R Y T E C

Turbo Slide™

Owner's Manual

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RYTEC TURBO-SLIDE LIMITED WARRANTY

Rytec Corporation (“Seller”), an Illinois corporation with its principal place of business at One Cedar Parkway, PO Box 403, Jackson, WI 53037, warrants to the original registered end-user commercial purchaser (“Buyer”) that the **Turbo-Slide model** (“Product”) sold to the Buyer will be free of defects in materials and workmanship (ordinary wear and tear excepted) for the time periods set forth below:

- **Mechanical** components for a period of **One (1) Year** from the date of shipment of the Product from the Seller’s plant (“Shipment”).
- **Electrical** components for a period of **One (1) Year** from Shipment.
- **Standard door panel** for **Five (5) Years** from Shipment.
- **Seals, including sweep seal, bulb seal and leading edge seals** are considered wear items and are not covered under this Limited Warranty.
- **Aftermarket parts**, **accessories** and **assemblies** for a period of ninety (90) days from the date of Shipment

Remedies. Seller’s obligation under this Limited Warranty is limited to repairing or replacing, at Seller’s option, any part which is determined by Seller to be defective during the applicable warranty period. Such repair or replacement shall be the Seller’s sole obligation and the Buyer’s exclusive remedy under this Limited Warranty.

Labor. Except in the case of aftermarket parts, accessories and assemblies, labor is warranted for one year. This means that Seller will provide warranty service without charge for labor in the first year of the warranty period. Thereafter, a charge will apply in to any repair or replacement under this Limited Warranty. In the case of aftermarket parts, accessories and assemblies, Seller will provide replacement parts only.

Claims. Claims under this Limited Warranty must be made (i) within 30 (thirty) days after discovery and (ii) prior to expiration of the applicable warranty period. Claims shall be made in writing delivered to the Seller at the address provided in the first paragraph of this warranty. Buyer must allow Seller and Dealer, or their agents, a reasonable opportunity to inspect any Product claimed to be defective and shall, at Seller’s option, either (x) grant Seller and Dealer or their agents access to Buyer’s premises for the purpose of repairing or replacing the Product or (y) return of the Product to the Seller, f.o.b. Seller’s factory.

Original Buyer. This Limited Warranty is made to the original Buyer of the Product and is not assignable or transferable. This Limited Warranty shall not be altered or amended except in a written instrument signed by Buyer and Seller.

Not Warranted. Seller does not warrant against and is not responsible for, and no implied warranty shall be deemed to cover, damages that result directly or indirectly from: (i) the unauthorized modification or repair of the Product, (ii) damage due to misuse, neglect, accident, failure to provide necessary maintenance, or normal wear and tear of the Product, (iii) failure to follow Seller’s instructions for installation, operation or maintenance of the Product, (iv) use of the Product in a manner that is inconsistent with Seller’s guidelines or local building codes, (v) movement, settling, distortion, or collapse of the ground, or of improvements to which the Products are affixed, (vi) fire, flood, earthquake, elements of nature or acts of God, riots, civil disorder, war, or any other cause beyond the reasonable control of Seller, (vii) improper handling, storage, abuse, or neglect of the Product by Buyer or by any third party.

DISCLAIMERS. THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER REPRESENTATIONS AND WARRANTIES, EXPRESS OR IMPLIED, AND THE SELLER EXPRESSLY DISCLAIMS AND EXCLUDES ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PURPOSE. SELLER SHALL NOT BE SUBJECT TO ANY OTHER OBLIGATIONS OR LIABILITIES, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORIES OF LAW, WITH RESPECT TO THE PRODUCTS SOLD OR SER- VICES RENDERED BY THE SELLER, OR ANY UNDERTAKINGS, ACTS, OR OMISSIONS RELATING THERETO.

LIMITATION OF LIABILITY. IN NO EVENT WILL SELLER BE RESPONSIBLE FOR, OR LIABLE TO ANY- ONE FOR, SPECIAL, INDIRECT, COLLATERAL, PUNITIVE, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, EVEN IF SELLER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Such excluded damages include, but are not limited to, personal injury, damage to property, loss of goodwill, loss of profits, loss of use, cost of cover with any substitute product, interruption of business, or other similar indirect financial loss.

Product Descriptions. Any description of the Products, whether in writing or made orally by the Seller or the Seller's agents, including specifications, samples, models, bulletins, drawings, diagrams, engineering or similar materials used in connection with the Buyer's order, are for the sole purpose of identifying the Product and shall not be construed as an express warranty. Any suggestions by the Seller or the Seller's agents regarding the use, application, or suitability of the Product shall not be construed as an express warranty unless confirmed to be such in writing by the Seller.

Limited Warranty Void. This Limited Warranty shall be void in its entirety if:

a. The Product is modified in a manner not approved in writing by Seller; or

b. Buyer fails to maintain the Product in accordance with instructions contained in the Owner's Manual for the Product.

TABLE OF CONTENTS

PAGE

INTRODUCTION 1
DOOR SERIAL NUMBER(S) 1
HOW TO USE MANUAL 1
GENERAL ARRANGEMENT OF DOOR COMPONENTS 2
OPERATION 3
CONTROL PANEL 3
POWER DRIVE SYSTEM 3
MANUAL OPERATION 3
PHOTO EYES 4
DOOR RETENTION SYSTEM 4
DEFROST SYSTEM (OPTIONAL SYSTEM) 4
Heat Tape Circuit 5
DOOR PANEL SEALING SYSTEM 5
PLANNED MAINTENANCE 5
RECOMMENDED SCHEDULE 5
DAILY INSPECTION 5
Visual Damage Inspection 5
Door Retention Inspection 6
Door Operation Inspection 6
Photo Eye Inspection 7
QUARTERLY INSPECTION 7
Electrical Inspection 7
CONTROL PANEL, ENCODER, AND MOTOR WIRING 7
UPPER JUNCTION BOX 7
Mounting Hardware Inspection 8
Door Retention System 8
Drive Chain Inspection 9
Trolley Assembly Inspection 9
Lubrication 10
Electric Brake Inspection 10
Insulated Door Panel and Door Seal Inspection 11

Bi-Parting Door Center Seal Inspection 12
Cleaning Panels and Seals 12
Control Panel and Activator Inspection 12
Defrost System (Optional System) 12
Heat Tape Inspection 12
Wall Anchor Inspection 13
Chain Release Mechanism Inspection 13
ADJUSTMENTS 14
LIMIT SWITCHES 14
DRIVE CHAIN ADJUSTMENT 14
DOOR PANEL ALIGNMENT AND ADJUSTMENT 14
DOOR RETENTION/BULB SEAL ADJUSTMENT 15
Top/Head-Door Bulb Seal Adjustment 16
Door Retention/Stay Roller-Door Bulb Seal Adjustment 16
DOOR LEADING EDGE SEAL ADJUSTMENT BI-PARTING DOORS 17
DOOR PANEL FLOOR SWEEP SEAL ADJUSTMENT 17
PHOTO EYE ADJUSTMENT-ALIGNMENT 17
Testing Photo Eyes 18
Troubleshooting Photo Eyes 18
MOTOR BRAKE ADJUSTMENT 19
CHAIN RELEASE ASSEMBLY ALIGNMENT AND ADJUSTMENT 19
PARTS LIST 23
PARTS ORDERING INFORMATION 23
How to Order Parts 23
Substitute Parts 23
Return of Parts. 23
DOOR SERIAL NUMBER(S). 23
DOOR ASSEMBLY: BI-PARTING DOOR ASSEMBLY. 24
DOOR ASSEMBLY: SINGLE SLIDING DOOR ASSEMBLY 26
HEAD ASSEMBLY: BI-PARTING DOOR ASSEMBLY 28
HEAD ASSEMBLY: SINGLE SLIDING DOOR ASSEMBLY 30
DOOR PANEL ASSEMBLY: BI-PARTING DOOR ASSEMBLY 32
DOOR PANEL ASSEMBLY: SINGLE SLIDING DOOR ASSEMBLY 34
TURBO SLIDE MOTOR DRIVE ASSEMBLY 35

TURBO SLIDE CHAIN RELEASE ASSEMBLY 36

TURBO SLIDE RETURN IDLER ASSEMBLY 37

TURBO SLIDE DOOR SWIVEL HANGER ASSEMBLY 38

TURBO SLIDE DOOR TROLLEY ASSEMBLY 39

TURBO SLIDE STAY ROLLER ASSEMBLY 40

TURBL SLIDE UNIVERSAL CAM STAY ROLLER ASSEMBLY 41

INTRODUCTION

The information contained in this manual will allow you to operate and maintain your Rytec Turbo Slide™ Door in a manner which will ensure maximum life and trouble-free operation.

Any unauthorized changes in procedure, or failure to follow the steps as outlined in this manual, will automatically void our warranty. Any changes in the working parts, assemblies, or specifications as written that are not authorized by Rytec Corporation will also cancel our warranty. The responsibility for the successful operation and performance of this door is yours.

DO NOT OPERATE OR PERFORM MAINTENANCE ON THIS DOOR UNTIL YOU READ AND UNDERSTAND THE INSTRUCTIONS CONTAINED IN THIS MANUAL.

If you have any questions, contact your Rytec representative or call the Rytec Customer Support Department at 800-628-1909. *Always refer to the serial number of the door when calling your representative or Customer Support.* The serial number is located in several locations-see **DOOR SERIAL NUMBER** section.

A wiring schematic is provided with each individual door specifically covering the control panel and electrical components of that door. See the Rytec System 4 Drive & Control Installation & Owner's Manual.

HOW TO USE MANUAL

Throughout this manual, the following key words are used to alert the reader to potentially hazardous situations, or situations where additional information to successfully perform the procedure is presented:

⚠ WARNING

WARNING is used to indicate the potential for personal injury, if the procedure is not performed as described.

⚠ CAUTION

CAUTION is used to indicate the potential for damage to the product or property damage, if the procedure is not followed as described.

IMPORTANT:* *IMPORTANT is used to relay information CRITICAL to the successful completion of the procedure.

NOTE: NOTE is used to provide additional information to aid in the performance of the procedure or operation of the door, but not necessarily safety related.

DOOR SERIAL NUMBER

Each RYTEC door is uniquely identified with a serial number. You will need this when contacting RYTEC for any service. To obtain your door's DOOR SERIAL NUMBER, there are several typical locations where the ***DOOR SERIAL NUMBER*** can be found; on the cover of the RYTEC System 4 control panel, the front side outside edge of each door panel at approximately eye level, and the drive motor/head assembly. (See Figure 1)

IMPORTANT: When installing multiple doors of the same model, verify and match the serial number of the control panel with those on all the other components of each door assembly. Failure to do this will void the manufacturer's warranty and may lead to catastrophic failure and/or personal injury!

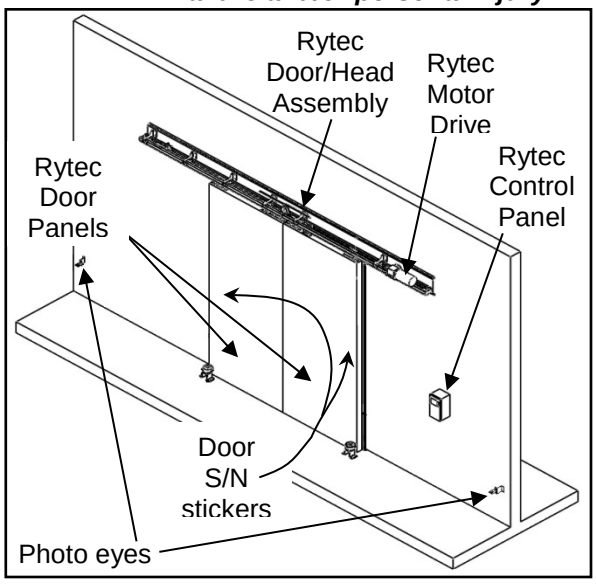


Figure 1

GENERAL ARRANGEMENT OF DOOR COMPONENTS

Figure 2 - Figure 5 show the location of the major components of the door and the general placement of the associated control sub-assemblies for a typical installation.

These illustrations are provided to you for informational purposes only. They should not be solely relied upon for the operation and maintenance of your door and its sub-assemblies.

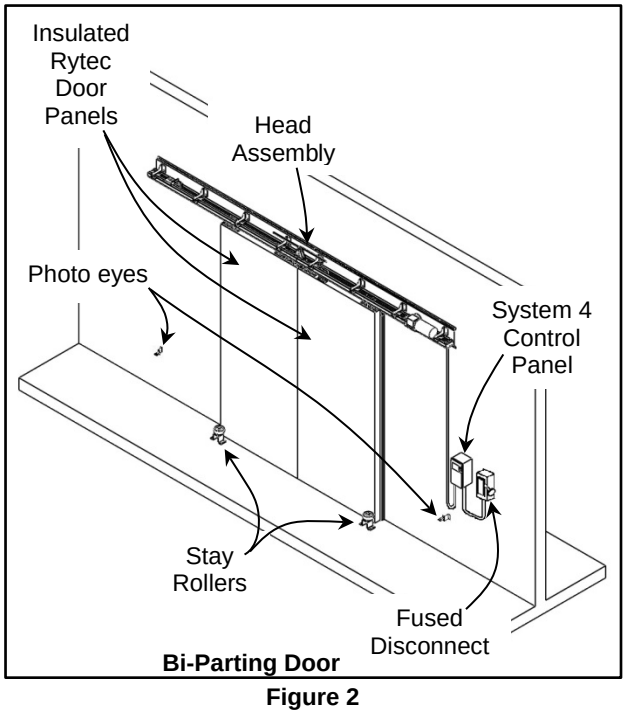


Figure 2

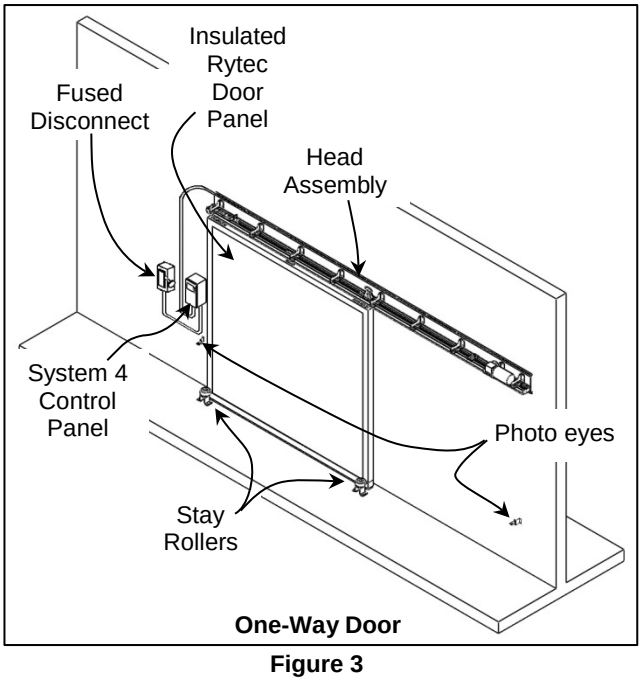


Figure 3

NOTE: Figure 2 and Figure 3 show the front side of the door. Left and right are determined when facing/viewing the front side of the door. This is the side that the door assembly is mounted on/the same side the head assembly is on. All views shown on this page are showing the "Front" side of the door assembly.

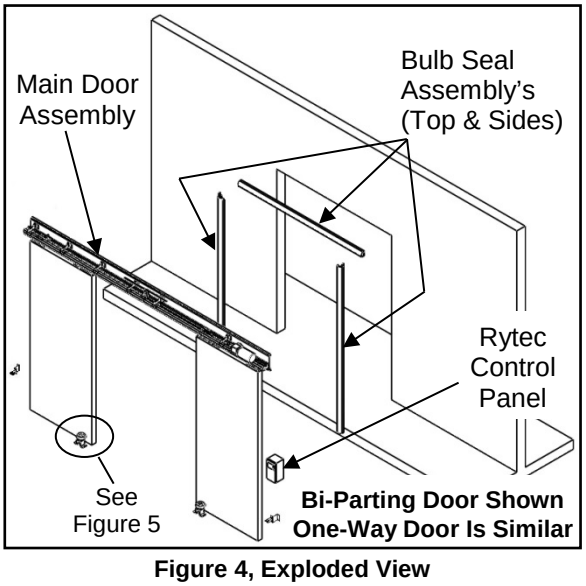


Figure 4, Exploded View

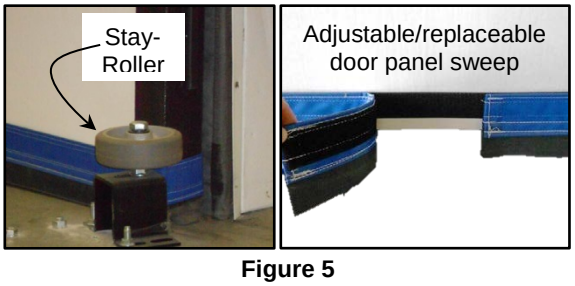


Figure 5

OPERATION

CONTROL PANEL

The Turbo Slide door is equipped with a Rytec System 4 Drive & Control. It is a solid-state, microprocessor-based, high-speed door control system designed exclusively to operate Rytec high performance doors. It provides connections for multiple activators, close delay timers, status indicators, as well as a means for programming and controlling the door and displays status and alarm messages. All command functions to operate the drive and control system are software controlled. For information on control panel operation, see the Rytec System 4 Drive & Control Installation & Owner's Manual. (See Figure 6)

POWER DRIVE SYSTEM

The power drive system for the Turbo Slide door consists of a motor, a gearbox, tensioners, and an electric brake. The power drive system can be mounted on either side of the head assembly. The location of the drive system is determined at the time the door is ordered from the manufacturer. Additional drive components include idler gear assemblies, a drive chain, chain reverser assembly (Bi-Parting Door), and trolleys. (See Figure 6)

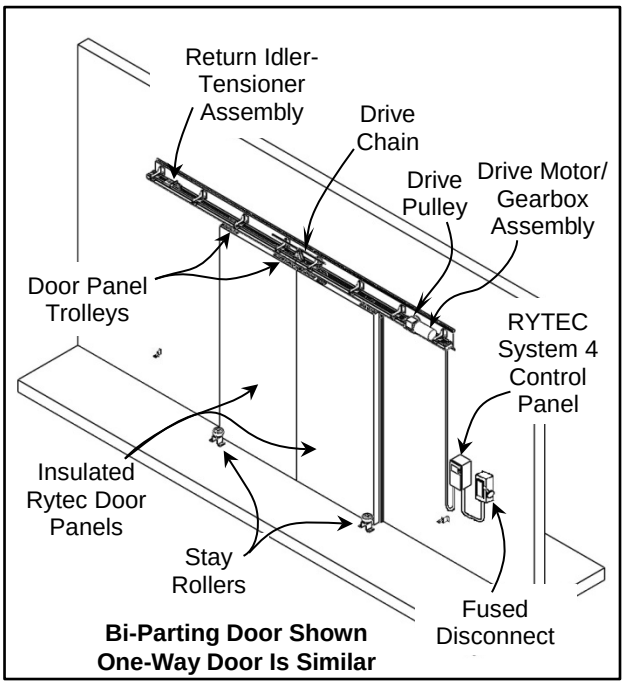


Figure 6

One end of the drive chain loop is connected to the drive gear on the motor. The other end is connected to the return idler-tensioner assembly that includes an adjustable gear used to tension the drive chain.

