3 SECTION SLIDE-UP CAR DOOR
INSTALLATION GUIDE
(Double Counterweight)
# Contents

1. **FORWARD** ......................................................................................................... 1
2. **BEFORE STARTING INSTALLATION** ................................................................. 1
3. **JOB NUMBER IDENTIFICATION** ..................................................................... 1
4. **HANDING** ....................................................................................................... 2
5. **3 SECTION SLIDE-UP CAR DOOR ASSEMBLY** ........................................... 3
6. **CAR DOOR & RETIRING CAM INSTALLATION NOTES** ................................. 4
   6.1. **GENERAL** .................................................................................................. 4
   6.2. **CAR DOOR RAILS & BRACES** .................................................................. 4
   6.3. **CAR DOOR PANELS** ................................................................................ 5
   6.4. **CAR DOOR MOTORIZED SHEAVES OR MANUAL SPROCKETS & IDLER SPROCKETS** .................................................................................................. 5
   6.5. **CAR DOOR COUNTERWEIGHTS** .............................................................. 5
   6.6. **CAR DOOR CHAINS AND CHAIN STUDS** ............................................... 5
   6.7. **CAR DOOR RUBBER BUMPERS** ............................................................... 6
   6.8. **CAR DOOR CONTACT** .............................................................................. 6
   6.9. **RETIRING CAM** ...................................................................................... 6
   6.10. **PULL STRAPS** ....................................................................................... 7
7. **CAB / CAR ENCLOSURE PREPARATION** ....................................................... 8
8. **RAIL INSTALLATION** ........................................................................................ 9
9. **SPREADER / OPERATOR SUPPORT** ............................................................. 10
10. **RAIL SPREADER & DIAGONAL BRACE** ...................................................... 11
11. **GAUGE THE RAILS** .................................................................................... 12
12. **SET THE RAILS** ......................................................................................... 13
13. **BRACING RAILS TO CAR** ............................................................................ 14
14. **COUNTERWEIGHT ASSEMBLY** ................................................................... 15
15. **COUNTERWEIGHT INSTALLATION** ............................................................ 16
16. **OPERATOR INSTALLATION** .......................................................................... 19
17. **PANEL BUMPERS** ...................................................................................... 20
18. **UNLOADING THE PANELS** ......................................................................... 21
19. **INSTALL THE UPPER PANEL** .................................................................... 22
20. **INSTALL THE MIDDLE PANEL** .................................................................. 23
21. **INSTALL THE LOWER PANEL** ................................................................... 24
22. **CHAIN CONNECTION DETAIL** .................................................................... 25
23. **PANEL ROPING SCHEMATIC** ....................................................................... 26
24. **CHAIN CONNECTION DETAILS** ................................................................. 27
25. **REMOVE COUNTERWEIGHT STOP ANGLE** ............................................... 29
26. **CAR DOOR / CAR DOOR CONTACT** ......................................................... 30
27. **ENCODER INSTALLATION** ........................................................................... 31

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**THE PEELE COMPANY**

**FREIGHT DOORS | CAR GATES | CAR ENCLOSURES**

**TECHNICAL SUPPORT** 1-800-787-5020 ext 275

**Guide No. 258-EN**

**3 SECTION SLIDE-UP CAR DOOR DOUBLE COUNTERWEIGHTS**

Date:  Oct 02 / 2018
1. **FORWARD**

The following Installation Guide is for a standard Peelle product assembly. However, Peelle products are designed-built to suit many elevator conditions such as very large openings, limited elevator shaft dimensions, hoistway conditions and unique lift designs. Therefore special designs, arrangements or add-ons may not be covered in this manual. Refer to the installation drawings provided with your order for instructions on special components or arrangements.

If you have any questions, concerns or require further details regarding your installation please call 1 (905) 846-4545 x 275, please have your Peelle Job Number handy. A Peelle technical support expert will help you save time and keep the installation moving.

