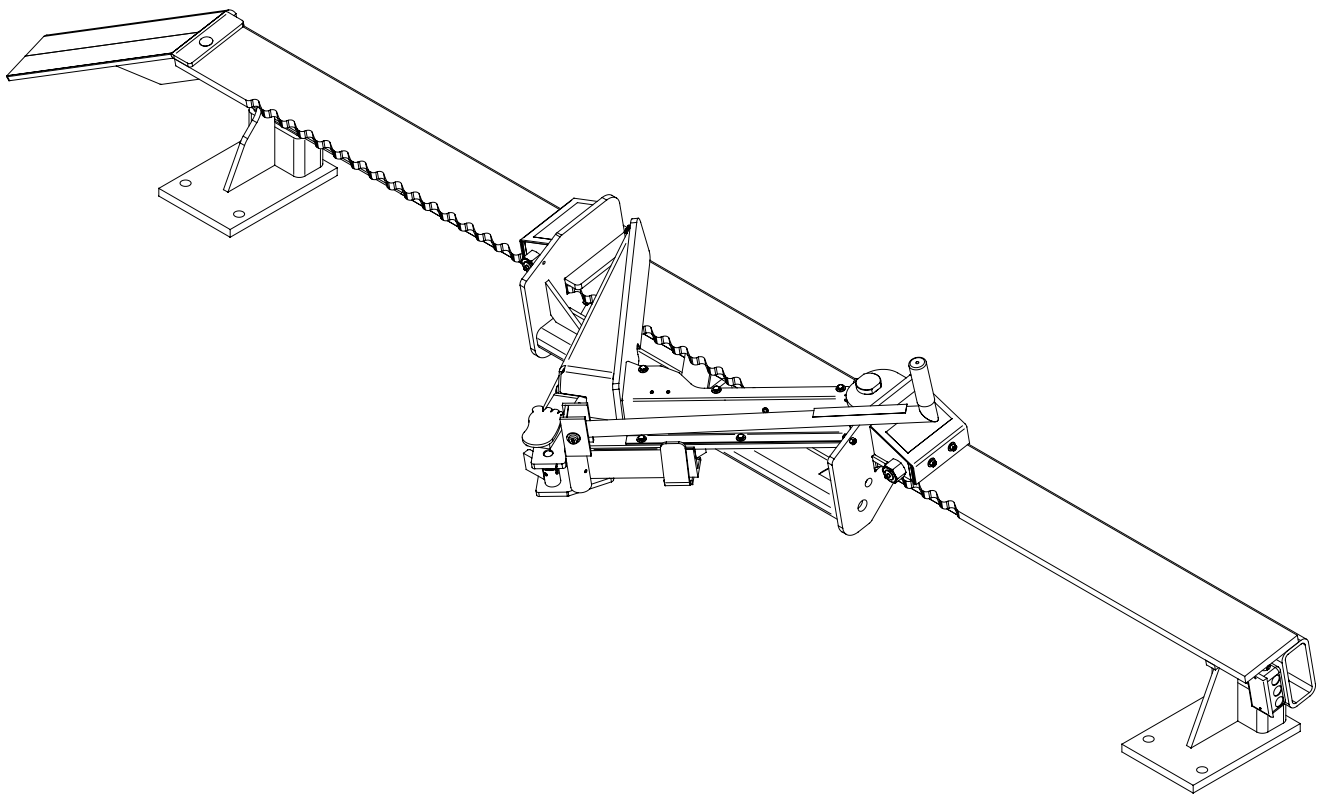


Manual Wheel Restraint Surface Mounted



This manual applies to Manual Wheel Restraints manufactured beginning June 1, 2016 with the serial number 61205420 and higher.

▲ WARNING

Do not install, operate or service this product unless you have read and understand the Safety Practices, Warnings, and Installation and Operating Instructions contained in this manual. Failure to do so could result in death or serious injury.

User's Manual

Installation, Operations,
Maintenance and Parts

Part No. 6014097G

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INTRODUCTION

Welcome, and thank you for buying this wheel chock from 4Front Engineered Solutions, Inc.

This User's Manual contains information that you need to safely install, operate and maintain the wheel chock. It also contains a complete parts list and information about ordering replacement parts. Please keep and read this User's Manual before using your new wheel chock.

SAFETY SIGNAL WORDS

You may find safety signal words such as DANGER, WARNING, CAUTION or NOTICE throughout this Owner's Manual. Their use is explained below:



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible death or injury.

▲ DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

▲ WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

▲ CAUTION

Indicates a potentially hazardous situation which, if not avoided may result in minor or moderate injury.

NOTICE

Notice is used to address practices not related to personal injury.

SAFETY PRACTICES

⚠ WARNING

Read these safety practices before installing, operating or servicing the wheel chock. Failure to follow these safety practices could result in death or serious injury.

READ AND FOLLOW THE OPERATING INSTRUCTIONS IN THIS MANUAL BEFORE OPERATING THE WHEEL CHOCK. If you do not understand the instructions, ask your supervisor to teach you how to use the wheel chock.

Improper installation of wheel chock could result in death or serious injury to dock workers or other users of the wheel chock.

Vehicles leaving or moving when loading and unloading are in process could result in death or serious injury.

Be certain bystanders in the driveway stand clear when the wheel chock is operating.

Be certain to follow the installation instructions in this manual.

OPERATION

Use by untrained people can cause property damage, bodily injury and/or death. Your supervisor should teach you the safe and proper way to use the wheel chock. Read and follow the complete OPERATING INSTRUCTIONS starting on page 13 before use. Do not use the wheel chock if it is not working right. Tell your supervisor it needs repair.

Do not operate the wheel chock with equipment, material, or people directly in front of the chock.

Do not use the wheel chock if it looks broken or does not seem to work right. Tell your supervisor at once.

Before chocking vehicle wheel or engaging the wheel chock, dump air from air ride suspensions and set parking brake.

Prior to using the wheel chock:

- Ensure the vehicle is parked firmly against the dock bumpers.

After engaging the wheel chock:

- Load or unload the vehicle only when the inside GREEN light is displayed.
- If the wheel chock cannot make engagement, use wheel chocks to secure the vehicle, then turn selector switch to **RESTRAINT OVERRIDE/LIGHTS ONLY**.

INSTALLATION, MAINTENANCE AND SERVICE

If the wheel chock does not operate properly using the procedures in this manual, **BE CERTAIN TO MANUALLY CHOCK THE VEHICLE WHEELS BEFORE LOADING OR UNLOADING**. Call your local distributor for service.

Place barricades around pit on dock floor and drive while installing, maintaining or repairing the wheel chock.

Do not stand in the driveway between the dock and a backing vehicle.

All electrical troubleshooting and repair must be done by a qualified technician and meet all applicable codes.

Before doing any electrical work, make certain the power is disconnected and properly tagged or locked off.

Before doing any welding, make certain the power is disconnected and properly tagged or locked off.

If it is necessary to make troubleshooting checks inside the control box with power on, **USE EXTREME CAUTION**. Do not place fingers or uninsulated tools inside the control box. Touching wires or other parts inside the control box could result in electrical shock, serious injury or death.

OWNER'S RESPONSIBILITIES

The owner should recognize the inherent danger of the interface between dock and transport vehicle. The owner should, therefore, train and instruct operators in the safe use of vehicle restraining devices, and take appropriate steps to prevent their use by untrained individuals. The owner shall verify the manual(s) containing the manufacturer's installation, operation, and maintenance requirements, is made available for instruction and training personnel entrusted with such responsibilities.

When industrial vehicles are driven on and off transport vehicles during the loading and unloading operation, the brakes on the transport vehicle shall be applied, and whenever possible, air-ride suspension systems should have the air exhausted and wheel chocks or positive restraints that meet the requirements of ANSI MH30.3 shall be engaged. For more detailed information regarding vehicle restraints see "ANSI MH30.3 Vehicle restraining devices: Performance and Testing" available at www.mhi.org/lodem. When a vehicle restraint is unable to properly engage a transport vehicle, the user shall activate the applicable communication if so included, or provide an alternate method to address a "not restrained vehicle condition" to alert and or protect the loading dock operating personnel.

Manufacturer's recommended periodic maintenance and inspection procedures in effect at date of shipment shall be followed and written records of the performance of these procedures should be kept. Only trained and authorized personnel shall be permitted to maintain, repair, inspect and adjust the vehicle restraint. Use only original equipment manufacturer parts, manuals, maintenance instructions and labels; or their equivalent.

Restraining devices that are structurally damaged shall be removed from service, inspected by the manufacturer's representative, and repaired as needed or recommended by the manufacturer before being placed back into service. Modifications or alterations of restraining devices shall be made only with written permission of the original manufacturer. These changes shall be in conformance with all applicable provisions of this standard and shall be at least as safe as the equipment was before modification. These changes shall also satisfy all safety recommendations of the original equipment manufacturer for the particular application of the restraint.

The owner shall see that all nameplates, cautions, instructions, and posted warnings are in place and legible and that these items and communication lights shall not be obscured from the view of operating or maintenance personnel for whom such warnings are intended.

The vehicle restraint shall never be used in a manner not intended by its design. It shall also be compatible with the loading dock equipment and other conditions relating to the loading dock area. When selecting a restraining device, it is important to consider not only present requirements but also future plans or adverse environments.

COMPONENTS AND SPECIFICATIONS

The main components of the wheel chock are shown below.

Fig. 1

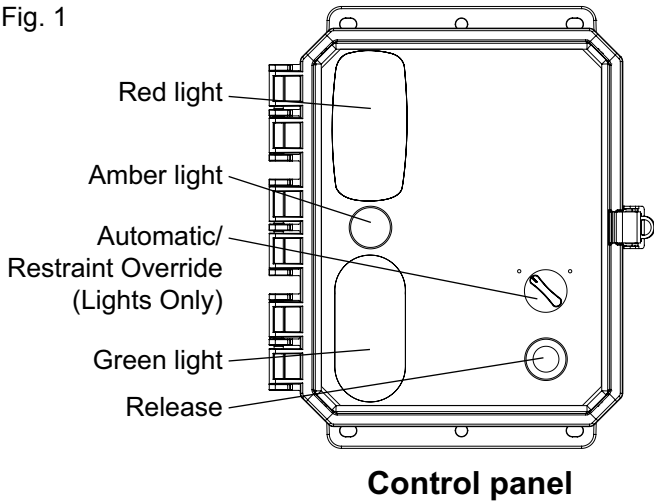
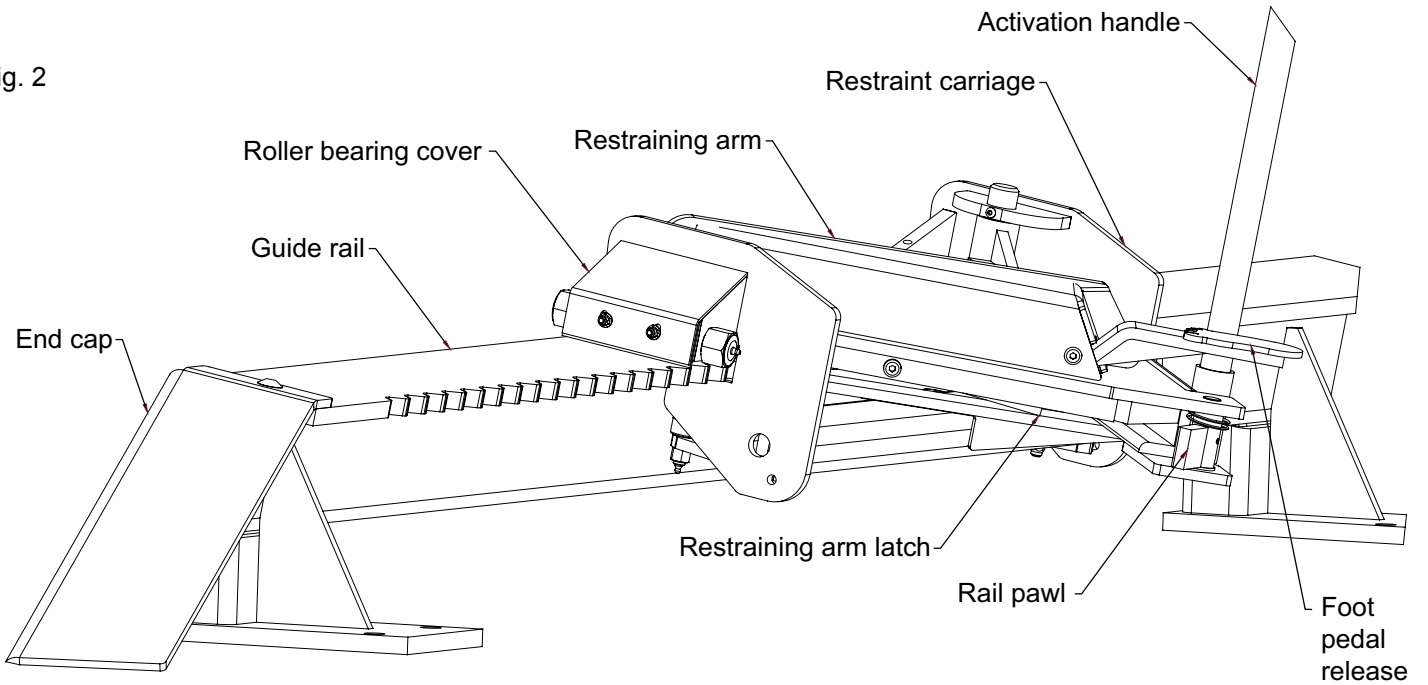


Fig. 2



INSTALLATION INSTRUCTIONS

⚠ WARNING

Before installation read and follow the Safety Practices on page 3. Failure to follow these safety practices could result in death or serious injury.