The door panel(s) are connected to the drive chain via the chain release mechanism and hang from trolleys. The trolleys roll along tracks in the head assembly to move the door panel(s) back and forth to open and close the door.

On Bi-Parting Door systems, the drive chain moves the door panels/trolleys toward each other to close the door or away from each other to open the door by passing through the chain reverser assembly in the center of the door.

MANUAL OPERATION

When the motor is not operating the door, during a power loss, or when routine maintenance calls for power to be disconnected, the motor is automatically locked in place by an electric brake on the motor assembly that, in turn, locks the door.

An electric brake is used to halt the door if power to the door is shut off for any reason. A manual door chain drive release assembly connected to a rotating handle (via cable) is provided to release the door from the drive chain allowing the door to be manually opened and/or closed. During a power failure, when routine maintenance calls for power to be disconnected, or when needing to get through the door from the rear/non-activated side, this manual release handle can be used. (See Figures 7 and 8)

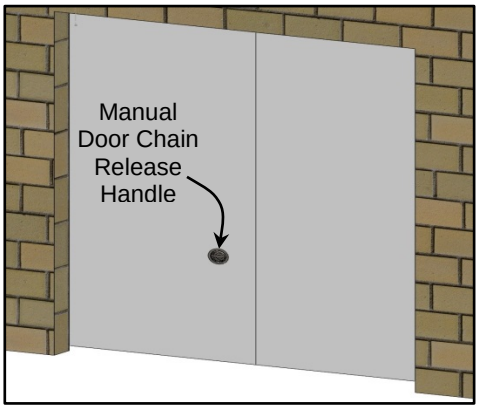


Figure 7

Figure 8

OPERATION—PHOTO EYES/DOOR RETENTION/DEFROST

WARNING

The disconnect must be in the OFF position and properly locked and tagged before performing the following procedure.

To manually open the door from the front, safety protocols must be followed first. Once the drive system has been de-energized and locked out, the Chain Release Assembly lever must be pulled down to disengage the door panel(s) from the drive chain. Then the door panel(s) can be moved freely. To re-engage the door panel(s), simply move the panel(s) back to where the Chain Release Assembly locks back into place on the drive chain. (See Figure 9)

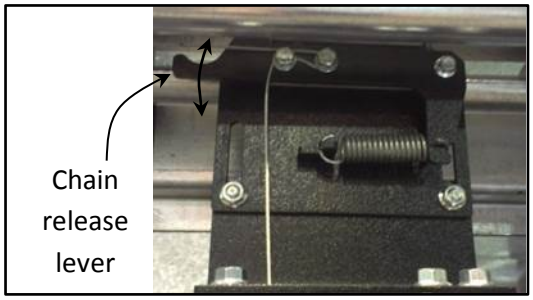


Figure 9

PHOTO EYES

This safety system consists of a single set of photo eyes. Each set of photo eyes consists of a transmitter module and a receiver module. Each module is mounted in a heavy-duty bracket installed on the front side of the door. (See Figure 10 & 11)

The purpose of these photo eyes is to hold the door open or, if the door is closing, reverse the direction of the door if a person or object crosses the path of the photo eye beam. The door will remain parked in the open position until the beam is restored (object removed).

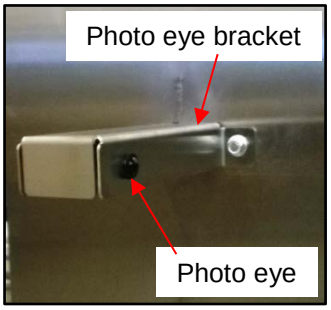


Figure 10

IMPORTANT: The photo eyes are not intended to be used as a door activator and will not open the door when it is closed.

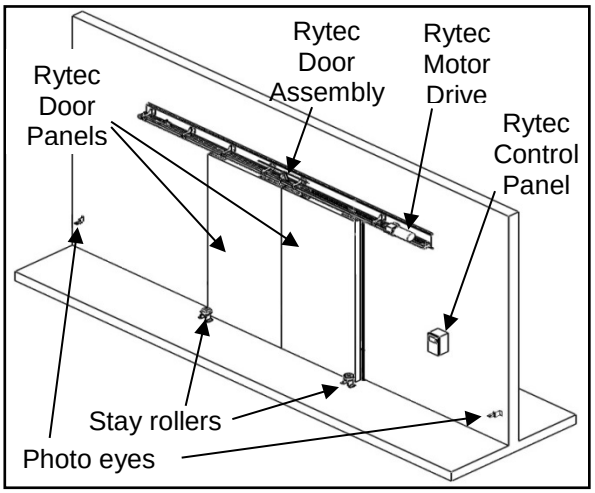


Figure 11

After the object breaking the beam of light is removed:

- If the door was opened by a non-automatic activator (push button, pull cord, radio control, etc.), the door will remain open until it is closed by a non-automatic activator.
- If the door was opened by an automatic activator (floor loop, motion detector, etc.), the door will close automatically.

The photo eyes are powered and properly aligned when the power indicator on each eye is lit; amber on the receiver, and green on the transmitter. When the light beam is interrupted, the alignment indicator on the receiver will go out but the transmitter will remain green. Restoring the beam relights the alignment indicator on the receiver.

DOOR PANEL RETENTION SYSTEM

The door retention system is designed to secure the panels along the floor during a negative pressure situation. It is also designed to guide the door panel when opening/closing. The retention system consists of stay roller assemblies for each door and are mounted in front of each door panel. With the door closed a properly positioned stay roller presses the door slightly against the bulb seal, depressing it ¼-½ inch. (See Figures 11, 15, and/or 16)

DEFROST SYSTEM (OPTIONAL SYSTEM)

The optional defrost system is designed to help prevent frost build-up in/on the door frame bulb seal assembly and door panel surfaces, and keep the seals flexible and pliable in cold temperature conditions to attain the best seal. A door configured with a defrost system includes a heat tape circuit and heat tape strips which are mounted in each bulb seal section (sides and top).

Heat Tape Circuit

The heat tape circuit is designed to help prevent frost from building up along the bulb seal sections of the door assembly that create the seal w/ the door panel. The heat tape also helps keep the rubber seals pliable in a cold environment to maintain a tight barrier between the door panel and the wall.

The heat tape circuit consists of two self-regulating heat tapes (1 Long and 1 Short) that are installed around the door opening. The heat tapes pass through the door bulb seals that line the door jamb and header surrounding the door opening. Each tape runs along the entire vertical length of its respective jamb frame and across the header frame. From a hole in the bulb seal foam end block, each tape is routed to a junction box located below the head assembly. (See Figure 12)

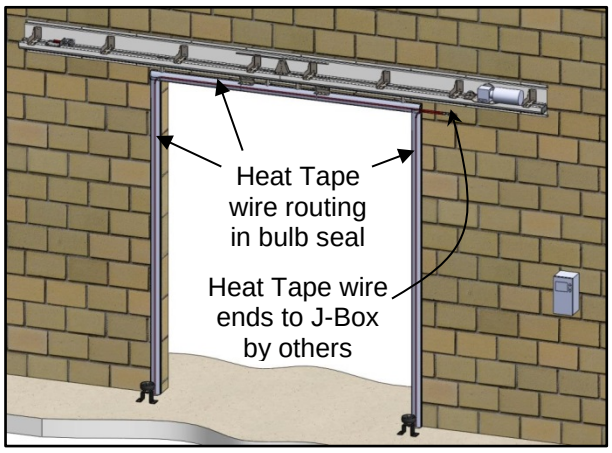


Figure 12

When this self-regulating circuit is powered up, the exposed lengths of heat tape running from the header seal to the junction box will be warm to the touch.

DOOR PANEL SEALING SYSTEM

The door is equipped with a sealing system which provides insulation and prevents air infiltration between the 2 sides of the wall. It consists of 2 or 3 separate systems working together to provide the seal depending on the door type. The 1st is the door panel(s) mating and pressing up against a bulb seal assembly that is mounted on the door wall sides and top jamb. The 2nd is the bottom door panel sweep seals that are mounted to each door panel and form a seal between the floor and panel. The 3rd is the leading edge mating seals that are mounted to each Bi-Parting panel leading edge and form a seal between the panels when the door is closed. To adjust the door panel seals, follow the procedures in the Adjustments section.

PLANNED MAINTENANCE

RECOMMENDED SCHEDULE

NOTE: The following maintenance schedule is recommended. (See Table 1)

	Daily	Quarterly
Visual Damage Inspection		
Door Retention Inspection		
Door Operation Inspection		
Photo Eye Inspection		
Electrical Inspection		
Mounting Hardware Inspection		
Door Retention Inspection		
Drive Chain Inspection		
Trolley Assembly Inspection		
Lubrication		
Electric Brake Inspection		
Insulated Door Panel and Door Seal Inspection		
Cleaning Panels and Seals		
Control Panel and Activator Inspection		
Heat Tape Inspection (Optional Defrost System)		
Wall Anchor Inspection		
Chain Release Mechanism		

Table 1

DAILY INSPECTION

Visual Damage Inspection

Visually inspect the door components such as the head assembly, side panels, door panels, and door seals. (See Figure 13 and Figure 14)

- **Head Assembly:** Inspect the head for dents, damage, or missing/loose items that may prevent the door from operating properly.
- **Insulated Door Panels:** Ensure the insulated door panels are clean. Inspect them for holes, tears, and worn areas. Clean, repair, or replace the panels as required. They can be cleaned with general cleaning or caustic wash down solution. A repair kit is available for rips or tears to the thermoplastic exoskeleton.
- **Door Seals:** Inspect all seals for holes, tears, and worn areas. Ensure the seals form a tight barrier between the door, floor, and wall and are ice free. Repair or replace the seals as required.
- **Door Retainers:** Inspect all retainers/stay rollers for damage, wear, and proper function. Reposition or replace the retainers as required.

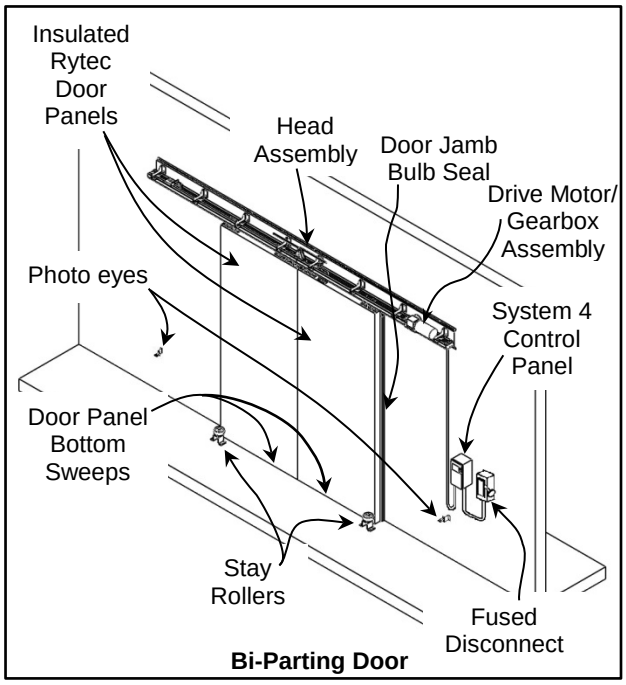


Figure 13

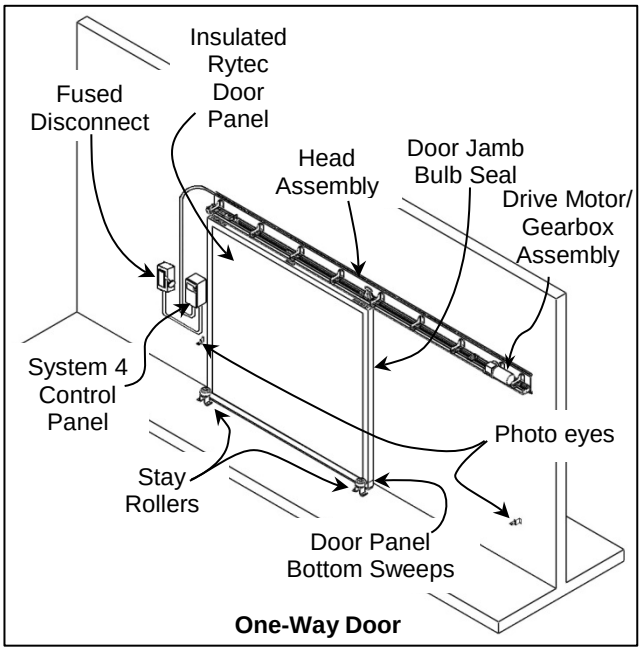


Figure 14

Door Retention Inspection

Move the door to the fully closed position and then verify that each door panel is properly positioned to the respective door panel. Excessive pressure on the door panel from the stay rollers can cause door malfunction and premature wear of the gasket system while not enough allows air infiltration, increasing energy use.

Refer to “DOOR RETENTION SYSTEM” on page 4 for additional information on the retention system. See “DOOR RETENTION/ STAY ROLLER-DOOR BULB SEAL ADJUSTMENT” on page 15 for adjustment procedures. (See Figures 15 and 16)

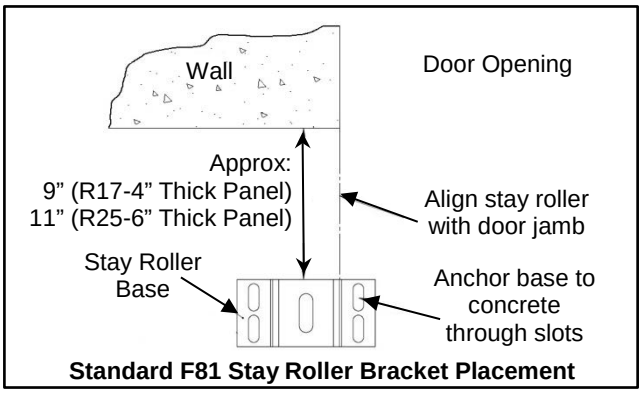


Figure 15

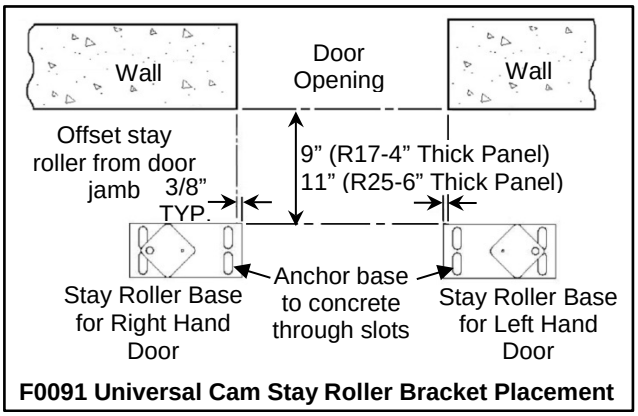


Figure 16

Door Operation Inspection

Run the door through four or five full open/close cycles to make sure it is operating smoothly and efficiently. There should be no binding or unusual noises as the door travels across the head assembly. Also, as the door opens and closes, verify that the panels remain in contact with the door retention system and seal properly.

IMPORTANT: DO NOT continue to operate the door if it is not running properly. This could further complicate any problem.

Refer to “OPERATION” on page 3 for additional information on control panel operation.

Photo Eye Inspection

Inspect the photo eye mounting brackets and photo eyes for visible damage or misalignment. Verify that the photo eyes operate as described below:

⚠ WARNING

Personnel and objects should not be in the path of the door when the following inspection is performed. If the photo eyes are not working properly, the door could strike an individual or object in its path.

1. Open the door to the fully open position by pressing the open (▲) key located on the Rytec System 4 Drive & Control Panel.
2. Place an object between the photo eyes to interrupt the light beam between the photo eye transmitter and receiver.
3. Press the close (▼) key on the Rytec System 4 Drive & Control Panel. The door should not move or close at all.
4. Remove the object and cycle the door to verify that the front set of eyes is working properly.
5. If the photo eyes on the door front are not working properly, the photo eyes may be dirty. Clean the lens of each eye as required, using window cleaner and a clean, soft cloth. If this does not resolve the problem, see “PHOTO EYE ADJUSTMENT-ALIGNMENT” on page 17 for adjustment procedures.

Refer to “PHOTO EYES” on page 4 for additional information on how the photo eyes operate.

QUARTERLY INSPECTION

Electrical Inspection

CONTROL PANEL, ENCODER, AND MOTOR WIRING

⚠ WARNING

The disconnect must be in the OFF position and properly locked and tagged before performing the following procedure.

1. Inspect electrical connections to the power drive assembly and encoder assembly.
2. Inspect control panel wiring. See Rytec System 4 Drive & Control Installation & Owner’s Manual for control panel inspection procedure.

UPPER JUNCTION BOX

NOTE: The upper junction box is an optional item that may have been installed during the installation of your door. If an upper junction box was installed, it was most likely mounted on the wall, just above the control panel. If your door has an upper junction box, it must be inspected.

1. Move the door to the fully closed position.
2. Remove power to the control panel by placing the fused disconnect in the OFF position.

⚠ WARNING

The disconnect must be in the OFF position and properly locked and tagged before performing the following procedure.

3. Remove the cover from the upper junction box located above the door opening. (See Figure 17)
4. Inspect all electrical connections in the upper junction box. All connections must be tightly secured.
5. Check for pinched, kinked, cracked, or damaged wires and insulation. Repair or replace wires as needed.
6. If the door is configured with the optional defrost system (heat tapes), inspect all associated electrical wiring and connections. Repair or replace wires as needed.

