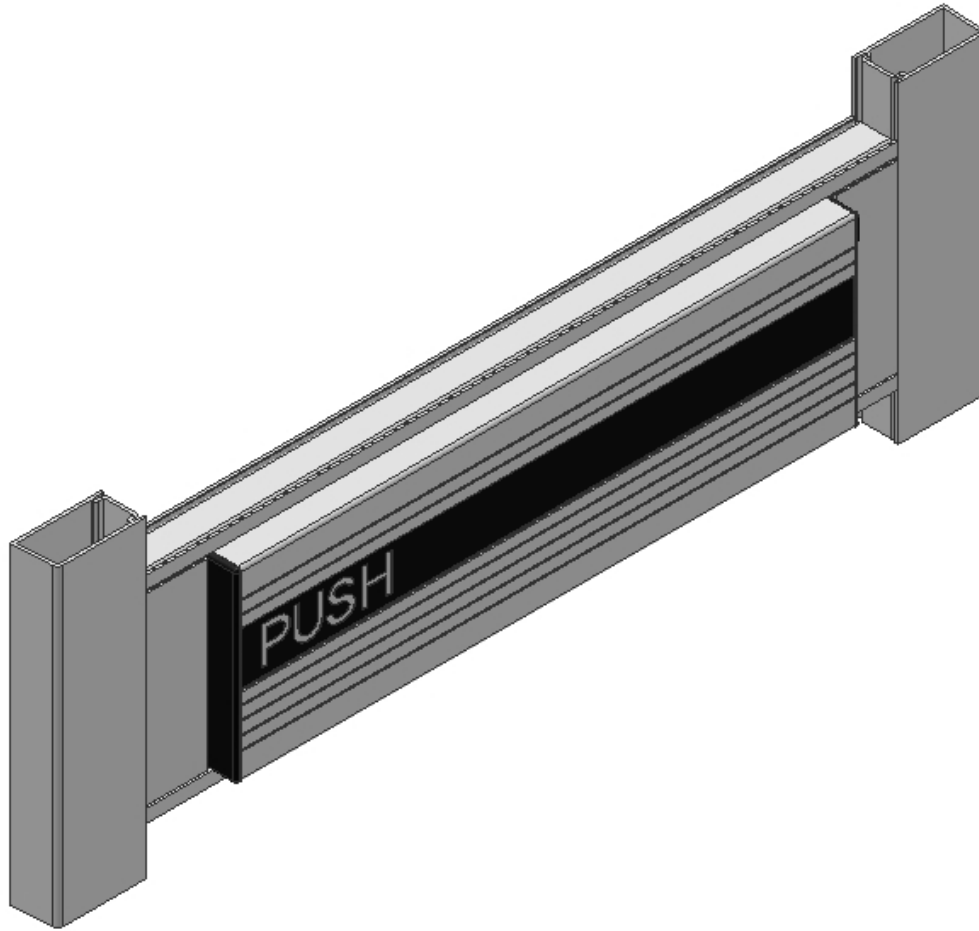


INSTALLATION



INSTRUCTIONS

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PANELINE™ MEL EXIT DEVICE

INSTALLATION INSTRUCTIONS

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Consult the KawneerDirect website for the latest updates to the instructions before beginning work on your project

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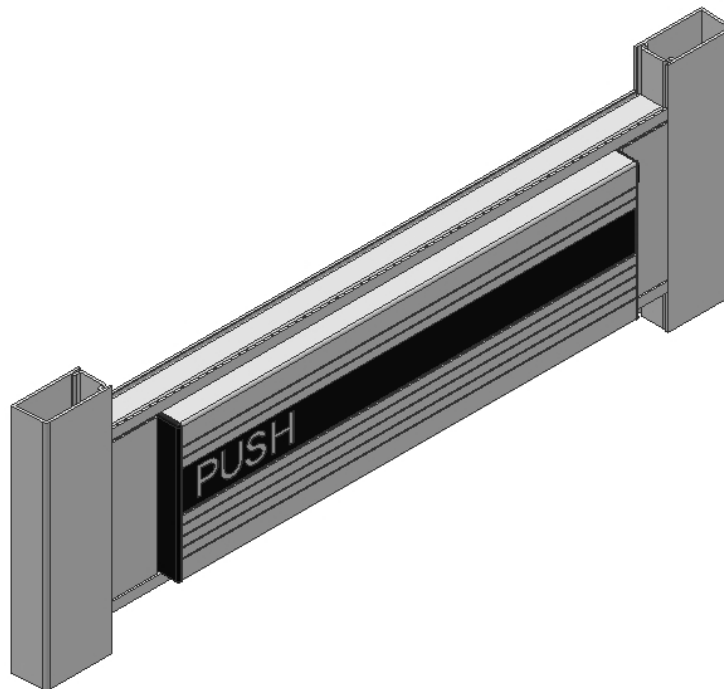
INTRODUCTION

A. Scope

This document provides instructions for the installation and adjustment of the Paneline™ MEL Exit Device. Instructions for frame preparation, strike adjustment, rod adjustment, glazing, and detailed service procedures are provided in the Paneline™ Exit Device Service Instructions.

Installation and adjustment vary depending on the date of manufacture. For exit devices before 2019, refer to *Paneline™ Exit Device Service Instructions*, for removal and installation of dress caps and push pad.

MEL Exit Devices use a deeper push pad and can only be retrofit into Paneline Exits manufactured after 1989.



