



***THE NEXT GENERATION OF
FREIGHT ELEVATOR DOORS***



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**Car Gate - Q Style
Installation Instructions**

OPENING QUALITY DOORS AROUND THE WORLD

Car Gate - Q Style

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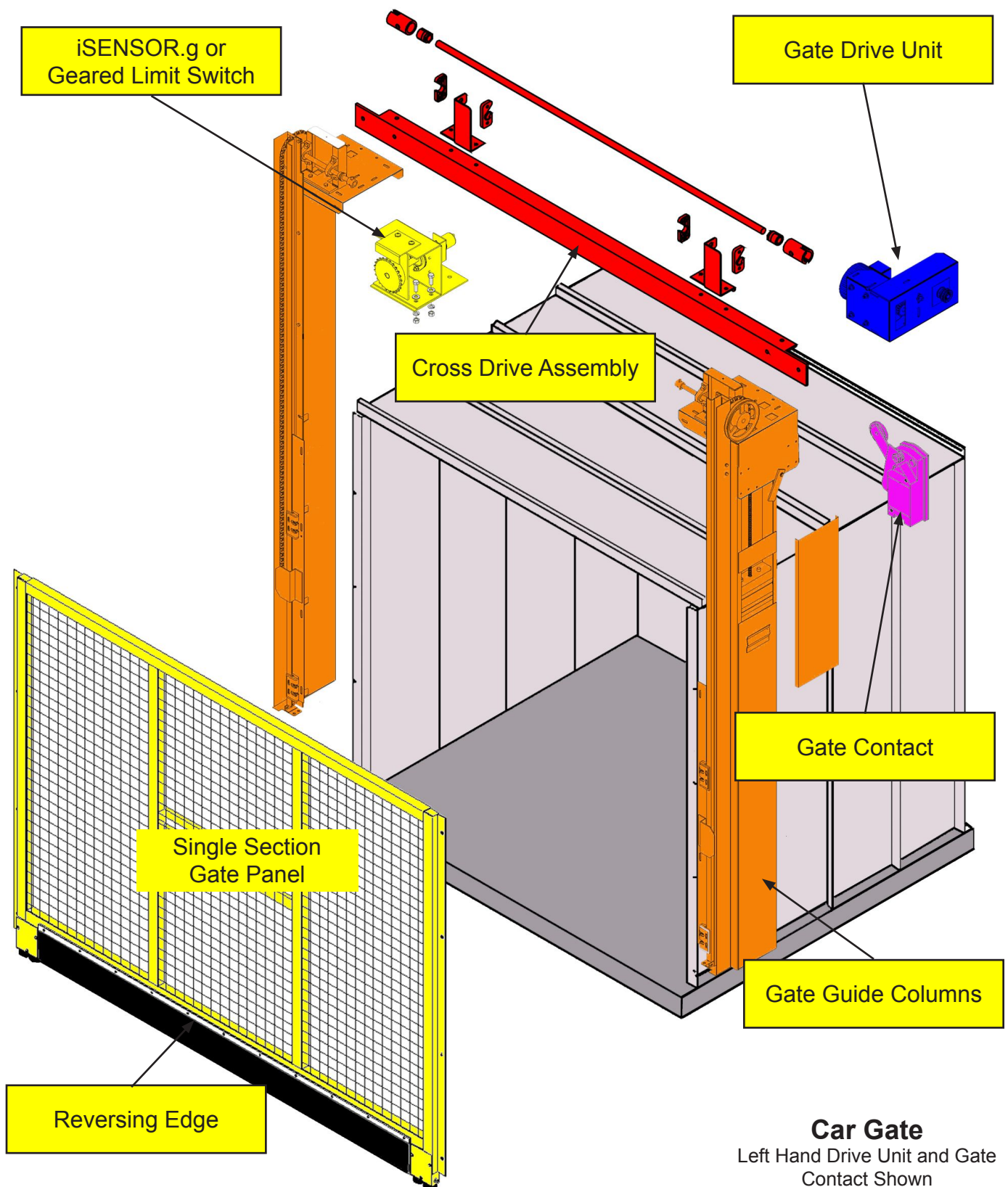
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Car Gate
Left Hand Drive Unit and Gate
Contact Shown

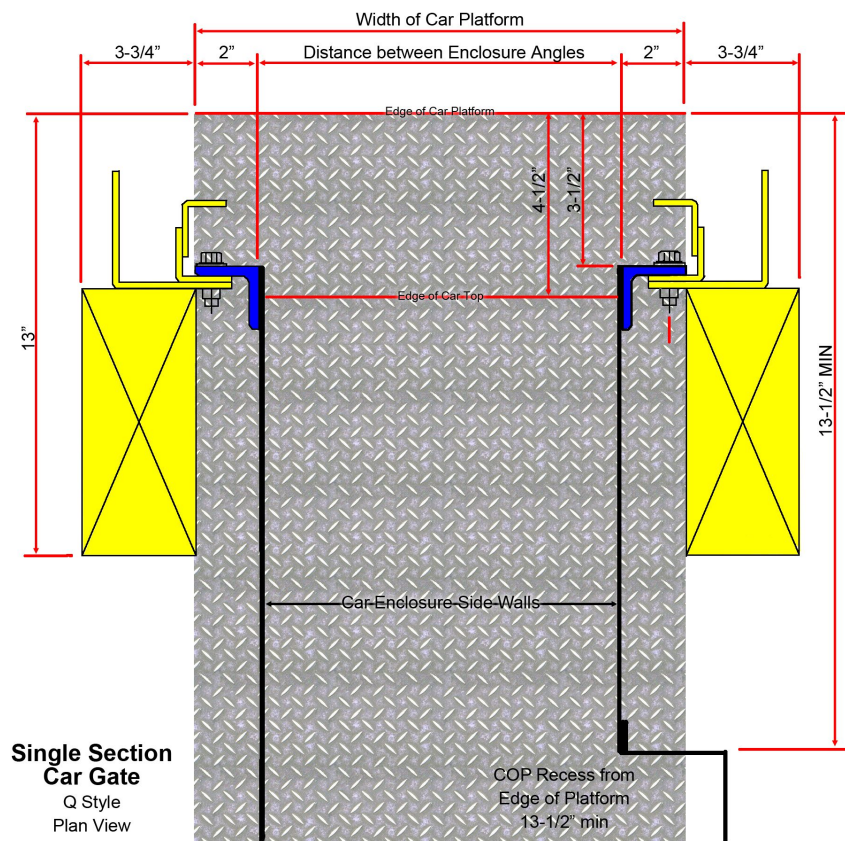
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Check Car Enclosure Set Back - Insure that the Car Enclosure is properly **SET BACK** from the edge of the Platform and that the Wainscot Mounting Angle is the proper size and contains the proper mounting holes.

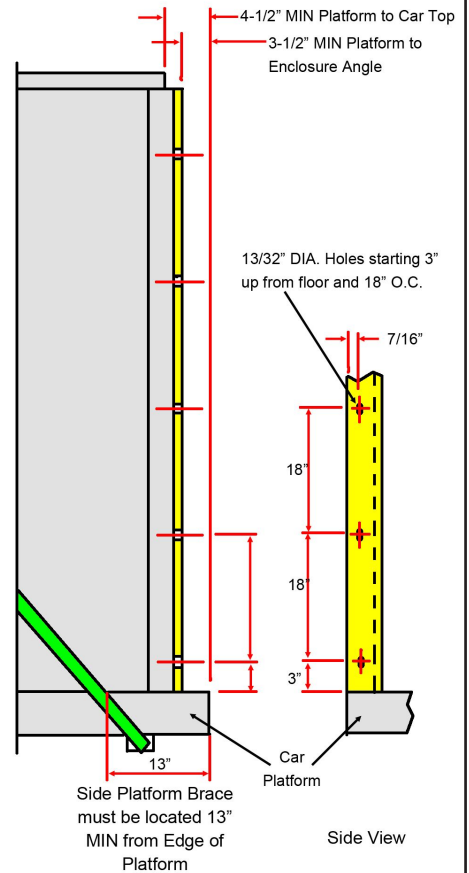
IMPORTANT!

If your actual CAR SET BACKS do not meet the required MINIMUM SET BACKS shown on these two pages, stop and call Courion immediately.

