

Converting instructions control valve 02 from E control to B control

The measurements given in this instruction start with the metric system after which between brackets [0] the imperial measurement is mentioned.

IMPORTANT RECOMMENDATIONS AND GUIDELINES FOR THE COMMISSIONING

Before putting the Cargo Floor loading and unloading system into operation, follow the recommendations provided below and check the specified checkpoints to avoid damage to the Cargo Floor system and the vehicle.

Please review the important instructions before operating the Cargo Floor system and loading cargo into the vehicle. Likewise, before loading cargo, check the operation of the various control switches/valves to familiarize yourself with how the system works. We strongly recommend that you perform these checks when picking up the vehicle from the dealer so that a resident expert can answer your questions and provide you with any necessary advice or guidance you may require.

Important:

- Always check that the selected loading or unloading direction is actually activated and occurring!!
- If the system fails to start, turn off the Cargo Floor system and the hydraulic pump and follow the recommendations and guidelines provided below. Do not repeatedly try to start the system as this may result in damage to your Cargo Floor system and/or vehicle.
- After use, turn off the Cargo Floor system and hydraulic pump. Set switches to the "0" position and the lever in neutral.

In case of doubt or uncertainty about these recommendations and guidelines, always contact your dealer or an official workshop.

The Cargo Floor system comes standard with an operating manual, but if this has not been supplied, please contact your dealer or download it from the official Cargo Floor website: WWW.CARGOFLOOR.COM

- A) Always open the vehicle's doors before turning on the hydraulic pump. Note! Build-up of pressure against the doors can force them open, which may cause some of the cargo to fall out of the vehicle. That is why it is always advisable to use the pneumatic lock, if provided.
- B) 1. Check that the vehicle's (quick-detachable) couplings are properly connected to the P (Pressure line, min. 20mm [3/4"]) and the T (tank/return line, min. 25mm [1"]). Also check that the couplings are fully tightened or slid completely into each other.
IMPORTANT: the pressure and return line connectors may not be reversed or exchanged to prevent dirt or water from entering the lines when connecting them!
2. Before connecting, check that the non-return valves can open easily (check: the non-return valves should open easily when pressed with the finger, if not, potential pressure build-up in the hydraulic lines may be preventing the system from starting).
NOTE: Incorrectly connected or unopened hydraulic couplings will cause serious damage to the Cargo Floor system and the vehicle.
- C) The vehicle (pump) must be fitted with a pressure relief valve that is set to 250 bar [3,625 psi]. If fitted, check that the dual-function lever (function: tipper/Cargo Floor) is in the Cargo Floor position. Pressure may not exceed the maximum adjusted and allowable operating pressure of the Cargo Floor system. An incorrectly adjusted pressure relief valve can cause damage to the Cargo Floor system and the vehicle.
- D) During operation, the (hand)brake of the vehicle must always be applied. You must, however, move the vehicle forward on time to unload it quickly in order to prevent unnecessary strain and wear to the floor and the vehicle.
- E) Use of a wireless remote control is permitted only if it is fully tested before the start of each loading or unloading operation. Always check if the function you have selected is actually activated and taking place. If, for example, you have accidentally pressed the load function when you actually meant to press the unload function, irreversible damage may occur to the Cargo Floor system and the vehicle.
- F) During operation of the Cargo Floor system, all existing STOP and control knobs/levers must be freely accessible.