2. **BEFORE STARTING INSTALLATION**

1) You will require a moving platform
2) This is a two person job
3) Safety Equipment
   - Personal Protective Equipment
   - Workplace Barricades
   - Fall Protection
4) Tools required
   - Measuring Tape
   - Level
   - High Speed Drill
   - Drill Bits HSS 5/16” [8mm] & 3/8” [10mm]
   - Impact Wrench
   - 9/16” [14mm] socket
   - Angle Grinder
   - Chain Pin Extractor (Chain Breaker) (Peelle Part No. 0608)
   - Open and closed ended wrenches (3/8” to 7/8”) [10mm to 22mm]
   - Socket set (3/8” to 7/8”) [10mm to 22mm]
   - Screwdriver Set
   - Pliers
5) Hardware kits included
   - Peelle Part No. 060133 - Standard car door hardware kit
   - Peelle Part No. 02321 - Counterweight shoe hardware

3. **JOB NUMBER IDENTIFICATION**

   - Locate the peelle job number on the rails, car door panel and counterweight.
   - Job numbers should match and include the line designation
   - Example:

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Guide No. 258-EN
3 SECTION SLIDE-UP CAR DOOR
DOUBLE COUNTERWEIGHTS

Date: Oct 02 / 2018
4. **HANDING**

- Instructions shown here are typical for a car car door with a Peelle right hand mounted interlock and retiring cam. For left hand installations opposite configuration will be used.

![Plan View of Hoistway](image-url)

**LEFT HAND**

**HALLWAY**

**RIGHT HAND**

**STANDING IN THE CAR FACING THE LANDING**

**PLAN VIEW OF HOISTWAY**
5. 3 SECTION SLIDE-UP CAR DOOR ASSEMBLY

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Guide No. 258-EN
3 SECTION SLIDE-UP CAR DOOR DOUBLE COUNTERWEIGHTS
Date: Oct 02 / 2018
6. CAR DOOR & RETIRING CAM INSTALLATION NOTES

6.1. GENERAL

Install car doors after the landing doors are installed. Car doors are counterweighted with a counterweight traveling on the outside of the car door rails. Refer to the Car Door Assembly Drawing for a component breakdown. Where the overhead space is limited, the car door is made in two sections or three sections.

Overhead/headroom height is the area of a hoistway shaft extending up from the sill of the highest landing to the nearest obstruction above in the hoistway shaft. A two-section (telescopic) car door is used when over-head space will not allow a single section car door. The two sections of the car door are coupled, with the lower panel traveling twice as fast as the upper panel. This enables both sections to reach the open position simultaneously.

**CAR DOOR TYPES (VERTICAL-SLIDE-UP TYPE):**
- Single-section - available overhead space.
- Two-section (Telco) - limited overhead space.
- Three-section (Telco) - extremely limited overhead space

**PANEL CONSTRUCTION**
- Solid Panel
- Wire Mesh (option to save car weight)

If installing both a front car door and a rear car door, make sure they are installed at proper front or rear locations to allow the retiring cams to operate the door interlocks. Do not switch the front and rear car doors. The hands (LH & RH) of a retiring cam, car door counterweight and all hardware are as viewed from inside the car looking out. The retiring cam is on one side (either right or left hand) of the car door and the counterweight is on the other side (the other hand).

6.2. CAR DOOR RAILS & BRACES

Before installation of the rails, measure the distance from the front of the elevator platform to the car enclosure angles. If not enough space has been provided between the front of the platform and the car enclosure angles, it will be necessary to cut back the cab side walls and relocate the car enclosure angles. Be sure of your measurements before you do any cutting. The car enclosure angles are usually 50mm by 50mm by 5mm [2in x 2in x 3/16in] steel angles and should have holes to attach the car door rails.

Install the car door rails. Bolt them to the platform and to the car enclosure angles. Make sure the rails are plumb and square. Hold the correct distance-between-guides so the car door will fit. Use “Distance Between Guides” (DBG) dimension located on the Gauge Rod.

After installing both sets of car door rails, attach the top spreader, brace angle and diagonal brace. The top of the car door is held in place by two brace angles connected to the elevator cross-head. The distance between the car door rails must be constantly maintained when the spreader and braces are installed. Bolt braces tightly after car door panel is installed and adjusted.
Check the overhead / headroom space for interference, then run the car up slowly on inspection to the top floor and check overhead / headroom for code clearance of car door rails and braces, and run by.

6.3. CAR DOOR PANELS

To install the car door panels, remove the shoes on either side, move the car door into its guide tracks while sliding on the platform. Then reinstall the shoes.

Install the upper panel first and hold in place using wood braces. Next install the middle and lower panels in the closed position.

