



INSTRUCTIONS 1003-R00 e

Section	1003
Effective	September 2014
Replaces	New

Original instructions

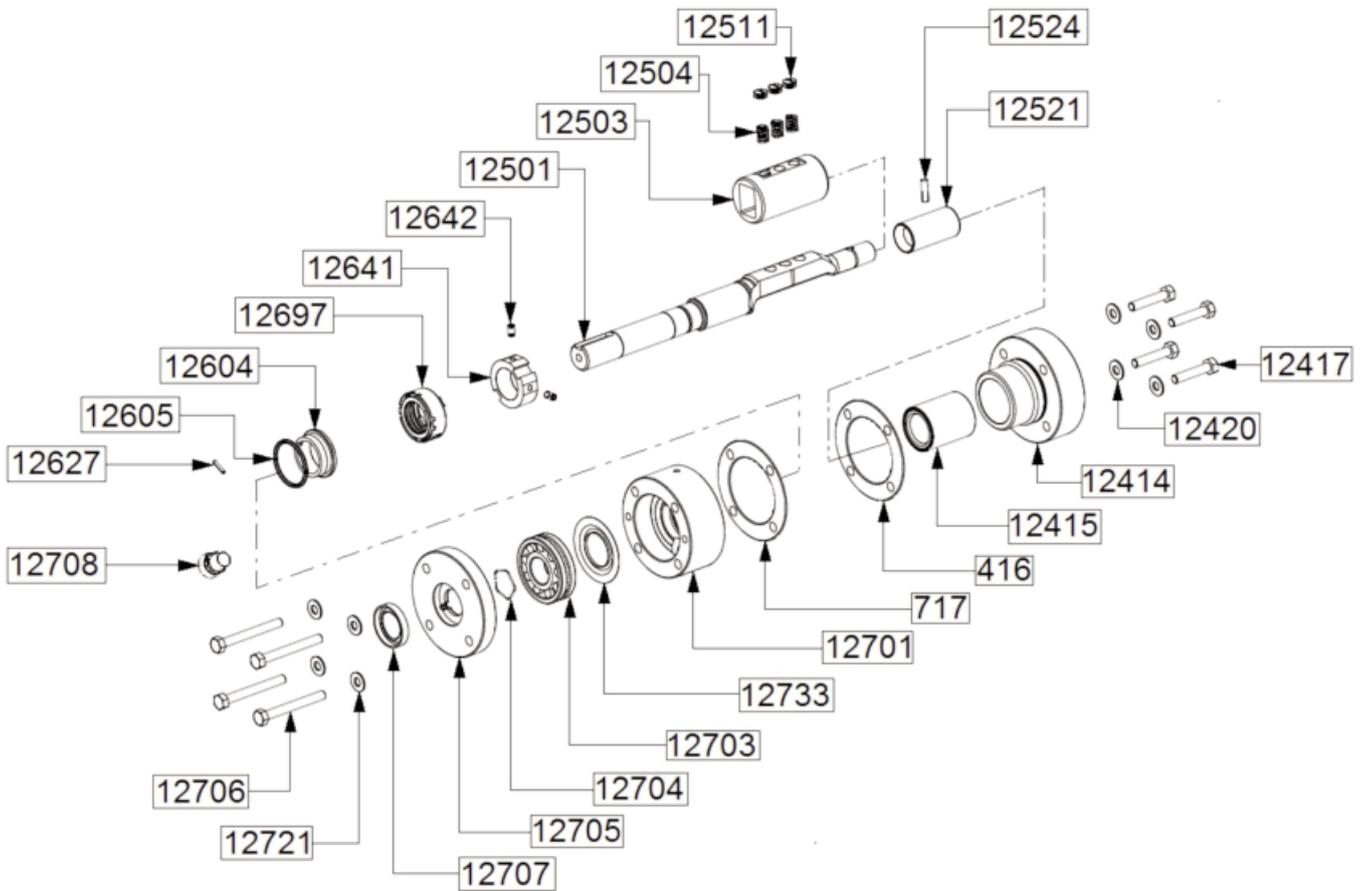
Mounting shaft A18 on AL pump



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Your distributor :

