DATE: 06/2017
REV NO - DATE: 3 – 19/07/2022

CL 08 BI-DIRECTIONAL ELEVATOR OVERSPEED GOVERNOR

INSTALLATION SETTING MAINTENANCE MANUAL

GENERAL INFORMATION

The overspeed governors that we manufacture are safety components used in elevators. It is a mechanism that is activated and drives the safety gear and stops the car in case of the elevator car speeds up excessively for any reason.

It is recommended to use with progressive safety gear. It can also be used with instantaneous safety gear at speeds within the limits allowed by the relevant standard.

It should be used with ropes measuring Ø6 - 6.5 - 8 mm, certified in accordance with EN 12385-5 standard.

As specified in the standard, it should not be activated until a speed that is equal to 115% of the car rated speed, should drive the safety gear by activating before the upper speed obtained as a result of a calculation made with a method specified in the standard.

The overdrive of the elevator can be in the up or down direction. The governor we have manufactured is designed to allow the cabin to stop by activating safety gear in both directions in case of overspeed.

At the same time, the governor helps the safety gear by stopping the drive machine by cutting off the power of the elevator drive system.

Shortly before activating the safety gear, it cuts off the electric circuit and stops the traction machine.

The model, operating direction, operating speed, locking speed, coil feed current if any, date of manufacture, serial number and CE certificate number of the speed governor you have purchased are indicated on the label. (FIGURE 1)

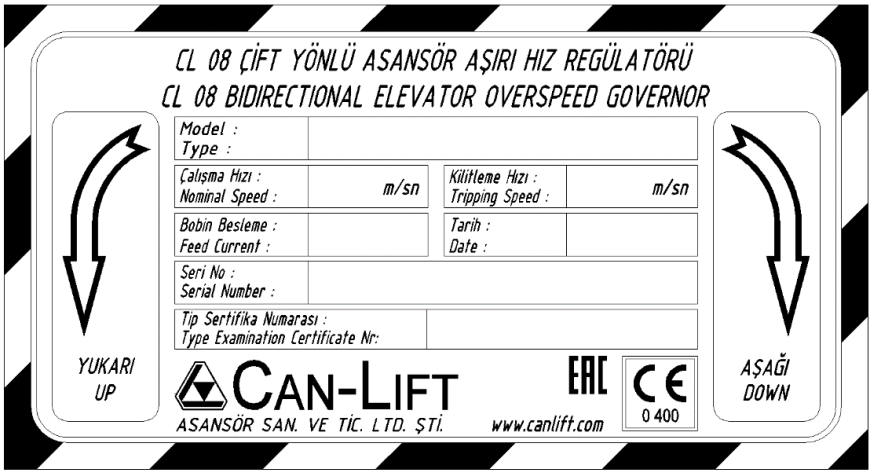


FIGURE 1

Check whether the label information of the governor you have purchased meets the speed of your system (rated speed) and other features. If the information on the label carries the information of the speed governor you need, you have purchased a governor which you can install in the system.

The operation at the rated speed declared is adjusted with the aid of a spring and sealed to prevent it from being changed. In order for the system to work properly, it is necessary not to distort the spring setting. Do not use governors with damaged or broken seals. In such case, contact our company and ensure safety by changing with a new product that has an unbroken seal and not disrupting proper operation.

Remember that the speed governor is a safety component.

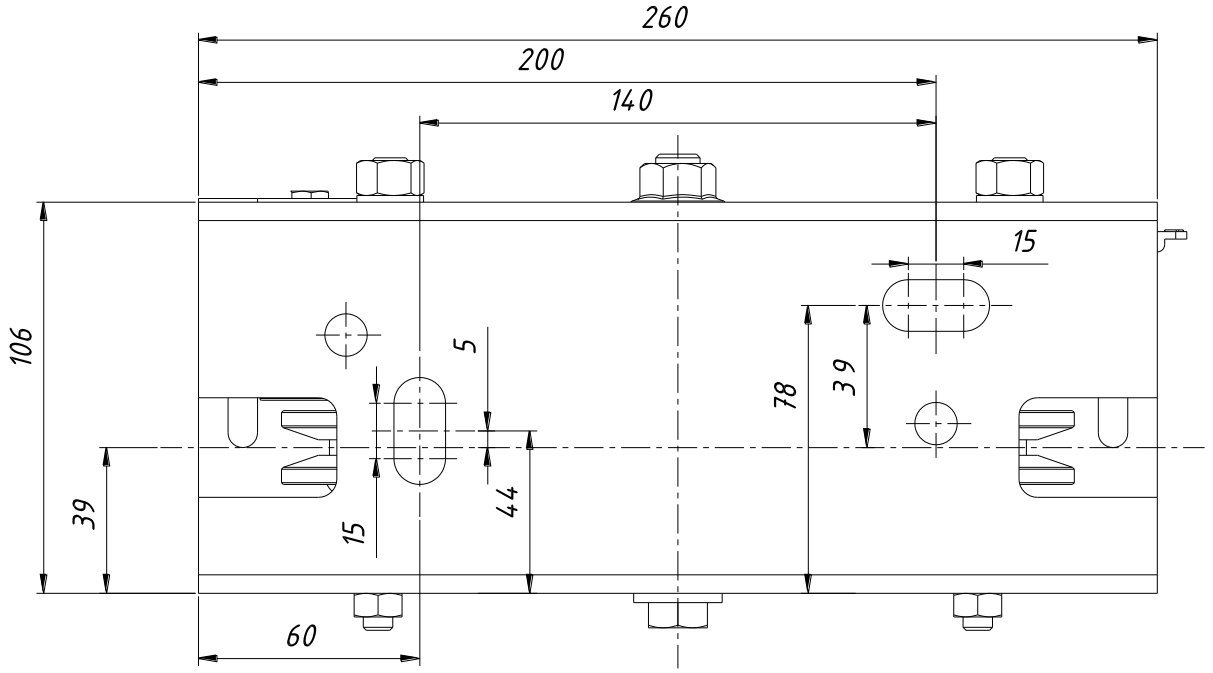
Body of bi-directional elevator overspeed governor and tensioning pulley are a whole. It works properly with the amount of tensioning load obtained as a result of calculations made. The use of a tensioning pulley group of another brand disturbs proper operating conditions. These are outside the responsibility of our company and is not guaranteed.

GOVERNOR BODY AND TENSIONING PULLEY INSTALLATION

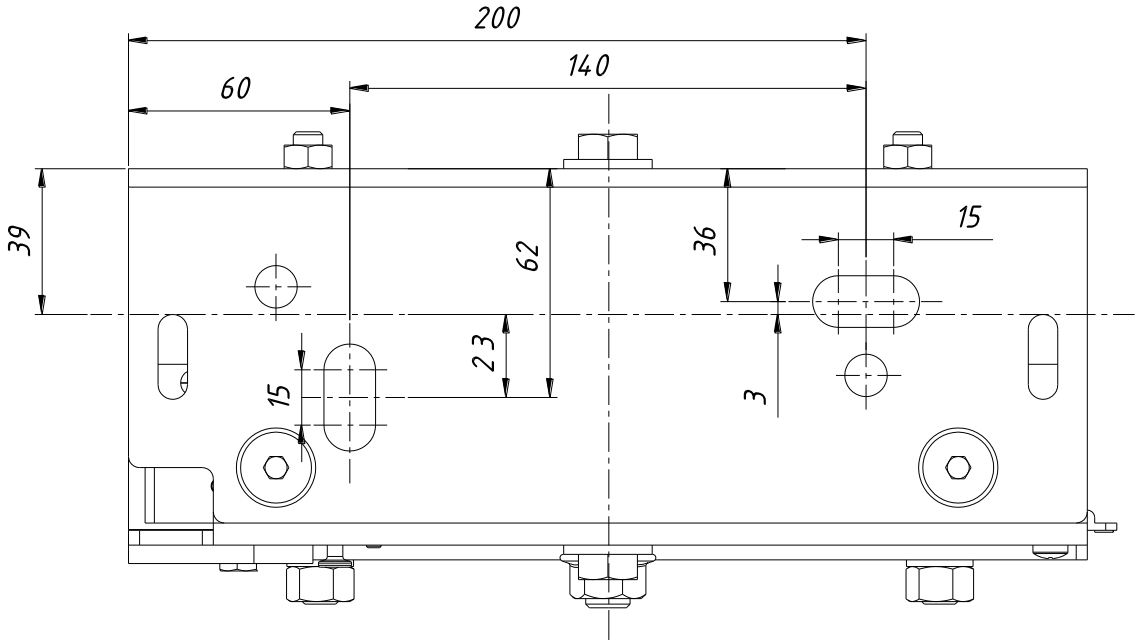
The speed governor and the tensioning pulley group must be installed in a position that meets each other. In cases that do not meet each other, the rope does not fit properly in the pulley grooves. The rope damages the grooved by friction during entry and exit into the pulley groove. As a result, it becomes difficult to drive the safety gear due to not enough friction force being available. Care must be taken in the alignment process.

The governor body is used by being installed on the floor of headroom in the elevator system or on a specially prepared table, and on a table prepared in the pit for the elevators without a headroom.

The governor bodies, which are our design, can also be used by hanging on the ceiling of the pit if they cannot be connected to the machine room floor or the table in the pit due to the space limit. Although not a highly preferred method, may be preferred due to conditions.



HOLE MEASUREMENT FOR BASE MOUNTING



HOLE MEASUREMENT FOR CEILING MOUNTING

FIGURE 2

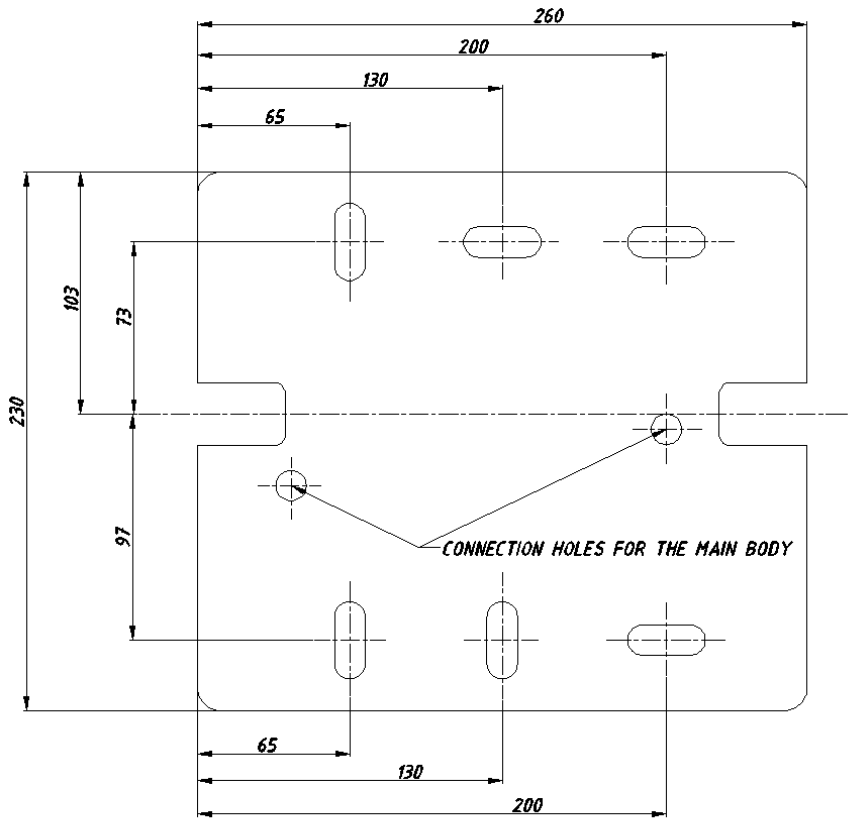
To install the governor, two M12 steel dowels (Fatique certified Chemical dowels) if it is to be installed on the concrete floor, and two M12 countersunk bolts if it is to be installed on the prepared table. (FIGURE 2)

If you have enough space in your installation area, you can connect the governor to the floor from a larger floor using the base installation plate. First install the base plate onto the governor body. Combine the base installation plate with the governor body with the help of M12 countersunk bolts through the box. You can then connect the governor to the appropriate floor with the help of the base plate. At the same time, you can also connect the base installation plate to the upper part of the governor body and use it in the form of ceiling hanged (fatique certified chemical dowel). Base installation plate hole dimensions are given. (FIGURE 3)

In addition, a paper floor drilling template is placed in the product box to facilitate the alignment of the installation holes for drilling into the floor.

After identifying the rope centers, you can mark the installation hole centers by placing the template on the floor.

Use this template by rotating it to the left or right side of the elevator guide rail. The template is prepared for installation on the left side.



MEASUREMENT FOR THE CENTER POINTS OF THE HOLES ON THE GOVERNOR BASE PLATE

FIGURE 3

Pay attention to the arrow directions on the label attached on the governor housing for installation. The direction of the arrows is shown as up and down. According to the arrow directions;

The designed bi-directional speed governor is designed to be installed on the left side of the guide rail in the pit, relative to the downward direction of the cabin. When you buy it, you can install it directly on the left side of the guide rail out of the box. (FIGURE 4)

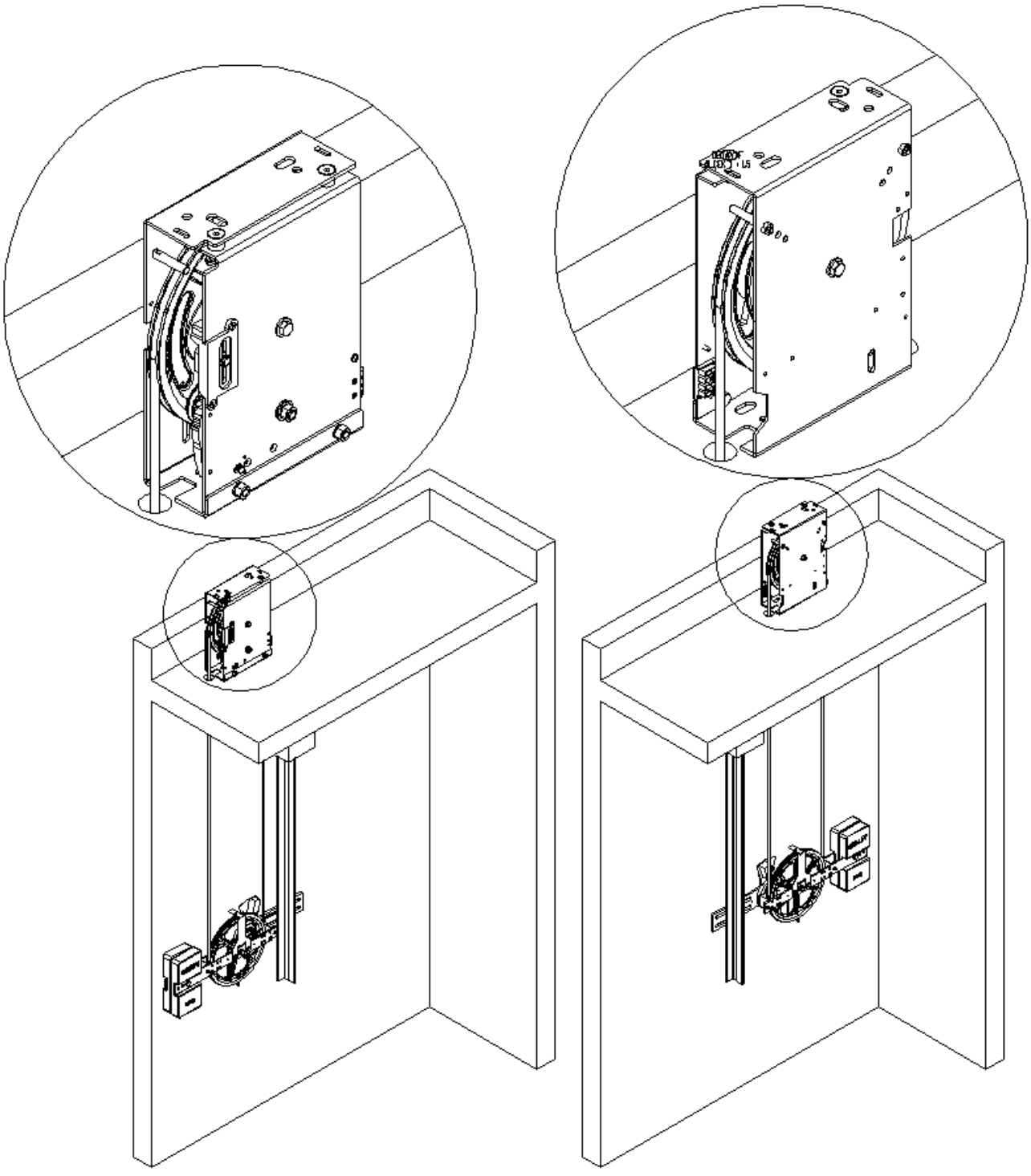


FIGURE 4

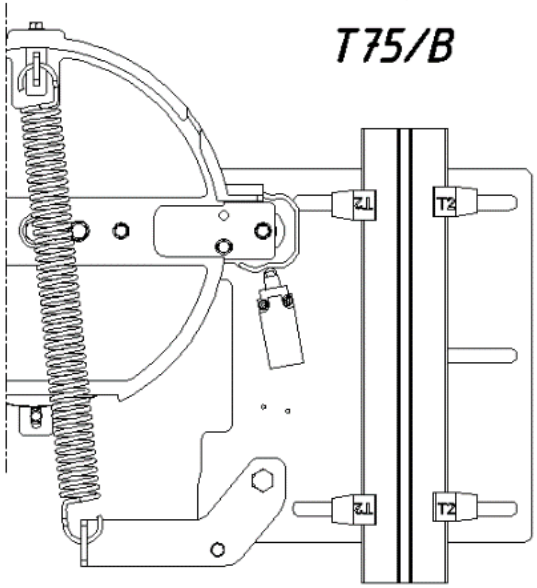
The elevator system design may require that the governor be installed on the right side of the rail. In this case, you can install the speed governor by rotating it on the condition that it is attached to the up and down arrows (FIGURE 4).