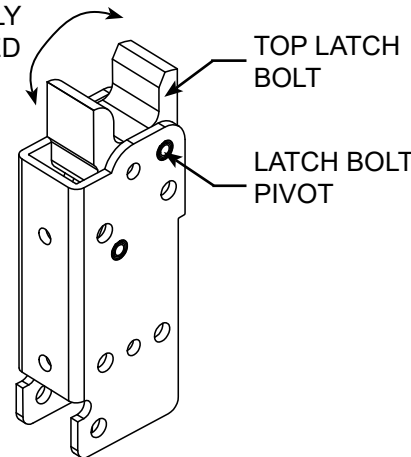
B. Before Starting

Important:

Before installing or adjusting exit device, confirm that door rods are correctly adjusted. Paneline device cannot be adjusted or operated successfully when rods are out of adjustment. With rods properly adjusted, top latch bolt pivots freely when dogged or electrically activated.

Refer to *Paneline™ Exit Device Service Instructions*, for rod adjustment procedure.

MUST PIVOT FREELY
WHEN DOGGED
OR ELECTRICALLY
ACTIVATED



C. Referenced Documents

See these documents for related details and information:

- Paneline™ Exit Device Service Instructions, **038371EN**
- SP2000 Power Controller Wiring Diagram, **050424EN**

D. Required Tools

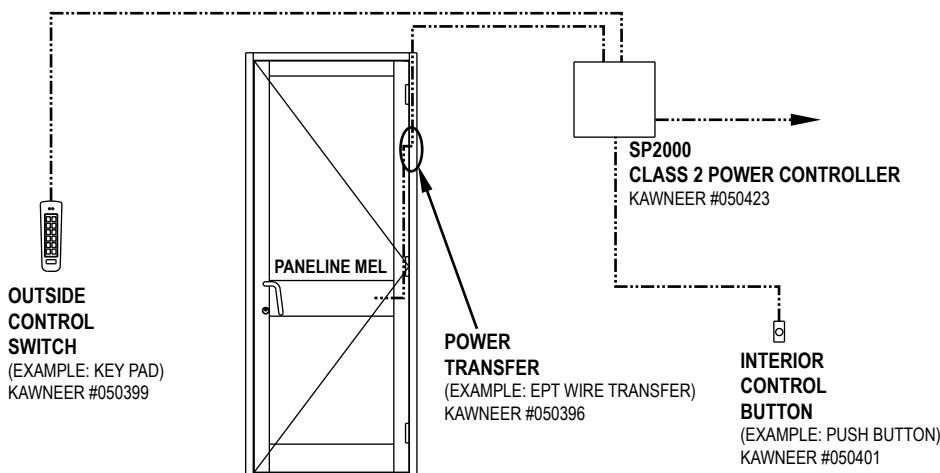
- Teflon grease, 033203
- #1 phillips head screwdriver
- #2 phillips head screwdriver
- #2 flat head screwdriver
- dogging hex key, 030435 (furnished)
- putty knife

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WIRING AND PARTS IDENTIFICATION

A. Basic Wiring Diagram



WIRE GAUGE	EPT, ELECTRIC B/H or O/P
18 AWG Stranded	180 ft
16 AWG Stranded	280 ft
14 AWG Stranded	450 ft
12 AWG Stranded	720 ft

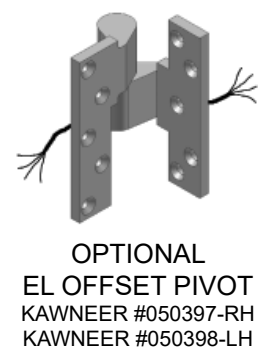
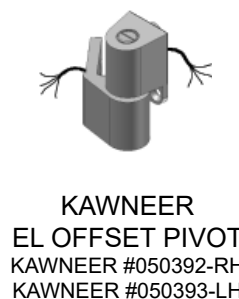
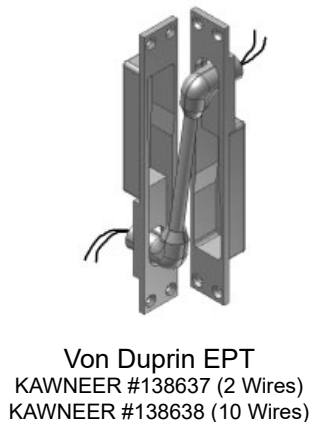
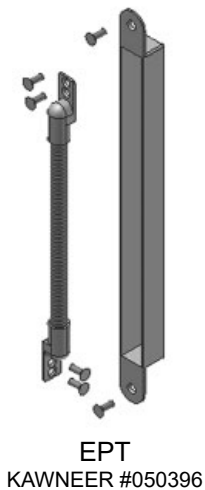
Notes:

- a. Coordinate all wiring with a licensed electrical installer.
- b. Point-to-point wiring diagram to be supplied for each project at time of installation.
- c. The SP2000 is the approved power controller. Refer to *SP2000 Power Controller Wiring Diagram*.

