| Model | From Serial # |
|---|---|
| HS-5008 | 886.068 |
| H5020 | 1.340.001 |

# Instructions for replacing the bearings on washers HS-5008 / H5020

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BEARING REPLACEMENT
HS-5008
H5020
Rev. 00

*For USA and CANADA:*

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Cod. 409748 Bearing
Rev. 00/0204

**INDEX**



## SAFETY INSTRUCTIONS

**IMPORTANT**
The operations described in these instructions are restricted to the Authorised Service

**WARNING!!**
Before attempting any service or inspection of the washing machine:

- **COMPLETELY** disconnect the machine from the power source and check for accidental reconnection. In LOGI CONTROL units, moving the **ON** switch to the OFF position is not sufficient.
- Wait at least five minutes after disconnecting the machine before beginning this operation. Within the electrical circuit of the washer exists high powered charges which can produce important electrical shocks even after the machine has been disconnected.
- Close and mechanically interlock the water supply valves and check that machine has **COMPLETELY** drained, parts have cooled down and that no pieces are in movement through inertia.

**Failure to comply with this warning may result in serious injury.**

# 1. PREPARATION

## 1.1 Variants of bearings' box

**IMPORTANT**

**THERE ARE TWO VARIANTS OF BEARINGS' BOXES IN MACHINES CURRENTLY IN OPERATION.**

**FOR CORRECT INTERVENTION, IT IS IMPORTANT TO FOLLOW THE SPECIFIC ACTION GUIDELINES FOR EACH ONE.**

- **BEARINGS' BOX WTHOUT DRAINAGE OUTLET**.
  MACHINES MANUFACTURED WITH SERIAL NUMBER BEFORE 887034 (CONTINENTAL MODELS: MACHINES MANUFACTURED WITH SERIAL NUMBER BEFORE 1343435). FOR CHANGING THE BEARINGS, FOLLOW THE STEPS INDICATED IN CHAPTER 2.

- **BEARING BOX WITH DRAINAGE OUTLET**.
  MACHINES MANUFACTURED WITH SERIAL NUMBER FROM NUMBER 887034 (CONTINENTAL MODELS: MACHINES MANUFACTURED WITH SERIAL NUMBER FROM NUMBER 1343435). FOR CHANGING THE BEARINGS, FOLLOW THE STEPS INDICATED IN CHAPTER 3.

The rest of the interventions: disassembly and assembly of covers, changing the seals and verification are described in chapters 1, 4 and 5 and are common to all washing machines.

**Note**: It is possible that machines manufactured with serial number corresponding to the variant without drainage had been modified later. If in doubt, the plastic tube in the lower part of the bearings' box identifies machines with drainage.

## 1.2. Necessary tools

| DISASSEMBLY ASSEMBLY | TOOLS AND EQUIPMENT |
|---|---|
| Lower front and rear covers (according to manufacturing series) | TORX 20 screwdriver<br>TORX 25 screwdriver<br>5mm. flat screwdriver |
| Front panel of the washing machine | Wrench for opening the control panel<br>10mm. wrench<br>TORX 20 screwdriver |
| Front outer drum | Two open wrench 13mm<br>Lock grip pressure-type pliers. |
| Drum | 17mm. key<br>Nylon-headed hammer (approx. recommended weight: 4,5lb/2kg)<br>M10 threaded rod. approx. length: 6 inch / 150mm.<br>M10 washers and nut. |
| Bearings' box | 13mm tube wrench<br>Two wrench 13mm. |
| Bearings | Nylon-headed hammer<br>Metallic round or similar item. (guiding measurements):<br>∅ 1inch. / 25mm; length: 12inch / 300mm<br>Front bearing introducer: UM-500 tool<br>UM-542 centering tool<br>Rear bearing introducer: UM-499 tool |