It is appropriate to use elevator guide rail clip (T2) for the assembly. Different sizes of elevator guide rail clip are being used as the rail sizes grow. It varies depending on the load to be carried by the car. For a bigger elevator guide rail clip, a bigger duct is needed so that the elevator guide rail clip can pass through. If the duct is made bigger, then small elevator guide rail clip cannot be used.

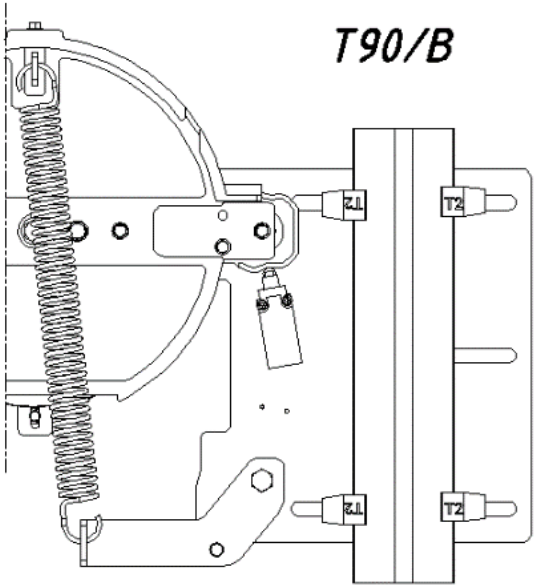
The force to be generated during locking of our governor does not depend on the weight to be carried by the car. The generated force is fixed and does not change. Elevator guide rail clip (T2) is sufficient as a fixture to meet the generated force and to ensure the right assembly. You can find below the figure of rail assembly in different sizes with elevator guide rail clip (T2). (Figure 5)

YOU CAN ASSEMBLE THE SPRING SYSTEM TENSIONING GROUP
TO THE RAIL TYPES WITH GUIDE RAIL CLIP (T2)
WHICH IS SHOWN BY THE PICTURE

T70/A
T75/B



T82/A
T89/A
T90/A
T89/B
T90/B



T114/B
T125/B

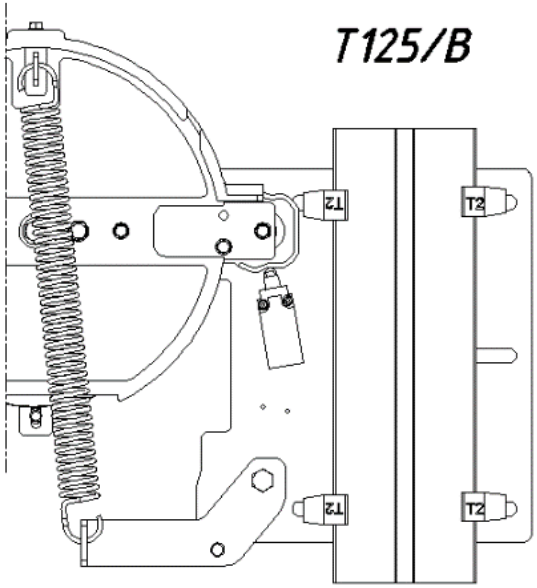


FIGURE 5

You can make a modification in the tensioning group and install it by aligning it to the right side of the guide rail.

The changes in the weighted tensioning group are explained in the following figure. (FIGURE 6,7,8)

The changes in the spring tensioning group are explained in the following figure. (FIGURE 9,10,11)

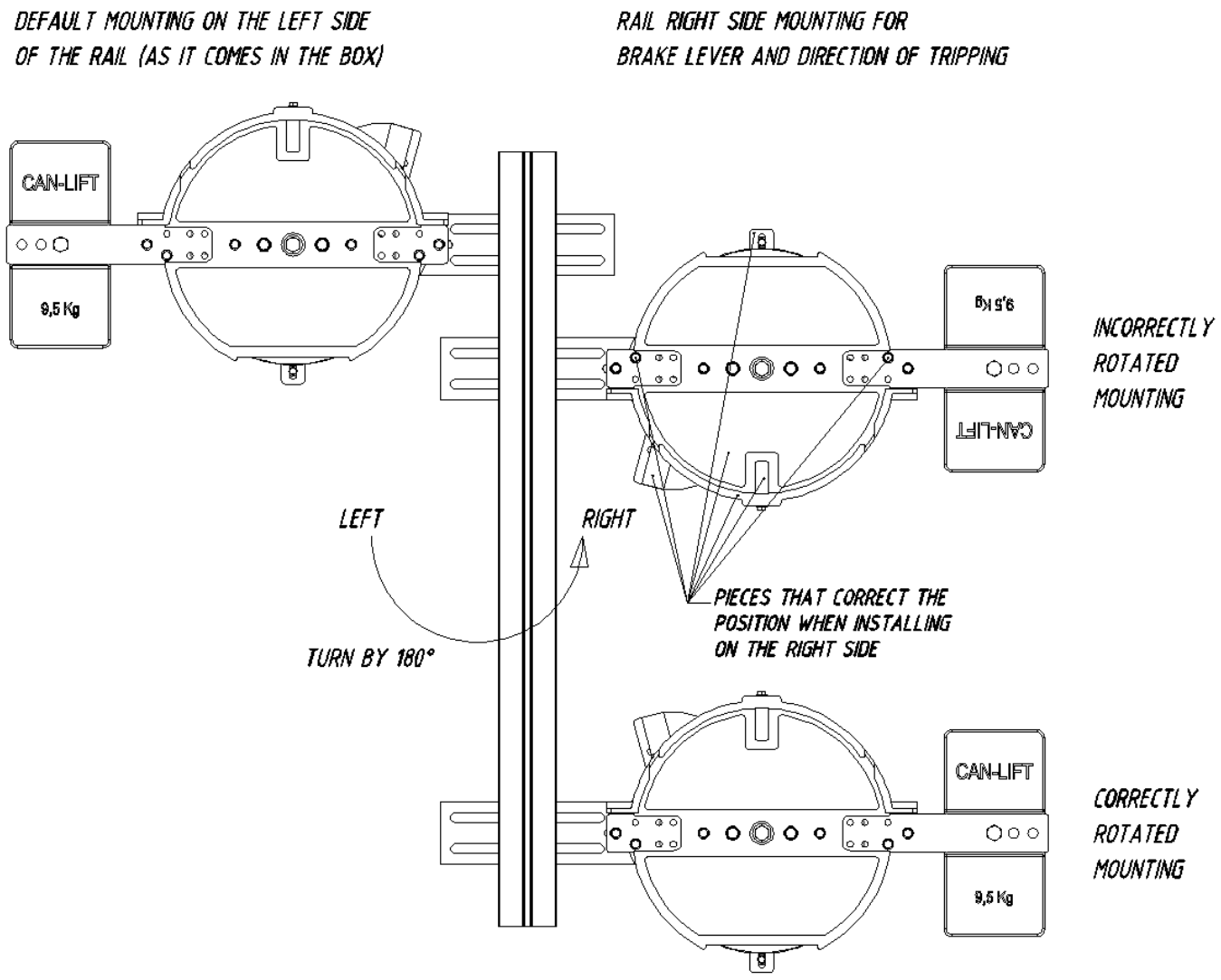
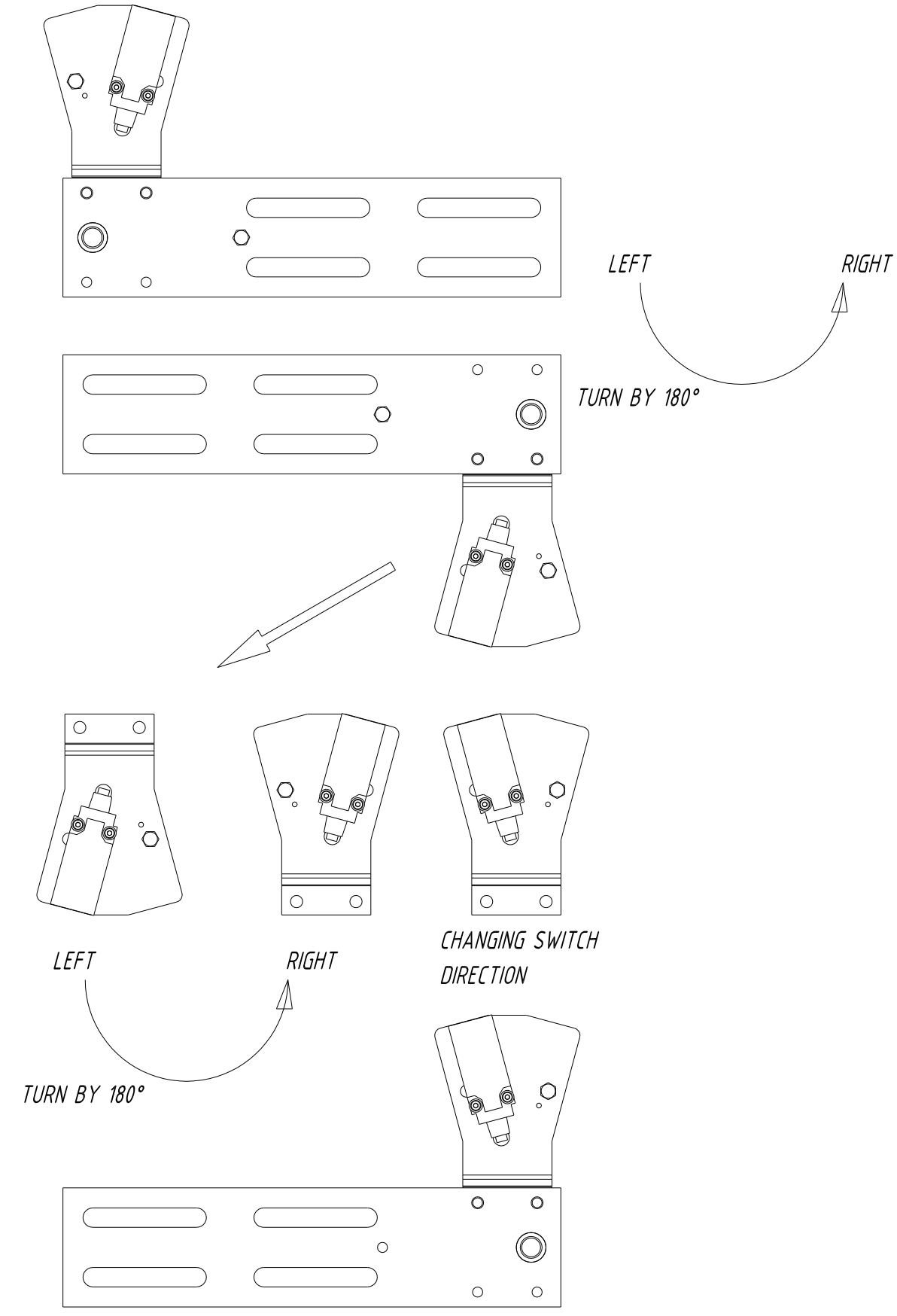