ELECTRICAL SPECIFICATION

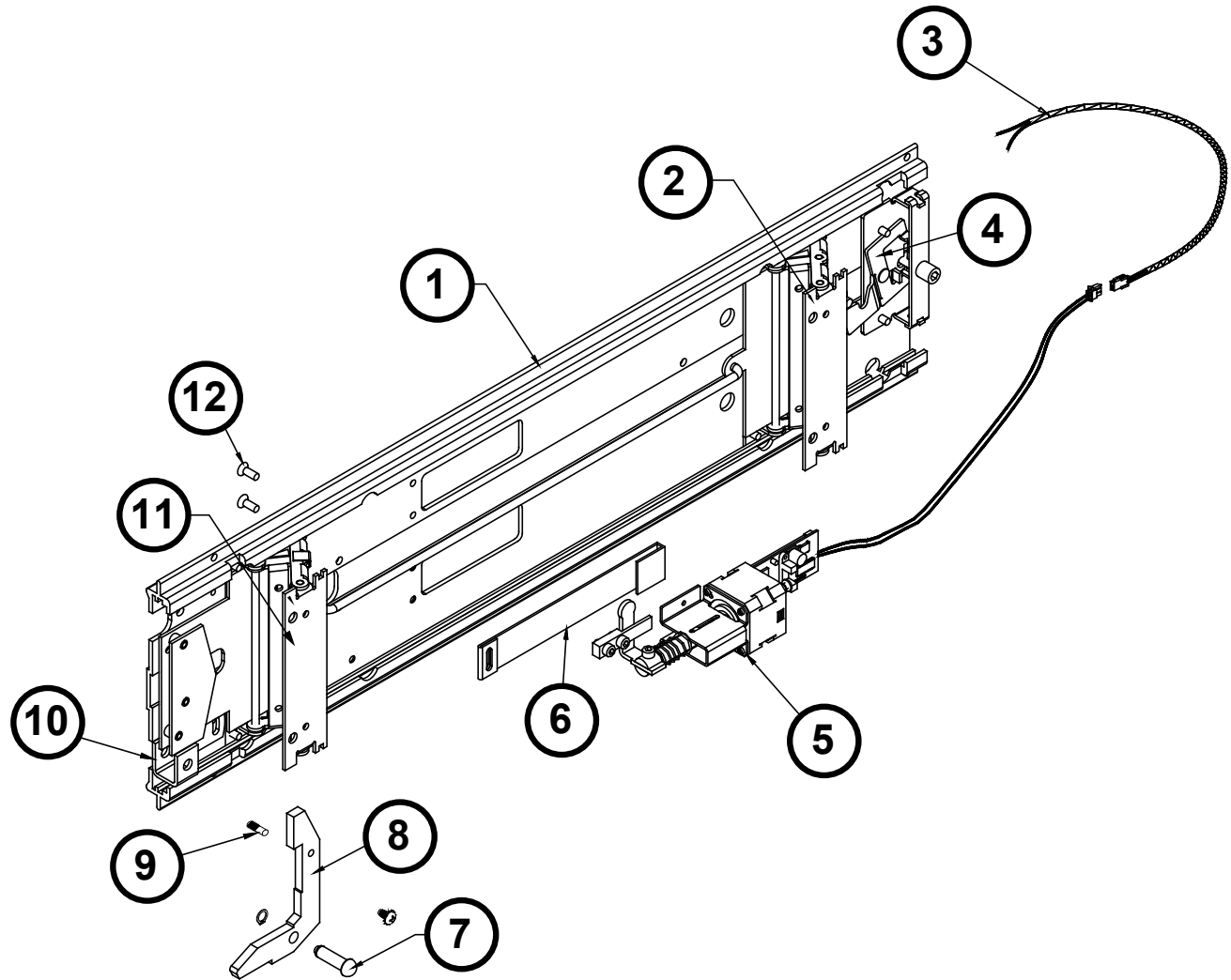
Voltage: 24 Vdc ± 10%
 Current: 1 A max initial in-rush/400 mA max holding power input non-polarized

B. Power Transfers



AVAILABLE WITH	EPT	KAWNEER EL BUTT HINGE	KAWNEER EL OFFSET PIVOT	OPTIONAL EL OFFSET PIVOT
190/350/500 STANDARD	X	X	X	X
HEAVY WALL	X	X		X
TUFFLINE	X			
FLUSHLINE	X	X		X

C. Chassis Parts Breakdown



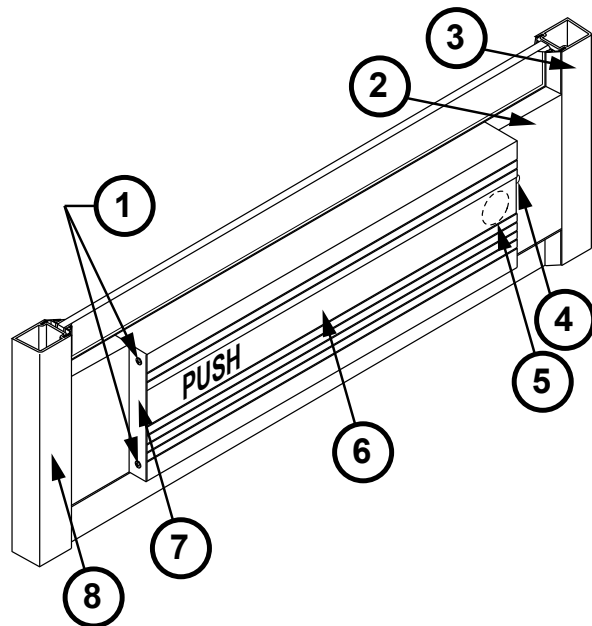
ID	PART NUMBER	DESCRIPTION	ID	PART NUMBER	DESCRIPTION
1	233201	CHASSIS SUB ASSEMBLY	9	233242	LEVER PIN
2	033198	INACTIVE TOGGLE ASSEMBLY	10	133007	RH LEVER AXLE BRACKET
3	233228	3' QUICK CONNECT CABLE (SHIP LOOSE)		233446	LH LEVER AXLE BRACKET
4	033091	DOGGING ASSEMBLY	11	033196	RH TOGGLE ASSEMBLY
5	233375	MOTOR DRIVE ASSEMBLY		033197	LH TOGGLE ASSEMBLY
6	233241	SLIDE BAR	12	028237	#8-32 X 3/8" FHMSUC (QTY 2)
7	233448	AXLE LEVER PIN	<p>Note: Parts shown for clarity in procedures. Chassis is sold as a single unit. Only motor drive assembly may be purchased separately.</p>		
8	233244	EL RH LEVER			
	233245	EL LH LEVER			

