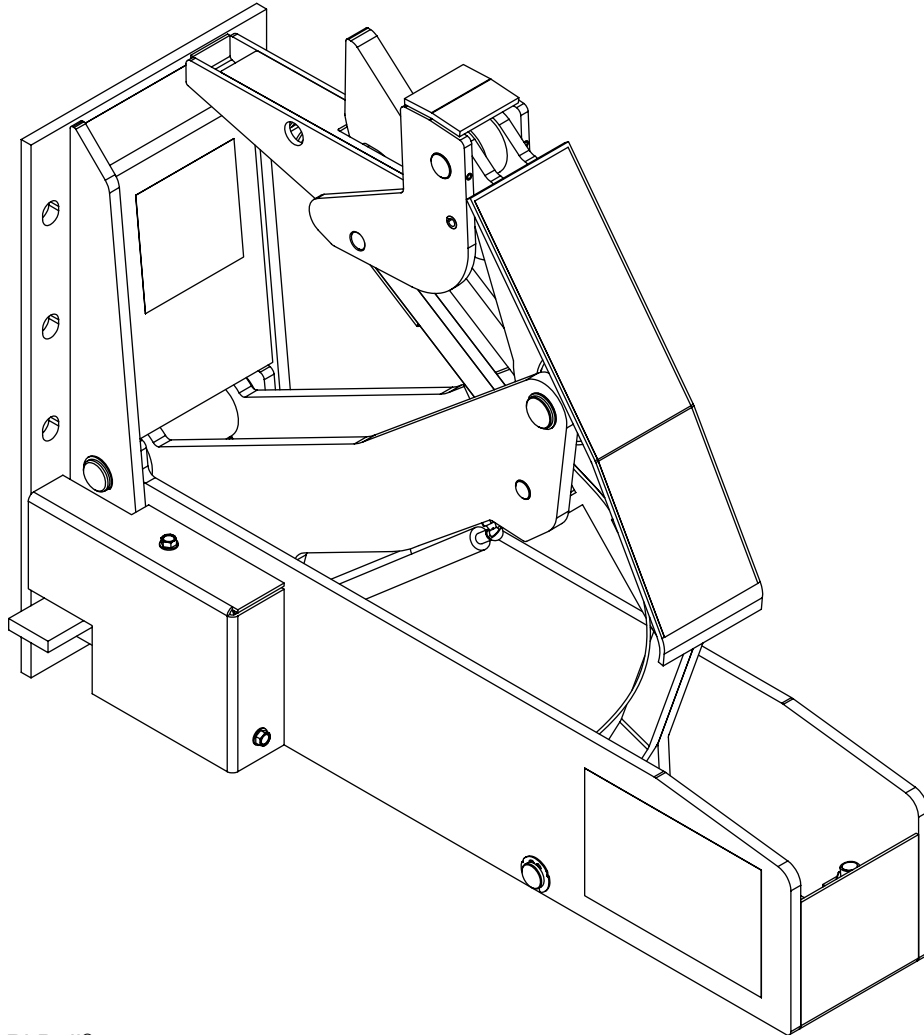




ENTRE//MATIC

Vehicle Restraints PitBull® SAFETY-LOC® SL10, SL20 and SL40



This manual applies to PitBull® SAFETY-LOC® vehicle restraints manufactured beginning May 2013 with the serial numbers 61080478 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

824-229G

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INTRODUCTION

Welcome and thank you for choosing this vehicle restraint from SERCO®.

This User's Manual contains information that you need to safely install, operate and maintain the vehicle restraint. 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 vehicle restraint.

SAFETY PRACTICES

You may find safety signal words such as DANGER, WARNING, CAUTION or NOTICE throughout this User'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 PitBull® SAFETY-LOC®. 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 PITBULL® SAFETY-LOC®. If you do not understand the instructions, ask your supervisor to teach you how to use the vehicle restraint.

Be certain to follow the instructions in this manual.

INSTALLATION AND OPERATION

Do not use this vehicle restraint until you have received proper training. Improper use could result in property damage, bodily injury and/or death. Read and follow the complete OPERATING INSTRUCTIONS for your model on pages 15-23 before use. If you do not understand the instructions, ask your supervisor to explain them to you or call your authorized SERCO® distributor.

DO NOT USE THE VEHICLE RESTRAINT IF IT APPEARS DAMAGED OR DOES NOT OPERATE PROPERLY. Inform your supervisor immediately.

Do not operate the vehicle restraint until all bystanders are clear of all moving parts.

Do not install the vehicle restraint anchor bolts into aged or unsound concrete. Improper installation of the vehicle restraint could result in death or serious injury to dock workers or other users of the vehicle restraint.

Do not load or unload any vehicle unless you make certain the vehicle restraint has securely engaged the RIG (rear impact guard) of the vehicle and set the brakes. If the vehicle restraint does not engage the RIG for any reason, **BE CERTAIN TO CHOCK THE VEHICLE WHEELS BEFORE LOADING OR UNLOADING.**

Before chocking vehicle wheels or engaging vehicle restraint, dump air from air ride suspensions and set parking brake.

MAINTENANCE AND SERVICE

If the vehicle restraint does not operate properly using the procedures in this manual, **BE CERTAIN TO CHOCK THE VEHICLE WHEELS AND ENSURE THE BRAKES ARE SET BEFORE LOADING OR UNLOADING.** Call your local SERCO® distributor for service.

Place barricades around the pit on the dock floor and driveway while installing, maintaining or repairing vehicle restraint restraining device.

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

Do not use the vehicle restraint as a step.

Keep hands and feet clear of moving parts at all times.

If equipped with heater there is a possible burn hazard if turned on.

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 properly tagged or locked off.

If it is necessary to make troubleshooting checks inside the control box with the 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, death or serious injury.

If you have any problems or questions, contact your local SERCO® distributor for assistance.

INSTALLATION

MOUNTING CONSIDERATIONS

▲ 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 VEHICLE RESTRAINT. If you do not understand the instructions, ask your supervisor to teach you how to use the vehicle restraint.

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

Place barricades around pit on dock floor and drive while installing, maintaining or repairing vehicle restraining device.

Be certain bystanders in the driveway stand clear when the vehicle restraint is operated.

Be certain to follow the installation instructions in this manual.

Do not install the vehicle restraint anchor bolts into aged or unsound concrete.

1. The surface on which the vehicle restraint will be mounted must be flat to prevent binding of the mechanism. If the mounting surface is not flat it may be necessary to use shims or physically modify the dock face or driveway to provide a flat mounting surface.

PitBull® SAFETY-LOC® restraints require a 4" bumper projection from the front of the bumper to the rear of the back plate of the restraint (the mounting surface). Less than 4" of projection can allow vehicle RIG (rear impact guard) to damage the restraint.

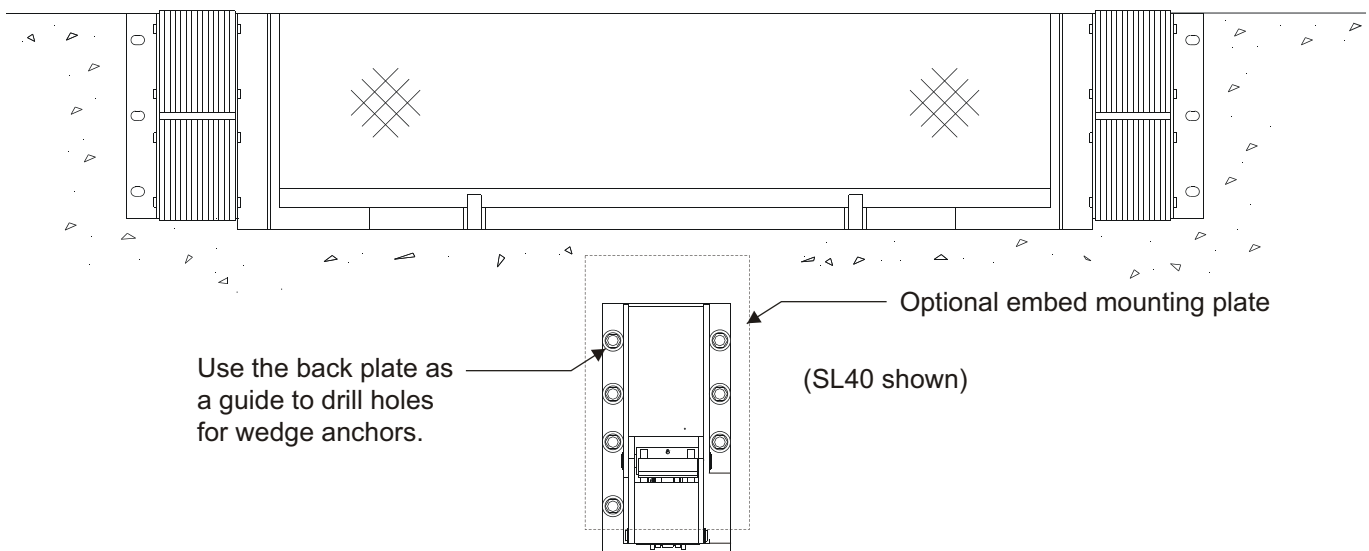
2. The standard anchors included with this product may only be used on docks constructed of solid concrete. Docks constructed with other materials require special mounting consideration. Contact your local SERCO® distributor for information.

TOOLS REQUIRED

- Welder
- Impact or rotary hammer drill with 3/4" diameter concrete drill bit, (also 7/8" diameter if driveway mount option is to be installed)
- 1-1/8" inch wrench
- General hand tools
- Touch up paint (Cold spray galvanizing)
- Torque wrench (110 ft-lb min.)
- 1-1/8" deep socket
- Rebar cutting drill bit (3/4" or 7/8") with rotary-only drill motor
- Threaded rod installation tool for rotary hammer drill with 3/4" coupler (driveway mount only).

Fig. 1

WALL MOUNT — CONCRETE DOCK FACE (Standard Installation)



INSTALLATION, continued

⚠ WARNING

Inadequate lifting equipment or practices can cause a load to fall unexpectedly. Make sure the lifting chain or other lifting devices are in good condition and have a rated capacity of at least 500 lbs. Never allow anyone to stand on or near the restraint when it is lifted or positioned. Stand clear of the vehicle restraint when it is positioned. Failure to follow this warning can allow the restraint to fall, tip, or swing into people, which could result in death or serious injury.

⚠ WARNING

Improper installation that allows the pendant dock leveler lip to support the weight of the dock leveler on the vehicle restraint could result in death or serious injury.

Fig. 2 ANCHOR TO DOCK FACE

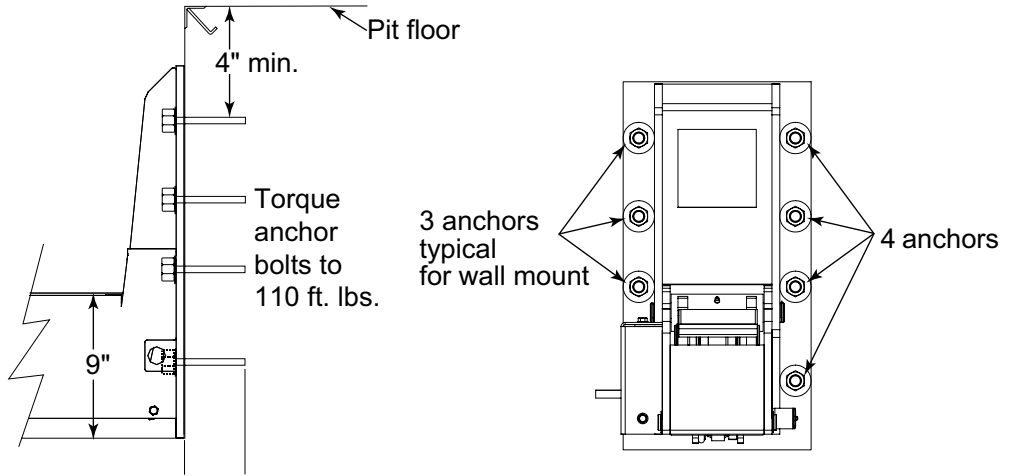
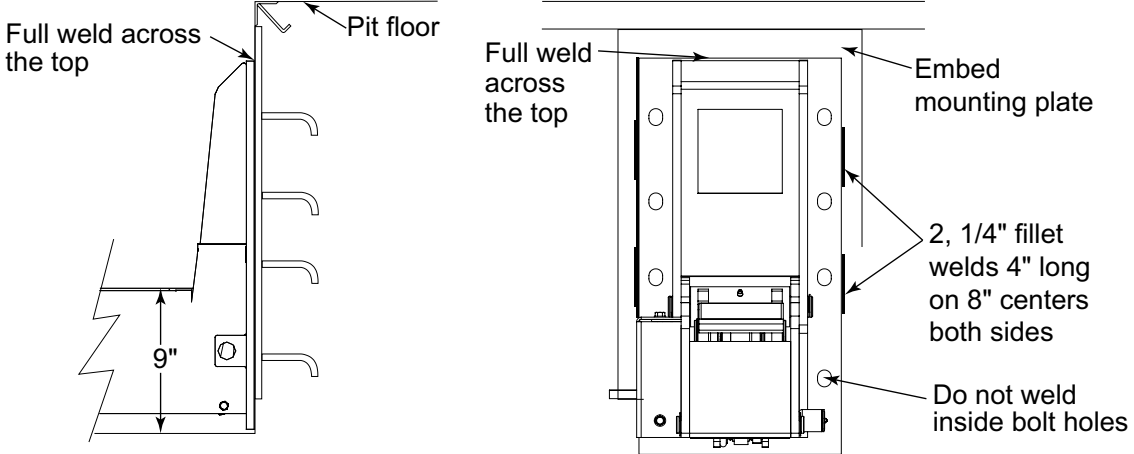


Fig. 3 WELD TO EMBED MOUNTING PLATE (Optional, applies to 2\"/>



INSTALLATION, continued

▲ WARNING

Do not install, operate, or service this product unless you have read and followed the Safety Practices, Warnings, and Installation and Operating Instructions contained in this manual. Failure to do so could result in death or serious injury. ALWAYS USE DOCK LEVELER SUPPORT WHEN WORKING UNDER A DOCK LEVELER RAMP OR LIP.

Place barricades around pit on dock floor and drive while installing, maintaining or repairing dock leveler or vehicle restraint.

Improper installation of anchoring devices or installation into aged or unsound concrete could result in death or serious injury.

Inadequate lifting equipment or practices can cause a load to fall unexpectedly. Make sure the lifting chain or other lifting devices are in good condition and have a rated capacity of at least 500 lbs for the lifting angle used. Never allow anyone to stand on or near the restraint when it is lifted or positioned. Stand clear of the vehicle restraint when it is positioned. Failure to follow this warning can allow the restraint to fall, tip, or swing into people, which could result in death or serious injury.

Improper installation that allows the pendant dock leveler lip to support the weight of the dock leveler on the vehicle restraint could result in death or serious injury.

WALL MOUNT (STANDARD INSTALLATION)

▲ WARNING

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

1. Place the vehicle restraint on the driveway. See Fig. 7. Center it on the dock position. Operate the dock leveler with the vehicle restraint in its intended position to assure there is no interference. Make sure the lip, when in the storage position, does not interfere. Use the back plate as a guide to drill the 7 holes for the 3/4" diameter wedge anchors. See Fig. 1 and 11. Install the wedge anchors per installation instructions on page 10. Place the anchors in the holes as they are drilled to prevent the vehicle restraint from shifting during drilling. Ensure back plate lies flat with dock face - shim if necessary. Torque the anchors to 110 ft. lbs.

▲ WARNING

Improper installation that allows a pendant dock leveler lip to be supported by the restraint could result in death or serious injury. Install lip deflector plate(s) as required

to avoid any chance of the pendant lip storing on top or behind the restraint backplate (see Fig. 4). Materials supplied by the installer.

2. If steel embed plate is used, see instructions in Fig. 1, 2 and 3.

▲ WARNING

Ensure area is well ventilated when welding galvanized metal, fumes may be toxic.

3. For low dock installations reference Fig. 4-6. If the top anchor positions are less than 4" from the pit floor do not install them. Install pit floor mounting plate (Requires four 3/4" anchors, supplied by others) and weld to the back of the restraint as shown in Fig. 5, 6.

INSTALLATION WITH EDGE-OF-DOCK TYPE LEVELERS

4. Stand-off or edge-of-dock levelers require a special standoff to be used between the vehicle restraint and the dock face to maintain the 4" bumper projection from the front of the bumper to the rear of the back plate of the restraint (the mounting surface). See Fig. 7 and 8.

DRIVEWAY MOUNT (OPTIONAL INSTALLATION)

1. If the dock face is not suitable for anchoring, a driveway mount option is available. A special concrete pad must be poured if sound concrete is not available on the driveway. See Fig. 9 and 10. Place the vehicle restraint on the driveway, Center it on the dock position. Operate the dock leveler with the vehicle restraint in its intended position to assure there is no interference. Make sure the lip when in the storage position does not interfere.
2. Use the restraint rear base plate as a guide to drill the four 7/8" diameter x 6-5/8" deep holes for the four chemical anchors supplied by SERCO®. Use the front base plate as a guide for drilling the 3/4" diameter holes for the two 3/4" x 7" wedge anchors supplied by SERCO®. See Fig. 9 and 10 and 11. Place the front anchors in the holes as they are drilled to prevent the vehicle restraint from shifting during drilling. Torque the wedge anchors to 110 ft. lbs. See page 10 for wedge anchor installation instructions.
3. Install the chemical anchors per installation instructions on page 11.

NOTE:

When driveway mounting is used, do not anchor to the wall or dock face.