- G) The pressure filter element needs to be replaced at least once a year. If the couplings between the vehicle and the Cargo Floor system are regularly removed, it is advisable to check the pressure filter for dirt build-up and replace the pressure filter element more often, if necessary. If provided, also check the return filter (not supplied with the Cargo Floor). Failure to replace a filter element on time may cause damage to or malfunctions in the Cargo Floor system and the vehicle.
- H) Moving parts must be shielded. Always maintain at least 10m [30'] distance from the Cargo Floor system when it is in operation.
- I) In the event of malfunctions/maintenance work, you may approach the Cargo Floor system only if all equipment, including the hydraulic pump, has been shut off, and the Cargo Floor system and the electro-hydraulic aggregate have been disconnected from the power supply and pump.
- J) Regularly check and, if necessary, tighten any loose bolts that secure the aluminium floor profiles to the Cargo Floor system. All such checks can simply be performed inside the vehicle itself by qualified personnel. The Cargo Floor system must, however, be turned on in unloaded condition and the person performing the check must place his finger half on the floor profile and half on the bolt. There should be no appreciable movement/space between the floor profile and bolt. Failure to check these bolts may lead to damage to the Cargo Floor system. During this check, a second person must also be present to switch off the Cargo Floor system.
- K) Check that the minimum required amount of oil is present (150 ltr. [40 gallon]) Too little oil in the hydraulic tank will cause damage to both the pump and the Cargo Floor system.
- L) Do not allow the number of strokes to exceed the maximum allowable 16 power strokes per minute. Only a Power speed Cargo Floor system may deliver up to 23 beats per minute. A higher number of power strokes can cause damage to the Cargo Floor system and the vehicle.
- M) Hydraulic lines, couplings and hoses with very small diameters will cause damage.
- N) If the Cargo Floor system fails to start or operates incorrectly, the Cargo Floor system and the hydraulic pump must be shut down immediately. Subsequently, check all the checkpoints before switching the pump and the Cargo Floor system back on. To prevent the oil from overheating, regularly check the oil temperature by CAREFULLY and CAUTIOUSLY touching the line and or oil tank. If either is too hot to the touch, stop touching them right away. **WARNING: TOUCHING OVERHEATED OIL AND COMPONENTS CAN CAUSE BURNS!**
- O) The cause of failure or malfunctioning of the Cargo Floor system may also be due to other hydraulic components that may or may not be connected to the same hydraulic circuit of the Cargo Floor system.
- P) Jamming of the floor profiles caused by the transport of abnormal loads and or the freezing of the floor or of the product to the floor may result in damage to the Cargo Floor system and the vehicle. Recommendation: in the event of freezing, stop the system and try to find a hall (heated area) to allow the product to thaw.
- Q) Because the electrical power supply of the Cargo Floor system is often connected to the lighting circuit of the vehicle, it is advisable to turn on the lighting throughout the operation of the system.
- R) Maintenance and repairs to the Cargo Floor system may be only performed by qualified personnel. Use only original Cargo Floor components to ensure maximum reliability and long service life.
- S) Maximum cargo weight is subject to the limits set by law and applicable regulations. Even if the system can transport heavier loads, the law determines the maximum limit. Excessively heavy cargo can cause damage to the Cargo Floor system and the vehicle.
- T) Check that the correct type and quality of hydraulic oil is used. The use of incorrect oil type may cause damage to the Cargo Floor system and the pump.
- U) Check the vehicle for correct voltage. Make sure there are no open electrical connections. A faulty electrical system can cause damage to the Cargo Floor system and the vehicle.
- V) Check that the bulkhead, if present, is functioning smoothly and properly. A properly functioning bulkhead ensures that the product is unloaded in a clean and quick fashion. A malfunctioning bulkhead may extend the unloading time and cause damage to the vehicle.
- W) Use of the Cargo Floor system by unqualified personnel can cause damage to the Cargo Floor system and the vehicle.
- X) Excessively high oil temperatures will cause damage to the Cargo Floor system and other hydraulic components, such as the pump.
- Y) It is at all times advisable to stop the Cargo Floor system when all the piston rods are retracted. This is usually the case when the floor profiles are positioned towards the unloading end (vehicle doors). Unretracted piston rods may cause damage to the Cargo Floor system.