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D. Exit Device Assembly

ID	DESCRIPTION
1	DRESS CAP FASTENERS (4) 028288
2	FILLER PLATE
3	HINGE STILE
4	DOGGING SCREW LOCATION
5	DOGGING CYLINDER LOCATION
6	PUSH PANEL
7	DRESS CAP
8	LOCK STILE



INSTALLATION

A. Install Chassis

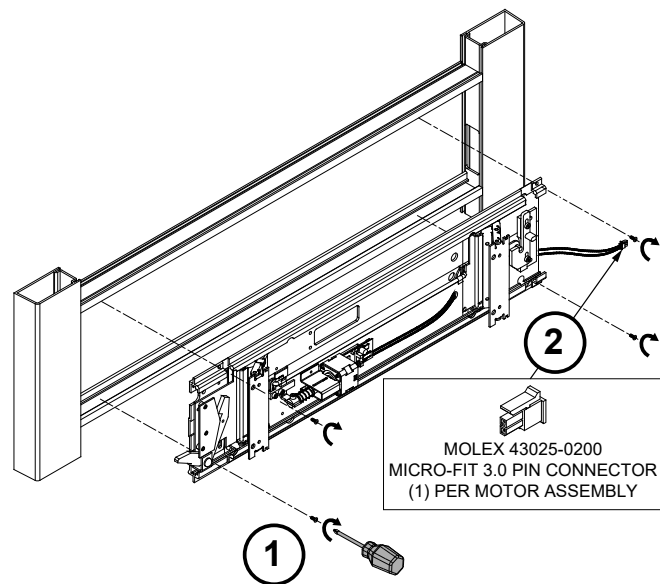
Electrical Notes:

- Coordinate all wiring with a licensed electrical installer.
- Point-to-point wiring diagram to be supplied for each project at time of installation.
- The SP2000 is the approved power controller. Refer to *SP2000 Power Controller Wiring Diagram*.

1. Install chassis assembly into cross rail using four (4) 028403 fasteners.

SKIP THIS STEP IF PREPARING DOOR FOR FINAL INSTALLATION.

2. Attach male quick connect from Paneline device to the power cable with the female quick connect.



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SKIP THESE STEPS IF NOT PREPARING DOOR FOR FINAL INSTALLATION.

3. Use an approved power transfer device to transfer wiring from the door to the frame.
4. Attach the quick-connect cable to the power transfer and to the wire run from the SP2000 power controller.
5. Test unit for proper electrical activation.

B. Adjust Lift Lever

1. Stand door up with a .75 in spacer between door and floor to allow for bolt operation (not needed for installed doors).
2. Check for proper operation and set door bolts in locked position.
3. Lubricate lift lever where shown with Teflon grease, 033203.
 - traveler in housing
 - lever surfaces touching traveler roller and lock cam.
4. Loosen binder fastener on lever axle bracket.
5. Rotate bracket until lever arm contacts bottom of traveler roller with no pressure.

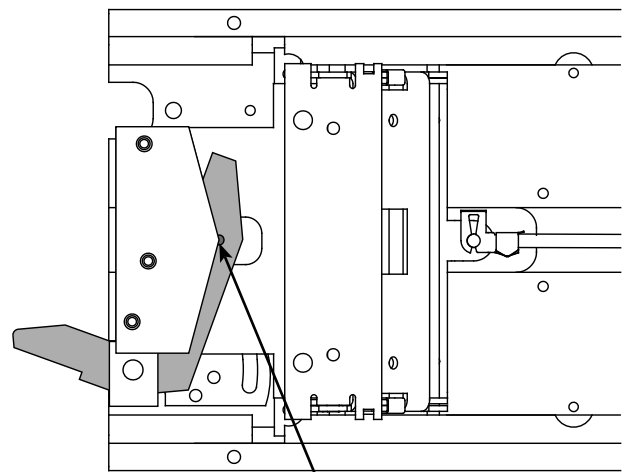
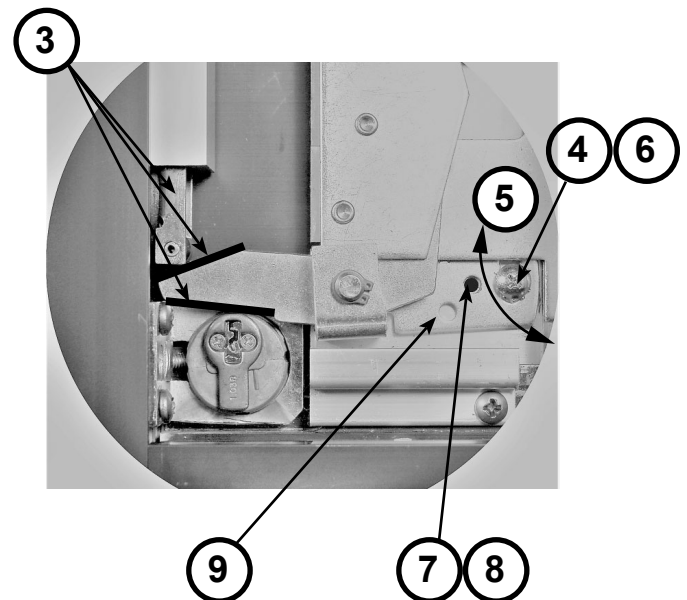
Note: Slight gap between lever arm and bottom of traveler roller is also acceptable.