FIGURE 6



CORRECT MOUNTING ON THE RIGHT SIDE OF THE RAIL, TURNED BY 180°

FIGURE 7

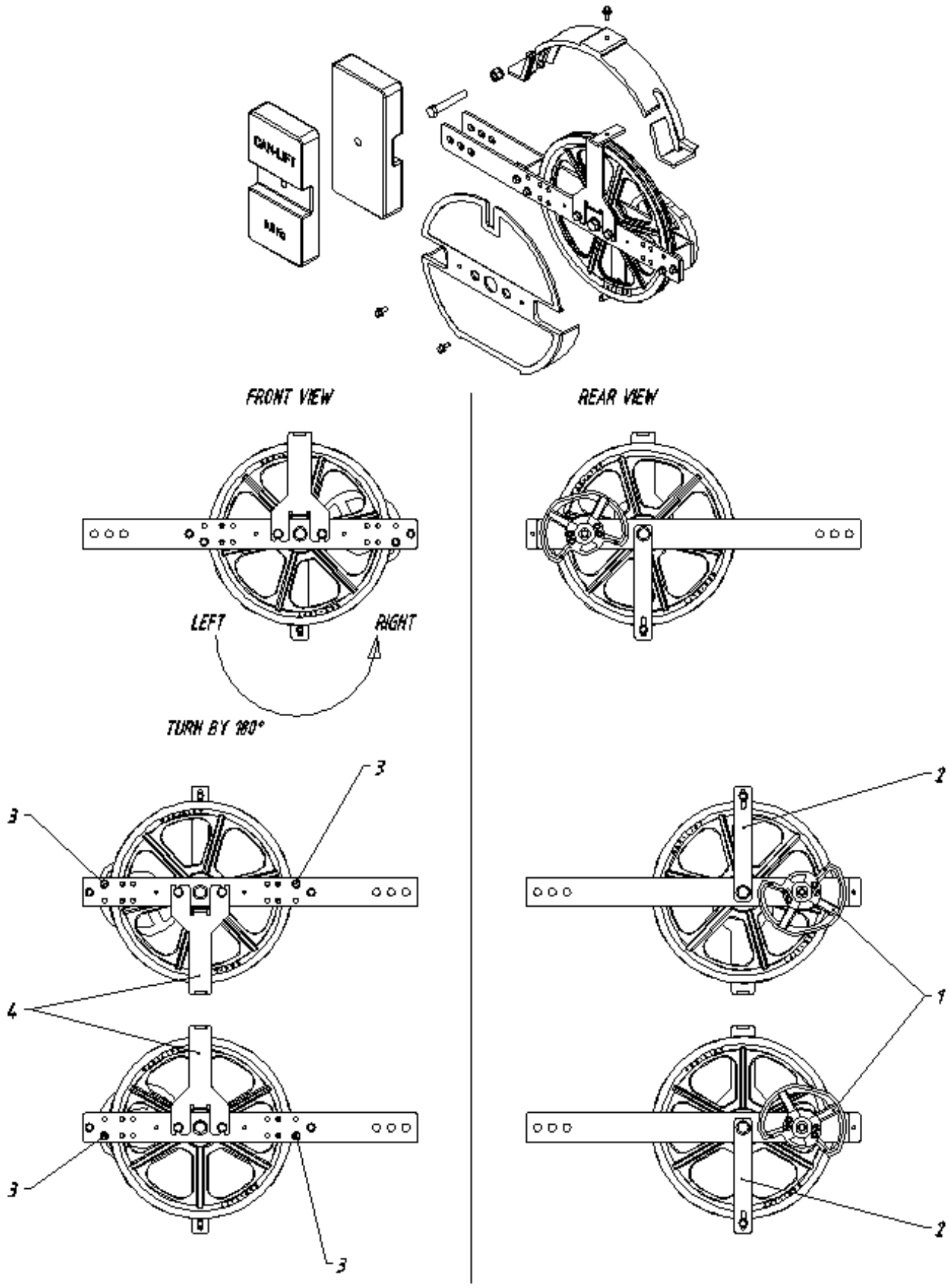

TENSION PULLEY LEVER CHANGING THE DIRECTION
FRONT VIEW
REAR VIEW
LEFT
RIGHT
TURN BY 180°
1
2
3
4

FIGURE 8

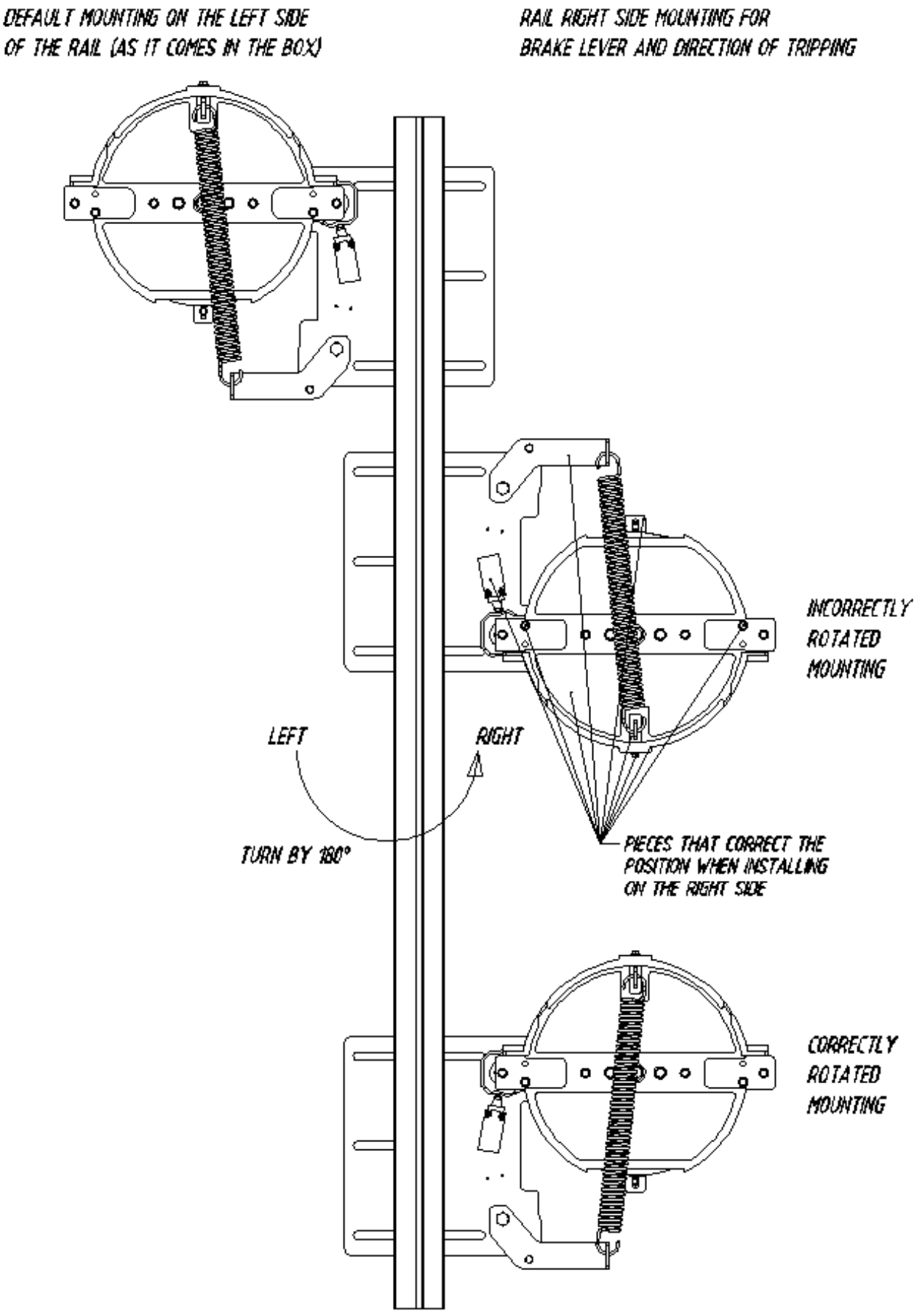
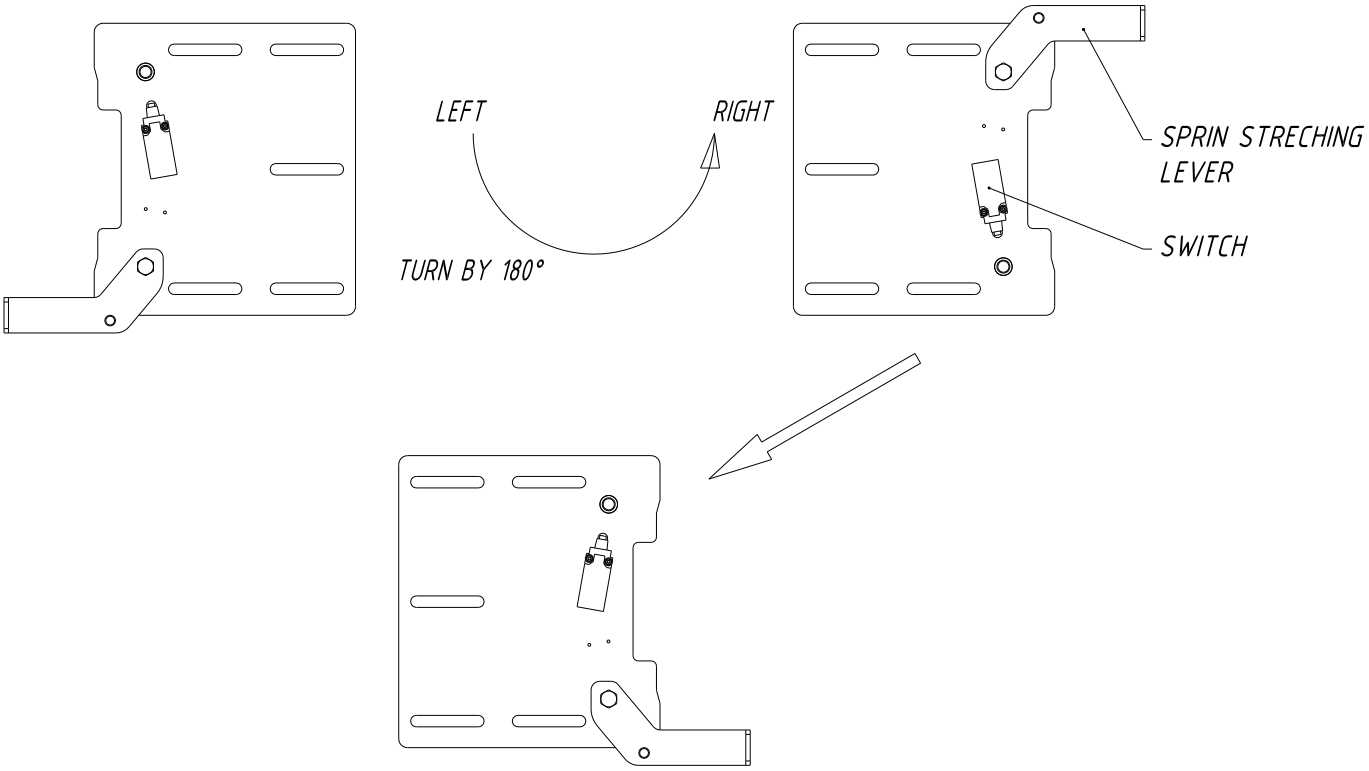

DEFAULT MOUNTING ON THE LEFT SIDE
OF THE RAIL (AS IT COMES IN THE BOX)
RAIL RIGHT SIDE MOUNTING FOR
BRAKE LEVER AND DIRECTION OF TRIPPING
INCORRECTLY
ROTATED
MOUNTING
LEFT
RIGHT
TURN BY 180°
PIECES THAT CORRECT THE
POSITION WHEN INSTALLING
ON THE RIGHT SIDE
CORRECTLY
ROTATED
MOUNTING

FIGURE 9



CORRECT MOUNTING ON THE RIGHT SIDE OF THE RAIL, TURNED BY 180°

FIGURE 10

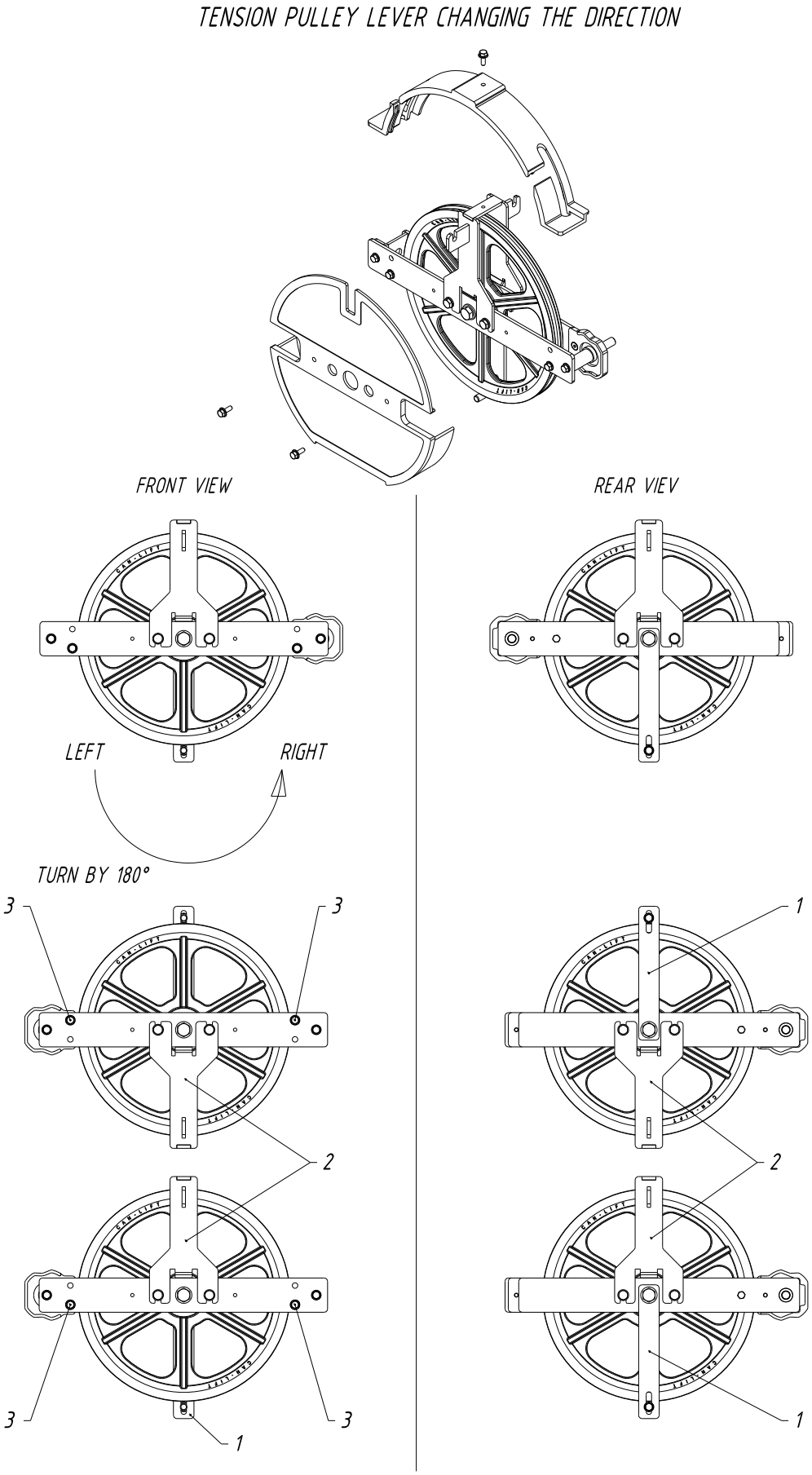

TENSION PULLEY LEVER CHANGING THE DIRECTION
FRONT VIEW
REAR VIEV
LEFT
RIGHT
TURN BY 180°
3
3
2
3
3
1
1
2
1

FIGURE 11

SPRING TENSIONING PULLEY TENSION SPRING INSTALLATION

Install the overspeed governor spring system tensioning pulley tension spring as described below.

There is no adjustment mechanism for the spring system tensioning pulley spring, which we designed.

In case of rope elongation or breakage, sagging is possible and the tension spring can generate enough pulling force until the safety contact circuit is closed and the current is cut off. For this reason, no spring tension adjustment mechanism is used.

Place the overspeed governor rope in the pulley grooves and install it in the system. Tighten the rope with the hand so that the tensioning pulley lever is **horizontal** and the tensioning group is secured to the elevator guide rail. When the lever is in the horizontal position, the tension of the governor rope must be sufficient to prevent extension during spring tensioning.

Once you have ensured that the tensioning group is secured to the guide rail, install the tension spring hook in the lower lantern hole as shown in figure 12. (FIGURE 12)

Attach and tighten the hand hook used for spring tensioning in the box to the hook on the other end of the tension spring as shown in figure 12. (FIGURE 12)

With the help of a hand hook, attach the hook on the end of the tension spring to the hook on the pulley lever as shown in the figure 3 and make sure it fits in the canal. (FIGURE 12)

Do these procedures for the two tension springs on the front and rear.

Leave the hand hook on one of the installation grooves that you have not used on the spring system tension pulley assembly for subsequent maintenance or repairs.

A tensile force of 660 N is created as a result of tensioning of springs after being attached.

In order for the springs to be able to generate the correct amount of force, the pulley lever must be in horizontal position when the governor rope is fitted and tensioned.

An elongation will occur during the first use of the governor rope. The total length of rope in our design is set to be max. 8 cm elongation. In this case, even when the center of the tensioning pulley sags max. 4cm down, tension springs can generate enough force.

If the lever cannot be adjusted horizontally, the safety contact will close the circuit in a shorter time as the amount of final sag decreases due to role elongation.

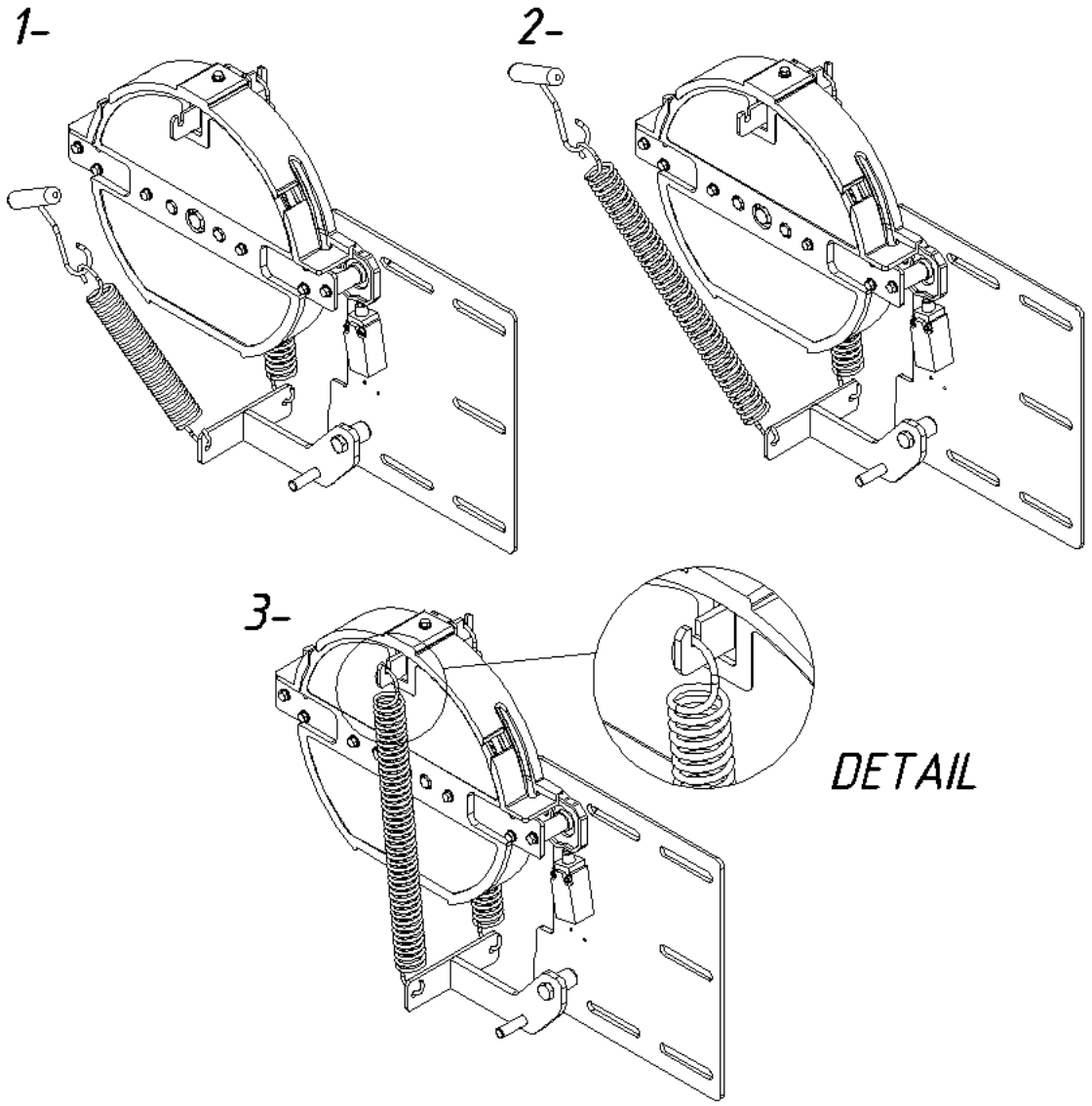


FIGURE 12

EASY INSTALLATION FOR THE GOVERNOR ROPE IN REVISION PURPOSES

When the governor is changed for the purpose of revision, the two ends of the governor rope are connected to the safety gear.