Minimum Setback - Single Section Gate



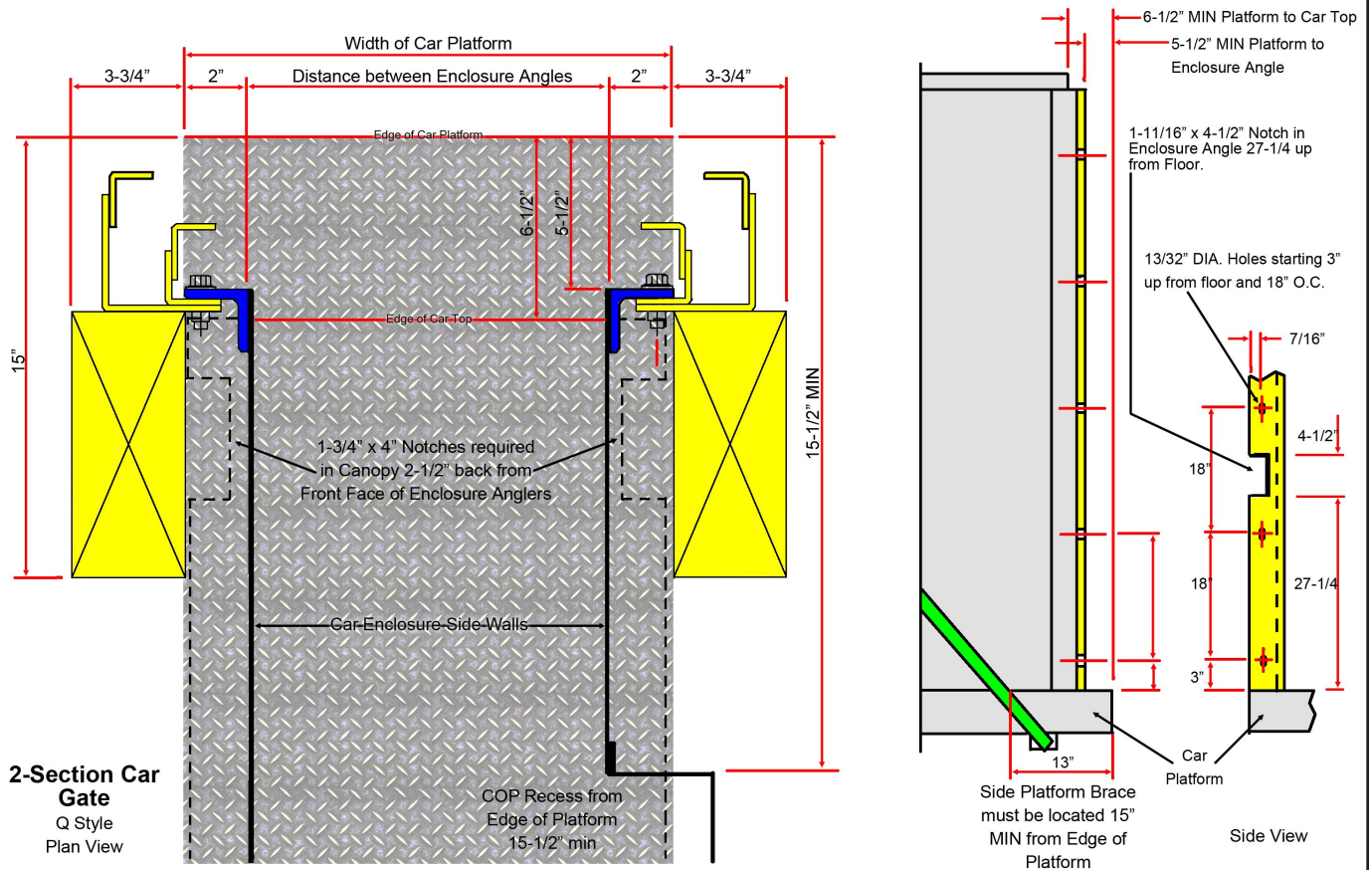
Single Section Car Gate
Q Style
Plan View



Side View

Car Gate - Q Style

Minimum Setback - 2-Section Gate



MODIFICATIONS TO AN EXISTING CAR ENCLOSURE WHEN INSTALLING A NEW COURION Q-STYLE CAR GATE

EXISTING ENCLOSURE ANGLES - Enclosure Angles must have a 2" (51mm) return and maximum thickness of 1/4" (6mm). In addition, the Enclosure Angles must have 13/32" (10mm) Gate Guide mounting holes starting 3" (76mm) up from the platform, 7/16" (11mm) from the outside edge, and 18" (457mm) on center.

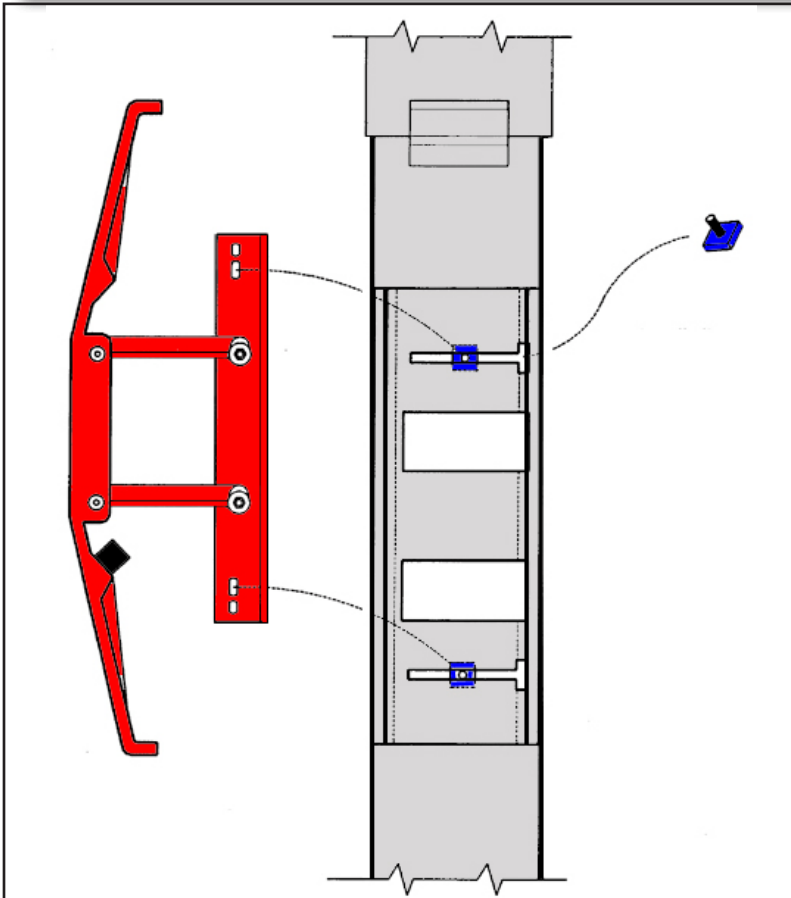
If you have a 2-Section Car Gate, the Enclosure Angles must be notched with a 4-1/2" cutout 27-1/4" up from the Platform on both sides of the Enclosure.

CAR CANOPY - 2-SECTION GATE ONLY - The Canopy (including the Canopy Support Angle) must be notched with a 1-3/4" x 4" cutout 2-1/2" from the front edge on both sides of the Enclosure.



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- 1** Before installing the GATE GUIDE COLUMNS, attach the RETIRING CAM to the Gate Guide Column on the Interlock Side of the hoistway.



Slide two (2) 3/8" "T" Bolts, found in Hardware Kit #10, into the slots and fasten the Retiring Cam to the Cam Mounting Bracket on the Gate Guide Column.



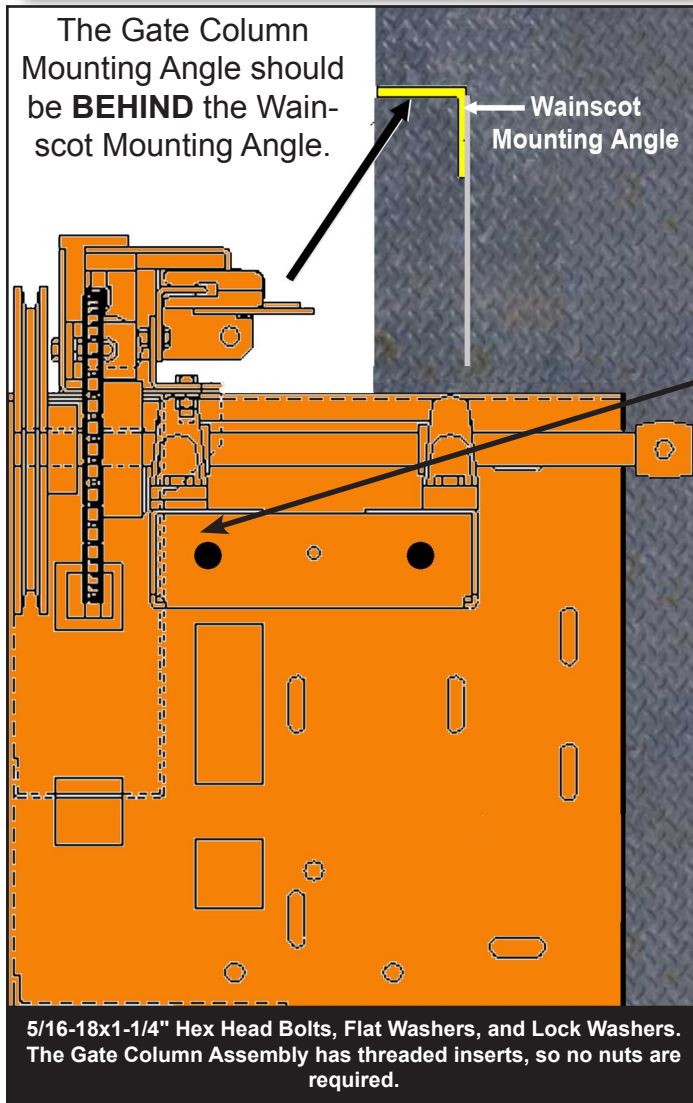
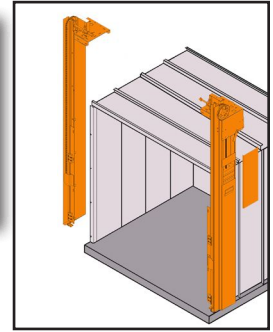
CAUTION!