Note: When lever is properly adjusted and rods are retracted, pin in upper arm of lift lever should be partially covered by plate above.

6. Tighten binder fastener to allow for operation testing.
7. After testing unit thoroughly, drill a hole through chassis where shown using a #23 (0.154 dia.) bit.

Note: Do NOT blow chips into mechanism. Place a shop cloth under bracket while drilling to catch metal chips.

8. Lock lever axle bracket in place with fastener 028747.
9. If field readjustment is needed, use the extra hole in axle bracket.



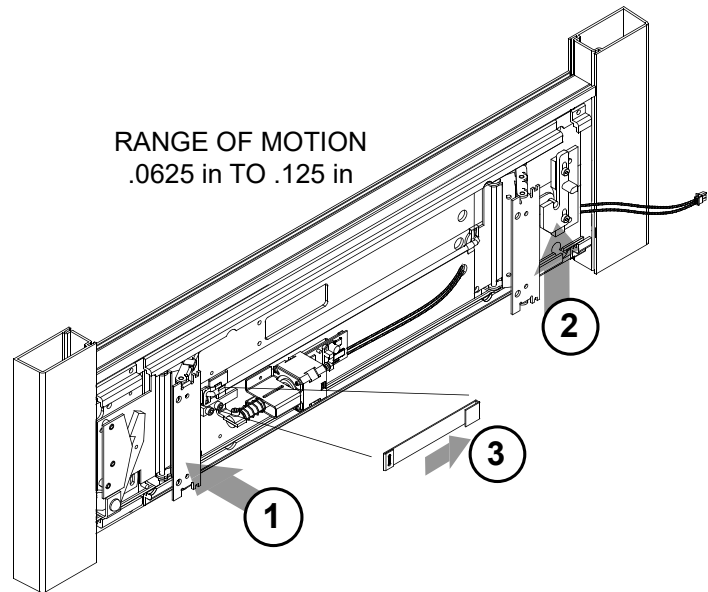
APPEARANCE OF LEVER AND PIN WHEN PROPERLY ADJUSTED

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C. Check Slide Bar

1. Depress active toggle assembly to retract door rods.
2. Dog exit device (mechanically or electrically).
3. Confirm slide bar moves freely, .0625 in to .125 in toward pivot stile.
4. If slide bar does not move, adjust top rod assembly.



D. Adjust Electric Motor Drive

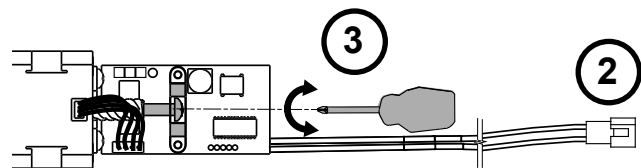
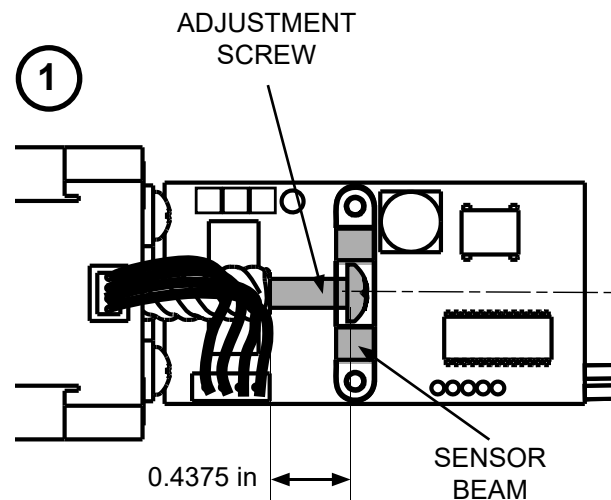
1. Confirm adjustment screw aligns with optical sensor beam.

Note: Adjustment screw is factory set to extend 0.4375 in as shown.

2. Connect motor drive to SP2000 power controller and test electrical operation.

CAUTION: Adjust electrical latch retraction only within the range of mechanical motion. Operating electrical latch retraction beyond mechanical limits may damage the exit device.

3. Rotate adjustment screw clockwise to increase pull or counterclockwise to decrease pull.
4. Confirm that exit device is properly adjusted for mechanical operation.
5. Refer to *Paneline™ Exit Device Service Instructions* for rod adjustments and additional information.