INSTALLATION, continued

Fig. 4 **LOW DOCK HEIGHT**

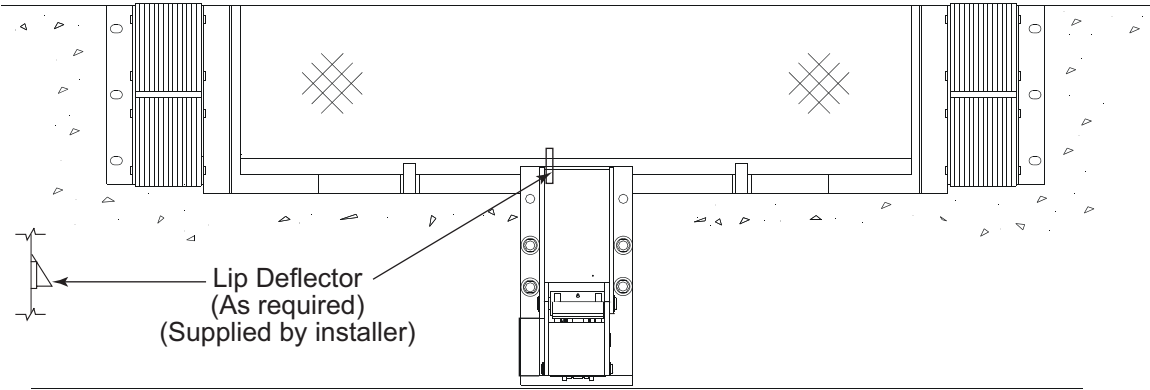
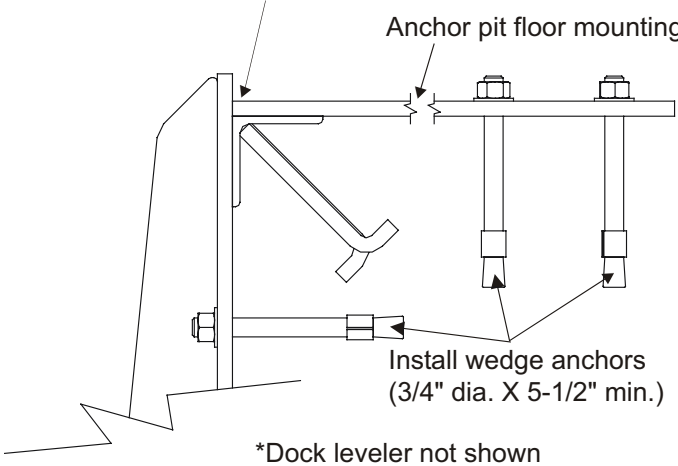
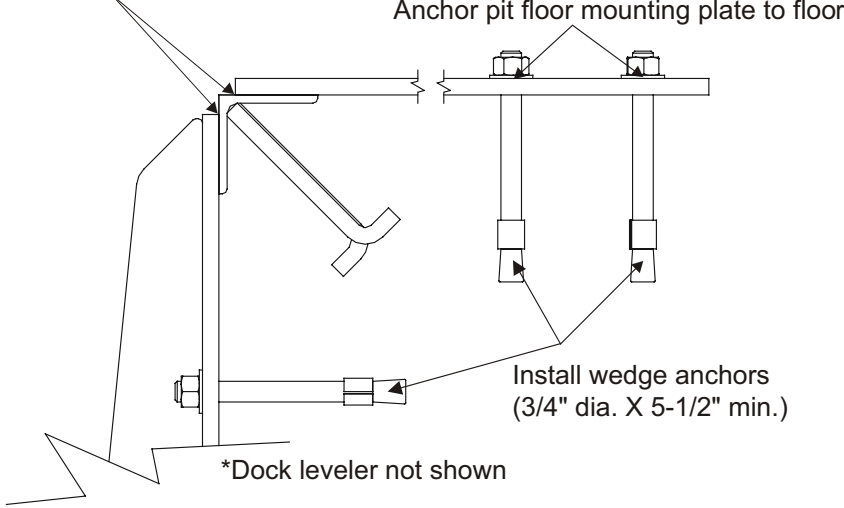


Fig. 5 (Weld pit floor mounting plate to lock unit back plate with a continuous 1/4" fillet weld.)



NOTE:
 If top anchor positions in the mounting plate are less than 4" from the pit floor do not install as concrete may fracture. Install Pit Floor Mounting Plate (requires 4 anchors) and weld to the back of the mounting plate or to the curb angle as shown.
 (Pit floor mounting plate part no. 586-2935)

Fig. 6 Weld to curb angle with a continuous 1/4" weld.



INSTALLATION, continued

Fig. 7

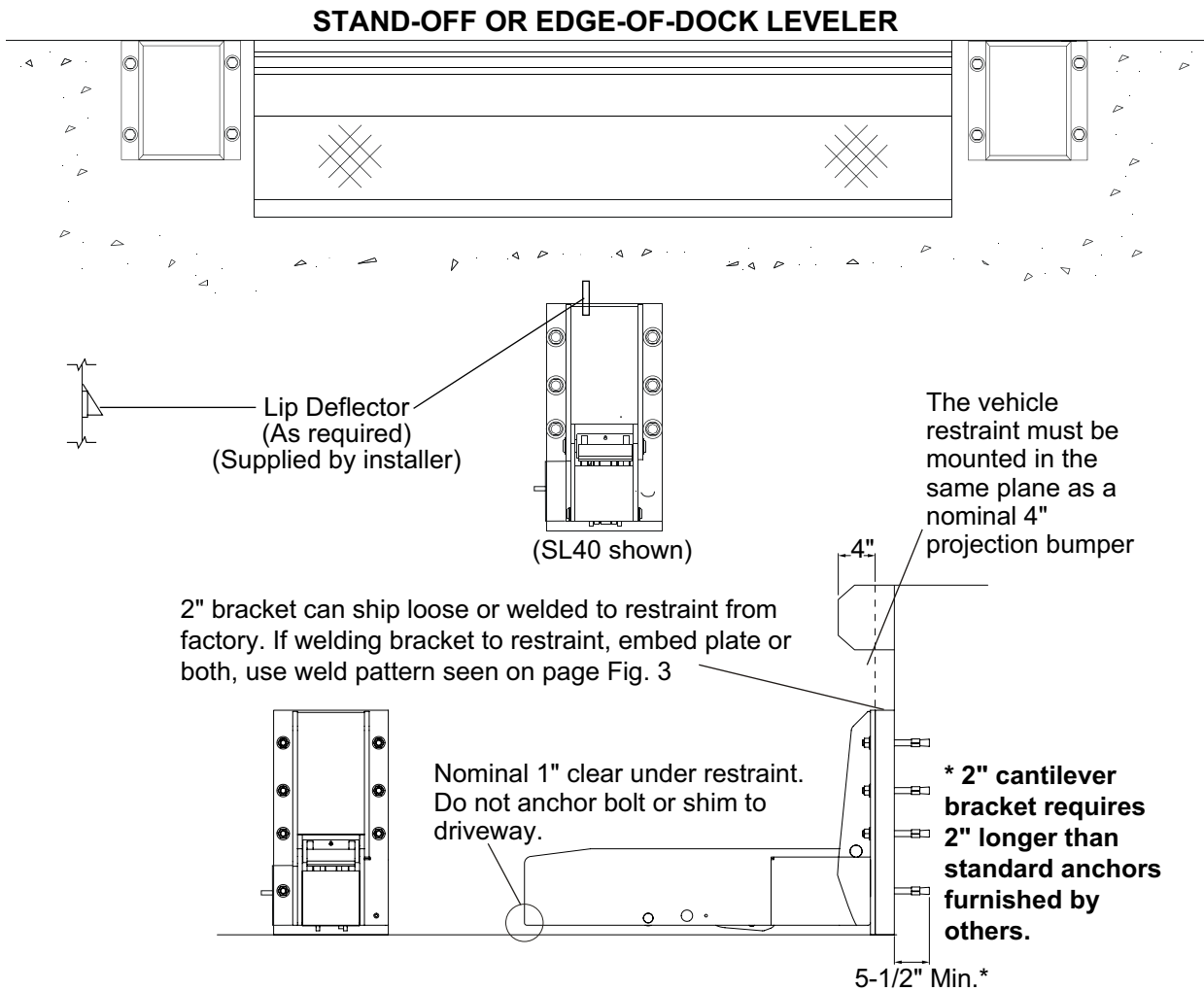
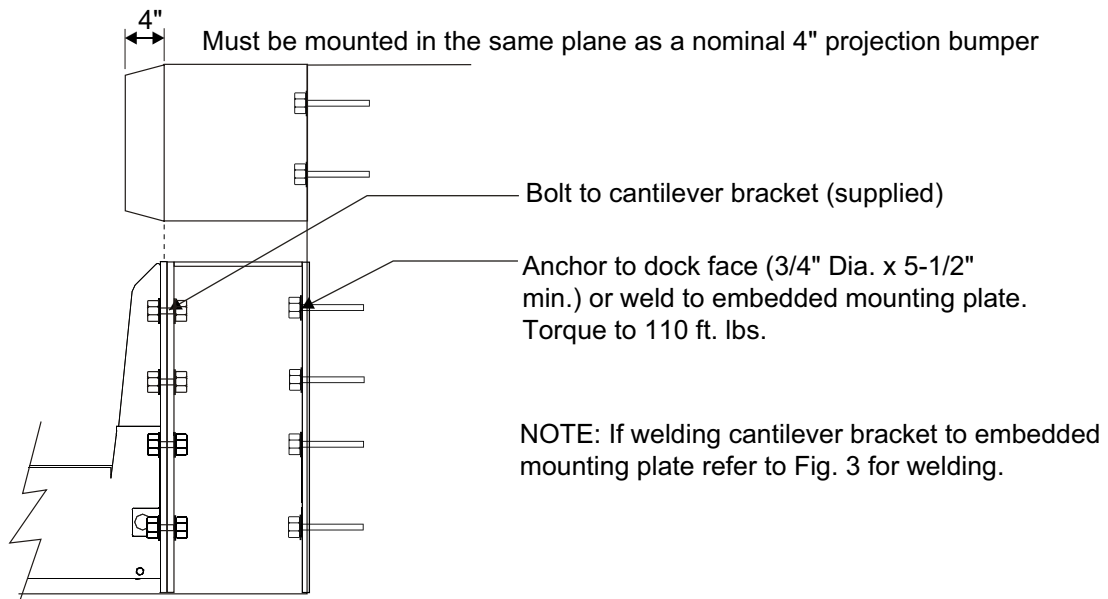


Fig. 8



▲ WARNING

Concrete pad size shown is a general recommendation in size so that the vehicle weight is on pad. Due to different soil, drainage and drive conditions a civil engineer must be consulted to detail the correct pad size for the particular application. Failure to do so may cause the pad to fail to hold the restraint in place and could result in death or serious injury.

Fig. 9

**DRIVEWAY MOUNT
(Recommended when dock face is not suitable for wall mounting)**

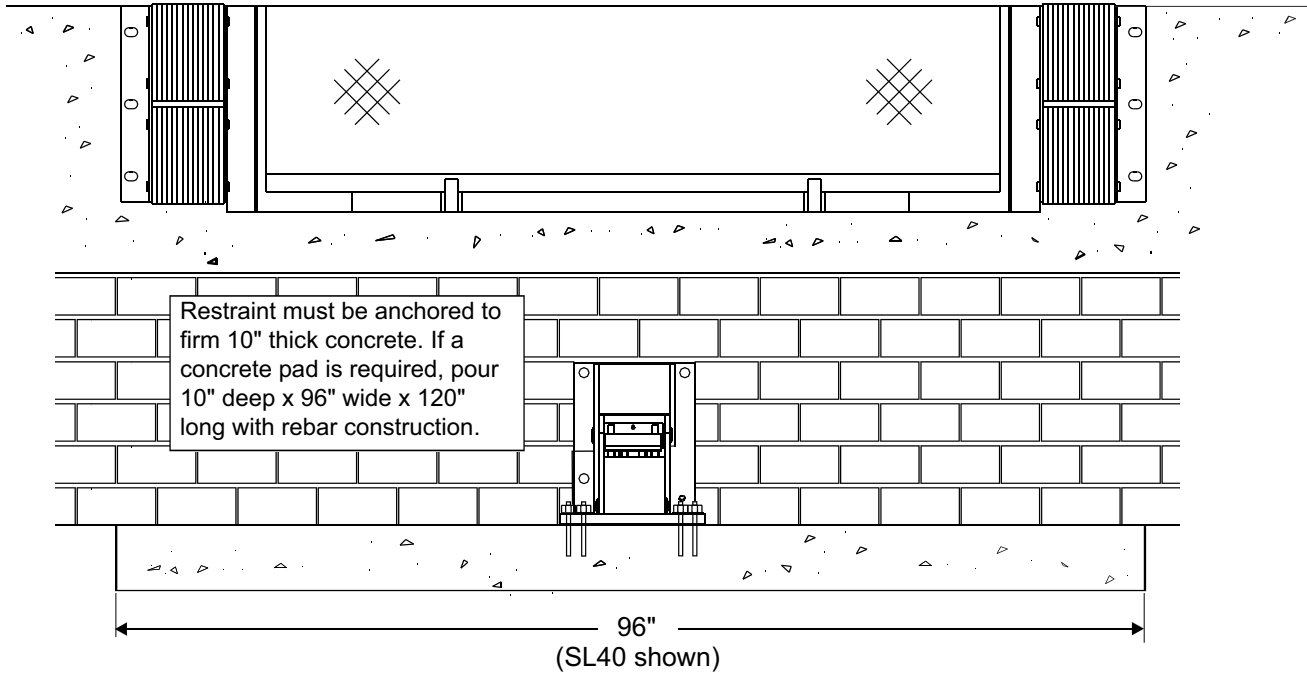
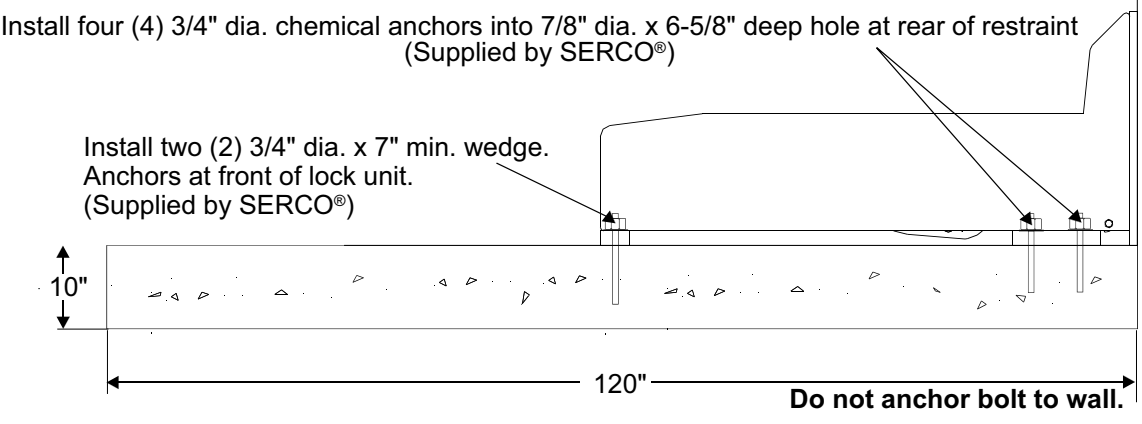


Fig. 10



INSTALLATION, continued

WEDGE ANCHOR INSTALLATION (STANDARD INSTALLATION)

Fig. 11

⚠ WARNING

Do not install the vehicle restraint 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.

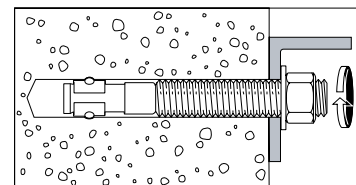
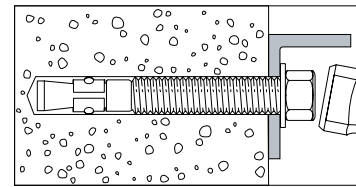
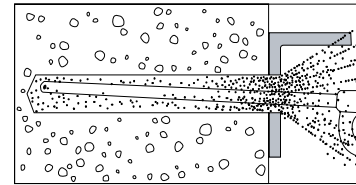
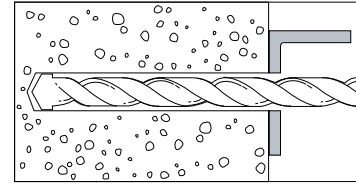
⚠ CAUTION

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 carbide drill bit the same diameter as the nominal diameter of the anchor to be installed. 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. 11.



CHEMICAL ANCHOR INSTALLATION (DRIVEWAY MOUNTING ONLY)

Fig. 12

▲ WARNING

Do not install the vehicle restraint anchor bolts into aged or unsound concrete.

Drill hole to the size and depth as shown in previous figures for the specific anchor required. Clean hole with compressed air or wire brush and blow-out bulb.

Insert the capsule into the hole.

Thread the hex nut onto the stud leaving 3-4 threads exposed above the nut. Then thread the coupler onto the nut/stud assembly until tight.

Insert the drive unit into the rotary percussion hammer drill. Engage the drive unit into the coupler/stud assembly. At a drill speed of 250-500 rpm, break the glass capsule with the chamfered end of the stud and drive the stud into the bottom of the hole. Turn off the drill motor immediately and disengage.

To remove the coupler, hold the hex nut with a wrench, and with a second wrench, turn the couple counter-clockwise to release the friction lock. Then un-thread the coupler from the assembly.