6.4. CAR DOOR MOTORIZED SHEAVES OR MANUAL SPROCKETS & IDLER SPROCKETS

Power car door operators have a combination sheave and motor while manual car doors have a double sprocket assembly that bolts into the pre-drilled rail location on the counterweight side. The single sprocket idler assembly is mounted inside the opposite rail.

6.5. CAR DOOR COUNTERWEIGHTS

The counterweights travels on the outside of the car door rails. The counterweights requires two supporting chains each. Carefully hoist the counterweights to the top of the car. Lower each counterweight into the guide track so that it rests on the temporary support angle near the top of the guide track.

6.6. CAR DOOR CHAINS AND CHAIN STUDS

Attach the two counterweight chain-studs 100mm [4in] long to the counterweight. Attach the chains to the chain-studs. Wrap connecting links and connector clips at each end of the chain with the nylon tie-wraps provided. Wipe any excess oil off the chains.

Remove extra links from end of chain and connect the longer chain studs 180mm [7in] long to the loose ends of the chains and then connect these chain studs into their hangers on the car door panel. Secure the chain connecting links with nylon tie wraps. Each chain stud gets 2 nuts, a lock washer and a cotter pin. Make sure the nuts are almost touching the cotter pin near the bottom of the chain stud. This allows for the easy future chain stretch adjustment.

Connect the lower panel pickups to the counterweight. The two chains connect from the counterweight up and over the operator and down to the lower panel pickups.

Connect the middle panel chain to the dead end hitch at the top of the upper panel. Connect the other end of the chain around the middle panel sheave and to the lower panel chain pickup.

Connect the upper panel chain to the chain stud in the holes provided in the top spreader. Connect the other end of the chain around the upper panel sheave and to the middle panel chain pickup.

After attaching the chains to both the counterweight and car door panel, remove the temporary support angle. Manually lift the car door to full open. Have it touch the upper bumper stops. At this position, the bottom edge of the car door should be even with or slightly above the car enclosure.
ceiling. If the car door was not fully open due to the counterweight bottoming out, the chains are too long and must be adjusted at the studs or some links must be removed to shorten the chains.

Finally adjust the chain studs with just slightly more tension (less slack) on the long chain to allow for greater chain stretch. The car door must move smoothly in the guide rails during its entire travel. Adjust the shoes (inward-outward) only if the car door panel is not square in the guide rails or if there is no side-to-side play. With the car door raised 75mm [3in] off the platform, check to see if car door panel hangs level. Adjust the chains to level the car door panel.

The car door panel should balance the counterweight at half-travel position. With the car door at half-travel open, manually push it further open and from the same position push it closed. Weight differential can usually be detected by this method. Add or remove the counterweight flats to achieve balance of the counterweight and the car door panel.

The car door panel must be exactly balanced (at half-travel position) by the counterweight to prevent the car door drifting open when the elevator car is in motion or from drifting closed at an inappropriate time.

6.7. CAR DOOR RUBBER BUMPERS

Bumpers are important to reduce noise and reduce car door wear and tear. The car door bottom bumpers can be adjusted by adding flat washers as spacers for proper positioning if the car platform is not level.

6.8. CAR DOOR CONTACT

When the car door is in the closed position the electrical car door contact must also be “made”. This is activated by a roller cam attached to the top of the car door counterweight. The counterweight has a small degree of horizontal play. Ensure the car door contact will remain “made” by moving the counterweight back and forth.

Check that the car door contact stops the elevator when the car door is lifted up 50mm [2in] from its closed position. If there are two car doors on an elevator, the car door contacts usually wired in series. See elevator controller prints.

6.9. RETIRING CAM

Freight door interlocks are designed to be operated by a retiring cam. The retiring cam is mounted on the car. There is a connecting rod between the cam face and the retiring cam motor.

The cam motor is mounted above the car top height. The cam face assembly is mounted on the side of the car, vertically near the door opening centerline for biparting doors and lower down for slip up landing doors. Both have pre-drilled holes in the Peelle car door rail. Follow the installation drawings when you are installing the retiring cam. The retiring cam face should be mounted to the center of the interlock rollers horizontally and vertically when the car is at each floor. The interlock rollers must be adjusted so that when the cam is extended (by gravity), it unlocks the interlock. The cam must be set to fully unlock the interlock with over-travel.
The cam face is weighted so that the cam will drop while in the “no power” condition and unlock the door. The doors can be manually opened if the car is at a landing and there is no power to the retiring cam. When the cam motor is energized, it lifts (retires) the cam face to allow the interlock to lock the door.