READ AND FOLLOW THE OPERATION INSTRUCTIONS IN THIS MANUAL BEFORE OPERATING THE WHEEL CHOCK. If you do not understand the instructions, ask your supervisor to teach you how to use the wheel chock.

Improper installation of the wheel chock could result in death or serious injury to dock workers or other users of the wheel chock.

Place barricades around pit on dock floor and drive while installing, maintaining or repairing the wheel chock.

Be certain bystanders in the driveway stand clear when the wheel chock is operated.

Be certain to follow the installation instructions in this manual.

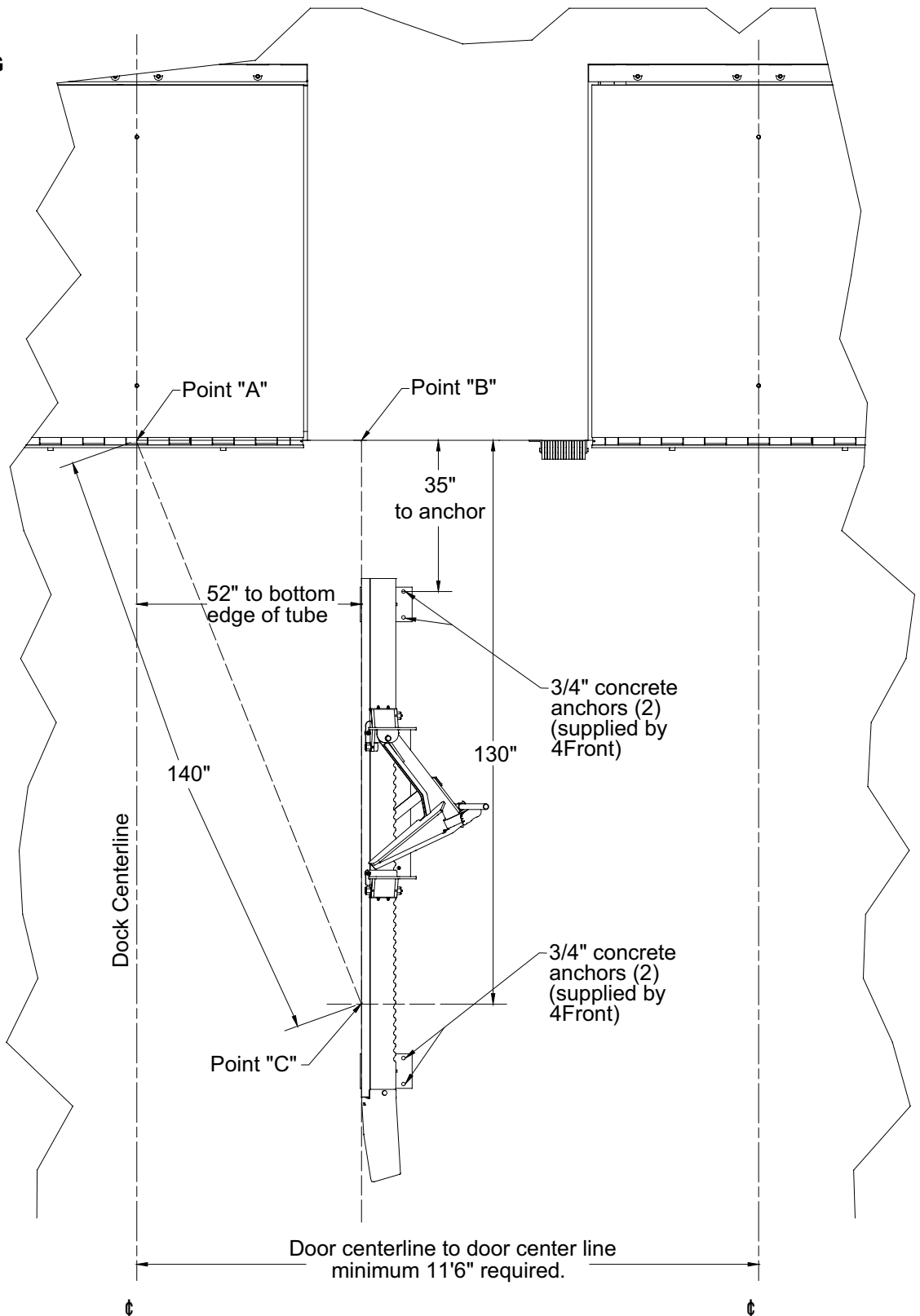
INSTALLATION INSTRUCTIONS

1. Layout the installation position. Refer to the wheel chock installation drawings included in this publication for clarification of the following instructions. See Fig. 3.
 - a. Mark the center line of the dock on the driveway. This is point "A".
 - b. While facing the dock, measure over 52" to the right of the center line and mark the driveway at the dock wall. This is point "B".
 - c. Measure 130" out from the dock wall (from point "B") and draw a line on the driveway parallel to the wall.
 - d. Hold one end of the tape measure on the center line of the dock wall (point "A") and measure out 140" to the 130" line. Mark where the 140" distance crosses the 130" line. This is point "C".
 - e. Mark a line from point "B" to point "C" and extend the line out 16' from the dock face. This line will be square to the dock wall.
2. Position the wheel chock assembly on the right side of the driveway with the inside edge of the guide rail tube directly above the line "B-C" with back anchor 35" from dock wall. Secure the rail assembly to the driveway with four anchor bolts 3/4" diameter by 5-1/2" long (Furnished by 4Front Engineered Solutions, Inc.). Torque to 110 ft. lbs.
3. Mount the conduit cover over the conduit between the manual wheel restraint and the dock wall. Secure the conduit cover with two spike anchors 1/2" diameter by 5" long (provided by manufacturer). See Fig. 5.
4. Mount the control panel on drivers side of the dock so that the communication lights are visible to the fork truck driver. Mount the outside communication lights/alarm and sign so that they are visible to the vehicle driver. Refer to the installation drawing for recommended dimensions. Make sure the RED light is on top and the GREEN light on the bottom when the light assembly is mounted. See Fig. 5.
5. Refer to the operation and maintenance instructions. If the wheel chock does not operate properly, refer to the troubleshooting guide on page 20.