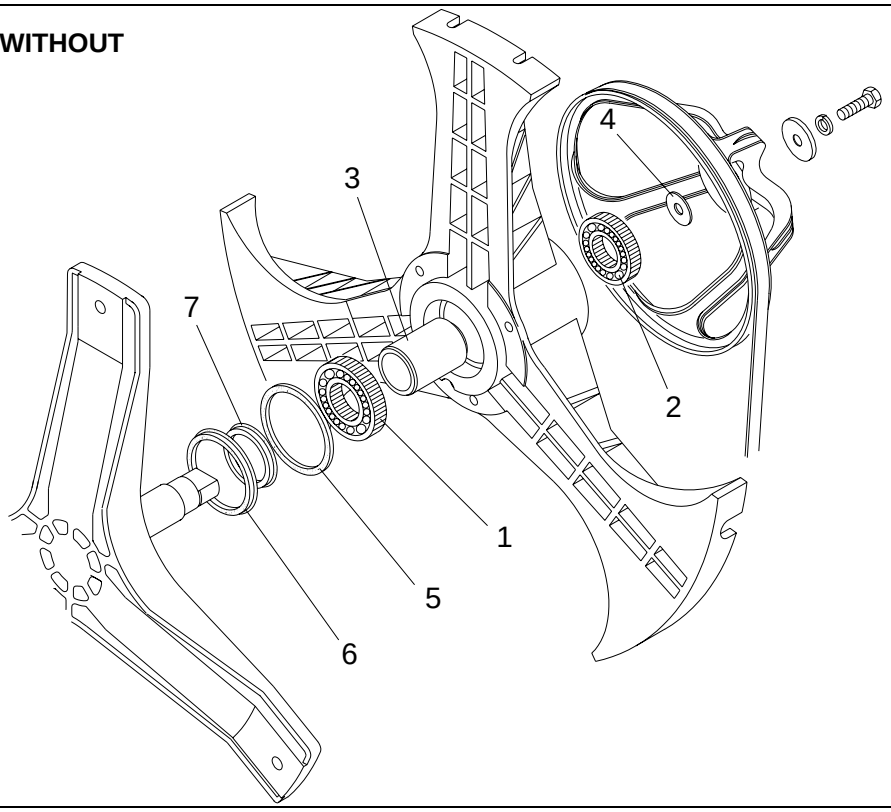
## 1.3. Pieces and materials

For identifying the pieces, consult their position in the figures in section 1.4.

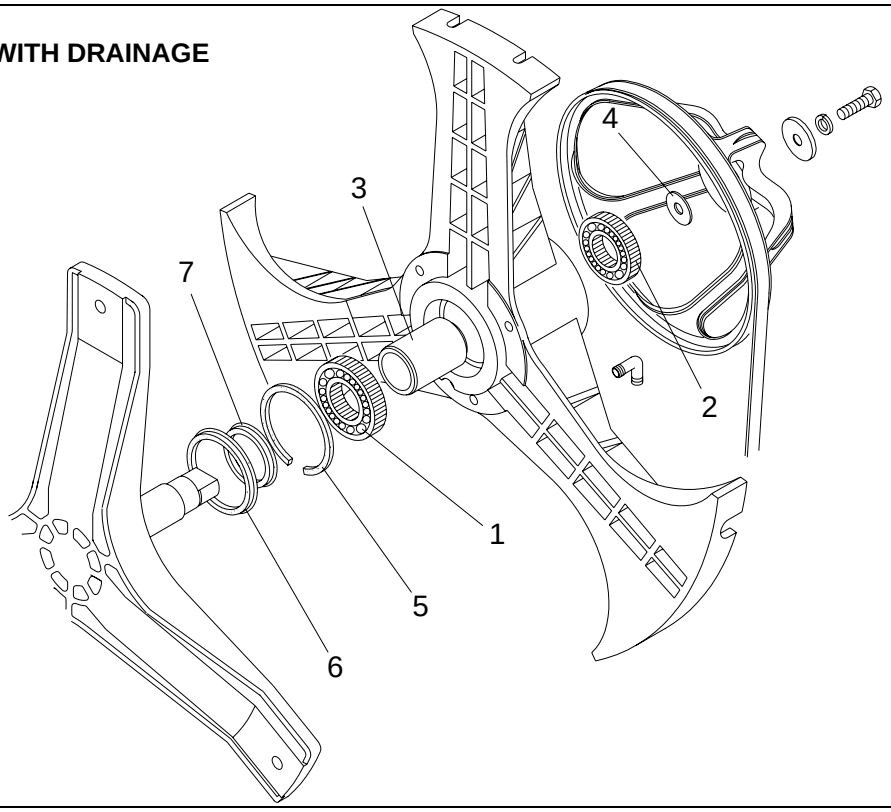
| DESCRIPTION | POSITION | QUANTITY | |
|---|---|---|---|
| | | MACHINES WITHOUT DRAINAGE before serial num.: 887034 / 1343435 | MACHINES WITH DRAINAGE from serial num.: 887034 / 1343435 |
| 6207 Bearing | 1 | 1 | 1 |
| 6206 Bearing | 2 | 1 | 1 |
| Separator | 3 | 1 | 1 |
| ∅39x∅30 Washer | 4 | 1 | 1 |
| ∅83x∅71x4 Joint | 5 | 1 | - - - - - |
| Flat joint | 5 | - - - - - | 1 |
| V-ring 65 | 6 | 1 | 1 |
| V-ring 45 | 7 | 1 | 1 |
| SKF LGWA2 grease | | 200 gr. (aprox.) | - - - - - |
| Silicon | | You can use any kind of non-acid silicon sealant. It is important to use a fine mouth applicator. | |
| Vaseline | | You can use any kind of industrial vaseline (you can also use sanitary vaseline found in smaller containers). | |

## 1.4. Parts list

**MACHINES WITHOUT DRAINAGE**




**MACHINES WITH DRAINAGE**



## 1.5. Emptying the residual bath

Before acting upon the washing machine.

- Situate the outer, horizontal drainpipe tube onto the floor (machines with pump drainage) and place a recipient under it for collecting the water that can come out.
- Lightly tilt the machine forwards and backwards in order to help empty the residual water that remains at the bottom of the outer drum and in the drains.

