

HSV VALVE MAINTENANCE

Maintenance operations allowed on the HSV valves by the customer.

INDICE:

1. SCOPE	1
2. MAINTENANCE.	2
2.1. Spool replacement.....	2
2.2. Cleaning of pilot filter	4
2.3. O-ring replacement	5
3. Test	6
3.1. Pressure test.....	6
3.2. Functional test 1	6
3.3. Functional test 2	7

1. SCOPE

Scope of this instruction is to describe the maintenance operations allowed on the HSV valves by the customer. See also document M 00 019.

HSV valves are safety devices, the operations described in this document must be done by qualified operators.

The operations described in this document apply to all types of HSV valves.

Before perform the maintenance operations described in this document contact Hydronic lift technical support.

The maintenance operations allowed are:

- Replacement of main spool with hydraulic seal due to an internal leakage.
- Cleaning of pilot filter because the valve does not open during the travel in down direction.

HSV type:

HSV 150 single coil code 8690503

HSV 150 double coil code 8690505

HSV 440 single coil code 8690502

HSV 440 double code 8690506

2. MAINTENANCE.

Before perform any operation on the elevator, secure the car and discharge the pressure from the control valve and HSV valve and disconnect the power supply.

To operate on HSV valve, it is not necessary to disassemble it from the lift control valve.

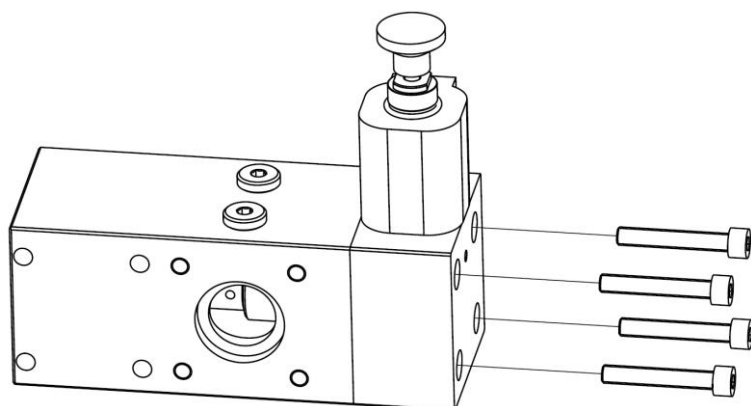


After maintenance, it is mandatory to perform the tests described in the last chapter.

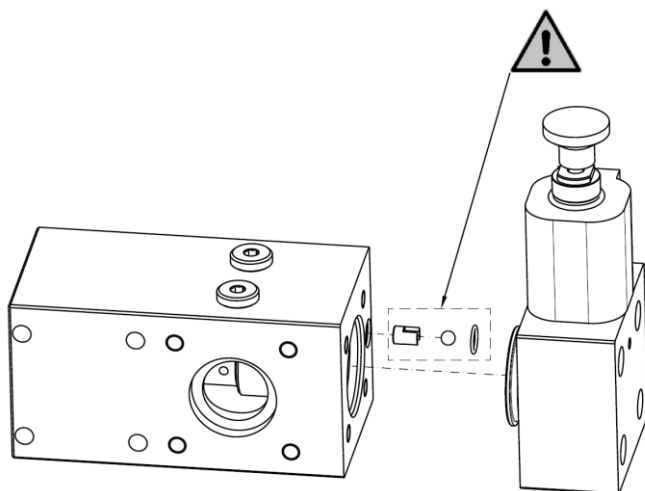


Place a container under the valve to prevent internal valve components falling into the tank.

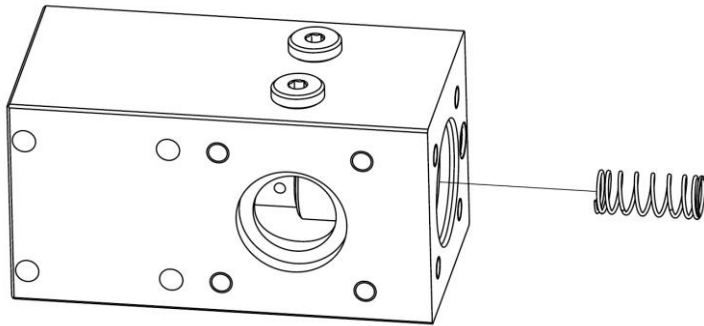
2.1. Spool replacement



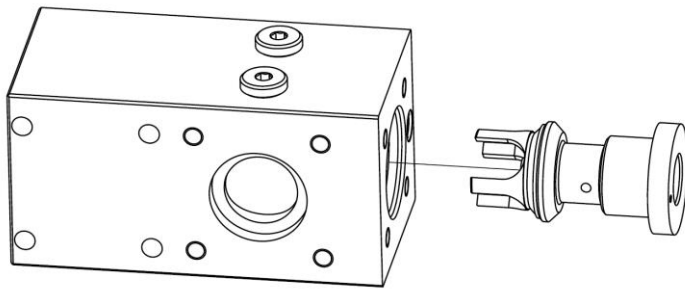
Remove the 4 hexagon socket head screws M8x50 UNI 5931
Hex. key 6 mm



Remove the cover with solenoid valve from the main body.
Pay attention to the O-Ring gasket, the ball and the spacer.



