



INSTRUCTIONS 208 e

Section	
Effective	May 2007
Replaces	February 2006

Translation of the original instructions

Pumps

P15 - P25 - P40 - P60 - P100

Cast iron - Steel - Stainless steel

***Standardized mechanical shaft seal
with lubricant reservoir***

INSTALLATION

OPERATION

MAINTENANCE



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Your distributor :

Before any disassembly, makes sure that the pump has been drained and all the necessary precautions to prevent it from starting up. The pump must not start up, even accidentally.

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PUMP..... See specific Instructions

1. FUNCTION

The shaft **501** drives the rotary part **697** in its rotation through the agency of bolts **617**.

The stationary part **604** forms an integral unit with the shaft O-ring holder **601** through the O-ring **605** and the retainer **627**.

THE SEALING IS ACHIEVED :

- 1 - On the shaft, by the O-ring **613** of the rotating part **697**.
- 2 - By the contact face between the one-piece rotating part **697** and the fixed stationary part **604**.
- 3 - Between the fixed stationary part **604** and the shaft O-ring holder **601** by the O-ring **605**.
- 4 - Between the shaft seal holder **601** and the outboard bearing **725** by the seals **602**.
- 5 - Between the outboard bearing **725** and the cover **401** by the seal **727**.

The sealing is dependent therefore on the state of the contact surfaces and the seals and O-rings.

LEAKING GASKET

The gasket has been damaged during fitting (scratching of the friction faces ...)

Gasket is ill-suited to the product (chemical or mechanical attack (abrasion) the seals and counterparts)

It has been subject to normal wear.

GASKET WITH LUBRICANT RESERVE VARIANT

The lubricant reserve **645** is necessary in the situation where the pumped product is liable to solidify in the atmosphere.

2. DISASSEMBLY - RE-ASSEMBLY

2.1 TOOLS REQUIRED

Flat spanners for bolts **723**, **729**, **726**
Opening circlip pliers
Flat screwdriver
Extractor (e.g. FACOM U-35L)
Socket head spanner for bolts **617**
Bushing **739**

Before any disassembly, make sure that the pump has been drained and take all the necessary precautions to prevent it from starting up. The pump must not start up, even accidentally.

2.2 DISASSEMBLY

Uncouple the pump by removing the coupling.
Remove the key **508**.
Carefully clean the shaft end to remove any traces of paint, oxidation, burrs...
Loosen the bolts **723** and remove the cover **705** without damaging the seal **707**.
Remove the circlips **537**.
Remove the washer **731**.
Remove the ball bearing **703** by means of the extractor : pass the grippers behind the ball bearing while sliding them into the holes of the outboard bearing **725**, using the shaft end **501** as a support.
Remove the second washer **731**.
Loosen the 3 bolts **726**.
Slide the outboard bearing assembly along the shaft.
Do not dismantle the base **401** from the pump cylinder.
Position the outboard bearing assembly **725** vertically, the shaft seal being at the top.
Loosen the 2 bolts **729** and remove the 2 square nuts **730**.
Pull the shaft seal holder **601** and extract it through the side hole of the outboard bearing **725**.
In the case of an assembly with lubricant reservoir, first remove the cover unit **645** with its seals **647** and **646** by sliding it through the side hole of the outboard bearing **725**.
Withdraw the stationary part **604** and its O-ring **605** which remain on the shaft seal holder **601**.
Loosen the 3 bolts **617**.
Withdraw the rotating part **697** by sliding it along the shaft **501**.

2.3 RE-ASSEMBLY

1. Check that the contact surfaces of the stationary part **604** and the rotating part **697** are in good condition. Make sure the O-rings **605** and **613** are in good condition.
Fit the stationary part **604** with its O-ring **605** in the shaft seal holder **601** by engaging the pin **627** in the slot of the stationary part. Clean the contact faces of the shaft seal using a clean rag.
Check the condition of the 2 seals **602** and change them as needed. Insert the shaft seal holder **601** with its seals **602** through the side aperture of the outboard bearing **725**.
Lightly lubricate the shaft **501**,

Abut the rotating part **697** with its O-ring **613**.

Pumps with CAST IRON or STEEL construction

- Supported against the circlips **511** (P15 - P25 - P40 - P60 pumps)
- Supported on the spacer **641** (P100 pump).

Pumps with STAINLESS STEEL construction

- ♦ At right angles to the opening of the circlips **511** (except P100 pump absence of circlips).
- Supported on the spacer **512** (P15 BI and P25 BI)

Then tighten the screws **617**.