*fig. 1*

## 1.6. Disassembling the covers.

Lower front cover. Unscrew the three fastening screws at the base and separate it from the machine. *(fig. 1).*

Rear central cover. Take out the fastening screws, move the cover upwards and separate it from the machine *(fig. 2).*

*fig. 2*

## 1.7. Disassembling the front panel of the washing machine.

Open the door of the washing machine.

With the help of a screwdriver, remove the spring bracket that fastens the door joint. Separate the front panel from the washing machine *(fig. 3)*

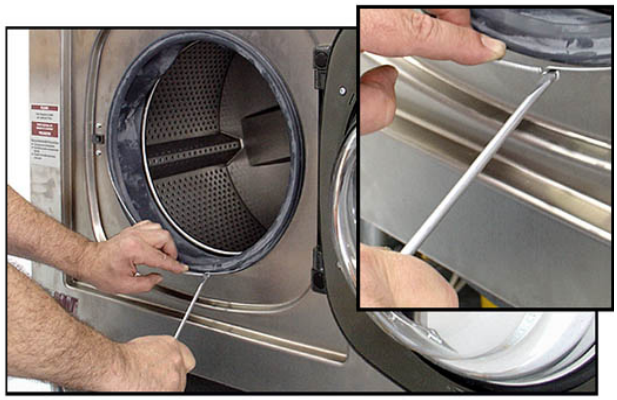


*fig. 3*

Take the fastening screws out of the door lock device *(fig. 4).* Separate it from the front panel.


*fig. 4*

Open the control panel of the washing machine using the security wrench that is provided with the machine.

Take out the four screws that fasten the front panel of the washing machine and remove it from the machine. The location of the screws is indicated by means of the arrows in *figure 5.*


*fig. 5*

## 1.8. Disassembling the outer drum front.

Take out the joint screw of the fastening ring of the front panel *(figure 6).* Remove the ring.
Hold the front panel and remove the union joint. Remove the outer drum front panel


*fig. 6*

## 1.9. Disassembling the drum.

(It is advisable to have this operation performed by two people)
Remove the drum pulley belt.
Take the fastening screw out of the drum pulley. Remove the pulley from the axle.
Attention: Some machines have an adjustment ring at the rear end of the axle. Remove said ring.
Hold the drum by the opening, lightly pulling upwards. At the same time, hit the end of the drum axle strongly with a nylon-headed hammer.
Once the axle has been freed of the bearings, take the drum out of the inside of the outer drum. Avoid rubbing the axle with the back of the outer drum.

## 2. MACHINE WITHOUT DRAINAGE. ACTION

### 2.1. Disassembling the bearings' box.

Note down the position of the level sensor tube in order to put it back during assembly.
Note down the position of the screws and washers in order to put them back during assembly.
Take out the **A** screws *(fig. 7)* fastening the bearings' box to the back of the outer drum.
Take out the **B** screws *(fig. 7)* fastening the bearings' box to the outer drum.
Remove the bearings' box.

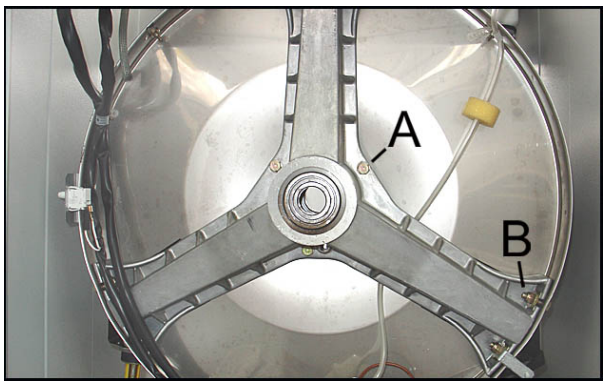


*fig. 7*

### 2.2. Changing the bearings.

Position the bearings' box in a way that the bearings can be separated from the box. Take out the bearings by striking them from inside the bearings' box *(fig. 8)*, using a metallic round (or similar item). For facilitating disassembly, it is advisable to strike along different points.


*fig. 8*

Clean the bearings' box, especially the area housing the bearings.

Lean the conical trunk end of the bearings' box on a hard, clean and flat surface.

Position the front bearing in its housing (the numbered face of the bearing in the external part). Introduce it up to the end of the box using the UM-500 tool *(fig. 9)*.

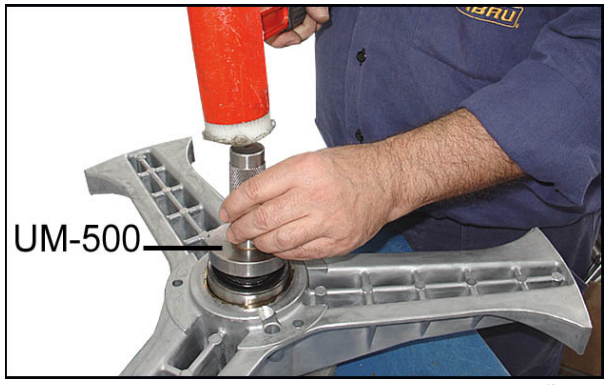


*fig. 9*

Turn the bearings' box around and position it over the UM-542 centering tool *(fig. 10)*.