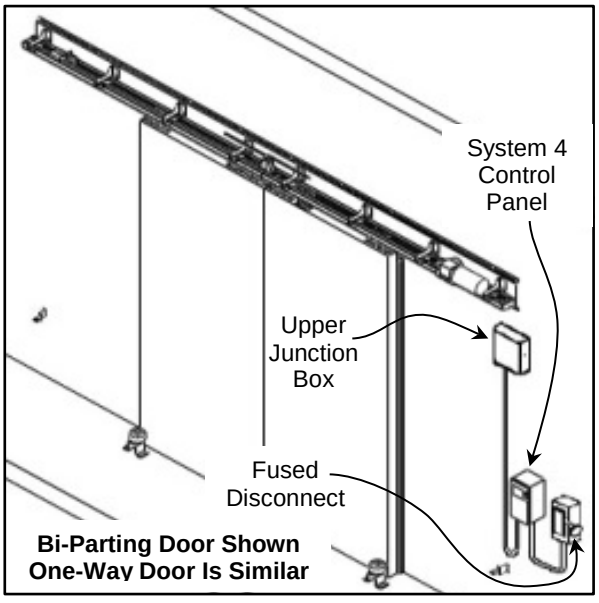


Figure 17

7. Replace the cover.
8. Apply power to the door.

Mounting Hardware Inspection

1. Move the door to the fully closed position.
2. Remove power to the control panel by placing the fused disconnect in the OFF position.

⚠ WARNING

The disconnect must be in the OFF position and properly locked and tagged before performing the following procedure.

3. Check that the mounting hardware securing the door header assembly and photo eye mounting brackets to the wall are in place and tight. Tighten and replace any loose or missing hardware, such as wall fasteners, floor anchors, nuts, bolts, and screws. (See Figure 18)

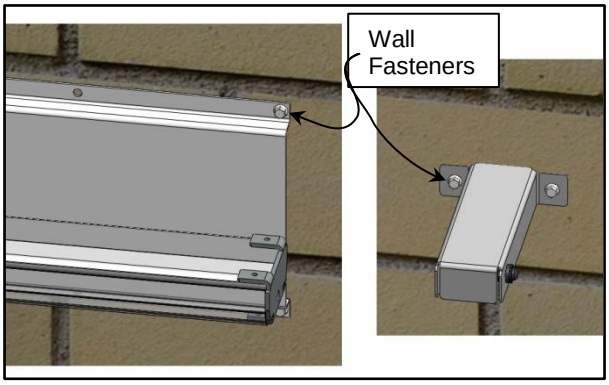


Figure 18

4. Check that all the self-tapping screws used to secure the bulb seals are tight and in place. Tighten and replace any loose or missing hardware. (See Figure 19)
5. Check that all mounting hardware, such as nuts, bolts, and screws, etc., throughout the head assembly, drive motor gearbox assembly, idler assembly, trolleys, mounting brackets, etc. are secure and tight. Tighten and replace any loose or missing hardware as necessary. (See Figure 20)

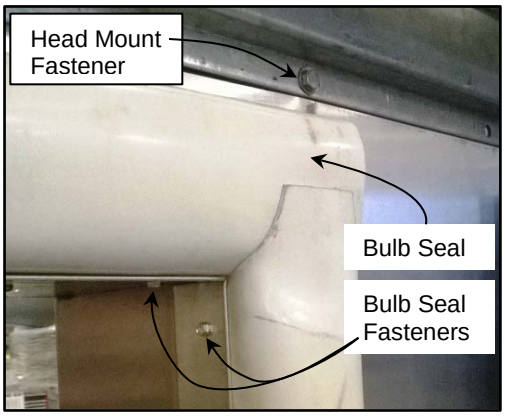


Figure 19

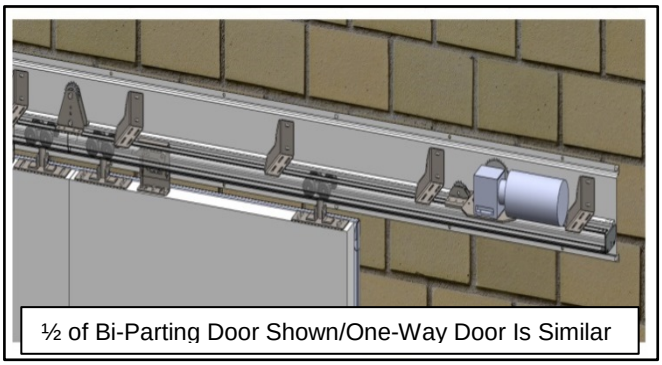


Figure 20

Door Retention Inspection

1. Check all mounting hardware associated with the stay roller door retention system. Check that it is properly placed. Impact from forklifts, hand trucks, or other machinery can degrade the ability of the door system to seal.
2. Tighten and replace any loose or missing hardware as necessary. (See Figure 21.)

Figure 21

3. Place the door in the fully closed position.
4. With the stay roller resting on the door panel closure wedge, the bulb seal should be depressed $^{1}/_{4}$-$^{1}/_{2}$ inch.
5. As the door opens, the gap at the door bottom will increase but stay relatively constant at the top. With the door panel held against the stay roller, the gap along the entire remaining length of the bulb seal should remain relatively constant but increase slightly more as the door opens. The trolley tracks in the head assembly are designed to move the door panel up and away from the bulb seal as it opens.
6. If the door does not meet the above requirements, refer to “DOOR RETENTION/ STAY ROLLER-DOOR BULB SEAL ADJUSTMENT” on page 15.

Drive Chain Inspection

1. Move the door to the fully closed position.
2. Remove power to the control panel by placing the fused disconnect in the OFF position.

⚠ WARNING

The disconnect must be in the OFF position and properly locked and tagged before performing the following procedure.

⚠ CAUTION

The drive chain, motor drive gear, and all idler gears must be lubricated according to the Drive Chain Lubrication section on page 10.

3. Gain access to head assembly and drive chain.
4. Inspect the drive chain. Check that the chain is routed properly through the head assembly. The chain should not be cracked, worn, too loose, or damaged. Also check for any damaged or missing links/connectors. Replace any drive chain parts as necessary. (See Figure 22 and Figure 23.)

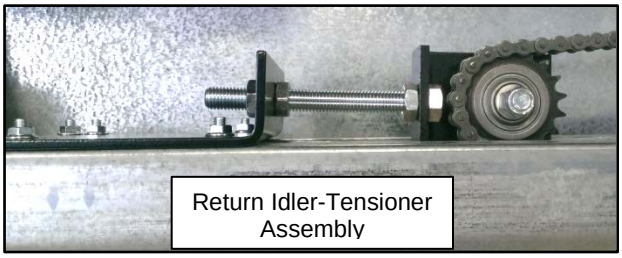


Figure 22

5. With the door in the fully closed position, check the tension of the drive chain by measuring the offset of the chain tensioner banana guide. A properly tensioned chain will have a slight amount of deflection at its midpoint and the deflection of the banana guide when the drive chain is installed on it must be ¼ inch. The chain should be taught but not tight. (See Figure 24)
6. Inspect the hardware that secures the drive motor, drive gear, idlers, and tensioners to the head assembly. Tighten or replace any loose, missing, or damaged hardware.

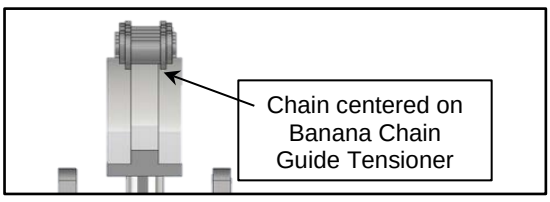


Figure 23

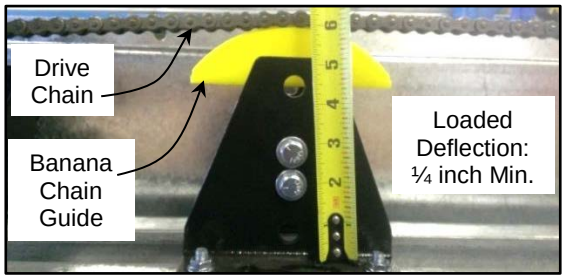


Figure 24

IMPORTANT: Excessive chain tension can result in accelerated chain wear. Inadequate tension can cause the drive pulley to jump a tooth on the chain, jump off completely, and/or excessive chain wear, and may result in possible damage to the chain and/or door.

To adjust the tension of the drive belt, see "DRIVE CHAIN ADJUSTMENT" on page 14.

Trolley Assembly Inspection

The trolley assembly is installed on the head assembly and tracks preset for each specific door assembly at the factory. No adjustment is required.

1. Move the door to the fully closed position. Then remove power to the control panel by placing the fused disconnect in the OFF position.

⚠ WARNING

The disconnect must be in the OFF position and properly locked and tagged before performing the following procedure.

2. Inspect the door swivel hangers securing the door panel(s) to each trolley for loose or missing hardware. The hardware clamping the plate to the door must be in place and tightly secured. Replace/tighten hardware as required. (See Figure 25)

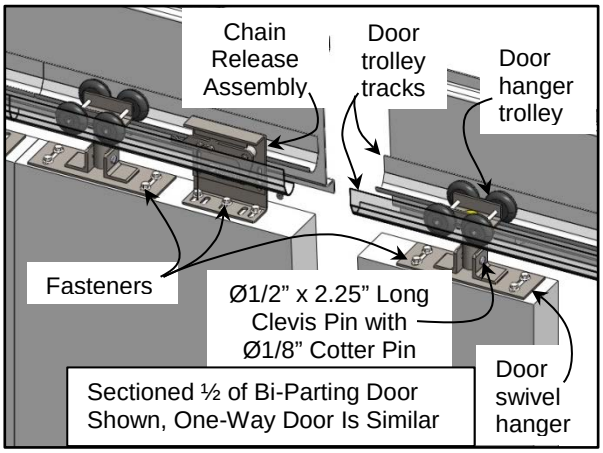


Figure 25

3. Inspect the door hanger trolley assemblies for any loose or missing hardware. Tighten or replace hardware as required. (See Figure 26)

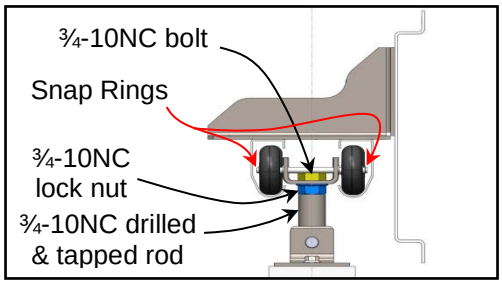


Figure 26

CAUTION

Do not use a petroleum-based solvent or abrasive cleaner to clean the rollers or track they travel along, otherwise, damage/ premature wear to the rollers could result.

4. Clean all dirt and grit from the track using an all-purpose household cleaner and a clean, soft cloth.
   Also clean all dirt and grit from the surface and sides of each track roller to ensure they travel smoothly. There are four roller wheels on the trolley assembly at each end of each door panel.

NOTE: When cleaning the track and rollers, it may be necessary for you to reposition the door to gain access to the entire surface of the track and all sides of each roller.

5. While manually moving the door back and forth along the track, observe the bearings as each roller travels along the track. The bearings should allow the rollers to travel smoothly and effortlessly without noise or binding.

6. If the trolley rollers are making noise or do not move freely, inspect each roller assembly after removing them from the head assembly. Be sure the snap rings securing the rollers are all in place. Verify that each wheel on the rollers are not cracked, worn, or damaged. Clean or replace roller assemblies as necessary.

Lubrication

1. Move the door to the fully closed position. Then remove power to the control panel by placing the fused disconnect in the OFF position.

WARNING

The disconnect must be in the OFF position and properly locked and tagged before performing the following procedure.

2. Lubricate the following items as required:

   a. **Gearbox:** The motor gearbox is filled with synthetic oil, which does not need to be changed but should be checked regularly for proper oil level. The level can be checked at the plug located on the lower section of the gearbox.

   Recommended oil for refill is as follows:

   - Mobil SHC 630 Synthetic Gear Oil
   - Fill the gearbox by removing the breather toward the top of the gearbox and add oil through the exposed hole. Add oil until it starts draining from the check plug hole. (See Figure 27)

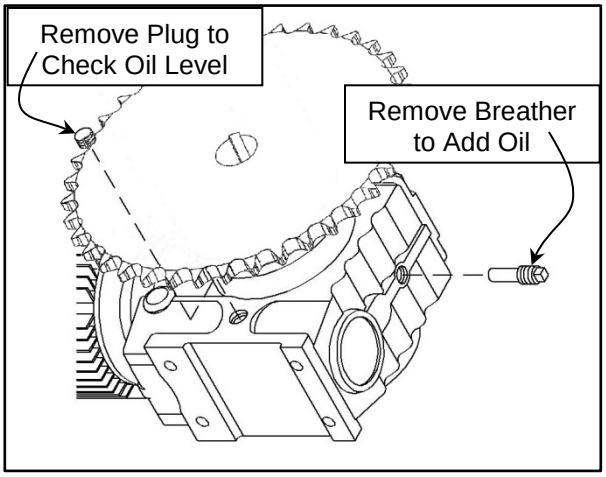


Figure 27

   b. **Drive Chain:** RYTEC recommends lubrication of the drive chain, drive chain gear, idler gear(s), and sprockets with high quality heavy lubricating chain oil every six months. RYTEC also recommends that the chain be visually inspected for wear and proper tension at the same interval.

Electric Brake Inspection

The motor brake assembly is designed to stop the door panel travel at the locations indicated in the limit inspection section. Check that the brake is operating properly. If the limits are set properly and the door drifts past the set limits or isn't holding the door securely, etc., adjust the brake.

If adjustment to the motor brake is necessary, see "MOTOR BRAKE ADJUSTMENT" on page 19.

Insulated Door Panel and Door Seal Inspection

Door panels and bulb seals should be regularly checked for ice buildup, damage, and wear. Ice buildup in and around the bulb seal gaskets and door path can impede the door seal and performance, cause erratic operation, potentially damage mechanical systems, allow air infiltration, and increase energy use. Bulb seals should last 36-48 months with proper stay roller pressure/adjustment. A repair kit is available for rips or tears to the thermoplastic exoskeleton of the door panel.

1. Move the door to the fully closed position.

IMPORTANT: Operate the door with the drive motor to ensure the panels and seals are positioned and compressed as in normal use.

2. Remove power to the control panel by placing the fused disconnect in the OFF position.

⚠ WARNING

The disconnect must be in the OFF position and properly locked and tagged before performing the following procedure.

3. Release the door panel(s) from the drive chain with the chain release assembly to allow manual movement of the panel(s) for inspection.

4. Inspect the hardware used to attach each panel to its respective trolleys and both sides of each door panel for loose, worn, missing, and damaged items.

   Replace or repair any missing, worn, or damaged hardware, components, or seals. (See Figure 25, 26, and 28)

5. Inspect the end seal around the perimeter of each panel. The end seals must be securely adhered to the panels, not cracked or damaged. Repair as necessary. (See Figure 28)

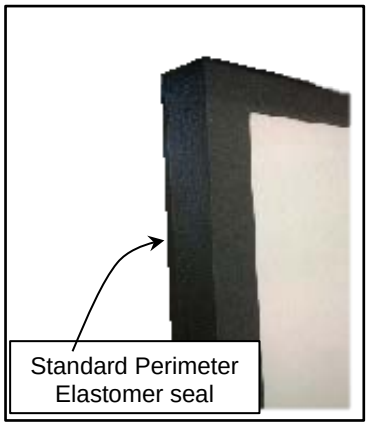


Figure 28

6. Inspect the floor sweep along the bottom edge of each door panel. The cover should not be frayed, torn, or loose. Replace or adjust as necessary.

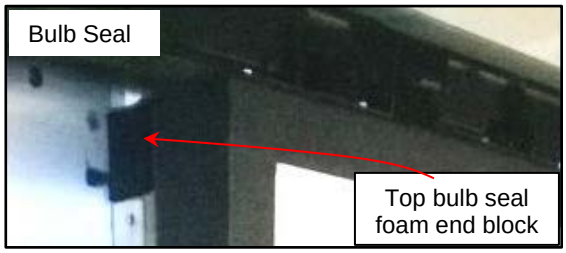


Figure 29

7. Make sure a short foam block is installed in the end of each top panel bulb seal. Replace any block if it's missing, torn, or damaged. (See Figure 29)

8. Manually move the door to the fully open position.

9. Inspect the bulb seals along the back side of each panel. The seals should not be worn, torn or damaged. Replace as necessary. (See Figure 30)

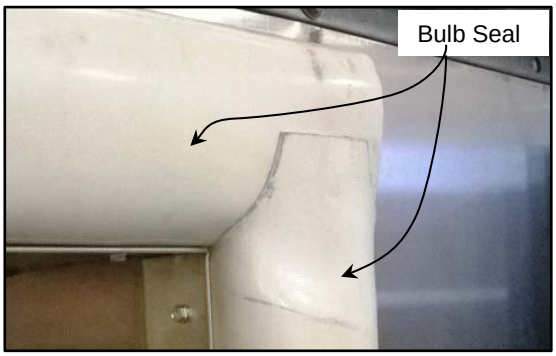


Figure 30

10. Check the floor sweep seal along the bottom edge of each panel. Because there is a sweep around each panel face, you will need to use your fingers to verify the seal along the floor on both sides of the panel. The seal below the door panel should be a full seal with the floor and no gaps along the entire width of the panel.

    Floor sweep seals are normal wear items and will need to be replaced approximately every two years, depending on usage and local environment. Replace as necessary.

    If an adjustment to any floor sweep seal is necessary, see "DOOR PANEL FLOOR SWEEP SEAL ADJUSTMENT" on page 17 for adjustment procedures.

11. Verify that there is a tight seal between the bulb seals and the back side of each door panel. The door panels should depress the bulb seals between ¼" – ½".

If adjustment is necessary, see “DOOR PANEL ALIGNMENT AND ADJUSTMENT” on page 14 and “DOOR RETENTION/BULB SEAL ADJUSTMENT” on page 15.

12. Reconnect the door panel(s) to the drive chain.
13. Apply power and move the door to the fully closed position.

IMPORTANT: Operate and cycle the door with the drive motor to ensure the panels and seals are positioned and compressed as in normal use.

14. Confirm that the door is operating properly.

BI-PARTING DOOR CENTER SEAL INSPECTION

1. Move the door to the fully closed position.
2. Remove power to the control panel by placing the fused disconnect in the OFF position.

WARNING

The disconnect must be in the OFF position and properly locked and tagged before performing the following procedure.