Be very cautious not to damage the Retiring Cam when hoisting the Gate Guide Column into position during the next step of the installation process.

Car Gate - Q Style

2 Install the **GATE GUIDE COLUMNS** to the Car Enclosure Wainscot Angles.

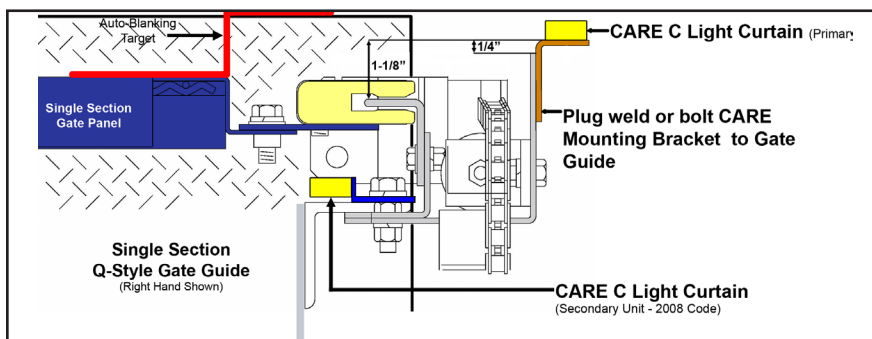
(1 pr) Gate Guide Columns (Left and Right Hand) and (1) Gate Guide Hardware Kit (94-000701Q)



1. Using an eyebolt secured in the 17/32" (13mm) hole at the top of the Gate Column Assembly, hoist the Gate Column into position. The Gate Column Mounting Angle should be **BEHIND** the Wainscot Mounting Angle.

2. Bolt the Gate Column Assembly loosely in place with the fasteners found in Hardware Kit #701Q.

3. Once both Gate Column Assemblies are in place, check the distance between the Gate Guide Rails at the top, middle, and bottom of the Car Enclosure to ensure the proper distance between guides. The distance between the Guides should not vary more than 1/8" (3mm) from top to bottom. Also make sure the Gate Column Assemblies are true and plumb. Tighten all fasteners. Bolt the Gate Column Footplate to the platform with at least one (1) 5/16" or 3/8" fastener.



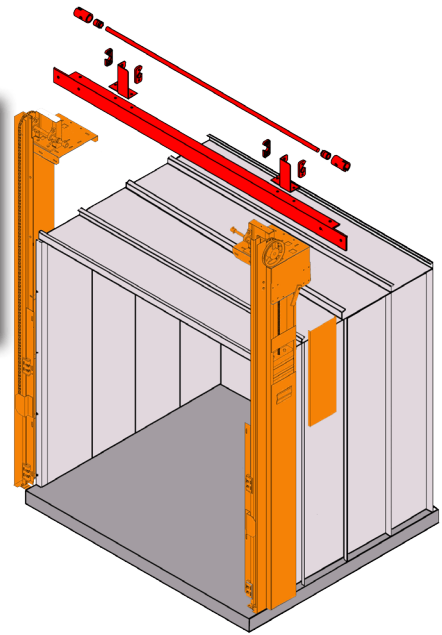
IMPORTANT! If you have two (2) light curtains, install the Secondary Light Curtain Brackets at the same time you are installing the Gate Columns.



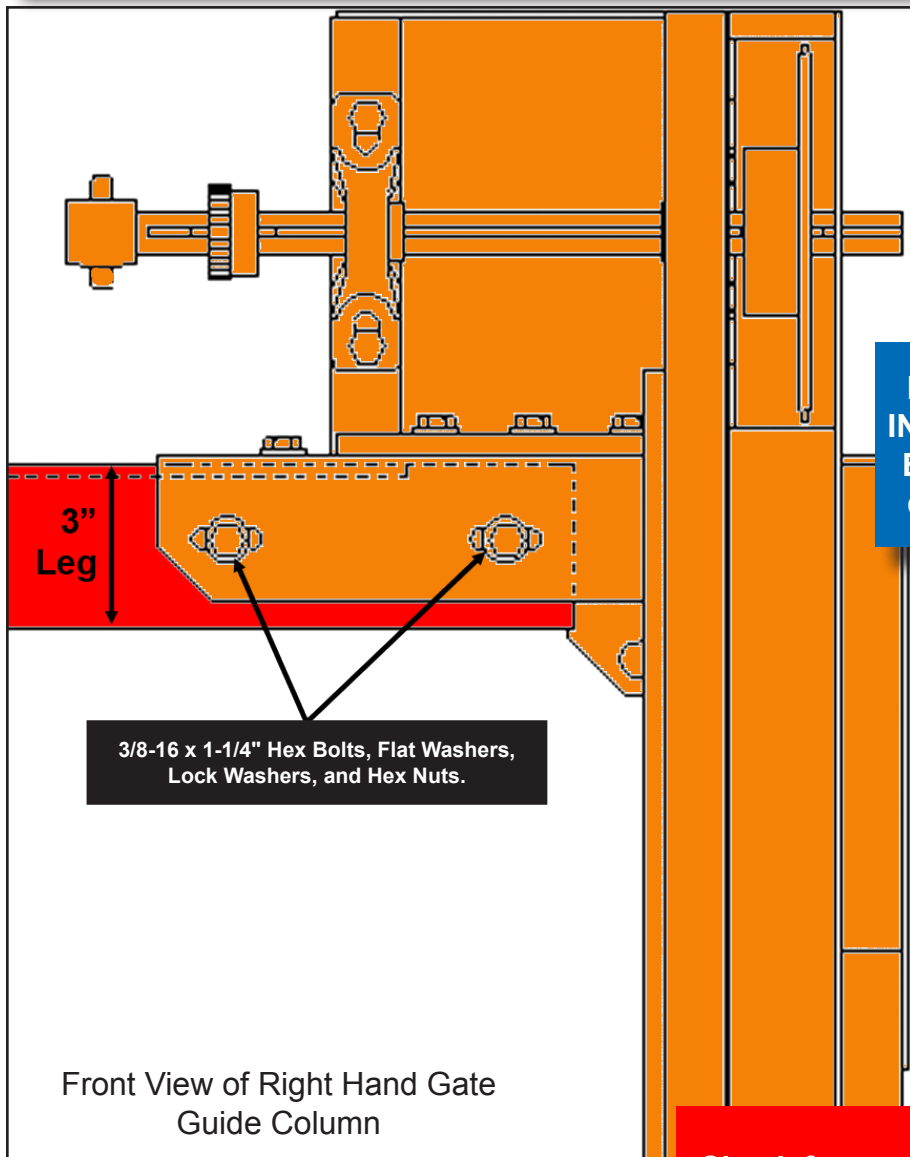
Car Gate - Q Style

3 Attach the **CROSS ANGLE** to the Car Gate Guide Corner Bracket.

- (1) Cross Angle (Length varies by Job)
- (1) Cross Drive Hardware Kit (94-000702Q)



Bolt the **CROSS ANGLE** to the **INSIDE** of the Gate Guide Corner Bracket with the 3" (76mm) leg down and facing the Opening.