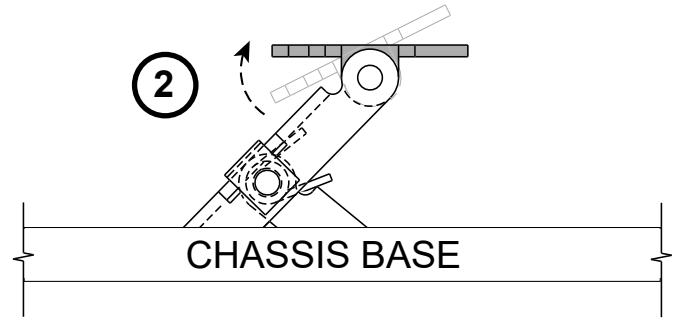


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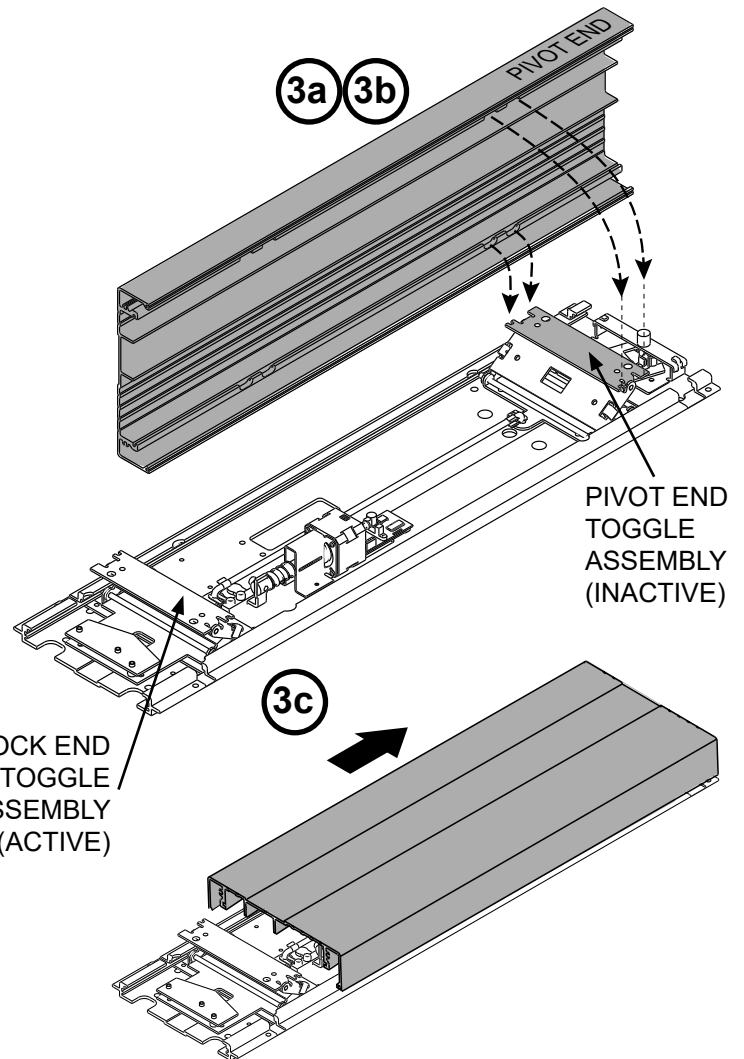
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B. Install Push Pad

1. Lay door on horizontal surface with interior facing up.
2. Tilt toggle assemblies to horizontal, parallel with base of chassis.



3. Engage pivot-end of push pad with pivot-end toggle assembly.
 - a. Align four (4) pivot-end, prefabricated notches with four (4) tabs on pivot-end toggle.
 - b. Lay push pad on toggles so that tabs pass through notches into slot of panel extrusion.
 - c. Slide panel toward pivot end until clear of lock-end toggle.

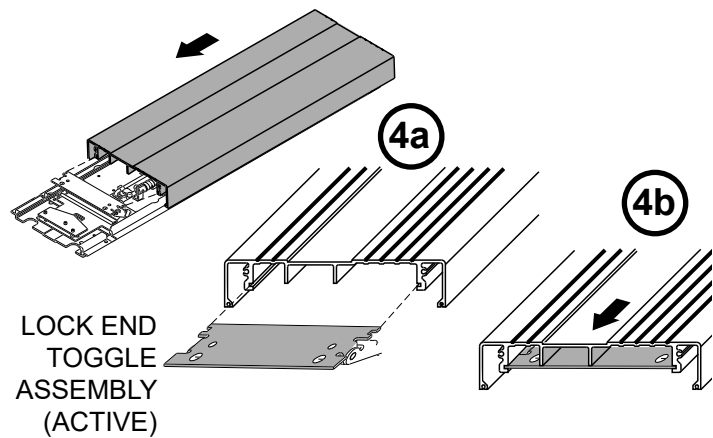


Note: Confirm that both top and bottom slots in push pad are engaged on tabs of pivot-end toggle. Push pad front surface should be parallel to chassis assembly.

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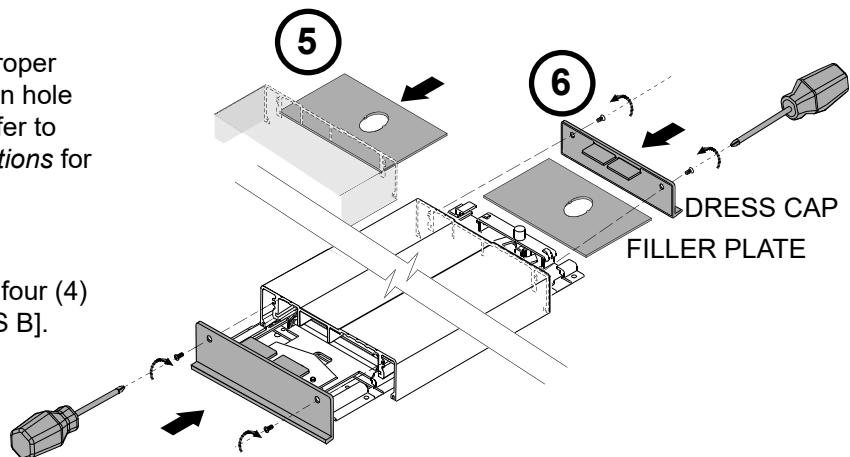
4. Engage push pad with lock-end toggle assembly.
 - a. Align edge of lock-end toggle with slot in push pad.
 - b. Slide push pad onto lock-end toggle.
 - c. Slide until edges of push pad and toggle meet.