3. Inspect the Bi-Parting door panel leading edge seals. It should form a seal tight barrier along the entire center vertical edge of the panels. They are normal wear items and will need to be replaced when worn to insure proper door seal depending on usage and local environment. Replace or adjust as necessary. (See Figure 31)

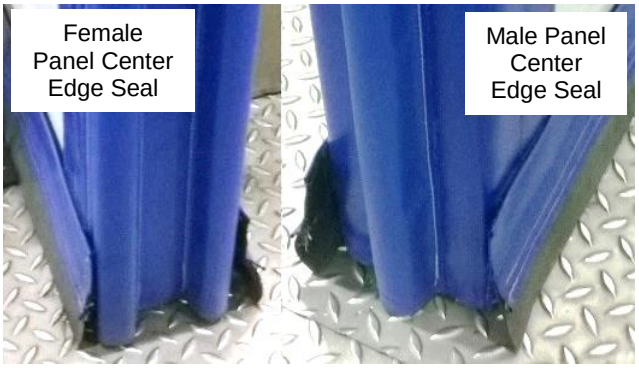


Figure 31

4. Apply power to the control panel by placing the fused disconnect in the ON position.
5. Restore power to the door and return to service.

If adjustment to the Bi-Parting panel leading edge seal is necessary see “DOOR LEADING EDGE SEAL ADJUSTMENT BI-PARTING DOORS” on page 17.

Cleaning Panels and Seals

CAUTION

Do not use an abrasive cleaner or a petroleum-based solvent to clean the rollers or the track they travel along, otherwise, damage to the rollers could result.

1. Inspect the panels and seals for dirt and grime. Clean as required using an all-purpose household cleaner and a clean, soft cloth. Then thoroughly rinse the panels and seals with fresh, clean water.
2. Once the door is dry, apply power to the door.
3. Operate the door several times to verify that it works properly.

Control Panel and Activator Inspection

1. Ensure all associated warning and safety labels are intact, clean, and easy to read. Replace as needed.
2. Check the control panel for proper operation. Make any adjustments or repairs as necessary.
3. Operate the door five or six complete cycles with each activator installed and used with the door. A typical activator may be a floor loop, pull cord, push button, motion detector, radio control, etc.

   The open cycle is controlled by an activator. The close cycle is controlled by an activator or by a programmable timer internal to the control panel.

   If a repair or adjustment is necessary, refer to the operating instructions provided by the manufacturer of that particular activator. To set the automatic timer, refer to the Rytec System 4 Drive & Control Installation & Owner’s Manual.

Defrost System (Optional System)

HEAT TAPE INSPECTION

1. Remove power to the control panel by placing the fused disconnect in the OFF position.

WARNING

The disconnect must be in the OFF position and properly locked and tagged before performing the following procedure.

NOTE: The bi-parting door is shown. The one-way door is the same.

⚠ CAUTION

Ensure that the heat tape is not routed near any moving parts. Also, verify that each cable is not kinked or twisted and that all slack is pulled from the entire length of the cables.

2. Disconnect the power supply from the heat tape.

⚠ WARNING

The electric power must be disconnected and properly locked and tagged before performing the following procedure.

3. Inspect the heat tape that is routed from the frame header to the junction box. The heat tape must not be pinched, kinked, or damaged. (See Figure 32)

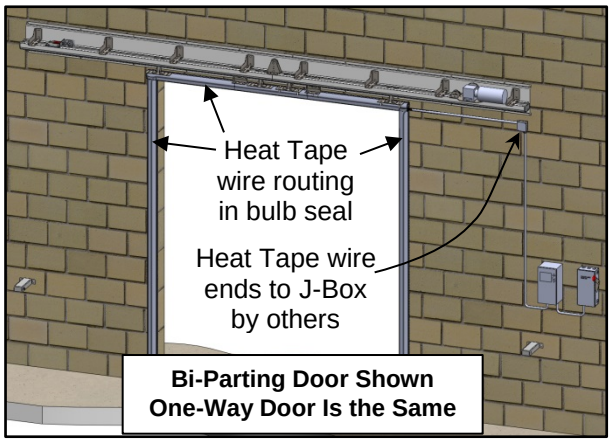


Figure 32

4. Apply power to the heat tape. control panel.

⚠ WARNING

Prevent the door from being operated while performing the following procedure.

5. Verify that the heat tapes are powered up and operating. The heat tape should be warm to the touch.

6. Apply power to the control panel by placing the fused disconnect in the ON position.

Wall Anchor Inspection

1. Turn off power to door.

⚠ WARNING

The disconnect must be in the OFF position and properly locked and tagged before performing the following procedure.

2. Gain access to wall anchors.

3. Inspect for loose or worn wall anchor(s).

4. Tighten, repair, or replace any wall anchors as needed.

5. Restore power to the door and return to service.

1. Chain Release Mechanism Inspection

The Chain Release Mechanism Assembly allows door panel detachment/reattachment to the drive chain. When detached from the drive chain door panel(s) may be manually moved. The Assembly must be properly aligned with the chain for proper operation or wear, damage, and/or other performance problems will occur.

1. Turn off power to door.

⚠ WARNING

The disconnect must be in the OFF position and properly locked and tagged before performing the following procedure.

2. Gain access to head assembly and drive chain.

3. After the door panel(s) has been properly aligned and secured to the head assembly via the swivel hangers and the bulb seal compression is properly set, check that the chain release mechanism assembly is aligned with the drive chain between the idler sprockets and the drive.

4. Check the height of the chain release. It should operate so the chain runs level and is not being lifted or pulled down by it.

5. Manual Chain Release Cable must be properly attached to the pivot arm and door panel handle. Check for damaged, worn, missing, or loose parts. Tighten, repair, or replace part(s) as needed.

6. Restore power to the door and return to service.

If adjustment is necessary, see CHAIN RELEASE MECHANISM ADJUSTMENT" on page 19.

ADJUSTMENTS

LIMIT SWITCHES

The fully open and fully closed limit switches are electronically controlled and adjusted through the control panel. To adjust the door limit settings, see the Rytec System 4 Drive & Control Installation & Owner's Manual.

DRIVE CHAIN ADJUSTMENT

Drive chain tension is controlled by the position of the tension/return idler pulley. The position of the tension/return idler pulley is controlled by one pair of tension adjusters.

1. To adjust the tension of the drive belt, first move the door to the fully closed position.
2. Turn off the power to the door.

⚠ WARNING

The disconnect must be in the OFF position and properly locked and tagged before performing the following procedure.

IMPORTANT: When adjusting the return idler-tensioner assembly, confirm that the idler gear is centered between the roller tracks. (See Figure 33)

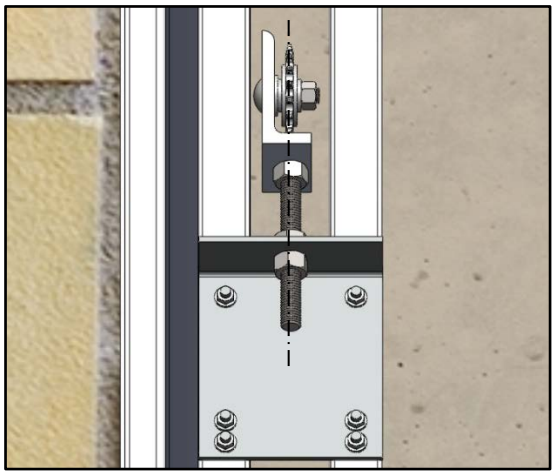


Figure 33

3. Initially the tension of the chain is set at the factory. Tighten or loosen the chain drive by adjusting the bolt in the return idler-tensioner assembly. Typically this needs to be done about every 250,000 cycles, but this will vary with the door size, environmental conditions, etc. The tensioner should have a ¾" gap between the housing and bottom of the "banana" chain glide. (See Figures 34 and 35)

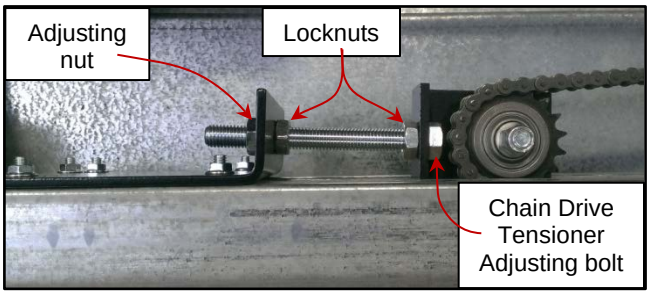


Figure 34

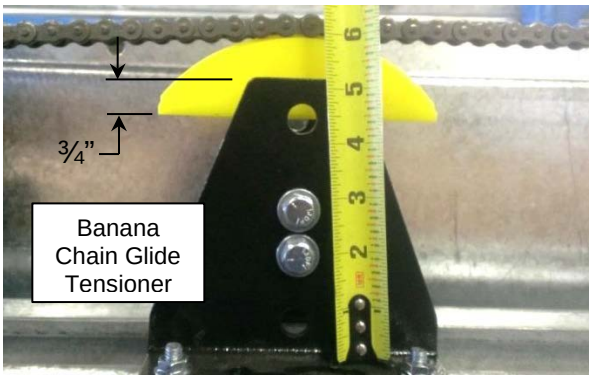


Figure 35

4. Once the chain tension is set, verify that the return idler-tensioner assembly is securely bolted in place. (See Figure 34)
5. If the chain tension requires further adjustment, reposition the return idler-tensioner assembly (tension pulley) accordingly.
6. Restore power to the door and return to service.

⚠ CAUTION

For the door to operate at its maximum efficiency, proper chain tension should be maintained. If the drive chain is too loose the chain may jump off the sprocket or wear out from rubbing on other parts. If the chain drive is too tight it may cause premature wear of the chain and/or bearings.

DOOR PANEL ALIGNMENT AND ADJUSTMENT

Door panel alignment is controlled by the position of the mounted head assembly and the door swivel hangers. If adjustment is necessary, the sides of each panel can be independently adjusted up or down by repositioning the trolley bolt along the swivel hanger barrel. (See Figures 36 and 37)

1. Move the door to the fully closed position.
2. Turn off the power to the door.

WARNING

The disconnect must be in the OFF position and properly locked and tagged before performing the following procedure.

3. Unlock the door panel(s) with the Chain Release Assembly(s).
   a. On bi-parting doors, manually move the doors so that the panels are 3 in. apart.
   b. On one-way doors, manually move the door so that it is 3 in. from the leading edge of the bulb seal.
4. Check that each insulated door panel is level along its top edge. Bi-parting door panel edges must be at the same height across the top edge. If adjustment is necessary, the sides of either panel can be independently adjusted up or down by loosening the lock nut, repositioning the trolley bolt in the swivel hanger barrel, then re-tightening the lock nut after properly adjusted. (See Figures 36 and 37)

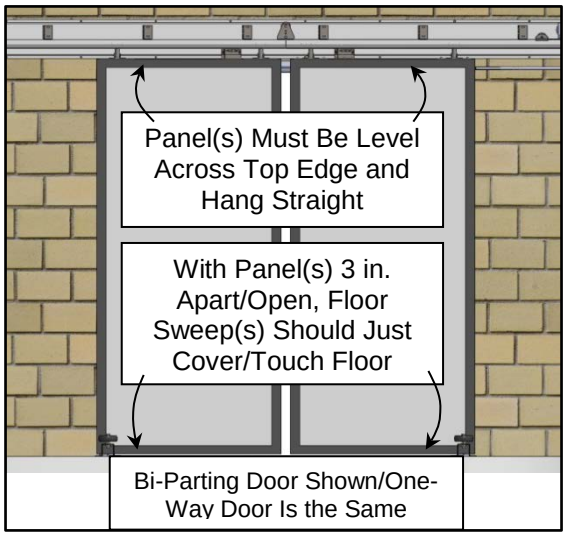


Figure 36

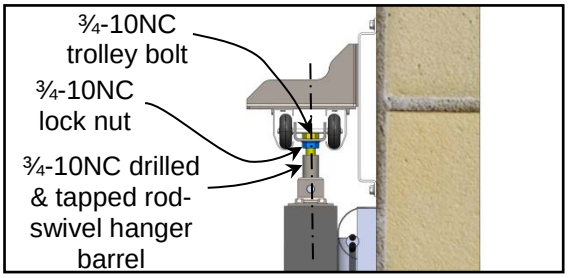


Figure 37

5. Once the door panel(s) are repositioned and checked/adjusted for level and hanging straight, check the position of the bottom edge of each panel. The floor sweeps should just make contact with the floor to create a seal along the entire width of the door panel on both the front and back sides.
6. If vertical adjustment to a panel is necessary, adjust the panel(s) as done in the prior step. Adjust trolley bolts equally in the same direction so the panel remains level.
7. After each door panel is leveled by adjusting the trolley bolts – the lower jamb nut must be spun up to the bottom of the trolley carriage and torqued to 15 Ft-lbs. Failure to do this will allow the trolley bolt to spin (loosen) which lowers the door and eventually causes the door to drag and excessive sweep seal wear. (See Figure 37)
8. Restore power to the door and return to service.

WARNING

Failure to properly tighten the trolley bolt will lead to the bolt loosening and lower the door panel. This can cause excessive sweep seal wear and the door panel to be damaged and/or destroyed.

WARNING

Locking the trolley bolt with the jamb nut against the swivel hanger barrel will lead to the door panel jumping in the trolley bolt-carriage interface during opening and closing cycles. This will at a minimum cause wear to the door panel and its components.

DOOR RETENTION/BULB SEAL ADJUSTMENT

The door seal is controlled by the door panel alignment and contact with the bulb seal. This is determined by the position of:

a. the door mount relative to the head assembly/ trolley track,
b. the bulb seal mounts, and
c. the door retainers/stay rollers mounted on the floor.

This is why during installation the head assembly's position and alignment with the door bulb seals are critical and how their mounting planes must be parallel and positioned within +/- 0.25 inch overall. The door seal adjustment must be done in 2 separate steps, the top header/door panel, and the bottom door/stay rollers. (See Figure 38)

NOTE: The head assembly trolley track is arranged to pull the door panel up and away from the bulb seal as the door opens, so the offset of the swivel hanger with respect to the bulb seal side of the door panel will be less at the leading edge swivel hanger than at the trailing edge swivel hanger.

Top/Head-Door Bulb Seal Adjustment

1. To adjust the top bulb seal/door panel alignment, move the door panel(s) to the fully closed position.
2. Turn off the power to the door.

⚠ WARNING

The disconnect must be in the OFF position and properly locked and tagged before performing the following procedure.

3. Check and confirm that each insulated door panel is level along its top edge and aligns/mates with the top bulb seal. If adjustment is necessary do so according to the "DOOR PANEL ALIGNMENT AND ADJUSTMENT" procedure on page 14.
4. Arrange the door panel(s) so they may be checked as follows:
   a. On bi-parting doors, manually move the door panel which is not being checked to the fully open position. Leave the door panel to be checked in the closed position.
   b. On single slider doors, leave the door panel in the closed position.

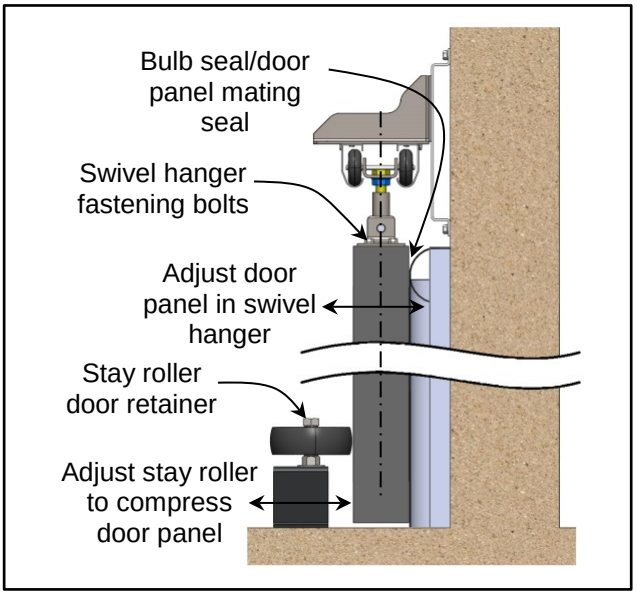


Figure 38

5. From the back side of the door panel (left or right side of the door), check the horizontal and vertical seal between the door panel and bulb seal on the door opening top jamb. The door top bulb seal must fit tight against the back of each door panel along the complete door panel width. The door panel should compress the bulb seal ¼-½ inch. Check this at the leading, trailing, and vertical top door panel edges. Bi-parting door panel centers must be aligned. (See Figure 38)
6. If any door seal adjustment is required on the top of the door, loosen the screws securing the door panel to the swivel hanger plate at the top of the door opening. Then move the door panel until it mates correctly against the full length of the bulb seals along the back of the door panel(s). Tighten the screws to 15 ft-lbs using a figure 8 pattern, locking the door panels in place.
7. Do this for all the door panels.
8. Restore power to the door and return to service.

⚠ WARNING

It is critical the door is not compressed against the bulb seal too tight. Too much compression will cause the door motor to stall out and premature wearing of the bulb seals.

Door Retention/Stay Roller-Door Bulb Seal Adjustment

Once the top seal has been properly adjusted the lower floor seal should be adjusted. Adjust the bottom and vertical side seals in the same manner as adjusting the top/head-door bulb seal.

1. To adjust the bottom bulb seal/door panel alignment, move the door panel(s) to the fully closed position.
2. Turn off the power to the door.

⚠ WARNING

The disconnect must be in the OFF position and properly locked and tagged before performing the following procedure.

3. From the back side of the door panel (left or right side of the door), check the vertical seal between the door panel and the bulb seal on the door jamb of the door opening. The doors bulb seal must fit tight against the back of each door panel along the complete door panel height. The door panel should compress the bulb seal anywhere from ¼-½ inch. Check this at the trailing vertical door panel edge when the door panel is in the fully closed position.

4. If any door seal adjustment is required on the bottom half of the door, loosen the screws securing the door panel stay roller to the floor. Then move the stay roller until the correct mate against the full length of the bulb seal along the back of the door panel(s) is achieved. Confirm stay rollers do not encroach the opening and are directly in front of the bulb seal. Tighten the stay roller fasteners, locking them in place on the floor. The F80 Standard Stay Roller may also be adjusted by loosening the bottom ¾-10 hex nut and moving the wheel on the bracket. (See Figures 38, 15, and 16)
5. Do this for all the door panels.
6. Turn on the power to the door.
7. With all seals adjusted and secured, cycle the door open and closed several times to test the seals. Then fully close the door and verify that the adjustable seals around the door opening have remained in place and fit properly against the back of the door. On Bi-Parting doors also verify that both door panel leading edge seals mate and seal properly. Make any necessary adjustments.