KIT CONTENTS



Item	Part
12414	Front cover bearing
12415	Bushing
12420	Washer
12501	Shaft
12521	Sleeve
12524	Pin
12503	Piston bearing
12504	Spring
12511	Screw
12604	Stationary seal face
12697	Rotating part
12605	Seal
12641	Driver
12642	Screw
12627	Pin
12701	Bearing cage
12703	Bearing
12733	Ring
12705	Bearing cover
12708	Grease nipple
12704	Ring
12706	Screw
12706A	Screw
12707	Lip seal
12721	Washer
416	Front cover bearing seal
717	Bearing cage seal

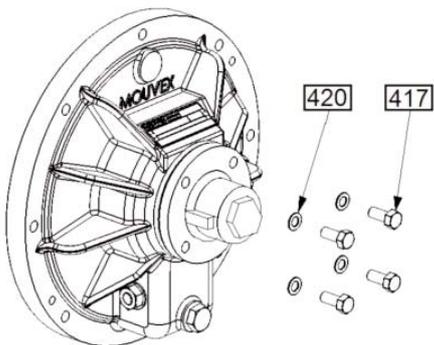
Mounting shaft new model on AL pump

On the pump, disassemble the following parts (see pump Instructions) :

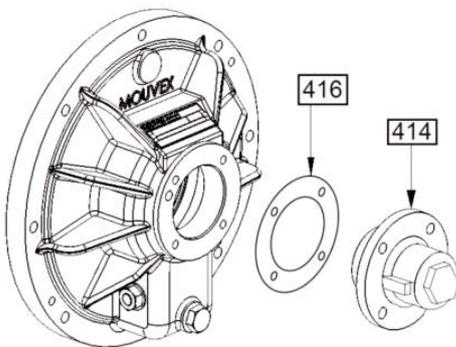
- Front cover,
- Sleeve,
- Piston,
- Bearing cover,
- Shaft with bearing cage and mechanical seal.

Mounting new front cover bearing

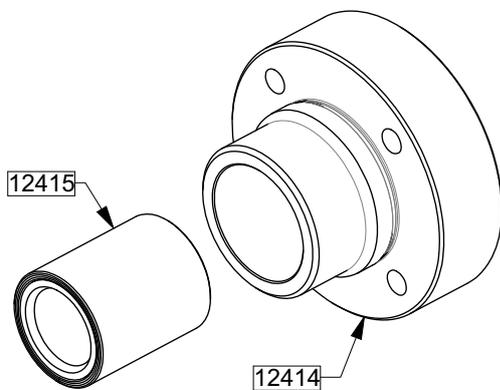
On the front cover, remove screws 417 and their washers 420.



Remove front cover bearing 414 and its seal 416.



Mounting of front cover bushing in the new bearing.



Orientate bushing chamfer on the outer side (see scheme above).

Insert the bushing 12415 in the front cover bearing 12414 using a press and a cylinder until bushing 12415 and front cover bearing 12414 faces are aligned.

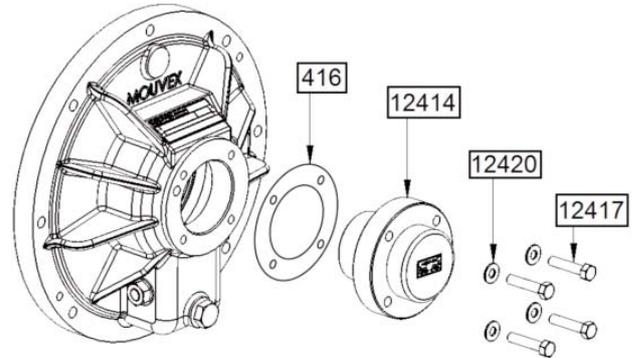
NOTICES

Do not add glue or grease.