INSTALLATION INSTRUCTIONS, continued

Fig. 3

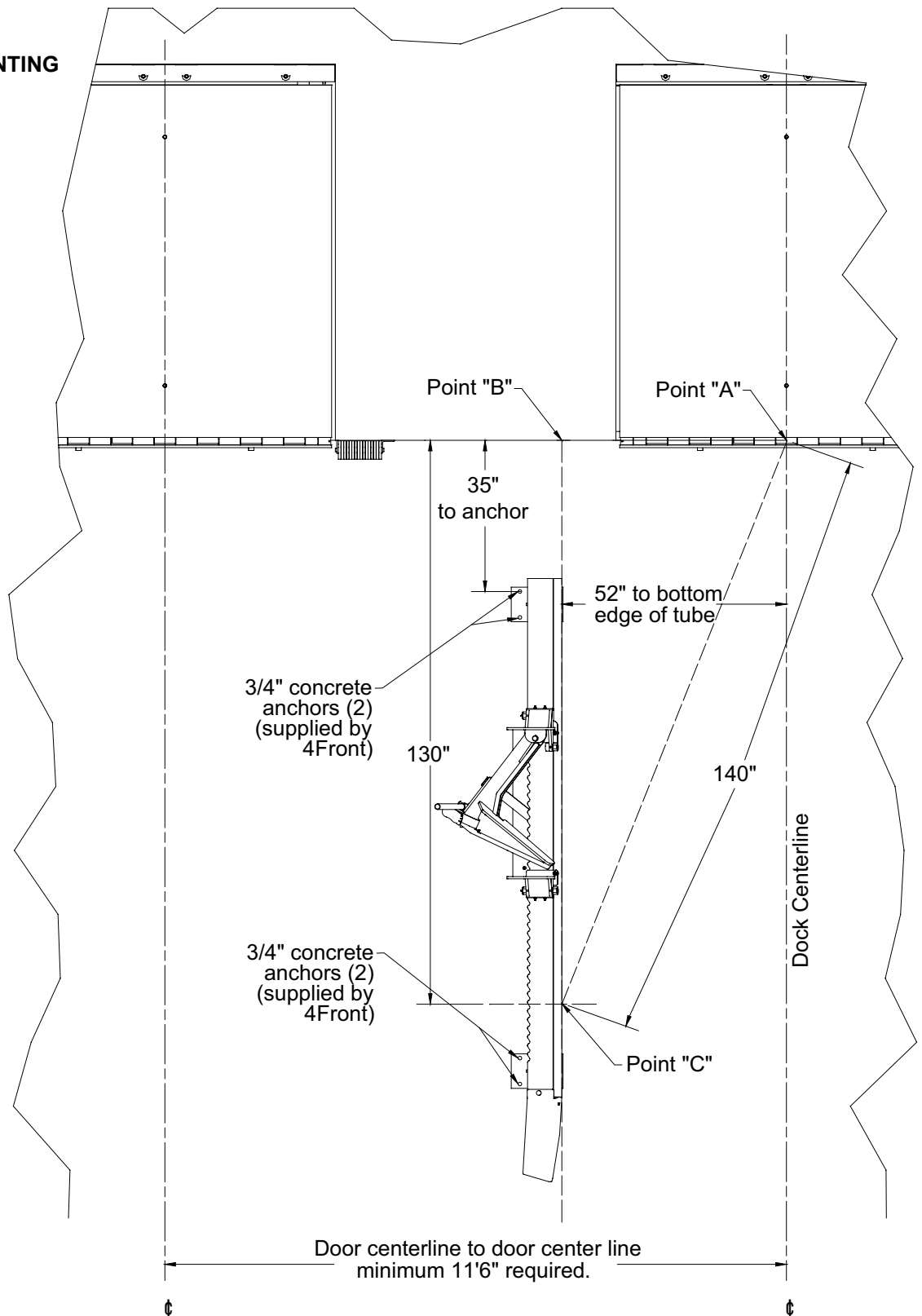
DRIVER SIDE MOUNTING



INSTALLATION INSTRUCTIONS, continued

Fig. 4

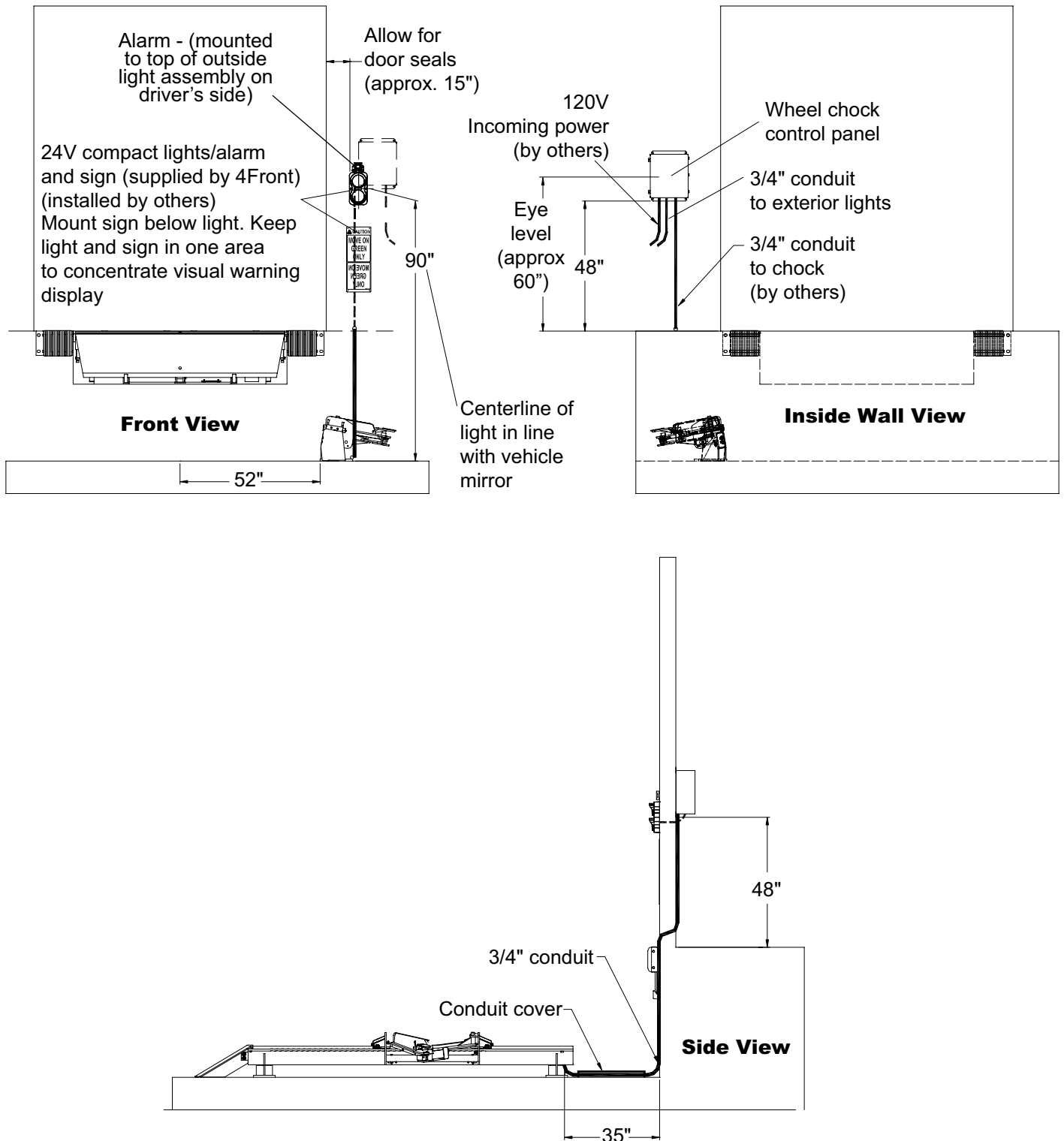
PASSENGER SIDE MOUNTING



INSTALLATION INSTRUCTIONS, continued

Fig. 5

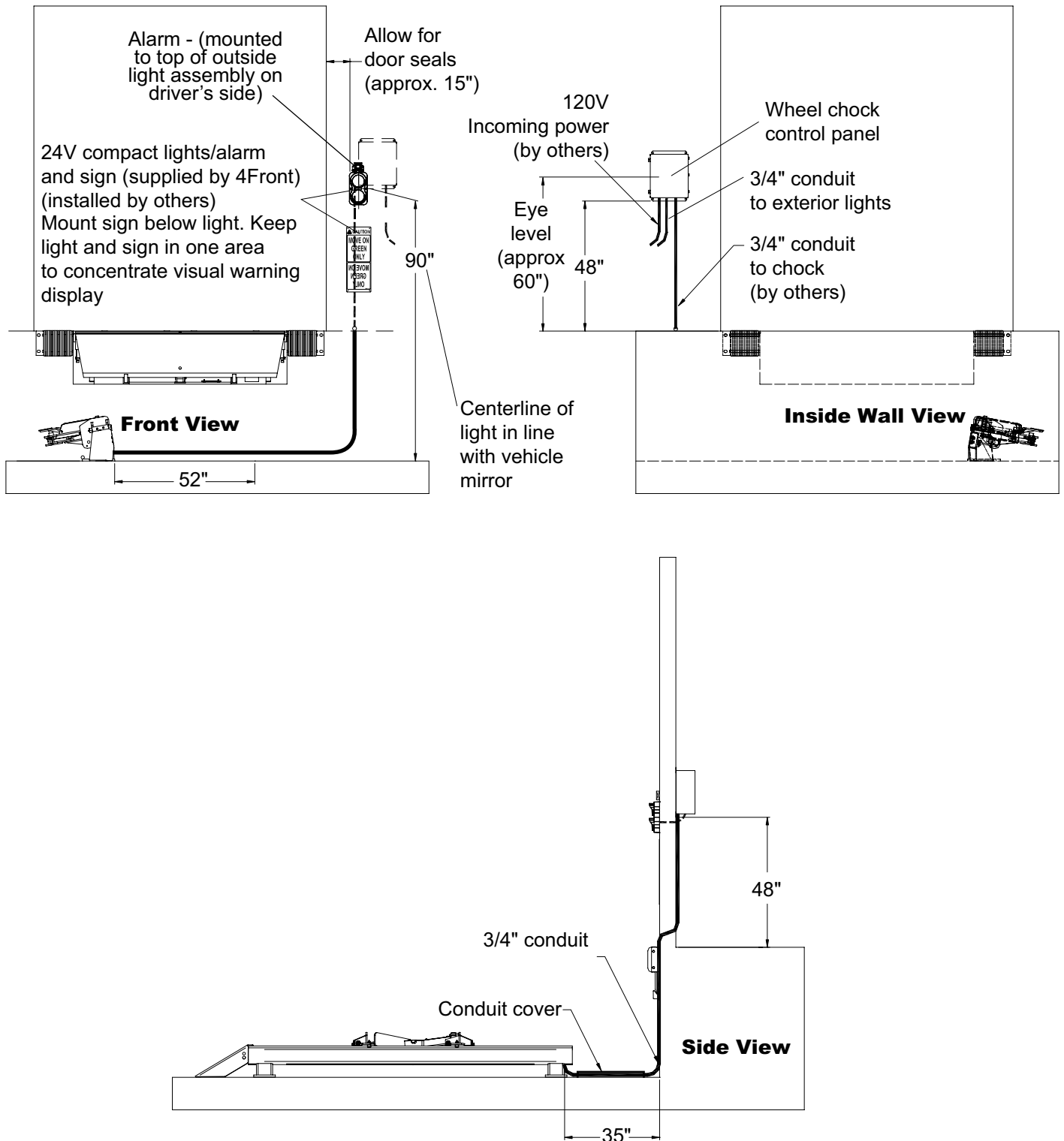
DRIVER SIDE MOUNTING



INSTALLATION INSTRUCTIONS, continued

Fig. 6

PASSENGER SIDE MOUNTING



INSTALLATION INSTRUCTIONS, continued

WEDGE ANCHOR INSTALLATION

Fig. 7

▲ WARNING

Do not install the wheel chock anchor bolts into aged or unsound concrete.

Use standard anchors on smooth 4,000 PSI concrete walls only. For aggregate, cinder block or tilt walls - consult factory.

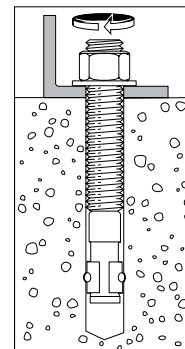
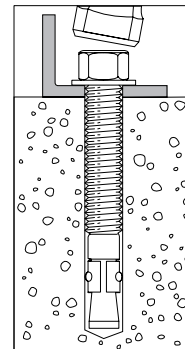
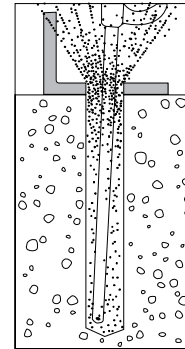
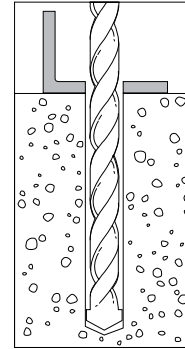
▲ CAUTION

Oversized holes in the base material will make it difficult to set the anchor and will reduce the anchor's load capacity.

NOTICE

Do not use an impact wrench to set or tighten the wedge anchors.

Drill a hole in the concrete using a rotary hammer with a 3/4" drill bit. Drill the hole to the specified embedment depth and blow it clean using compressed air. Alternatively, drill the hole deep enough to accommodate embedment depth and dust from drilling. Assemble the anchor with nut and washer so the top of the nut is flush with the top of the anchor. Place the anchor in the fixture and drive into the hole until washer and nut are tight against fixture. Torque to 110 ft. lbs. See Fig. 7.



INSTALLATION INSTRUCTIONS, continued

ELECTRICAL INSTALLATION

▲ WARNING

All wiring must be done by a qualified technician and must meet all applicable codes.

NOTICE

A field installed relay kit must be installed in the panel to interlock a dock leveler.

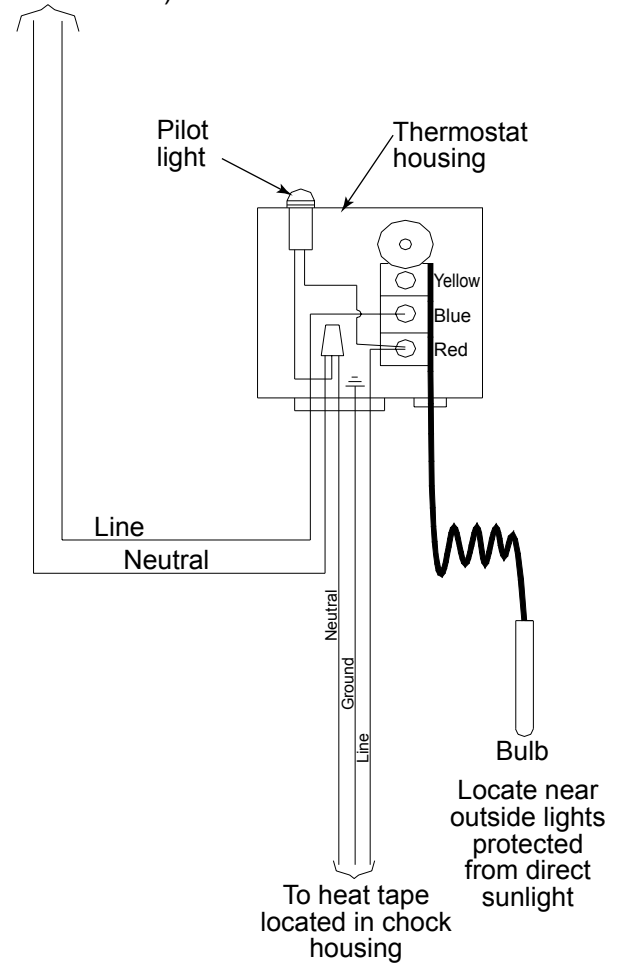
1. Make all field connections as shown on electrical installation drawing, see page 21.

HEAT TRACER INSTALLATION (OPTIONAL)

1. Mount the thermostat housing in close proximity to the outside lights, except on the inside of the wall. Protrude the bulb through the wall under the outside lights protected from direct sunlight.
2. Wire the heat tracer and pilot light in the thermostat housing. Set the thermostat at 40-50° F, and test the heat tape and chock for proper operation. Make sure the pilot light turns on when the thermostat turns the heat tape on. The pilot light becomes a visible indication of proper heat tape operation.
3. Power for the heat tape is separate from the wheel chock control box. It requires a separate 115V power source with 4 amp fuse, with GFI protection recommended, provided by others. See Fig 8.

Fig. 8

115VAC, 1Ø to 4 AMP
fused disconnect by others
(GFI recommended)



OPERATING INSTRUCTIONS

Use these instructions for normal operations.

▲ WARNING

Before operating the wheel chock, read and follow the Safety Practices, Warnings, and Operation instructions contained in this manual. Use by untrained people could result in death or serious injury.

Do not use the wheel chock if it looks broken or does not seem to work right. Tell your supervisor at once.

*Do not load or unload any vehicle unless you make certain the wheel chock has securely engaged the tire and set the brakes. If the wheel chock will not chock the vehicle's tire for any reason, **BE CERTAIN TO MANUALLY CHOCK THE VEHICLE WHEELS BEFORE LOADING OR UNLOADING.***

Enter the vehicle only when the GREEN signal light on the control panel is on. You must check the GREEN signal light each time that the vehicle is entered. If the GREEN light goes off at any time during loading operations, immediately cease loading operations and check the wheel chock to ensure that it is securely hitched.

If the power to the wheel chock is interrupted, immediately cease operations and check the unit. consult the troubleshooting instructions to reset the lights when power resumes.

Vehicles leaving or moving when loading and unloading are in process could result in death or serious injury.

Do not press the release button or release the chock arm with dock leveler lip in trailer. Always return the dock leveler to its stored position at dock level before pressing the release push button or allowing the vehicle to leave.

Failure to follow these safety practices may result in death or serious injury.

OPERATING INSTRUCTIONS, continued

ENGAGING VEHICLE

1. The vehicle should be in contact with the dock bumpers and the wheel restraint in the stored position. The outside light should be GREEN and inside light should RED with the selector switch in the AUTOMATIC position. See Fig. 9.
2. Lift the activation handle from storage and move the chock carriage along the guide rail. Position the chock arm in front of the rear wheel of the vehicle. See Fig 10.
3. Extend the chock arm out by pushing the activation handle toward the trailer until it locks into position on the rail. As the chock arm begins to extend toward the trailer, the outside light will change from GREEN to RED. See Fig. 11.