DOOR LEADING EDGE SEAL ADJUSTMENT BI-PARTING DOORS

On Bi-Parting doors the door panel leading edge seal creates the seal between the door panels when fully closed. If there isn't a proper seal first check that the leading edge seals are in good condition, properly centered, and aligned on each door panel. If not, pull off and adjust as required. Next confirm that the panels are level and mate properly with each other to form a proper seal. Adjustment may also be required if the door panels are not in proper alignment. If the door panels have been properly aligned for level and don't provide a proper seal they are likely not properly aligned with each other's center plane offset from the door opening face and head assembly. The door panels must be level and aligned per "DOOR PANEL ALIGNMENT AND ADJUSTMENT" on page 14 and "Top/Head-Door Bulb Seal Adjustment" on page 16.

DOOR PANEL FLOOR SWEEP SEAL ADJUSTMENT

The door panel floor sweep seal is located at the bottom of each door panel and provides the seal for that portion of the door with the floor. Alignment is controlled by the mounting position of the sweep assembly on the door panel and the doors swivel hangers.

In the event that the seal is either too tight or too loose between the door panel and the floor, the door panel itself can't be raised or lowered, or the floor sweep seal needs to be adjusted for some other reason, the door panel's floor sweep seal itself can be adjusted on the door panel. The seal is attached with industrial hook and loop for easy adjustment.

1. To adjust the door panel(s) floor sweep seal, move the door panel(s) to the fully closed position.
2. Turn off the power to the door.

⚠ WARNING

The disconnect must be in the OFF position and properly locked and tagged before performing the following procedure.

3. Check and confirm that each insulated door panel is level along its top edge and aligns/mates properly with the bulb seal. On Bi-Parting doors confirm that the leading edges of both door panels are properly mated with each other. If adjustment is necessary do so according to the "DOOR PANEL ALIGNMENT AND ADJUSTMENT" procedure on page 14.
4. Remove each floor sweep seal by pulling apart at the seam. Adjust the seal for proper fit and then firmly attach the hook and loop back together. (See Figure 39)

DOOR PANEL FLOOR SWEEP SEAL

Figure 39

5. Do this for all the door panel floor sweep seals.
6. Turn on the power to the door.
7. With all seals adjusted and secured, cycle the door open and closed several times to test the seals. Then fully close the door and verify that the floor sweep seals around the door panel have remained in place and seal properly against the floor. Make any necessary adjustments.

PHOTO EYE ADJUSTMENT-ALIGNMENT

Unless the photo eyes are knocked out of alignment, they generally do not require alignment. If the mounting brackets are intact and positioned as they were when originally installed and the photo eyes are not working properly, refer to "PHOTO EYES" on page 4 for photo eye diagnostic information.

The photo eye transmitter and receiver can be identified in two ways. The transmitter is designated SMT3000 on the white label or by a single green light that comes on at the clear end of the transmitter. (See Figure 40)

NOTE: When the cable is connected to the photo eye, there is only a 1/4-inch window to see the green or yellow LED light.

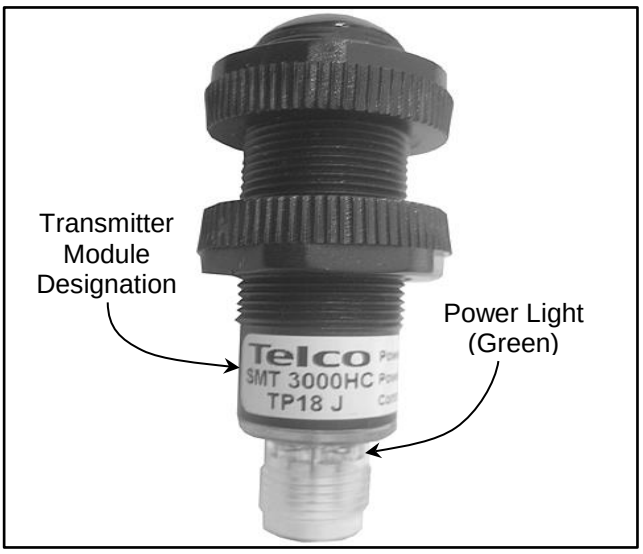


Figure 40

The receiver is designated SMR 3215 on the white label or by a yellow light that illuminates only when it is in proper alignment with the transmitter. (See Figure 41)

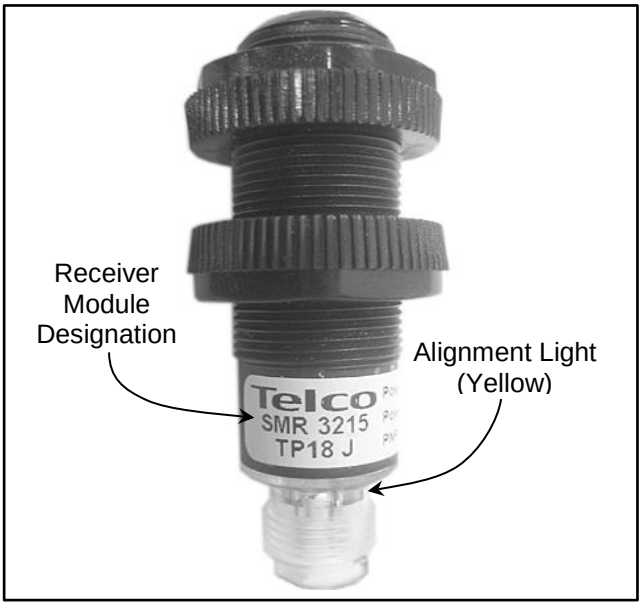


Figure 41

Testing Photo Eyes

When the door's power is on, the green light on the photo eye transmitter indicates the photo eye module is powered up. When the yellow light on the photo eye receiver module is also lit, the emitter and receiver modules are properly aligned.

Placing your hand in front of the receiver breaks the light path and should cause the yellow light to go out. Removing your hand from the light path should cause the yellow light to go back on if everything is properly installed and operating correctly.

Troubleshooting Photo Eyes

If the green light does not light, check to make sure the power is turned on, and that all wiring has continuity and is installed and connected correctly. If the green light is on but the yellow light is off, check the alignment of the emitter and receiver modules and clean each eye using window cleaner and a soft, clean cloth.

1. Turn on the power to the door.
2. Move the door to the half-open position.

⚠ WARNING

Take precautions to prevent the door from being operated as you perform the following procedure.

3. Locate the photo eye set. The photo eyes that monitor the front side of the door are located in the heavy-duty mounting brackets on the wall, adjacent to the door panel(s). (See Figure 42)

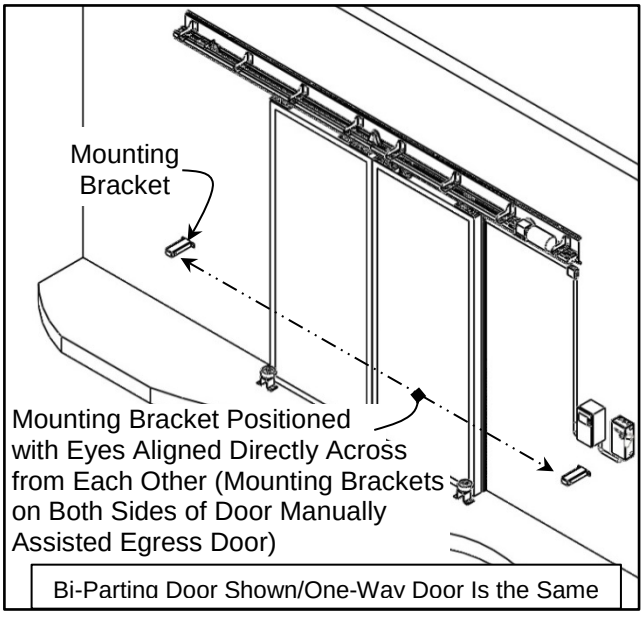


Figure 42

4. Inspect all photo eyes. If a photo eye appears damaged, bent, or out of position, replace or readjust the eye or mounting bracket as required.

5. Observe the indicator lights to verify that the photo eye modules are aligned. The green light indicates the photo eye transmitter module is powered up. When the yellow light on the receiver module is also lit, the emitter and receiver modules are properly aligned.

MOTOR BRAKE ADJUSTMENT

1. Turn off the power to the door.

⚠ WARNING

The disconnect must be in the OFF position and properly locked and tagged before performing the following procedure.

2. Loosen the retaining bolts securing the brake dust cover to the motor assembly. Remove the cover. (See Figure 43)

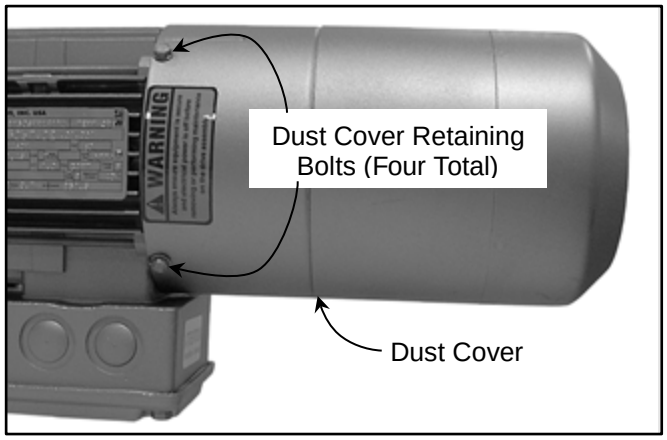


Figure 43

3. To adjust the brake, first securely tighten all brake adjustment nuts. Then back off each nut 1/2 turn counterclockwise. (See Figure 44)

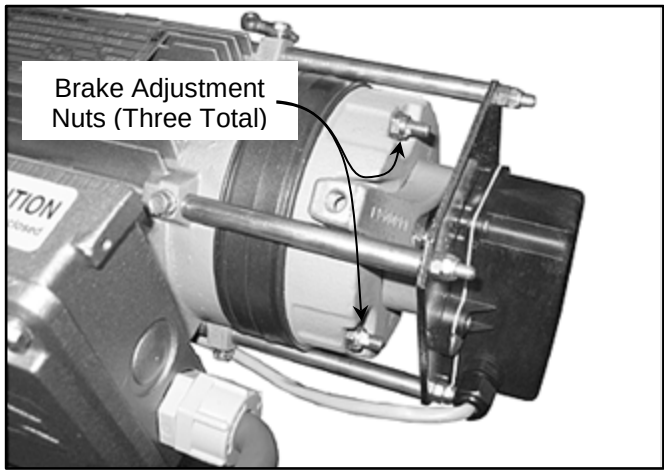


Figure 44

⚠ CAUTION

All nuts must be equally adjusted or the brake mechanism will wear unevenly.

4. Attach the dust cover and tighten all retaining bolts.
5. Turn on the power to the door.
6. With all seals adjusted and secured, cycle the door open and closed several times to test the seals. Then fully close the door and verify that the floor sweep seals around the door panel have remained in place and seal properly against the floor. Make any necessary adjustments.

CHAIN RELEASE ASSEMBLY ALIGNMENT AND ADJUSTMENT

The chain release assembly will occasionally need adjustment as the chain drive and panels are normal wear items. It generally will require alignment and adjustment any time the door panel is adjusted or the drive chain system needs servicing. The Assembly must be properly aligned with the chain for proper operation or wear, damage, and/or other performance problems will occur.

1. Move the door panel(s) to the fully closed position.
2. Turn off power to door.

⚠ WARNING

The disconnect must be in the OFF position and properly locked and tagged before performing the following procedure.

3. Gain access to head assembly and drive chain.
4. After the door panel(s) has been properly aligned, leveled, elevated, and secured to the head assembly via the swivel hangers, the drive chain properly tightened, and the bulb seal compression properly set, the chain release mechanism assembly can be aligned with the drive chain between the idler sprockets and the drive. Loosen the fasteners securing the chain glide bracket and the manual chain release cable in this assembly. Adjust the height of the bracket so the chain glide is at the same height as the chain and level (chain runs level and is not being lifted or pulled down by it). (See Figure 45)

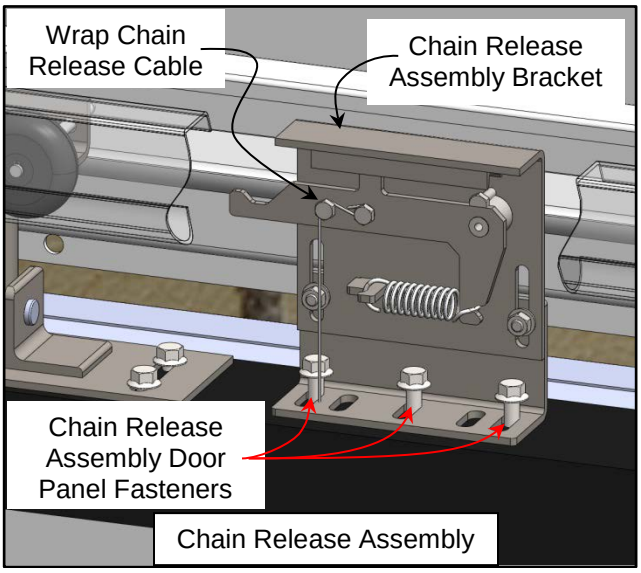


Figure 45

5. Loosen the fasteners securing the Chain Release Assembly to the door panel. Align the release assembly bracket chain glide with the drive chain so the chain runs in a straight line between the drive and idler gear sprockets. Tighten the screws to 15 ft-lbs locking the Chain Release Assembly in place. (See Figure 45 and 46)

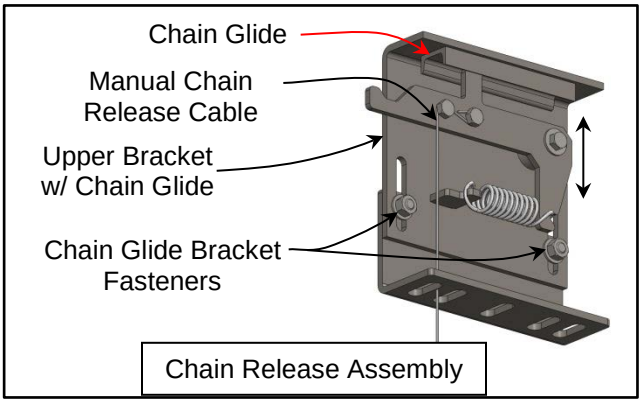


Figure 46

6. Re-check the height of the chain glide relative to the chain and adjust if necessary. Tighten the chain glide bracket fasteners to 15 ft-lbs. (See Figure 46)
7. Reattach the Manual Chain Release Cable around the 2 bolts on the Chain Release Assembly Bracket pivot arm as shown so it is taught. Torque the bolts to approximately 4 ft-lbs. Test the Manual Chain Release Handle to confirm it is working properly. (See Figure 46)
8. Restore power to the door and return to service.
9. With the assembly aligned, adjusted, and secured, cycle the door open and closed several times to test to verify the assembly works properly. Then fully close the door. Make any adjustments as necessary.

PARTS LIST

PARTS ORDERING INFORMATION

How to Order Parts

1. Identify the parts required by referring to the following pages for part numbers and part descriptions, bolts.
2. To place an order, contact your local Rytec representative or the Rytec Customer Support Department at: 800-628-1909 or 262-677-2058 (fax).
3. To ensure the correct parts are shipped, please include the door's serial number with the order. To locate the door's serial number refer to the "DOOR SERIAL NUMBER" section on page 1.

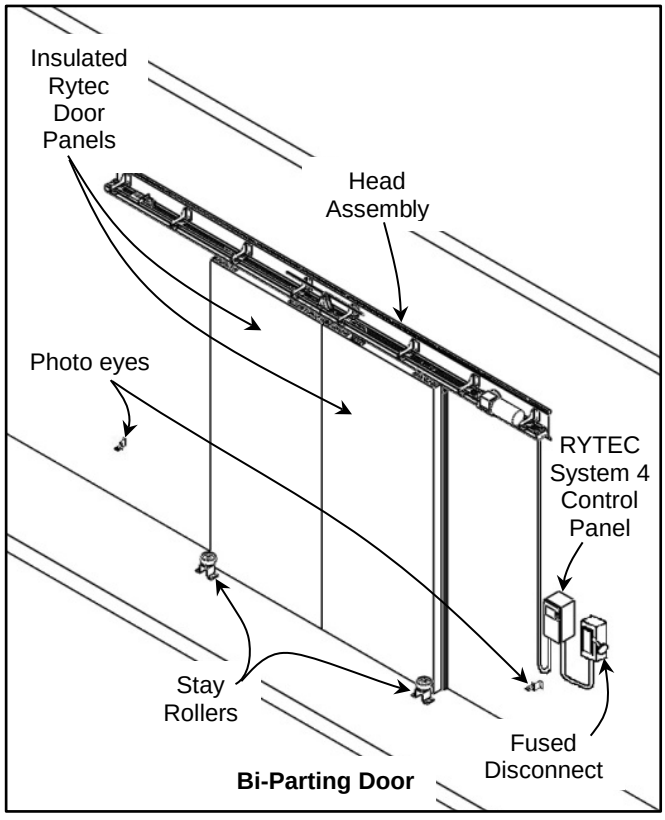


Figure 47

Substitute Parts

Due to special engineering and product enhancement, the actual parts used on your door may be different from those shown in this manual.

Also, if a part has been improved in design and bears a revised part number, the improved part will be substituted for the part ordered.

Return of Parts

Rytec will not accept the return of any parts unless they are accompanied by a Return Merchandise Authorization (RMA) form.

Before returning any parts, you must first contact the Rytec Customer Support Department to obtain return authorization and an RMA form.

DOOR SERIAL NUMBER

Each RYTEC door is uniquely identified with a serial number. You will need this when contacting RYTEC for any service. To obtain your door's DOOR SERIAL NUMBER, there are several typical locations where the ***DOOR SERIAL NUMBER*** can be found; on the cover of the RYTEC System 4 control panel, the front side outside edge of each door panel at approximately eye level, and the drive motor/head assembly. (See Figure 1)

IMPORTANT: When installing multiple doors of the same model, verify and match the serial number of the control panel with those on all the other components of each door assembly. Failure to do this will void the manufacturer's warranty and may lead to catastrophic failure and/or personal injury!

