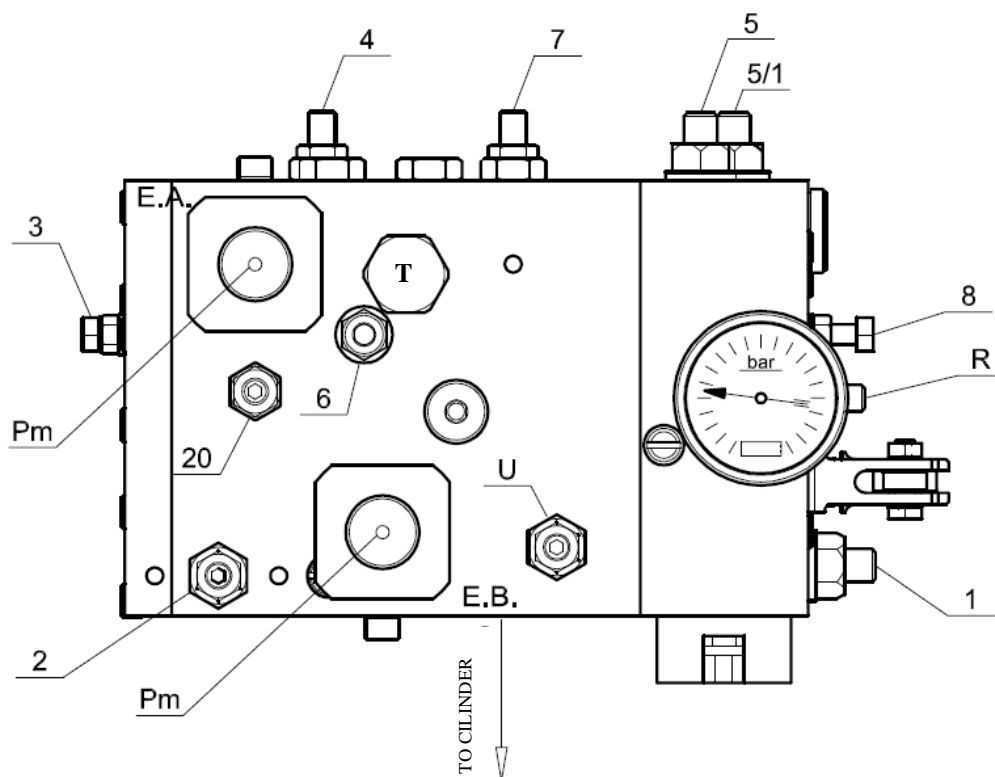


# MH2V unit valve troubleshooting



## MH2V unit valve possible defects



### MH1 DEFECT: THE ELEVATOR DOESN'T START THE UPHILL

- 1- Unscrew adjustment 7 of  $\frac{1}{4}$  turn (if the screw is too locked, it may decrease the elevator speed or block it) and test the system. If no improvements occur, reclose the screw of  $\frac{1}{4}$  turn.
- 2- Remove adjustment 7 with a setscrew wrench 17 and clean inner filter (Fig.1).
- 3- Clamp totally screw 8. If the elevator goes up fast, the problem is about piston pilot system of screw 8 (look at fixing **RP.MH.2**). Whether it goes up slowly or doesn't go up, the problem concerns the pump, the silencer or the connection between the pump and the unit valve. Verify those conditions.



Filter

Fig. 1

**MH2 DEFECT: THE ELEVATOR DOESN'T ATTAIN THE NOMINAL SPEED UPHILL**

- 1- Check the electric operation of the solenoid valve EA. If it doesn't get energized, the elevator goes up slowly.
- 2- Check that the elevator doesn't attain the nominal speed only uphill. If the problem regards also the downhill, try to open screw 3 of 1 turn. If no changes occur, replace the screw 3 and go to next step.
- 3- Unscrew adjustment 7 of  $\frac{1}{4}$  turn (if the screw is too locked, it may decrease the elevator speed or block it) and test the system. If no improvements occur, reclose the screw of  $\frac{1}{4}$  turn and go to next step.
- 4- Check if the piston of screw 8 is open. Close the gate valve, turn off the tension, relieve the pressure, remove plug T with a setscrew wrench 24 (Fig.2), remove spring and slider. Check the presence of both sliders. Verify the sliders sliding with a screwdriver: if one of the two piston is stuck, contact the assistance; otherwise go to next step.