Effort must be made only on metal liner and not on the carbon bushing.

Fit the new front cover bearing 12414 with the seal 416 (a new seal is supplied with the shaft kit).

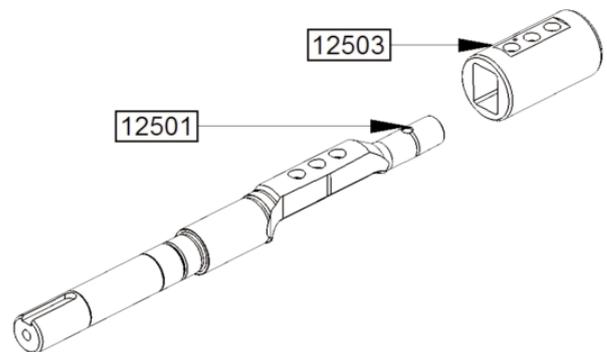
Screw and tighten screws 12417 with their washers 12420.



Mounting new shaft

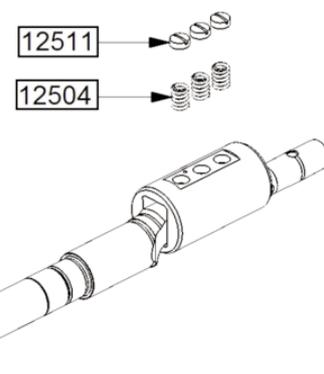
Mounting of piston bearing

Fit bearing 12503 on shaft 12501.

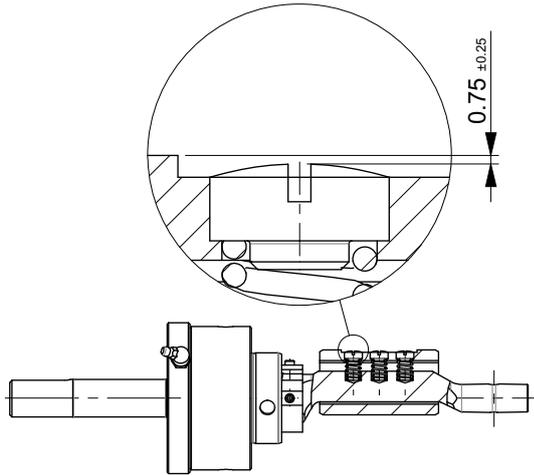


Fit springs 12504 in their housing.

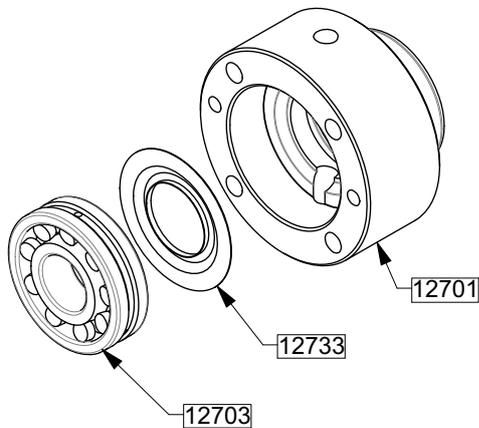
Fit screws 12511.



Mounting shaft new model on AL pump (continued)



Assembly of the bearing



Clean the bearing housing 12703.

Fit the Nilos seal 12733 in its housing.

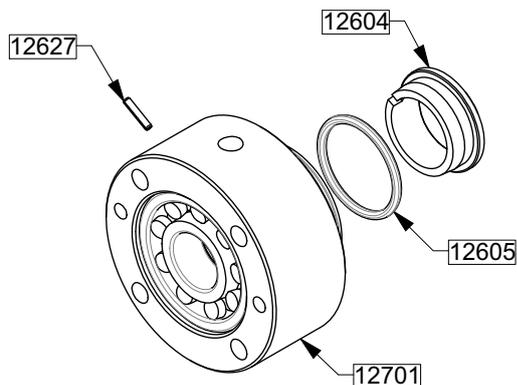
Fit the bearing 12703 in the bearing cage 12701 by pressing on its outer ring with a press and a tube.