CAUTION

The fitting method described relates to gaskets of length L1K (according to NFE standard 29 991). It is possible to use shorter gaskets. For this it is necessary to make the following provisions:

Pumps with CAST IRON or STEEL construction

Insert a wedge between the rotating parts and its support (circlips **511** or spacer **641/512**). This shall have a thickness X equal to the difference between gasket dimensions L1K and L.

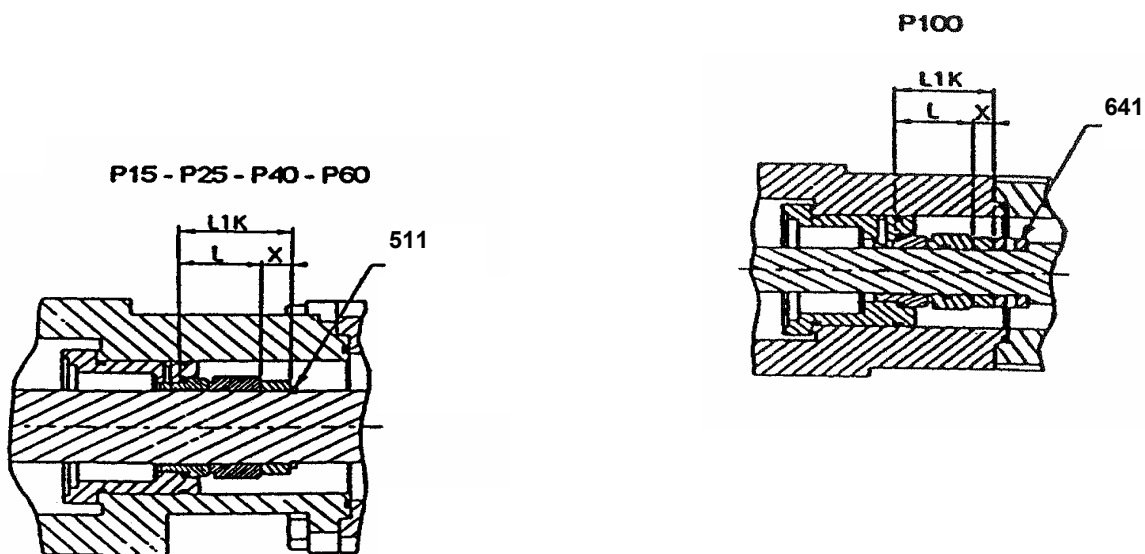
Pumps with STAINLESS STEEL construction (except P100)

Position the rotating part at a dimension X of the opening of the circlips equal to the difference between the dimension L1K and the dimension L of the gasket.

Illustration of dimensions L1K

PUMP	Ø SHAFT	L1K
P15 - P25	30	42.5
P40- P60	35	42.5
P100	45	45

$$X = L1K - L$$



2. Screw the 2 square nuts **730** onto the 2 bolts **729**.
3. Check that the seals **727** and **716** are in good condition, change them if necessary.
Slide the whole outboard bearing assembly onto the shaft **501** as far as the support on base **401**. Take care not to knock the edge of the stationary part **604** of the gasket. Tighten the 3 bolts **726**.
4. Place the first washer **731** as support on the shoulder of the shaft **501**.

Couple the ball bearing **703** to the shaft by hand, push it as far as the support by means of a suitable bushing **739**, on the internal cage, against the washer **731**.

FAILURE TO FOLLOW THIS INSTRUCTION CAN SERIOUSLY DAMAGE THE INTERIOR OF THE PUMP.

In no case must the ball bearing be pushed on to the shaft without support for the shaft. Place the second washer **731** against the ball bearing.

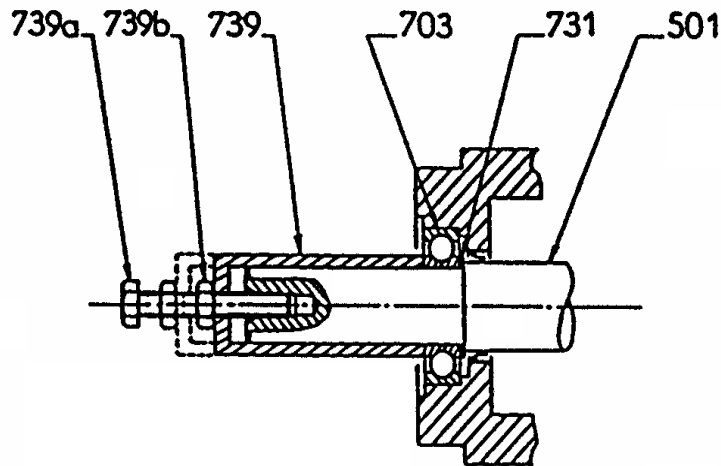
Fit the circlip **537**.