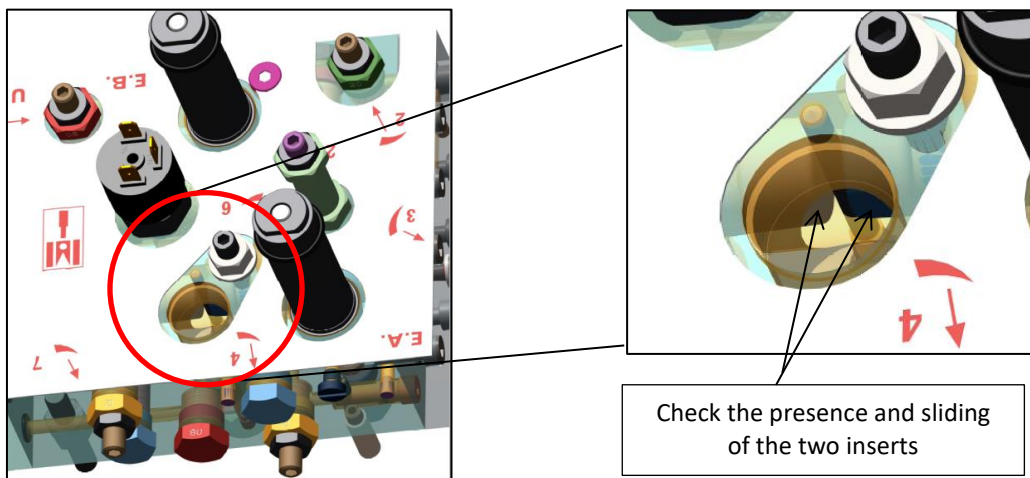


Fig. 2

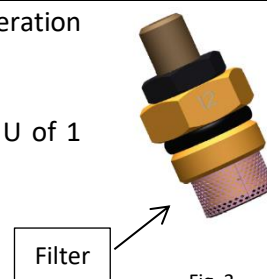
- 5- Check the oil leakage from drainpipe. Lift slightly the cover, start the motor and verify the drain. The elevator should drain little oil at high speed. If it drains a lot of oil, contact the assistance. Possible problem with insert H000119AA-A0. For cleaning it, look at fixing **RP.MH.2**

**MH3 DEFECT: THE ELEVATOR STARTS SHARPLY THE UPHILL**

- 1- Screw adjustment 7 of  $\frac{1}{4}$  turn. If the problem is not solved, go to step 2.
- 2- Check possible frictions on the guides or on the lift.

**MH4 DEFECT: THE ELEVATOR DOESN'T START THE DOWNHILL**

- 1- Check the electric operation of the solenoid valve EB. Check manual operation with a screwdriver and verify the solenoid valve feed.
- 2- Unscrew adjustment U of  $\frac{1}{4}$  turn. If the problem is not solved, unscrew U of 1 turn. If the problem is not solved, go to step 3.
- 3- Clean the filters of adjustment U and 2 (Fig. 3).
- 4- Check compensator screw 20, **RP.MH.3**. Check that it's not stuck.

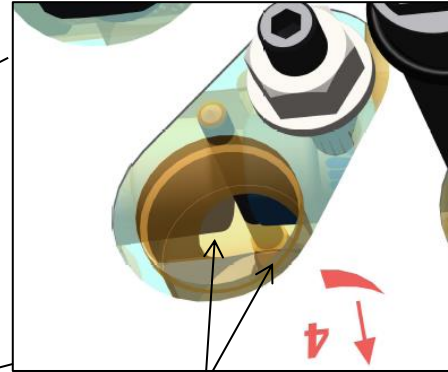
**MH5 DEFECT: THE ELEVATOR STARTS SHARPLY THE DOWNHILL**

- 1- Screw adjustment U of  $\frac{1}{4}$  turn. If the problem is not solved, go to step 2.
- 2- Check possible frictions on the guides or on the lift.