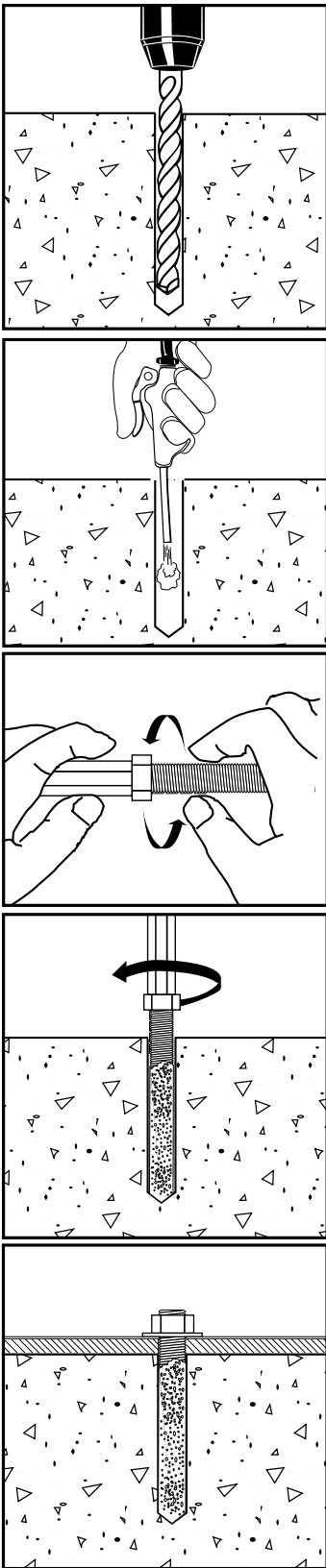
Allow Chem-Stud to cure for specified time (see table below) before loading stud.

RECOMMENDED CURING TIME

Concrete Temperature	Minimum Cure Time
68°F and over	10 minutes
50°F to 68°F	20 minutes
32°F to 50°F	1 hour
23°F to 32°F	5 hours
Below 23°F	Not Recommended

STORAGE RECOMMENDATIONS

Chem-Stud Anchors have a shelf life of 2-4 years providing they are stored in their original containers in a cool (under 70°F) dry area and are not exposed to direct sunlight. To determine the usability of the product after a long storage period, invert the capsule several times and if the resin is in liquid state and flows, the capsule may be used.



INSTALLATION, continued

⚠ WARNING

Before doing any electrical work, make certain the power is disconnected and properly locked or tagged off. Failure to do so may result in death or serious injury. All electrical work must be done by a qualified technician and must meet all applicable codes.

Do not route control wiring for any other device through this control box unless properly shielded.

Be certain power is off when wiring to the control box or signal lights. Failure to do so could result in electrical shock, death or serious injury.

ELECTRICAL INSTALLATION

NOTE:

Reference wiring diagrams on pages 34 and 38 for all field connections.

SL20

1. Mount control box part number 6014249 inside the building 5 feet above the floor, to the left of the doorway. See Fig 13.
2. Mount and wire outside 24V signal light assembly to the control box using terminals Outside R, G and + on the terminal strip in the control panel. Always mount the light assembly with the red light on top and the green light on the bottom. See Fig. 13.

SL40

1. Mount control box part number 6014263 inside the building 5 feet above the floor, to the left of the doorway. See Fig 13.
2. Mount and wire outside 24V signal light assembly to the control box using terminals Outside R, G and + on the terminal strip in the control panel. Always mount the light assembly with the red light on top and the green light on the bottom. See Fig. 13.
3. Run 1/2" conduit from the vehicle restraint to the control panel.
4. Run the three different colored 14 gage insulated wires (supplied by others) from the appropriate terminals on the terminal strip in the control panel to the junction box on the side of the restraint. See wiring diagram on page 38.

ALL MODELS

(Electrical installation steps on models SL20 and SL40 only).

1. Mount the control bar mounting bracket on the wall next to the door opening for all models. See Fig 13.
2. Permanently mount the vehicle driver's instruction sign on the outside wall (below the signal light when installing RED/GREEN light assembly.) See Fig. 13.
3. Wire power to the control box through a fused disconnect (supplied by others) using terminals provided in the control box. See Fig. 13 and wiring diagram on page 34 and 38. Turn the power on.
4. Operate the vehicle restraint following the operating instructions on pages 15-23 for the correct model restraint. Check for proper light operation (if equipped), and smooth operation according to the operating instructions.

Interlock output (terminals IL1 and IL2) is a dry contact which closes when the inside Green light is on. Purpose of the interlock is to interrupt a dock leveler's control circuit. **Note that the interlock maximum current rating is 1/2A @24V. Fuse protection required (by others).**

5. Instruct the dock workers how to use the vehicle restraint using the operating procedures on pages 15-23 for the correct model restraint.

INSTALLATION, continued

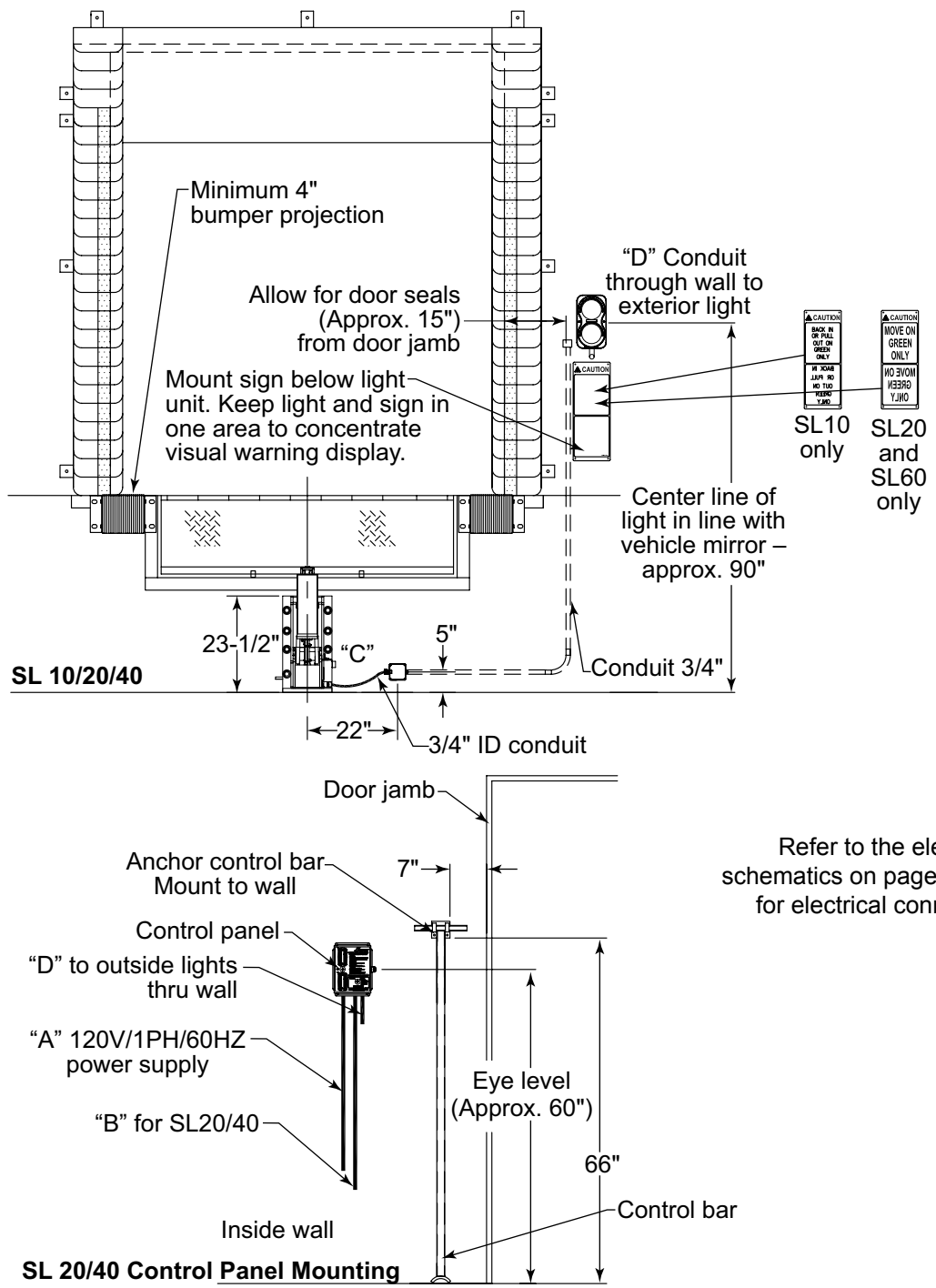
⚠ WARNING

Before doing any electrical work, make certain the power is disconnected and properly locked or tagged off. Failure to do so may result in death or serious injury. All electrical work must be done by a qualified technician and must meet all applicable codes.

⚠ WARNING

Be certain power is off when wiring to the control box or signal lights. Failure to do so could result in electrical shock, death or serious injury.

Fig. 13



COMPONENTS AND SPECIFICATIONS

The main components of the vehicle restraint are shown below. See the Parts List for specific part numbers.

Fig. 14

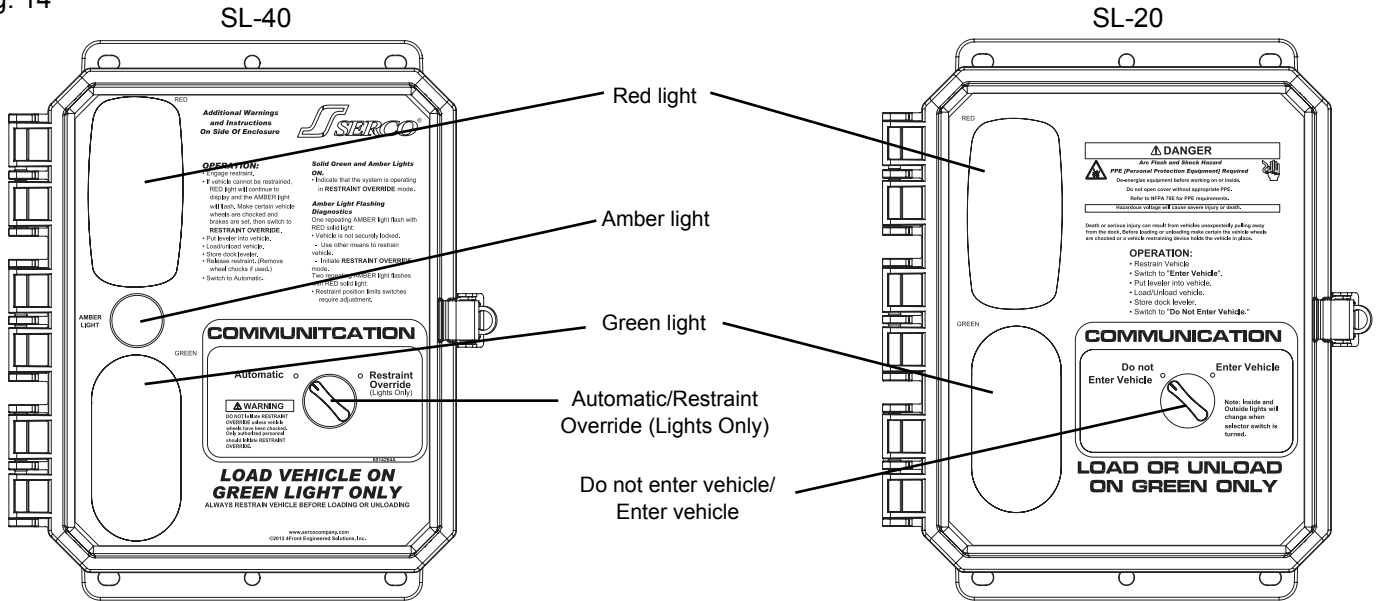
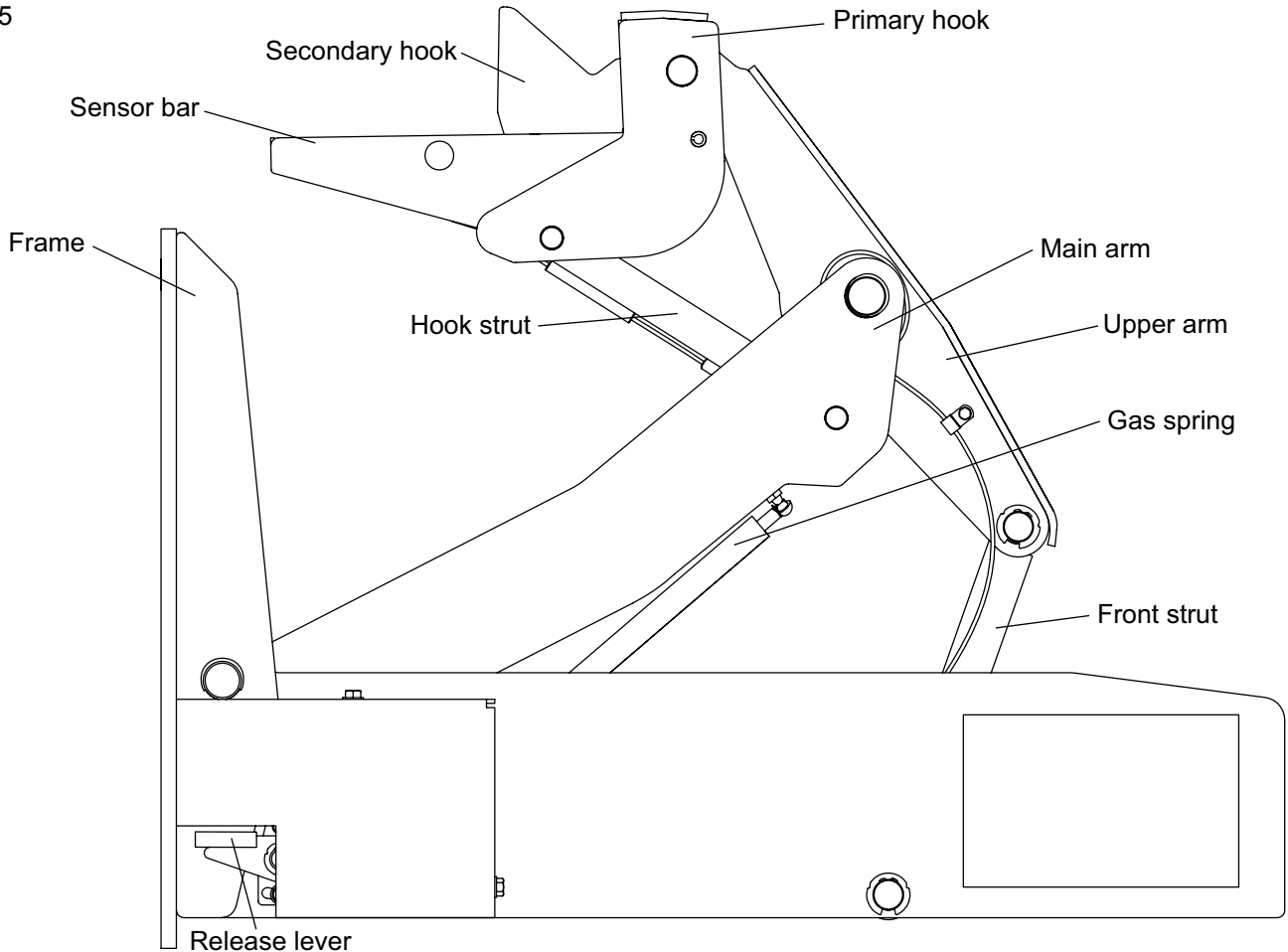


Fig. 15



OPERATING INSTRUCTIONS — SL10

▲ WARNING

Before operating the vehicle restraint, read and follow the Safety Practices, Warnings, and Operating Instructions contained in this manual. Use by untrained people could result in death or serious injury.

Do not use the restraint if it looks broken or does not seem to work right. Tell your supervisor right away.

Keep hands and feet clear at all times. Stay clear of vehicle restraint when it is moving. Vehicles not restrained move unexpectedly.

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

Do not load or unload any vehicle unless you make certain the vehicle restraint has securely hitched the vehicle's RIG (rear impact guard) and set the brakes. If the vehicle restraint does not hitch the vehicle's RIG for any reason, BE CERTAIN TO MANUALLY CHOCK THE VEHICLE WHEELS BEFORE LOADING OR UNLOADING.

Before chocking wheels or engaging vehicle restraint, dump air from air ride suspensions and set parking brakes.

Failure to place the hook in the stored position when not in use could result in damage to the vehicle restraint and incoming vehicles. Be certain bystanders in the driveway stand clear when the vehicle restraint is operated.

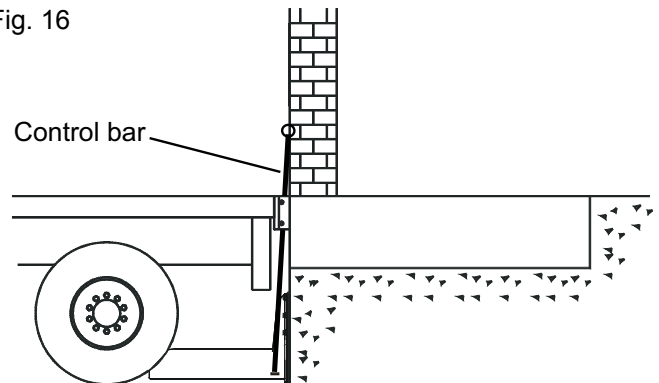
The SL10 is an upward biased, mechanically actuated restraint consisting of a dual hooking member, caution signs, and a control bar. The SL10 model does not include any communication lights.

OPERATING INSTRUCTIONS — SL10, continued

ENGAGING VEHICLE

1. To secure the vehicle at the dock, **activate the release lever arm located on the right side frame plate, with the control bar.** See Fig. 16.
2. The restraint hook will raise until it **contacts the RIG (rear impact guard)** of the vehicle. The operator shall confirm that the restraint has fully engaged the RIG. See Fig. 17.
3. The vehicle is now safe to load or unload.