Fig. 9

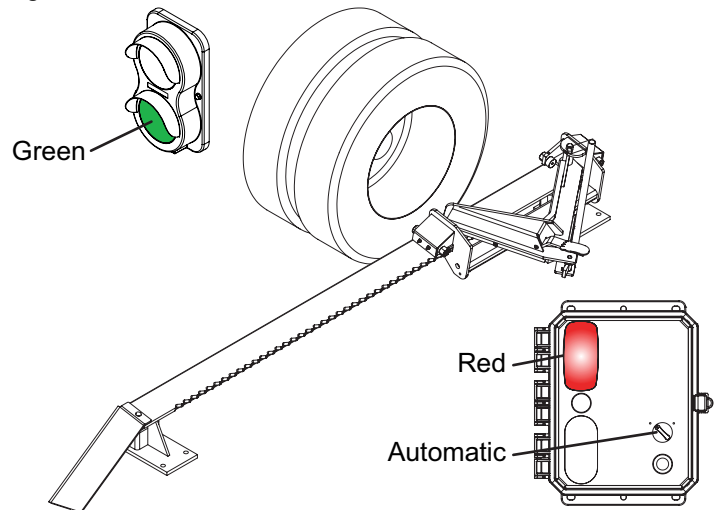


Fig. 10

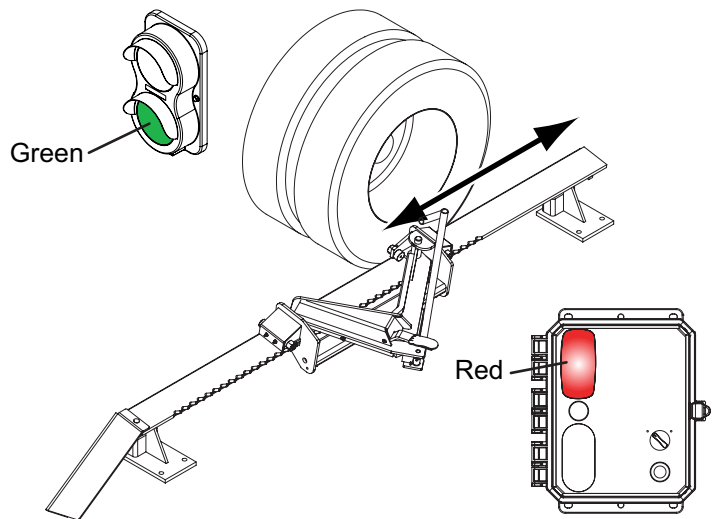
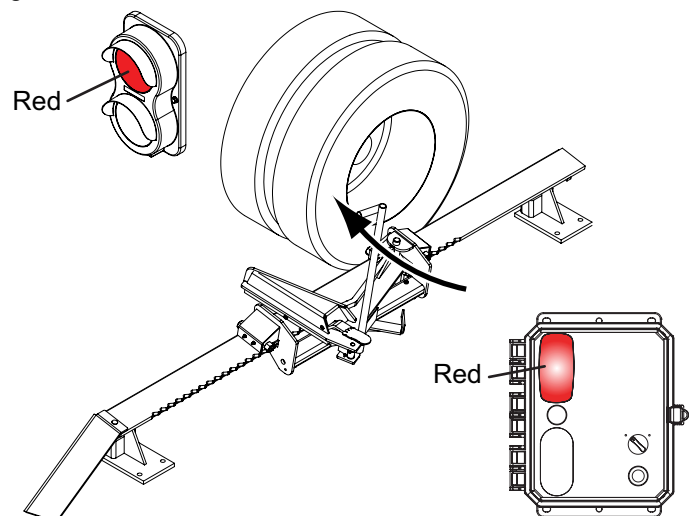


Fig. 11



OPERATING INSTRUCTIONS, continued

ENGAGING VEHICLE (CONTINUED)

4. With the chock arm locked in the extended position move the chock arm into contact with the rear wheel of the vehicle. Pull the handle towards you to confirm that the chock has fully engaged the rear wheel. When the chock has fully engaged the rear wheel, the inside lights will change from Red to Green. Lower the activation handle into storage. The vehicle is now safe to load and unload. See Fig. 12.

▲ WARNING

In the event the chock arm is released prior to the release pushbutton being pressed, an audible alarm will sound and the inside lights will change from GREEN to RED and AMBER. Re-engage chock arm to silence alarm and change inside light back to GREEN. Do not attempt to load or unload the vehicle until alarm is silenced and inside light is GREEN.

RELEASING VEHICLE

▲ WARNING

Do not press the release button or release the chock arm with dock leveler lip in trailer.

1. Store the dock leveler.
2. Press chock release button. The inside light will change from GREEN to RED and FLASHING AMBER. The outside light will change from RED to RED and GREEN. See Fig. 13.
3. Lift the activation handle from storage. Release the chock arm from vehicle wheel by applying a downward force to the foot pedal and allow the chock arm to retract toward the stored position. See Fig. 14.

Fig. 12

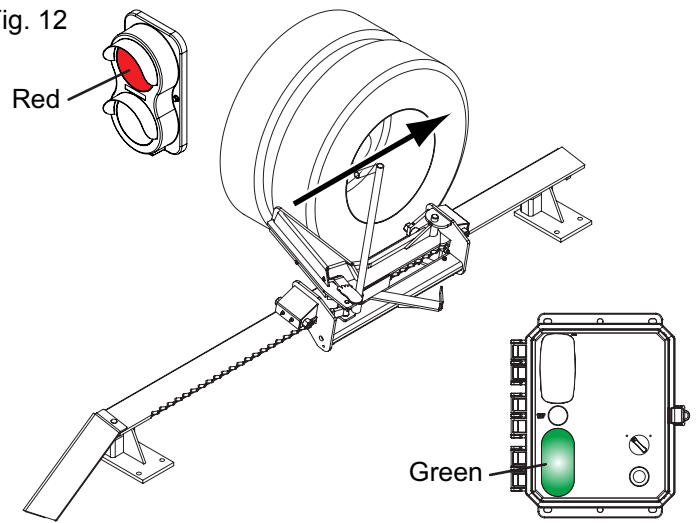


Fig. 13

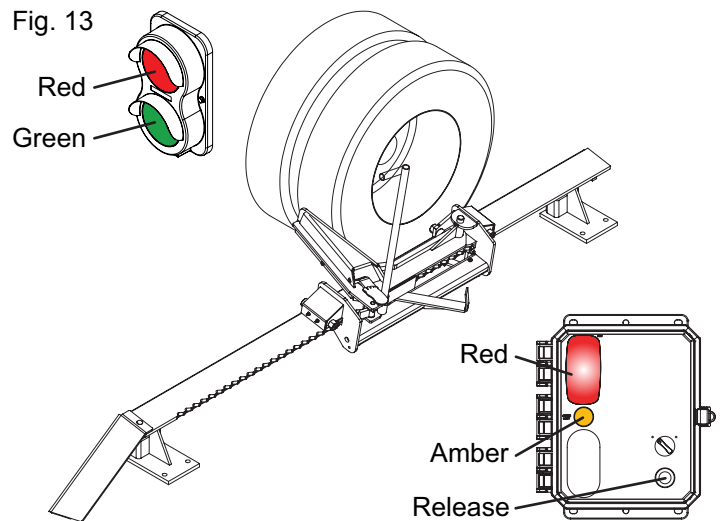
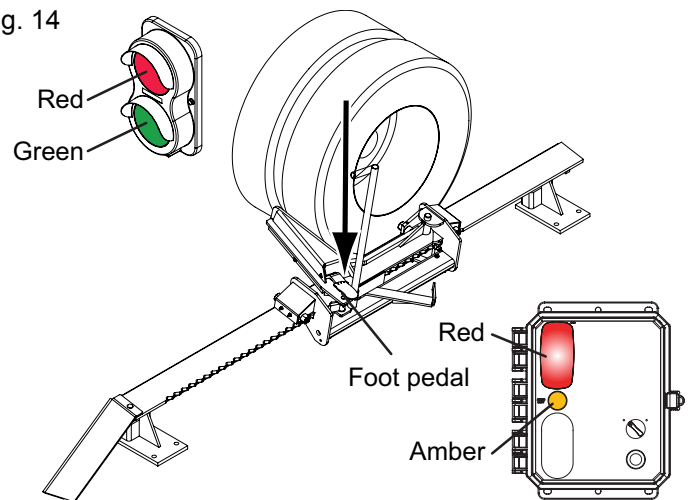


Fig. 14



OPERATING INSTRUCTIONS, continued

RELEASING VEHICLE (CONTINUED)

- When the chock arm reaches the stored position, the inside light will change from RED and AMBER FLASHING to just steady RED and the outside light will turn from RED and GREEN to just GREEN. Move the carriage along the guide rail all the way towards the building. Lower the activation handle to its stored position. The vehicle is now safe to leave. See Fig. 15.

▲ WARNING

In the event the chock arm is released prior to the release pushbutton being pressed, an audible alarm will sound and the inside lights will change from GREEN to RED and AMBER. Re-engage chock arm to silence alarm and change inside light back to GREEN. Do not attempt to load or unload the vehicle until alarm is silenced and inside light is GREEN.

FOR VEHICLES THAT CANNOT BE ENGAGED

▲ WARNING

Do not press the release button or release the chock arm with dock leveler lip in trailer.

Do not initiate RESTRAINT OVERRIDE (LIGHTS ONLY) unless vehicle wheels have been chocked. Only authorized trained personnel should initiate RESTRAINT OVERRIDE (LIGHTS ONLY).

- If the configuration of the vehicle wheels prevents proper engagement of the of the chock arm, the wheels must be manually chocked. Manually chock the vehicle wheels and then rotate the RESTRAINT OVERRIDE / LIGHTS ONLY selector switch to initiate the restraint override condition. The outside light will change from GREEN to RED. The inside light will change from RED to GREEN and AMBER. The vehicle is now safe to load and unload. See Fig. 16.
- When the loading and unloading is complete return the dock leveler to the stored position. Remove the wheel chocks and rotate the selector switch to the AUTOMATIC position. The outside light will change from RED to GREEN and inside light will change from GREEN and AMBER to RED. The vehicle is now safe to leave. See Fig. 17.

Fig. 15

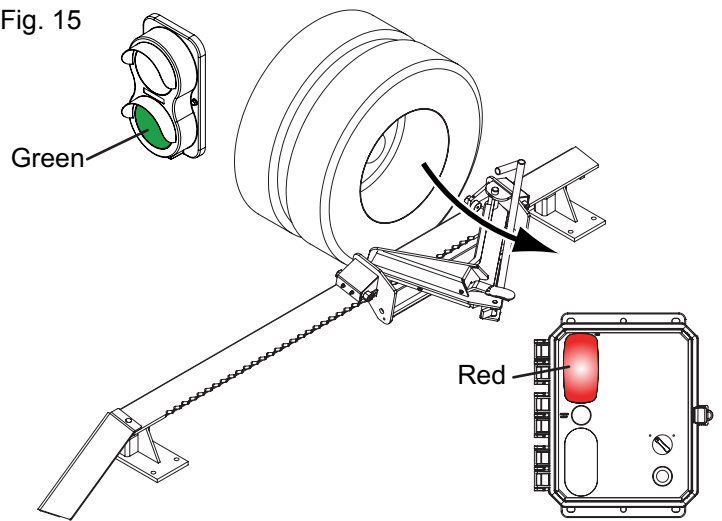


Fig. 16

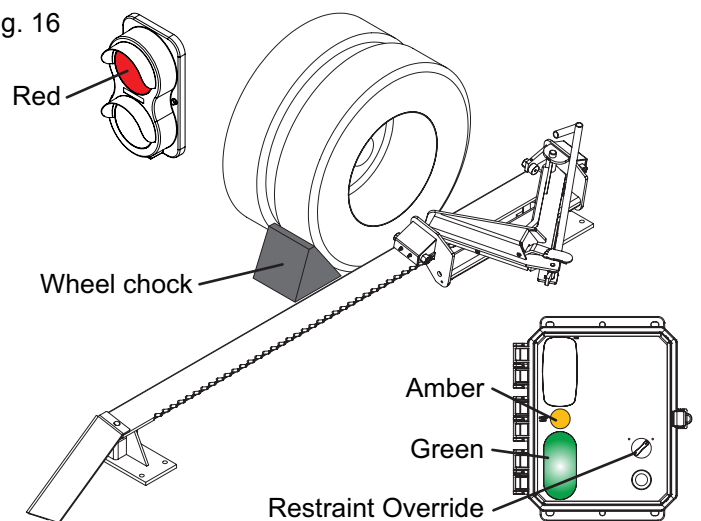
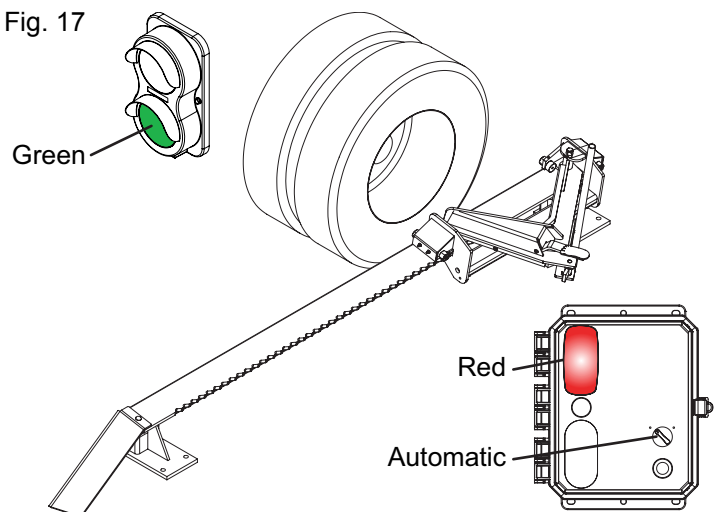


Fig. 17



PLANNED MAINTENANCE

To ensure the continued proper operation of your wheel chock, perform the following planned maintenance procedures.