In this case, the process of attaching the governor rope to the governor pulley and the lower tensioning group pulley can cause difficulties to the competent person.

In the governor body, that is our product, does not have a separate cap as a protector and the governor housing plate closes the top of the pulley.

In order for the governor rope to be fitted in the pulley, firstly detach the rope holder shafts no. 1 which holds the governor rope in the groove. Then remove the bolts at the top that connect the governor

housing plates together. (bolt no. 2, spring washer no. 3 and nut no. 4) Take the distance pipe in between. (distance pipe no. 5) Pass the governor rope through the formed intermediate space and place it in the pulley groove.

Then replace the distance pipe no. 5 again to its old place. Pass the bolt no. 2 through the distance pipe and tighten sufficiently with the aid of a spring washer no. 3 and nut no.4.

Lastly, finish the process by inserting the rope holder no. 1 in its place. (FIGURE 13)

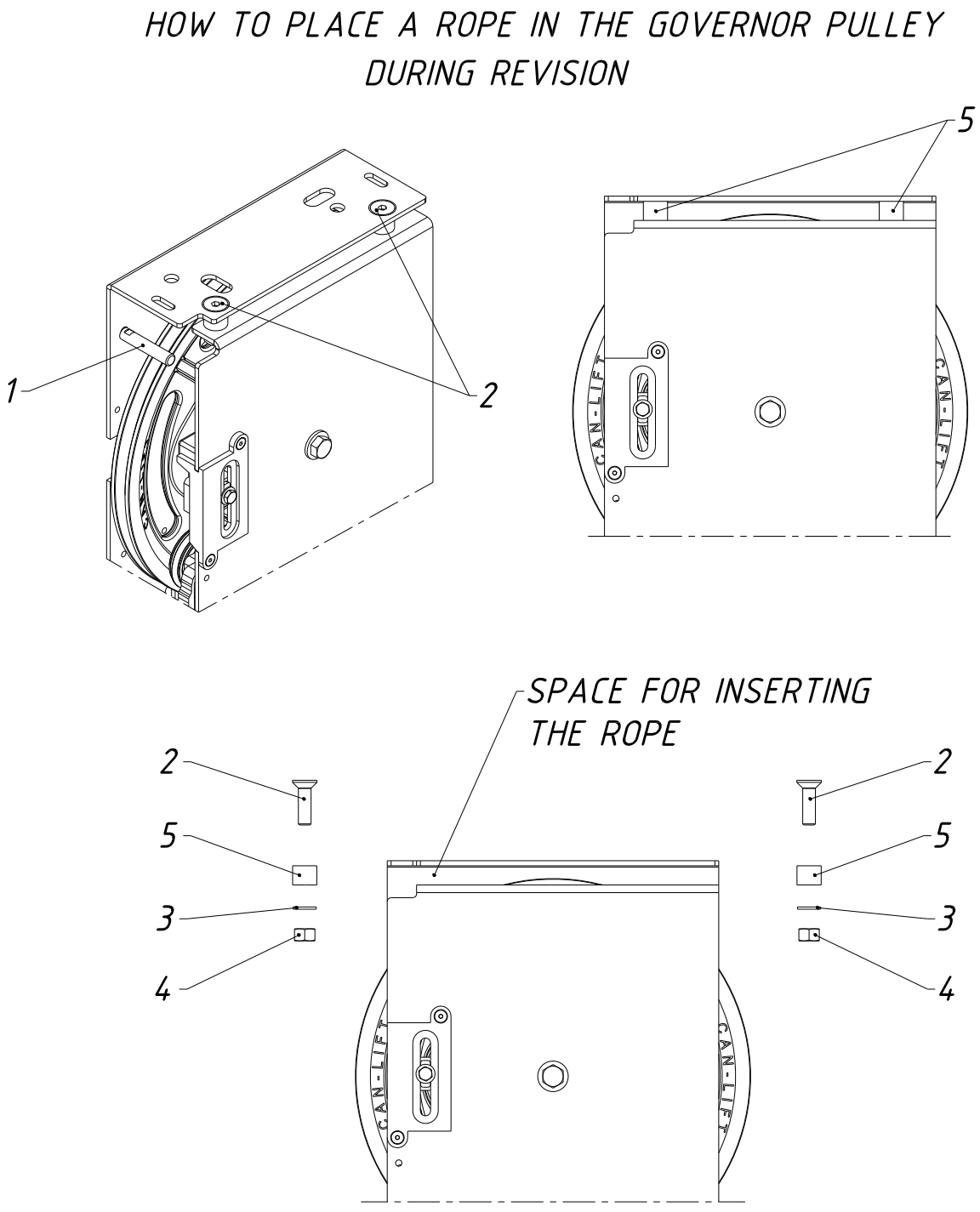


FIGURE 13

In the weighted lower tensioning group, first remove the bolt no.1 from the pulley lever.

Remove rope holder shafts no. 2.

Then remove the bolts no. 3 and make the pulley lever front plates be independent of the rear plate. Thus, the rope does not prevent the rope from fitting in the pulley groove.

Loosen the pulley hub mounting bolt (no. 4). Pass the governor rope from the gap that will be formed when you rotate the pulley lever front plate a bit and seat it in the pulley groove.

Take the hoop lever back to its former position and replace all the bolts and rope retaining axles that you have removed.

Tighten the pulley hub bolt enough and make the system operational. (FIGURE 14)

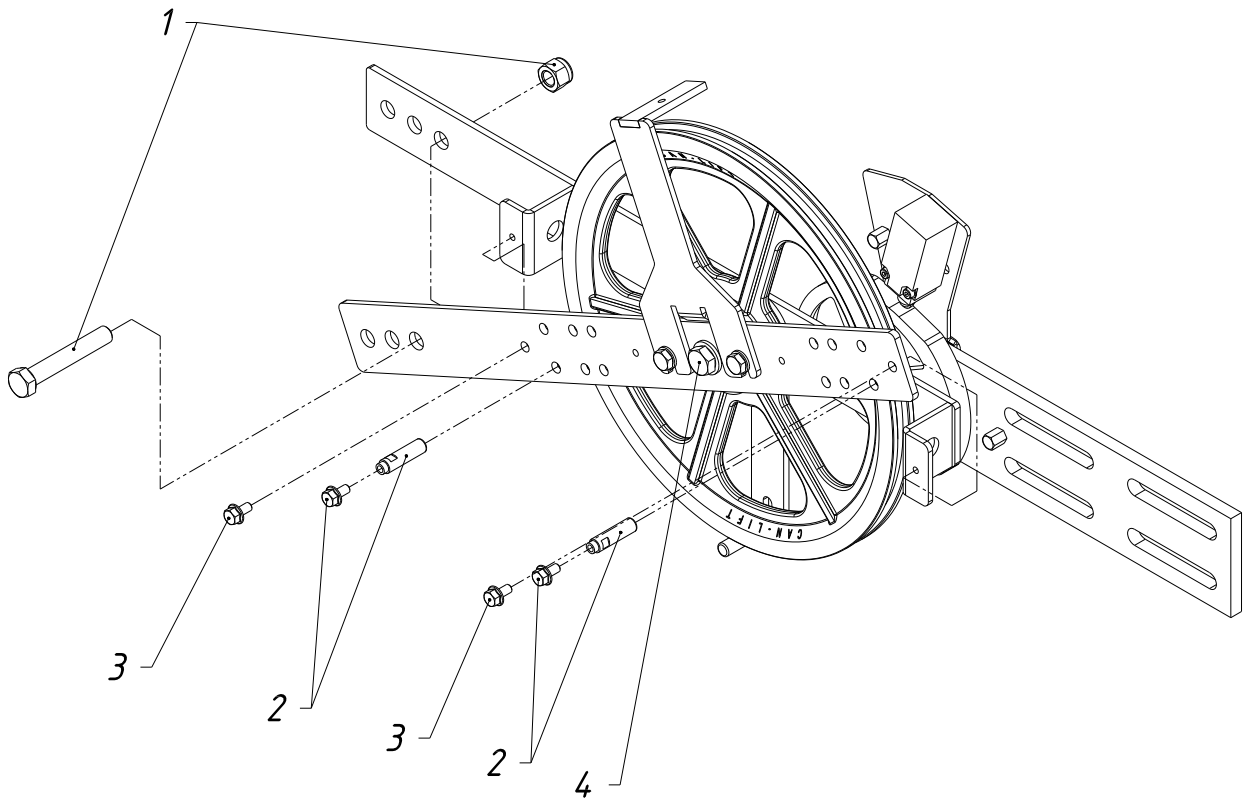


FIGURE 14

The bridge shaped part no. 2, which is used for spring attachment in the spring system lower tensioning group, should be removed. Loosen the four bolts no. 1 and remove the bridge part no. 2.

Remove rope holder shafts no. 3 and 4.

Then remove the bolts no. 5 and make the pulley lever front plates be independent of the rear plate. Thus, nothing prevents the rope from fitting in the pulley groove.

Loosen the pulley hub mounting bolt (no. 6). Pass the governor rope from the gap that will be formed when you rotate the pulley lever front plate a bit and seat it in the pulley groove.

Take the hoop lever back to its former position and replace all the bolts and rope retaining axles that you have removed.

Replace the bridge part and tighten the bolts.

Tighten the pulley hub bolt enough and make the system operational. (FIGURE 15)

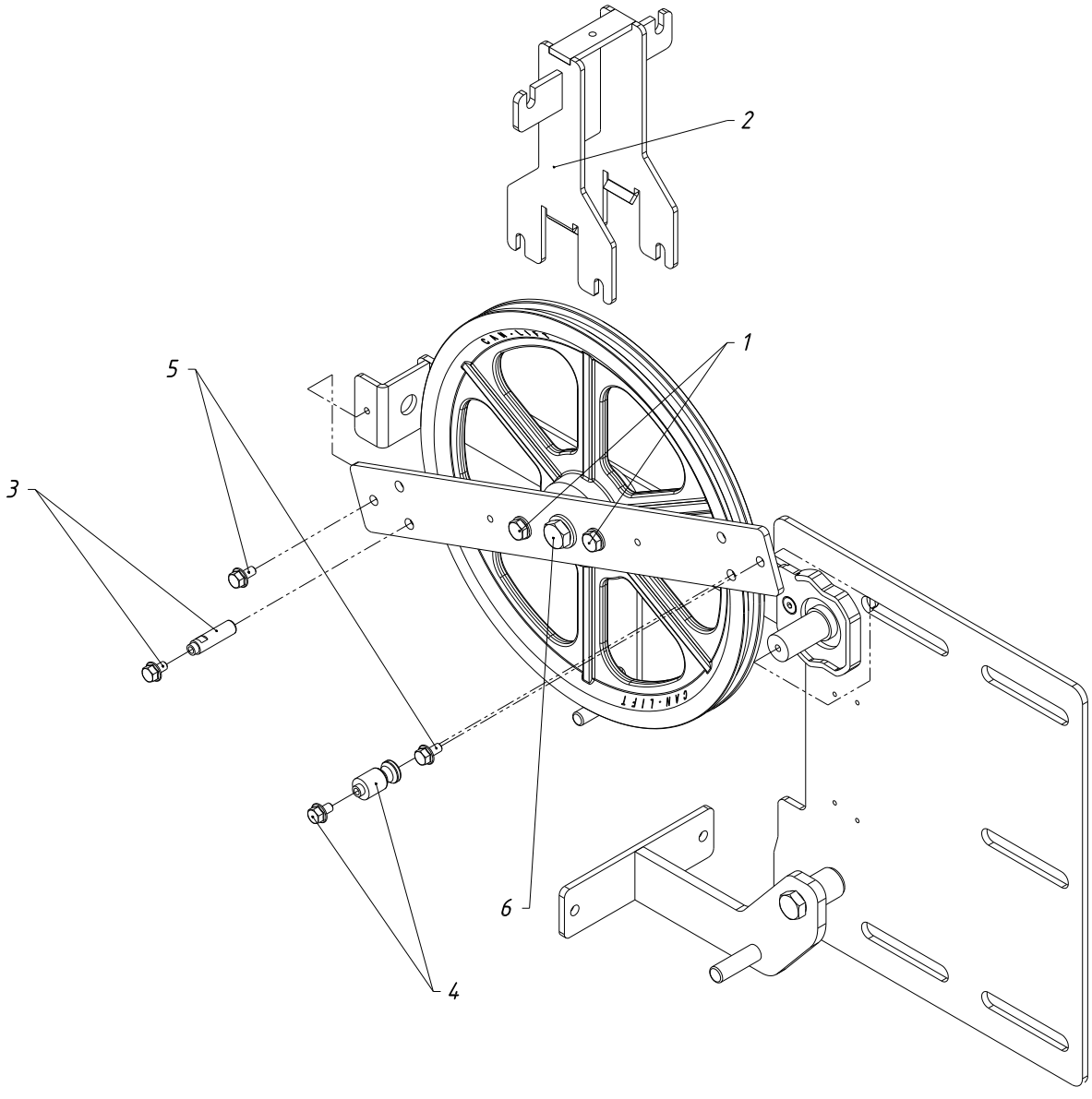


FIGURE 15

SAFETY AGAINST UNINTENDED CAR MOVEMENTS (UCM);

The Standard EN 81-20 requires that some measures must be taken against unexpected unintended car movements. This requirement is described in **EN 81-20 Article 5.6.7**.

5.6.7 Protection against unintended car movement

5.6.7.1 *Lifts shall be provided with a means to prevent or stop unintended car movement away from the landing with the landing door not in the locked position and the car door not in the closed position, as a result of any single failure of the lift machine or drive control system upon which the safe movement of the car depends.*

Excluded are failures of the suspension ropes or chains and the traction sheave or drum or sprockets of the machine, flexible hoses, steel piping and cylinder. A failure of the traction sheave includes a sudden loss of traction.

In lifts without levelling, re-levelling and preliminary operations with doors open according to 5.12.1.4 and where the stopping element is a machine brake complying with 5.6.7.3 and 5.6.7.4 no detection of the unintended car movement needs to be provided.

Any slip due to the traction conditions at unintended movement stopping shall be taken into account for calculation and or verification of the stopping distance.

5.6.7.2 *The means shall detect unintended movement of the car, shall cause the car to stop, and keep it stopped.*

It may be summarized as follows: after unintended car movement is detected, the car must be stopped at distances specified in **Article 5.6.7.5.**

One of the solution to this requirement of the standard is to stop unintended car movement (UCM) by enabling the safety gear mounted on the car through the overspeed governor and governor rope.