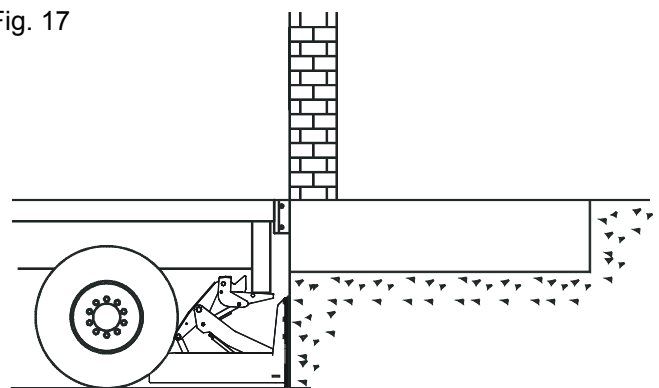
Fig. 16



RELEASING VEHICLE

1. When loading/unloading is complete, store dock leveler at dock level.
2. To release the vehicle from the dock, the operator inserts the end of the control bar in the recess in the front of the sensor bar and applies a downward force on the restraining hook with the control bar, until the storage latch engages. See Fig. 18.

Fig. 17



NO RIG (rear impact guard)

1. If the vehicle restraint has not securely hitched the vehicle's RIG, use the control bar to move the restraint to the released, stored position and **BE CERTAIN TO MANUALLY CHOCK THE VEHICLE WHEELS BEFORE LOADING OR UNLOADING.** See Fig. 19.
2. It is now safe to load and unload.
3. When loading is complete, remove the wheel chocks. The vehicle is now free to leave.

Fig. 18

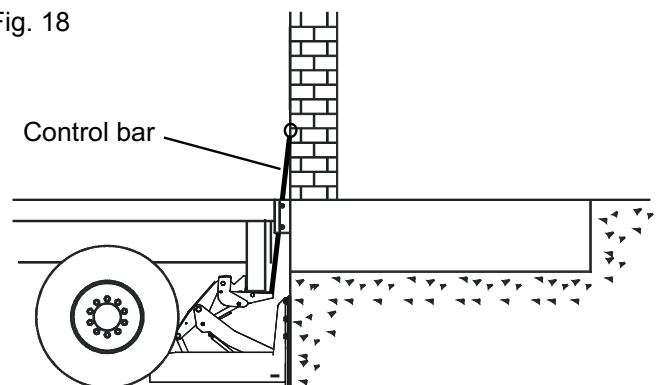
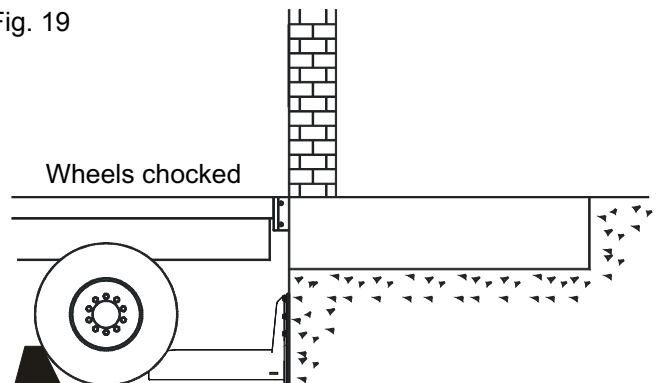


Fig. 19



OPERATING INSTRUCTIONS — SL20

▲ WARNING

Before operating the vehicle restraint, read and follow the Safety Practices, Warnings, and Operating Instructions contained in this manual. Use by untrained people could result in death or serious injury.

Do not use the restraint if it looks broken or does not seem to work right. Tell your supervisor right away.

Keep hands and feet clear at all times. Stay clear of vehicle restraint when it is moving. Vehicles not restrained move unexpectedly.

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

Do not load or unload any vehicle unless you make certain the vehicle restraint has securely hitched the vehicle's RIG (rear impact guard) and set the brakes. If the vehicle restraint does not hitch the vehicle's RIG for any reason, BE CERTAIN TO MANUALLY CHOCK THE VEHICLE WHEELS BEFORE LOADING OR UNLOADING.

Before chocking wheels or engaging vehicle restraint, dump air from air ride suspensions and set parking brakes.

Failure to place the hook in the stored position when not in use could result in damage to the vehicle restraint and incoming vehicles. Be certain bystanders in the driveway stand clear when the vehicle restraint is operated.

Enter vehicle only after making certain the vehicle is hitched (or chocked) and the light controls have been switched to indicate a green inside light and brakes are set. Vehicles not restrained move unexpectedly. If the lights are not properly switched the vehicle driver will see a green light and could pull out unexpectedly.

The SL20 is an upward biased, mechanically actuated restraint consisting of a dual hooking member, caution signs, and a control bar. The SL20 model includes a control box that allows the dock worker to manually switch inside/outside red/green communication lights. The color of the lights inside are always the opposite of the color of the lights outside.

OPERATING INSTRUCTIONS — SL20, continued

ENGAGING VEHICLE

1. When the vehicle backs in the **outside light** should be **green** and the **inside light** should be **red** with the selector switch in the **DO NOT ENTER** position. Fig. 20
2. To secure the vehicle at the dock, **activate the release lever arm located on the right side frame plate, with the control bar**. See Fig. 21.
3. The restraint hook will raise until it **contacts the RIG (rear impact guard)** of the vehicle. The operator shall confirm that the restraint has fully engaged the RIG. Switch the selector switch to the **ENTER** position to make the inside light green and the outside light red. See Fig. 22.
4. The vehicle is now safe to load or unload.

Fig. 20

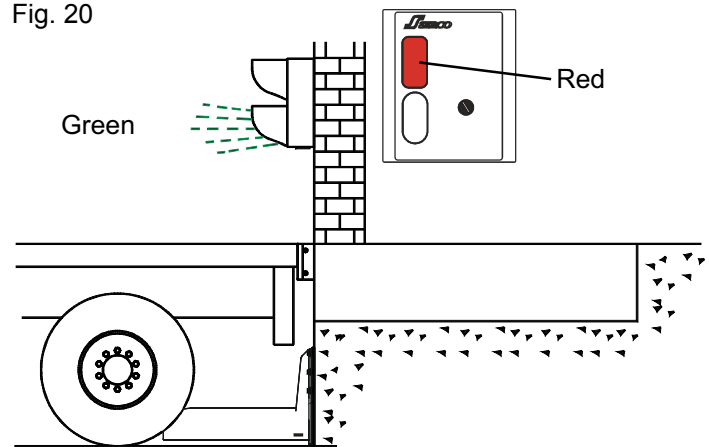


Fig. 21

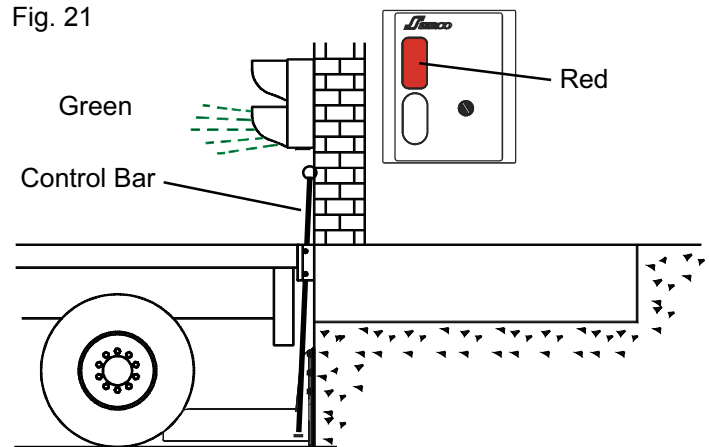
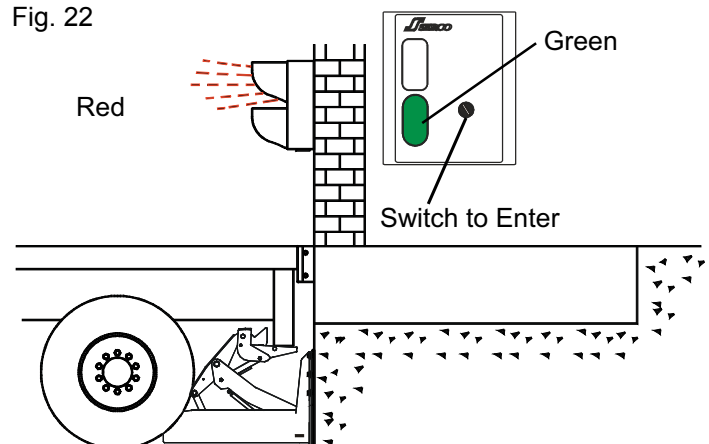


Fig. 22

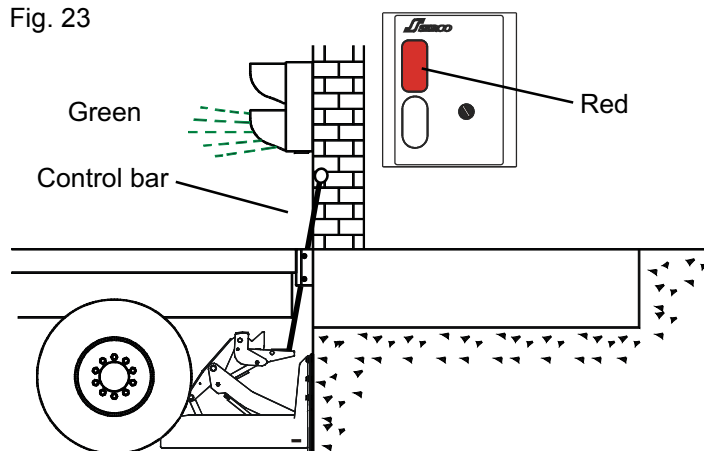


OPERATING INSTRUCTIONS — SL20, continued

RELEASING VEHICLE

1. Store dock leveler at dock level.
2. To release the vehicle from the dock, the operator inserts the end of the control bar in the recess in the front of the sensor bar and applies a downward force on the restraining hook with the control bar, until the storage latch engages. See Fig. 23.
3. After the operator has confirmed that the restraint is in the stored position, he shall turn the selector switch on the control panel from the **ENTER** position to the **DO NOT ENTER** position. The **outside light** will change from **red to green** and the **inside light** will change from **green to red**. The vehicle is now free to leave.

Fig. 23



NO RIG (rear impact guard)

1. If the vehicle restraint has not securely hitched the vehicle's RIG, use the control bar to move the restraint to the released, stored position and **BE CERTAIN TO MANUALLY CHOCK THE VEHICLE WHEELS BEFORE LOADING OR UNLOADING**. The operator shall turn the selector switch on the control panel from the **DO NOT ENTER** position to the **ENTER** position. The **outside lights** will change from **green to red** and the **interior lights** will change from **red to green**. It is now safe to load and unload. See Fig. 24.
2. When loading is complete, store dock leveler at dock level. Remove the wheel chocks and turn the selector switch on the control panel from the **ENTER** position to the **DO NOT ENTER** position. The **outside lights** will change from **red to green** and the **interior lights** will change from **green to red**. The vehicle is now free to leave. See Fig. 25.

Fig. 24

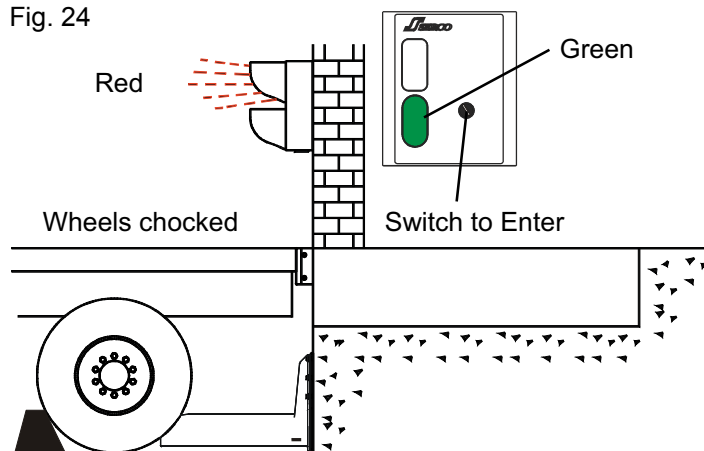
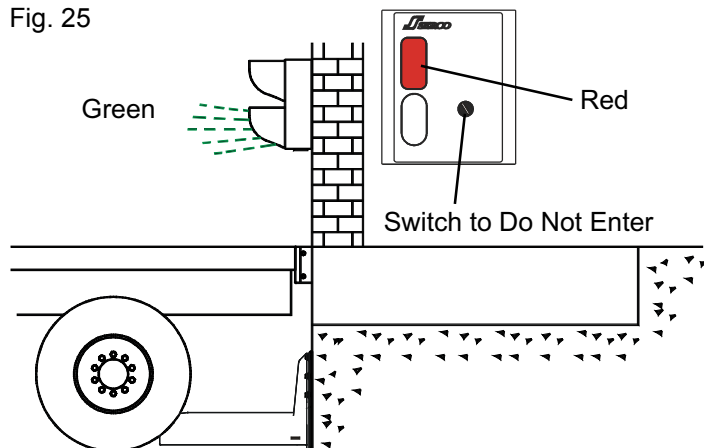


Fig. 25



OPERATING INSTRUCTIONS — SL40

⚠ WARNING

Before operating the vehicle restraint, read and follow the Safety Practices, Warnings, and Operating Instructions contained in this manual. Use by untrained people could result in death or serious injury.

Do not use the restraint if it looks broken or does not seem to work right. Tell your supervisor right away.

Keep hands and feet clear at all times. Stay clear of vehicle restraint when it is moving. Vehicles not restrained move unexpectedly.

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

Do not load or unload any vehicle unless you make certain the vehicle restraint has securely hitched the vehicle's RIG (rear impact guard) and set the brakes. If the vehicle restraint does not hitch the vehicle's RIG for any reason, BE CERTAIN TO MANUALLY CHOCK THE VEHICLE WHEELS BEFORE LOADING OR UNLOADING.

Before chocking wheels or engaging vehicle restraint, dump air from air ride suspensions and set parking brakes. Failure to place the hook in the stored position when not in use could result in damage to the vehicle restraint and incoming vehicles. Be certain bystanders in the driveway stand clear when the vehicle restraint is operated.

Enter 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 vehicle restraint to insure that it is securely hitched.

The SL40 is an upward biased, mechanically actuated restraint consisting of a dual hooking member, an interior/exterior light communication system, caution signs, and a control bar. The SL40 model includes a control box that automatically switches an inside/outside red/green light communication system.

OPERATING INSTRUCTIONS — SL40, continued

ENGAGING VEHICLE

1. When the vehicle backs in the **outside light** should be **green** and the **inside light** should be **red** with the selector switch in the **AUTOMATIC** position. See Fig. 26.
2. To secure the vehicle at the dock, **activate the release lever arm located on the right side frame plate, with the control bar**. As the restraint begins to raise, the **outside lights** change from **green to red**. See Fig. 27.
3. The restraining hook will raise until it **contacts the RIG (rear impact guard)** of the vehicle. The operator shall confirm that the restraint has fully engaged the RIG. When the restraint has fully engaged the RIG, the **inside lights** will change from **red to green**. The vehicle is now safe to load or unload. See Fig. 28.

Fig. 26

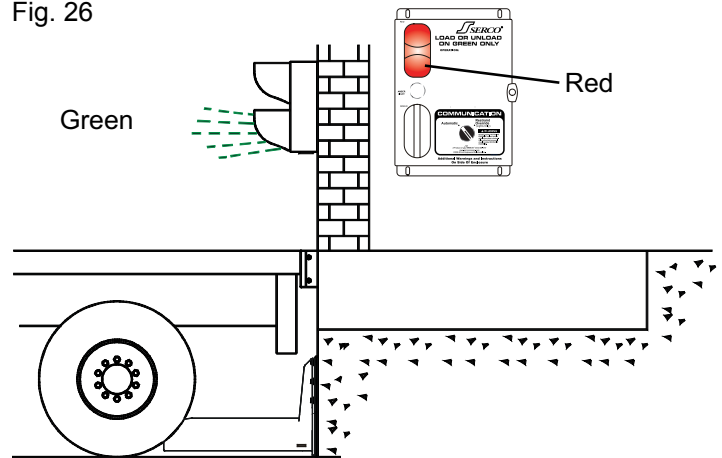


Fig. 27

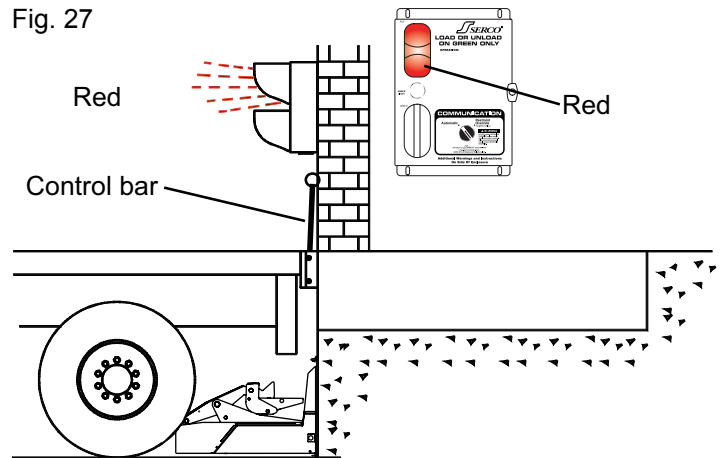
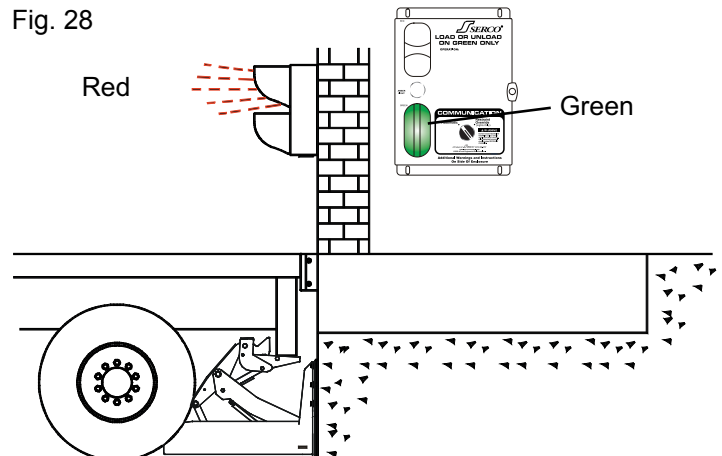


Fig. 28



OPERATING INSTRUCTIONS — SL40, continued

RELEASING VEHICLE

1. Store the dock leveler.
2. To release the vehicle from the dock, the operator inserts the end of the control bar in the recess in the front of the sensor bar and applies a downward force on the restraining hook with the control bar, until the storage latch engages. The **inside lights** will change from **green to red**. The **outside lights** will change from **red to green**. The vehicle is now free to leave. See Fig. 29.