▲ WARNING

Do not service this product unless you have read and followed the Safety Practices, Warnings and Operation instructions contained in this manual. Failure to follow these safety practices could result in death or serious injury.

DAILY

1. Check inside/outside lights and alarms to ensure they are functioning properly.
2. Clear all debris (dirt, snow, etc.) from the rail.
3. Check for worn, torn, missing bumpers. Replace if necessary.

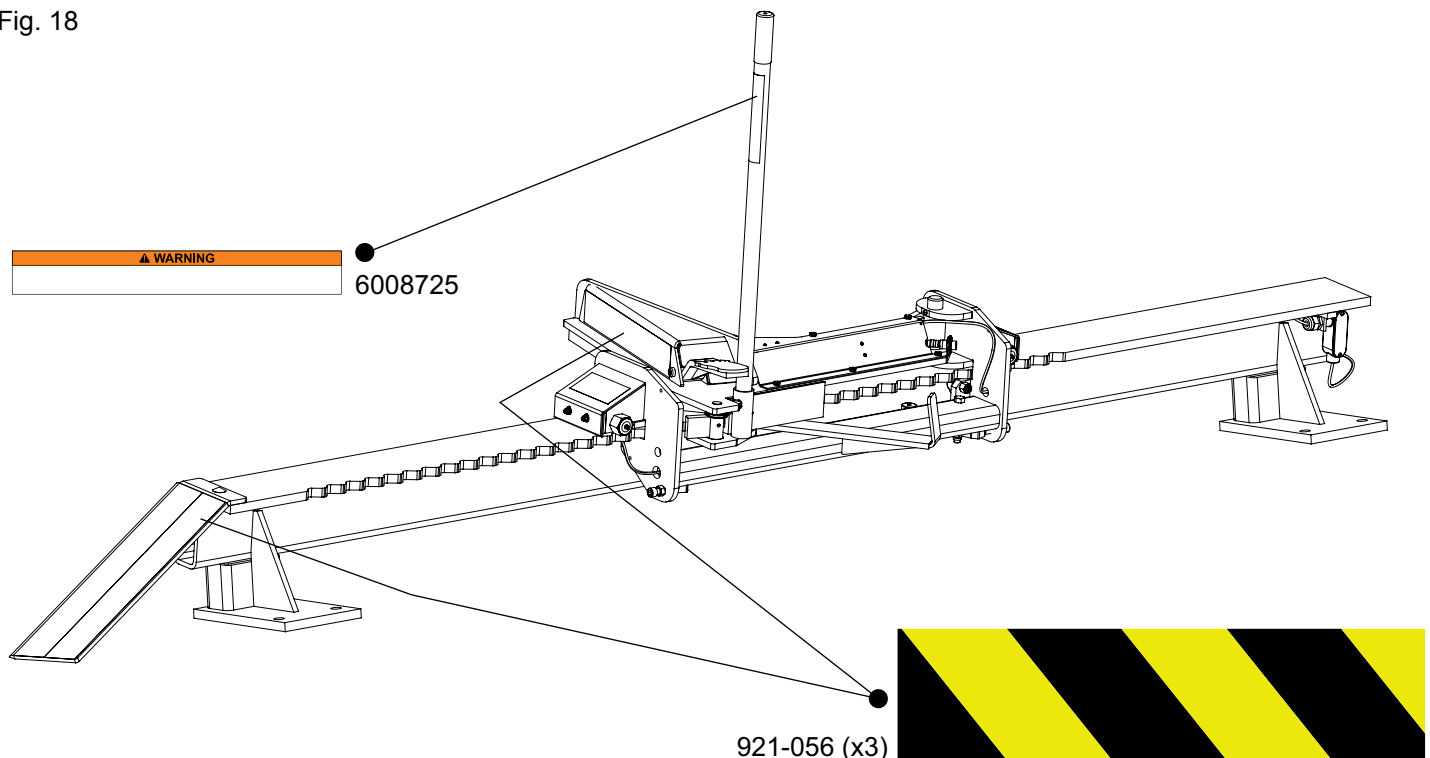
WEEKLY

1. Remove all debris from the chock arm and under the wheel chock housing.
2. Remove all debris from the chock arm stored sensor.
3. Inspect the wheel chock for damage that may weaken the anchoring strength. Re-tighten the concrete anchors if necessary.

QUARTERLY

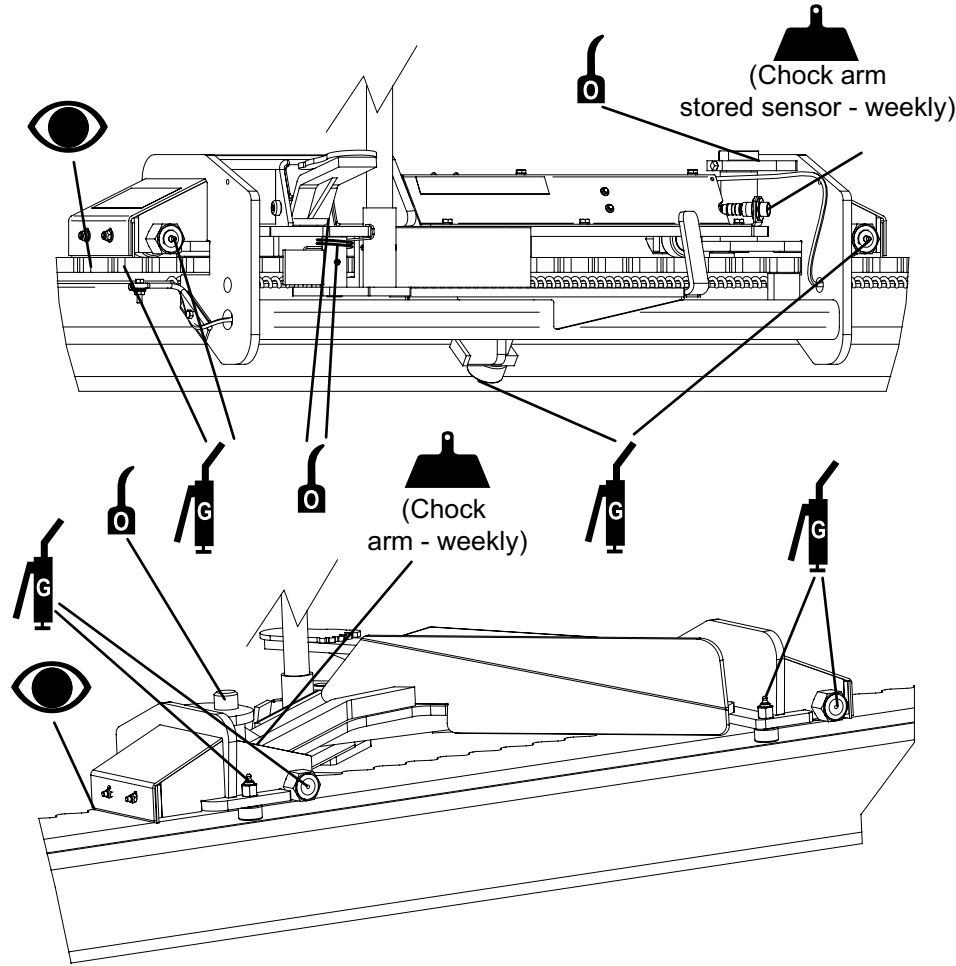
1. Lubricate the chock arm pivot with light oil, and ensure that it pivots freely. See Fig. 19 on page 18.
2. Inspect the chock for any signs of wear, distortion, or cracked welds.
3. Grease all pivot points. See Fig. 19 on page 18.
4. Check for worn, torn, missing bumpers. Replace if necessary.
5. Inspect all safety labels and tags to ensure they are on the dock leveller and are easily legible. If any are missing or require replacement, please call your local distributor. See Fig. 18.

Fig. 18



PLANNED MAINTENANCE, continued

Fig. 19



Legend	
Symbol	Description
	Lubricate - Oil Light Oil - SAE 30
	Lubricate - Grease Molybdenum Disulfide NLGI #2
	Cleaning (Location - Frequency)
	Visually inspect (Replace damaged or worn)

ADJUSTMENTS

⚠ WARNING

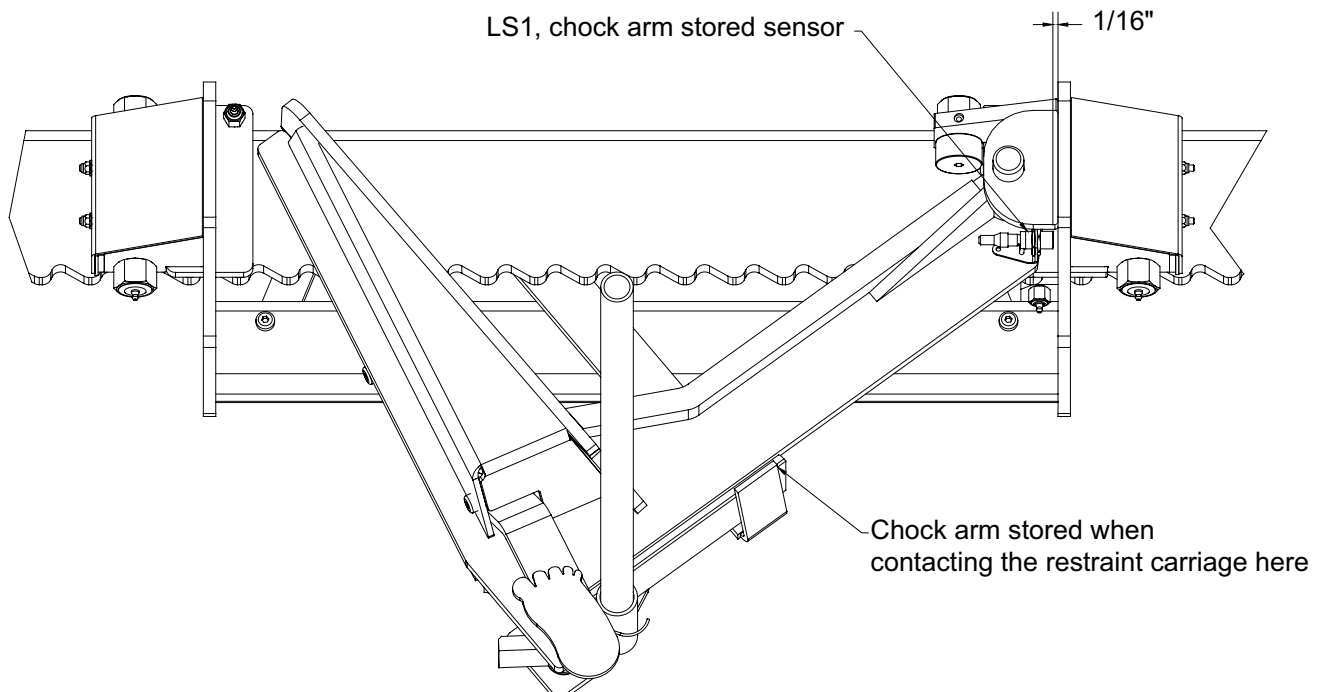
Do not service this product unless you have read and followed the Safety Practices, Warnings and Operation instructions contained in this manual. Failure to follow these safety practices could result in death or serious injury.

Use these instructions to adjust the wheel chock.

PROXIMITY SENSORS — LS1

Proximity sensor LS1 indicates the chock arm stored position. The correct position is when the chock arm is resting against the stop on the carriage. When the chock arm is stored, the LS1 sensor should be 1/16" from contacting the chock carriage as shown in Fig. 20.