PARTS LIST—DOOR ASSEMBLY

BI-PARTING DOOR ASSEMBLY

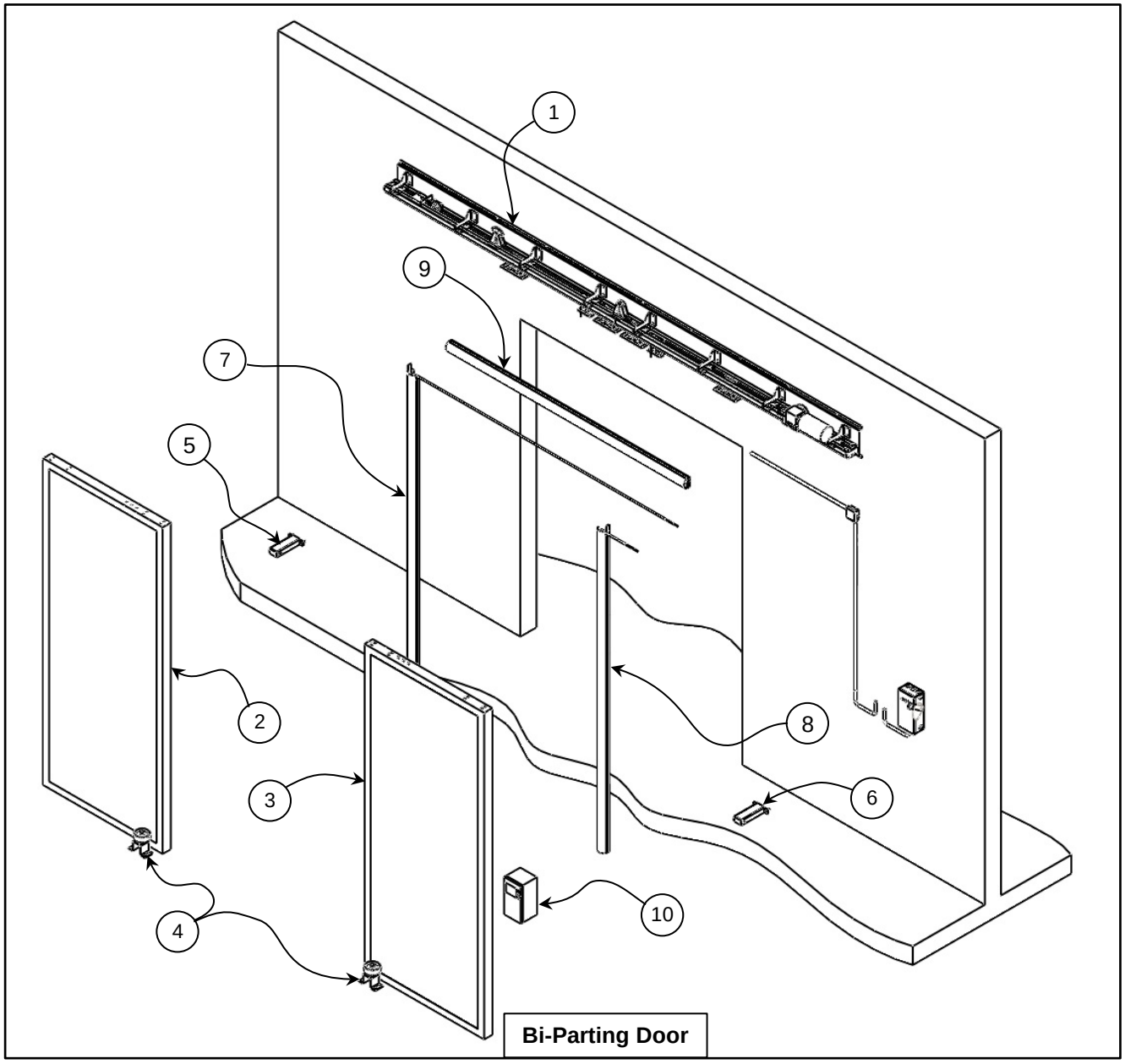


Figure 48

ITEM	QTY.	PART #	DESCRIPTION
-	1		Turbo Slide Bi-Parting Door Assembly
1	1	TSBH-2	Turbo Slide Bi-Parting Head Assembly, RH (Shown)
		TSBH-1	Turbo Slide Bi-Parting Head Assembly, LH
2	1	TSBDP-1	Bi-Parting Door Panel Assembly-Left
3	1	TSBDP-2	Bi-Parting Door Panel Assembly-Right
4	2	F80–Stay Roller	Stay Roller Assembly
5	1	0799367	Photo Eye Assembly, Remote PE Receiver, LH
6	1	0799368	Photo Eye Assembly, Remote PE Emitter, RH
7	1	TSBG	Bulb Seal Assembly, Non-Heated
		TSBG 120 Short	Bulb Seal Assembly, Short Heated
		TSBG 120 Long	Bulb Seal Assembly, Long Heated (Shown)
8	1	TSBG	Bulb Seal Assembly, Non-Heated
		TSBG 120 Short	Bulb Seal Assembly, Short Heated (Shown)
		TSBG 120 Long	Bulb Seal Assembly, Long Heated
9	1	TSBG	Bulb Seal Assembly, Non-Heated (Shown)
10	1	00142000	System 4 Control Panel

PARTS LIST—DOOR ASSEMBLY

SINGLE SLIDE DOOR ASSEMBLY

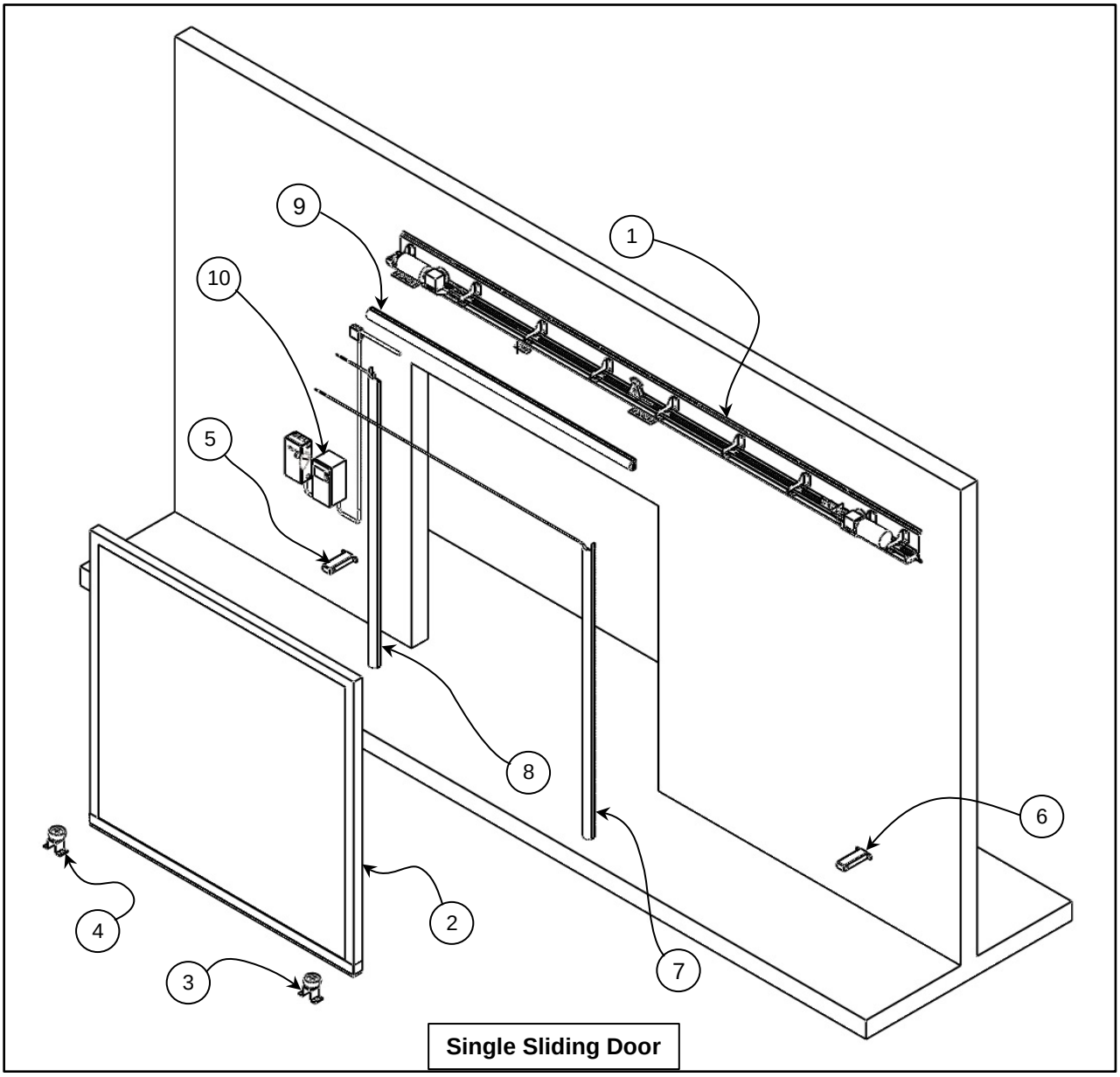


Figure 49

ITEM	QTY.	PART #	DESCRIPTION
-	1		Turbo Slide Single Slide Door Assembly
1	1	TSSH-1	Turbo Slide Single Slide Head Assembly, Left Hand (Shown)
		TSSH-2	Turbo Slide Single Slide Head Assembly, Right Hand
2	1	TSSDA	Sliding Door Panel Assembly
3	1	F80–Stay Roller	Stay Roller Assembly
4	1	F0091_A-Stay Roller	Stay Roller Assembly, Universal Cam
		F80–Stay Roller	Stay Roller Assembly (Shown)
5	1	0799367	Photo Eye Assembly, Remote PE Receiver, LH
6	1	0799368	Photo Eye Assembly, Remote PE Emitter, RH
7	1	TSBG	Bulb Seal Assembly, Non-Heated
		TSBG 120 Short	Bulb Seal Assembly, Short Heated
		TSBG 120 Long	Bulb Seal Assembly, Long Heated (Shown)
8	1	TSBG	Bulb Seal Assembly, Non-Heated
		TSBG 120 Short	Bulb Seal Assembly, Short Heated (Shown)
		TSBG 120 Long	Bulb Seal Assembly, Long Heated
9	1	TSBG	Bulb Seal Assembly, Non-Heated (Shown)
10	1	00142000	System 4 Control Panel

PARTS LIST—DOOR ASSEMBLY

BI-PARTING DOOR HEAD ASSEMBLY

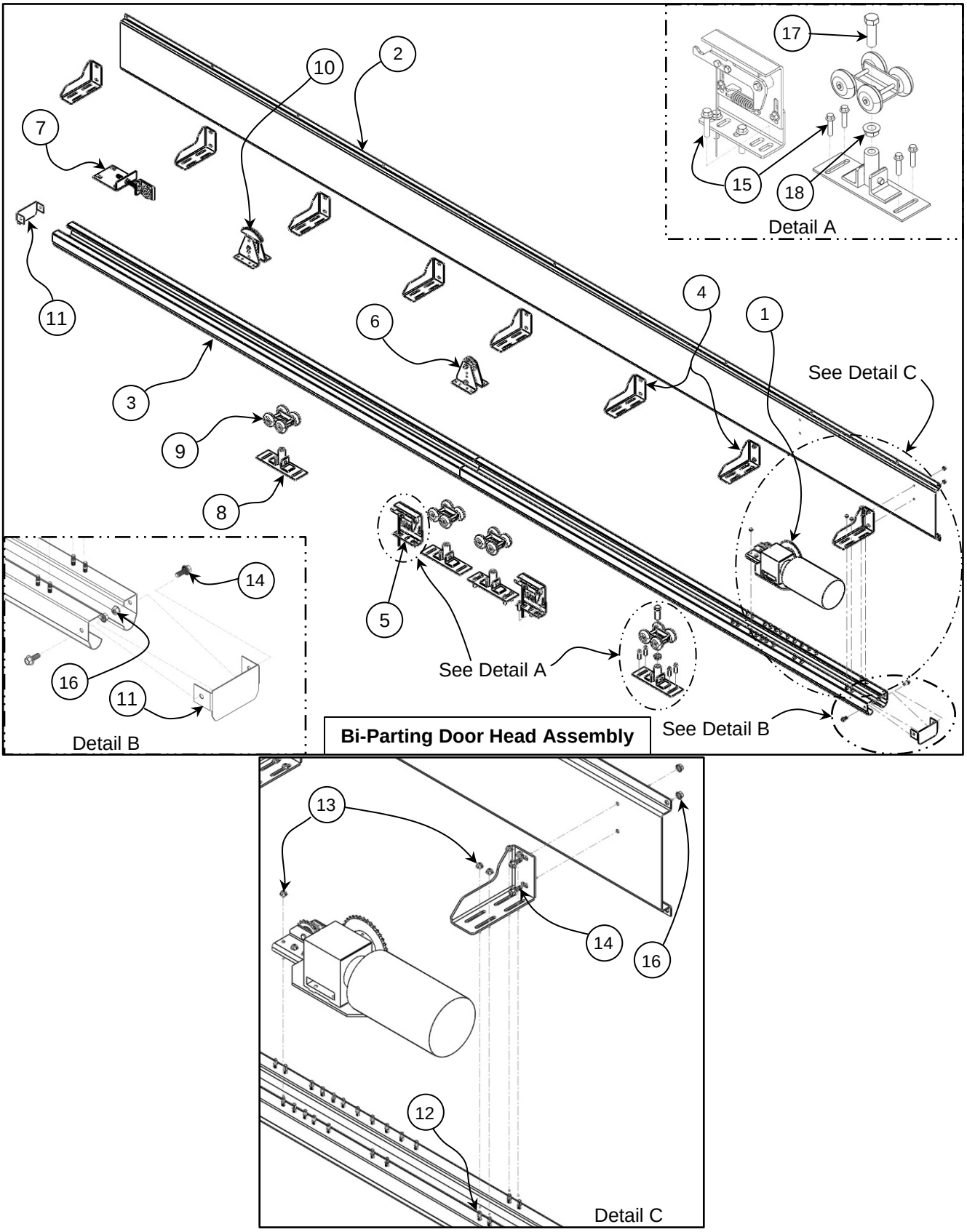
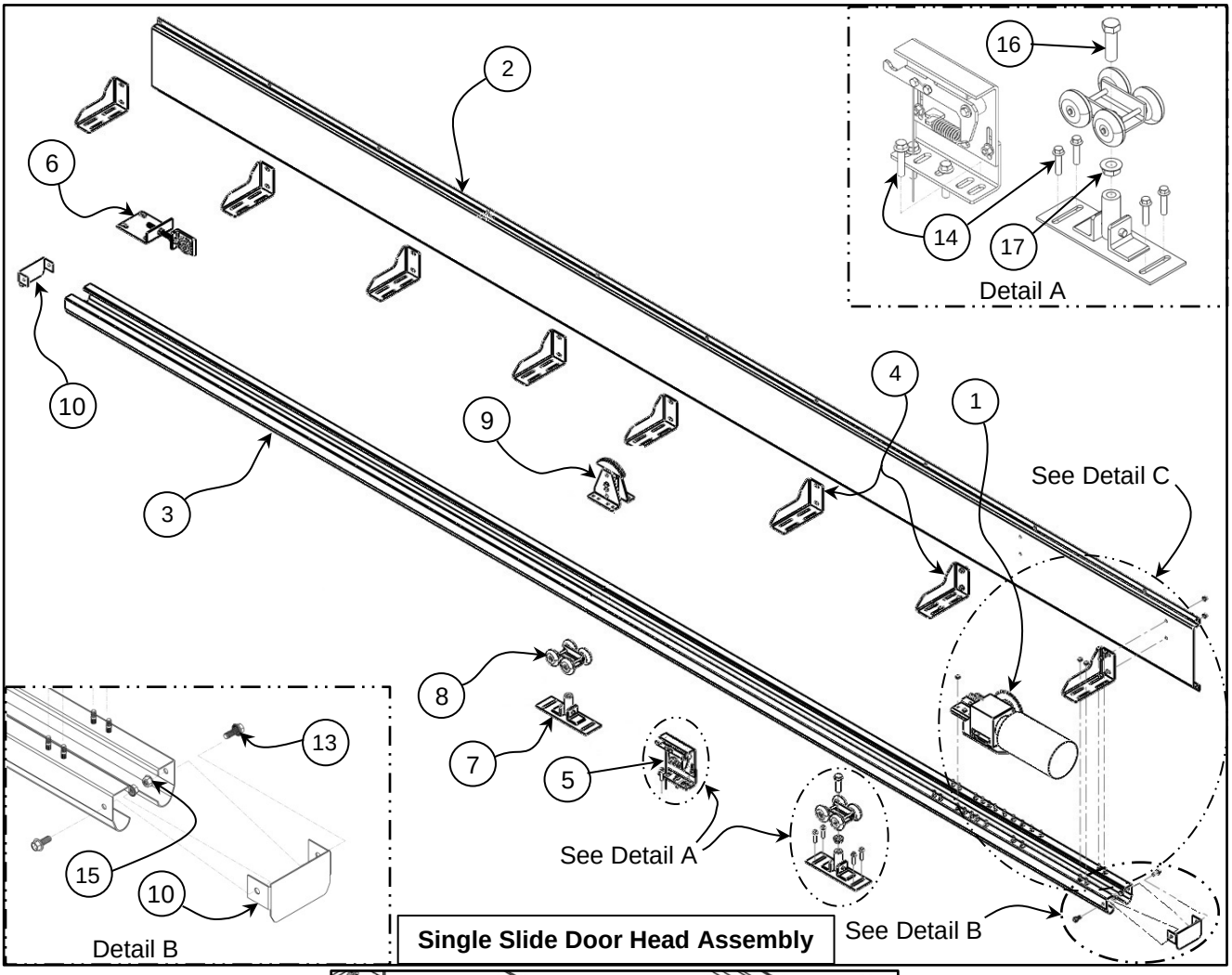


Figure 50

ITEM	QTY.	PART #	DESCRIPTION
-	1	TSBH-2	Turbo Slide Bi-Parting Head Assembly, RH (Shown)
		TSBH-1	Turbo Slide Bi-Parting Head Assembly, LH
1	1	TSMA-2	Turbo Slide Motor Assembly, Right Hand Installation (Shown-For RH Head Assembly)
		TSMA-1	Turbo Slide Motor Assembly, Left Hand Installation (For LH Head Assembly)
2	1	F18	Header Hat Channel, 6M
3	4	F0017	3" J-Rail Track
4	A/R	F0010R	J-Rail Track Bracket
5	2	F0040-A	Chain Release Assembly
6	1	F125	Chain Reverser Assembly
7	1	F0030-A	Return Idler
8	4	F75	Door Swivel Hanger
9	4	F65_A	Freezer Door Trolley
10	1	F0064-A	Single Slide Tensioner
11	2	F71-R	F71-R End Cap
12	A/R	Consult Factory	5/16-18 x ¾" Clinch Bolt (Secure J-Rail to Track Brackets & J-Rail Mounted Components)
13	A/R	95922A120	5/16-18 Serrated Flange Nut
14	A/R	94386A105	3/8-16 x 1.00 Serrated Flange Bolt (Secure J-Rail Brackets to Hat Channel)
15	A/R	94239A118	3/8-16 x 2.00 Serrated Flange Bolt (Secure Door Panels to Mounts and Chain Release)
16	A/R	95922A130	3/8-16 Serrated Flange Nut
17	4	D30160-21/2	3/4-10 x 2.50 Hex Head Cap Screw
18	4	32278	3/4-10 Jam Nut
19	1	Drive Chain	Drive Chain (Not Shown)