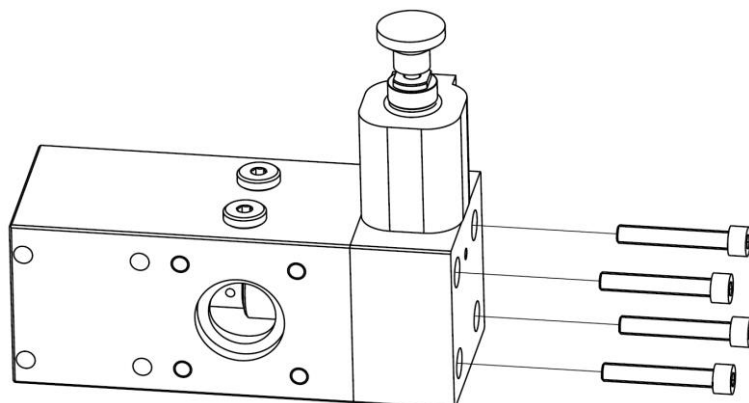
Remove the spring.



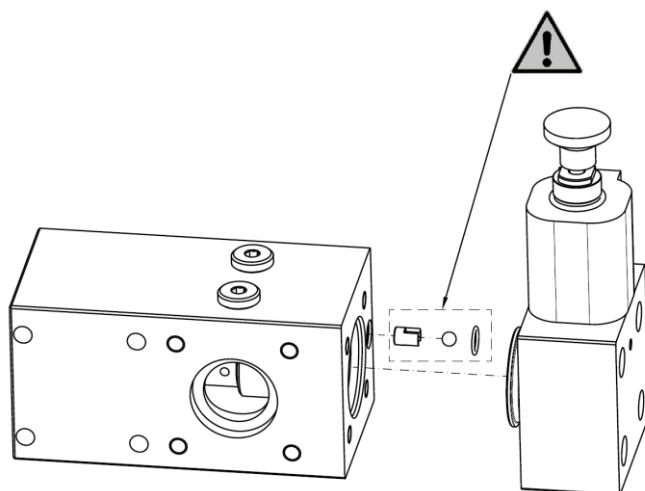
Remove the spool.

- Check the internal seat of the gasket for damage.
- Check inside the valve for dirty.
- Assemble the spool and the spring.
- Assemble the cover, pay attention to the O-Ring, ball and spacer.
- Screw the 4 hexagon socket head screws M8x50 UNI 5931.
- Perform the test described in the last chapter.

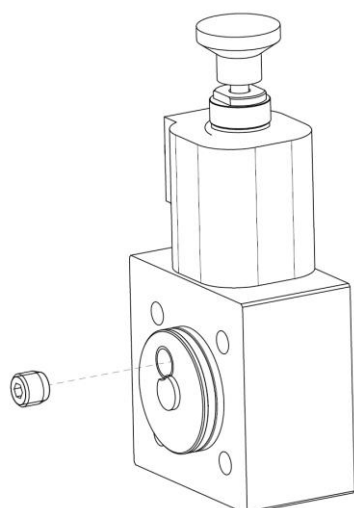
2.2. Cleaning of pilot filter



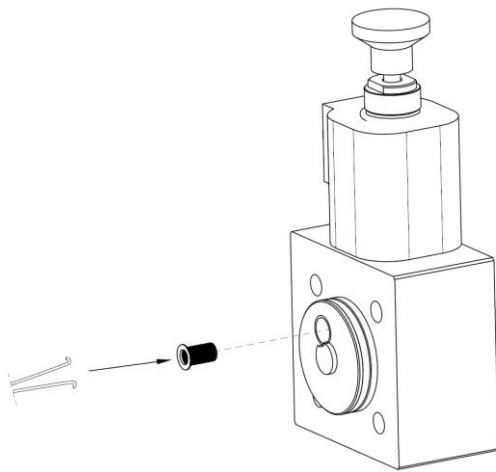
Remove the 4 hexagon socket head screws M8x50 UNI 5931
Hex. key 6 mm



Remove the cover with solenoid valve from the main body.
Pay attention to the O-Ring gasket, the ball and the spacer.