- Z) To prevent damage to the floor profiles, exercise caution and limit the dump height as much as possible. The transport of unauthorized goods, such as aggressive, corrosive, hot, hard, sharp and viscous materials may cause damage to the Cargo Floor system and the vehicle. Avoid loading and unloading sharp objects. Loads that are softer than the hardness of the floor profiles will extend the service life of your system; if in doubt, use a protective cloth or consult your dealer.
- AA) Forklift trafficable. In principle, the floors are completely trafficable and can be driven over by forklifts, but always consult your dealer for advice on the maximum loads allowed on your vehicle. Overloading will cause damage to the Cargo Floor system and the vehicle.
- BB) Always return emergency control(s) to their original non-activated position after use.
- CC) During the operation of the system, test the temperature of the oil by touching the side of the tank. If the oil is so hot that you cannot continue to touch the tank, switch off the pump to allow the oil to cool off and determine what is causing the overheating. Stop loading or unloading if the oil is too hot, as this will irreversibly cause damage to the Cargo Floor system and the other hydraulic components.
- WARNING: TOUCHING OVERHEATED OIL AND COMPONENTS CAN CAUSE BURNS AND INJURIES!**
- DD) During loading and unloading operations, the load should be spread to give an even weight distribution over the floor area, otherwise the load may stall. Tip: when transporting pallets, place softwood boards of 300 x 18 x 2350 mm [12" x 0.75" x 92.5"] to distribute the pressure more evenly.
- EE) The constant pressing of the load against the head board or the doors can lead to extra wear of the complete system. Also the construction can be damaged. Please consult you supplier about the optimizing possibilities or in order to prevent problems occurring.
- FF) The user/operator/driver that is operating the Cargo Floor system is compelled to remain a safe distance from the Cargo Floor system at all times, from the time of switching on the hydraulic pump until turning it off. He should ensure that no dangerous situations can occur. When the process malfunctions or if other people are present he should shut down the Cargo Floor system, or hydraulic pump, immediately.

WARRANTY:

Warranty is subject to prior approval by Cargo Floor B.V.! To request warranty coverage, visit www.cargofloor.com to fill out and submit the warranty application form provided there; do not forget to include your Cargo Floor system number on the form.

In the event of an EMERGENCY, operation of the Cargo Floor system can be halted as follows:

- ◆ By pressing the stop button on the wired remote control unit;
- ◆ By turning all switches to position "0";
- ◆ By putting the handle of the control valve in the middle position (only B and A control);
- ◆ Turning off the pump;
- ◆ Turning off the main switch of the power supply;
- ◆ Turning off the motor of the electro-hydraulic aggregate;

The WARNING STICKER is attached to the outside of the control cabinet.



This instruction will make it possible for you to convert a control valve 02, provided with a electro/hydraulic choice for loading and unloading, to a control valve that is operated with a manual control loading / unloading. The reason for choosing this could be that the control valve is no longer dependent on a certain oil flow.

In general it is possible to convert the control valve without taking it off the system. If the control valve already has been demounted the converting can also be done on a workbench.

Scope of delivery (article no. 7170039) + stickers B-control.



- Tools required:
 - Allen keys 5, 2x 10 and 12 mm.
 - Open end / ring spanner 19, 22, 24 and 30 mm.
 - Rivet gun
 - Loctite
 - Copper grease
 - Dripping tray

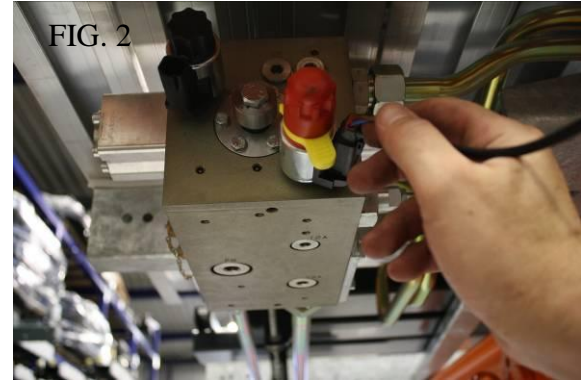
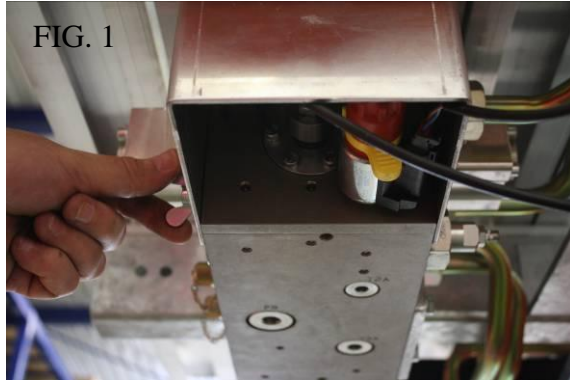


Important information:

