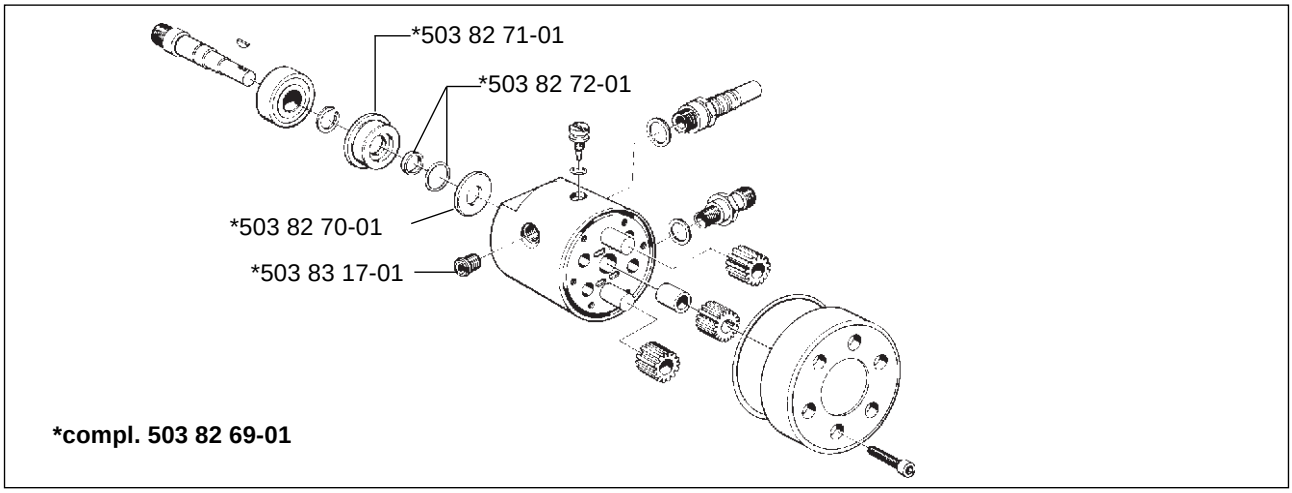
Workshop tools for rebuilding and servicing of hydraulic motor - model 250PS

To be able to use the highcutter shaft together with the valve block 503 78 07-01 when the external hydraulic system is connected, the hydraulic motor's axle sealing collar must be of a type that can cope with relatively high pressures. The return hose pressure in a larger hydraulic system can reach 40-50 bar. The normal sealing ring which was assembled in the hydraulic engine up until the middle of 1995 can not cope with even a considerably lower return hose pressure (4-5 bar), instead it has to be replaced by a special hydraulic sealing collar. All hydraulic motors which have a "D" marked on the cover of the motor housing (see diagram) have an hydraulic sealing collar fitted from the beginning.

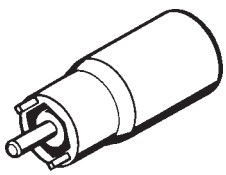
Due to the higher return hose pressure, the relief valve must also be replaced. The same "D" marking on the hydraulic engine cover also applies here.
This was brought into production from the middle of 1995 (see serial number plate on the bar attachment). Consequently hydraulic motors marked with a "D" never need to be rebuildt when external hydraulic systems are connected.

This instruction deals with the rebuilding of hydraulic motors so that they can be used with external hydraulic systems. Likewise, the replacement of existing hydraulic sealing collars. Two special tools have been produced which facilitate the work, namely mandrel 502 52 25-01 and sleeve 502 52 24-01.

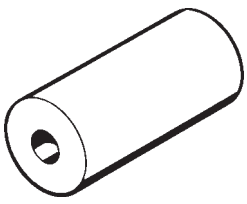
The hydraulic sealing collar with holder and cover including relief valve can be ordered as a complete set, no. 503 82 69-01. Component parts are also available on their own. See also spare parts list "Valve plate", art. no. 106 24 24-61.