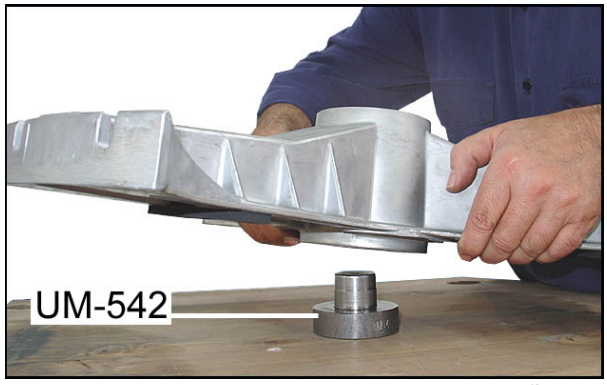


*fig. 10*

Introduce the separator into the bearings' box and position it over the UM-542 centering tool. The conical side facing outward *(fig. 11)*.

*fig. 11*

Position the rear bearing in its housing (the numbered face of the bearing in the external part). Introduce it up to the end of the separator using the UM-499 tool *(fig. 12).*


*fig. 12*

Check that the separator end piece is pressed between the two bearings.
Turn the bearings' box around again. Spread a coat of grease over the visible face of the front bearing (do not go beyond the edges of the bearing) *(fig. 13).*

**IMPORTANT**
Use SKF LGWA2 grease. It is watertight grease indicated by the manufacturer of the bearings. Other types of lubricants may not be compatible with the grease of the bearings.

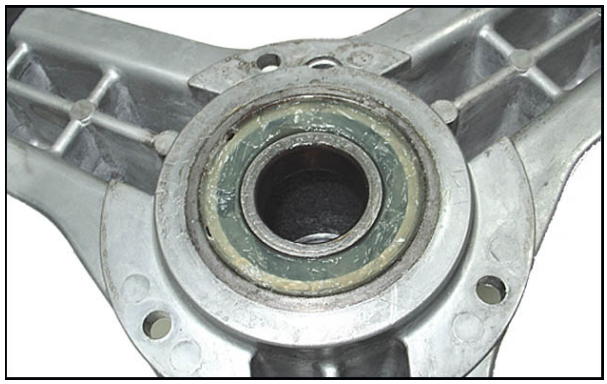


*fig. 13*

## 2.3. Preparing the back of the outer drum.

Check the back of the outer drum in the friction area of the seals. This surface should be clean and should not display dents, scratches or deformations.
For proper tightness, this surface should be totally clean.
Use a damp cloth for eliminating remains of detergent or fabric *(fig. 14).*
The adherence of remains of rubber coming from the seals can be cleaned with solvent.
The adherence of lime can be cleaned with an anti-lime liquid and then wiped away with a damp cloth.

*fig. 14*

If superficial scratches are observed, they can be smoothed with a polishing pad (Scotch Britte type) with a very fine grain. Never use abrasive products with emery-type course grain.

At the rear face of the back of the outer drum, clean the inside of the central fastening disk of the bearings' box and place a fine circular string of silicon (0,1 inch / 3mm diameter) on the joint of this disk and the back of the outer drum *(fig. 15)*.

*fig. 15*

Spread the silicon *(fig. 16)* in order to seal the joint and place the flat joint on top *(fig. 17)*.

*fig. 16*

*fig. 17*

## 2.4. Assembling the bearings' box.

Position the bearings' box against the rear side of the back of the outer drum, trying to coincide with the fastening points. The drill hole **N** *(fig. 18)* indicates the position in relation to the outer drum.

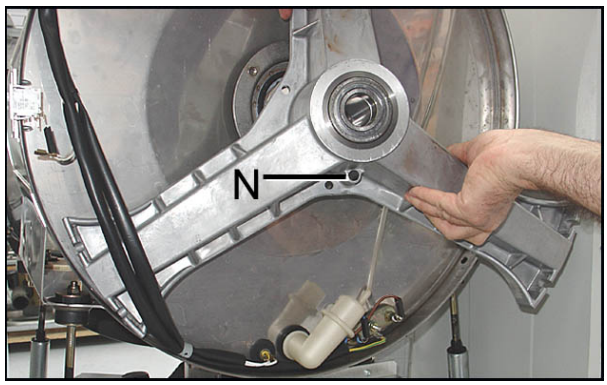



*fig. 18*

Fasten the center of the bearings' box to the center of the back of the outer drum by means of the **A** screws and the corresponding washers *(fig. 19).* Do not tighten.
Fasten the ends of the bearings' box to the edge of the outer drum by means of the **B** screws and the corresponding nuts and washers *(fig. 19).*
Avoid letting the level sensor tube become pressed by the bearings' box.
Tighten the central fastening screws **A** first and then the peripheral ones **B**.