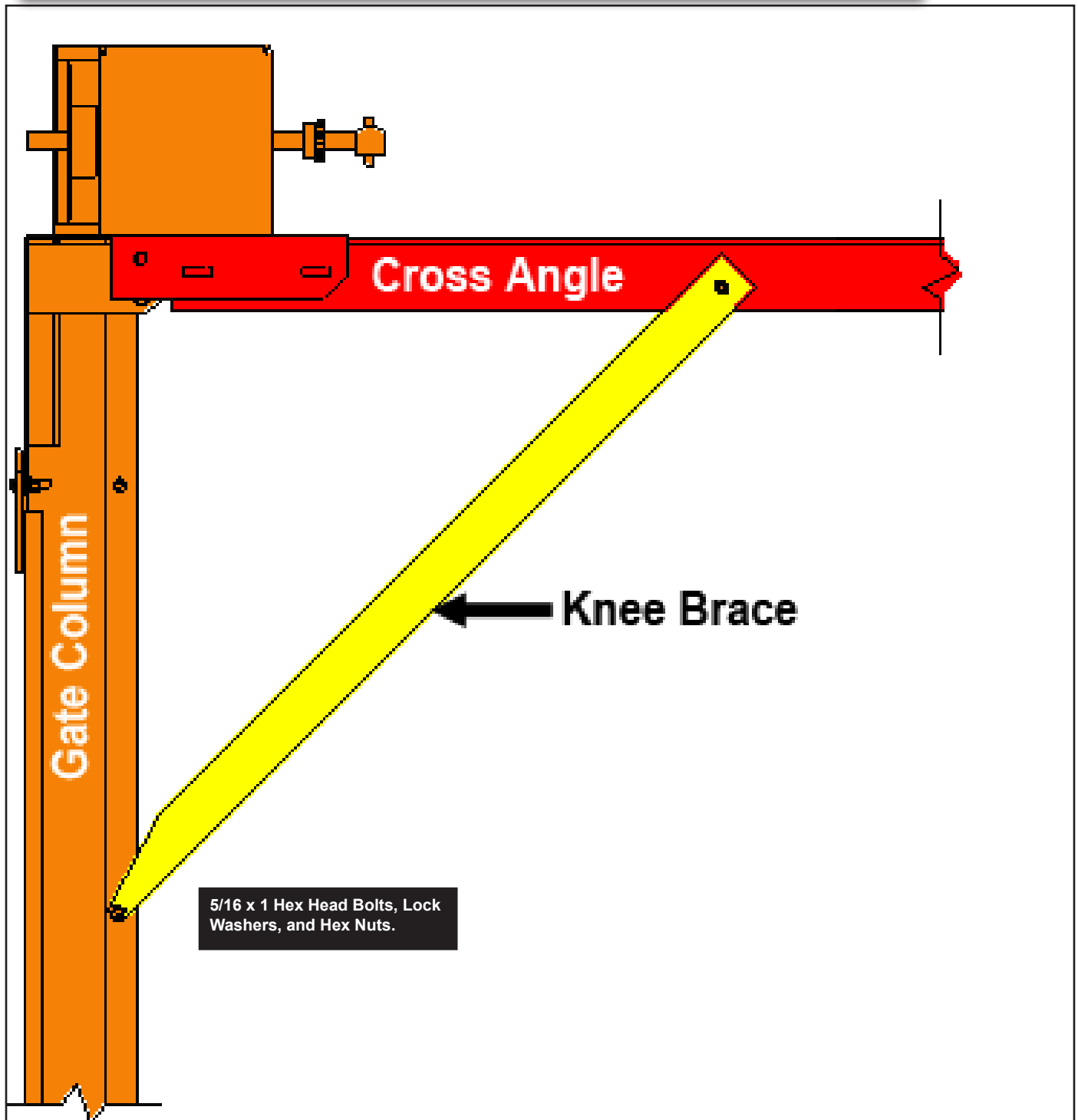


Check for squareness and distance between Guides and then tighten all fasteners.

4

Attach the **KNEE BRACES** to the Cross Angle and Gate Guide Columns.

- (2) Knee Braces
- (1) Knee Brace Hardware Kit (94-000705Q)



Car Gate - Q Style

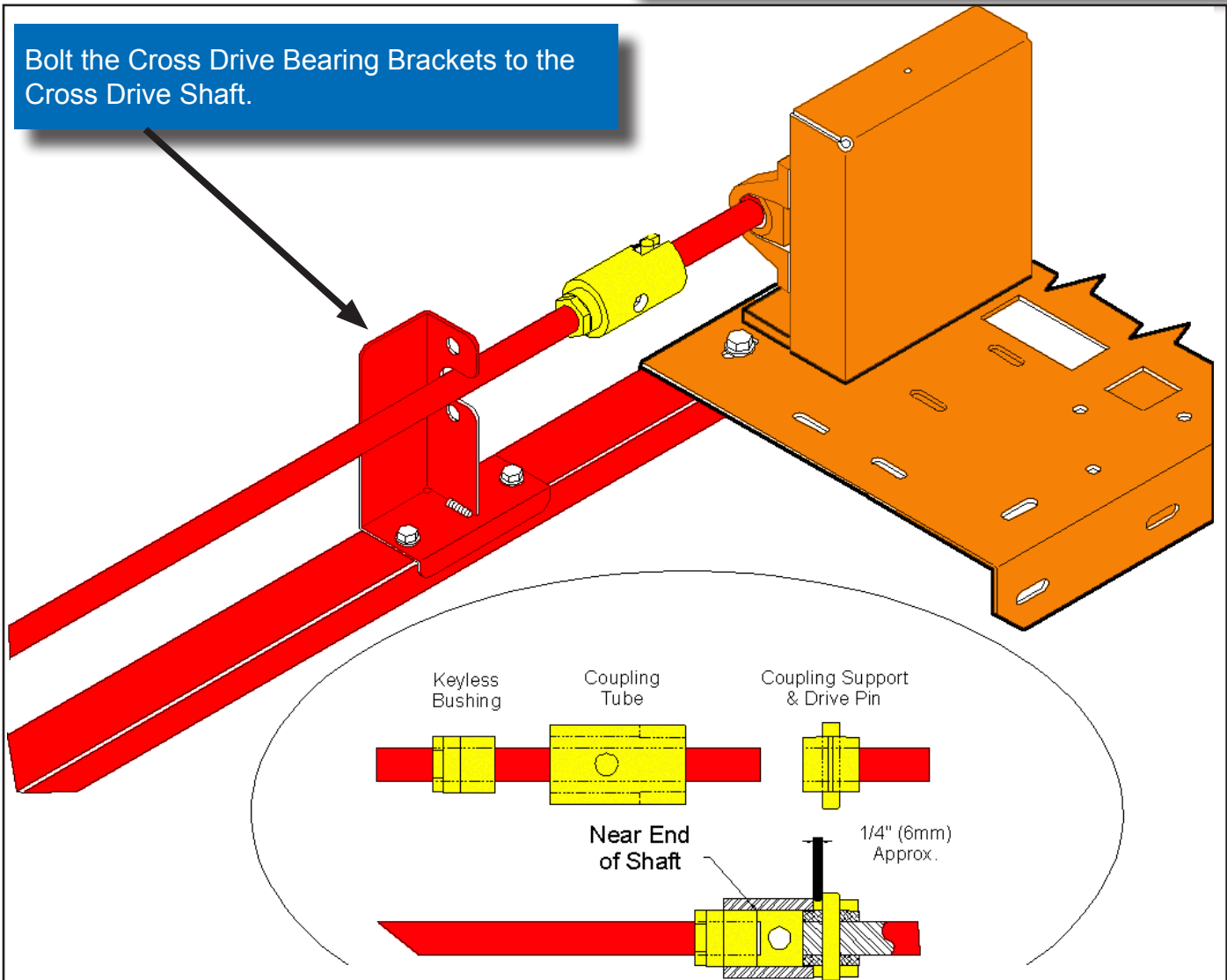
5 Attach the **CROSS DRIVE SHAFT** to the Drive Sprocket Units on the top of each Gate Guide Column.

- (1) Cross Drive Shaft (length varies by job)
- (1) Cross Drive Shaft Coupling Hardware (94-000702Q)
- (3) Cross Drive Bearing Brackets (94-000703Q)