The cam large pulley should be operated by hand to make sure that it does not bind or hang-up. The V-belt deflection should be set at 13mm [1/2in]. Adjust the motor position to achieve 13mm [1/2in] deflection.

The effective length of the connecting rod between the crank pulley and the cam face must be adjusted so that the rotation of the crank is limited. To adjust the cam rod length: manually hold the cam face fully up (retired); while held in this position, rotate the crank arm towards the center of the car; tighten the rod nuts with the crank held 90 degrees back (towards the center of the car) from the down direction. When powered the cam motor must then pick the cam rod toward the center of the car. If the direction of the lift is toward the front of the car, reverse the motor rotation by switching any two of the three motor power leads. The cam rod must pick toward the center of the car. The motor must pick up and stall when the cam is retired (picked up) under power. The cam face must drop easily when not under power.

Fixed cams are sometimes used instead of retiring cams with side-opposite-locks. Mechanical door locking must take place as the car travels away from the floor.

After installing the cam(s), run the car up slowly on inspection to check any retiring cam obstacles in the hoistway shaft.

6.10. PULL STRAPS

Pull strap(s) may be provided for each door and car door. Pull straps are mounted on the panel and hang down so that the operator may pull the car doors closed. Limiting the length of the straps ensures that they do not become a hazard during operation of the car.

⚠️ DO NOT TIE KNOTS IN STRAPS OR CREATE LOOPS

Straps are required for manually operated vertically sliding car doors to ensure they can be conveniently closed. Car doors require one pull strap and biparting doors require two straps.

If supplied on power operated car doors, the straps will be tucked away behind a clip, and still be accessible in case of a power failure. Where pull straps have been provided on car doors conforming to ASME A17.1/CSA B44, 2008 addenda, a pull strap contact is provided and should be wired in series with door stop button contact to the Peelle door controller.
7. CAB / CAR ENCLOSURE PREPARATION

Refer to Layout Drawing (L-1) for further details regarding the car enclosure interface requirements.

SLOTS
Ø7/16 in x 3/4 in
(11 mm x 19 mm)

TYPICAL
21” O.C.
(533mm)

CAB WALL

FLOOR

6” (152mm)

FRONT OF PLATFORM

10 1/2” (265mm)
ENCLOSURE SETBACK

Guide No. 258-EN
3 SECTION SLIDE-UP CAR DOOR
DOUBLE COUNTERWEIGHTS

Date: Oct 02 / 2018
8. RAIL INSTALLATION

MIN 5 BOLTS

TYPICAL EACH SIDE

Guide No. 258-EN
3 SECTION SLIDE-UP CAR DOOR
DOUBLE COUNTERWEIGHTS

Date: Oct 02 / 2018

**HARDWARE BAG**

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**Guide No. 258-EN**

3 SECTION SLIDE-UP CAR DOOR
DOUBLE COUNTERWEIGHTS

Date: Oct 02 / 2018
10. RAIL SPREADER & DIAGONAL BRACE

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Guide No. 258-EN
3 SECTION SLIDE-UP CAR DOOR
DOUBLE COUNTERWEIGHTS
Date: Oct 02 / 2018
11. GAUGE THE RAILS

Gauge rails using gauge rod supplied. Adjust and tighten rails. Pin and set rails top and bottom.

HINT: After installation gauge rod can be used for additional rail support.

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Guide No. 258-EN
3 SECTION SLIDE-UP CAR DOOR
DOUBLE COUNTERWEIGHTS

Date: Oct 02 / 2018
12. SET THE RAILS

Drill 9mm [5/16 in] diameter hole. Ensure hole is at least 30mm [1 1/4 in] deep.

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### Description

- **Drill and bolt Brace Angles to car door rails spreader and cross head.**
- **Cut and notch one end of Brace Angle to suit.**
- **Use Gauge Rod for additional support of needed.**

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**HARDWARE BAG**

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**Guide No. 258-EN**

3 SECTION SLIDE-UP CAR DOOR DOUBLE COUNTERWEIGHTS

**Date:** Oct 02 / 2018
14. COUNTERWEIGHT ASSEMBLY

Prepare the counterweights for insertion into the rail
Repeat the following steps, for each counterweight and side of the car door.