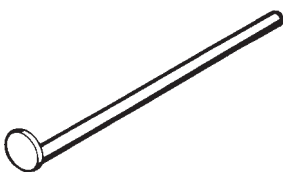
***compl. 503 82 69-01**



502 42 50-01



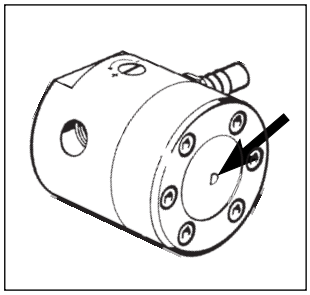
502 52 24-01



502 52 25-01

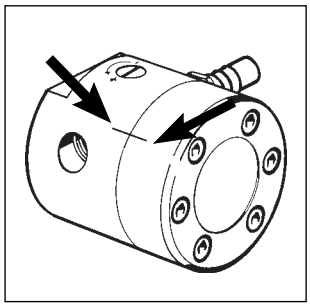
Changing to a new type of hydraulic axle sealing collar

If the hydraulic motor is lacking a “D“ marking on the cover, the axle sealing collar must be replaced in order to cope with the higher return oil pressure.



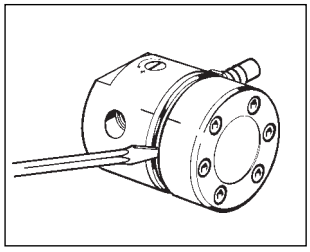
NOTE!
To obtain maximal motor output, it is important that the cover and the gear wheels come in the same position after assembly as they were before.

1. Mark the engine body and the cover.



2. Remove the six screws which hold the cover.

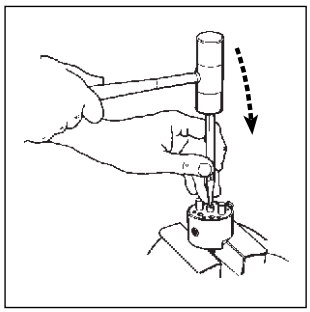
3. Carefully separate the cover from the engine-body.



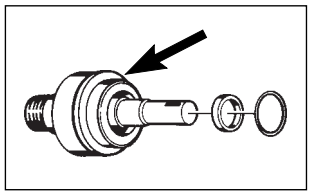
IMPORTANT!
Transfer the gear wheels to the cover using a screwdriver making sure that they retain their relative positions.
Remove the cover.

4. Use a suitable mandrel to press out the axle and the ball bearing.

5. Dismantle the existing sealing ring.

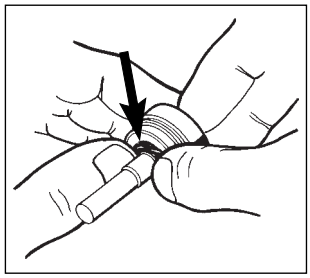


Assemble the new sealing collar in the following way:



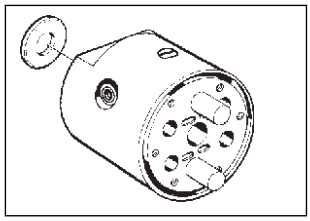
1. Place the sealing collar holder on the axle so that the flange is against the ballbearing.

2. Lubricate the axle with a few drops of oil and carefully press the sealing ring over the axle’s sealing collar area.



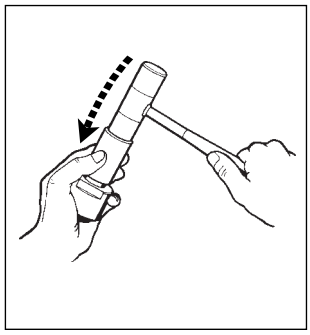
3. Press down the O-ring between the sealing ring and the sealing collar holder. Use your thumb nails! Check that the O-ring comes down all the way into the space between the sealing ring and the holder.

4. Position the cover washer in place in the engine housing. The chamfer should be facing inwards to facilitate the assembly.



Note!
The plate washer outside the standard sealing ring is not to be fitted together with the new hydraulic sealing collar.

5. Press in the axle with the ball bearing in the housing. Hold the housing in your hand and press in the ball bearing using sleeve no. 502 52 24-01. Check that the axle can rotate freely. The new type of sealing ring makes the axle harder to rotate.

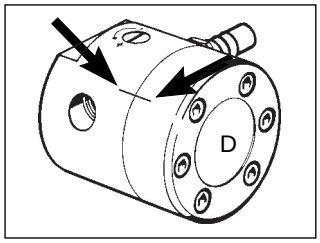


6. Check that the O-ring is undamaged and fit the cover together with the gear wheels. Ensure that the marking on the cover comes in line with the mark on the motor body! Rotate the axle so the key goes into the gear wheel in the correct way. Tighten the screws alternately and diagonally.