IMPORTANT

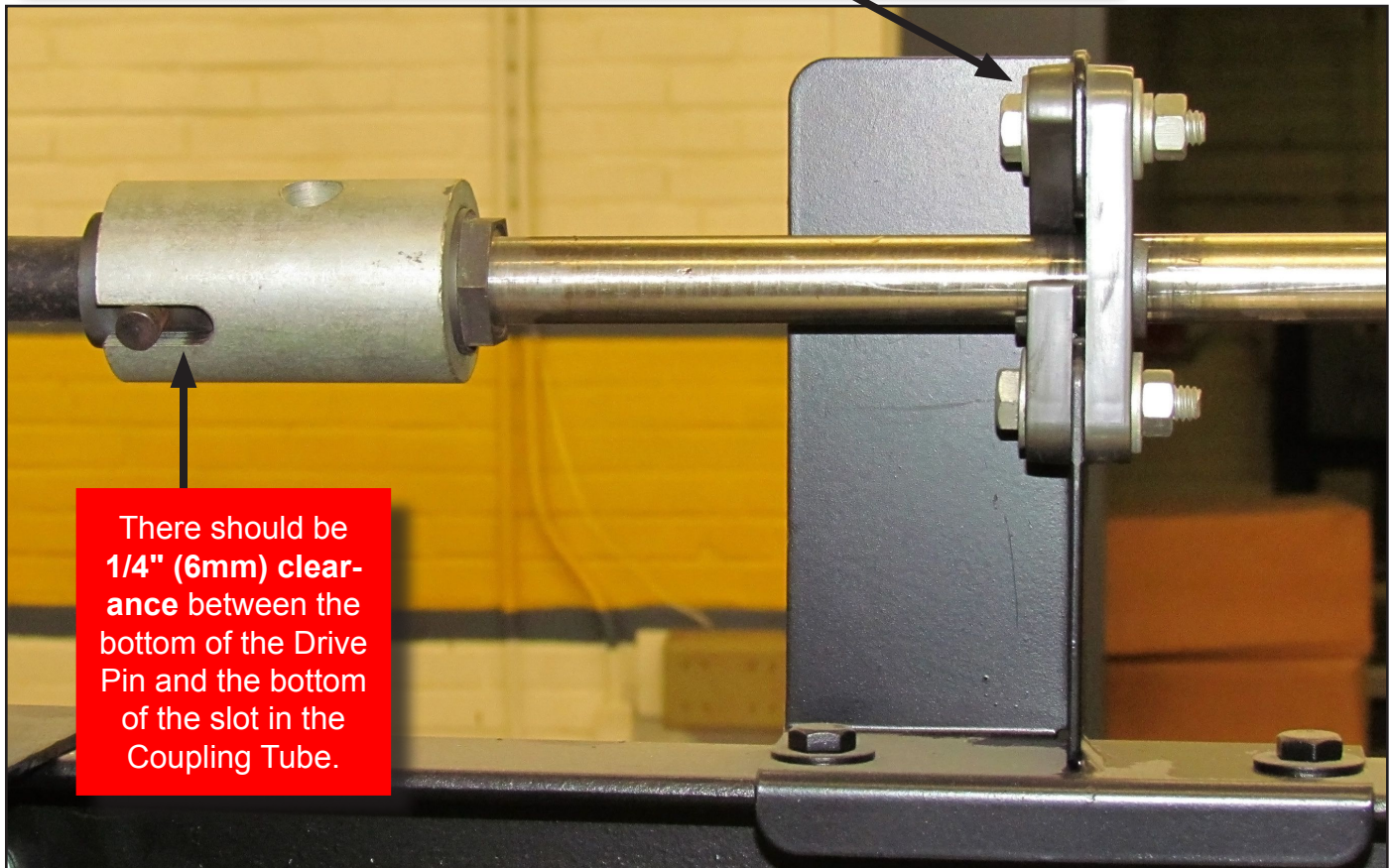
If you have a Gate iSENSOR.g or Geared Limit Switch, place the Drive Shaft Sprocket or Gear on the Cross Drive Shaft before installing the Drive Shaft - See Step 8 for further details.

Bolt the Cross Drive Bearing Brackets to the Cross Drive Shaft.



With the CROSS DRIVE SHAFT in position, slide the Coupling Tubes and Keyless Bushings around the Drive Pin on each Drive Sprocket Unit. Hand tighten the Keyless Bushings.

Attach the Cross Drive Bearing Halves to each side of the Cross Drive Bearing Brackets. Cross Drive Shaft should rest on these Halves and turn freely.

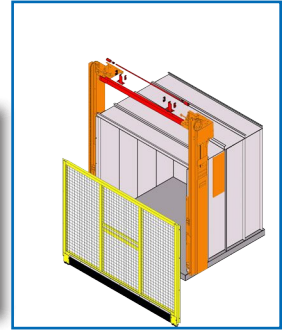


With the CROSS DRIVE SHAFT centered, tighten the Keyless Bushing by inserting a drift pin (or similar implement) through the 1/2" (13mm) hole in the Coupling Tube (this is to help counter the tightening torque). Tighten the keyless bushing to approximately 700 in/lbs (about one-half turn beyond hand tight).

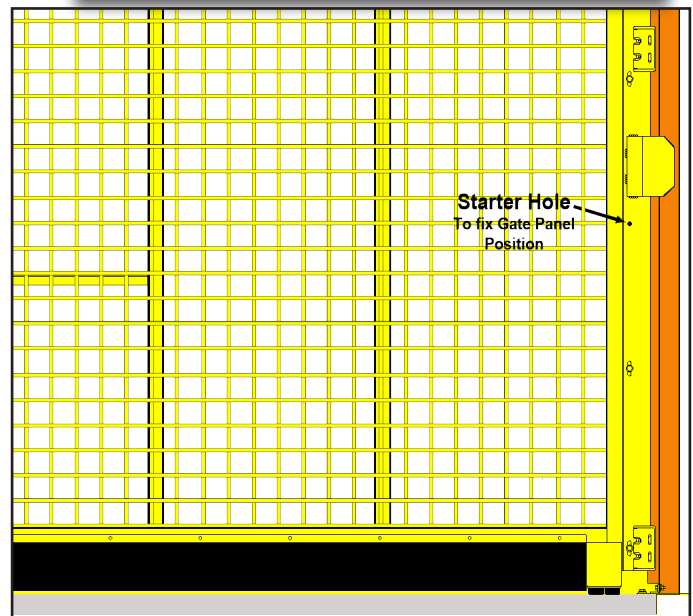
Car Gate - Q Style

6 Fit the **CAR GATE PANEL** between the Gate Guides and attach to the **BACK SIDE** of the Gate Mounting Plates on the Gate Column.

(1) Car Gate Panel and (1) Car Gate Panel Hardware Kit (94-000704Q)



Fix the Gate Position - Once the Gate Panel is in proper position, drill and tap a 5/16-18 hole through the starter hole on each Gate Mounting Plate and fix the Gate Panel's position.



2-SECTION GATES

Weight Stack Blocking - Once the Gate Panel is installed, remove the Weight Stack Blocking at the top of the Gate Guide Columns. Manually operate the Car Gate Panel. The Gate Panel should be level and move freely with not more than 1/8" (3mm) side play.

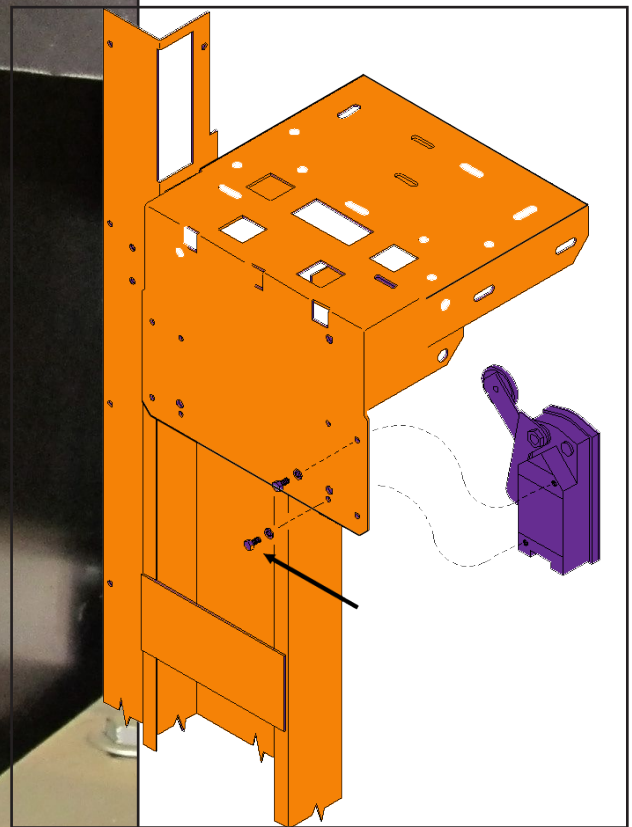
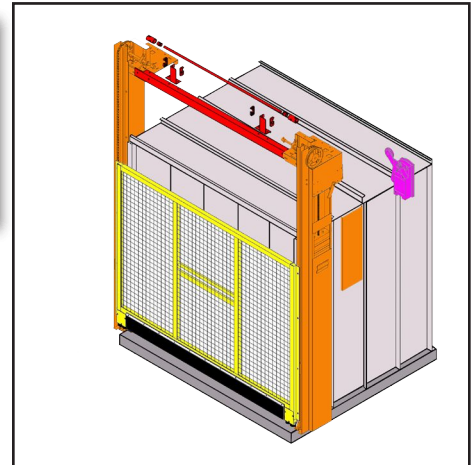
Prop the **"SLOW"** Panel (Upper Gate Panel) up with the wood props so that the bottom edge of the Upper Panel is even with the top edge of the Lower Panel (Fast Panel). Install the **"FAST"** Panel (Lower Gate Panel with Reversing Edge) resting on the Platform.



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7 Attach the GATE CONTACT to the Gate Guide Column on the side opposite the Retiring Cam.

(1) Gate Contact



Gate Contact Position - The Q Gate Contact is actuated by the top of the Weight Stack inside the Gate Guide Column. Once mounted, check for proper actuation.