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Guide No. 258-EN
3 SECTION SLIDE-UP CAR DOOR DOUBLE COUNTERWEIGHTS
Date: Oct 02 / 2018
### Step 1

Remove the bumper assembly

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**Description**

- COUNTERWEIGHT INSTALLATION

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**Guide No. 258-EN**

3 SECTION SLIDE-UP CAR DOOR
DOUBLE COUNTERWEIGHTS

Date: Oct 02 / 2018
**STEP 2**

**Guide No. 258-EN**

3 SECTION SLIDE-UP CAR DOOR
DOUBLE COUNTERWEIGHTS

**DATE:** Oct 02 / 2018

---

**DESCRIPTION**

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<td>770193</td>
<td>COUNTERWEIGHT RAIL ASSY</td>
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1. **Lower the counterweight down into the guide track rail onto the CWT Angle Stop**

2. **Hoist counterweight up and down into track.**
**Re-attach the bumper assembly.**

### STEP 3

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**Guide No. 258-EN**  
3 SECTION SLIDE-UP CAR DOOR  
DOUBLE COUNTERWEIGHTS  

Date: Oct 02 / 2018
16. OPERATOR INSTALLATION

HARDWARE INCLUDED WITH COMPONENT

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Guide No. 258-EN
3 SECTION SLIDE-UP CAR DOOR
DOUBLE COUNTERWEIGHTS

Date: Oct 02 / 2018
# 17. PANEL BUMPERS

## Hardware Included with Component

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**Guide No. 258-EN**

3 SECTION SLIDE-UP CAR DOOR  
DOUBLE COUNTERWEIGHTS

Date: Oct 02 / 2018
18. UNLOADING THE PANELS

Unload panels from pallets as shown to reduce the risk of bending and distorting the panels.

1. To Lifting Device
   - Attach straps as shown. Hoist the door panel upwards and off the crate.
   - Upper Door Panel
   - Straps
   - Crate
   - 1/4 door width

2. Lower the door panel so it rests on wooden blocks

3. Re-position the straps to lift the panel from the top end as shown.

To reduce the risk of panel distortion flip panels as shown
19. INSTALL THE UPPER PANEL

1) Remove shoes from one side of panel
2) Install the upper panel and support with wood blocks

---

22. Guide No. 258-EN

3 SECTION SLIDE-UP CAR DOOR
DOUBLE COUNTERWEIGHTS

---

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Date: Oct 02 / 2018
20. INSTALL THE MIDDLE PANEL

1) Remove shoes from one side of panel
2) Remove the middle panel pickups
3) Install the middle panel and support with wood blocks

**Note:**
Re-attach shoes to the same location.

1

2

3

4

To Chain Fall Device
Straps

Remove shoes on small shoebar side.

REMOVE THE MIDDLE PANEL PICKUPS

SWING THE SHOEBAR INTO THE RAIL AND ENGAGE THE SHOE ONTO THE GUIDE. RE-ATTACH THE SHOES.

USE BLOCKS TO SUPPORT THE MIDDLE PANEL

ENSURE PANELS LAP OPENING AND EACH OTHER MINIMUM 50mm [2in]

FINISH ®

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TOLERANCES

± .1 ° ± 1/64 ± .020 ± .010 ± .005

PLAN VIEW SHOWING UPPER PANEL

Guide No. 258-EN
3 SECTION SLIDE-UP CAR DOOR DOUBLE COUNTERWEIGHTS

Date: Oct 02 / 2018
21. INSTALL THE LOWER PANEL

1) Remove shoes from one side of panel
2) Remove the lower panel pickups
3) Install the lower panel, rest the panel on the sill

Note: Re-attach shoes to the same location.

1. Remove shoes on small shoebar side.

2. REMOVE THE LOWER PANEL PICKUPS


4. SIT LOWER PANEL ON THE SILL
   RE-ATTACH THE MIDDLE & LOWER PANEL PICKUPS

PLAN VIEW SHOWING UPPER PANEL

Guide No. 258-EN
3 SECTION SLIDE-UP CAR DOOR
DOUBLE COUNTERWEIGHTS

Date: Oct 02 / 2018
To remove links you will need to grind off the head of the pin. Then use the Peelle #0608 Chain Pin Extractor to pop out the pin.