Assembly of new mechanical seal

NOTICE

Mechanical seal components must never be put on friction faces without protection sheets.

• Assembly of mechanical seal stationary seal face



If necessary, clean the bearing 12703 of its grease.

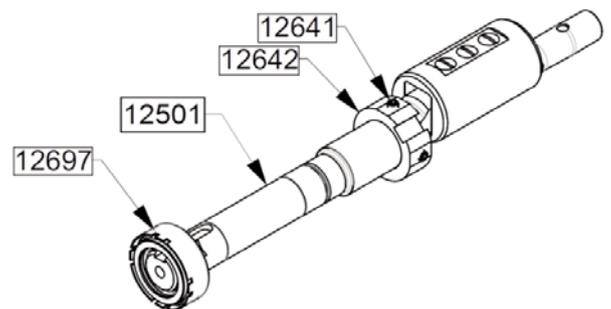
Clean the housing of seal in the bearing cage 12701.

Fit the seal 12605 in the bearing cage 12701.

Fit the stationary seal face 12604 in the bearing cage 12701, taking care of aligning pin 12627 located in the bearing cage 12701 with groove on the stationary seal face 12604.

If necessary, clean friction face with a clean, soft cloth. Caution not to scratch friction face.

• Assembly of mechanical seal rotating part



Check shaft 12501 surface condition. Rub it down with thin sand paper if there are scratches on seal rotating part O-ring place. In particular, it must be check that there are no scratches parallel to shaft axis.

If necessary, fit the new mechanical seal driver 12641 and its screws 12642 on the shaft 12501, and position it so that it cannot move any forward. Fit the screws 12642 with medium thread lock.

To reduce friction, wet with water or alcohol surfaces on which O-rings will slip during assembly.

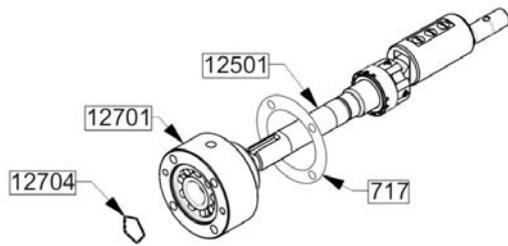
If seal includes FEP coated FKM O-rings, use mounting cone supplied with mechanical seal.

Fit the rotating part 12697 aligning ergots driver 12641 grooves.

If necessary, clean friction face with a clean, soft cloth. Caution not to scratch friction face.

Mounting shaft new model on AL pump (continued)

Assembly of the bearing cage



Fit the set bearing cage (12701 - 12703 - 12733 - 12627 and mechanical seal stationary seal face) on the shaft 12501.

NOTICE

As long as bearing cover 12705 is not mounted, shaft is hold only by the bearing and may fall which could damage the mechanical seal. To prevent this, keep holding shaft 12501 and bearing cage 12701 to limit ball joint movement, for instance by putting it vertically.

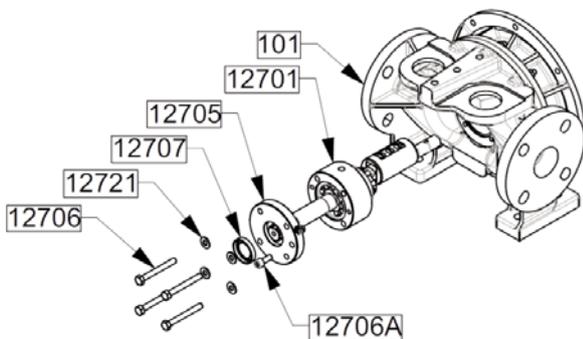
Fit the ring 12704 on the shaft 12501.