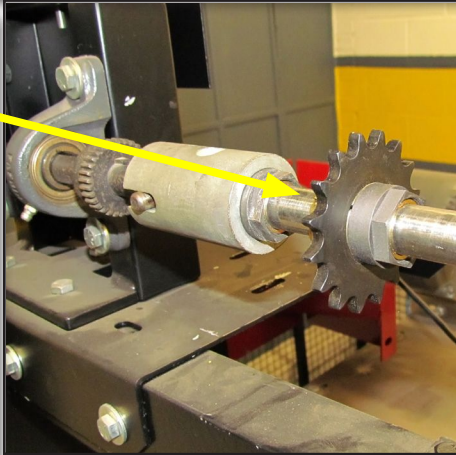
Car Gate - Q Style

8 NEXT GENERATION SYSTEM - Mount the **iSENSOR.g** to the Gate Column on the side CLOSEST to the Gate iDRIVE Control.

(1) iSENSOR.g (21-741002) - (1) iSENSOR.g Mounting Plate (21-741005) - (1) iSENSOR.g Hardware Kit (94-741004)

1 Place the iSENSOR Drive Shaft Sprocket on the Gate Drive Shaft.

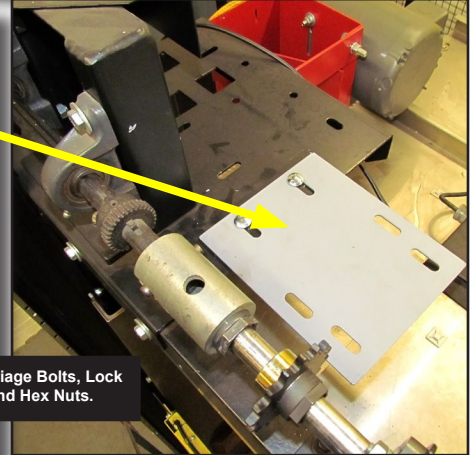
Hand tighten the Sprocket Coupler at this time.



2 Attach the iSENSOR Mounting Plate to the Gate Column.

Hand tighten the mounting bolts at this time.

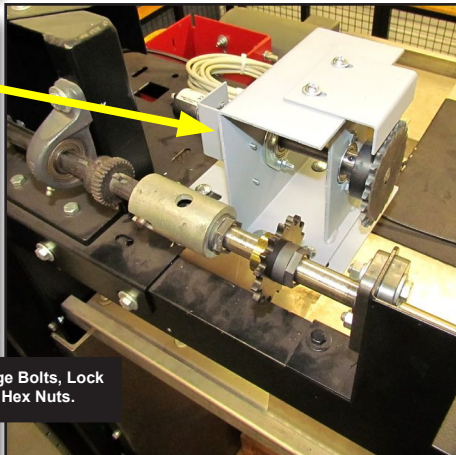
5/16-18x1" Carriage Bolts, Lock Washers, and Hex Nuts.



3 Attach the iSENSOR to the Mounting Plate.

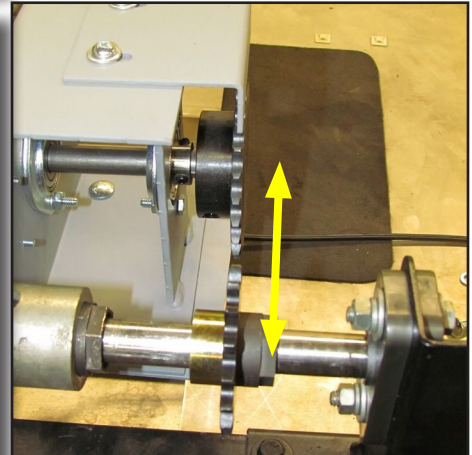
Hand tighten the mounting bolts at this time.

5/16-18x1" Carriage Bolts, Lock Washers, and Hex Nuts.



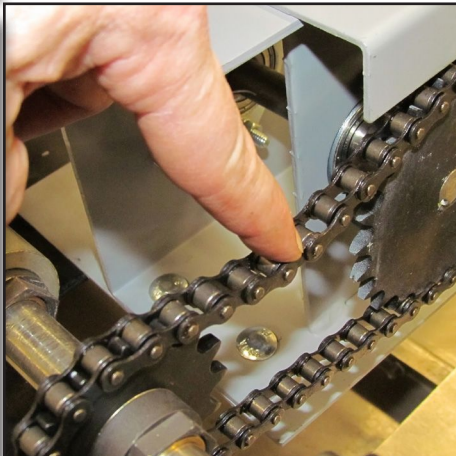
4 Align the Encoder Sprocket with Drive Shaft Sprocket.

Tighten the Drive Shaft Sprocket on the Drive Shaft



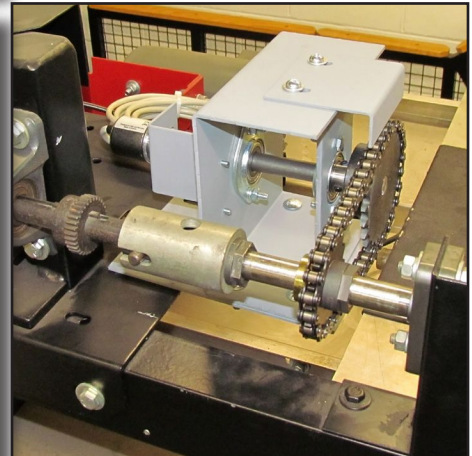
5 Wrap Drive Chain around both Sprockets and secure with link.

Adjust iSENSOR Mounting Plate so Drive Chain is finger tight.



6 Move Gate Panel up and down to ensure iSENSOR runs smoothly.

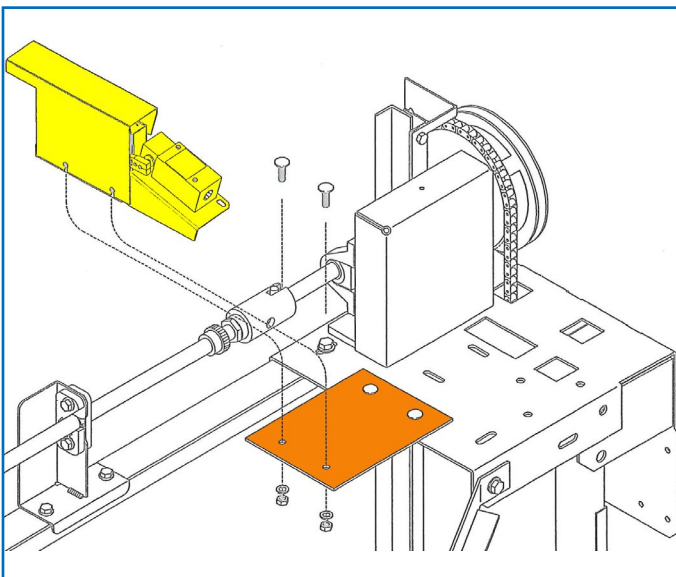
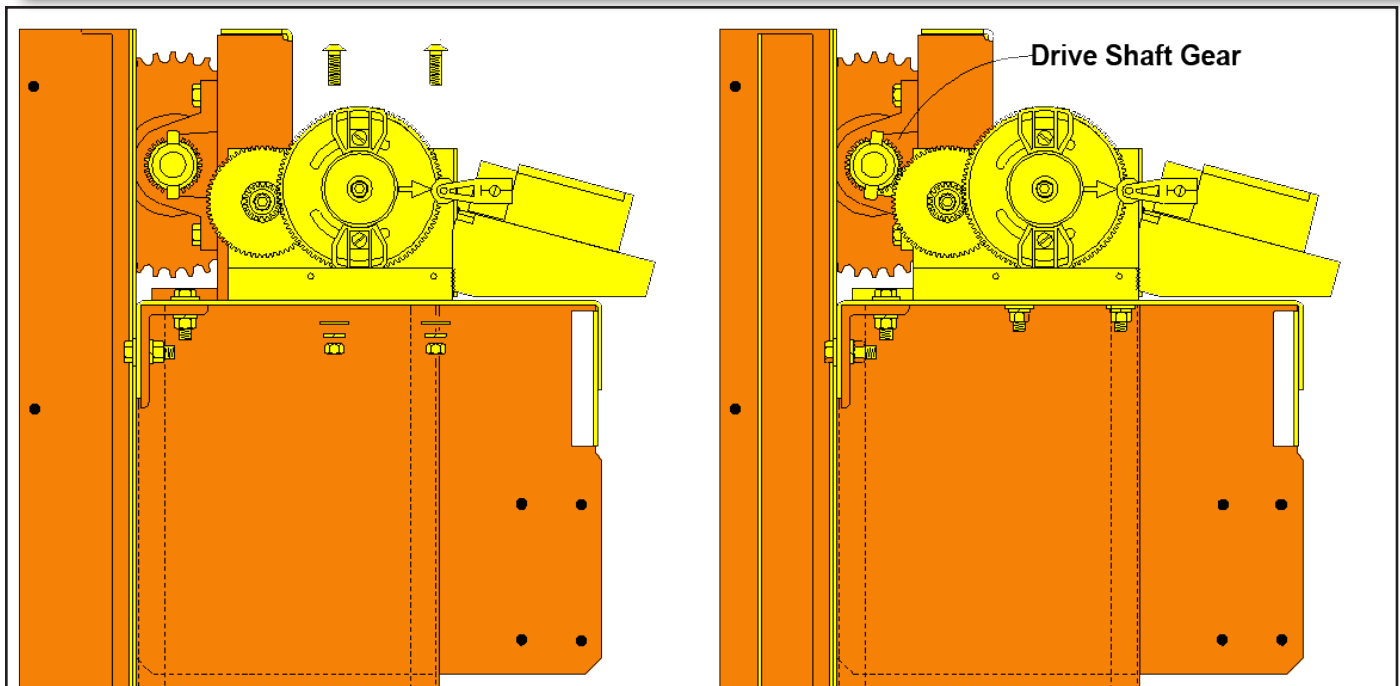
Tighten all mounting bolts.