Fig. 20



TROUBLESHOOTING

⚠ WARNING

Before servicing the wheel chock, read and follow the Safety Practices on page 3 and the Operation section in this manual. Failure to do so could result in death or serious injury.

Use the Troubleshooting Guide if the wheel chock fails to perform properly. Find the condition that most closely matches your situation, and make the recommended adjustments.

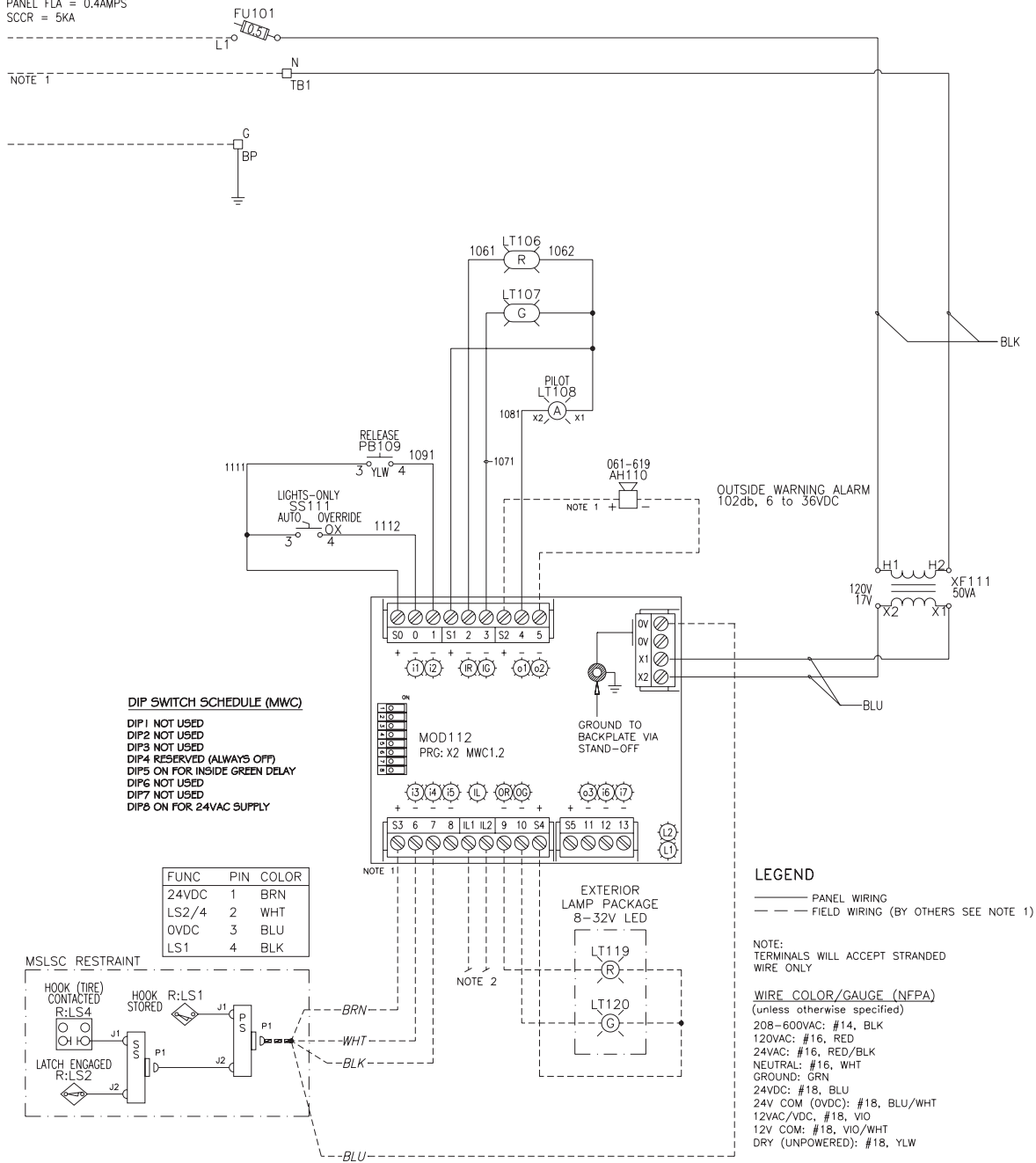
PROBLEM	POSSIBLE CAUSE	SOLUTION
1. No Lights.	a) No power to panel. b) Fuse failed.	a) Check power supply terminals L and N. b) Check fuses FU-1 and fuse on circuit board.
2. Chock arm is stored, inside and outside lights are red.	a) LS1 switch out of adjustment.	a) Check LS1 switch adjustment. Check wiring. See page 19.
3. Chock arm is rotated into engagement with vehicle wheel, inside and outside lights are red.	a) LS4 switch not sensing.	a) Check LS4 wiring. See item 3 pages 27-28. Should it be necessary to remove or replace LS4, apply thread locking compound to the mounting screws and nuts.
4. No sound from outside alarm.	a) Alarm polarity reversed.	a) Verify alarm wiring.
5. Chock arm will not rotate into fully locked position.	a) Chock arm is misaligned.	a) Adjust bearing cap eccentric.

ELECTRICAL SCHEMATIC

Fig. 21

120V/1PH/60HZ

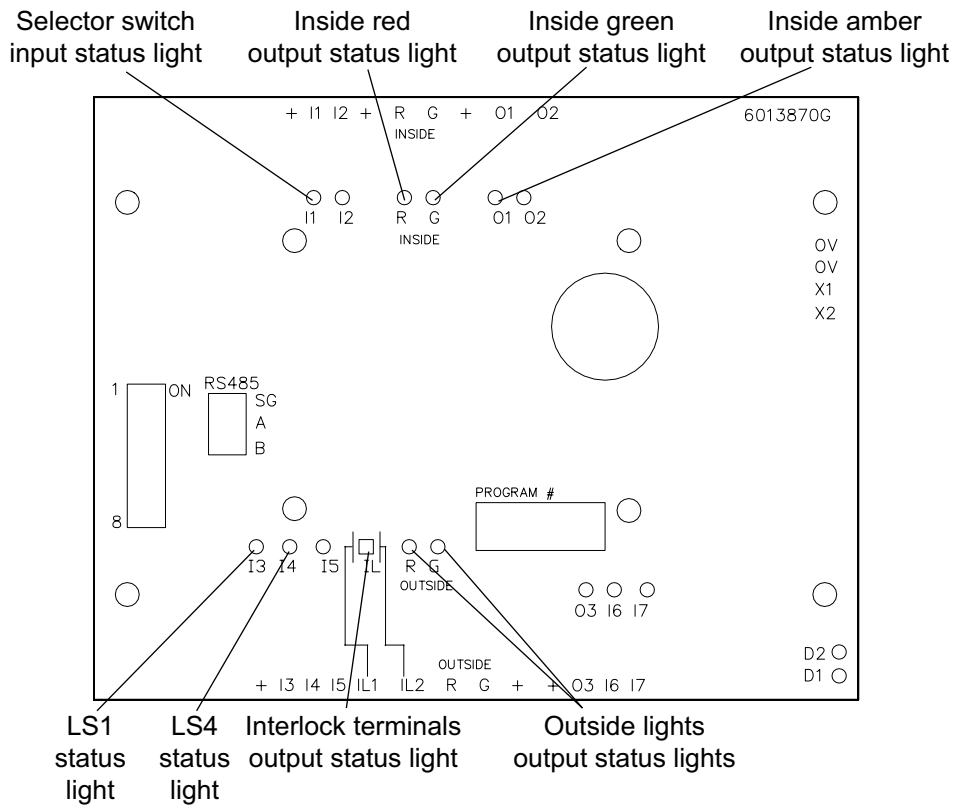
INCOMING SERVICE TO BE TERMINATED AT DISCONNECT
 CB/FU TO BE SUPPLIED BY OTHERS
 SUPPLY BCPD = CB/FU 15AMP MAX
 PANEL FLA = 0.4AMPS
 SCCR = 5KA



1. FIELD TERMINAL WIRING: 90 DEGREE WIRE, MIN 16AWG FOR SIGNAL WIRING, MIN 14AWG FOR INCOMING POWER, SEE CHART IN PANEL FOR TORQUE REQUIREMENTS
2. INTERLOCK 1: TERMINALS IL1-IL2, DRY CONTACT RATED 0.5A @ 24VDC MAX. EXTERNAL FUSE REQUIRED. CLOSSES WHEN RESTRAINT IS FULLY ENGAGED OR SWITCHED TO OVERRIDE.

CONTROL PANEL CIRCUIT BOARD COVER

Fig. 22

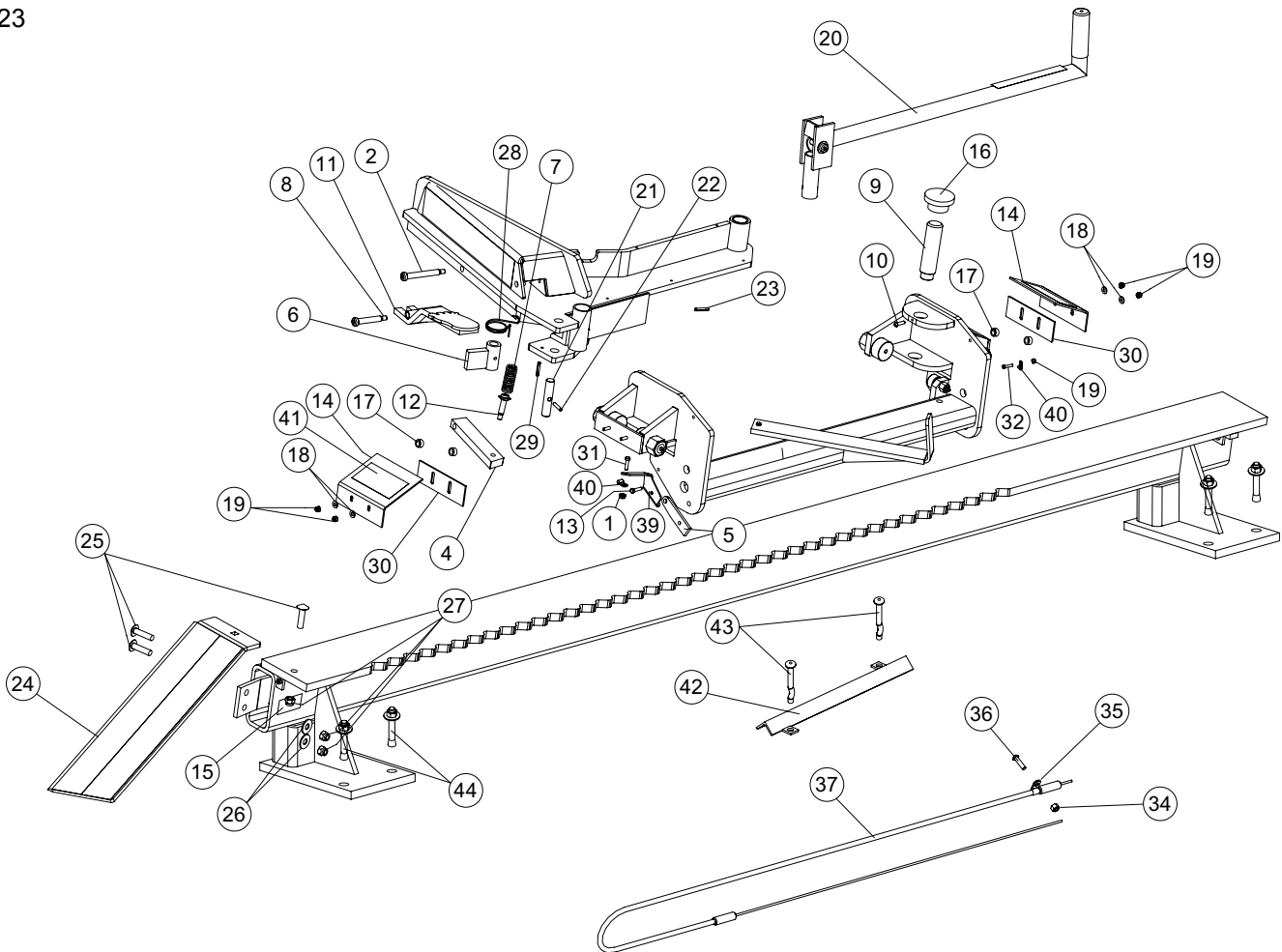


PARTS LIST — WHEEL CHOCK

⚠ WARNING

To ensure proper function, durability and safety of the product, only replacement parts that do not interfere with the safe, normal operation of the product must be used. Incorporation of replacement parts or modifications that weaken the structural integrity of the product, or in any way alter the product from its normal working condition at the time of purchase from 4Front Engineered Solutions, Inc. may result in product malfunction, breakdown, premature wear, death or serious injury.