Clean the sides of the cover **705** and of the outboard bearing **725** with a clean rag.

Check seal **707** and change if necessary (take due note of fitting direction).

Fit the cover **705** with its seal **707** after applying sealing paste to the contact surface between the cover **705** and the outboard bearing **725**.

Tighten the 4 bolts **723**.



2.4 VARIANT WITH LUBRICANT RESERVOIR

In the case of an assembly with lubricant reservoir, carry out operations 1. (§ RE-ASSEMBLY).

Check the seals **646** and **647** and change them if necessary.

Take care when fitting seal **647** to have the lips pointing towards the shaft output.

Slide the cover **645** with its seals **646** and **647** through the side aperture of the outboard bearing **725** while locating the lubricator **644** towards the bottom and the valve **643** towards the top, screw the 2 bolts **729** into the square nuts **730** without tightening.

Carry out re-assembly operations 3. (§ RE-ASSEMBLY).

Unscrew the 2 bolts **729** and push the cover **645** outwards.

Use a grease gun to pump grease into the internal volumes of the gasket holder **601** and the cover **645** so as to prevent air from getting into the grease as far as possible.

Carry out operations 2. (§ RE-ASSEMBLY).

Fill the lubricant reservoir with the lubricator **644** until the grease overflows through the snifter valve **643**.

Carry out operations 4. (§ RE-ASSEMBLY).

3. MAINTENANCE

The mechanical gaskets require very little maintenance. In each case you should follow the instructions appertaining to the particular model.

Lubrication of the ball bearing 703

Pumps construction Stainless steel : The roller bearing is lubricated for life.

Other constructions :

* For pumps working at ambient temperature and protected from the weather :
Lubricate every 1000 operating hours

* For other working situations :
Lubricate every 500 operating hours

For pumps operating at elevated temperatures (in principle, from 100°C), choose a grease with a high drop point.

Use a good-quality ball bearing grease.

Topping up the lubricant reservoir 645

Every 500 operating hours the lubricant reservoir must be filled to overflowing by means of the snifter valve **643**.

4. SPARE PARTS LIST

° = Assemblies and parts able to be supplied as spares

Ref	No.	DESIGNATION
° 600	1	BLOCDIR SHAFT SEAL. COMPLETE
610	1	STATIONARY PART, COMPLETE
604	1	Stationary part
605	1	Stationary part O-ring (see 699)
697	1	Rotating part
613	1	Rotating part O-ring (see 699)
617	3	Drive bolt
It is recommended that the sets of washers and outboard bearing seals 797 should also be supplied		
° 699	1	SET OF SHAFT SEAL O-RINGS (605 + 613)
° 609	1	SHAFT SEAL HOLDER
511	1	Circlips (see 715)
601	1	Shaft seal holder
602	2	Shaft seal holder seal (see 715)
627	1	Shaft seal retainer
641	1	Shaft seal carrier
642	2	Shaft seal carrier bolts (P100 only)
729	2	Shaft seal holder bolt
730	2	Shaft seal holder nut
° 715	1	SET OF WASHERS (511+537+602+646+647+707+716+727)
° 720	1	OUTBOARD BEARING, COMPLETE
703	1	Ball bearing of outboard bearing (see 715)
716	1	Lip seal (see 715)
725	1	Outboard bearing
726	3	Outboard bearing bolt
727	1	Outboard bearing seal (see 715)
731	2	Roller bearing support washer (see 704)
° 740	1	OUTBOARD BEARING COVER, COMPLETE
705	1	Outboard bearing cover
707	1	Lip seal (see 715)
723	4	Cover bolt
° 704	1	BALL BEARING KIT
537	1	Circlips
703	1	Ball bearing
731	2	Support washer
° 640	1	LUBRICANT RESERVOIR, COMPLETE
643	1	Valve
644	1	Lubricator
645	1	Seal holder cover
646	1	Cover seal (see 715)
647	1	Lip seal (see 715)