The overspeed governor models that we manufacture CL 08 200 A3 (UCM), CL 08 250 A3 (UCM), CL 08 300 A3 (UCM), CL 08 200 A3+UZ (UCM+RC), CL 08 250 A3+UZ (UCM+RC), CL 08 300 A3+UZ (UCM+RC) are activated in case of unintended car movement, enabling safety gears mounted on the car.

With this overspeed governor model, the disc connected to the governor sheave through a coil is locked flexibly when the car stops at landing. The back-and-forth movement of the coil axle which performs locking is controlled by a electric switch. (These governors are locked whenever the car stops at a landing and kept locked during stop periods)

If an unintended car movement (UCM) occurs at locking position, the disc, after allowing some movement, locks the governor sheave and prevents its rotation. Thus, the governor rope passing through the sheave pulls the safety gear lever and enables the safety gear.

The amount of unintended movement allowed by the disc that flexibly locks through the coil is specified in the User Manual for CL 08 Overspeed Governor, p. 38. These distances equals to the values that allow the lift to load/unload or perform leveling movements. When these values are exceeded, the governor is locked.

These features of the governors were tested and certified by the notified bodies.

The safety gears are required to be enabled easily at low speeds so that they can be used as safety gear in case of unintended car movements (UCM). Our safety gear models CL SG - P - B ve CL SG - P - U allow braking by activating at low speeds of unintended car movement, as well.

The Overspeed Governors CL 08 and Progressive Safety Gear CL SG in the models specified above, are certified individually for use as safety gear.

As specified in Lift Regulation 2014/33, Annex 3, Clause 2, the mechanisms that prevent fall or unintended movement of the car are required to be tested and certified by the Notified Bodies.

It was approved by testing that the two products of our company activate harmoniously at low speeds of unintended car movements and they were certified as a set by the Notified Body. They can be used for safety against unintended car movements (UCM).

If a set of Can Lift CL 08 Overspeed Governor used, no additional detection device is required as the governors have a continuously locked system when the car is at the landing.

For certification, it is checked if the lift car stops at the distance specified by the standard after an unintended movement (UCM). (EN 81-20 M 5.6.7.5) Once the test result is within the range of values specified by the standard, the safety gear and governor are certified as a set.

Where a set of Can Lift CL 08 Overspeed Governor specified above, and the tension mechanism and CL SG Progressive Safety Gear are used together, no additional certification is required as they have an UCM test document and certificate as a set. They are included in the product line having the UCM certificate which is required to be issued by the Notified Body specified in Lift Regulation 2014/33, ANNEX 3, Clause 2.

In case our products are not used as a set, the installation company must have an authorized notified body carry out the certification process so that the products are approved as a safety gear against unintended car movements.

SAFETY TEST AGAINST UNINTENDED CAR MOVEMENTS

6.3.13 Protection against unintended car movement (5.6.7)

The aim of the test before putting into service is to check detection, and stopping elements.

Test-requirements: only the stopping element of the means defined in 5.6.7 shall be used for the tests for stopping the lift. The test shall:

— consist of verifying that the stopping element of the means is triggered as required by type examination;

— be made by moving the empty car in up direction in the upper part of the well (e.g. from one floor from top terminal) and fully loaded car in down direction in the lower part of the well (e.g. from one

floor from bottom terminal) with a 'pre-set' speed, e.g. as defined during type testing, (inspection speed etc.);

The test, as defined by the type-examination, shall confirm that the unintended movement distance will not exceed the value given in 5.6.7.5. If the means requires self-monitoring (5.6.7.3), its function shall be checked.

NOTE If the stopping element of the means involves elements present at landing floors, it could be necessary to repeat the test for each concerned landing.

DEACTIVATING THE UCM SYSTEM DURING THE ELEVATOR INSTALLATION

During the small movements required during the initial installation of the elevator or subsequent setting and maintenance operations, if the electric current cannot be supplied to the **UCM** coil, it activates the safety gear by locking due to locking pin being left ahead.

You can push the safety contact stop back by installing the UCM system stopper which is attached by chains at the back of UCM unit, into the groove located on the guard. Thus, the locking pin retracts of the UCM system. During small portions of movement, no locking occurs and the safety gear does not activate.

Once the installation, adjustment and maintenance process is completed, always remove the UCM system stopper from the groove and release the UCM system locking pin.

During normal operation, the UCM system stopper must never be attached on the UCM unit guard and must not swing at the end of the attaching chain. The UCM unit is a safety element and must not be deactivated during normal operation. (FIGURE 16)

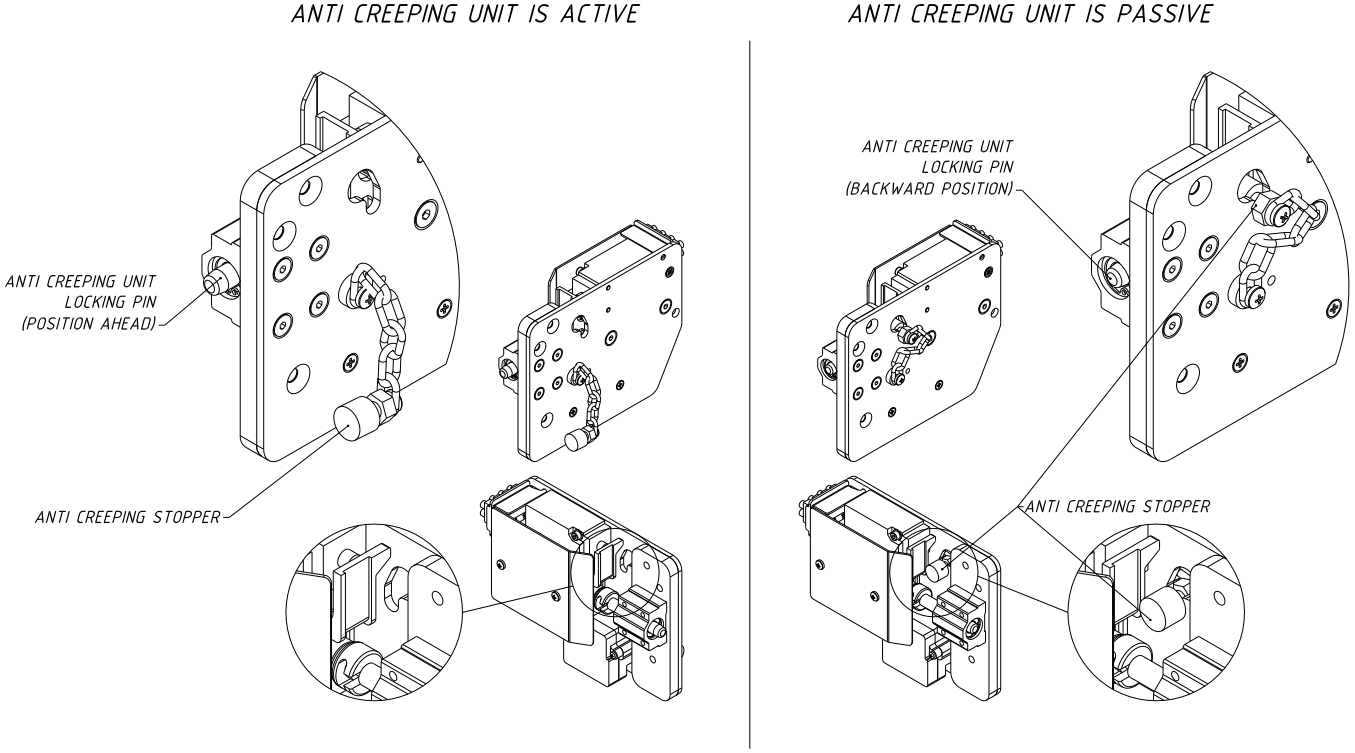


FIGURE 16

ELECTRICAL CONNECTIONS

All electrical connections vary by model. According to this;

1- CL – 08 Ø300 / CL – 08 Ø250 / CL – 08 Ø200 overspeed governors are the most basic governors. It only activates the safety gear system by locking by overspeed and disables the drive machine circuit with the help of reset governor contact.

In this system, there is only reset electric switch that interrupts the circuit. Therefore, only grounding connection and governor contact connection must be made. On the right side of the front of the governor, connect the cable of the governor contact with the grounding screw and the terminal block mounted on the inner surface of the chassis. For cable connection, use the two terminals no. 3 and 4 of the terminal block. The cables are connected to the NC (Normally Closed) terminals of the governor contact.

On the back side of the governor there is also a threaded hole ready for alternative grounding connection. If necessary, you can make grounding connection by removing the grounding screw and moving it to this hole. Use grounding screw for grounding. (FIGURE 17)

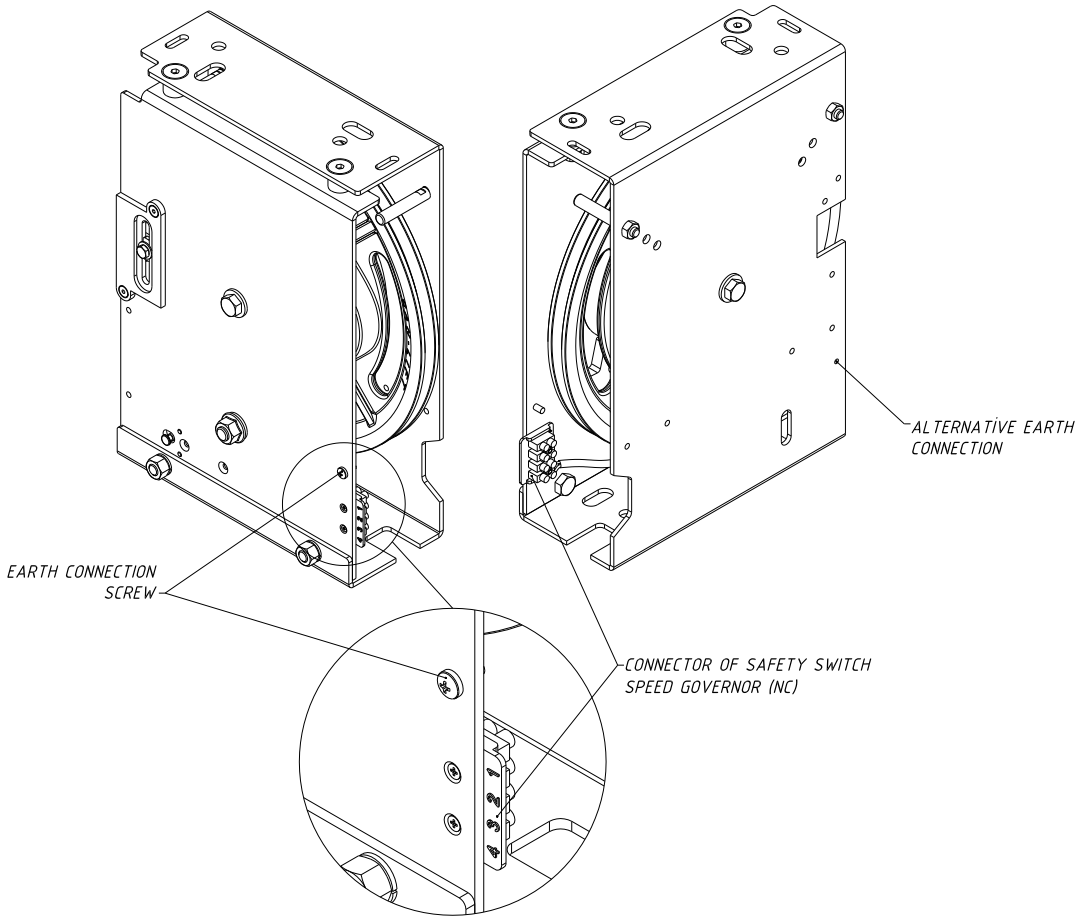


FIGURE 17

2- CL - 08 Ø300 A3 (UCM) / CL - 08 Ø250 A3 (UCM) / CL - 08 Ø200 A3 (UCM) (Unintended Car Movement) electrical connections of overspeed governors should be made as follows.

Overspeed governors of this model; when the cabin is on the floor, it stops the movement of the cabin by activating the safety gear system if it moves accidentally.

The disc connected to the governor sheave through a coil is locked flexibly when the car stops at landing. The back-and-forth movement of the coil axle which performs locking is controlled by a contact.

If unintended movement occurs in the locking position, the disk locks the governor pulley after allowing some movement and prevents it from rotating. Thus, the rope passing through the pulley activates the safety gear system by pulling.

System recovery is performed mechanically by authorized personnel.

If there is not a lot of unintended movement and the governor is completely fixed and the brake system is not activated, the coil current is supplied to retract the coil shaft. The possible locking of the pulley will be released and the system will continue to operate normally.

UCM model governors have two safety contacts.

There is a contact which is triggered by the lever locking the pulley as a result of overspeed by slipping and a contact which controls the electric coil which locks unintended movement.

For the electrical connection of the reset contact triggered from the pulley locking lever, you can use the terminals of the terminal block no. 3 and 4 on the inside of the front side of the governor. (FIGURE 17 - 18)

For unintended movements on the UCM unit, you can use the terminal block on top of the plate which carries the coil which has the locking task, and the cable connection of the contact controlling the coil, on these two elements. In the following figure, the connection order of the cables is shown as numbered. (FIGURE 18)

1,2 UCM coil electrical connection terminals,

3,4 Coil contact (contact without reset) (NC – Normally Closed) terminals.

You can make the grounding connection with the aid of the screw provided on the front of the governor housing. (FIGURE 17 - 18)

As an alternative, you can make the grounding connection by removing the grounding screw from its place and change its location.

If you want to use the (NO Normally Open) terminals of the contact, you have to make a connection by taking a separate cable from the contact.

The UCM coil and the plastic part attached to the back of the locking system plate are used to disable the UCM system when necessary during installation and maintenance.

When attached to the slot on the plate, it holds back the plastic part that presses on the contact, so that the UCM locking pin does not lock by returning back. The coil is the opposite of the retracted position.

This plastic part must never be inserted into the slot when it is not needed and the UCM system should not be left deactivated.

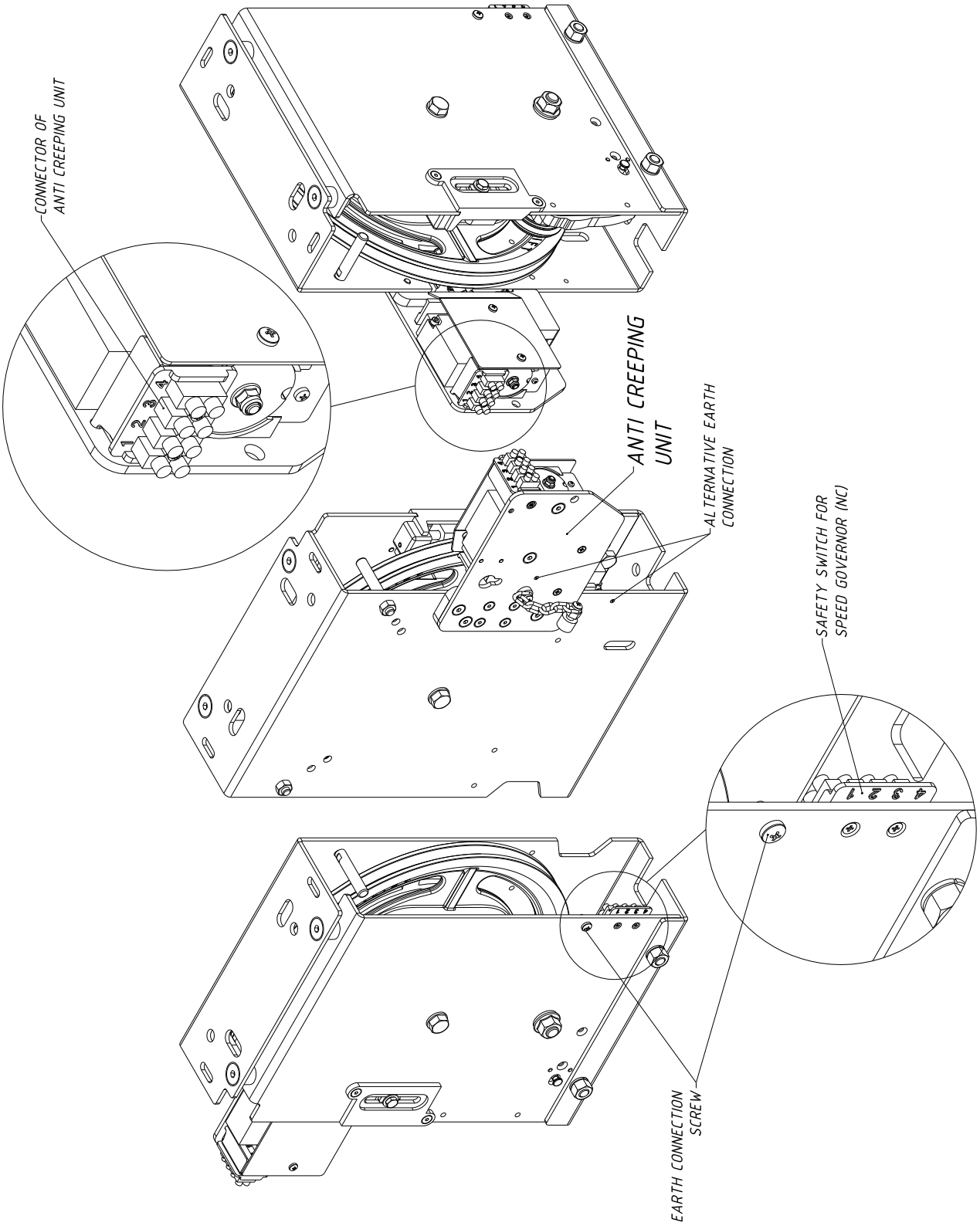

CONNECTOR OF
ANTI CREEPING UNIT
ANTI CREEPING
UNIT
ALTERNATIVE EARTH
CONNECTION
SAFETY SWITCH FOR
SPEED GOVERNOR (NC)
EARTH CONNECTION
SCREW

FIGURE 18

3- CL - 8 Ø300 UZ (RC) / CL - 08 Ø250 UZ (RC) / CL - 08 Ø200 UZ (RC) (MRL) (Remote Control) electrical connections of **overspeed governors** should be made as follows.