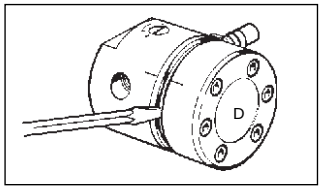
Dismantling and assembling the hydraulic axle sealing collar

NOTE!
To obtain maximal engine output, it is important that the cover and the gear wheels come in the same position after assembly as they were before.

1. Mark the motor body and the cover.

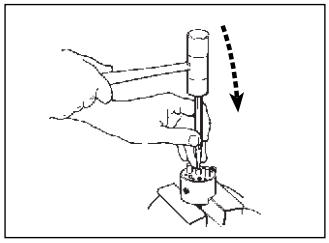


2. Remove the six screws which hold the cover.
3. Carefully separate the cover from the motor body.

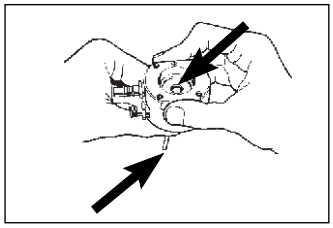


Important!
Transfer the gear wheels to the cover using a screwdriver making sure that they retain their relative positions.
Remove the cover.

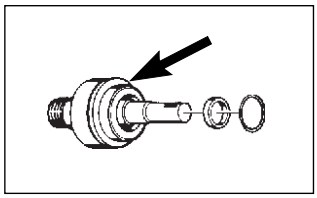
4. Use a suitable mandrel to press out the axle and the ball bearing.
5. Dismantle the existing sealing ring from the axle.



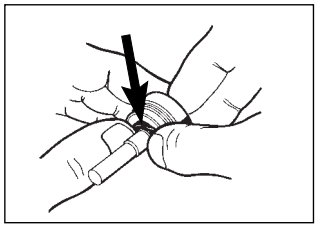
6. Dismantle the cover washer at the bottom of the ball bearing seatusing mandrel no. 502 52 25-01. Insert the mandrel through the axle hole from the ball bearing side and place the lip on the mandrel under the cover washer. Knock the mandrel against the work bench. Move the mandrel around the cover washer to prevent the washer from jamming in its position when it is to be dismantled.



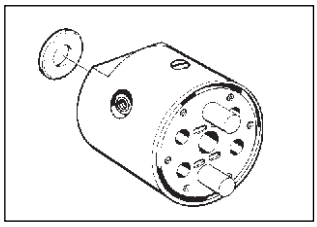
Assembly
Assemble the new sealing collar in the following way:



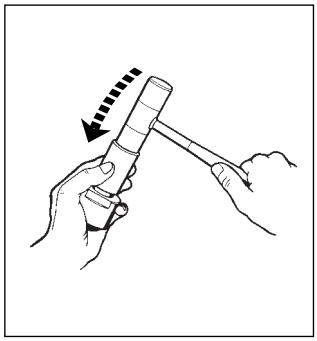
1. Place the sealing collar holder on the axle so that the flange is against the roller bearing.



2. Lubricate the axle with a few drops of oil and carefully press the sealing ring over the axle's sealing area.
3. Press down the O-ring between the sealing ring and the sealing collar holder. Use your thumb nails! Check that the O-ring comes down all the way into the space between the sealing ring and the holder.



4. Position the cover washer in place in the engine housing. The chamfer should be facing inwards to facilitate the assembly.



5. Press in the axle with the ball bearing in the housing. Hold the housing in your hand and press in the ball bearing using sleeve no. 502 52 24-01. Check that the axle can rotate freely. The new type of sealing ring makes the axle harder to rotate.
6. Check that the O-ring is undamaged and fit the cover together with the gear wheels. Ensure that the marking on the cover comes in line with the mark on the motor body! Rotate the axle so the key goes into the gear wheel in the correct way. Tighten the screws alternately and diagonally.

Replacement of reducing valve

To cope with the higher pressure in the return hose, the reducing valve has to be replaced.

A new reducing valve a higher opening pressure is supplied together with the valve block.

Use special tool no. 502 42 50-01 when replacing the valve.