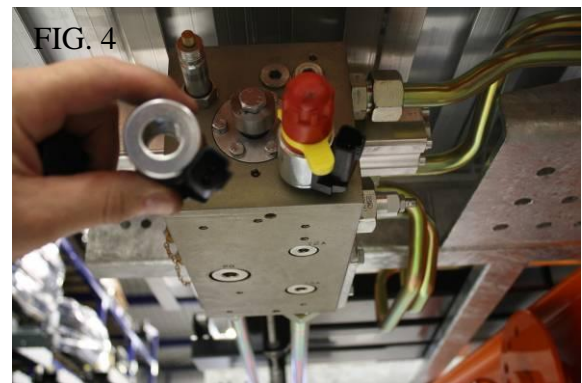
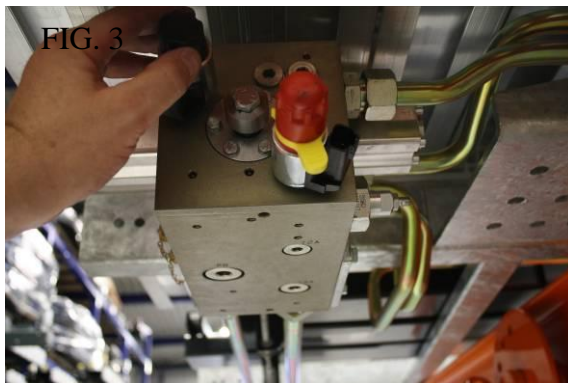
- The guarantee is only valid if Cargo Floor B.V. has given permission in advance!
- The pump and electrical installation must always be switched off, in addition the tubes and/or pipes between the pump and the Cargo Floor drive unit must be disconnected;
- After fitting, check the oil level;

Replacing the G02

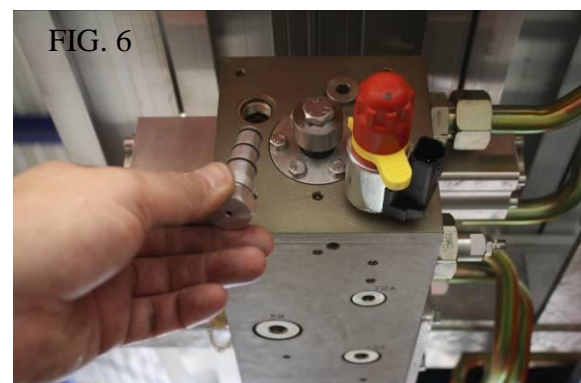
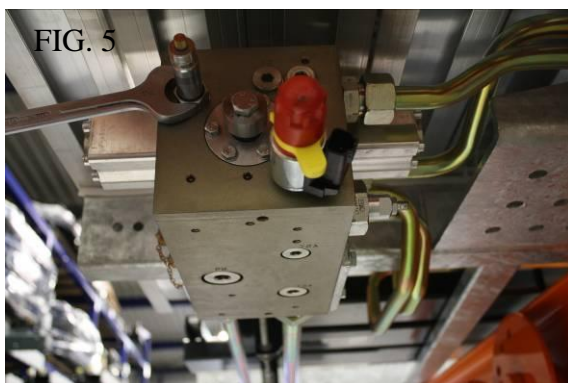
Remove the protective cover at the backside of the control valve. This is done by unscrewing the three winged nuts (fig. 1). Remove the plug connections by pushing in the clip attached to the plug and at the same time pulling the plug to the back (fig. 2).



Next the black plastic cap of the G02 solenoid can be unscrewed (fig. 3). Also the solenoid can be taken off the cartridge (fig. 4).

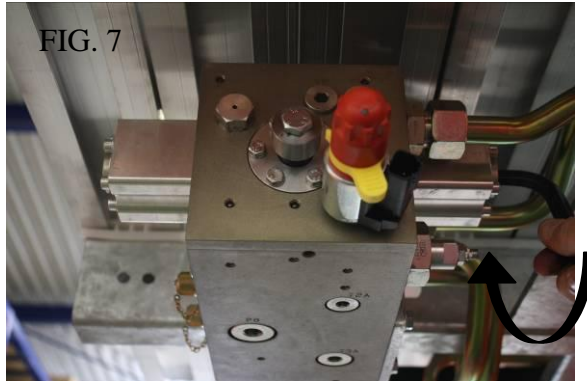


Unscrew the G02 cartridge with spanner 22 mm. and remove it (fig. 5). In its place the special CF500 G02 plug for the B control can be mounted (fig. 6). When demounting the G02 some oil can leak, use a dripping tray.