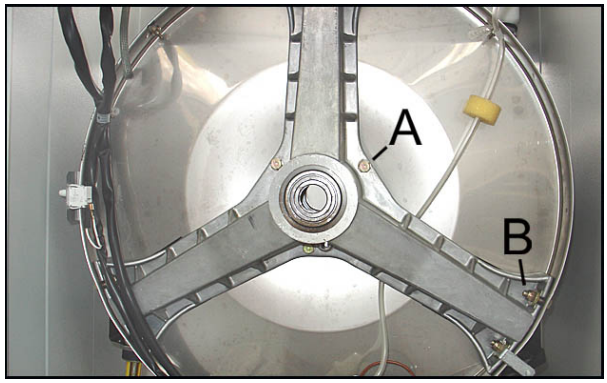


*fig. 19*

## 3. MACHINE WITH DRAINAGE. ACTION

### 3.1. Disassembling the bearings' box.

Note down the position of the level sensor tube in order to put it back during assembly.
Note down the position of the screws and washers in order to put them back during assembly
Disconnect the drainage tube from the elbow of the bearings' box.
Take out the **A** screws *(fig. 20)* fastening the bearings' box to the back of the outer drum.
Take out the **B** screws *(fig. 20)* fastening the bearings' box to the outer drum.

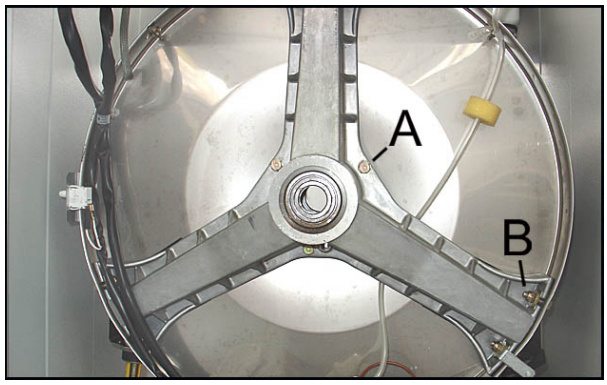


*fig. 20*

A small contact area between the bearings' box and the back of the outer drum is sealed with silicon; in order to separate the two pieces, it may be necessary to use a small lever. *(fig. 21).* Remove the bearings' box.

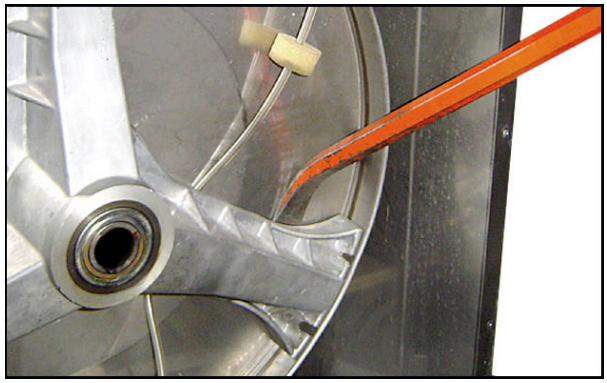


*fig. 21*

**IMPORTANT**
In order to avoid deformations in the back of the outer drum, press the ends of each one of the star branches with the lever.

### 3.2. Changing the bearings.

Position the bearings' box in a way that the bearings can be separated from the box. Take out the bearings by striking them from inside the bearings' box *(fig. 22)*, using a metallic round (or similar item). For facilitating disassembly, it is advisable to strike along different points

Clean the bearings' box, especially the area housing the bearings and the remains of silicon.


*fig. 22*

Lean the conical trunk end of the bearings' box on a hard, clean and flat surface.

Position the front bearing in its housing (the numbered side of the bearing in the external part). Introduce it up to the end of the box using the UM-500 tool *(fig. 23).*

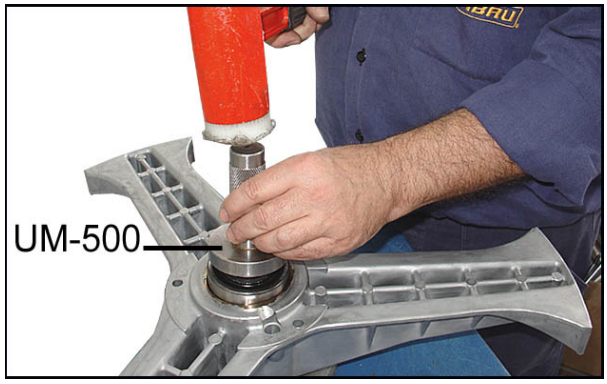



*fig. 23*

Turn the bearings' box around and position it over the UM-542 centering tool *(fig. 24).*


*fig. 24*

Introduce the separator into the bearings' box and position it over the UM-542 centering tool. The conical side facing outward *(fig. 25).*

*fig. 25*

Position the rear bearing in its housing (the numbered side of the bearing in the external part). Introduce it up to the end of the separator using the UM-499 tool *(fig. 26).*

Check that the separator end piece is pressed between the two bearings.