PARTS LIST—DOOR ASSEMBLY

SINGLE SLIDE DOOR HEAD ASSEMBLY



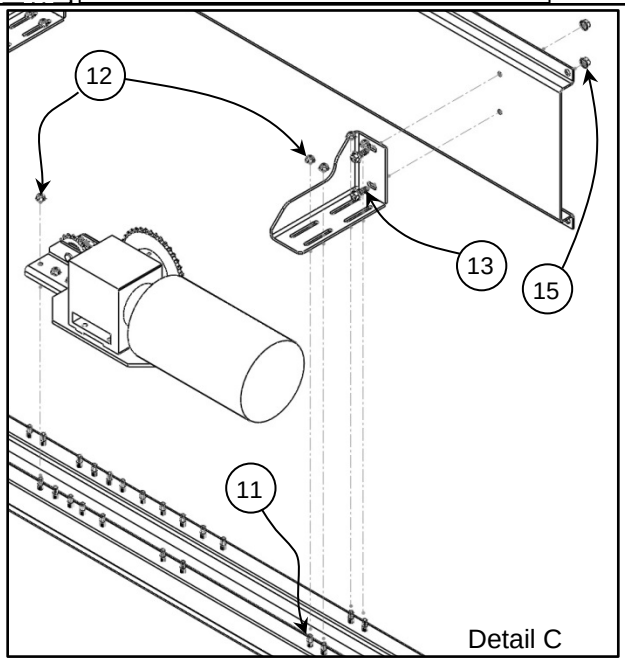


Figure 51

ITEM	QTY.	PART #	DESCRIPTION
-	1	TSSH-1	Turbo Slide Single Slide Head Assembly, LH
		TSSH-2	Turbo Slide Single Slide Head Assembly, RH (Shown)
1	1	TSMA-2	Turbo Slide Motor Assembly, Right Hand Installation (Shown-For RH Head Assembly)
		TSMA-1	Turbo Slide Motor Assembly, Left Hand Installation (For LH Head Assembly)
2	1	F18	Header Hat Channel, 6M
3	2	F15	3" J-Rail Track
4	A/R	F0010R	J-Rail Track Bracket
5	1	F0040-A	Chain Release Assembly
6	1	F0030-A	Return Idler
7	2	F75	Door Swivel Hanger
8	2	F65_A	Freezer Door Trolley
9	1	F0064-A	Single Slide Tensioner
10	2	F71-R	F71-R End Cap
11	A/R	Consult Factory	5/16-18 x ¾" Clinch Bolt (Secure J-Rail to Track Brackets & J-Rail Mounted Components)
12	A/R	95922A120	5/16-18 Serrated Flange Nut
13	A/R	94386A105	3/8-16 x 1.00 Serrated Flange Bolt (Secure J-Rail Brackets to Hat Channel)
14	A/R	94239A118	3/8-16 x 2.00 Serrated Flange Bolt (Secure Door Panels to Mounts and Chain Release)
15	A/R	95922A130	3/8-16 Serrated Flange Nut
16	2	D30160-21/2	3/4-10 x 2.50 Long Hex Head Cap Screw
17	2	32278	3/4-10 Jam Nut
18	1	Drive Chain	Drive Chain (Not Shown)

PARTS LIST—DOOR ASSEMBLY

BI-PARTING DOOR PANEL ASSEMBLY

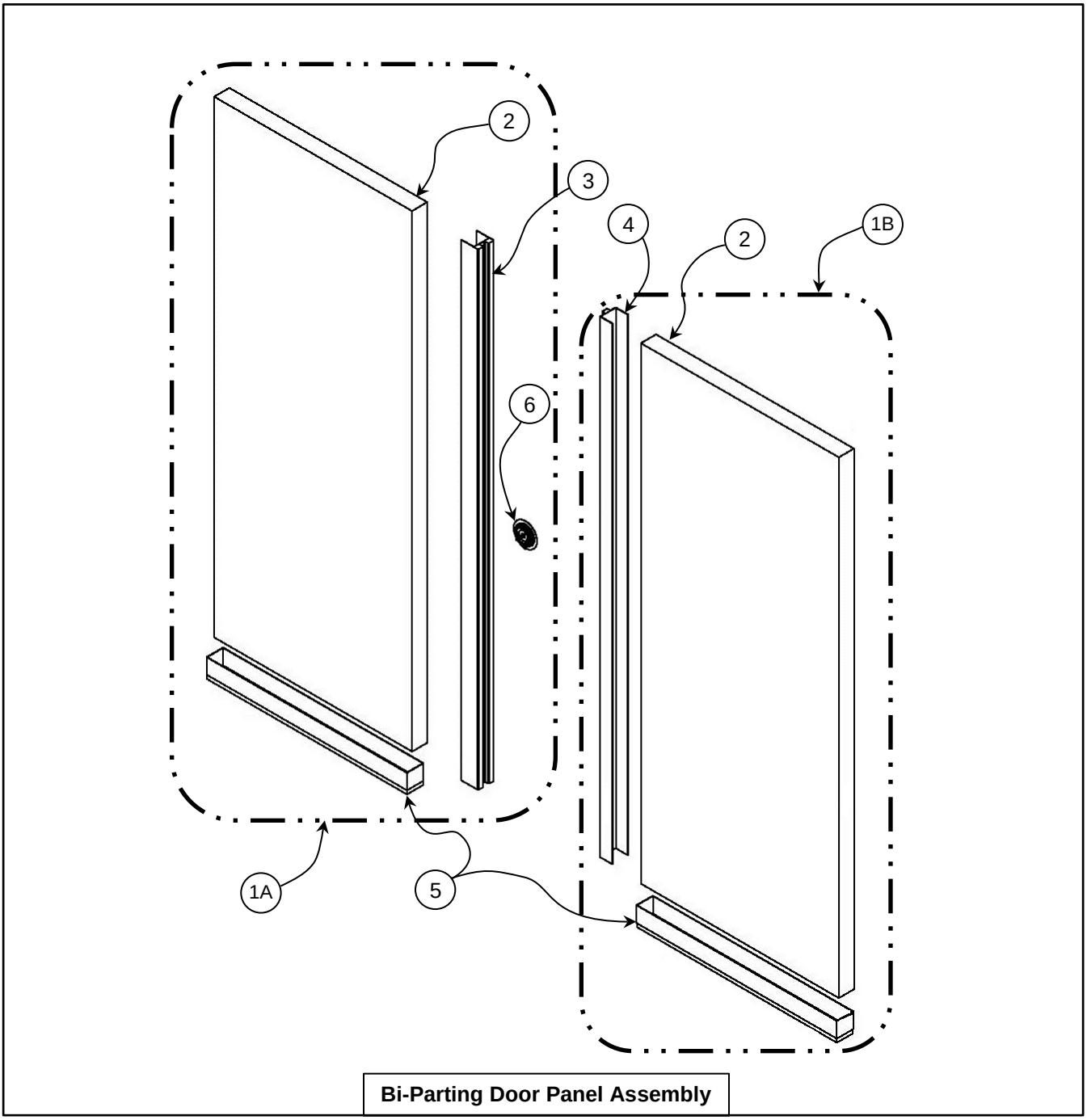


Figure 52

ITEM	QTY.	PART #	DESCRIPTION
-	1	TSBDA	Turbo Slide Bi-Parting Door Assembly (Consists of 2 Door Panel sub-assemblies TSBDA-1 & TSBDA-2)
1A	1	TSBDP-1	Turbo Slide Bi-Parting Door Assembly-Standard (Constructed of items 2, 3, 5, & 6)
1B	1	TSBDP-2	Turbo Slide Bi-Parting Door Assembly-Standard (Constructed of items 2, 4, & 5 – item 6 is optional)
2	1	TSB-DP	Turbo Slide Bi-Parting Door Panel
3	1	TSBG_1	TSBG Groove Section
4	1	TSBG_2	TSBG Tongue Section
5	2	F008-BP	Bi-Parting Door Panel Sweep Seal
6	A/R	F105	Manual Release Handle (Standard quantity = 1)

PARTS LIST—DOOR ASSEMBLY

SINGLE SLIDE DOOR PANEL ASSEMBLY

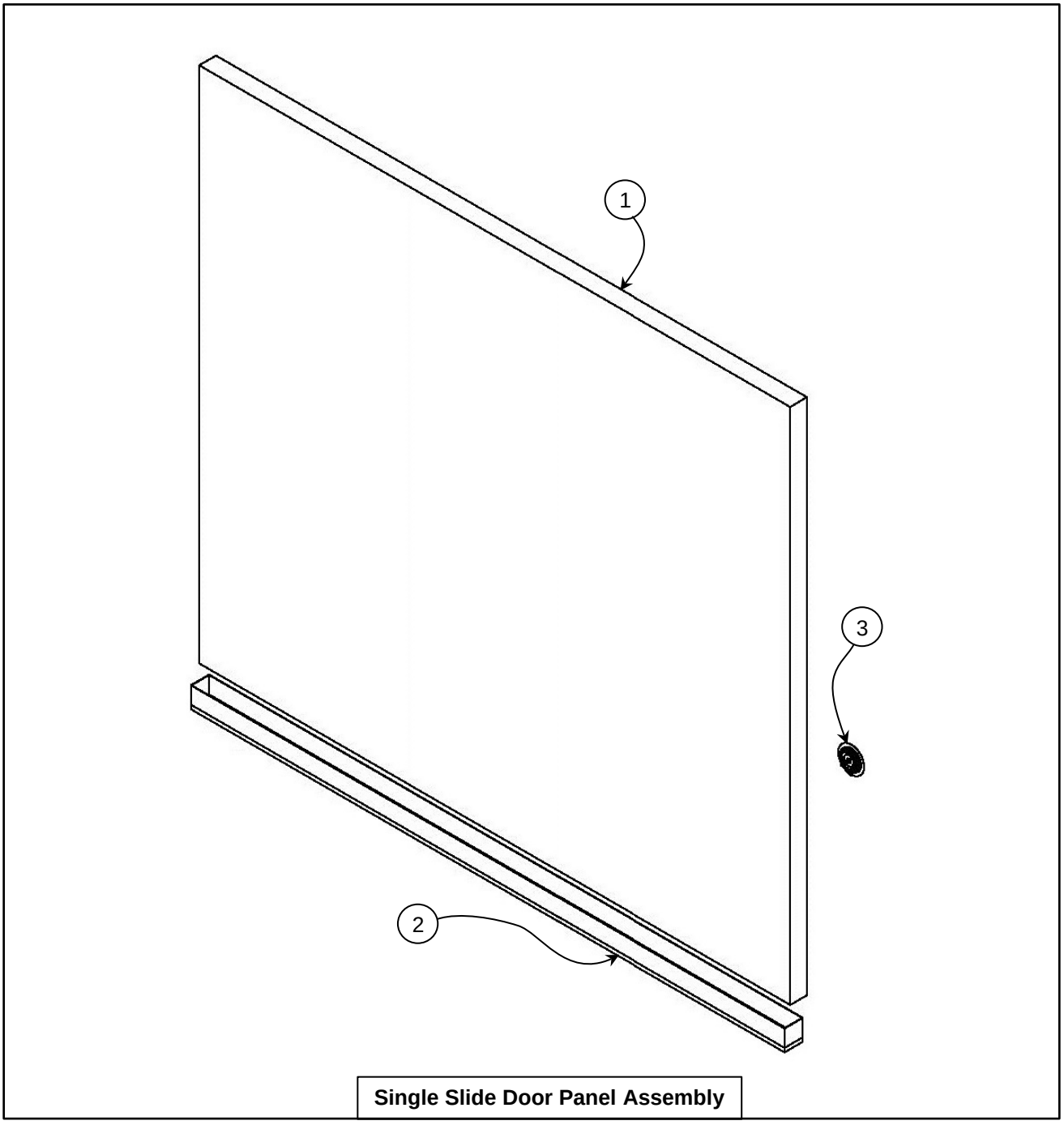


Figure 53

ITEM	QTY.	PART #	DESCRIPTION
-	1	TSSDA	Turbo Slide Single Slide Door Assembly
1	1	TSS-DP	Turbo Slide Single Slide Door Panel
2	1	F008	Single Slide Door Panel Sweep Seal
3	1	F105	Manual Release Handle

TURBO SLIDE MOTOR ASSEMBLY

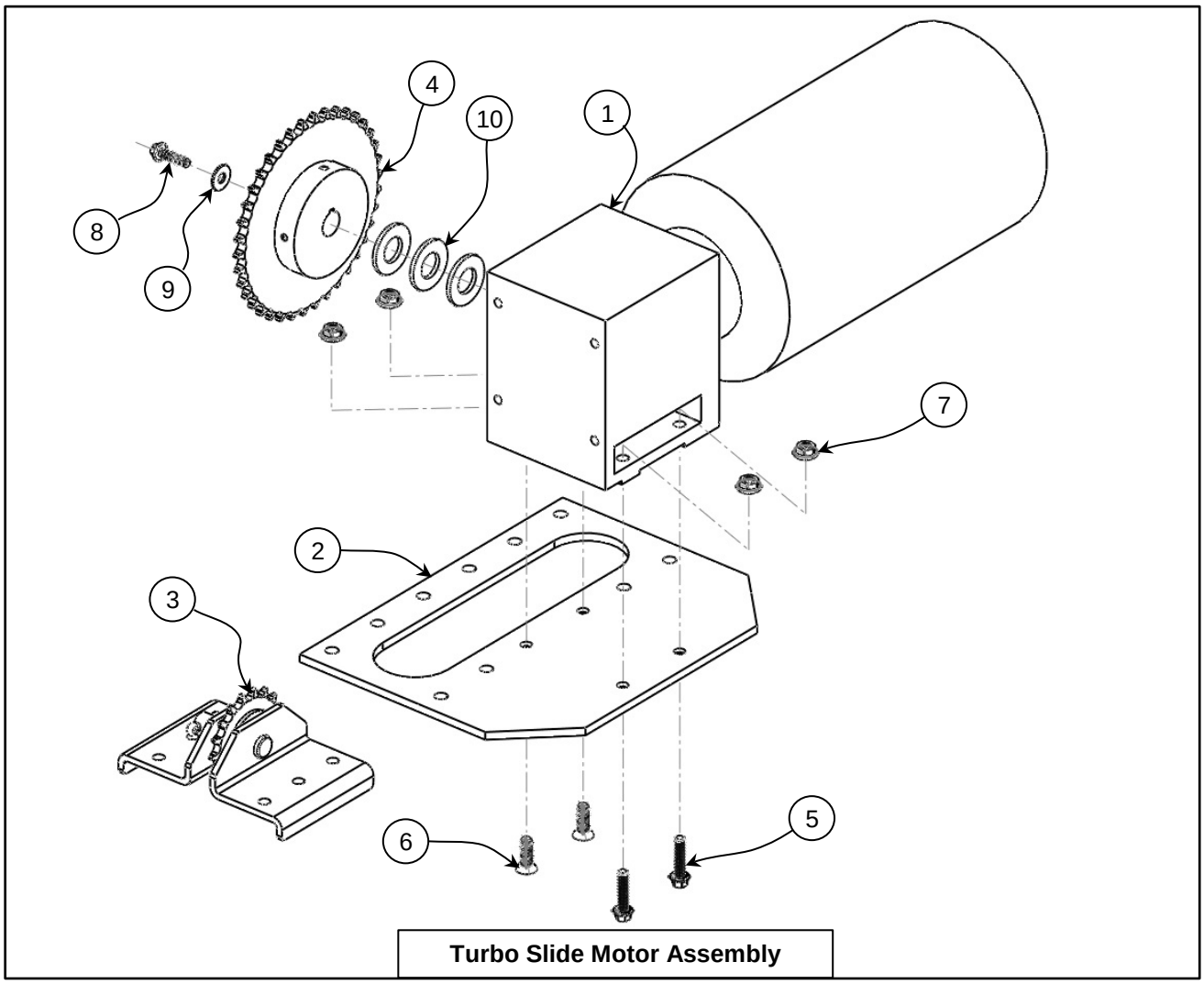


Figure 54

ITEM	QTY.	PART #	DESCRIPTION
-	1	TSMA-2	Turbo Slide Motor Assembly, Right Hand Installation (Shown-For RH Head Assembly)
	1	TSMA-1	Turbo Slide Motor Assembly, Left Hand Installation (For LH Head Assembly)
1	1	1090221-1	Turbo Slide Motor/Gearbox, LH Mount (Opposite Hand)
		1090221-2	Turbo Slide Motor/Gearbox, RH Mount (Shown)
2	1	F107	Motor Mount Plate
3	1	F25	Idler Assembly
4	1	6236K357	Drive Gear
5	2	Consult Factory	5/16-18 x 1.25 Hex Bolt
6	2	91263A575	5/16-18 x 1" Flat Head Socket Cap Screw
7	4	95922A120	5/16-18 Serrated Flange Nut
8	1	94239A102	1/4-20 x 1" Serrated Flange Hex Head Cap Screw
9	1	Consult Factory	Ø¼ Flat washer
10	3	Consult Factory	Ø¾ Flat washer