**MH6 DEFECT: THE ELEVATOR DOESN'T ATTAIN NOMINAL SPEED DOWNHILL**

- 1- Check electric operation of the solenoid valve EA. If it doesn't get energized, the elevator goes down slowly.
- 2- Check that the elevator doesn't attain the nominal speed only downhill. If the problem regards also the uphill, try to open screw 3 of 1 turn. If no changes occur, replace the screw 3 and go to next step.
- 3- Unscrew adjustment U of  $\frac{1}{4}$  turn (if the screw is too locked, it may decrease the elevator speed downhill or block it) and test the system.
- 4- If no improvements occur, reclose the screw of  $\frac{1}{4}$  turn and go to next step.

- 5- Check if the piston of screw 8 is open. Close the gate valve, turn off the tension, relieve the pressure, remove plug T with a setscrew wrench 24 (Fig.2), remove spring and slider. Check the presence of both sliders. Verify the sliders sliding with a screwdriver: if one of the two piston is stuck, contact the assistance.



Check the presence and sliding of the two inserts

Fig. 3

### **MH7 DEFECT: THE ELEVATOR DOESN'T SLOW DOWN WHEN REACHING THE FLOOR**

- 1- Check that the solenoid valve EA is not energized when it comes on the floor. Check manual operation with a screwdriver.
- 2- Check screw 4 measurement (For standard regulation, close screw and re-open of 4 rounds). Screw of  $\frac{1}{4}$  turn and test the elevator. If it doesn't change, open of  $\frac{1}{2}$  turn and test again. If nothing occurs, clean the adjustment 4 filter (fig. 4). If the problem is not solved, go to step 3.
- 3- Check the deceleration magnets position on the guides.



Filter

Fig. 4

### **MH8 DEFECT: THE ELEVATOR VIBRATES AT LOW SPEED**

- 1- Unscrew adjustment 6 of  $\frac{1}{2}$  turn. Test the elevator. If the problem is not solved, go to step 2.
- 2- Check that the elevator car is not too tight on the guides or the guides aren't oiled.
- 3- Try to do a bleeding on the piston.
- 4- If the elevator hasn't a silencer and the vibration occurs mostly on the higher floor, is required to install a silencer.

**MH9 DEFECT: THE ELEVATOR LOSES PRESSURE OR RE-LEVELLING****Check valve group leakage:**

- 1- With the elevator stationary at the floor, close the gate valve and check on the manometer if the pressure decreases: if it decreases, the leakage concerns the unit valve, otherwise check the pipeline toward the piston: if the leakage regards the unit valve, check visually. If no leaks are observable, check the following steps.

**Check EB drain leakage:**

- 1- Turn off the power supply with the elevator stationary at the floor, remove solenoid valve EB and unscrew EB core with setscrew wrench 15. Check that no oil leaks occur from the core seat, from under the unit valve or from EB drain (Fig.5).
- 2- If a leakage occurs, reassemble the core and try to press the manual EB bottom with a screwdriver, in order to drain the passage.
- 3- If the leakage keeps on going, follow fixing **RP.MH.4**.

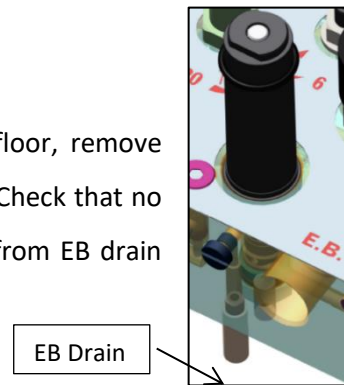


Fig. 5

**Check sealing insert leakage:**

- 1- Lift the elevator car to the first floor.
- 2- Turn off the power to the motor.
- 3- Keep the gate valve open.
- 4- Remove the solenoid valve EB and unscrew EB core with setscrew wrench 15. If no leakage occurs, it's likely that the leak comes from the sealing insert. Look at the sealing insert checking and replacement **RP.MH.5**.

**Check manual downhill button leakage:**

- 1- With the elevator car stationary at the floor, check that no leakages occur from under unit valve (Fig.6).
- 2- If a leak occurs, try to press several times the manual downhill button in order to drain the passage.
- 3- If the leakage keeps on going, follow fixing **RP.MH.6**.

**Check hand pump check valve leakage:**

- 1- Keep the elevator stationary at the floor and under pressure.
- 2- Pull the hand pump handle outwards. If the hand pump comes back quickly to closing, perform fixing **RP.MH.7**.