If necessary, fill the bearing 12703 with grease (see § MAINTENANCE in pump Instructions).

Clean the pusher faces of seal 717.

Fit the seal 717 on the bearing cage 12701 (a new seal is supplied with the shaft kit).

Assembly of bearing cover



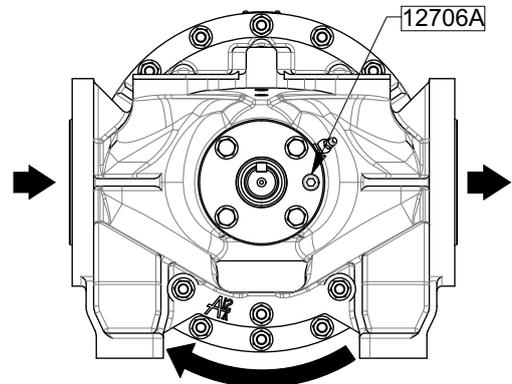
Fit the lip seal 12707, lip orientated outside in the bearing cover 12705.

Fit the bearing cover 12705 in the bearing cage 12701.

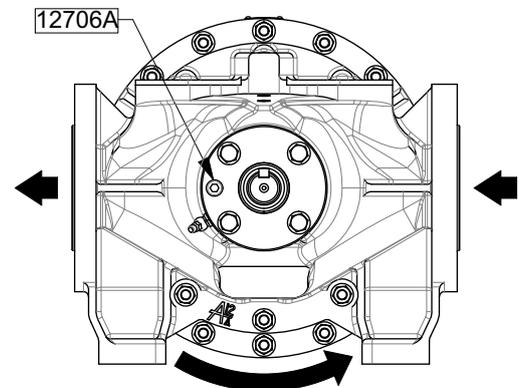
Fit the screw 12706A.

Insert shaft assembly in the main body 101 positioning the screw 12706A according to the main direction of rotation of the pump :

Positions detail



Clockwise main direction of rotation

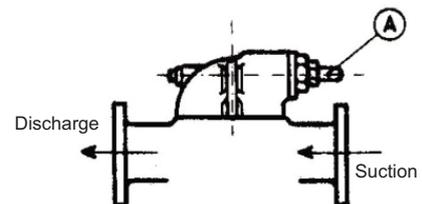


Anticlockwise main direction of rotation

Incorrect positioning will not cause damage, but will lead to a loss of flow.

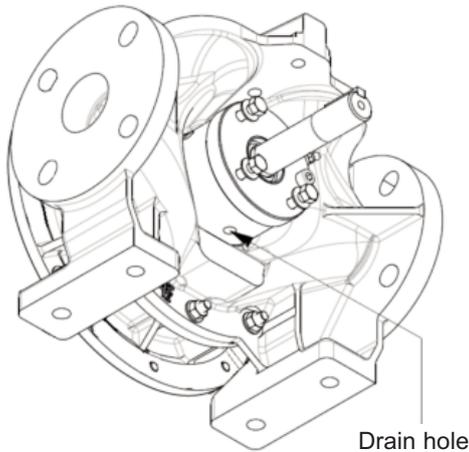
Also ensure that the position of the bypass is correct.

The single bypass protects only the pump in only one direction, but it is reversible. Cap A must be on the intake side. This must be done before the pump is started for the first time and revalidated if the pumping circuit changes.

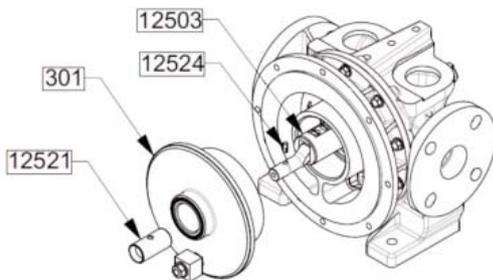


Mounting shaft new model on AL pump (continued)

Fit the screws 12706 and their new ridged conic washers 12721 with medium thread lock.