NO RIG (rear impact guard)

⚠ WARNING

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

1. If the sensor bar has not securely hitched the vehicle's RIG, (rear impact guard) the inside light will remain red and the amber pilot light will flash. **BE CERTAIN TO MANUALLY CHOCK THE VEHICLE WHEELS BEFORE LOADING OR UNLOADING.** Then turn the selector switch to the **RESTRAINT OVERRIDE (LIGHTS ONLY)** position. The **outside light** changes to **red** and the **inside lights** will change to **green** with the **amber pilot light** on. The vehicle is now safe to load or unload. See Fig. 30.
2. When loading is complete, store the dock leveler at dock level. Use the control bar to move the restraint to the released, stored position. Remove the wheel chocks and turn the selector switch to the **AUTOMATIC** position. The **outside light** will change to **green** and the **inside light** will change to **red**. The vehicle is now free to leave. See Fig. 31.

Fig. 29

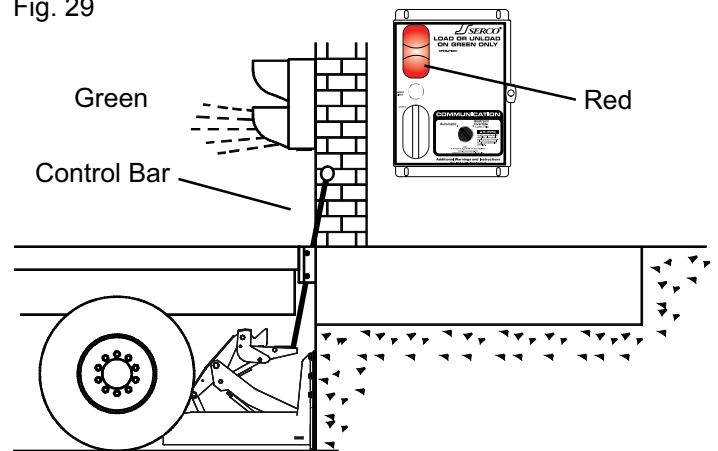


Fig. 30

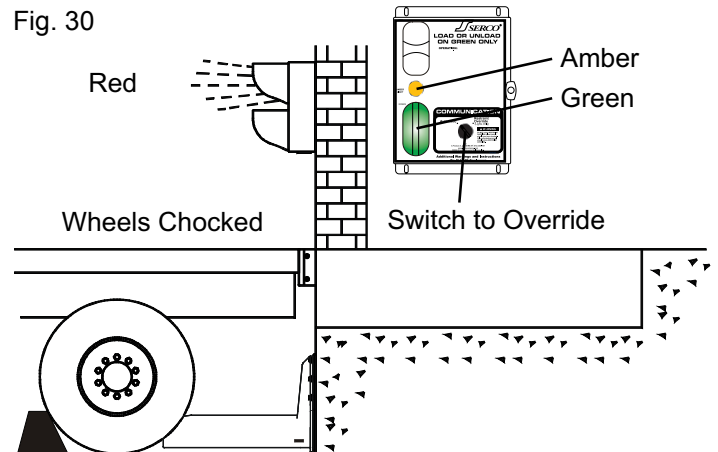
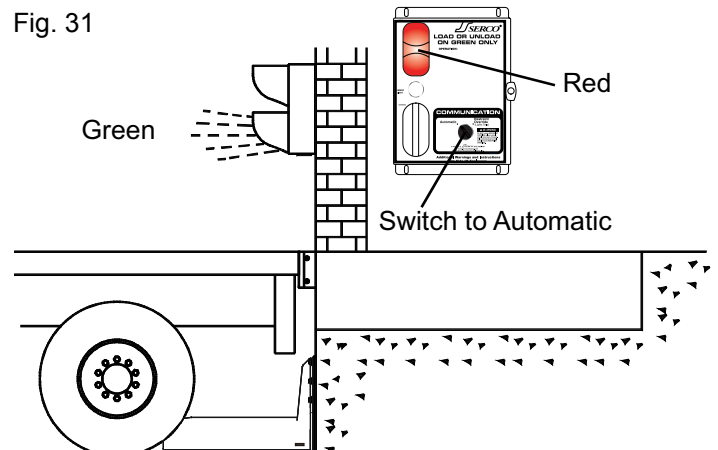


Fig. 31



OPERATING INSTRUCTIONS — SL40, continued

HIGH RIG (rear impact guard)

1. If during unloading, the vehicle raises and the sensor bar loses contact with the RIG (rear impact guard), the **inside light** will change from **green** to **red** and the **amber** pilot light will flash to indicate a possible safety hazard. See Fig. 32.
2. **MANUALLY CHOCK THE VEHICLE WHEELS BEFORE CONTINUING LOADING OR UNLOADING.** Then turn the selector switch to the **RESTRAINT OVERRIDE (LIGHTS ONLY)** position. The **outside light** will remain **red** and the **inside light** will change back to **green** with the amber pilot light on. The vehicle is now safe to load or unload. See Fig. 32.
3. When loading is completed, store the dock leveler at dock level. Use the control bar to move the restraint to the released, stored position. Remove the wheel chocks and turn selector switch to **AUTOMATIC** position. The **outside light** will change to **green** and the **inside light** will change to **red**. The vehicle is now free to leave. See Fig. 33.

Fig. 32

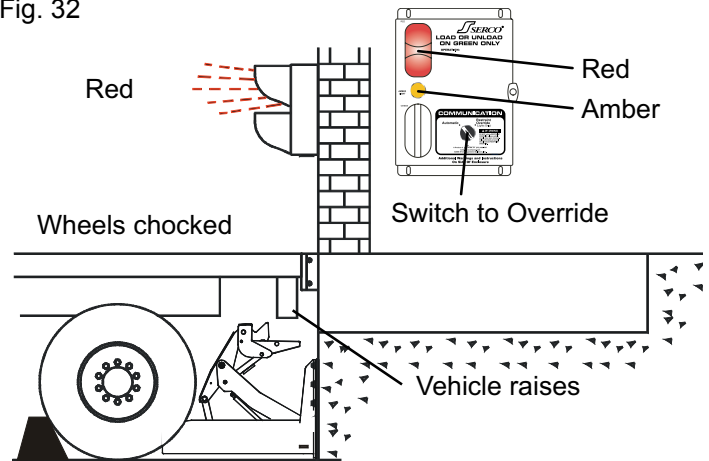
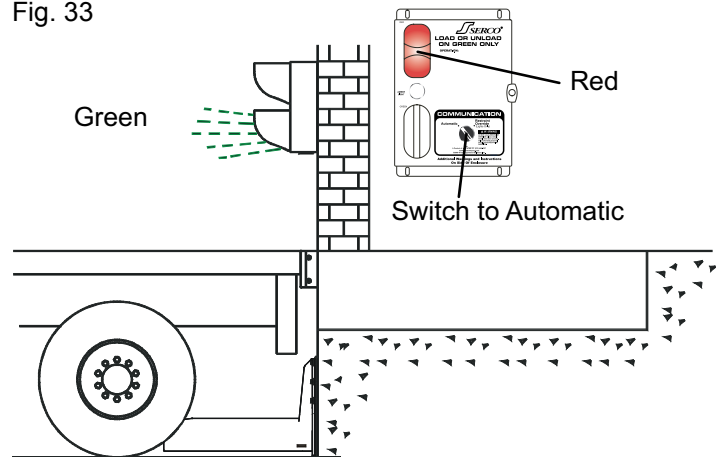


Fig. 33



PREVENTIVE MAINTENANCE

⚠ WARNING

Before servicing the vehicle restraint, read and follow the Safety Practices on page 2 and the Operation section in this manual. Failure to do so could result in death or serious injury.

To ensure the continued proper operation of your vehicle restraint, perform the following preventive maintenance procedures.

DAILY

1. Check all lights on the control panel and outside to ensure they are functioning. (SL20 and SL40 only)
2. Inspect dock bumpers. Four inches (4") of projection is required. Worn, torn, loose or missing bumpers must be replaced.

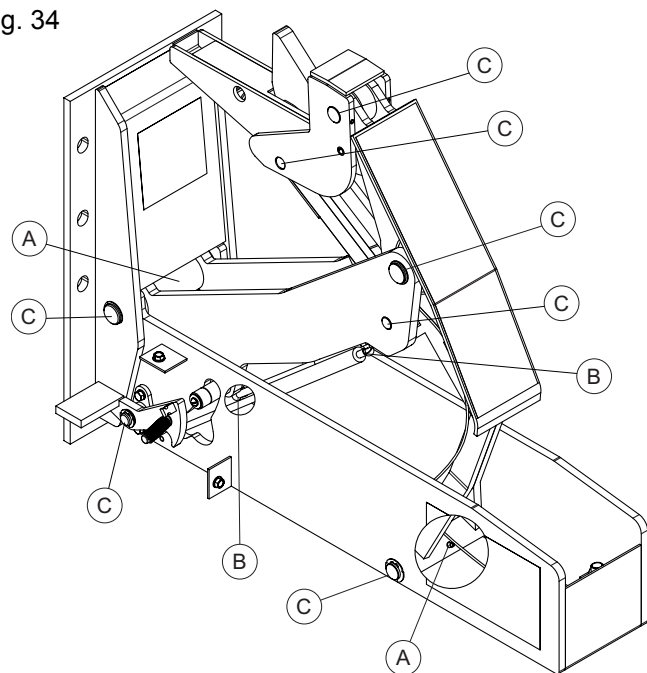
WEEKLY

1. Remove all debris from the vehicle restraint to ensure operation is unobstructed.
2. Inspect operation of the RIG (rear impact guard) sensor bar to ensure it pivots freely.
3. Inspect the vehicle restraint for damage that may weaken the anchoring strength. Re-tighten the concrete anchors if necessary.

QUARTERLY

1. Inspect the proximity sensors for proper adjustment. (SL40 only.) Refer to pages 27-28.
2. Lubricate and clean restraint. See Fig. 34.
3. Raise the restraint and inspect the mechanism for any signs of wear, distortion or cracked welds.
4. Inspect all mechanical pivot points on the restraint. If necessary clean and remove foreign material with brush and penetrating oil.
5. Check all operating, warning, and caution labels and signs and be sure they can be read. Replace as necessary.
6. Inspect dock bumpers. Four inches (4") of projection is required. Worn, torn, loose or missing bumpers must be replaced.

Fig. 34



- A) Lubricate main arm pin and front strut pin with bearing grease. Apply at grease zerk.
- B) Lubricate gas spring ball studs with spray type lithium grease (both ends).
- C) Clean and remove foreign material from all pivot points using a brush and penetrating oil.

TROUBLESHOOTING GUIDE

⚠ WARNING

Before servicing the vehicle restraint, read and follow the Safety Practices on page 2 and the Operation section in this manual. Failure to do so could result in death or serious injury.

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

SL20

PROBLEM	POSSIBLE CAUSE	SOLUTION
1. No Lights.	a) No power to panel. b) Fuse failed.	a) Check power supply at terminals L and N. b) Check fuses FU-1 and fuse on circuit board.

SL40

PROBLEM	POSSIBLE CAUSE	SOLUTION
1. No Lights.	a) No power to panel. b) Fuse failed.	a) Check power supply at terminals L and N. b) Check fuses FU-1 and fuse on circuit board.
2. Restraint is stored, inside and outside lights are red.	a) LS1 switch out of adjustment.	a) Check LS1 switch adjustment. Check wiring.
3. Restraint is raised, RIG sensor bar is depressed, inside and outside lights are red.	a) LS4 switch not sensing.	a) Check LS4 switch adjustment. Check wiring.
4. Restraint is stored, selector switch in automatic position, the outside lights should be flashing red, the inside lights should be a solid red and the amber pilot light should be flashing with a two pulse pattern.	a) LS4 switch is stuck down.	a) Check sensor bar for debris. Check LS4 switch for adjustment.
5. Restraint will not latch in the stored position.	a) Storage latch out of adjustment. b) Storage latch pivot friction or missing/damaged return spring. c) Restraint improperly installed - no 1" gap between driveway and restraint frame.	a) Adjust storage latch (see pg. 26). b) Lubricate the storage latch pivot, verify return spring is in place. c) Re-install restraint correctly so nom. 1" gap is present underneath restraint.

ADJUSTMENTS

Use these instructions to adjust the vehicle restraint.

⚠ WARNING

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

Place barricades around the pit on dock floor and drive while installing, maintaining or repairing dock leveler or the vehicle restraint.

Keep hands and feet away from moving parts when making adjustments.

STORAGE LATCH ADJUSTMENT

The storage latch is located on the side of the restraint housing. When the restraint is lowered by the dock attendant, the main arm restraint pin is engaged by the storage latch. The location of the storage latch pin assembly determines the stored position of the restraint. The correct stored position is when the hook is 3/16" below the housing.

TO ADJUST THE STORAGE LATCH:

Lower the restraint to its stored position. Observe the distance from the top of the restraint hook and the top surface of the restraint housing. If the top of the restraint hook is above the restraint housing, adjust the storage latch as follows:

1. Remove the two fasteners and remove the storage latch cover.
2. Depress the restraint hook to its maximum lowered position.
3. Loosen the two storage latch adjusting screws.
4. Rotate the storage latch pin assembly counter clockwise as required until the storage latch firmly engages the main arm restraint pin.
5. Tighten the storage latch adjusting screws.
6. Verify that the hook is at least 3/16" below the restraint housing. Repeat steps 3 through 5 as required.
7. Reinstall the storage latch cover.

Fig. 35

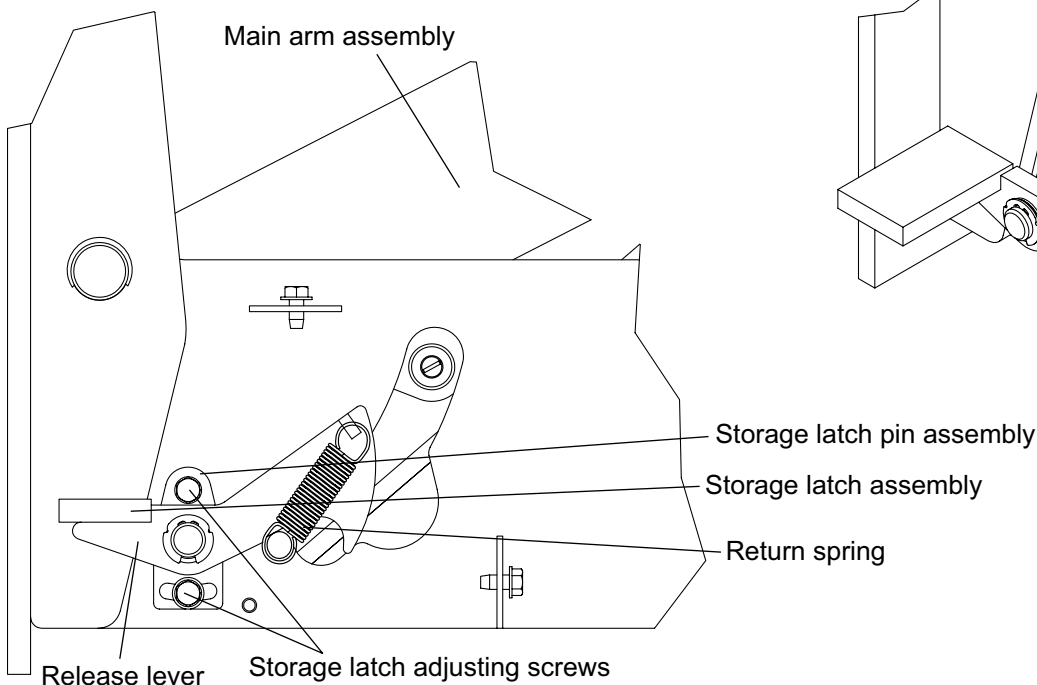
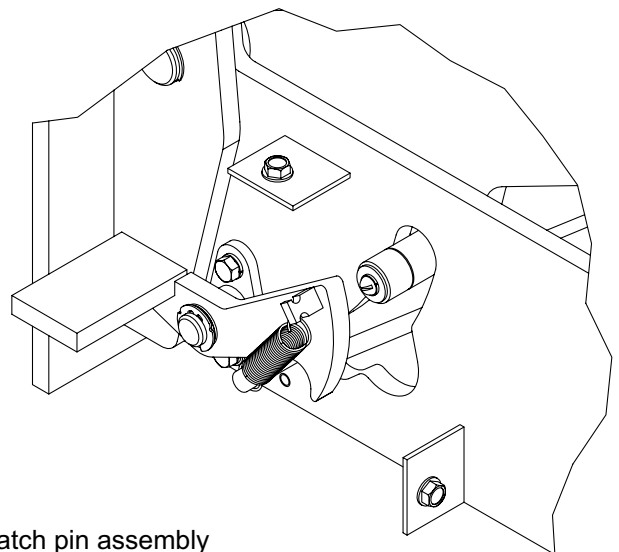