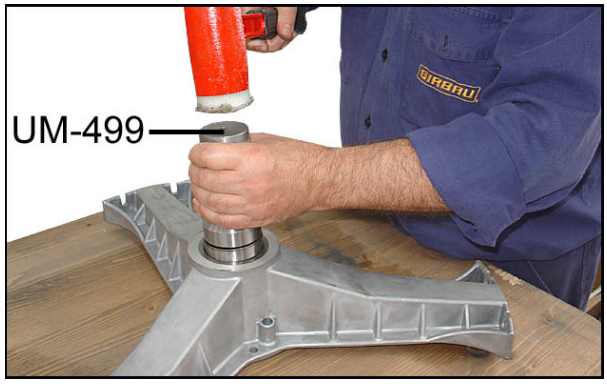



*fig. 26*

Turn the bearings' box around again.

Spread a silicon string of about 0,2 inch / 5mm in diameter in order to seal the drainage outlet. See the layout of the silicon string in *figure 27.*

**IMPORTANT**
The layout of the silicon string should correspond to the layout in the figure and should not obstruct the drainage outlet

*fig. 27*

## 3.3. Preparing the back of the outer drum.

Check the back of the outer drum in the friction area of the seals. This surface should be clean and should not display dents, scratches or deformations...
Use a damp cloth for eliminating remains of detergent or fabric *(fig. 28).*
The adherence of remains of rubber coming from the seals can be cleaned with solvent.
The adherence of lime can be cleaned with an anti-lime liquid and then wiped away with a damp cloth.

*fig. 28*

If superficial scratches are observed, they can be smoothed with a polishing pad (Scotch Britte type) with a very fine grain. Never use abrasive products with emery-type course grain.

At the rear side of the back of the outer drum, clean the inside of the central fastening disk of the bearings' box and place a fine circular string of silicon (0,1 inch / 3mm diameter) on the joint of this disk and the back of the outer drum. (fig. 29)

*fig. 29*

Spread the silicon in order to seal the joint of the two pieces *(fig. 30)*

*fig. 30*

Place the flat joint starting from the welding points indicated in figure 31.

**IMPORTANT**
The position of the flat joint should allow the drainage of the bearings' box. In case of improper placement, drainage will not be effective.

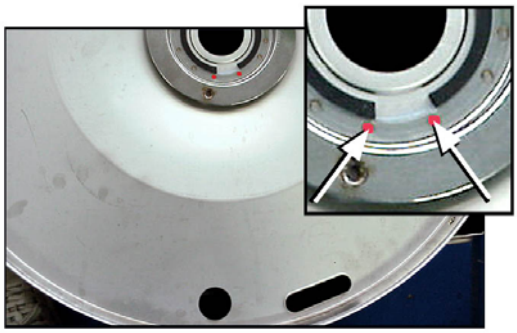


*fig. 31*

## 3.4. Assembling the bearings' box.

Position the bearings' box against the rear face of the back of the outer drum, trying to coincide with the fastening points. The drainage outlet **N** *(fig. 32)* indicates the position in relation to the outer drum.

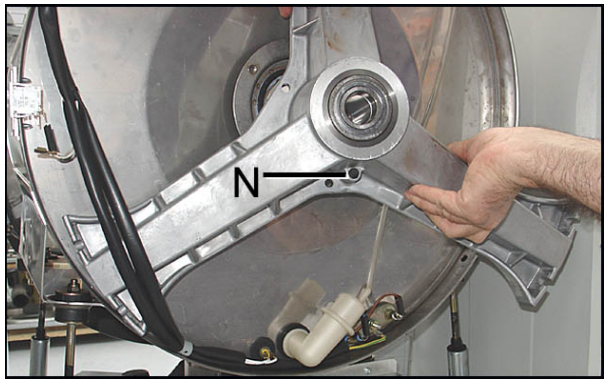



*fig. 32*

Fasten the center of the bearings' box to the center of the back of the outer drum by means of the **A** screws and the corresponding washers *(fig. 33).* Do not tighten.

Fasten the ends of the bearings' box to the edge of the outer drum by means of the **B** screws and the corresponding nuts and washers *(fig. 33).*

Avoid letting the level sensor tube become pressed by the bearings' box.

Tighten the central fastening screws **A** first and then the peripheral ones **B**.

Fasten the drainage tube with clamps. Do not deform the tube with the clamps.

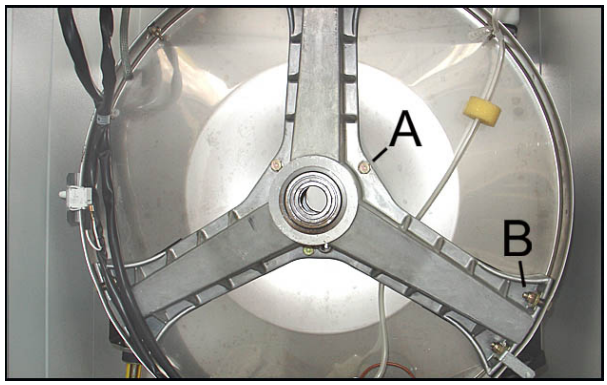



*fig. 33*

## 4. Changing the seals.

Remove the old seals.