8 **Q SYSTEM** - Mount the **GEARED LIMIT SWITCH** to the Gate Column.

- (1) Geared Limit Switch
- (1) Geared Limit Switch Hardware Kit (94-00706Q)

Mount the Geared Limit Switch to the appropriate Gate Guide Column Corner Bracket. Finger tighten only. Slide the Geared Limit Switch back so that its gears are not engaged with the Drive Shaft Gear.

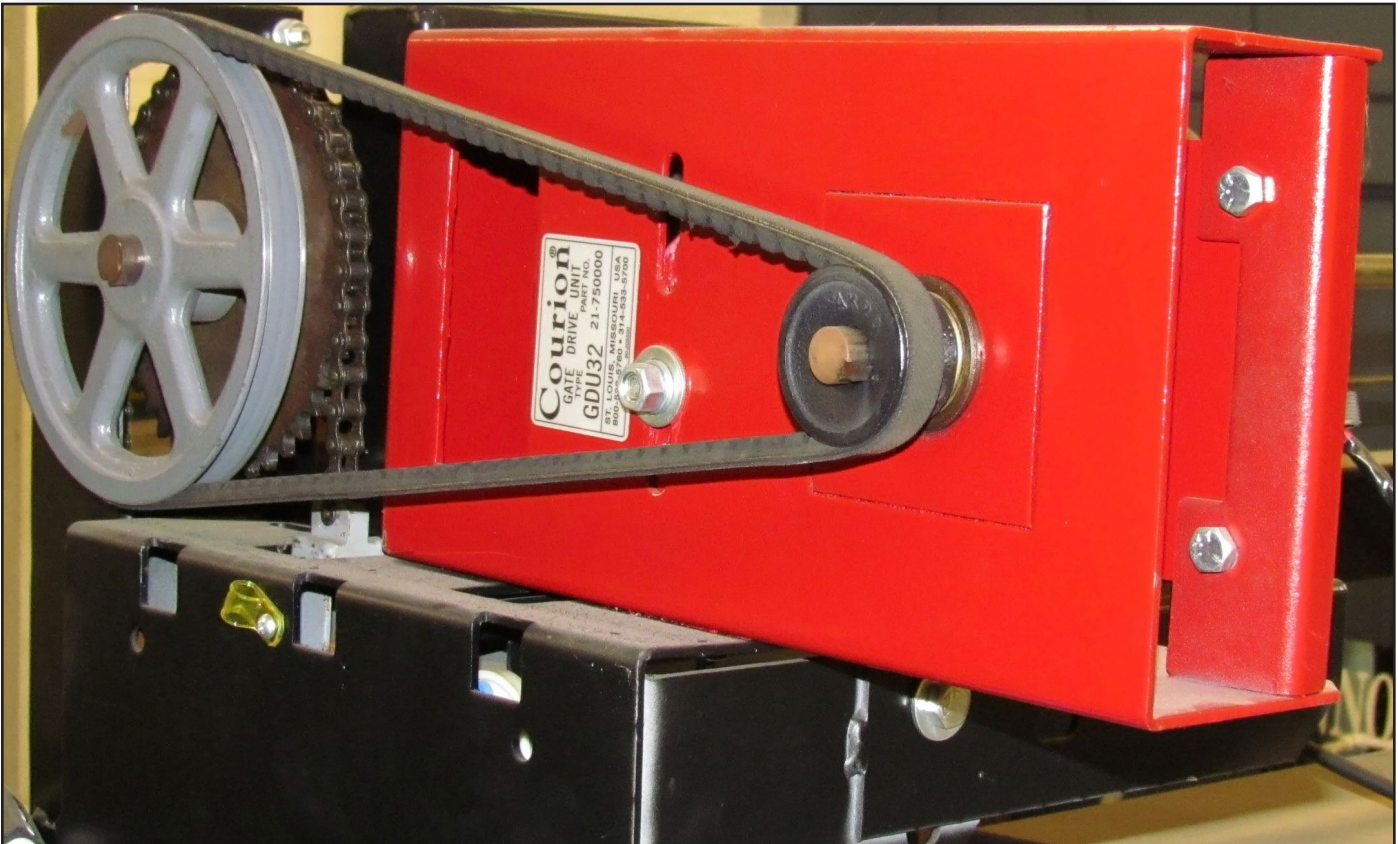
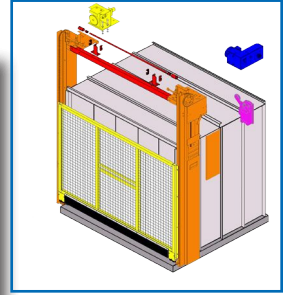


In some cases (e.g. when you have dual Gate Drive Units), the Geared Limit Switch will require an extended Mounting Plate. In those cases, mount the Geared Limit Switch and GLS Extended Mounting Plate to the Gate Guide Column Corner Bracket on the side opposite the Retiring Cam.

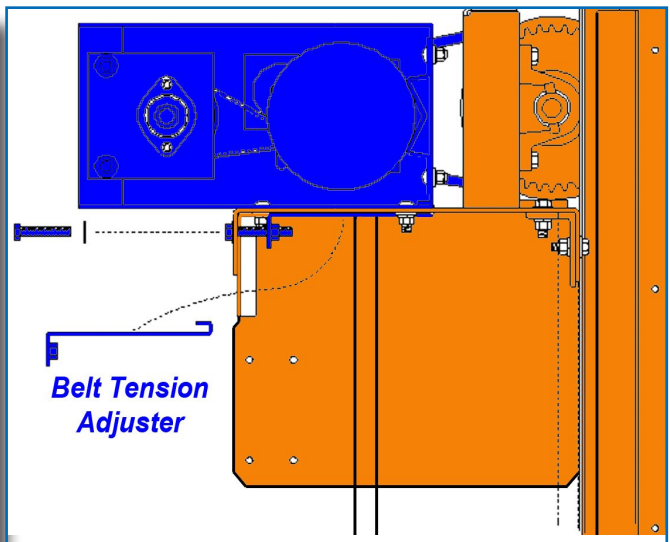
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9 Mount the **GATE DRIVE UNIT** to the Gate Guide Column Corner Bracket on the side that has the GATE DRIVE SHEAVE.

- (1) Gate Drive Unit
- (1) Gate Drive Hardware Kit (94-000706Q)



1. Place one (1) 5/16 x 1" Carriage Bolt in the middle mounting slot of the Gate Guide Column Corner Bracket and loosely apply the washers and nut.
2. Lift the Carriage Bolt and slide the GATE DRIVE UNIT onto the bolt through the special "keyhole" notch. Insert the remaining mounting hardware and finger tighten.
3. Install the "V" Drive Belt around the Gate Drive Sheave and Drive Unit Sheave.
4. Attach the Belt Tension Adjuster with the 3/8"-16 x 2-1/2" full threaded adjustment screw to the underside of the Gate Guide Column Corner Bracket. Adjust the Drive Unit for proper belt tension and tighten all mounting bolts.