This type of overspeed governors are used in elevator systems without a headroom by being mounted on a stand prepared in a pit.

In this model governors, there is a safety contact with a reset which controls the position of the coil and the locking lever, which allows locking by pushing one pulley locking lever for testing.

A coil current is applied to allow the authorized person for the test to lock the governor without entering the pit. The coil pushes the locking lever to ensure pulley is locked. In the meantime, the locking lever also allows the safety contact to be disconnected.

The coil used for locking has %3 ED feature. Press the button for maximum 3 seconds for the locking operation. Pressing longer would lead to overheat of the coil. If pressed longer, wait for a sufficient time to cool down the coil.

Although the system recovery is made mechanically, the locked contact remains disconnected. By energizing the recovery coil in the contact, the contact completes the circuit again and moves to the normal operating position.

The coil in the contact used for rescue has %3 ED feature. **Press the button for maximum 3 seconds for the rescue operation. Pressing longer would lead to overheat of the coil. If pressed longer, wait for a sufficient time to cool down the coil.**

Do the electrical connection of the remote control governor lockout test coil with the help of the terminals no. 3 and 4 of the terminal block on the inside right of the governor front side.

There is a reset contact on the remote control unit. Electrical connection of the contact and the recovery coil in it must be done with the help of the terminal block mounted on the remote control unit.

Connect the remote control coil, contact and contact recovery coil cables in the order as shown in the figure.

1,2 Reset coil (recovery coil)

3,4 UZ (RC) governor switch (NC – Normally Closed) electrical connection terminals

You can make the grounding connection with the help of the bolt provided on the front of the governor housing. (FIGURE 19)

As an alternative, you can make the grounding connection by removing the grounding screw from its place and change its location.

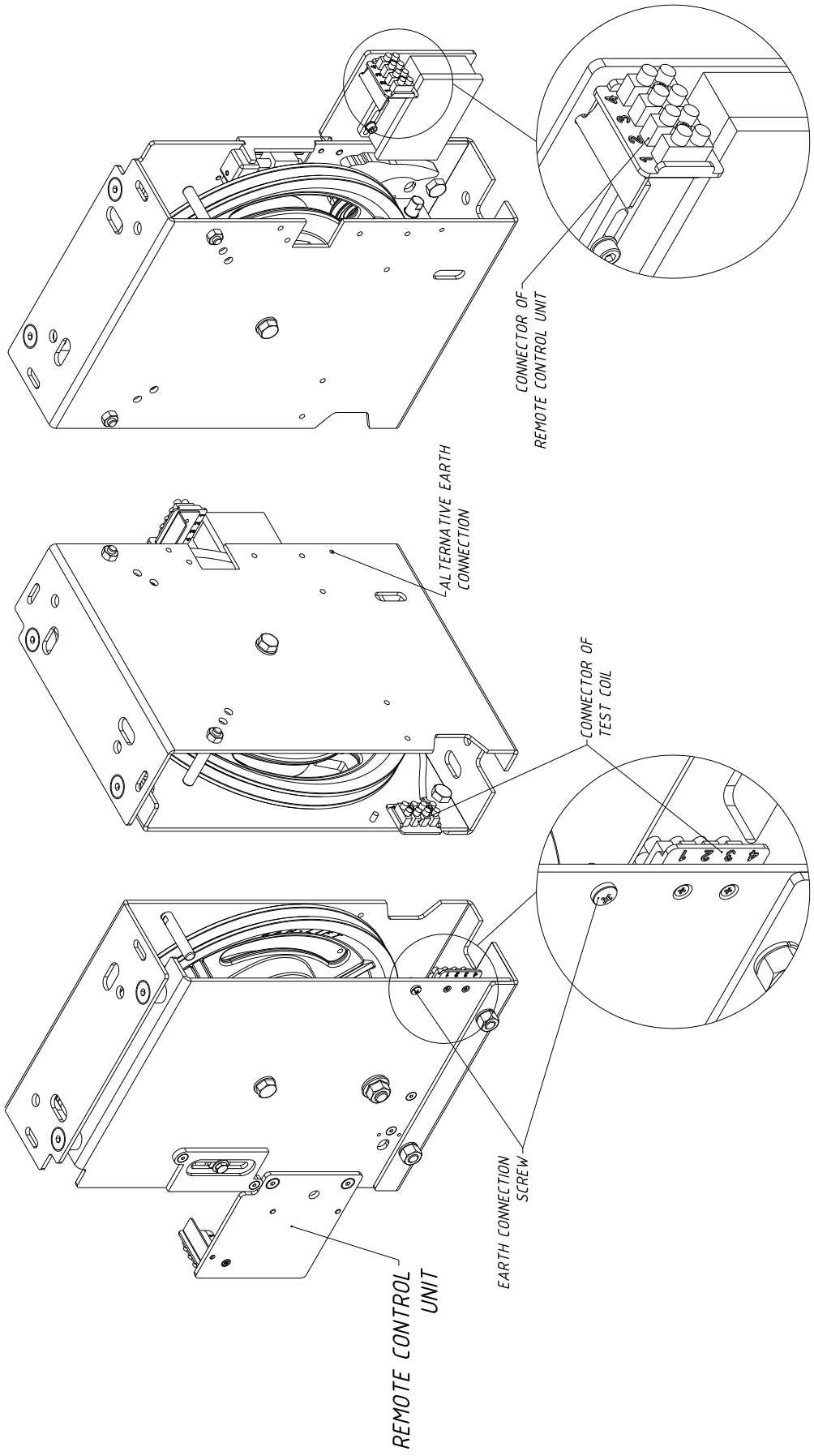

CONNECTOR OF
REMOTE CONTROL UNIT
ALTERNATIVE EARTH
CONNECTION
CONNECTOR OF
TEST COIL
EARTH CONNECTION
SCREW
REMOTE CONTROL
UNIT

FIGURE 19

CL – 08 Ø300 A3+UZ (UCM+RC) / CL – 08 Ø250 A3+UZ (UCM+RC) / CL – 08 Ø200 A3+UZ (UCM+RC)

(Unintended Car Movement + Remote Control) (UCM+MRL) electrical connections of **overspeed governors** should be made as follows.

This type of overspeed governors are used in elevator systems without a headroom by being mounted on a stand prepared in a pit.

In these governor models, there is a locked safety contact which controls the position of the coil and the locking lever, which allows locking by pushing one pulley locking lever for testing.

A coil current is applied to allow the authorized person for the test to lock the governor without entering the pit. The coil pushes the locking lever to ensure pulley is locked. In the meantime, the locking lever also allows the safety contact to be disconnected.

Although the system recovery is made mechanically, the contact remains disconnected. By energizing the recovery coil in the contact, the contact completes the circuit again and moves to the normal operating position.

At the same time, overspeed governors of this model; when the cabin is on the floor, it stops the movement of the cabin by activating the safety gear if it moves accidentally.

The disc connected to the governor sheave through a coil is locked flexibly when the car stops at landing. The back-and-forth movement of the coil axle which performs locking is controlled by a contact.

If unintended movement occurs in the locking position, the disk locks the governor pulley after allowing some movement and prevents it from rotating. Thus, the rope passing through the pulley activates the safety gear by pulling.

System recovery is performed mechanically by competent personnel.

If there is not a lot of unintended movement and the governor is completely fixed and the safety gear is not activated, the coil current is supplied to retract the coil shaft. The possible locking of the pulley will be released and the system will continue to operate normally.

A3+UZ (UCM+RC) model governors have two safety contacts and three coils.

Do the electrical connection of the remote control governor lockout test coil with the help of the terminals no. 3 and 4 of the terminal block on the inside right of the governor front side.

There is a reset contact on the remote control unit. Electrical connection of the contact and the recovery coil in it must be done with the help of the terminal block mounted on the remote control unit.

Connect the reset contact and contact recovery coil cables to the terminal block in the order as shown in the figure.

1,2 Reset coil (recovery coil)

3,4 UZ (RC) governor contact (NC – Normally Closed) electrical connection terminals

For unintended movements on the UCM unit, you can use the terminal block on top of the plate which carries the coil which has the locking task, and the cable connection of the contact controlling the coil, on these two elements. In the following figure, the connection order of the cables is shown as numbered. (FIGURE 20)

1.2 Coil contact (contact without reset) (NC - Normally Closed) terminals,

3,4 UCM coil electrical connection terminals,

If you want to use the (NO - Normally Open) terminals of the contact, you have to make a connection by taking a separate cable from the contact.

You can make the grounding connection with the help of the bolt provided on the front of the governor housing. (FIGURE 20)

As an alternative, you can make the grounding connection by removing the grounding screw from its place and change its location.

The UCM coil and the plastic part attached to the back of the locking system plate are used to disable the UCM system when necessary during installation and maintenance.

When attached to the slot on the plate, it holds back the plastic part that presses on the contact, so that the UCM locking pin does not lock by returning back. The coil is the opposite of the retracted position.

This plastic part must never be inserted into the slot when it is not needed and the UCM system should not be left deactivated.

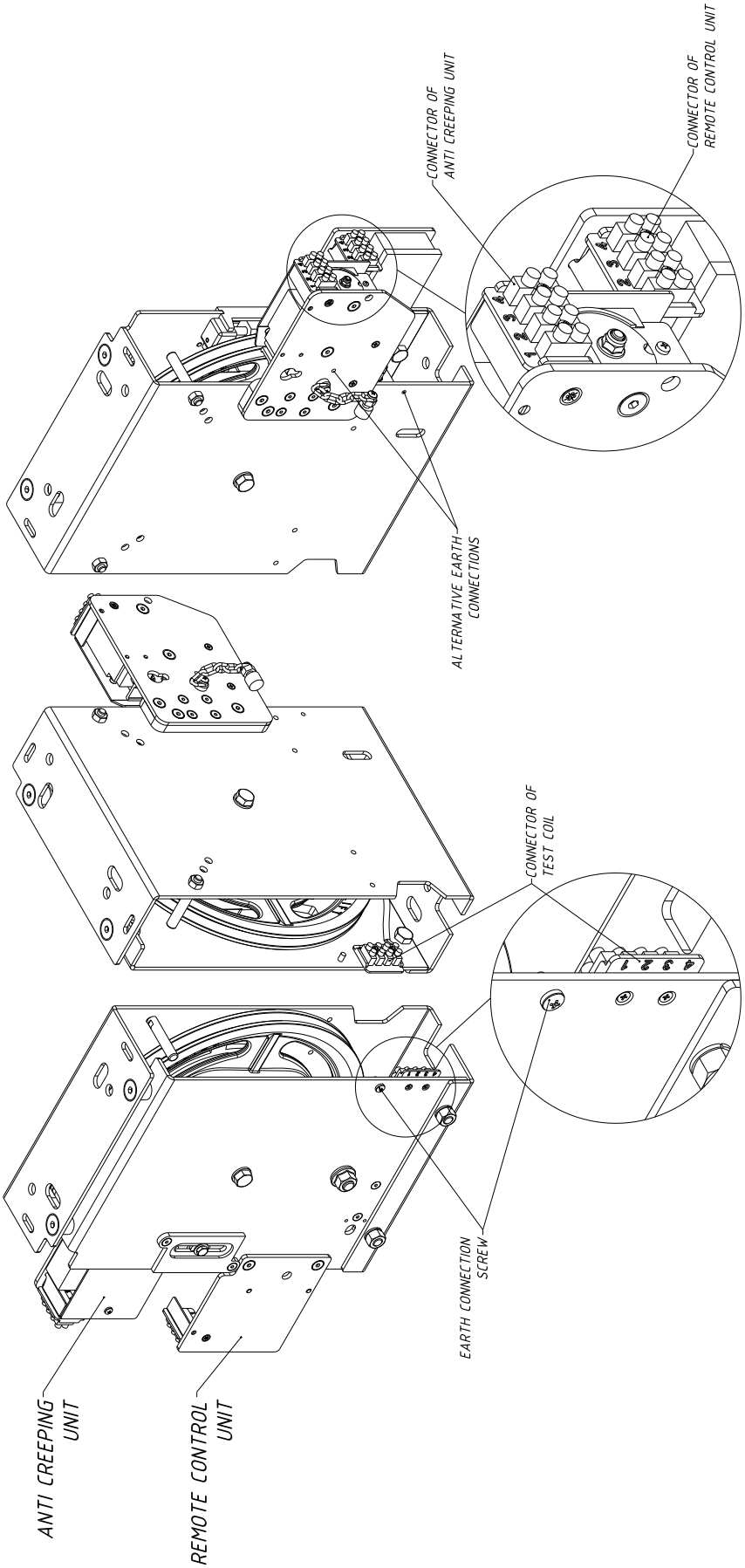

CONNECTOR OF
ANTI CREEPING UNIT
CONNECTOR OF
REMOTE CONTROL UNIT
ALTERNATIVE EARTH
CONNECTIONS
CONNECTOR OF
TEST COIL
EARTH CONNECTION
SCREW
ANTI CREEPING
UNIT
REMOTE CONTROL
UNIT

FIGURE 20

4- The **tensioning pulley group** electrical connection must be made as follows.

Problematic situations in which the governor rope breaks down or overstretch, may be controlled by a safety contact which interrupts the safety chain.

This safety contact is operated by the pushing roller on the lever of the pulley. The lever hangs down as a result of governor rope breaking down or overstretches. The roller, which is connected to the lever, disconnects the circuit by pressing on the contact and prevents the drive from operating.

If for any reason the lever also moves upwards, the roller, which is still connected to the lever, disconnects the circuit by pressing on the contact. When the lever returns to its normal operating position, the pressure on the contact is released and the circuit is completed.

The contact used here is a non-lock model. The roller that applies pressure on the contact on the pulley lever does not apply instant pressure, but presses on the contact until the end of the movement when it is sagging or jumping and keeps its steady state.

Open the contact cover for electrical connection and make the connection from the terminals inside the contact with the help of cable.

USE OF TEST LOCKING LEVER

The lift overspeed governor and the safety gear (brake) that is connected to the car and driven by the governor are tested under three circumstances.

1- During installation, check for system if it is mounted correctly and in operating condition.

2- The test conducted during the approval of commissioning after lift installation.

3- The tests during periodical annual checks.

1- During installation, check for overspeed and safety gear to verify they are in operative condition at maintenance speed. It is to verify that there is no installation error on the mounted elements, which will prevent operation during regular car movement, and that the overspeed governor is able to drive the safety gear when locked, if needed.

The operating logic of overspeed governor is to lock, activating the safety gear with the help of the governor rope after the car exceeds the specified speed due to unintended conditions.