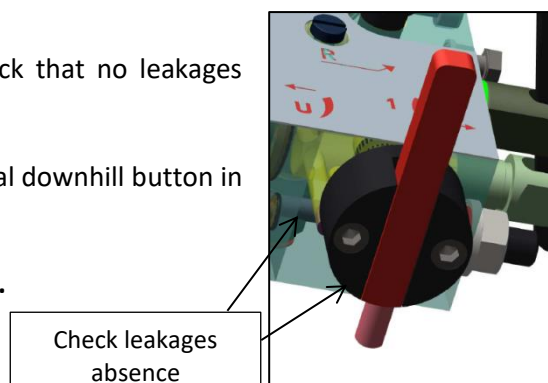


Fig. 6

**MH10 DEFECT: SINGLE PHASE ENGINE WORKS UNDER STRESS**

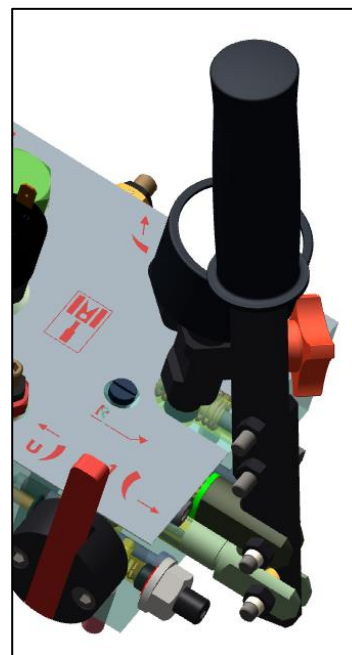
- 1- Check output voltage power supply with motor running: if it drops below 5% of the nominal current (230 Volt), the motor starts working under stress. Check Enel line.
- 2- Check the motor condenser: if it's in short circuit it doesn't work properly.
- 3- With low currents it's recommended an ignition condenser.

**MH11 DEFECT: THE HAND PUMP DOESN'T WORK**

If the hand pump lever doesn't work (the hand pump comes back in its initial position when you pull it towards yourself) and the system doesn't go under pressure, we need to bleed air from the hand pump in the following way:

- 1- Close the gate valve.
- 2- Remove the R plug near the pressure gauge with a flat-blade screwdriver.
- 3- Try to pump until the oil bleeds from the plug. If after 20 attempts the oil doesn't come out, try to insert manually few oil inside the hole and do 20 attempts again.
- 4- When the oil comes out, assemble the R plug and verify the pressure rising over the pressure gauge. The pressure shouldn't go to zero with gate valve closed.
- 5- Open the gate valve and check the elevator car lifting.

If the hand pump doesn't maintain the pressure, verify the oil presence inside the tank and that the float always be inside the oil bath.



## MH2V unit valve troubleshooting

### RP.MH.1 FIXING: piston of screw 8

- 1- Close the gate valve, turn off the power to the motor, relieve the pressure operating on the manual downhill valve.
- 2- Remove screw 8, disassemble the plate of adjustment 8 (H000153AA-A0), paying attention to the parts inside.
- 3- Check that the piston (H000114AA-A0) sliding is not difficult (Fig. 7).
- 4- If it is stuck, contact the assistance.
- 5- If it is open, reassemble spring and plate. Check that all the o-rings are on their seat.
- 6- Open the gate valve, provide power supply and test the elevator.

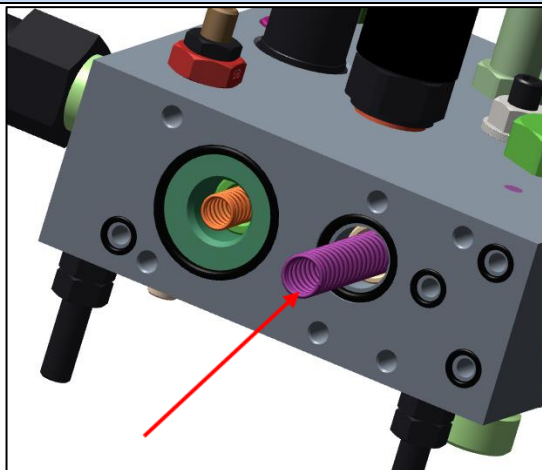
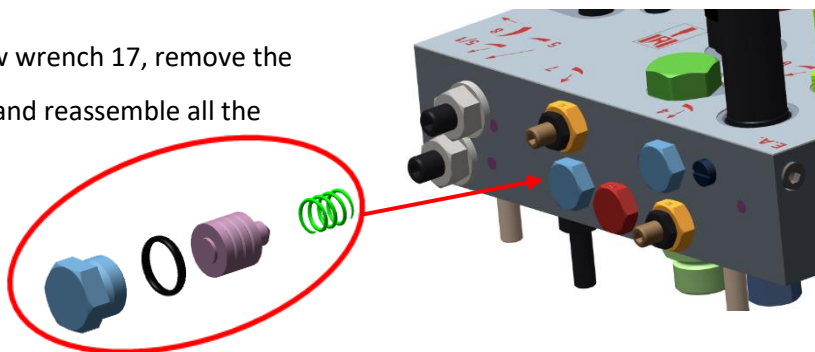