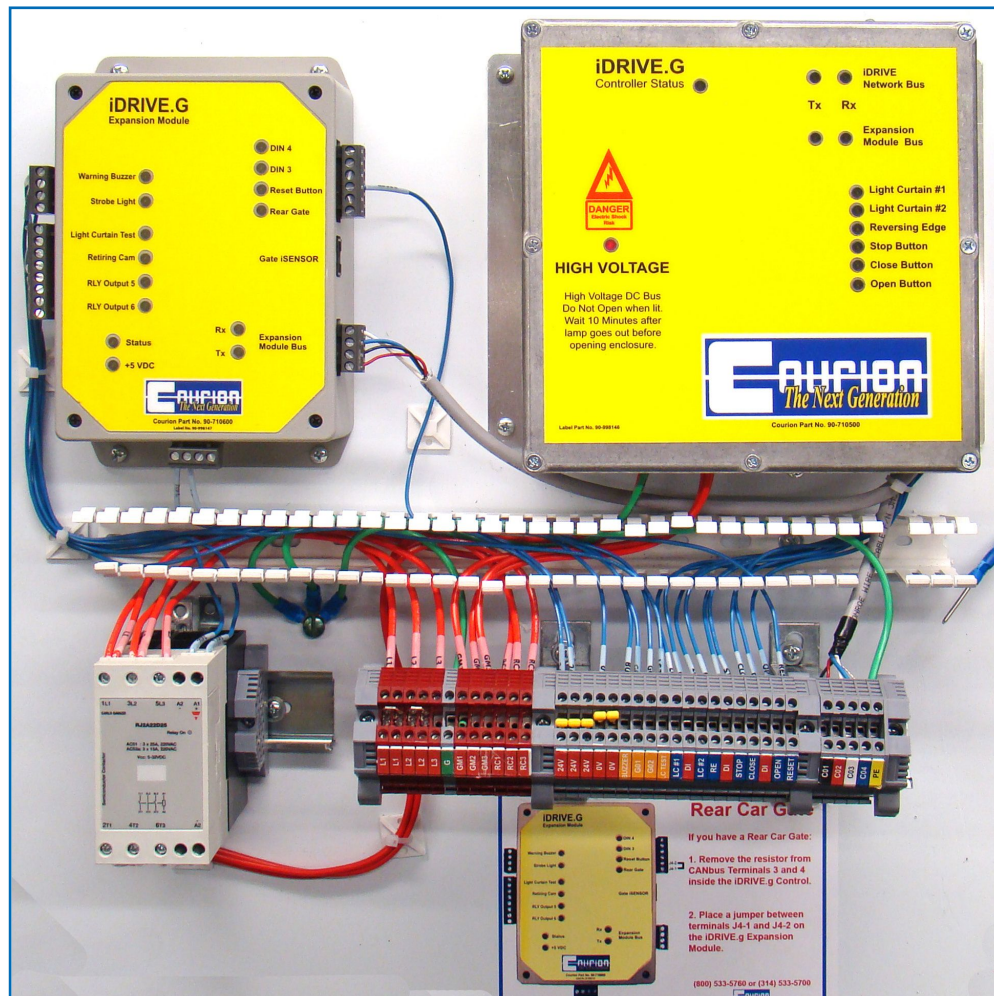
Car Gate - Q Style

10 If You Have Courion's NEXT GENERATION Equipment, mount the **Gate iDRIVE VFD Control** to the top of the Car Enclosure.

- (1) Gate iDRIVE VFD Control - Front Gate
- (1) Gate iDRIVE VFD Control - Rear Gate (when applicable)

IMPORTANT!

The Gate iDRIVE VFD Control must be mounted in close proximity to the Gate iSENSOR and CARE Light Curtain so that their respective cables can reach the necessary connection points on the Gate iDRIVE.



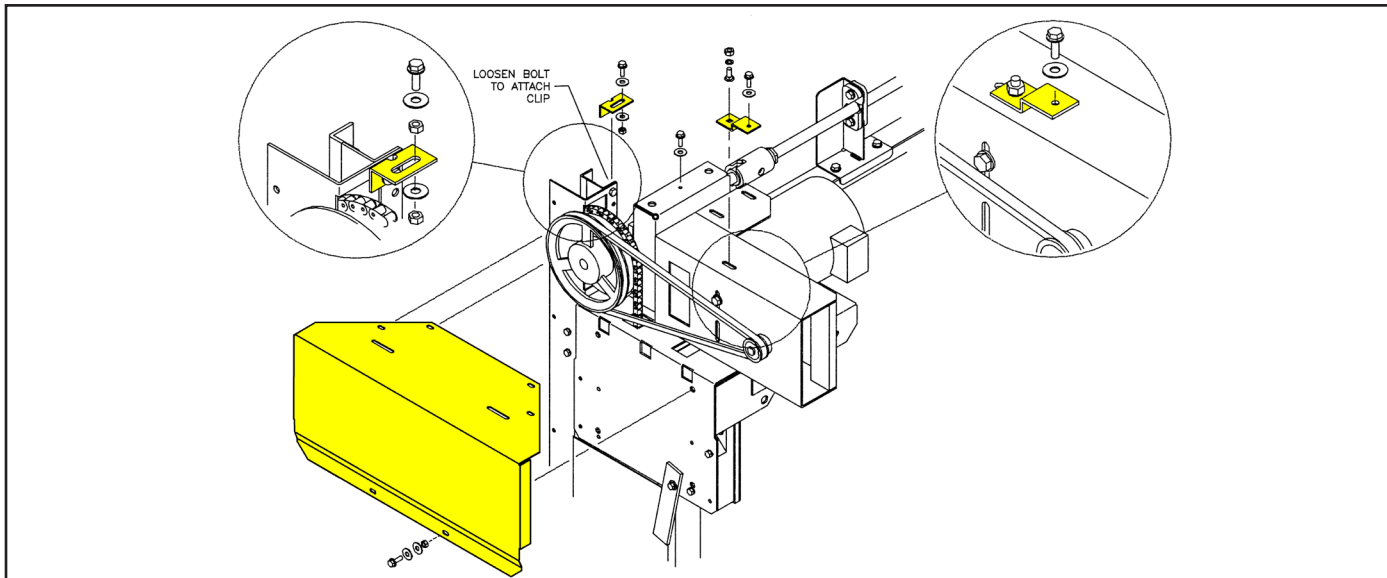
NEXT GENERATION NOTE

If you have Courion's NEXT GENERATION System, your shipment will contain a Gate iDRIVE VFD Control. See the iLEARN System Manual for additional information.



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- 11** Install the Drive Cover to the Gate Drive using fasteners found in Hardware Kit 709Q (#94-00709Q)



- 12** Install an electrical junction box on the Gate Cross Angle for the **REVERSING EDGE** Drop Cord. Be sure the location does not interfere with operation of the Car Gate. Connect the provided Reversing Edge Cable from the junction box to the Reversing Edge Switch. You may need to cut the cable length to suit your installation. Use the cable clips provided on the Car Gate Panel to restrict movement of the Reversing Edge Cable.

- 13** Install suitable bracing between the Gate Guide Columns and the Elevator Crosshead to stabilize the Gate Guides.

- 14** Attach the **WEB STRAPS** to the Gate Panel

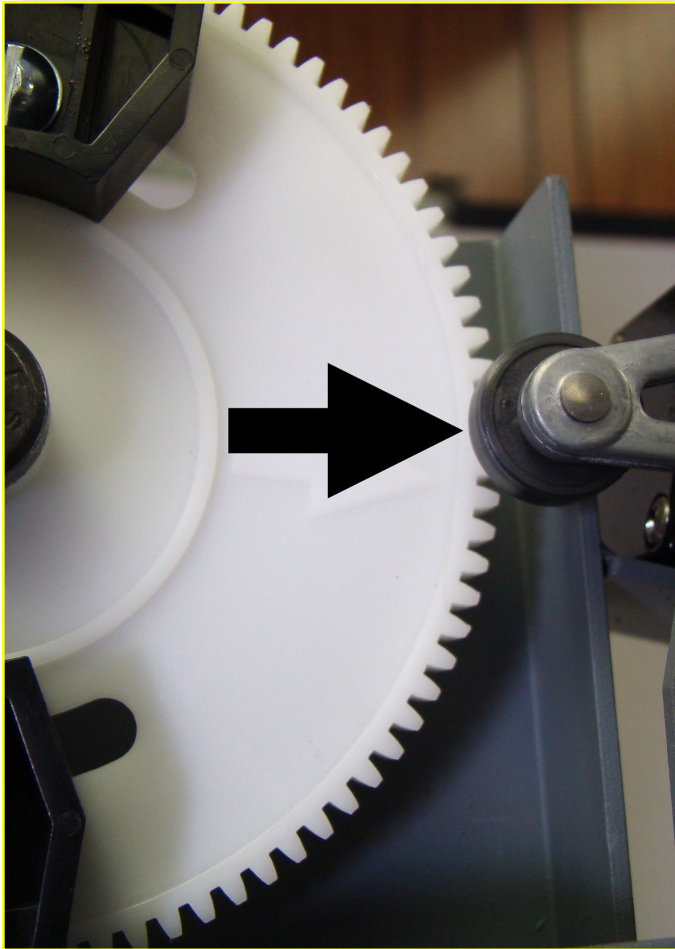
- 15** If You Have Courion's Retiring Cam, please proceed to the Retiring Cam Installation Manual.

- 16** If You Have Courion's CARE Light Curtain, please proceed to the CARE Light Curtain Installation Manual.



Car Gate - Q Style

ADJUSTMENT If you have a **GEARED LIMIT SWITCH**, please make the following adjustments.



With the Gate Panel positioned in its 1/2 Open position and the Geared Limit Switch NOT engaged with the Idler Sprocket -

1. Rotate the CAM GEAR on the Geared Limit Switch until the arrow points to the roller actuator on the Limit Switch.
2. Move the Geared Limit Switch forward so that the CAM GEAR engages the Idler Sprocket Gear. Tighten all bolts.
3. Set the Geared Limit Switch Cams to actuate the Limit Switch when the Car Gate is about 13" (330mm) from FULL OPEN and FULL CLOSE.

Further adjustments will be done after the Gate System is under power.



NEXT GENERATION NOTE

If you have a Gate iSENSOR.g, please proceed to the iLEARN System Manual for final setup and adjustment.





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