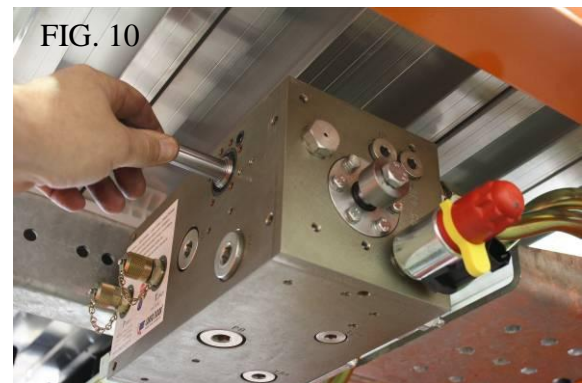


Works that need to be done on the operation plunger

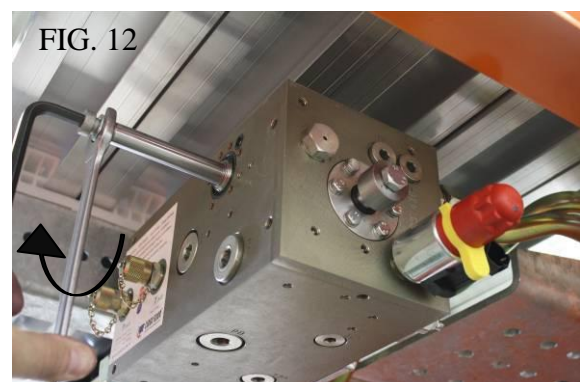
With the help of allen key 12 mm. remove the plug out of the head of the operation plunger **right** (fig. 7). At the left the whole head of the operation plunger needs to be removed, with help of a allen key 5 mm. (fig. 8).



Put loctite on the thread end of the connection rod $\varnothing 16$ M10xM12 and screw it into the operation plunger (fig. 9 and 10).



In order to fasten the connection rod $\varnothing 16$ M10xM12 definitely we use two socket head cap screws. First take the supplied socket head cap screw M12 with the nut M12 (fig. 11) and fasten it to the connection rod $\varnothing 16$ M10xM12 with allen key 10 mm. and spanner 19 mm. When fastening the socket head cap screw you hold it in its place with the allen key and secure the bolt with spanner 19 mm. to the connection rod (fig. 12).



Take the socket head cap screw M10 (fig. 13) and screw it in the operation plunger at the right side (fig. 14). This screw does not need to be demounted again later.



The operation plunger can now be fastened firmly using the two allen keys 10 mm. Fasten the connection rod by screwing it in on both sides with an allen key 10 mm. (fig. 15). After this the socket head cap screw M12 needs to be demounted (left side). The easiest way to do this is by using allen key 10 mm. and spanner 19 mm. Keep the socket head cap screw from turning and unscrew the nut with spanner 19 mm (fig. 16). Take the socket head cap screw out of the connection rod. This screw is used later for fastening the control handle.



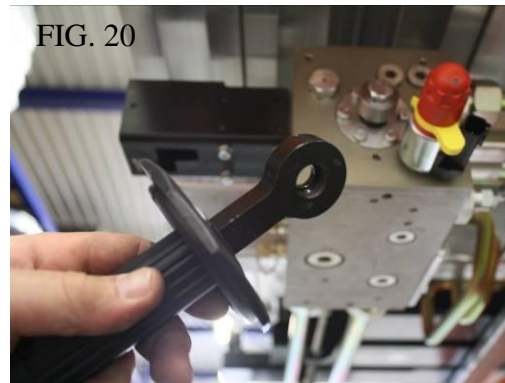
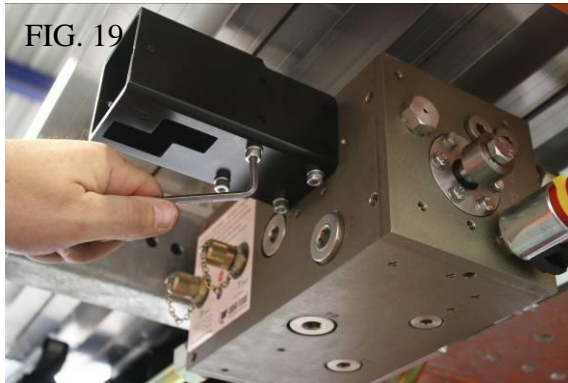
Now screw the bronze bush in the new supplied head for operation plunger and fasten it with spanner 30 mm. (fig. 17). Replace the seals (o-rings) between the head for operation plunger and the control valve (fig. 17). Grease the new socket head cap screws M6x80 with a little copper grease and mount the new head with bronze bush to the control valve. Fasten the screws with a torque of 10 NM [7.4 lbf.ft]. (fig. 18).