TOTALLY clean the housing of the seals. The contact of the seals with the TOTALITY of its housing surface area is essential.

**DO NOT LUBRICATE the housings of the seals.**

Mount the inner seal. Underneath the lip, press the base of the seal against the housing *(fig. 34).*

*fig. 34*

Spread a **VERY FINE** string of silicon inside the housing of the outer seal *(fig. 35).*

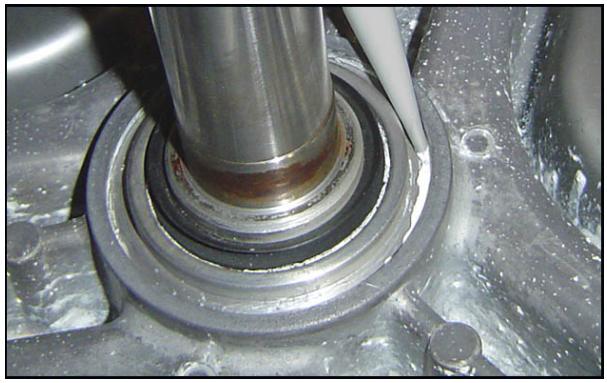


*fig. 35*

Mount the outer seal and press the base of the seal against the housing in a circular direction *(fig.36).*

Check that the seal remains perfectly positioned and that the silicon does not provoke unevenness in the lip of the seal.

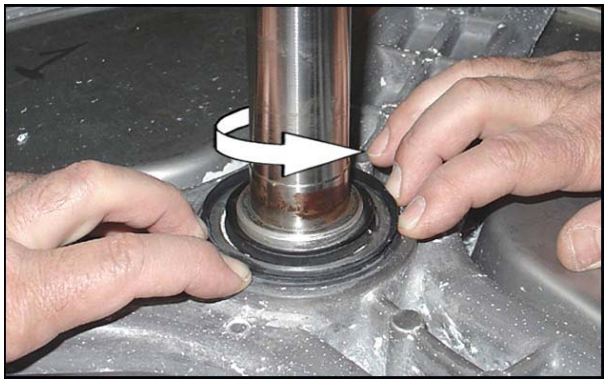


*fig. 36*

Lubricate the lips of the seals with Vaseline.

**VERY IMPORTANT! ! !**
**To prevent an incorrect position of seals lip** *(fig. 37)***, strongly press them against the shaft base** *(fig.38)* **immediately before assembling the drum in the bearings box.**

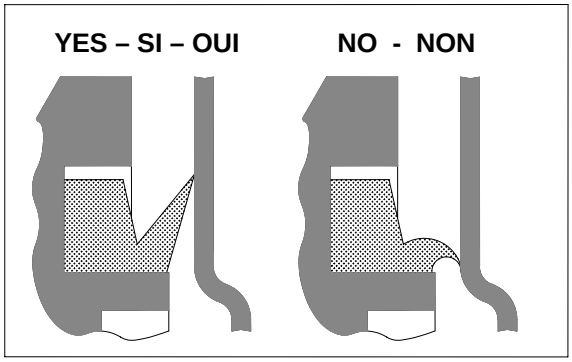



*fig. 37*

*fig. 38*

# 5 ASSEMBLY AND VERIFICATION

## 5.1. Assembling the drum.

Introduce the end of the drum into the outer drum. Avoid letting the axle strike or scrape against the back of the outer drum.
Center the axle with bearings and introduce it up to the back.

**IMPORTANT**
**This operation should be performed with extreme care due to the danger that a blow to the friction area of the seals entails and the following danger of loss of tightness.**

Machines without drainage: ONLY use the 39x30 washer. Set it at the end of the axle *(fig. 39).*
Machines with drainage: Use the washer already set originally onto the machine. Set it at the end of the axle.
Mount the pulley and tighten the fastening screw.
In case the drum does not totally enter the housing of the bearings, place the threaded rod and the M10 nut at the rear end of the axle *(fig. 40)* and tighten the nut in order to complete the introduction of the drum.
Then fasten the pulley with the screw.
Check that the drum rotates freely.
Mount the belt.