At installation stage, the car movements must be performed at maintenance speed. It is impossible to verify that the governor is locked and safety gears are operating at maintenance speed. Thus, the overspeed governor must be locked by an external impact and it is required to observe that the governor

can activate the safety gear.

The overspeed governors to be used are positioned in the lift machine room or hoistway depending on their design.

As it is not possible to access the overspeed governors located in the hoistway, these governors are tested by locking with the help of a coil.

The overspeed governor models that we manufacture CL 08 200 UZ (RC) – CL 08 250 UZ (RC) – CL 08 300 UZ (RC) – CL 08 200 A3+UZ (UCM+UZ) - CL 08 250 A3+UZ (UCM+UZ) - CL 08 300 A3+UZ (UCM+UZ) are those used in hoistway and test coils that perform locking for test are available.

Locking coils are not typically used with the overspeed governors used in machine room. So the governor must be locked with a mechanical intervention.

The overspeed governor models that we manufacture CL 08 200 – CL 08 250 – CL 08 300 – CL 08 200 A3(UCM) - CL 08 250 A3 (UCM) - CL 08 300 A3 (UCM) are those located in lift machine room without test coils.

As the elements in the governor are also moving during the car movement, locking of governor sheave by interfering directly with these parts result in some safety problems.

The method used to solve this problem is described in the paragraph following the Article 3.

2- The approval test before commissioning the lift must be conducted with the lift is loaded by a load of 125% of the specified load at the specified speed as defined in EN 81-20 Article 6.3.4 – b.

"Article 6.3 Inspections and experiments conducted before commissioning the lift

6.3.4 Car safety gear (5.6.2)

The aim of the test before putting into service is to check the correct mounting, correct setting and the soundness of the complete assembly, comprising car and decorative finishes, safety gear, guide rails and their fixing to the building.

The test shall be made while the car is descending, with the required load uniformly distributed over the car area, with the machine running until the ropes slip or become slack, and under the following conditions:

a) instantaneous safety gear:

The car shall travel at rated speed and be loaded either:

1) with rated load when the rated load corresponds with Table 6 (5.4.2.1), or

2) for hydraulic lifts, with 125 % of the rated load, except that the load shall not exceed the corresponding Table 6 load when the rated load is smaller than the value given by Table 6 (5.4.2.1);

b) progressive safety gear:

For traction drive lifts the car shall be loaded with 125 % of the rated load, and travel at rated speed or lower.

For positive drive lifts and hydraulic lifts, when the rated load corresponds with Table 6 (5.4.2.1) the car shall be loaded with rated load, and travel at rated speed or lower.

For hydraulic lifts, when the rated load is smaller than the value given by Table 6 (5.4.2.1), the car shall be loaded with 125 % of the rated load, except that the load shall not exceed the corresponding Table 6 load, and travel at rated speed or lower.

When the test is made with lower than rated speed, the manufacturer shall provide curves to illustrate the behaviour of the type tested progressive safety gear when dynamically tested with the suspensions attached.

After the test, it shall be ascertained that no deterioration, which could adversely affect the normal use of the lift has occurred. If necessary, friction components may be replaced. Visual check is considered to be sufficient.

In order to facilitate disengagement of the safety gear, it is recommended that the test be carried out opposite a door in order to be able to unload the car.

For the approval test conducted before commissioning the car, the overspeed governor must be locked by an external impact while operating at the specified speed and it is required to verify that the safety gear driven by the governor rope can stop the car within the values defined by the standard.

The impact method to be applied externally in order to lock the governor is described in the paragraphs following the Article 3.

3- It must be checked if the governor can be locked and activate the safety gear through the governor rope during periodical checks. These tests are conducted at maintenance speed.

The governor sheave is locked with an external impact to the lift overspeed governor as follows.

Locking the governor located in the machine room for testing is done by an intervention to the mechanical system that stops and locks the governor sheave. Contacting to the moving parts during operation is possible only if the safety guards are removed. And this results in safety problems.

For this reason, our company designed the test locking lever shown in the figure. The governor sheave is locked for test with the help of this lever. It is possible to access the test lever from both sides of the governor. (FIGURE 21)

If the yellow knob located at the end of the test locking lever is lifted upwards until stop while the governor sheave rotates with the lift movement, the governor sheave is locked and it does not rotate. The safety gear is tested in this way. (FIGURE 22)

If you do not have enough space in the lift machine room and you cannot access to the test locking lever on the governor or you do not want to stand close to the governor during testing, you can test remotely by attaching a rope to the groove of the knob located at the end of the test locking lever beforehand. Adjust the strong rope that you attached to the knob so that it lifts the lever up when you pull it.

Perform safety gear testing by pulling the rope fast to lift the lever up in order to lock the governor sheave while the lift car is in motion.

Remove the rope and set the lever to its neutral position at the end of the test.

The recovery processes after braking test are described under the relevant heading.

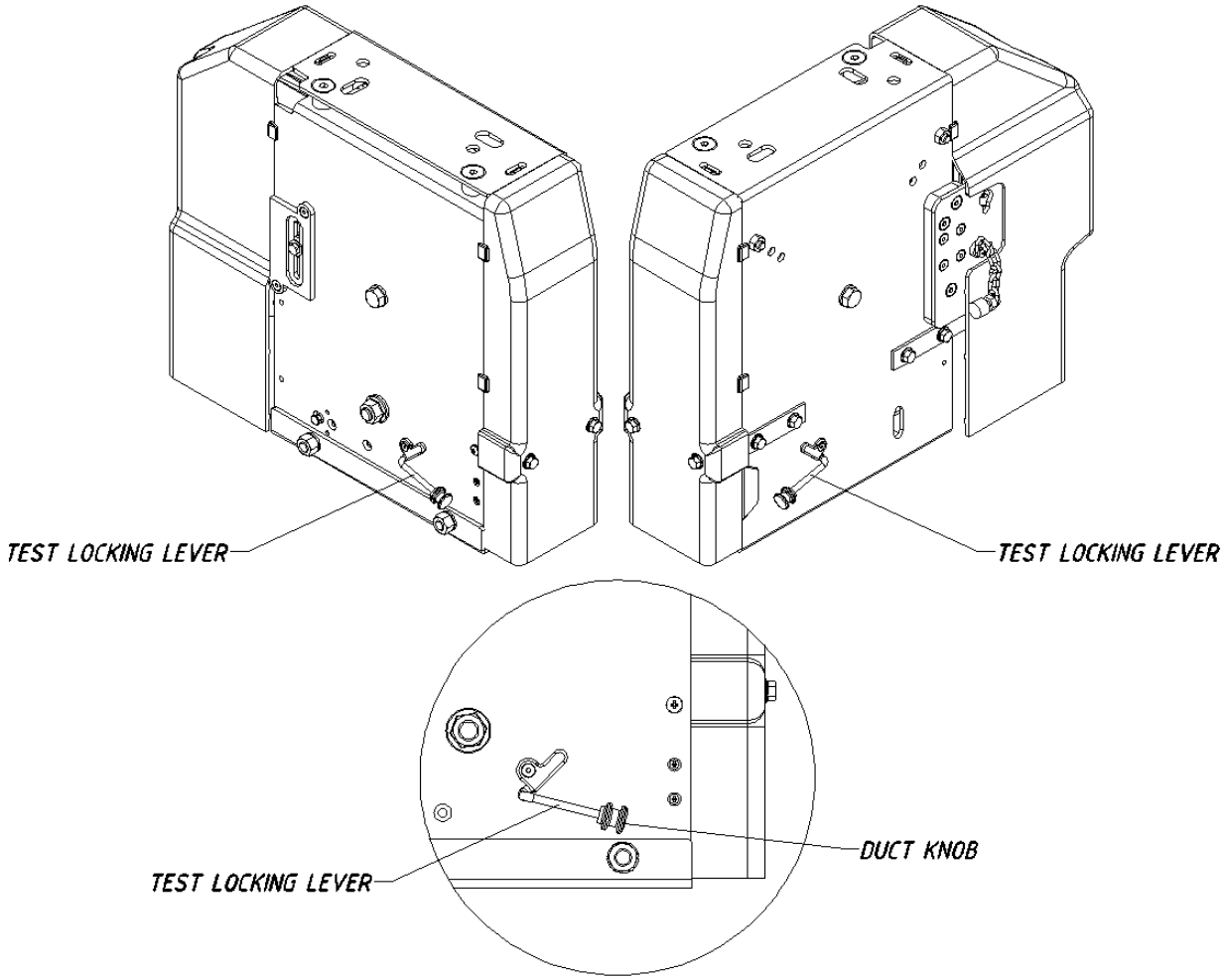


FIGURE 21

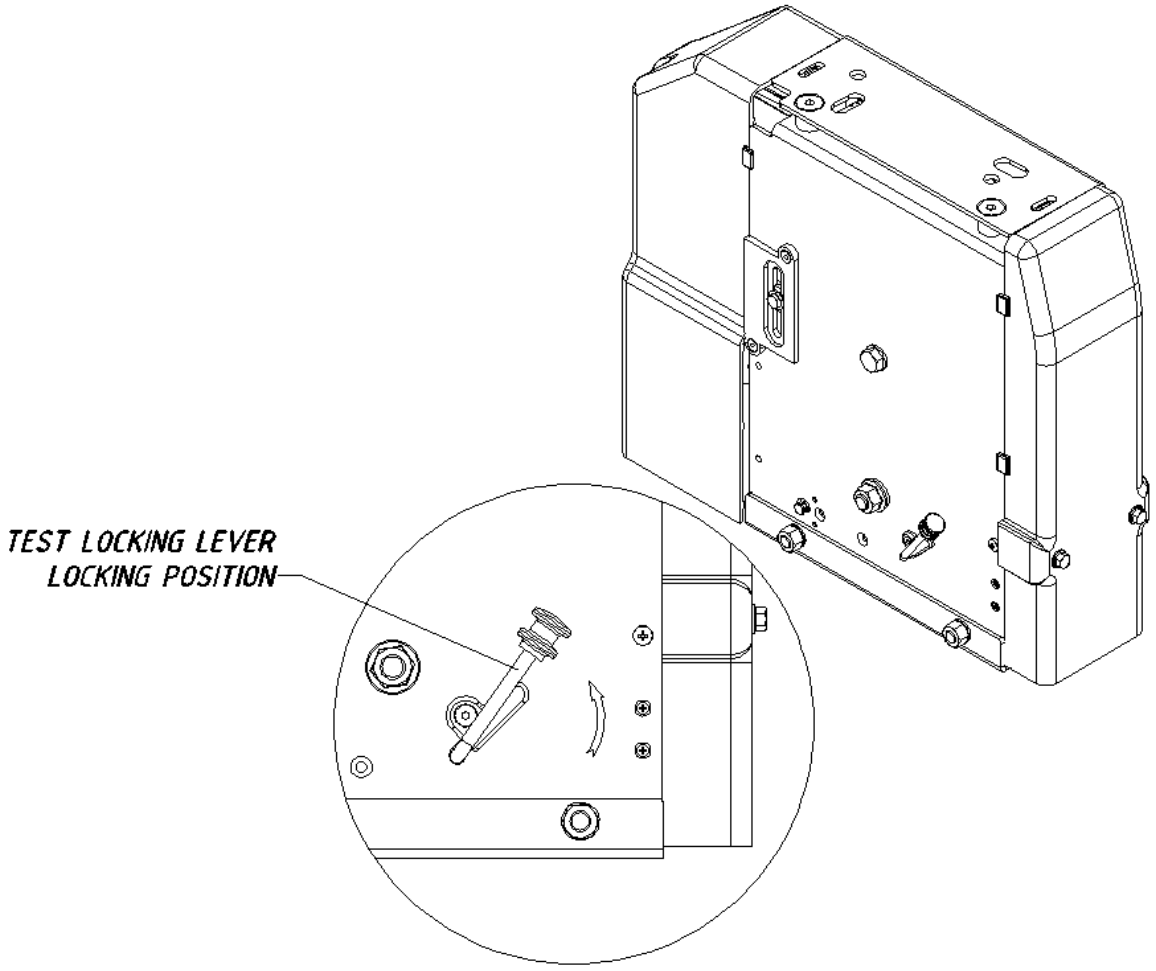


FIGURE 22

RECOVERY

The governor may be locked and activate the safety gear due to excessive speed, unintended movement of the car on the floor and power fail for any reason. The conditions for recovery of the governor and return to normal system operation may vary depending on the intended use and the model.

The governors are dived into model groups of two, one being used in elevator machinery room and the other not located in elevator machine room but used in elevator shaft. Thus;

Our model, manufactured by us and used in elevator machinery room, recovery and system normalisation methods are as follows.

CL 08 200, CL 08 250, CL 08 300

CL 08 200 A3 (UCM), CL 08 250 A3 (UCM), CL 08 300 A3 (UCM)

- **CL 08 200, CL 08 250, CL 08 300**

The governors of this type are used in elevator machinery room and locked due to excessive speeding of the car and activate the safety gear.

At the same time, this locking state is controlled electrically by means of a contact. During locking, the contact makes sure that the elevator driving motor stops by disconnecting the current on safety chain. The activation time for the contact should be within the speeds and the time specified in the standard.

If the governor's pulley locks by means of a locking lever cam and activates the safety gear as a result of excessive speeding, then the governor pulley stands still, with the cam latched under pressure. The locking lever switches on the circuit by pressing the contact and thus disconnects the current to on safety chain.

In order to put the elevator back in operation, it is required that the governor pulley be released from the cam to which it is fitted and the governor contact be reset and thus complete the circuit.

In order to release the elevator pulley from the locking lever cam, it is required to rotate the elevator car 2 cm in the opposite of the braking direction by means of driving motor pulley. In this way, it is ensured that both the safety gear is relieved and the governor pulley rotates freely once it is released from the cam and thus it is prevented that it activates the safety gear again.

As the pressure applied by the locking lever on the governor contact is removed, the reset pin on the governor contact is pulled out and set to the previous position. (FIGURE 23)

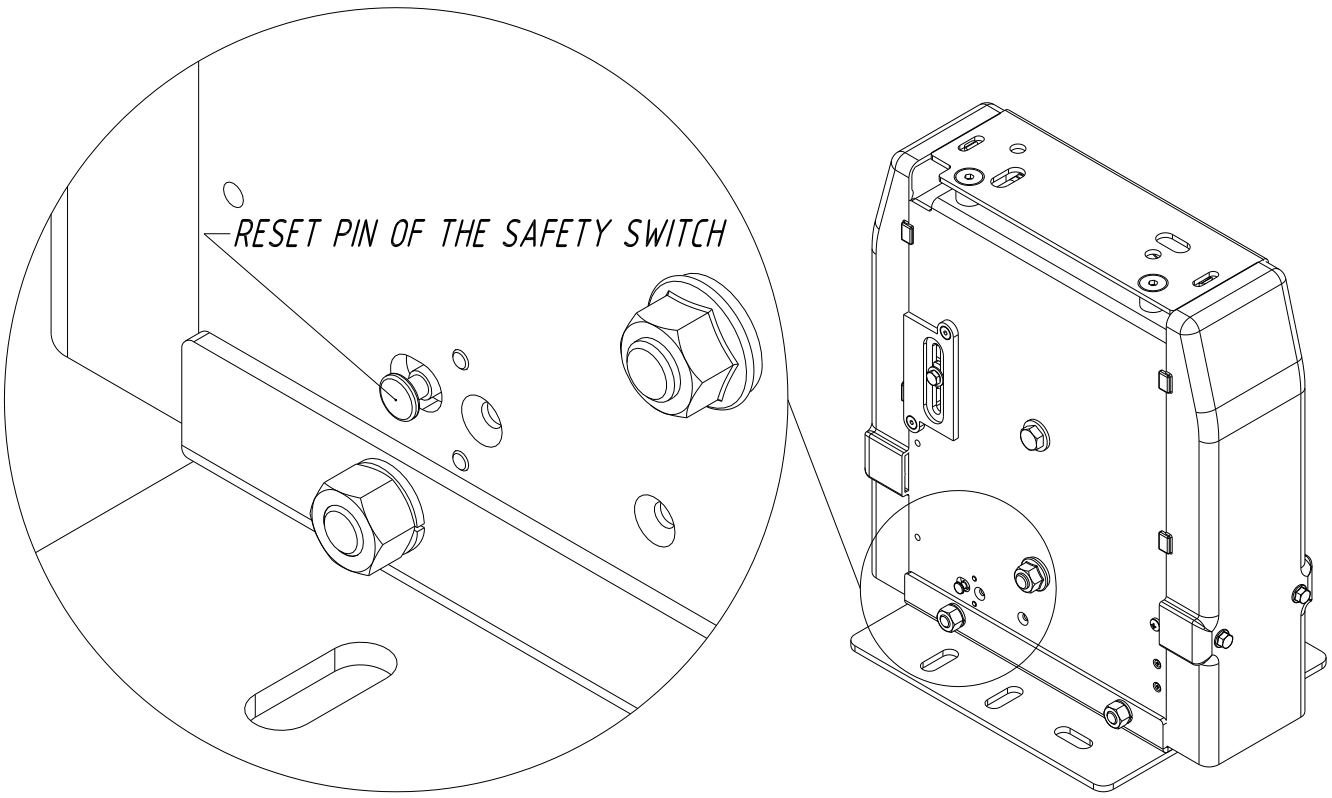


FIGURE 23

Power fail caused by any reason do not affect the operation of this type of governors.