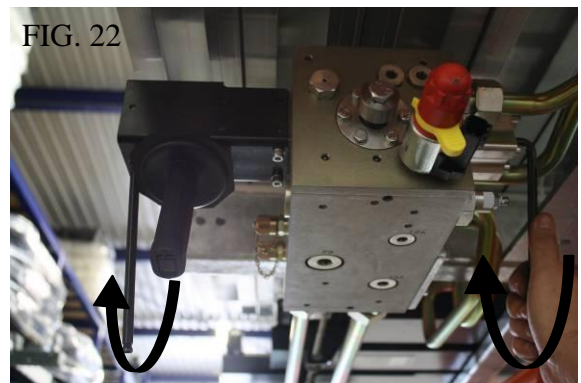
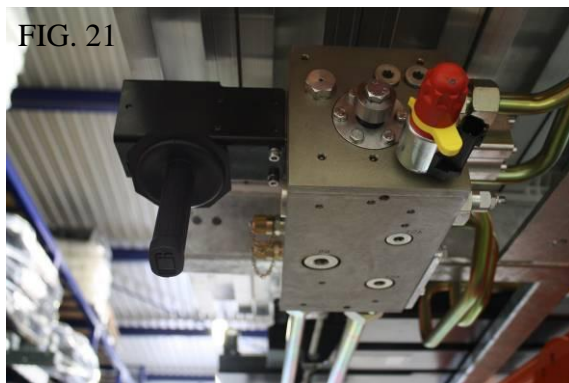
Mounting the control handle

Grease the four socket head cap screws M6x25 with a little copper grease and mount the square tube with s-detent to the head for operation plunger. Fasten the socket head cap screws with a torque of 10 Nm [7.4 lbf.ft]. (fig. 19).

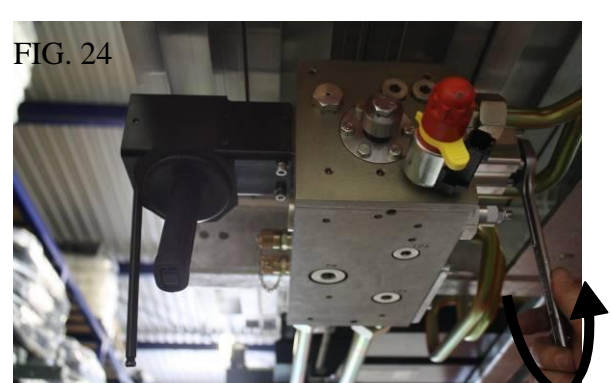
Mount the rubber grip over the steel handle with eye, the hand protection is mounted in the direction of the eye (fig. 20).



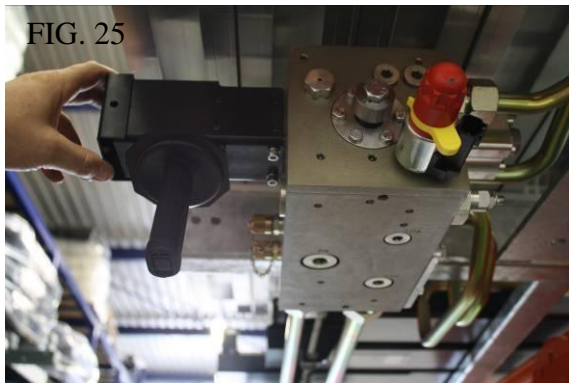
Put loctite on the socket head cap screw M12 (that just has been used with the fastening of the connection rod) and mount the control handle to the connection rod. **Pay attention!** The right way of mounting: the larger bore slides over the connection rod. The fastening can be done with the help of the two allen keys 10 mm., just as with the fastening of the connection rod (fig. 22).