Fig. 36



RESTRAINT STORED SENSOR – LS1 (SL40)

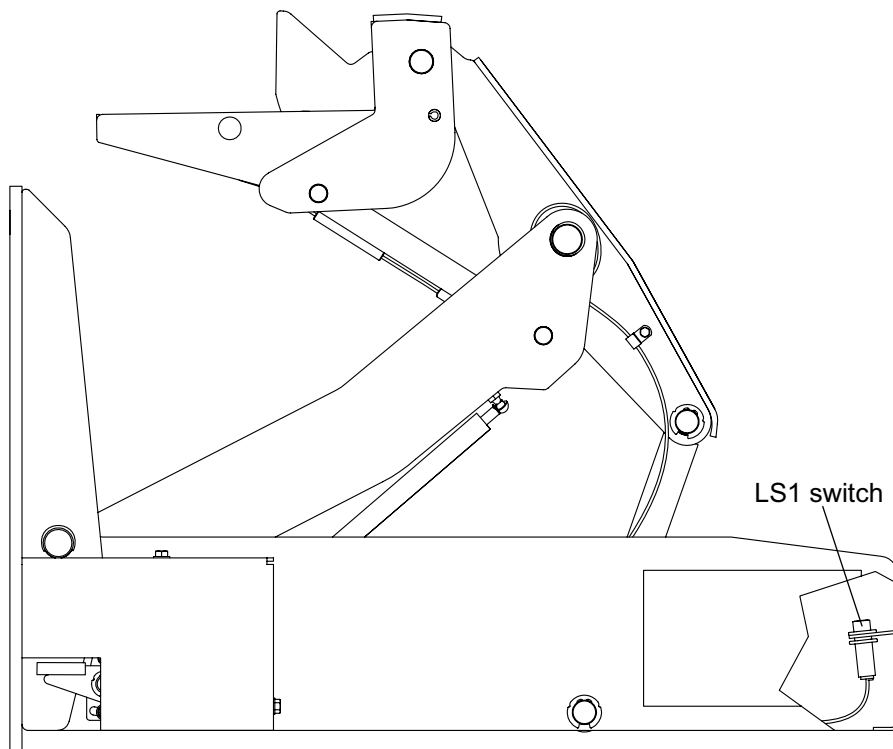
Proximity sensor LS1 indicates the lowered position of the restraint. The correct stored position is when the hook is at least 3/16" below the top of the restraint housing. To adjust the sensor LS1:

1. Turn control panel Selector switch to the "Automatic" position.
2. Trip the release lever to raise the restraint. The outside lights should immediately change to RED.
3. Fully lower the restraint. The outside light must change to GREEN only when the restraint primary hook is below the restraint housing.
4. If the outside GREEN light does not indicate when the restraint is fully stored, trip the release lever to raise the restraint. Adjust the LS1 so it is 1/16" - 1/8" from the upper arm when the restraint is stored.

NOTE:

Visually verify that the upper arm does not contact the LS1 sensor while storing the restraint. If it appears that the main arm will strike the LS1 sensor at any time, raise the restraint and adjust the LS1 sensor to maintain the 1/16" gap shown in Fig. 38.

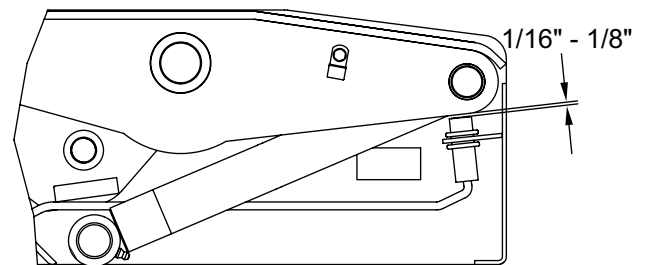
Fig. 37



NOTICE

Visually verify that the main arm will not contact the LS1 sensor while storing the restraint. If upper arm contacts the LS1 it may cause product damage.

Fig. 38



ADJUSTMENTS, continued

RIG (REAR IMPACT GUARD) SENSOR BAR – LS4 (SL40)

Proximity sensor LS4 indicates when the sensor bar has contacted the RIG (rear impact guard). The proper setting of LS4 is 1/16" - 1/8" gap between the sensor target and proximity sensor while the sensor bar depressed, as shown in Fig. 39.

To check for proper operation of LS4, raise the restraint. The outside light immediately changes from flashing **green** to flashing red. The inside lights change from **red** to **red** with a **flashing amber** pilot light. Press down on the sensor bar. The outside light remains flashing **red** and the inside light changes to **green** and the **amber** pilot light turns off. Release the sensor bar to ensure the inside light switches back to **red** with the **amber light flashing**.

NOTE:

Proper torque specification for tightening LS4 is 3.7ft. lb.

To adjust LS4, order the special tool from your local SERCO® distributor. P/N: **AP2632** - VEHICLE RESTRAINT LS4 15/16" WRENCH SET or make your own tool using the following instructions:

1. Buy a 15/16" combination wrench (one end open-end, other end 12-point box)
2. Using an abrasive cutoff wheel or "chop saw", cut the wrench in half, in the middle of the handle.
3. Carefully remove a 0.708" - 0.750" section from the box "ring", directly opposite the handle. This is important, as the wrench must pass over the 18mm body of the proximity sensor.
4. Sand any sharp edges or burrs.

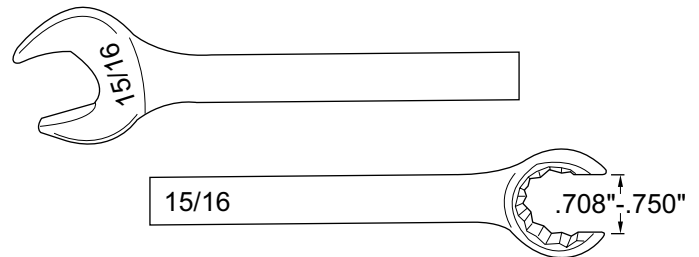
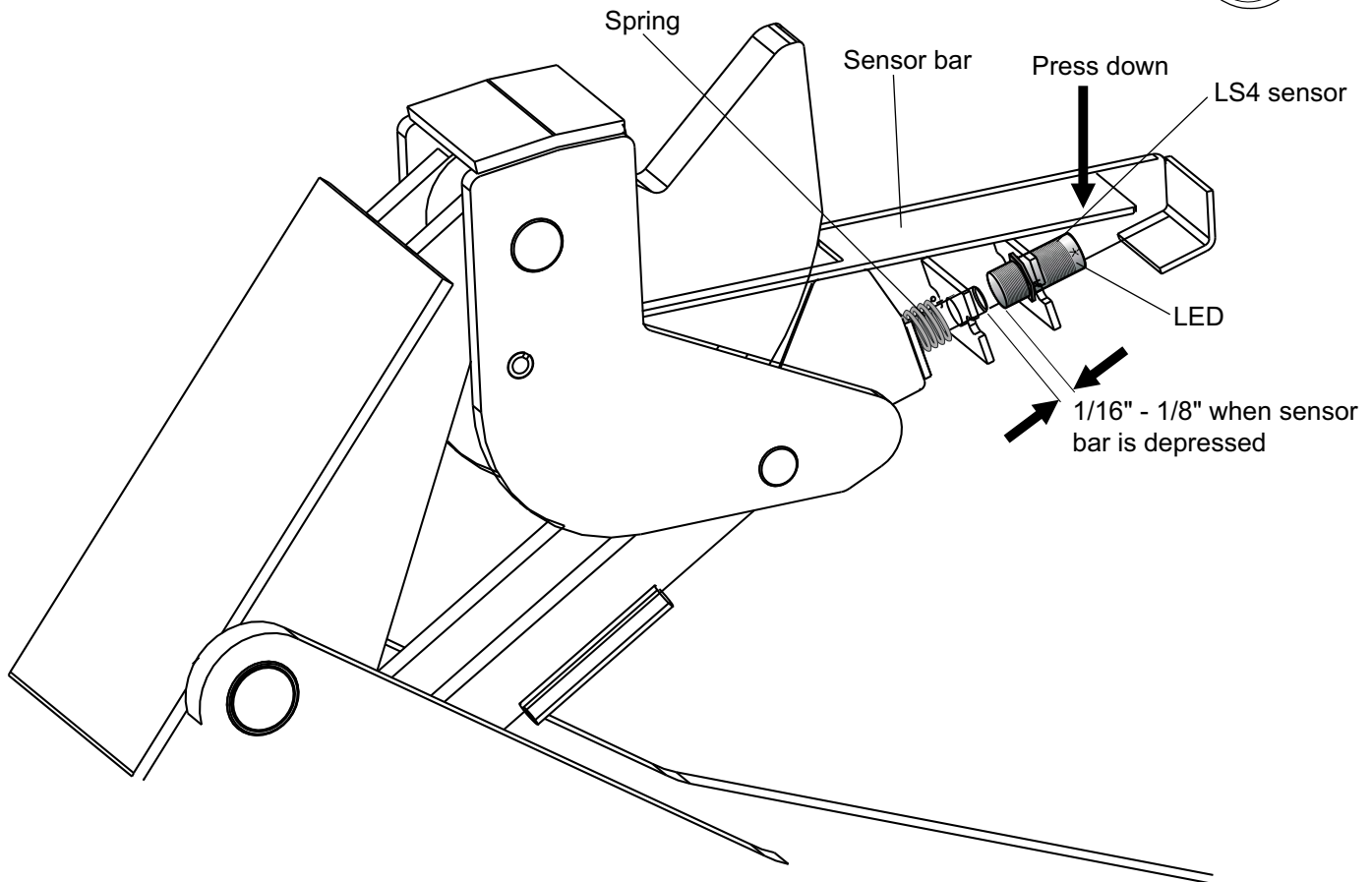


Fig. 39



GAS SPRING REPLACEMENT

TO REPLACE GAS SPRINGS ON THE PITBULL® SAFETY-LOC® SERIES RESTRAINT – ALL MODELS

To replace gas springs on the PitBull® SAFETY-LOC® series restraint

Two gas springs are used on the PitBull® SAFETY-LOC® series restraints to bias the moving parts upward. Gas springs contain high pressure compressed nitrogen, and must be handled with care. The gas springs are charged with approx. 200 lbs. of force, and must BOTH be changed if either gas spring weakens or is damaged. To successfully replace gas springs, you must follow the instructions below.

1. Remove the side cover from the restraint with the restraint in the lowered position.
2. Release the storage latch to raise the restraint to its fully up position.
3. Cut a piece of 2x4 lumber to length and fit it tightly between the frame and the underside of the main arm. See Fig. 40. The length of this 2x4 must allow the gas springs to reach their free length.

▲ WARNING

The moving parts of the restraint are very heavy, and are supported by the gas springs. Great care must be taken to support the weight of these parts while removing or replacing the gas springs.

4. Remove the klipring from one end of the pin that joins the front strut assembly to the upper arm assembly. Carefully slide out the pin while replacing it with a 1/4" diameter shaft screwdriver. This will allow the gas springs to extend to their free length so that they can be removed.

NOTE:

You may have to use the supporting wood to force the Main Arm Assembly upwards even further than before you removed the pin.

5. Replace the gas springs one at a time beginning with the most obviously damaged gas spring. This may help to counterbalance some of the weight while you are working on the unit. Place a small dab of grease in each ball socket before you push the socket onto the ball stud. Make sure the rod end of the gas spring points downward.

GAS SPRING REPLACEMENT, continued

NOTE:

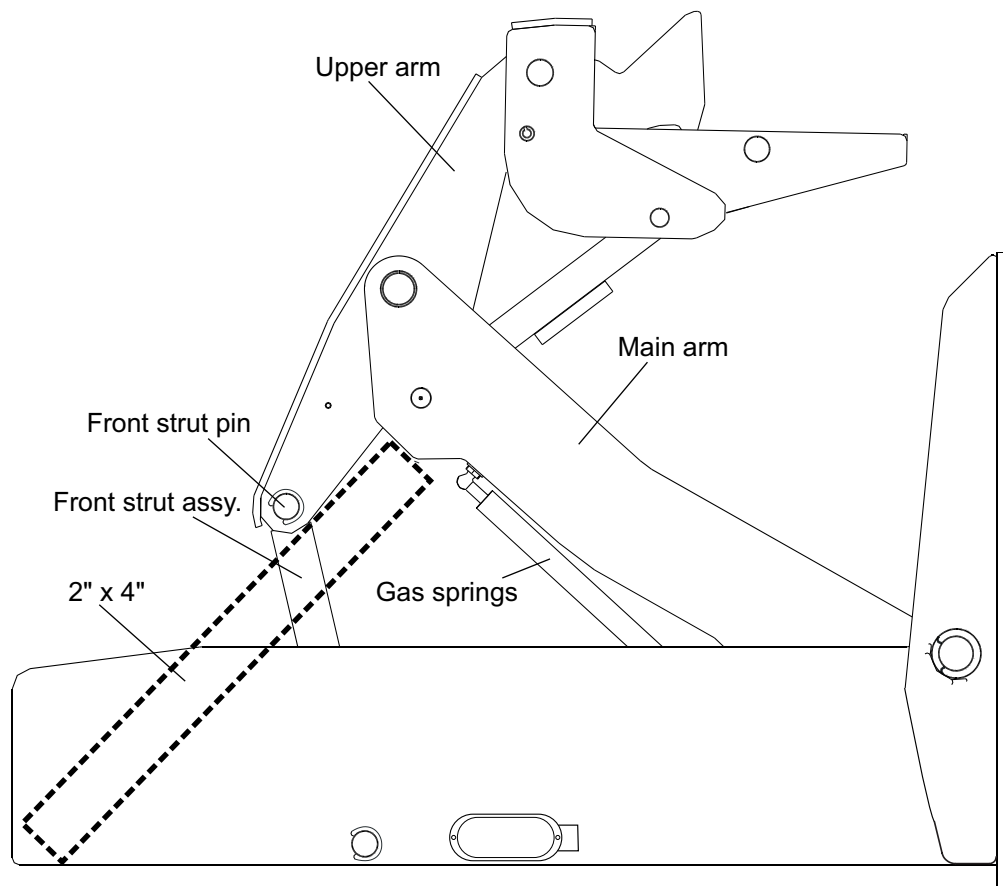
Make sure the ball sockets are properly aligned – hold the gas spring in your hand and using pliers tighten the barrel end socket snug. Next hold the barrel in your hand as you use pliers on the rod end ball socket. Rotate the rod clockwise as you index the rod to proper orientation.

NOTICE

Do NOT use pliers on the chrome rod surface!

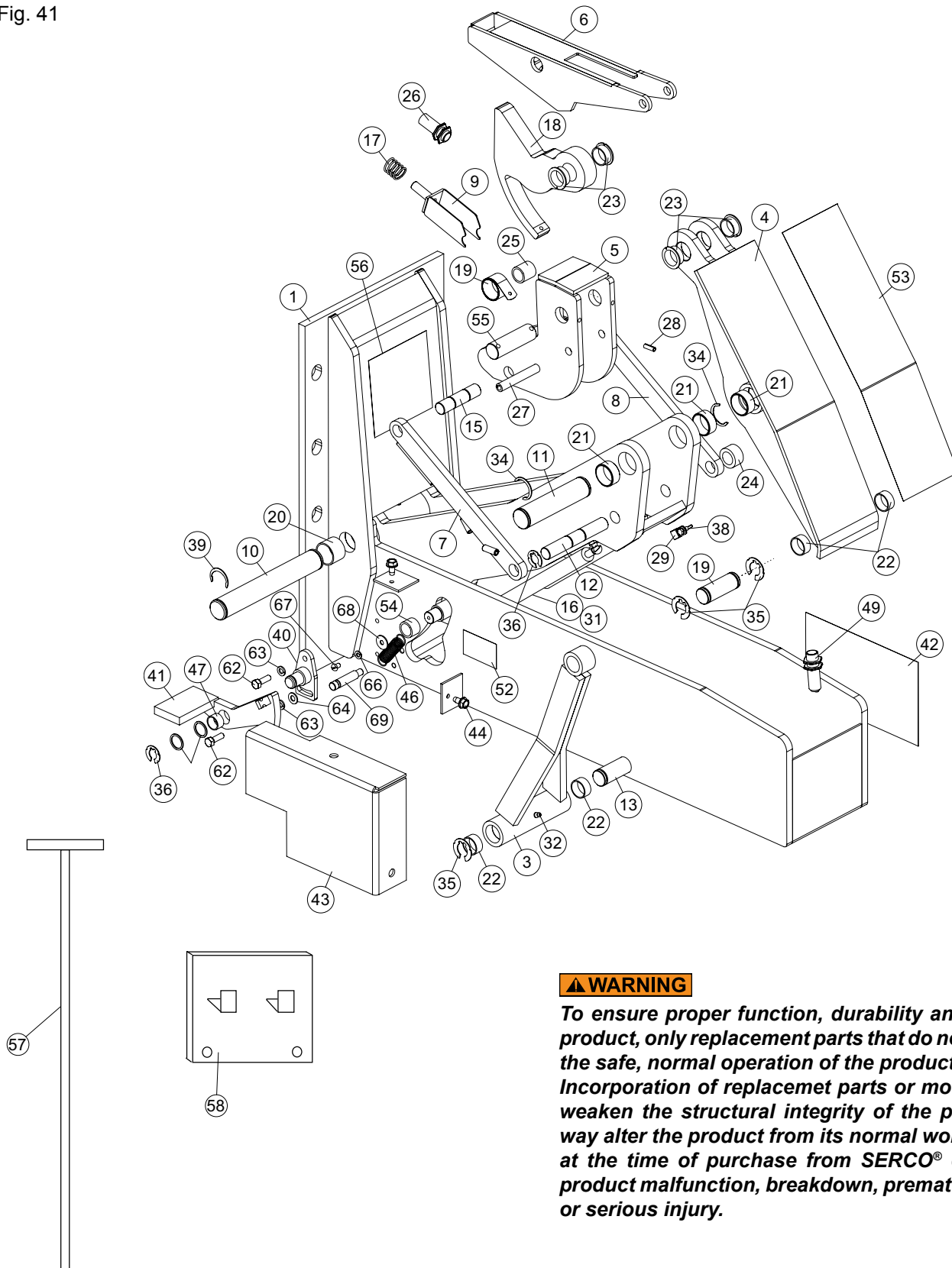
6. With both gas springs installed and the retainer clips in place, you can remove the 2x4 support, replace the Front Strut pin and kliprings.
7. Use the control bar to re-latch the restraint in the stored (down) position.
8. Test the unit and reinstall the side cover.