This is a model that operates fully mechanically.

- **CL 08 200 A3 (UCM), CL 08 250 A3 (UCM), CL 08 300 A3 (UCM)**

The governors of this type are used in elevator machinery room and lock due to excessive speeding of the car and unintended movement of the car when it is on the floor and activate the safety gear.

At the same time, this locking state is controlled electrically by means of a contact. During locking, the contact makes sure that the elevator traction machine stops by disconnecting the driver current. The activation time for the contact should be within the speeds and the time specified in the standard.

If the governor pulley is locked by means of locking lever cam and activates the safety gear as a result of excessive speeding of the elevator car, the recovery and resetting of the governor contact is carried out in the same way as described in CL 08 200, CL 08 250, CL 08 300. Carry out the same procedures.

If the elevator car moves involuntarily on the floor, it means that the UCM system is active and the governor pulley locks and safety gear is activated when the allowable movement is exceeded.

In the case the traction system used has UCM certificates for braking upwards and electro-mechanic braking and in the systems not leveling at open door position, it is not required to use UCM

system group in the governors, but the UCM system is required on the governor with traction machines without these certificates, and in the systems leveling at open door position.

When the elevator reaches to the floor, the current to the coil inside the UCM system is disrupted via control panel and the coil is opened. The axle connected to the coil pops out and sets to a position ready for locking.

In the meantime, the movements of the coil are controlled electrically via a contact installed on the coil. As the axle of the coil protrudes, the contact opens the circuit and stops the operation of the traction machine.

If an unintended movement occurs, the protruding axle is fitted on one of the cams on the cam-disc attached to the governor pulley flexibly. A little more movement is allowed for. If the movement persists, then the flexibility comes to an end and the governor pulley locks. So, the brake is activated.

This flexible movement;

	Min. Movement	Max. Movement
Ø200	101mm	231mm
Ø250	100mm	255mm
Ø300	105mm	295mm

If it remains in involuntary movement flexibility, the UCM coil is energized and the axle is retracted when the car starts to move normally. The car travels without a problem.

If the locking and braking is realized by the UCM system, and the axle does not retract itself when the coil is energized for recovery operation, it means that it is overloaded. Reduce the pressure on the coil axle by moving the car min. 2cm at the opposite direction of braking, using the turning roller for the lift traction machine and allow the axle to retract.

When the coil axle retracts, the electric switch located in the UCM system will complete circuit and allow the lift traction machine to operate as well.

The UCM system is activated due to any power fail. In case of a power fail, the current to the coil is cut and the coil axle may move forward and activate the UCM system braking.

When there is a power fail, the car can be moved to a floor in two methods if it is between the floors.

The first method is to bring the car to the landing mechanically. The car is brought to the landing by turning the traction sheave. In this case, the axle connected to the UCM may engage with the toothed disc and activate the safety gear as it stands forward.

Insert the pin that is attached by chains at the back of UCM coil and that holds the coil and the axle back to its slot on the coil guard. Thus, the axle will stand back and the UCM system will be disabled.

You can move the car to a floor by rotating the traction sheave. (FIGURE 24)

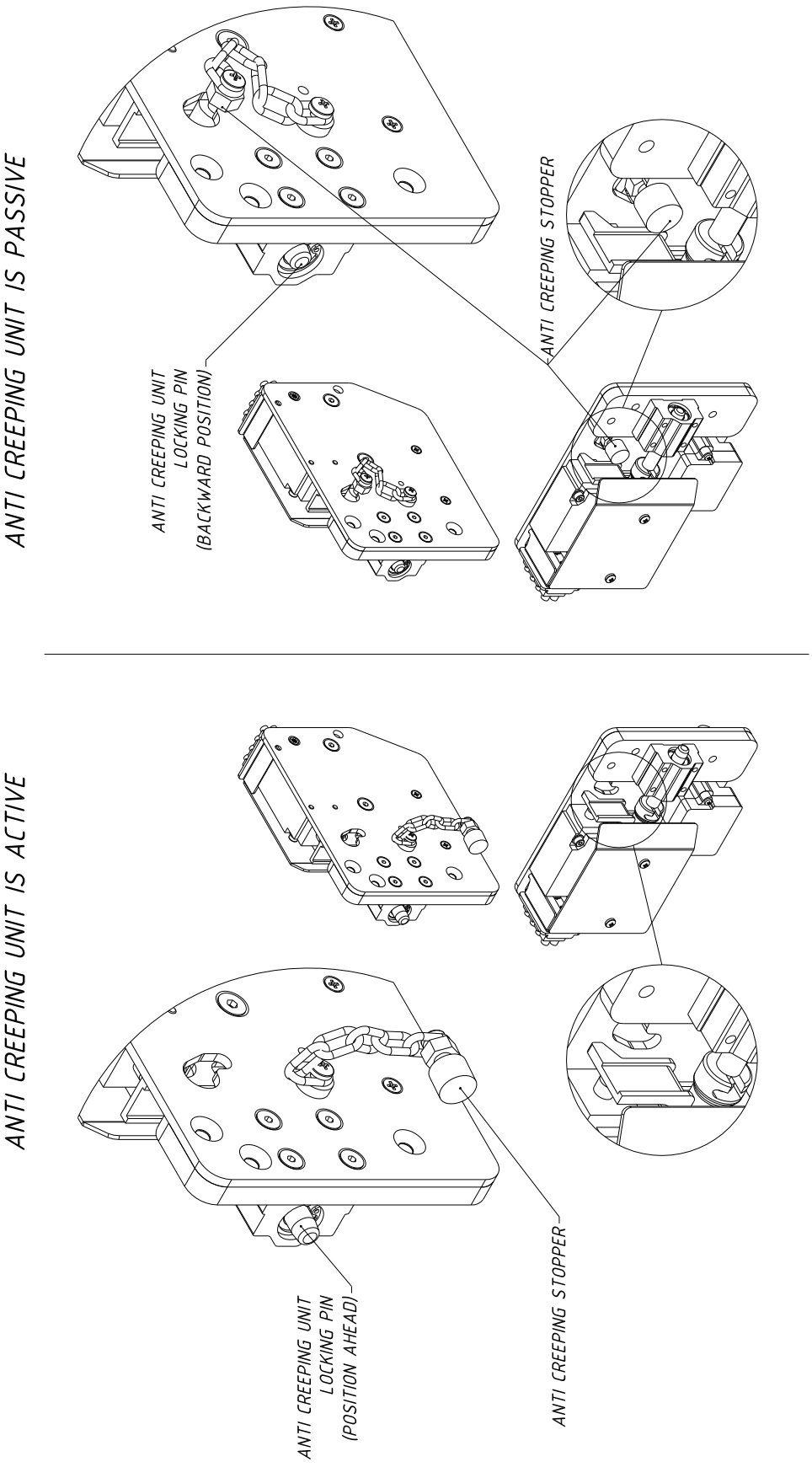

ANTI CREEPING UNIT IS PASSIVE
ANTI CREEPING UNIT LOCKING PIN (BACKWARD POSITION)
ANTI CREEPING STOPPER
ANTI CREEPING UNIT IS ACTIVE
ANTI CREEPING UNIT LOCKING PIN (POSITION AHEAD)
ANTI CREEPING STOPPER

FIGURE 24

*** This pin can only be installed into the groove on the UCM system guard during installation, test and recovery. This process must be performed by an competent person. If this pin is continuously left installed, it will disable the (UCM) system and result in hazards due to unintended movements. The use, installation and maintenance of the pin is under the responsibility of the competent person.**

The second method is to bring the car to the landing using backup batteries included in the lifts with emergency recovery system. In this method, make sure that the UCM coil is fed by the battery. The UCM coil retracts with the current from the battery and the system brings the car to the landing smoothly.

Recommended method is the second method.

CL 08 200 UZ (RC), CL 08 250 UZ (RC), CL 08 300 UZ (RC) CL 08 200 A3+UZ (UCM+RC), CL 08 250 A3+UZ (UCM+RC), CL 08 300 A3+UZ (UCM+RC)

- **CL 08 200 UZ (RC), CL 08 250 UZ (RC), CL 08 300 UZ (RC)**

The governors of this type are used in elevator shaft with no elevator machinery room and lock due to excessive speeding of the car only and activate the safety gear.

At the same time, this locking state is controlled electrically by means of a contact. During locking, the contact makes sure that the elevator traction machine stops by disconnecting the driver current. The activation time for the contact should be within the speeds and the time specified in the standard.

This type of governor is tested to check the operation of the safety gear during and after the installation of the elevator systems being used. The governor is locked via control panel and checked if it activates the brake.

The type of governors are equipped with a test coil used to activate the safety gear for testing purposes. The coil to which a current applied for a short period by means of a test button pushes the locking lever and makes sure that the cam at the end is caught up by the rotating governor pulley. Thus, the governor pulley that stands still activates the safety gear.

The locking lever switches on the circuit by pressing the contact and thus disconnects the safety chain current to the traction machine.

In order to put the elevator back in operation, it is required that the governor pulley be released from the cam to which it is fitted and the electric switch be reset and thus close the circuit.

In order to release the elevator pulley from the locking lever cam, it is required to rotate the elevator car 2 cm in the opposite of the braking direction by means of traction sheave. In this way, it is ensured that both the safety gear is relieved and the governor pulley rotates freely once it is released from the cam and thus it is prevented that it activates the safety gear again.

The contact is fitted with a reset coil inside as the operator cannot access to the governor inside the shaft to reset the contact. Make sure that the contact returns to its previous position by supplying current to this coil.

The contact closes the circuit for traction machine by moving to previous position and enables a smooth operation.

If this type of governors lock and activates the safety gear as a result of excessive speeding of the elevator car in normal operation mode, the procedure for recovery is the same as the one carried out in testing stage.

Power fails caused by any reason do not affect the operation of this type of governors.

This is a model that operates fully mechanically.

- **CL 08 200 A3+UZ (UCM+RC), CL 08 250 A3+UZ (UCM+RC), CL 08 300 A3+UZ (UCM+RC)**

The governors of this type are used in elevator shaft with no elevator machinery room and lock due to excessive speeding of the car and unintended movement of the car when it is on a floor and activate the safety gear system.

At the same time, this locking state is controlled electrically by means of a contact. During locking, the contact makes sure that the elevator traction machine stops by disconnecting the driver current. The activation time for the contact should be within the speeds and the time specified in the standard.

This type of governor is tested to check the operation of the safety gear system during and after the installation of the elevator systems being used. The governor is locked via control panel and checked if it activates the safety gear.

When it is required to test the operation of the elevator's safety gear system for maintenance, adjustment and inspection purposes, the procedures to be carried out are the same as those performed in **CL 08 200 UZ (RC), CL 08 250 UZ (RC), CL 08 300 UZ (RC)**. Carry out the same procedures.

If the governor pulley is locked by means of locking lever cam during the normal operation and activates the safety gear as a result of excessive speeding of the elevator car, the recovery and resetting of the contact is carried out in the same way as described in CL 08 200, CL 08 250, CL 08 300. Carry out the same procedures.

If the elevator car moves involuntarily on the floor, it means that the UCM system is active and the governor pulley locks and safety gear is activated when the allowable movement is exceeded.

If the safety gear is activated in such a case, the recovery and resetting of the contact should be carried out as follows.

In the case the traction system used has UCM certificates for braking upwards and electro-mechanic braking and in the systems not leveling at open door position, it is not required to use UCM system group in the governors, but the UCM system is required on the governor with traction machines without these certificates, and in the systems leveling at open door position.

When the elevator reaches to the floor, the current to the coil inside the UCM system is disrupted via control panel and the coil is opened. The axle connected to the coil pops out and sets to a position ready for locking.

In the meantime, the movements of the coil are controlled electrically via a contact installed on the coil. As the axle of the coil protrudes, the contact opens the driver circuit and stops the operation of the traction machine.

If an unintended movement occurs, the protruding axle is fitted on one of the cams on the cam-disc attached to the governor pulley flexibly. A little more movement is allowed for. If the movement persists, then the flexibility comes to an end and the governor pulley locks. So, the safety gear is activated.

This flexible movement;

	Min. Movement	Max. Movement
Ø200	101mm	231mm
Ø250	100mm	255mm
Ø300	105mm	295mm

If it remains in involuntary movement flexibility, the UCM coil is energized and the axle is retracted when the car starts to move normally. The car travels without a problem.

If the locking and braking is realized by the UCM system, and the axle does not retract itself when the coil is energized for recovery operation, it means that it is overloaded. Reduce the pressure on the coil axle by moving the car min. 2cm at the opposite direction of braking, using the turning roller for the lift traction machine and allow the axle to retract.

When the coil axle retracts, the contact located in the UCM system will complete circuit and allow the lift traction machine to operate as well.

The UCM system is activated due to any power fail. In case of a power fail, the current to the coil is

cut and the coil axle may move forward and activate the UCM system braking.

When there is a power fail, the car can be moved to a floor in two methods if it is between the floors.

The first method is to bring the car to the landing mechanically. The car is brought to the landing by turning the traction sheave. In this case, the axle connected to the UCM may engage with the clawed disc and activate the safety gear as it stands forward.

As movement of the UCM coil that will hold the axle back depends on your access to the governor inside the shaft, which it is not possible, please do not apply this method.

The second method is to bring the car to the landing using backup batteries included in the lifts with emergency recovery system. In this method, make sure that the UCM coil is fed by the battery. The coil UCM retracts with the current from the battery and the system brings the car to the landing smoothly.

Recommended method is the second method.

WARRANTY CONDITIONS

Warranty is for two years, subject to compliance with the terms and conditions.

CAN-LİFT Asansör San. Tic. Ltd. Şti cannot be held responsible for any material or nonmaterial damages that may arise if one or more of the following conditions are realized.

1- Installation in conditions not specified in the user manual and not in accordance with the standard, misuse and inappropriate maintenance

2- Installation and use of the governor damaged by transport or other factors

3- Use in systems with other than rated speed

4- Failure to use the correct supply voltage in coiled systems

5- Incorrect electrical connection

6- Improper use conditions and continued use in malfunctioning state

7- Breaking of setting seal

8- Intervention to change speed setting

9- Interventions to change the shape or properties of the speed setting spring

10- Interventions to change properties of parts

11- Interventions to disable the governor in the system

12- Use of a different brand of tensioner pulley group

13- Interventions to tension weight system and its weight

14- Tensioning system is unable to do the tensioning process

15- Use of ropes not suitable for EN 12385-5 standard

MAINTENANCE

The CL 08 Overspeed Governor should be regularly checked every six months and must be maintained in accordance with the controls performed by the competent person.

1- This user manual has been prepared according to EN 13015 + A1 standard. During maintenance, authorized personnel must comply with the rules specified in this standard.

2- Check the tensioning system against rope extensions.

3- Check the connection of the governor rope to the safety gear system.

4- Check for wear in the governor pulley rope groove. Do not use a governor that is too worn with a pulley groove. Prefer replacing the pulley.

5- Ensure the cleanliness of the rope grooves. If there is oil accumulation, clean both the rope and the pulley. The rope should be free of oil.

6- Check the O-ring on the roller and the rotation of the tracking roller on the locking lever. If the roller does not turn and the O-ring is very worn, do not operate the governor. Prefer replacing the roller.

7- All parts replacement and repairs on the governor must be done by our company. The competent person performing the control should not repair or replace the parts themselves.