5. Slide filler plate (1) 233191 into pivot-end push pad slots.

Note: Filler plate keeps push pad in proper location. If using cylinder dogging, align hole in filler plate with dogging cylinder. Refer to *Paneline™ Exit Device Service Instructions* for cylinder dogging and cam installation.

6. Attach two dress caps (2) 033109 with four (4) 028288 fasteners [#10X.5 in CRPHTFS B].



7. Install lock- and pivot-end filler (finish) plates per *Paneline™ Exit Device Service Instructions*.

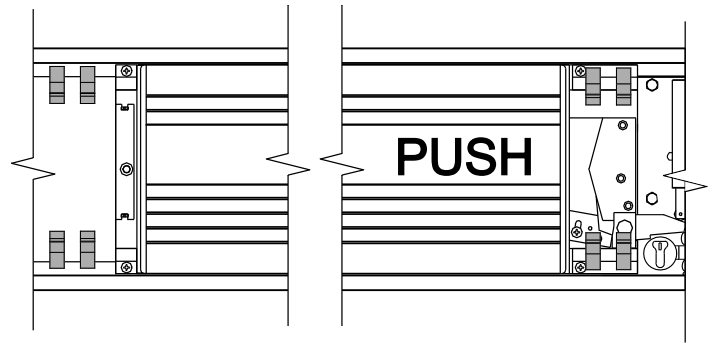
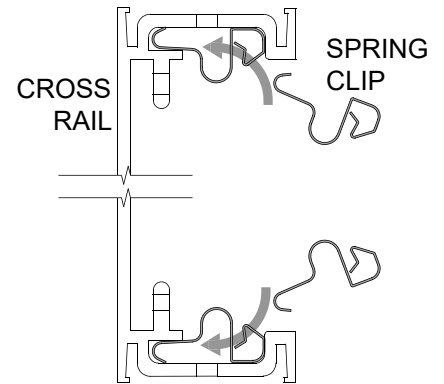
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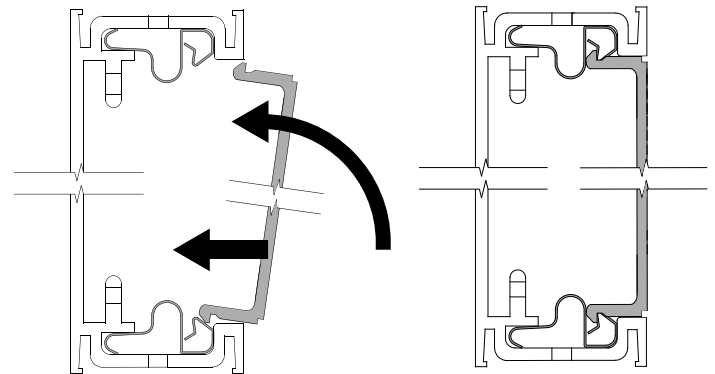
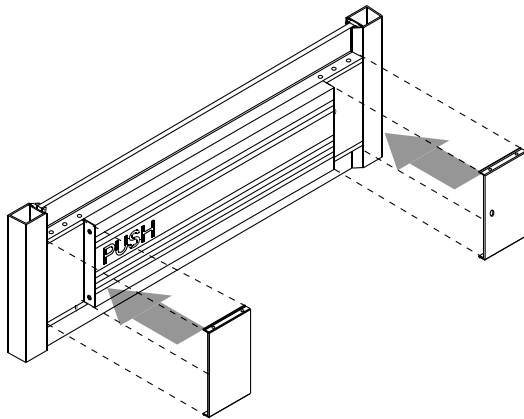
E. Install Finish Plates

1. Insert eight (8) 233391 spring clips in cross rail top and bottom. (Space clips evenly between push pad and stiles.)

Note: The 500 Wide Stile Entrance door only requires four (4) 233391 spring clips.



2. Install lock- and pivot-end filler (finish) plates per *Paneline™ Exit Device Service Instructions*.

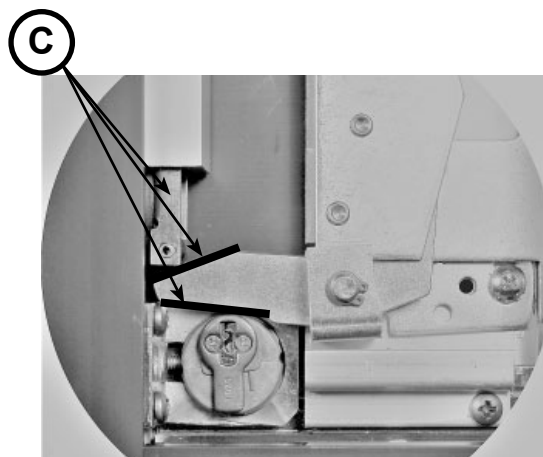


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LUBRICATION

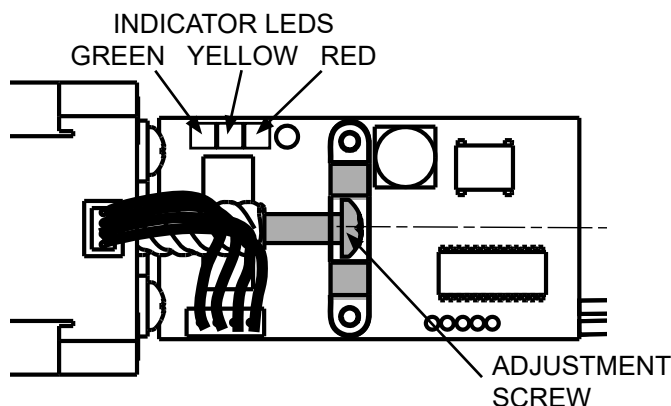
- A.** Frequency: Lubricate every four (4) months.
- B.** Lubricant: Lubricate with Teflon grease 033203 or equivalent.
- C.** Locations: Lubricate where shown with Teflon grease, 033203.
 - traveler in housing
 - lever surface that touches traveler roller
 - lever surface that touches lock cam.