Now mount the hollow plug (fig. 23) in the lid of the switching rod at the right side. No sealant is needed there it will be a oil free space, fasten the plug with spanner 24 mm. (fig. 24).

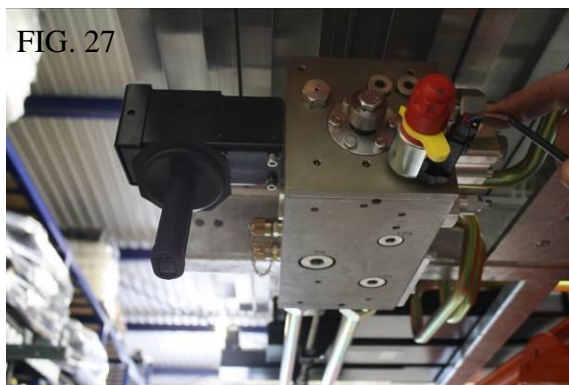


Next mount the steel cap 70x70 (fig. 25) and fasten it with the 2 supplied rivets (fig. 26).



Concluding works

Reconnect the black plug onto the solenoid GS02 (fig. 27). Mount the supplied contra plug onto the grey plug (G02), fig. 28. Put the wiring down in such a way that it can not be subject to wear and tie it firmly and mount the protective cover in its place.



Stick the following stickers in the control box (fig. 29).

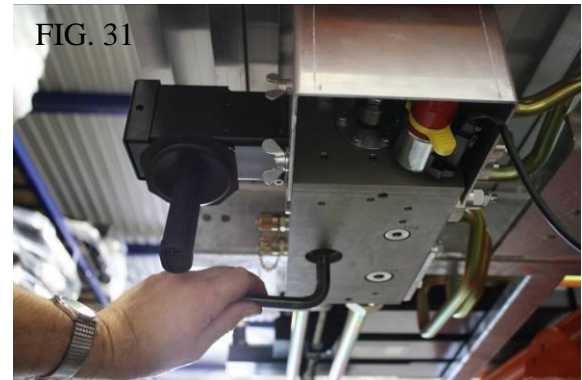
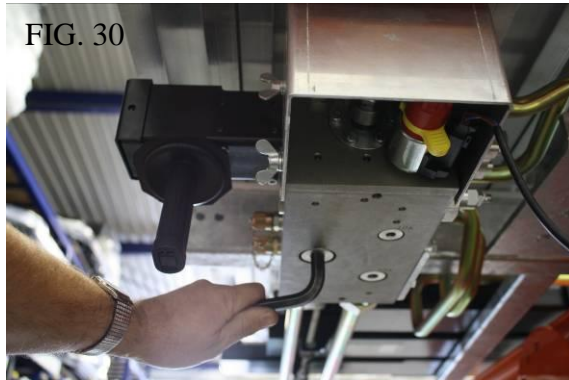
- At the inside of the door: the large sticker S.011 and optional RX/TX
- At the fixed switched CF3: sticker S.003-B over sticker CF7
- On the remote control CF4: sticker S.004-B over sticker CF8
- In the control box under the fixed switch: sticker S.009-B the electrical diagram.



ATTENTION!

The choke \varnothing 6.5 mm. [0.26"] should be removed out of the PB channel.
Remove the plug of the PB channel at the bottom side of the control valve with allen key 12 mm. (fig. 30).
The plug 6,5 mm. [0.26"] is about 30 mm. [1.25"] higher. You can remove it using the same 12 mm. allen key (fig. 31). After this has been done the plug needs to be put back.

Attention! Use a dripping tray for the oil that get released.



After converting the system needs to be tested on functionality and possible leaks.

It could be possible that after converting the control valve some oil leaks from the hole of the CF500 G02 plug. This could happen there in the former hydraulic channels some oil remained. By switching the operation plunger several times fully this remaining oil will soon be gone.