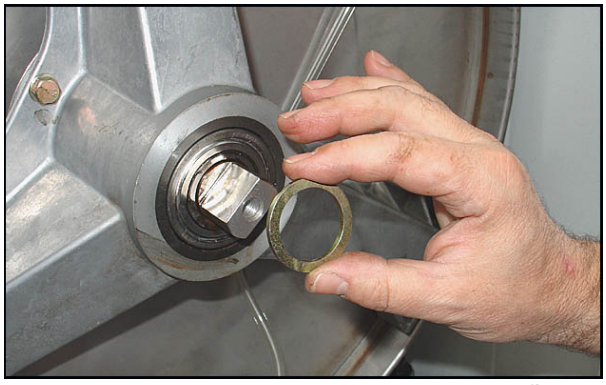


*fig. 39*

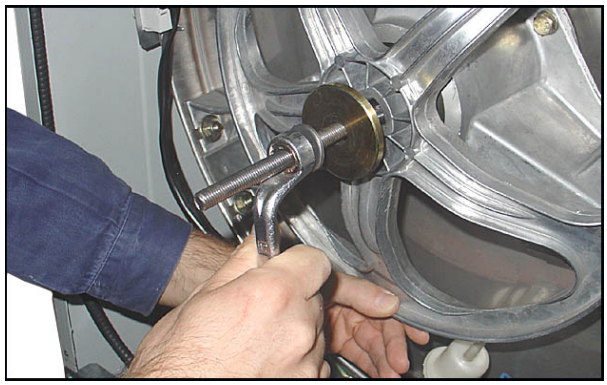


*fig. 40*

## 5.2. Assembling the outer drum front.

Position the front panel against the opening of the outer drum, the arrow point symbol *(fig. 41)* should signal the welding of the outer drum. Press both pieces until the edges come into contact.

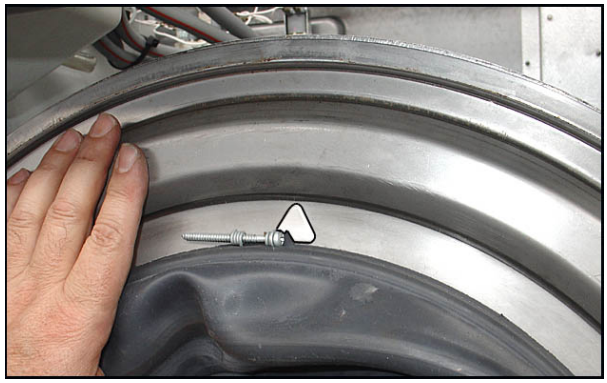


*fig. 41*

Mount the union gasket.

Mount the fastening ring with the ends in the upper part. Set the joint screw *(fig. 42).*

*fig. 42*

Tighten the lower area of the ring with the grip pliers *(fig. 43).* If you have more than one plier, place them in the lower area of the ring. Tighten the joint screw of the ring.

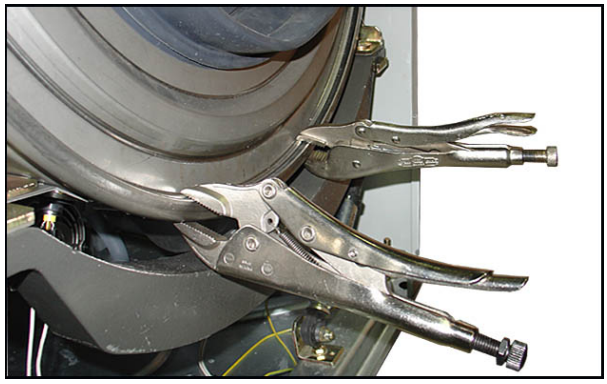


*fig. 43*

## 5.3. Assembling the front panel of the washing machine.

Fit the front panel with the side covers and fasten it with the upper screws.
Fit the door lock device in the front panel. Fasten it with screws.
Check that the latch of the door enters the lock housing.
Fit the door joint into the rim corresponding to the front panel. Fasten it with the spring clamp.
Fasten the lower part of the front panel with the screws.

## 5.4. Assembling the covers.

Follow the steps in reverse of those for disassembly (section 1.6).
Pay special attention to the arrangement of the cables and connectors of the microprocessor board.

## 5.5. Checking the machine.

Once **ALL** the washing machine covers are mounted and fastened, check the operation and water tightness of the washing machine.

**⚠ WARNING!!**
**NEVER START THE MACHINE BEFORE MOUNTING AND FASTENING ALL THE WASHING MACHINE COVERS.**

**Steps to follow:**
Check that the drainpipe outlet is placed and fastened correctly.
Open the manual water supply valves.
Connect the electric supply of the washing machine.
Load the washing machine with clothes.
Select a washing program. It is preferable to use a program with a high temperature.
Execute the selected program. During the execution of the washing cycle, check that no alarms appear, which indicate a malfunction in the machine, especially those related with the inverter or motor.

Once finalized, disconnect the electric supply and close the manual valves of the water inlets.
Take the front lower cover and the rear cover off.
Check that the base of the machine is dry and that no bath loss occurs, especially in the joints of the front panel of the outer drum and the door joint.
Check that no bath loss occurs, especially in the joints of the bearings' box and the back of the outer drum or through the drainage tube (machines with this type of assembly).
In the case of not observing any kind of anomaly, put the covers on.
Open the manual valves and connect the electric supply.

**Remember that:**
In LOGI Control machines, there is the possibility of accelerating up the program (see Instruction Manual, section 1.5).
In COIN machines, there is the possibility of using the DEMO program (see Advanced Instruction Manual, section 2.4).