PARTS LIST—DOOR ASSEMBLY

TURBO SLIDE CHAIN RELEASE ASSEMBLY

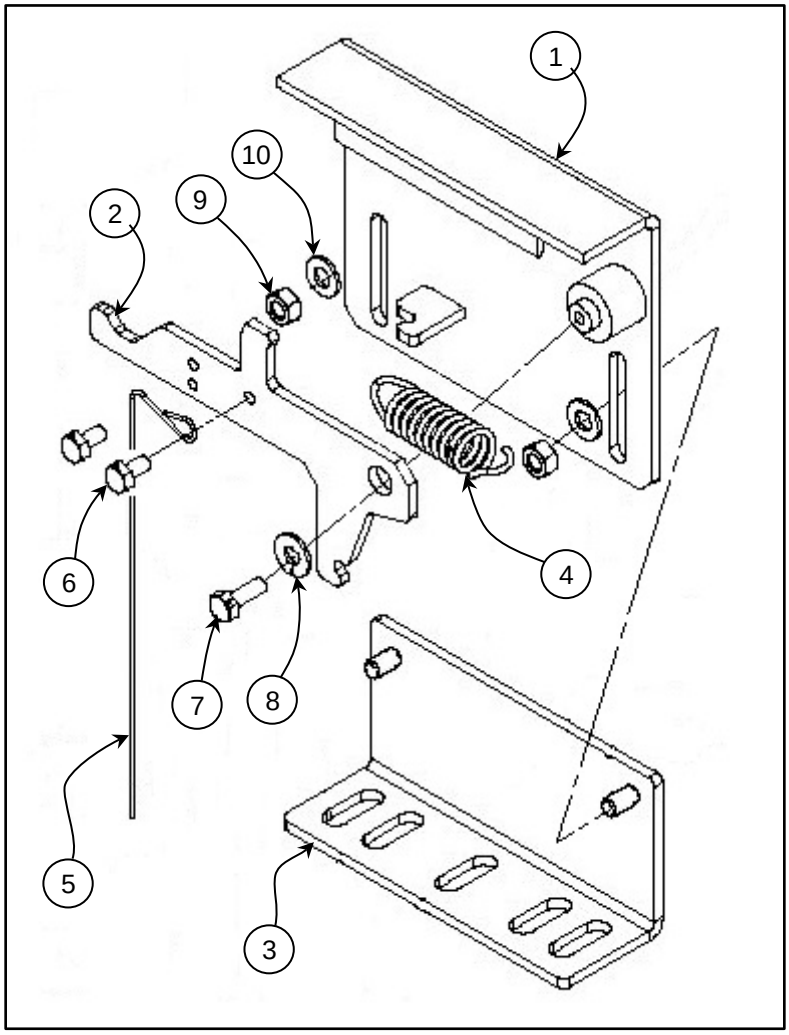


Figure 55

ITEM	QTY.	PART #	DESCRIPTION
-	1	F0040-A	Turbo Slide Chain Release Assembly
1	1	F040-1A	Chain Door Bracket Weldment
2	1	F0040-2A	Pivot Arm
3	1	F040-4	Door Bracket
4	1	F042	Extension Spring
5	1	G119	Ø1/16” Steel Cable
6	2	Consult Factory	1/4-20 x 1/2" Long Hex Head Cap Screw
7	1	Consult Factory	1/4-20 x 3/4" Long Hex Head Cap Screw
8	1	Consult Factory	Ø¼ Flat washer
9	2	Consult Factory	5/16-18 Hex Nut
10	2	Consult Factory	Ø5/16 Flat washer

TURBO SLIDE CHAIN RETURN IDLER ASSEMBLY

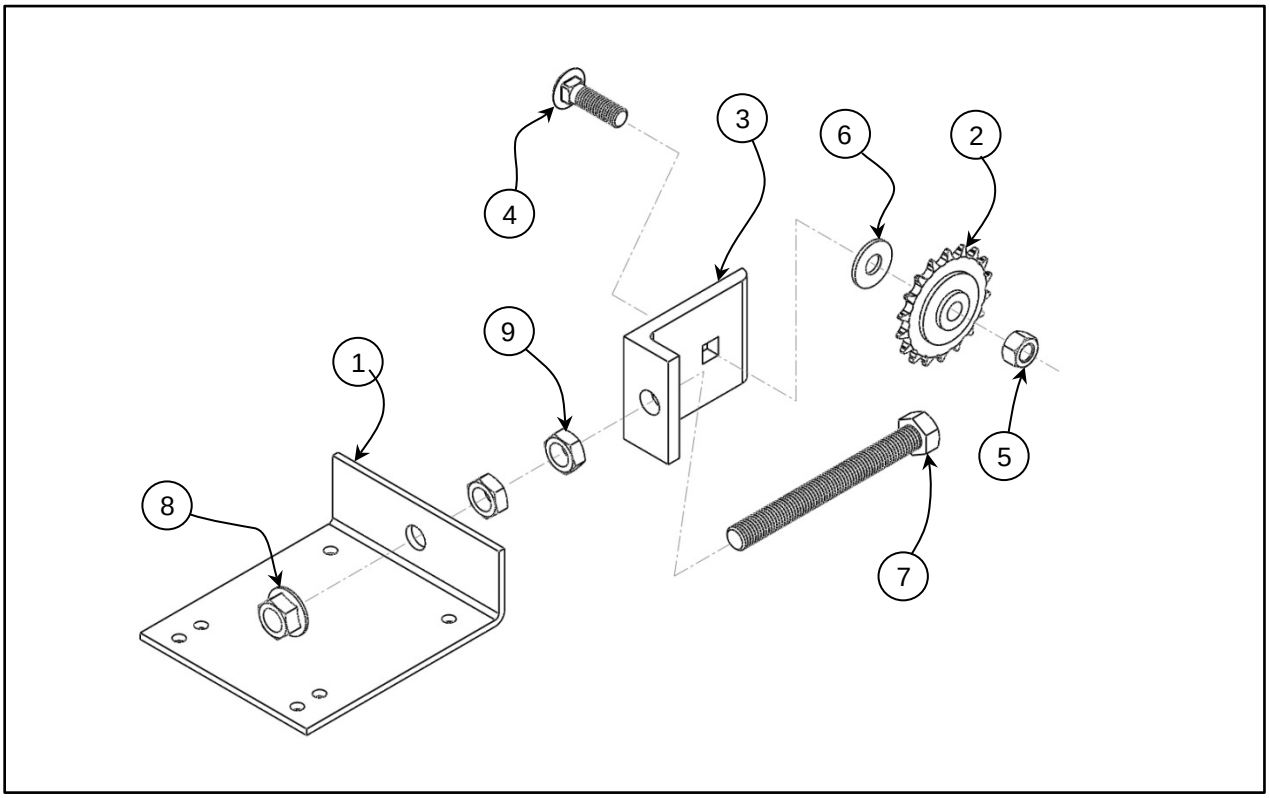


Figure 56

ITEM	QTY.	PART #	DESCRIPTION
-	1	F0030-A	Return Idler Assembly
1	1	F0011R	Spring Hanger
2	1	F53	Idler Sprocket
3	1	F31	Tensioner L Bracket
4	1	Consult Factory	½-13 x 1.75 Long Round Head Square Neck Bolt
5	1	Consult Factory	½-13 Hex Nut
6	1	Consult Factory	Ø1/2” Flatwasher
7	1	Consult Factory	5/8-11 x 6.00 Long Hex Head Bolt
8	1	94831A700	5/8-11 Serrated Flange Hex Locknut
9	2	94846A533	5/8-11 Jamb Hex Nut

PARTS LIST—DOOR ASSEMBLY

TURBO SLIDE DOOR SWIVEL HANGER ASSEMBLY

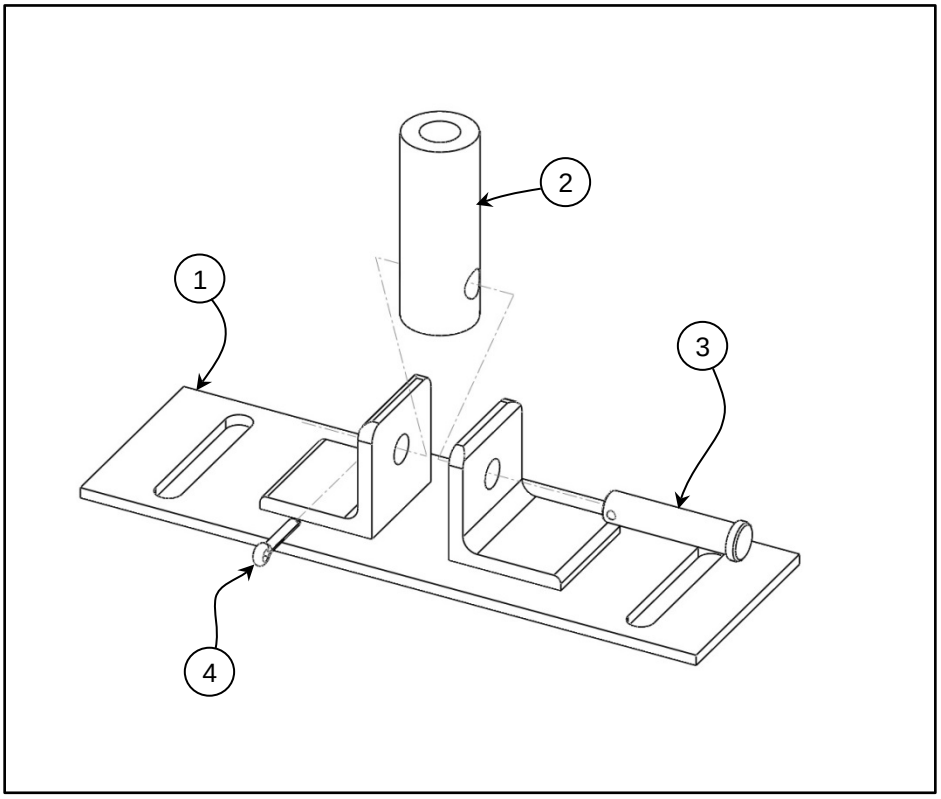


Figure 57

ITEM	QTY.	PART #	DESCRIPTION
-	1	F75	Door Swivel Hanger Assembly
1	1	F75A-1	Door Swivel Hanger Bracket-Baseplate Weldment
2	1	F75-TSR	Trolley Connector Rod
3	1	97245A426	Ø1/2" Clevis Pin – 2” Long
4	1	Consult Factory	Ø5/32 x 1.00” Long Cotter Pin

TURBO SLIDE DOOR TROLLEY ASSEMBLY

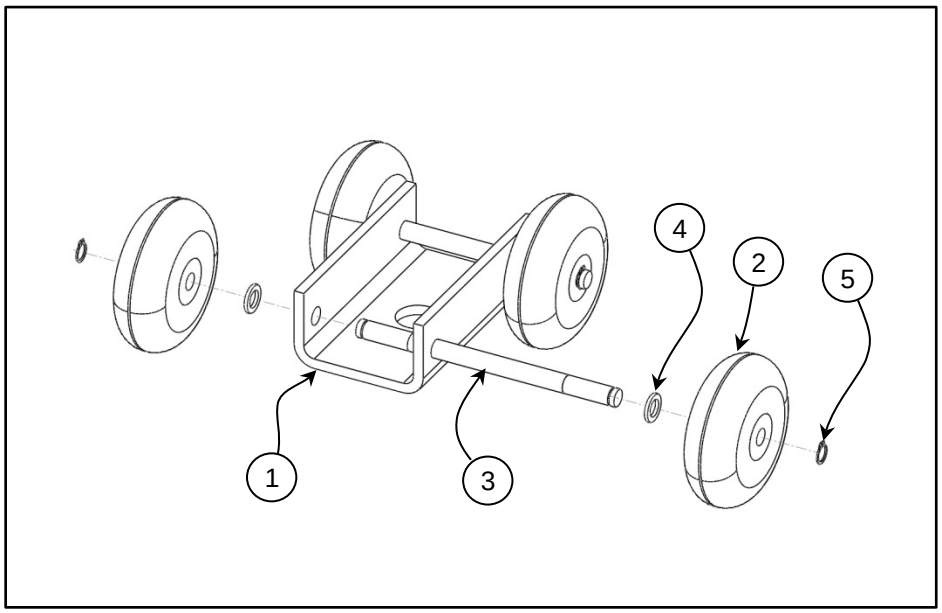


Figure 58

ITEM	QTY.	PART #	DESCRIPTION
-	1	F65_A	Door Trolley Assembly
1	1	F65-1	Trolley Carriage Plate
2	4	F65-3	Ø72mm 82a Wheel – ABEC 7 Bearings
3	2	F65-2	Ø5/16" Machined Steel Shaft
4	4	220-392-062	Washer
5	4	97633A150	External Snap Ring

PARTS LIST—DOOR ASSEMBLY

TURBO SLIDE STAY ROLLER ASSEMBLY

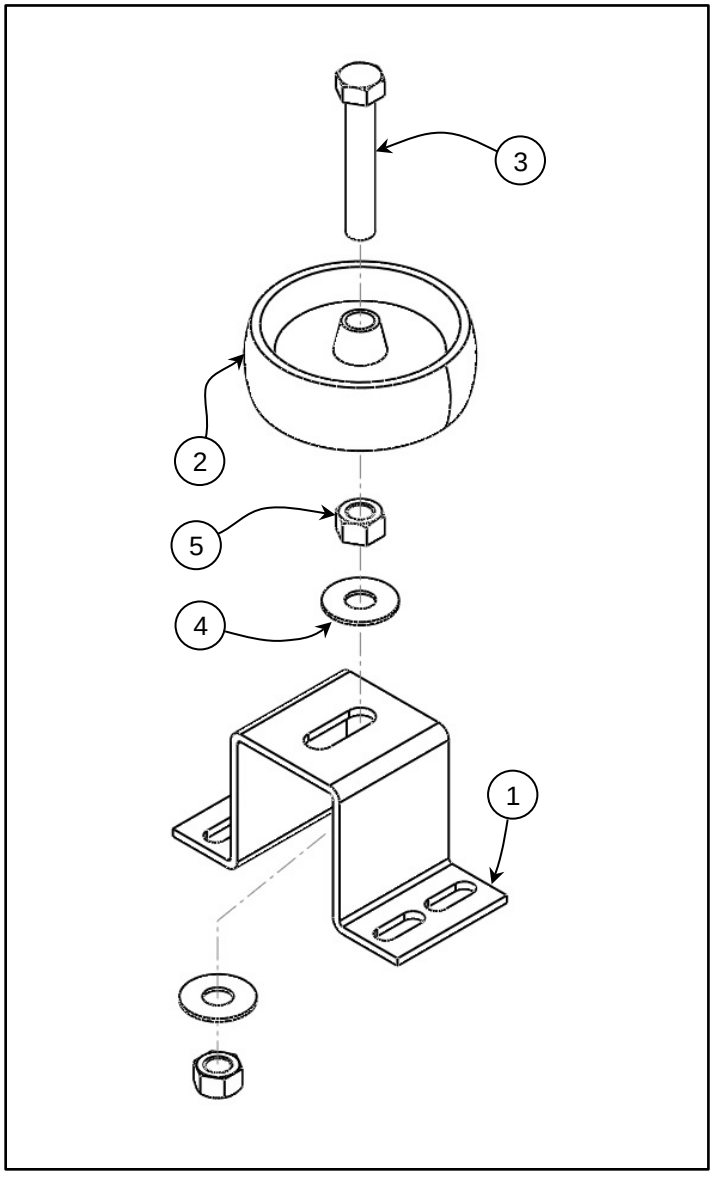


Figure 59

ITEM	QTY.	PART #	DESCRIPTION
-	1	F80	Stay Roller Assembly
1	1	F81	Stay Roller Base
2	1	F82	Stay Roller Wheel
3	1	Consult Factory	¾-10 x 4.50” Long Hex Head Bolt
4	2	Consult Factory	Ø3/4” Flat Washer
5	2	Consult Factory	¾-10 Hex Nut

TURBO SLIDE UNIVERSAL CAM STAY ROLLER ASSEMBLY

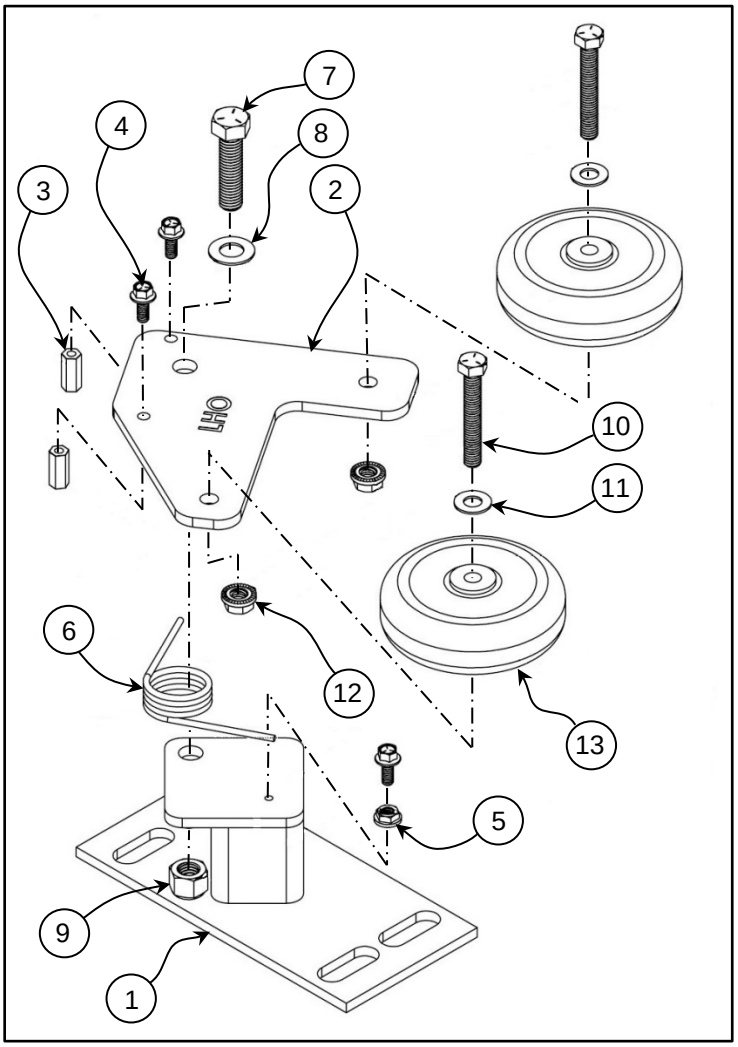


Figure 60

ITEM	QTY.	PART #	DESCRIPTION
-	1	F0091_A	Universal Cam Stay Roller Assembly
1	1	F0091-1	Swing Arm Base Weldment
2	1	F0091_A-4	Swing Arm Plate - 1/4" thick Steel
3	2	Consult Factory	7/8" Hex Double Female
4	3	92979A114	1/4-20 x 5/8" Flanged Cap Screw
5	1	91343A100	1/4-20 Flange Hex Locknut
6	1	9271K598	LHO Spring
7	1	92865A720	1/2-13 x 2" Cap Screw
8	1	94744A285	1/2" Washer
9	1	95615A210	1/2"-13 Lock Nut w/ nylon insert
10	2	92865A634	3/8-16 x 2" Hex Cap Screw
11	2	90126A031	3/8" Washer
12	2	94831A031	3/8-16 Flange Hex Locknut
13	2	Consult Factory	Ø 4.00 Wheel