Fig. 40



PARTS LIST — VEHICLE RESTRAINT

Fig. 41



▲ 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 a way alter the product from its normal working condition at the time of purchase from SERCO® could result in product malfunction, breakdown, premature wear, death or serious injury.

PARTS LIST — VEHICLE RESTRAINT, continued

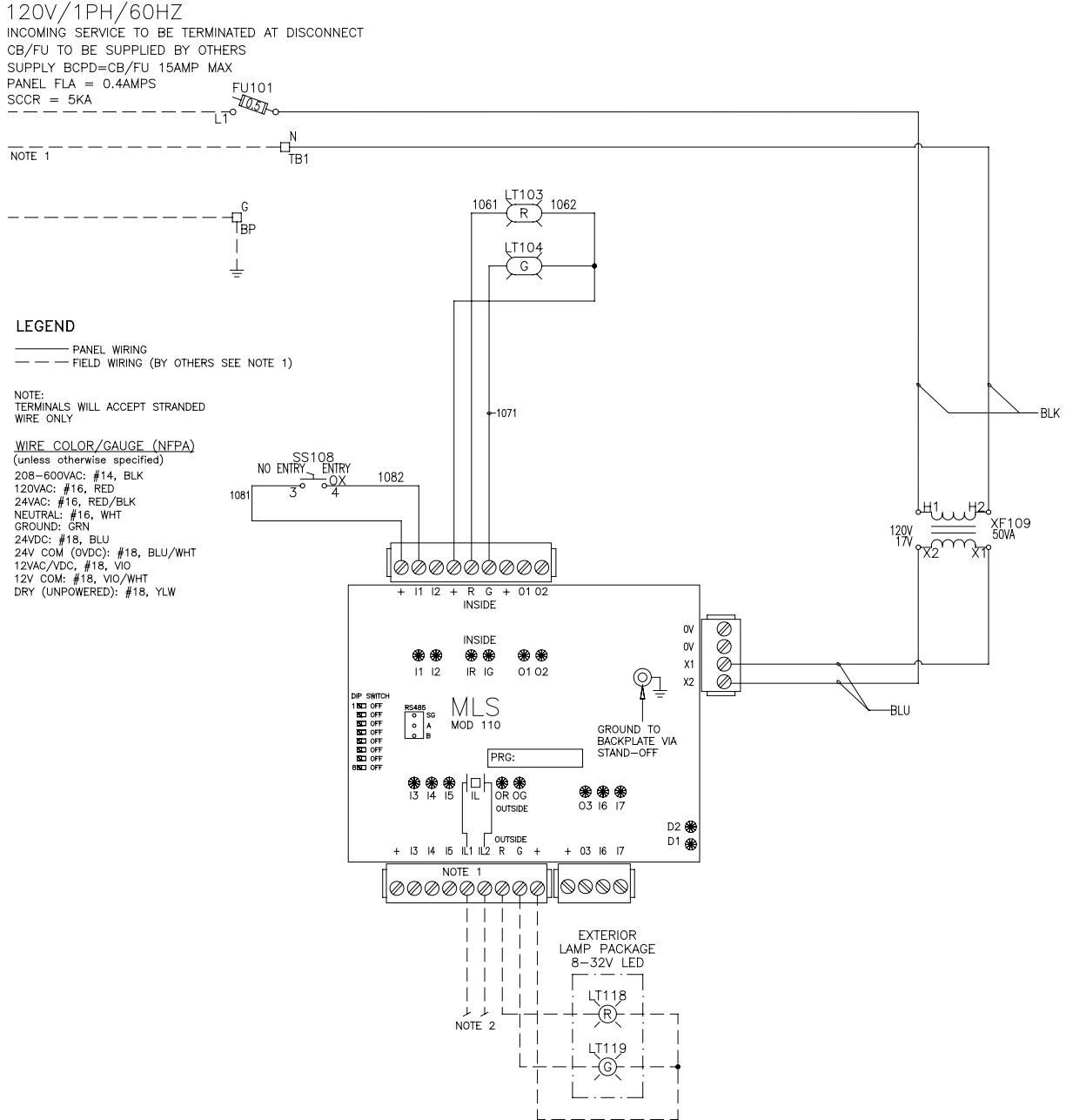
Item	Quantity	Part Description	Part Number
1A	1	FRAME ASSEMBLY, WALL MOUNT	6009187
1B	1	FRAME ASSEMBLY, GROUND MOUNT	6009189
2	1	MAIN ARM ASSEMBLY	6009181
3	1	FRONT STRUT ASSEMBLY	9-0007
4	1	UPPER ARM ASSEMBLY	6001535
5	1	PRIMARY HOOK ASSEMBLY	9-0011
6	1	SENSOR BAR ASSEMBLY	9-0028
7	1	MAIN HOOK STRUT ASSEMBLY	9-0030
8	1	MAIN HOOK STRUT	485-0240
9	1	SENSOR TARGET ASSEMBLY	9-0012
10	1	VR15-17 PIN-FRAME, 1-1/4" OD	485-0040
11	1	PIN, UPPER ARM –MAIN ARM, SL10-10, 1-1/4" OD	6001534
12	1	VR-PIN-MAIN ARM, 3/4" OD	485-0035
13	1	VR-PIN-FRAME, 1" OD	485-0038
14	1	VR-PIN-FRONT STRUT, 1" OD	485-0037
15	1	SL PRIMARY HOOK PIN, 3/4" DIA	485-0119
16	2	GAS SPRING, GSNI - 9117, SL10-40	338-018
17	1	SPRING (LS4) - COMPRESSION	333-047
18	1	SECONDARY HOOK ASSY, SL10-40	9-0015
19	1	SPRING (CONSTANT FORCE)	338-009
20	2	BUSHING - 1-1/4"	821-032
21	2	BUSHING - 1-1/4"	821-035
22	2	BUSHING - 1"	821-034
23	2	BUSHING - 1" (FLANGE)	821-033
24	2	SPACER - MAIN ARM	485-0026
25	1	NYLON ROLLER	485-0235
26	1	LS4 PROXIMITY SWITCH (C/W HARDWARE)	625-043
27	1	TENSION PIN - 1/2" DIA. X 3-1/4" LG.	231-205
28	1	TENSION PIN - 1/4" DIA. X 3/4" LG.	231-128
29	1	CABLE CLIP	441-125
30	2	WASHER - 5/16 ID X 3/4" OD	234-081
31	4	BALL STUD	821-037
32	2	GREASE FITTING (C/W BALL CHECK)	417-113
33	4	RETAINING CLIP. (FOR GAS SPRING)	236-124
34	4	CRESRING - 1-1/4"	236-123

PARTS LIST — VEHICLE RESTRAINT, continued

Item	Quantity	Part Description	Part Number
35	4	KLIPRING - 1"	236-114
36	3	KLIPRING - 3/4"	236-110
37	1	HHMB 1/2-13 X 1-1/2" LG.	212-204
38	1	HHMB 1/4-20 X 1" LG.	212-005
39	1	LN 10-32 UNC X NYLOCK	214-123
40	1	SL10-40, LATCH SHAFT ASSY	9-0032
41	1	STORAGE LATCH ASSEMBLY, SL10-40	6009184
42	2	PIT BULL LOGO	921-247
43	1	COVER, SL10-40	6009185
44	2	HH-ST5 5/16-18 X 1/2" LG	216-460
45	1	CONDUIT BODY: LB-19C	6000621
46	1	EXTENSION SPRING, SL10-40, LATCH	338-019
47	1	BUSHING, 12DU08, SL10-40	821-043
48	1	TERMINAL STRIP - 3 POLE	6013891
49	1	PROXIMITY SWITCH, LS-1	625-036
50	1	HHMB 10-32 X 3/4" LG.	821-027
51	6	WASHER -3/4" ID X 1" OD	234-150
52	1	SERIAL TAG	6009761
53	1	HAZARD STRIPE	6008556
54	1	NYLON ROLLER 1" OD X 0.781" ID X 11/16" W	485-0250
55	1	SL-PIN - PRIMARY HOOK, 1" DIA.	485-0108
56	1	PRODUCT IDENTIFIER LABEL - SERCO	921-185
57	1	CONTROL BAR ASSY.	8-9906
58	1	CONTROL BAR WALL MOUNT ASSY.	8-9909
59A	7	ANCHOR BOLT 3/4 UNC X 5-1/2 (NOT SHOWN) (WALL MOUNT ONLY)	6001187
59B	2	ANCHOR BOLT, 3/4 UNC X 7 (NOT SHOWN) (GROUND MOUNT ONLY)	6001334
60	4	EPOXY ANCHOR ROD – 3/4, RAWL (NOT SHOWN)	235406
61	4	EPOXY CAPSULE – 3/4, RAWL #65 (NOT SHOWN)	235407
62	2	HHMB 5/16 X 1 GRADE 5 ZINC PLD	212054
63	2	LW 5/16 ZINC PLD	234291
64	1	PW 5/16 BOLT SIZE 3/8 HOLE	234091
65	2	SPACER WASHER, 3/4" ID X 1" OD X 0.062	234150
66	1	LW 1/4 ZINC PLD	234281
67	1	1/4 - 20 X 3/8 SLOTTED ROUND HEAD CAP SCREW	6001295
68	1	RETAINING WASHER, SL10-40, ROLLER	6000290
69	1	PIN, LATCH STOP, SL10-40	6009358

SL20 ELECTRICAL SCHEMATIC

Fig. 42



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 1/2A@24VDC MAX. EXTERNAL FUSE REQUIRED.

NOTE:

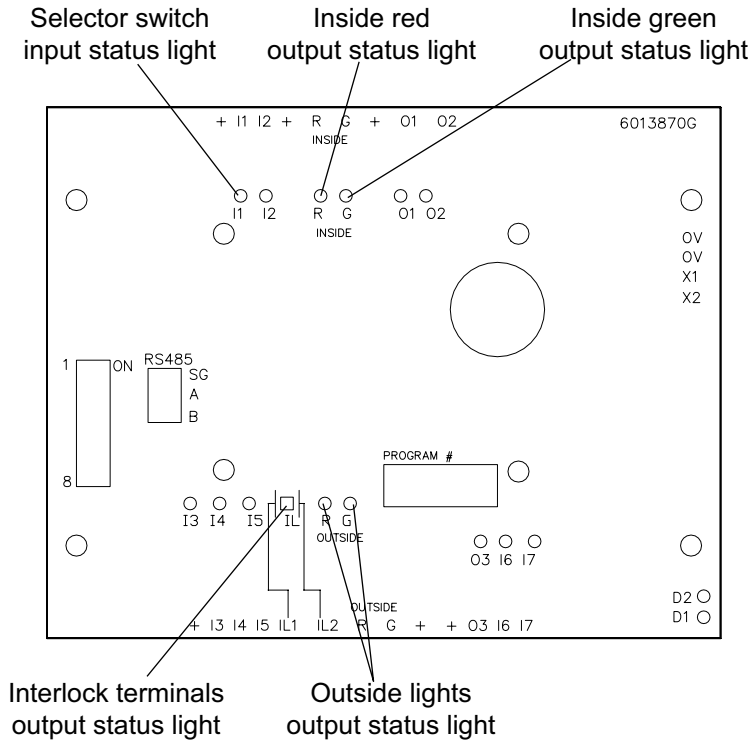
For 24V incoming power consult factory.

NOTE:

Power to control panel must be from fused disconnect supplied by others. All electrical work must meet all applicable codes. All devices shown in de-energized state.

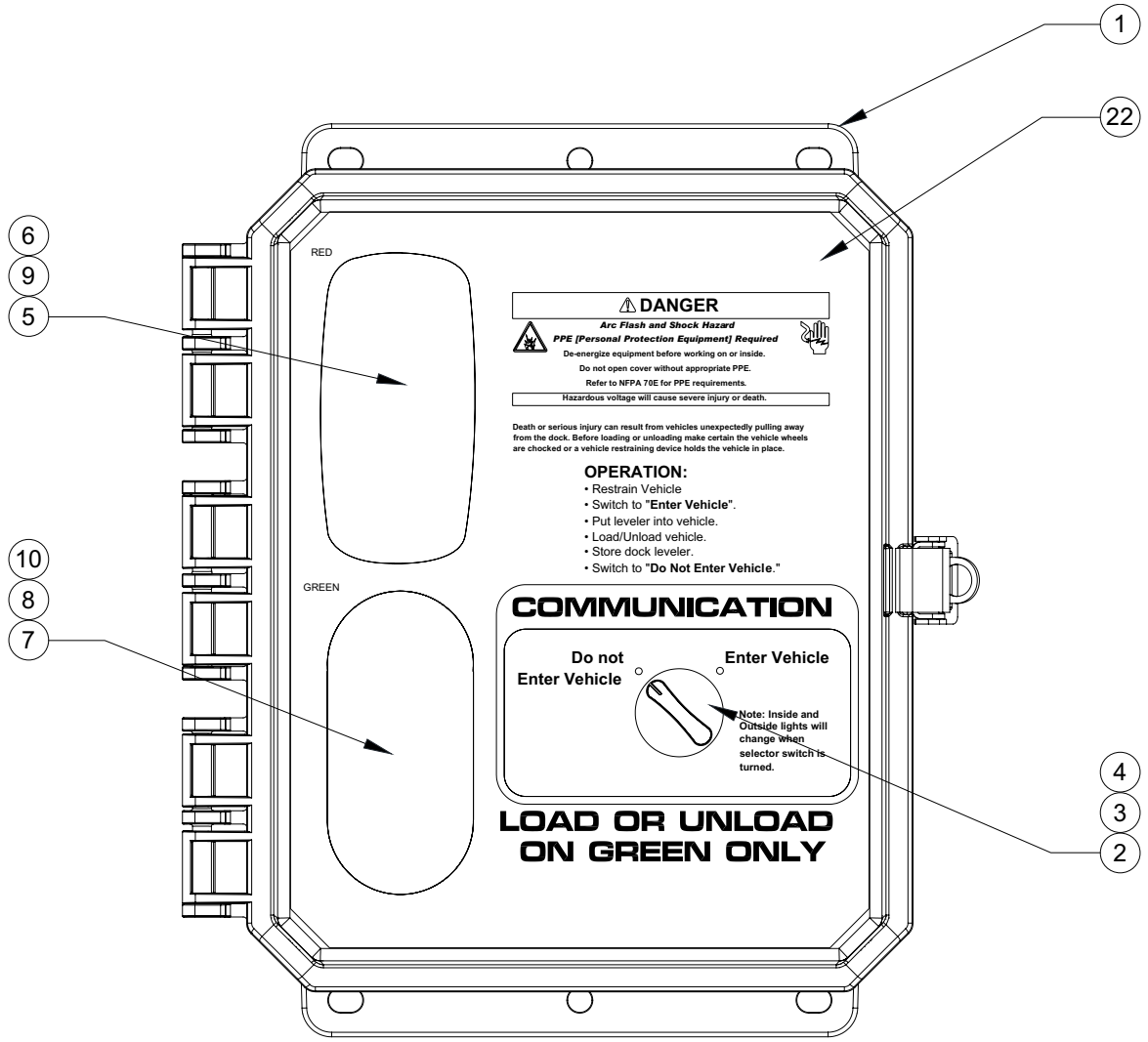
CONTROL PANEL CIRCUIT BOARD COVER — SL20

Fig. 43



PARTS LIST — SL20 CONTROL PANEL

Fig. 44



PARTS LIST — SL20 CONTROL PANEL, continued

Item	Quantity	Description	Part Number
1	1	CONTROL PANEL COMPLETE	6014259
2	1	SELECTOR SWITCH-2 POS. MAINT.	6012565
3	1	CONTACT BLOCK SWITCH N.O.	6012563
4	1	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 (NOT SHOWN)	6013870
12	1	X CONTROLLER PCB W/ MLS (NOT SHOWN)	6014053
13	2	TERMINAL BLOCK, 9 POS (NOT SHOWN)	6008824
14	2	TERMINAL BLOCK, 4 POS (NOT SHOWN)	6008822
15	1	TRANSFORMER,CONTROL 120/17 50VA (NOT SHOWN)	6008636
16	2	TERMINAL, END STOP, SCREWLESS (NOT SHOWN)	6000549
17	1	TERMINAL, 2 POLE (NOT SHOWN)	6000542
18	1	TERMINAL BLOCK, FUSED DISCONNECT (NOT SHOWN)	6000538
19	1	FUSE MDL .5 (NOT SHOWN)	6008836
20	1	TERMINAL END PLATE, 2MM (NOT SHOWN)	6006848
21	1	END AND INTERMEDIATE PLATE 2.5MM (NOT SHOWN)	6008853
22	1	CONTROL PANEL DECAL SL20 SERCO	6014255

