



REPLACING THE SEALS IN THE HYDRAULIC CYLINDERS

Before commencing - some precautions and recommendations

1. To provide easier and safer access to the Hydraulic Cylinders for the seal replacement operation it is recommended that they be removed from the machine. However, before removing the Cylinders, the Cylinder bodies, rod and adjacent pipe work must be cleaned to remove all traces of fluid residue, debris and dust. Cleanliness helps to prevent possible contamination of the hydraulic fluid which will become temporarily exposed to the atmosphere during the replacement operation.
2. For safety, personnel must wear suitable protective clothing, safety goggles, gloves and footwear with re-enforced toecaps etc.
3. Seals must only be removed/replaced by suitably qualified and authorised personnel.
4. Seals must always be replaced as sets.

To replace the seals in the Hydraulic Cylinders

Refer to the Cylinder drawing to clarify internal details.

Switch off the electricity at **your** mains isolator and withdraw the appropriate mains fuses.

Have a drip tray, some clean cloths and plastic caps for plugging the ports available for the following operation.

Working on one cylinder at a time: GENTLY slacken (but do NOT remove) the hoses at the point of connection with the cylinder body. This will release the pressure in the hydraulic system in a controlled manner.

Once the pressure has been released from both hoses disconnect them from the cylinder body and temporarily hold them vertically to minimise the spillage of fluid. As soon as possible fit the plugs to the hose ends and the caps to the cylinder ports.

Remove traces of fluid spilt during the previous operation.

Carefully remove the Cylinder, safely supporting it due to its considerable weight. If removing the Cylinder by slinging make sure that the slings are protected otherwise they are liable to damage the paintwork. Never sling from the rod. Protect the rod at all times as damage to the hard chrome plating will result in premature seal failure.

During the following operation it is advisable to have a drip tray or similar available to catch any residual fluid that will be released as the Cylinder is dismantled.

Place the Cylinder body horizontally (with the ports facing downward) in a soft-jaw vice tightening as necessary. Do not over tighten otherwise the body could be distorted. Remove the plastic caps from the ports.

Unscrew the Cylinder cap using a "C" spanner or similar. Remove the cap and carefully withdraw the rod assembly. Secure the rod in a soft jaw vice, slacken the locking socket screw and unscrew the piston. The piston and cap can now be withdrawn from the rod thus exposing all the seals as shown on the seal replacement drawing.

Ensure that the cylinder bore and rod are not marked or scratched. Keep all parts absolutely clean and free from foreign matter.

Prior to removal of the seals note their exact position and replace them as a complete set. Fit the new seals ensuring that they are fitted the correct way round where applicable. To ease assembly, smear the new seals with clean hydraulic fluid. Make sure that the seals do not become damaged or trapped as the cap and piston are fitted back to the rod.

Re-fit and secure the piston to the rod and slide the assembly carefully back into the cylinder body. Re-fit and secure the cylinder cap.

Refit the cylinder, reconnect the hydraulic hoses and remove traces of fluid spilt during this operation.

Operating the machine for the first time after the seals have been replaced

Prior to first use ensure that the cylinder is fully bled of air.

After refitting a Cylinder check that the connections are all secure and that no fluid is escaping. Thoroughly remove all traces of fluid spilt during the previous operations.

If in doubt with any of the above operations please contact us on the numbers below.

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