Assembly of piston (origin piston preserved)

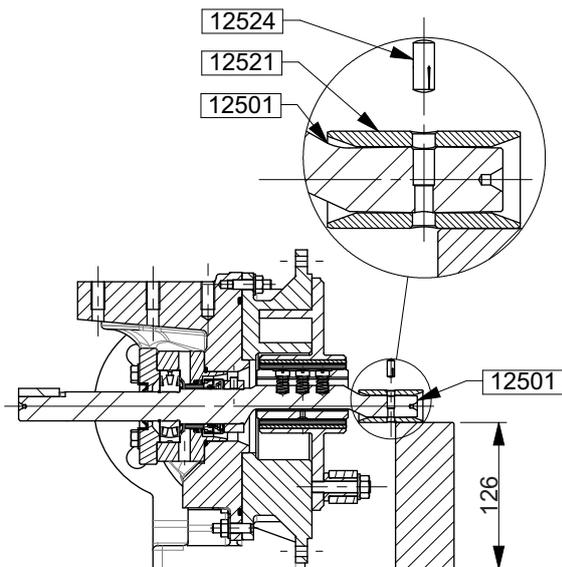


Lubricate the friction surfaces of the piston 301 with a product compatible with the pumped liquid.

Fit the piston 301 on its piston bearing 12503.

Fit the sleeve 12521 on the shaft 12501.

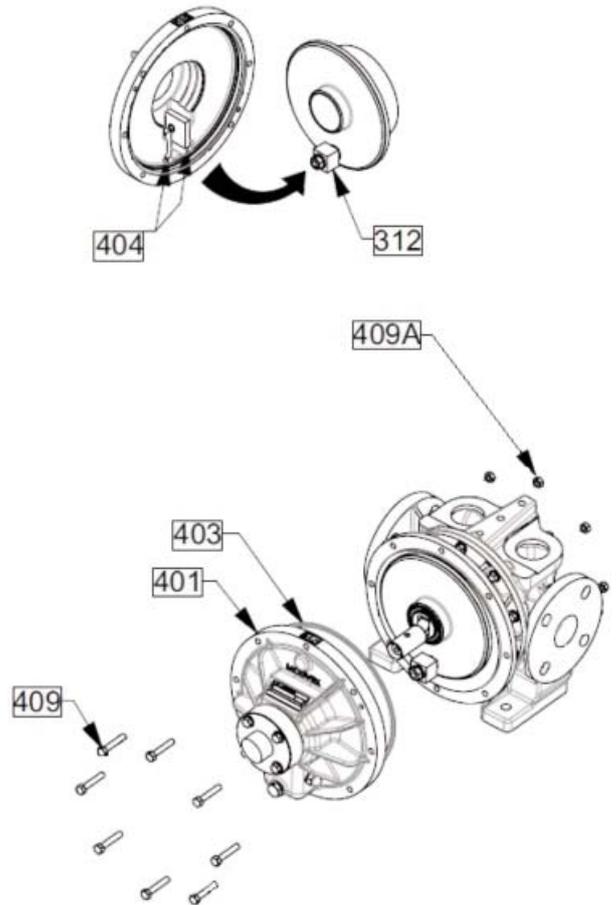
Fit the pin 12524 (until it cannot move any forward) taking care not to damage the sleeve.



NOTICE

To avoid damaging mechanical seal during this operation, shaft must be supported by a block (select a non-hard material to avoid damaging the sleeve).

Assembly of front cover



Clean the housing of seal 403.

Fit the seal 403 on the cylinder 201.

Orientate the slide block 312 to make it pass between the pads 404.

Fit the front cover 12401 on the cylinder 403.

Take care not to pinch the seal 403 during the assembly.

Take care not to damage the bushing 415 during the assembly.

Fit the screws 409 and nuts 409A.