Remove the lock screw of the filter.
Hex. key 10 mm.



Remove the filter from the cover by a little hook (see drawing).

- Check the filter, clean it and, if necessary, replace it.
- Assemble the cover, pay attention to the O-Ring, ball and spacer.
- Screw the 4 hexagon socket head screws M8x50 UNI 5931.
- Perform the test described in the last chapter.

2.3. O-ring replacement

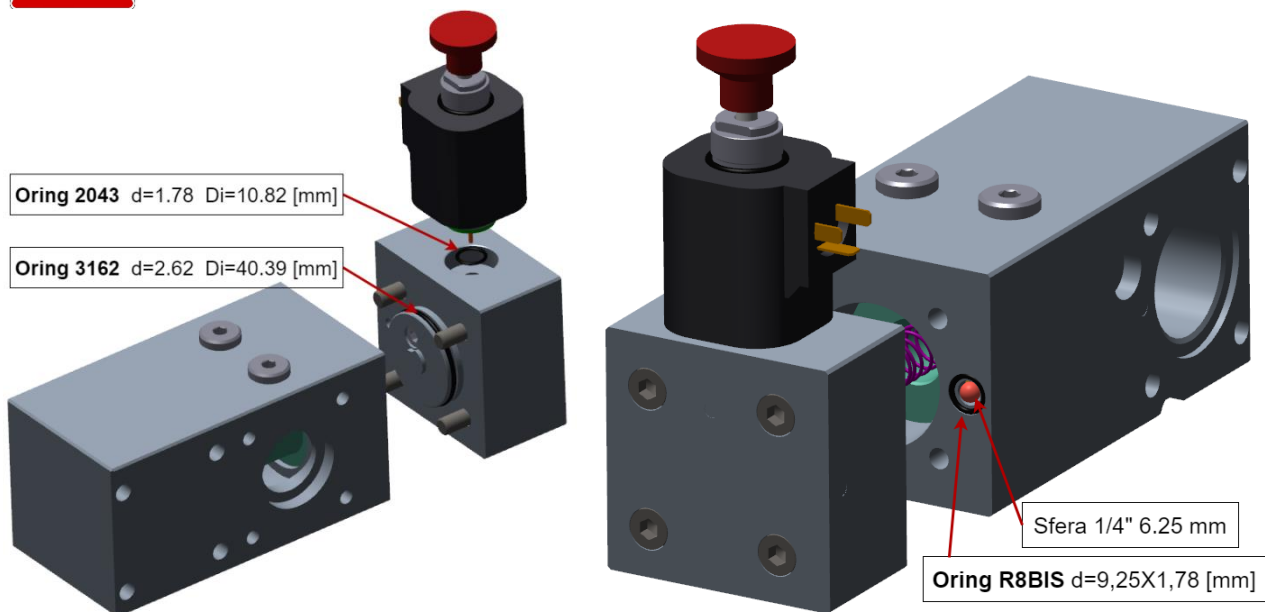


ATTENZION – BE CAREFUL

After O-ring replacement, a check test is required, see chapter 3.



Place a container under the valve to prevent internal valve components falling into the tank.



O-ring between HSV and H300



Note: with the spare part (code 659017G02) containing the various replacement O-ring, there are 2 O-rings type 4187 (d = 3.53 mm Di = 47.22 mm) which are not to be used.



3. TEST

3.1. Pressure test

Perform the test as described in 6.3.13 EN 81-20:2013 rule.

During the leakage checking pay particular attention to the HSV valve.

3.2. Functional test 1

1. Observe the instructions of the lift, or in the lift valve documentation, for the operation of the manual emergency lowering valve.
1. Make sure that the lift stays at the place at which the position of the car can be determined with sufficient accuracy.
2. Wait 5 seconds to verify that the cabin does not move.
3. Operate the emergency manual lowering valve on the main valve and check:
 - a. The pressure on the manometer drops to zero.
 - b. The car doesn't move.
4. Operate the emergency manual lowering valve on the HSV valve and check:
 - a. The car doesn't move.
5. Operate, at the same time, the emergency manual lowering valve of the control valve and of the HSV valve and check:
 - a. The car moves in down direction.
6. Execute a complete down car travel.

NOTE: if the HSV valve is not working properly, contact the Hydronic Lift Service Department.

3.3. Functional test 2

1. Execute a down car travel. During the down travel de-energize the HSV valve solenoid. Check:
 - a. the car will stop under all circumstances after 750 mm at the latest.
2. Make sure that the main coil windings and the emergency power winding (optional) of the solenoid of the Safety Valve are properly connected to the lift control again.

NOTE: if the HSV valve is not working properly, contact the Hydronic Lift Service Department.