TROUBLESHOOTING LATCH-RETRACTION MOTOR DRIVE

CAUTION:

Remove input power before attempting a solution.



Onboard LED Indicators			Cause	Possible Solution
GREEN (Power)	YELLOW (Sensor)	RED (Error)		
OFF	OFF	OFF	No power to motor drive assembly.	Verify connection, proper input power, and integrity of wire.
ON	ON	OFF	Normal operation. Push pad and door bolts are retracted by default when powered. The device is allowed 2 attempts.	N/A
ON	OFF	ON	Error in operation. The push pad did not retract within 2 attempts.	Rotate adjustment screw counterclockwise to decrease latch-retraction distance.
ON	ON	ON	Error in operation. With power applied, the push pad was unintentionally extended and the touchpad failed to retract again within 2 attempts.	Manually clear jam condition.
ON	BLINK	ON	Error in operation. The push pad did not extend when power was last removed. Device will not attempt a retraction.	Manually clear jam condition.
ON	SIMULTANEOUS BLINK		Error in operation. Input voltage dropped below the specification during operation.	Decrease wire run distance or increase wire gauge.
ON	ALTERNATING BLINK		Error in operation. An electronic fault was detected.	Call Special Projects Group Tech Support at 888-284-4774.

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TROUBLESHOOTING SP2000 POWER CONTROLLER AND PANELINE MEL EXIT DEVICE

Symptom	Cause	Solution
Green AC Input LED is not lit	No ac input voltage	Verify 120 Vac input voltage. Check main input fuse.
Red LED is lit	Fire Alarm (FA) circuit is open	<ol style="list-style-type: none"> 1. Verify FACP is reset and contact is closed. 2. If not connecting to FACP, place jumper between FA terminals.
INP1 red LED blinking slow while Input IN1 is shorted OR INP2 red LED blinking slow while Input IN2 is shorted	Open circuit on output 1 OR Open circuit on output 2	<ol style="list-style-type: none"> 1. Power down SP2000. 2. Remove all wires from O1 and O2. 3. Jumper O1 to GND or O2 to GND. 4. Power up and short I1 or I2 for 10 seconds. <ol style="list-style-type: none"> a. Red LED still blinking slow? * See Note Below b. Red LED blinking fast? <ul style="list-style-type: none"> • Output shorted. Power supply is operating correctly. • Remove jumper and check electric lock for open circuit.
INP1 red LED blinking fast while Input IN1 is shorted OR INP2 red LED blinking fast while Input IN2 is shorted	Circuit is shorted on output 1 OR Circuit is shorted on output 2	<ol style="list-style-type: none"> 1. Power down SP2000. 2. Remove all wires from O1 and O2. 3. Power up and short I1 or I2 to GND terminal for 10 seconds. <ol style="list-style-type: none"> a. Red LED still blinking fast? * See Note Below b. Red LED blinking slow? <ul style="list-style-type: none"> • Output open. Power supply is operating correctly. • Check wiring for short circuit.
Device unlocks, then immediately relocks	Door unlock time too short	Lengthen door unlock time.
	Two devices connected to one	Refer to Special Projects Group point-to-point wiring diagram.
	Incorrect rod adjustment.	Refer to <i>Paneline™ Exit Device Service Instructions</i> .
Device stays unlocked too long	O1 and/or O2 time set too long	When using an access control device, use device to control the unlock time. Set O1 and O2 timers to minimum.
Power supply OK, but device not responding	Poor or broken wire connection	<ol style="list-style-type: none"> 1. Check all wiring connections including male and female plugs. 2. Check power transfer for continuity.
Intermittent MEL device operation	Wire size too small.	Use minimum wire gauge of 18/2.
	Wire run too long.	Relocate power supply or re-route wires to reduce wire run to under 200 feet from power supply to exit device.
	Wire run from power supply to devices has been split.	Do not split wire run from power supply to exit device.
	Incorrect rod adjustment	Refer to <i>Paneline™ Exit Device Service Instructions</i> .
	Poor power transfer connection.	Inspect power transfer connection for broken wires.
	Wiring not coordinated with licensed electrical installer.	EL wiring should always be coordinated with licensed electrical installer.
Rods not releasing upon electrical activation - Binding	Top strike out of adjustment.	Rotate top strike and/or shim to eliminate binding.
	Bottom strike out of adjustment.	Modify bottom-strike cutout to eliminate binding.
	Door not plumb within framing system.	Plumb door to eliminate racking.
	Excessive stack pressure.	Request building owner adjust HVAC system.
	Lubrication needed.	Inspect all moving components and lubricate binding parts with a dry, non-oily, greaseless lubricant.

*** Note - For these and other issues with motor function or adjustment, call Special Projects Group Tech Support at 888-284-4774.**

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