Ensure clips are always facing down as shown.

To remove links you will need to grind off the head of the pin. Then use the Peelle #0608 Chain Pin Extractor to pop out the pin.

Ensure clips are always facing down as shown.
## 24. CHAIN CONNECTION DETAILS

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**Diagram:**
- **Detail A:**
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7

**Hardware Bag:**
- G4
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25. **REMOVE COUNTERWEIGHT STOP ANGLE**

Remove all CWT Stop Angle and keep for future maintenance.

### PARTS LIST

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**THE PEELEE COMPANY**

FREIGHT DOORS | CAR GATES | CAR ENCLOSURES

TECHNICAL SUPPORT 1-800-787-5020 ext 275

Guide No. 258-EN

3 SECTION SLIDE-UP CAR DOOR
DOUBLE COUNTERWEIGHTS

Date: Oct 02 / 2018
26. CAR DOOR / CAR DOOR CONTACT

If handing of contact needs to be changed refer to sheet #230000, included with your car door contact package.

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Guide No. 258-EN
3 SECTION SLIDE-UP CAR DOOR DOUBLE COUNTERWEIGHTS

Date: Oct 02 / 2018

THE PEELLE COMPANY
FREIGHT DOORS | CAR GATES | CAR ENCLOSURES
TECHNICAL SUPPORT 1-800-787-5020 ext 275

30
### 27. ENCODER INSTALLATION

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**PEELLE COMPANY**

Freight Doors | Car Gates | Car Enclosures

**Technical Support** 1-800-787-5020 ext 275

**Guide No. 258-EN**

3 SECTION SLIDE-UP CAR DOOR

DOUBLE COUNTERWEIGHTS

Date: Oct 02 / 2018
### Hardware Bag G8

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**Guide No. 258-EN**

**3 SECTION SLIDE-UP CAR DOOR**

**DOUBLE COUNTERWEIGHTS**

**Date:** Oct 02 / 2018
29. RETIRING CAM BOTTOM ASSEMBLY

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Guide No. 258-EN
3 SECTION SLIDE-UP CAR DOOR
DOUBLE COUNTERWEIGHTS

THE PEELLE COMPANY
FREIGHT DOORS | CAR GATES | CAR ENCLOSURES
TECHNICAL SUPPORT 1-800-787-5020 ext 275

Date: Oct 02 / 2018
30. RETIRING CAM ROD INSTALLATION

V-Belt should have 1/2 in. [12mm] of play.

When the Cam Face is fully lifted, the upper pick-up should be pointing to the 9:00 position (3:00 for Left Hand arrangement)

1 1137021 5/16"-18 NYLOCK HEX NUT ZP
3 97179 RETIRING CAM ROD
2 233065R RETIRING CAM TOP ASSY
1 233010 RETIRING CAM BOTTOM ASSY

Guide No. 258-EN
3 SECTION SLIDE-UP CAR DOOR
DOUBLE COUNTERWEIGHTS

THE PEELLE COMPANY
FREIGHT DOORS | CAR GATES | CAR ENCLOSURES
TECHNICAL SUPPORT 1-800-787-5020 ext 275

Date: Oct 02 / 2018
Set filler angles 6mm [1/4 in] away from face of panels.

Drill and tap for 1/4-20 screws

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Guide No. 258-EN
3 SECTION SLIDE-UP CAR DOOR
DOUBLE COUNTERWEIGHTS
Date:  Oct 02 / 2018

THE PEELLE COMPANY
FREIGHT DOORS | CAR GATES | CAR ENCLOSURES
TECHNICAL SUPPORT 1-800-787-5020 ext 275

35
### 32. GOF MICRO SWITCH INSTALLATION

**Guide No. 258-EN**  
3 SECTION SLIDE-UP CAR DOOR  
DOUBLE COUNTERWEIGHTS  

**Date:** Oct 02 / 2018

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**HARDWARE BAG**

**G5**
33. CAR DOOR PROXIMITY SENSOR (OPTIONAL)

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Guide No. 258-EN
3 SECTION SLIDE-UP CAR DOOR
DOUBLE COUNTERWEIGHTS

Date: Oct 02 / 2018
### 34. DOOR PROXIMITY SENSOR (OPTIONAL)

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**DETAIL A**

**SPECIAL DOL BRACKET**

**SPECIAL DCL BRACKET**