts.

It is also understood that the warranty is not recognized if the failure is due to an **ILLEGITIMATE USE** of the product, if the installation has not been executed according to the instructions of *BOLZONI S.p.A.* or if non-original parts have been assembled on the product of *BOLZONI S.p.A.*

BOLZONI's products are not guaranteed for uses exceeding the performance specified by plates and papers.

All the *BOLZONI's* equipments are covered by an insurance for any injury suffered by a third party because of defective parts or wrong working of the equipment; all damages due to an illegitimate or incorrect use of the equipments are excluded.