Fig. 7

### RP.MH.2 FIXING: MH2V pilot system piston

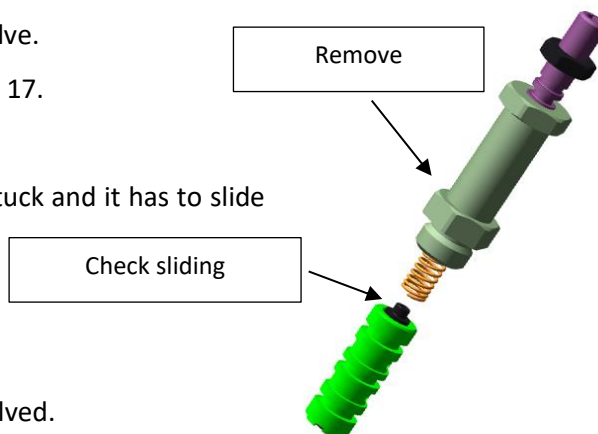
- 1- Close the gate valve, turn off the power to the motor, relieve the pressure operating on the manual downhill valve.
- 2- Unscrew the nut with setscrew wrench 17, remove the insert and the spring, clean it and reassemble all the parts.
- 3- Restore tension, open the gate valve and test the system.





### RP.MH.3 FIXING: compensator checking

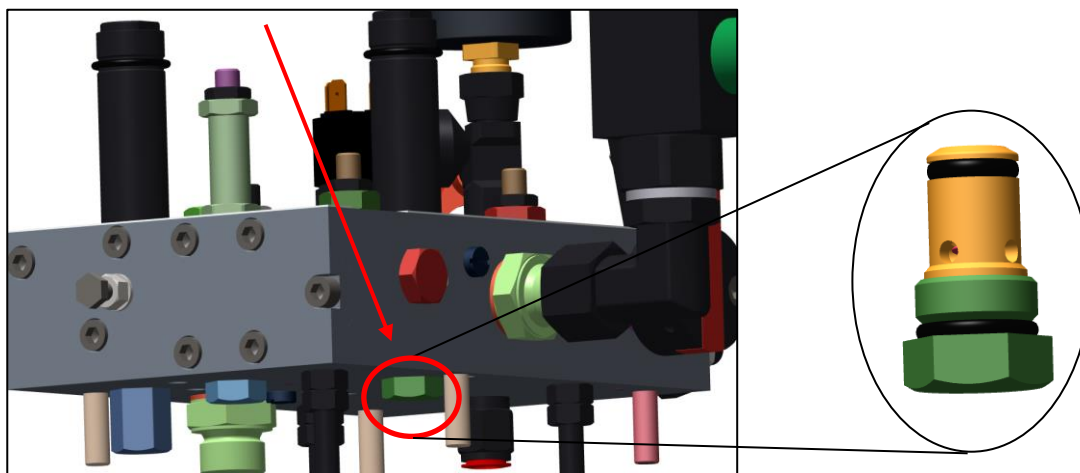
- 1- Close the gate valve, turn off the power to the motor, relieve the pressure operating on the manual downhill valve.
- 2- Unscrew component 20 with setscrew wrench 17.
- 3- Remove the spring.
- 4- Check sliding spool. The spool shouldn't get stuck and it has to slide without problems.
- 5- Plug in the component.
- 6- Check the elevator.
- 7- Contact the assistance if the problem is not solved.