Fig. 23



PARTS LIST — WHEEL CHOCK, continued

Item	Qty.	Part Description	Part Number
1	1	NUT, SERRATED FLANGE, 1/4-20	6011966
2	1	HEX SOCKET HEAD SHOULDER SCREW, 1/2 X 3-1/2	6009145
3	1	NYLON LOCK NUT, 3/8-16 UNC	214538
4	1	LEVER, CHOCK ARM RELEASE	6009005
5	1	PUSH BAR	6015583
6	1	WELDMENT, PAWL ASSY.	6009003
7	1	SPRING, FOOT PEDAL RELEASE	6009137
8	1	HEX SOCKET HEAD SHOULDER SCREW, 1/2 X 2-1/2	6006650
9	1	MAIN ARM PIN	6009894
10	1	CUP POINT SQUARE HEAD SET SCREW, 1/4-20 X 1/2L	6009896
11	1	WELDMENT, FOOT PEDAL RELEASE — DRIVER SIDE WELDMENT, FOOT PEDAL RELEASE — PASSENGER SIDE	6009004 6010972
12	1	ASSY, FOOT PEDAL BOLT	6012279
13	1	HHMB 1/4-20 X 1-1/4	000104
14	2	COVER, ROLLER BEARING	6009008
15	1	SERIAL TAG	6009761
16	1	CAM BUSHING, CHOCK ARM PIVOT	6009895
17	1	SPACER, SCRAPER	6010783
18	4	PLAIN WASHER 1/4 BOLT SIZE, 5/16 HOLE, PLATED	234081
19	5	NYLON LOCK NUT, 1/4-20 UNC	214502
20	1	ASSY, HANDLE — DRIVER SIDE ASSY, HANDLE — PASSENGER SIDE	6016794 6016810
21	1	PIN, RATCHET	6009011
22	1	SPRING PIN, 5/16 X 1-1/4	6010112
23	1	SPRING PIN, 1/4 X 1-3/4	6010126
24	1	NOSE CONE — DRIVER SIDE NOSE CONE — PASSENGER SIDE	6009012 6010973
25	3	CARRIAGE BOLT, 1/2-13 X 2, PLATED	213145
26	2	PLAIN WASHER 1/2 BOLT SIZE, 9/16 HOLE, PLATED	234121
27	3	NYLON LOCK NUT, 1/2-13 UNC, PLATED	214505
28	1	SPRING RATCHET PAWL — DRIVER SIDE	6009013

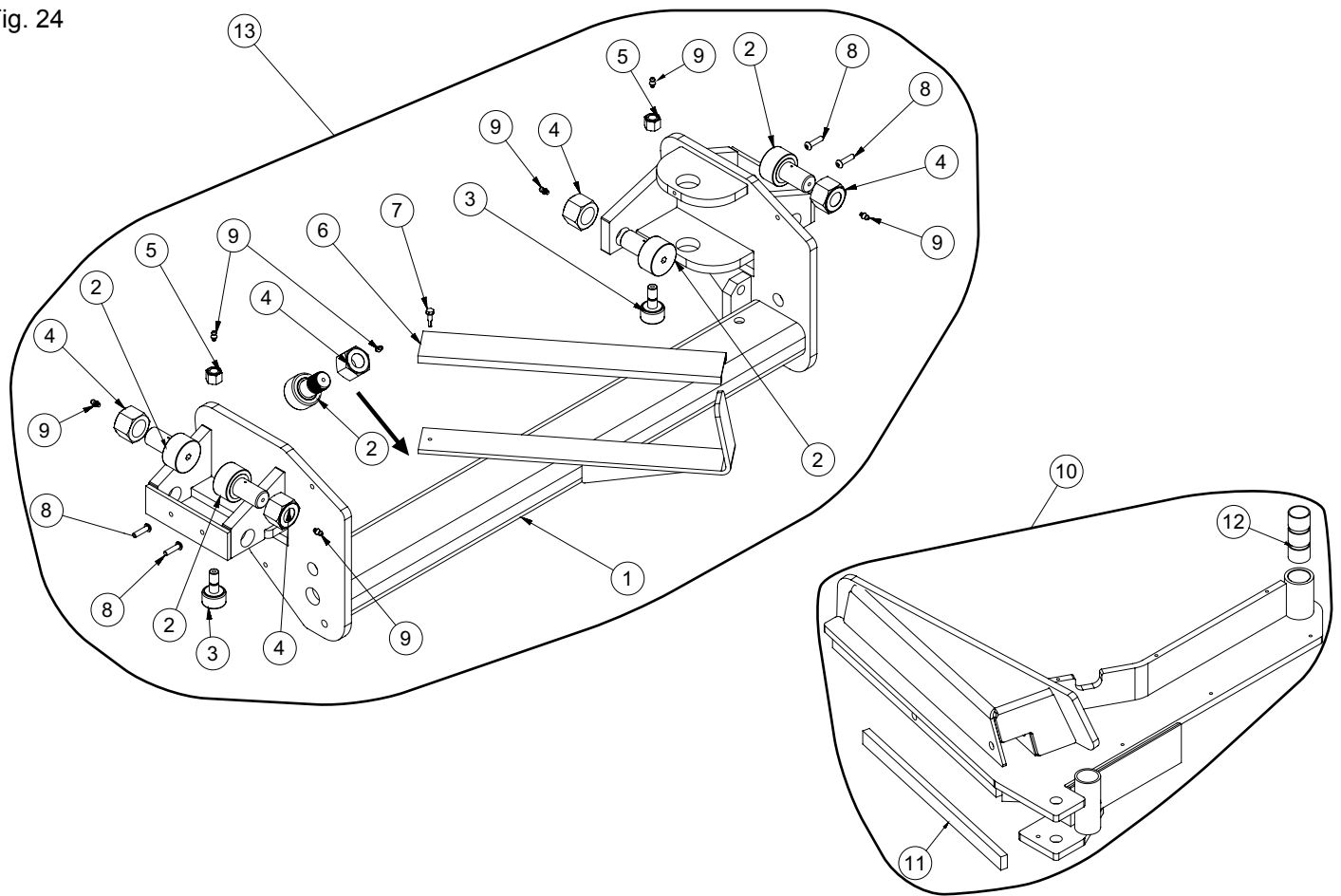
PARTS LIST — WHEEL CHOCK, continued

Item	Qty.	Part Description	Part Number
29	1	SPRING PIN , 1/4 X 1 — DRIVER SIDE SPRING PIN, 3/16 X 1 1/4 — PASSENGER SIDE	231122 035373
30	2	SCRAPER	6009014
31	1	BOLT, 1/4-20 X 5/8	212003
32	1	BOLT, 1/4-20 X 1	212005
33	1	HEATER KIT ASSY (OPTIONAL)	6011919
34*	1	NUT, 1/4-20, NYLON	214502
35*	1	CABLE CLIP, Ø 5/16 WIRE	441125
36*	1	BUTTON HEAD BOLT, 1/4-20X1	6008574
37*	1	HEAT TRACER	623202
38*	1	THERMOSTAT ASSY WITH ENCLOSURE AND PILOT LIGHT (NOT SHOWN)	061787
39	1	CABLE SUPPORT — DRIVER SIDE CABLE SUPPORT — PASSENGER SIDE	6013634 6015418
40	2	CABLE CLAMP, Ø1/4	6011965
41	1	LABEL, SERCO LABEL, KELLEY	824002 921140
42	1	WDMT, CONDUIT GUARD — 10' WDMT, CONDUIT GUARD — 13' AND 16' (OPTIONAL)	6009532 6019531
43	2	ANCHOR, SPIKE, 1/2 X 5"	6001910
44	4	ANCHOR, WEDGE 3/4 X 5-1/2"	6001187

* Included in item 33.

PARTS LIST — CARRIAGE ASSEMBLY AND CHOCK ARM

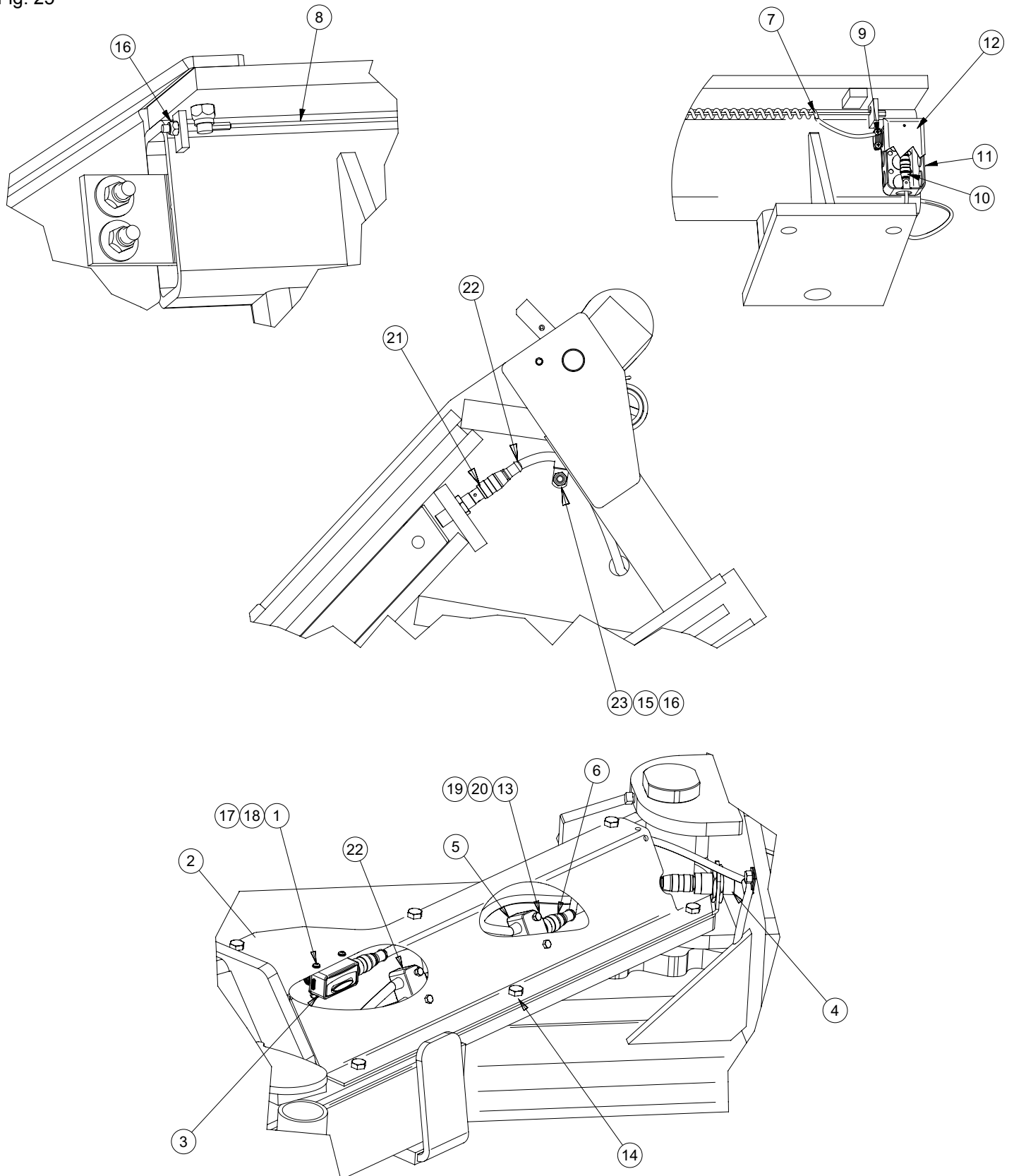
Fig. 24



Item	Qty.	Part Description	Part Number
1	1	WELDMENT, CARRIAGE — DRIVER SIDE	6013825
		WELDMENT, CARRIAGE — PASSENGER SIDE	6013826
2	5	1-7/8 CAM FOLLOWER BEARING	341001
3	2	1-1/4 CAM FOLLOWER BEARING	6004095
4	5	NYLON LOCK NUT - 1-14 UNS	214351
5	2	NYLON LOCK NUT - 1/2-20 UNF	6004096
6	1	WEAR STRIP, ARM	6009042
7	1	TEK SCREW 12-24 X 7/8	6000285
8	4	BUTTON HEAD HEX SOCKET CAP SCREW - 1/4-20 UNC X 1	6004099
9	7	GREASE FITTING, DRIVE FIT	417113
10	1	CHOCK ARM ASSY. — DRIVER SIDE	6009002
		CHOCK ARM ASSY. — PASSENGER SIDE	6010970
11	1	CHOCK ARM WEAR STRIP	6016602
12	3	BUSHING 1-1/4X1	821032
13	1	CARRIAGE ASSY. — DRIVER SIDE	6013823
		CARRIAGE ASSY. — PASSENGER SIDE	6013824