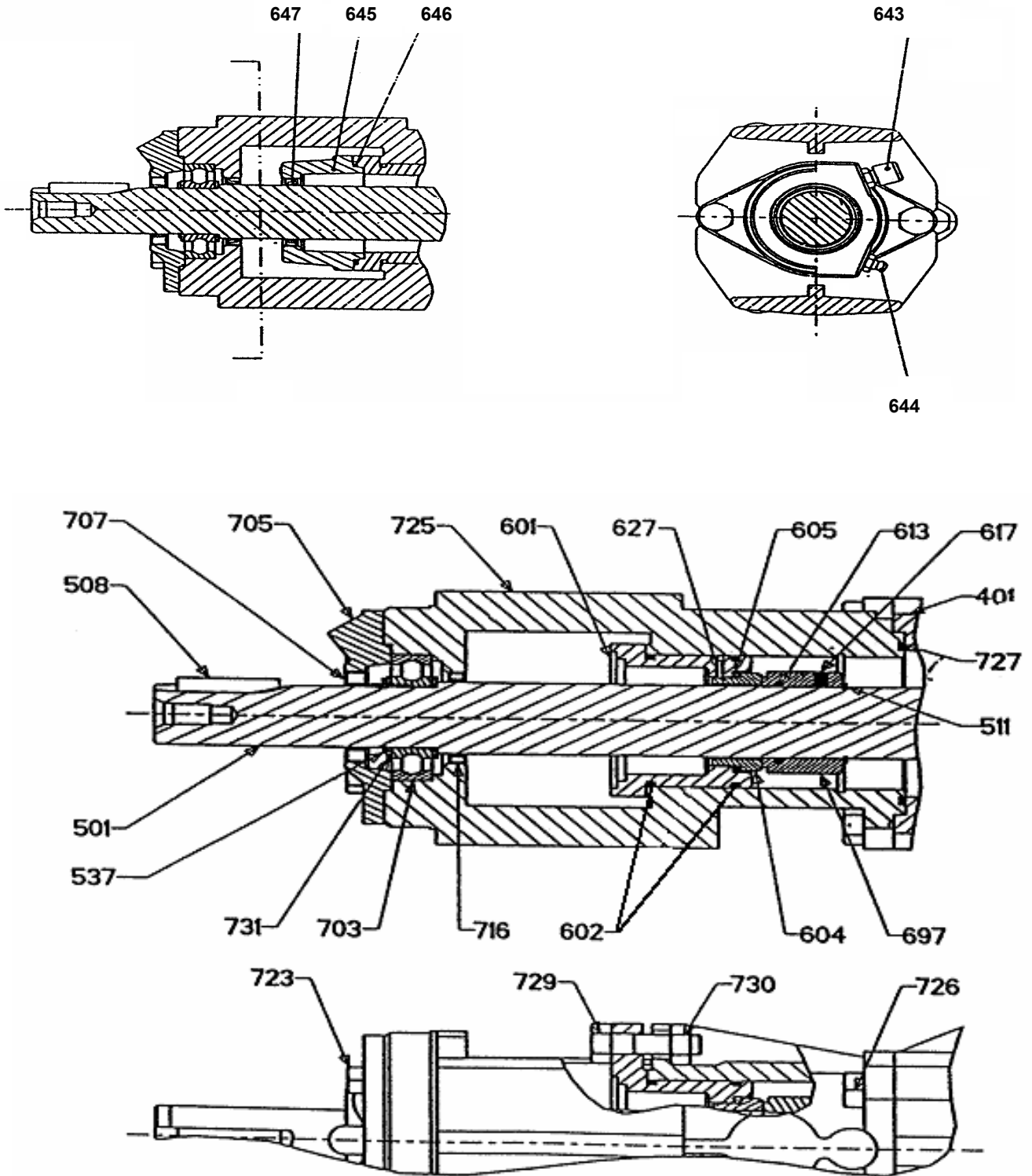
To order spare parts, please indicate :

- ♦ TYPE and SERIAL No. of the pump (stamped on pump plate)
- ♦ INSTRUCTIONS 208
- ♦ REFERENCES and DESIGNATIONS of the desired parts. Only those parts (complete assemblies or separate parts) whose reference is preceded by (°) can be supplied.

5. CROSS-SECTION DRAWINGS

Option : LUBRICANT RESERVOIR - All types of pumps

P15 - P25 - P40 - P60 Pumps



P100 Pump