### RP.MH.4 FIXING: EB bush change

**(It's possible only if S/N is higher than 260000. Otherwise contact the assistance)**

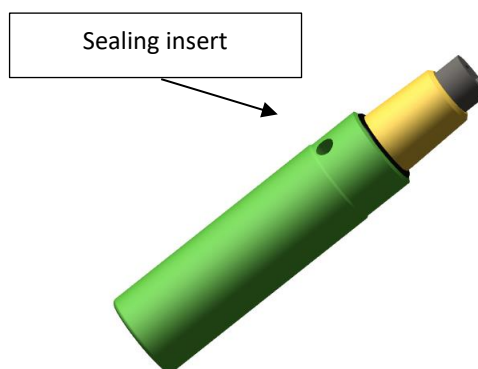
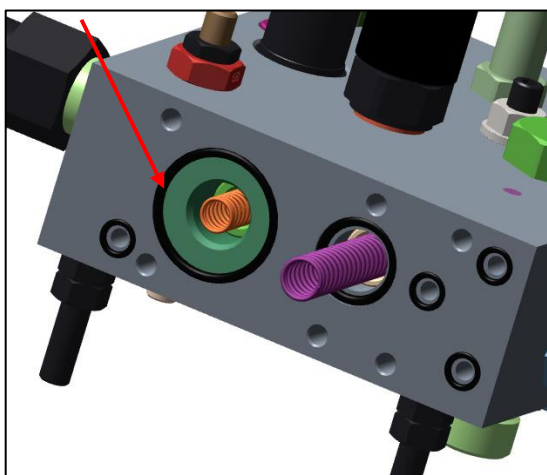
- 1- Close the gate valve, turn off the power to the motor, relieve the pressure operating on the manual downhill valve.
- 2- Unscrew cover screws, unscrew internal flexible pipe and lift the unit valve.
- 3- Unscrew the bush under EB with setscrew wrench 17 and replace it with new component.



- 4- Reassemble the components and test pressure tightness.

**RP.MH.5 FIXING: sealing insert change**

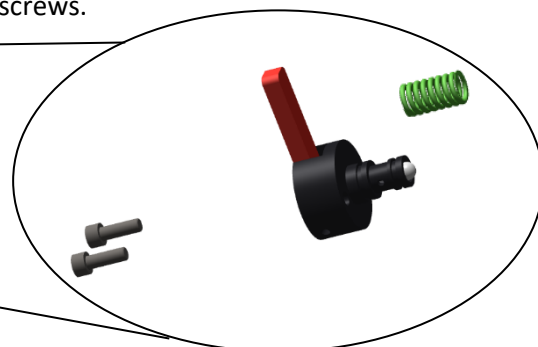
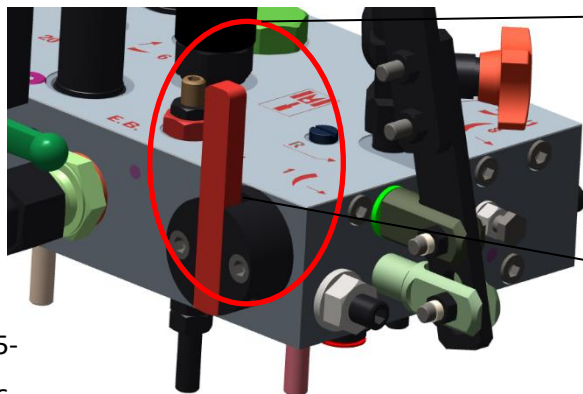
- 1- Close the gate valve, turn off the power to the motor, relieve the pressure operating on the manual downhill valve.
- 2- Remove screw 8 and manual module plate.
- 3- Remove spring from sealing insert.
- 4- Change sealing insert.



- 5- Reassemble spring and manual module plate. Check that all the o-rings are on their seat.
- 6- Open the gate valve and test static pressure tightness.

**RP.MH.6 FIXING: emergency downhill button change**

- 1- Close the gate valve, turn off the power to the motor, relieve the pressure operating on the manual downhill valve.
- 2- Unscrew the two screws and remove the button. Remove the spring and the sphere.
- 3- Assemble a new spring, sphere and button with the 2 screws.



- 5-
- 6-
- 4- Open the gate valve and test static pressure.

**RP.MH.7 FIXING: manual module replacement**

- 1- Close the gate valve, turn off the power to the motor, relieve the pressure operating on the manual downhill valve; remove screw 8.
- 2- Unscrew 6 screws and substitute the manual module.