PARTS LIST — LIGHT COMMUNICATION SYSTEM

Fig. 25

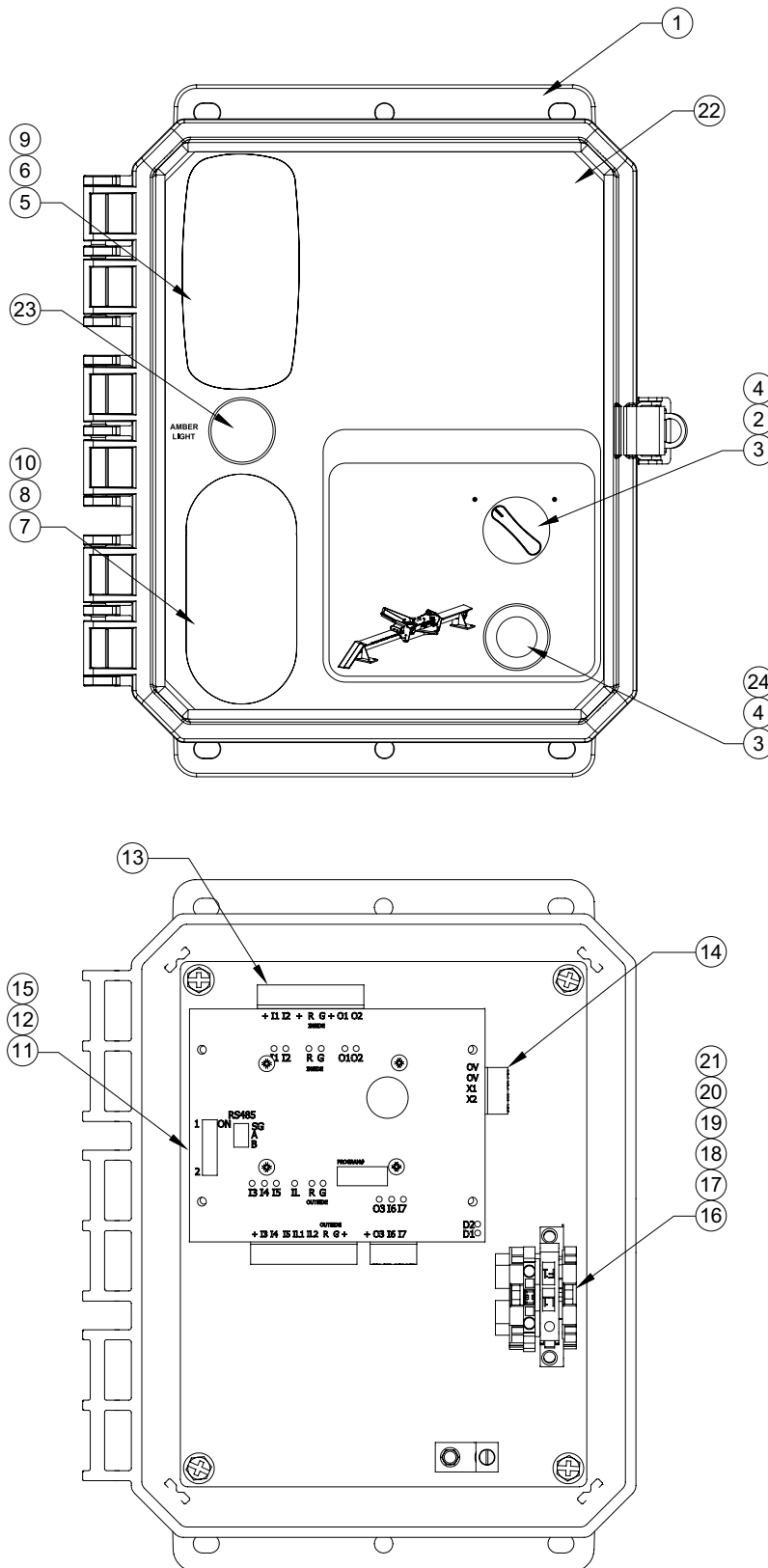


PARTS LIST — LIGHT COMMUNICATION SYSTEM, continued

Item	Qty.	Part Description	Part Number
1	4	PLAIN WASHER #4, 1/8ID X 3/8 OD	234052
2	1	COVER — DRIVER SIDE COVER — PASSENGER SIDE	6009015 6010991
3	1	LS4 — PHOTO SENSOR, CHOCK ARM	6012917
4	1	LS1 — PROX SENSOR, 18 MM, PNP, NO	6008404
5	1	SPLITTER, PARALLEL	6009139
6	1	CABLE ASSY, 5 PIN, QUICK DISCONNECT, 2.0M	6008692
7	1	COIL CORD, QD, 10' MODELS COIL CORD, QD, 13' AND 16' MODELS	6009140 6011986
8	1	CABLE ASSY, CORD SUPPORT, 10' MODELS CABLE ASSY, CORD SUPPORT, 13' MODELS CABLE ASSY, CORD SUPPORT, 16' MODELS	6009016 6012060 6012061
9	1	CABLE CLAMP	521110
10	1	HOME RUN CABLE, QUICK DISCONNECT, 4 LEAD, 10M	6009141
11	1	JUNCTION BOX	6008982
12	1	CONDUIT COVER	6008987
13	4	NUT #8-32	6001878
14	6	HEX HEAD MACHINE BOLT 1/4-20 UNC X 5/8	212003
15	1	1/4-20 X 1.25 BOLT	000104
16	1	LOCK NUT 1/4-20 UNC, NYLON INSERT	214502
17	2	RHMS 4-40 UNC X 1	211063
18	2	LOCK NUT 4-40 UNC, NYLON INSERT	214060
19	4	BOLT #8-32 X 1-1/4	211819
20	4	#8 WASHER	6001877
21	1	PROX SENSOR, 12 MM, NC	6017117
22	1	SPLITTER, SERIES	6017118
23	1	CABLE CLAMP	6011965

PARTS LIST — CONTROL PANEL

Fig. 26

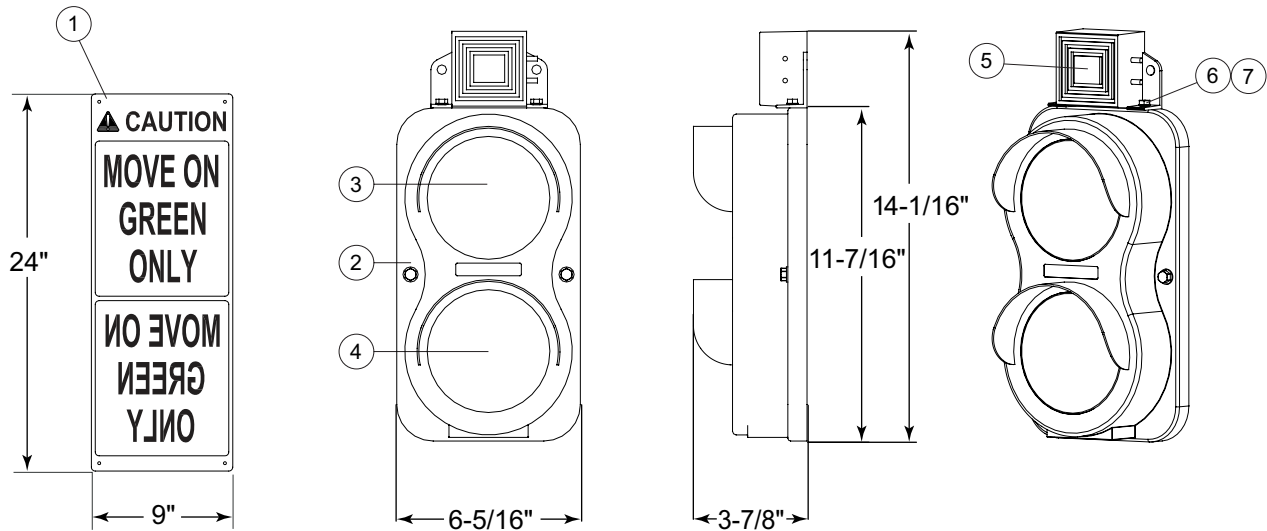


PARTS LIST — CONTROL PANEL, continued

Item	Quantity	Part Description	Part Number
1	1	CONTROL PANEL COMPLETE KELLEY CONTROL PANEL COMPLETE SERCO	6013951 6013997
2	1	SELECTOR SWITCH-2 POS. MAINT.	6012565
3	2	CONTACT BLOCK SWITCH N.O.	6012563
4	2	MOUNTING COLLAR	6012562
5	1	RED LENS	823100
6	1	LIGHT BASE RED	823107
7	1	GREEN LENS	AP0027
8	1	LIGHT BASE GREEN	823111
9	2	LRU, RED, CURRENT REGULATED	6006375
10	2	LRU, GREEN, CURRENT REGULATED	6006377
11	1	COVER PLATE - X CONTROLLER	6013870
12	1	X CONTROLLER PCB W/ MSLSC PROGRAM	6014054
13	2	TERMINAL BLOCK, 9 POS	6008824
14	2	TERMINAL BLOCK, 4 POS	6008822
15	1	TRANSFORMER, CONTROL 120/17 50VA	6008636
16	2	TERMINAL, END STOP, SCREWLESS	6000549
17	1	TERMINAL, 2 POLE	6000542
18	1	TERMINAL BLOCK, FUSED DISCONNECT	6000538
19	1	FUSE MDL .5 (NOT SHOWN)	6008836
20	1	TERMINAL END PLATE, 2MM	6006848
21	1	END AND INTERMEDIATE PLATE 2.5MM	6008853
22	1	CONTROL PANEL DECAL MSLSC SERCO CONTROL PANEL DECAL MSLSC KELLEY	6014242 6013969
23	1	AMBER LIGHT	6014259
24	1	YELLOW PUSH BUTTON	6013067

PARTS LIST — LIGHTS, SIGNS AND ALARM

Fig. 27



Item	Quantity	Part Description	Part Number
1	1	OUTSIDE SIGN – NORMAL AND REVERSE LETTERING	709832
2**	1	LIGHT ASSY - COMPLETE	6007798
3*	1	RED LED LIGHT ASSY.	6007800
4*	1	GREEN LED LIGHT ASSY.	6007801
5**	1	ALARM	061619
6**	2	HEX NUT 1/4-20	214161
7**	2	CARRIAGE BOLT 1/4-20 X 1 1/4"	213019
8	1	OUTSIDE LIGHT/ALARM ASSEMBLY	6009530

* Included in item 2.

** Included in item 8.

LIMITED WARRANTY

THIS LIMITED WARRANTY IS 4FRONT'S SOLE AND EXCLUSIVE WARRANTY WITH RESPECT TO THE WHEEL CHOCK AND IS IN LIEU OF ANY OTHER GUARANTEES OR WARRANTIES, EXPRESS OR IMPLIED.

4Front warrants that this WHEEL CHOCK will be free from flaws in material and workmanship under normal use for a period of one (1) year from the earlier of 1) 60 days after the date of initial shipment by 4Front, or 2) the date of installation of the WHEEL CHOCK by the original purchaser, provided that the owner maintains and operates the WHEEL CHOCK in accordance with this User's Manual.

In the event that this WHEEL CHOCK proves deficient in material or workmanship within the applicable Limited Warranty period, owner shall so notify 4Front, and 4Front will, at its option:

1. Replace the WHEEL CHOCK, or the deficient portion(s) thereof, without charge to the owner; or
2. Alter or repair the WHEEL CHOCK, on site or elsewhere, without charge to the owner.

This Limited Warranty does not cover any failure caused by improper installation, abuse, improper operation, negligence, or failure to maintain and adjust the WHEEL CHOCK properly. Parts requiring replacement due to damage resulting from vehicle impact, abuse, or improper operation are not covered by this warranty. 4FRONT DISCLAIMS ANY RESPONSIBILITY OR LIABILITY FOR ANY LOSS OR DAMAGE OF ANY KIND (INCLUDING WITHOUT LIMITATION, DIRECT, INDIRECT, CONSEQUENTIAL OR PUNITIVE DAMAGES, OR LOST PROFITS OR LOST PRODUCTION) arising out of or related to the use, installation or maintenance of the WHEEL CHOCK (including premature product wear, product failure, property damage or bodily injury resulting from use of unauthorized replacement parts or modification of the WHEEL CHOCK). 4Front's sole obligation with regard to a WHEEL CHOCK that is claimed to be deficient in material or workmanship shall be as set forth in this Limited Warranty. This Limited Warranty will be null and void if the original purchaser does not notify 4Front's warranty department within ninety (90) days after the product deficiency is discovered.

THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF, INCLUDING, BUT NOT LIMITED TO, A WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, ALL OF WHICH 4Front HEREBY DISCLAIMS.

Please direct questions about your wheel chock to your local distributor or to 4Front Engineered Solutions, Inc.

Your local 4Front Engineered Solutions, Inc.
distributor is:

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