SL40 ELECTRICAL SCHEMATIC

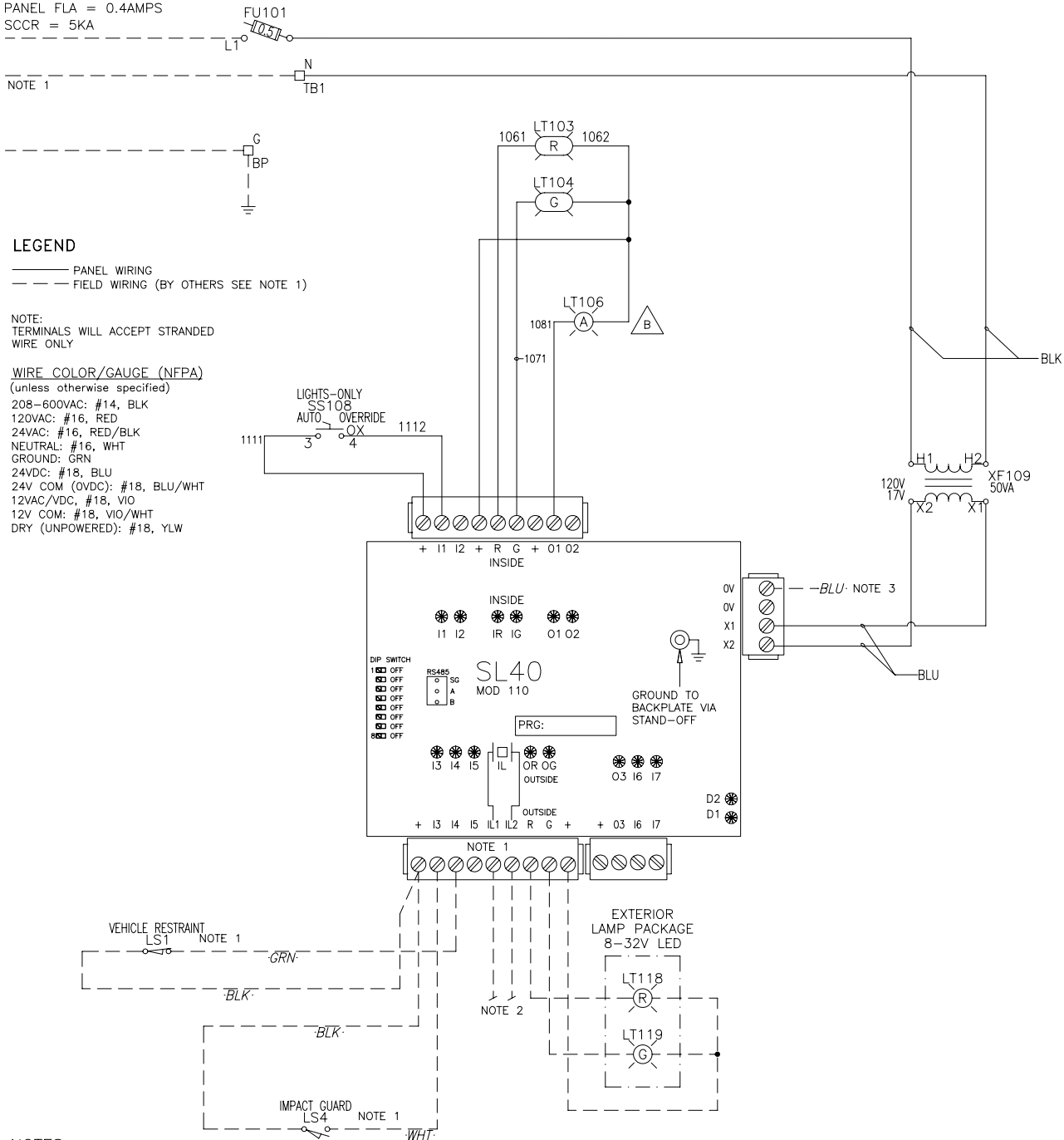
Fig. 45

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

NOTE:

For 24V incoming power consult approval drawings and PV Installation Manual.

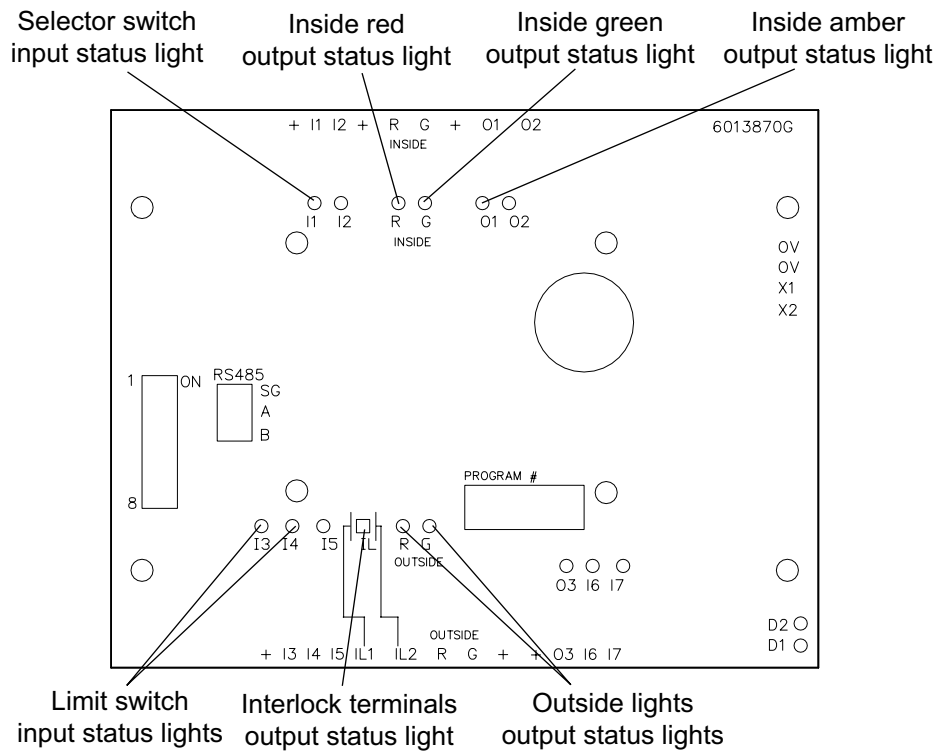


NOTES:

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 1/2A@24VDC MAX. EXTERNAL FUSE REQUIRED.
3. IF A 3 WIRE DC SWITCH IS USED CONNECT 0V FROM THE SWITCH TO THIS TERMINAL

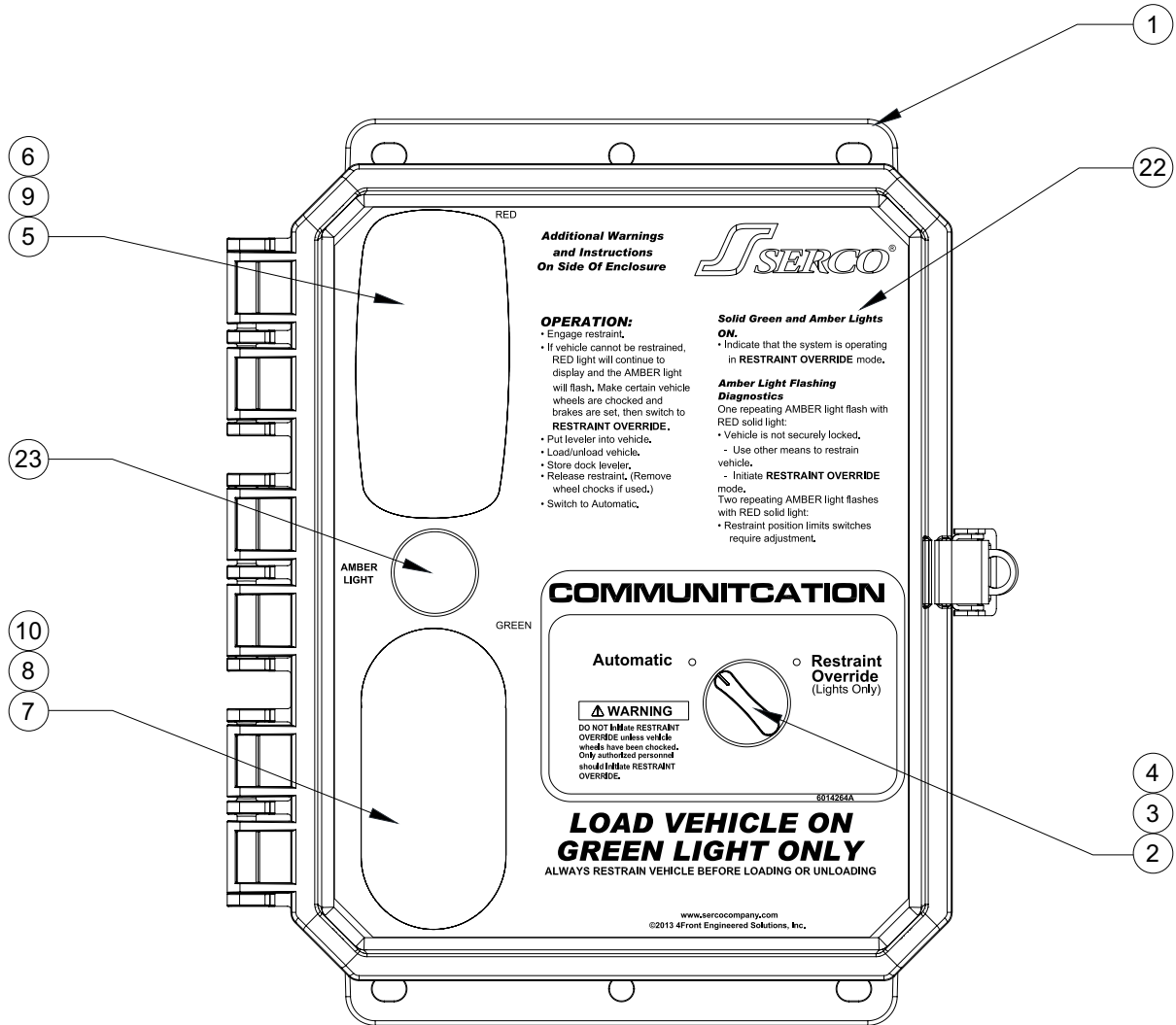
CONTROL PANEL CIRCUIT BOARD COVER — SL40

Fig. 46



PARTS LIST — SL40 CONTROL PANEL

Fig. 47

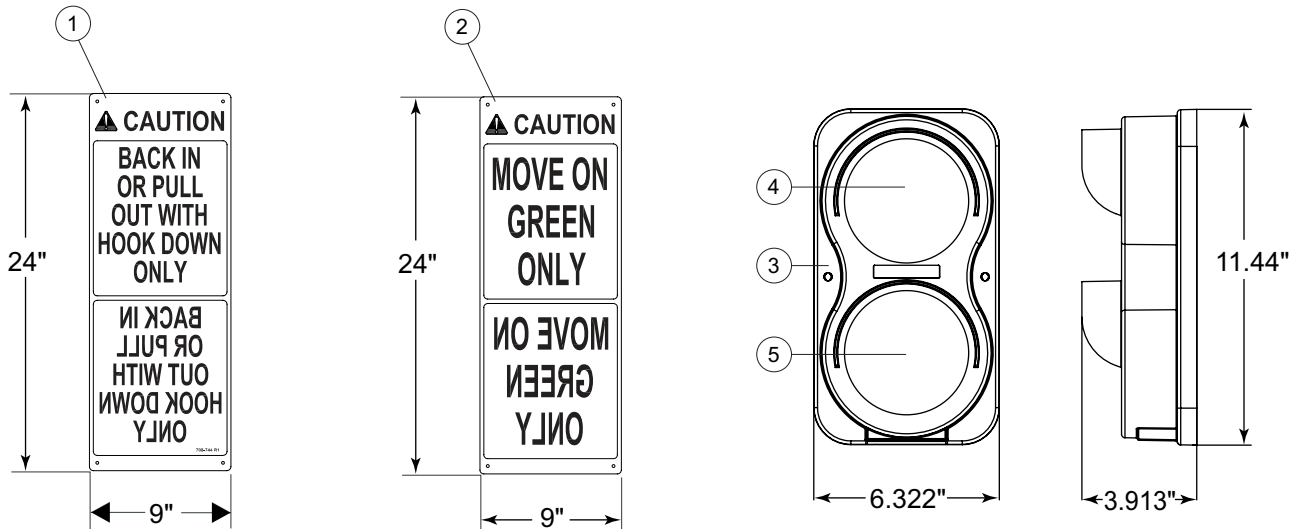


PARTS LIST — SL40 CONTROL PANEL, continued

Item	Quantity	Description	Part Number
1	1	CONTROL PANEL COMPLETE	6014263
2	1	SELECTOR SWITCH-2 POS. MAINT.	6012565
3	1	CONTACT BLOCK SWITCH N.O.	6012563
4	1	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 (NOT SHOWN)	6013870
12	1	X CONTROLLER PCB W/ SL40 (NOT SHOWN)	6014414
13	2	TERMINAL BLOCK, 9 POS (NOT SHOWN)	6008824
14	2	TERMINAL BLOCK, 4 POS (NOT SHOWN)	6008822
15	1	TRANSFORMER,CONTROL 120/17 50VA (NOT SHOWN)	6008636
16	2	TERMINAL, END STOP, SCREWLESS (NOT SHOWN)	6000549
17	1	TERMINAL, 2 POLE (NOT SHOWN)	6000542
18	1	TERMINAL BLOCK, FUSED DISCONNECT (NOT SHOWN)	6000538
19	1	FUSE MDL .5 (NOT SHOWN)	6008836
20	1	TERMINAL END PLATE, 2MM (NOT SHOWN)	6006848
21	1	END AND INTERMEDIATE PLATE 2.5MM (NOT SHOWN)	6008853
22	1	CONTROL PANEL DECAL SL40	6014264
23	1	AMBER LIGHT	6014259

PARTS LIST — EXTERIOR SIGN AND LIGHTS

Fig. 48



Item	Quantity	Part Description	Part Number
1	1	OUTSIDE SIGN – NORMAL AND REVERSE LETTERING (SL10 ONLY)	708-744
2	1	OUTSIDE SIGN – NORMAL AND REVERSE LETTERING (SL20 AND SL40 ONLY)	709-832
3	1	LIGHT ASSEMBLY - COMPLETE (LEDS) (SL20 AND SL40 ONLY)	6007798
4*	1	RED LED LIGHT ASSY. (SL20 AND SL40 ONLY)	6007800
5*	1	GREEN LED LIGHT ASSY. (SL20 AND SL40 ONLY)	6007801

* Part of Item 3 (Light Assembly – Complete).

LIMITED WARRANTY INFORMATION

SERCO® warrants that this VEHICLE RESTRAINT 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 SERCO®, or 2) the date of installation of the VEHICLE RESTRAINT by the original purchaser, provided that the owner maintains and operates the VEHICLE RESTRAINT in accordance with this User's Manual. In the event that this VEHICLE RESTRAINT proves deficient in material or workmanship within the applicable limited warranty period, SERCO® will, at its option:

1. Replace the VEHICLE RESTRAINT, or the deficient portion of either, without charge to the owner (excluding any cost of removal or reinstallation which shall be the sole responsibility of the purchaser); or
2. Alter or repair the VEHICLE RESTRAINT, on site or elsewhere, without charge to the owner.

The limited warranty stated in the preceding paragraph IS EXCLUSIVE AND IT IS IN LIEU OF ANY OTHER GUARANTEES AND WARRANTIES, EXPRESS OR IMPLIED. The limited warranty does not cover any failure caused by improper installation, abuse, negligence, or failure to maintain and adjust the VEHICLE RESTRAINT properly. Parts requiring replacement due to damage resulting from vehicle impact, abuse, or improper operation are not covered by this warranty. SERCO® disclaims any responsibility or liability for any loss or damage (including, without limitation, direct, indirect or consequential damages, or lost profits or production time) that results from the use of unauthorized replacement parts or modification of the VEHICLE RESTRAINT. SERCO® sole obligation with regard to a VEHICLE RESTRAINT that proves to be deficient in material or workmanship shall be as set forth in its standard warranty above (i.e., SERCO® will, at its option, repair or replace the VEHICLE RESTRAINT or portion thereof, without charge to the purchaser.).

This limited warranty does not cover any failure caused by improper installation, abuse, negligence, or failure to properly maintain and adjust the VEHICLE RESTRAINT. This limited warranty will be void or of no effect if the original purchaser does not notify SERCO® warranty department within ninety (90) days after the product deficiency is discovered. Parts requiring replacement due to damage resulting from vehicle impact, abuse, or improper operation are not covered by this warranty. SERCO® disclaims any responsibility or liability for any loss or damage that results from the use of unauthorized replacement parts or modification of the VEHICLE RESTRAINT.

THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF, AND THERE IS NO WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE.

SERCO® warranties extend only to the VEHICLE RESTRAINT itself.

SERCO® DISCLAIMS all warranties, express or implied, responsibility or liability for loss or damage of any kind associated with the installation or maintenance of the VEHICLE RESTRAINT, including any liability for premature product wear, product failure, property damage or bodily injury arising from improper installation or maintenance of the VEHICLE RESTRAINT.

Please direct questions about your vehicle restraint to your local distributor or to SERCO® Technical Service.

Your local SERCO® distributor is:

Corporate Head Office:

1612 Hutton Dr. Suite 140
Carrollton, TX. 75006
Tel. (972) 466-0707
Fax (972) 323-2661



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