USER MANUAL

Boxcar Door Assist

Manual Number 6019803-R2

cascade® corporation

CONTENTS

INTRODUCTION

This User Manual for the Cascade Boxcar Door Assist contains an Operator's Guide, Installation Instructions, Inspection & Maintenance, Service and Parts. All specifications are shown in U.S. and (Metric) units where applicable.

Special Definitions

The statements shown appear throughout this Manual where special emphasis is required. Read all WARNINGS and CAUTIONS before proceeding with any work. Statements labeled IMPORTANT and NOTE are provided as additional information of special significance or to make the job easier.

WARNING – A statement preceded by WARNING is information that should be acted upon to prevent **bodily injury**. A WARNING is always inside a ruled box.

CAUTION – A statement preceded by CAUTION is information that should be acted upon to prevent machine damage.

IMPORTANT – A statement preceded by IMPORTANT is information that possesses special significance.

NOTE – A statement preceded by NOTE is information that is handy to know and may make the job easier.

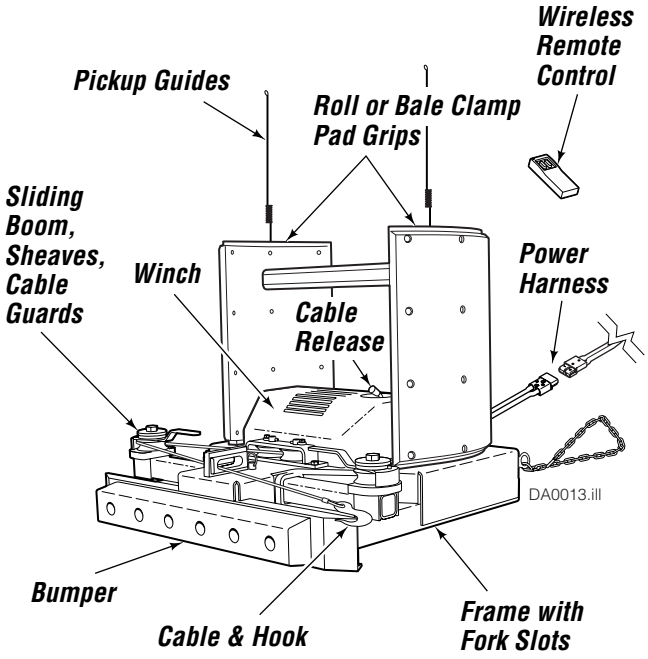
WARNING: Do not operate this unit with an attachment unless you are a trained and authorized lift truck driver.

OPERATOR'S GUIDE

This Section contains operating instructions for the Cascade Boxcar Door Assist. It will help you avoid common errors which can often cause damage to the equipment or personnel injury.

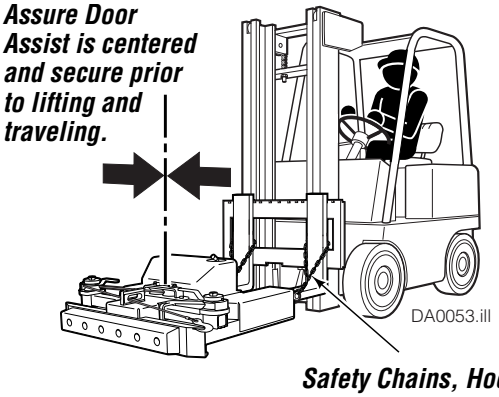
This information is intended to simplify operator understanding about effective and safe Boxcar Door Assist use and operation. Read this information thoroughly before operating the unit. Be sure you know and understand all operating procedures and safety precautions. If you have any questions, or don't understand a procedure, ask your supervisor.

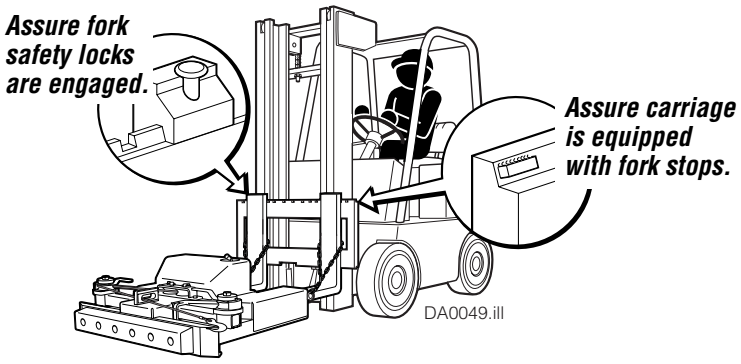
Emphasize Safety! Most accidents are caused by operator carelessness or misjudgement. You must watch for poorly maintained equipment and hazardous situations and correct them.

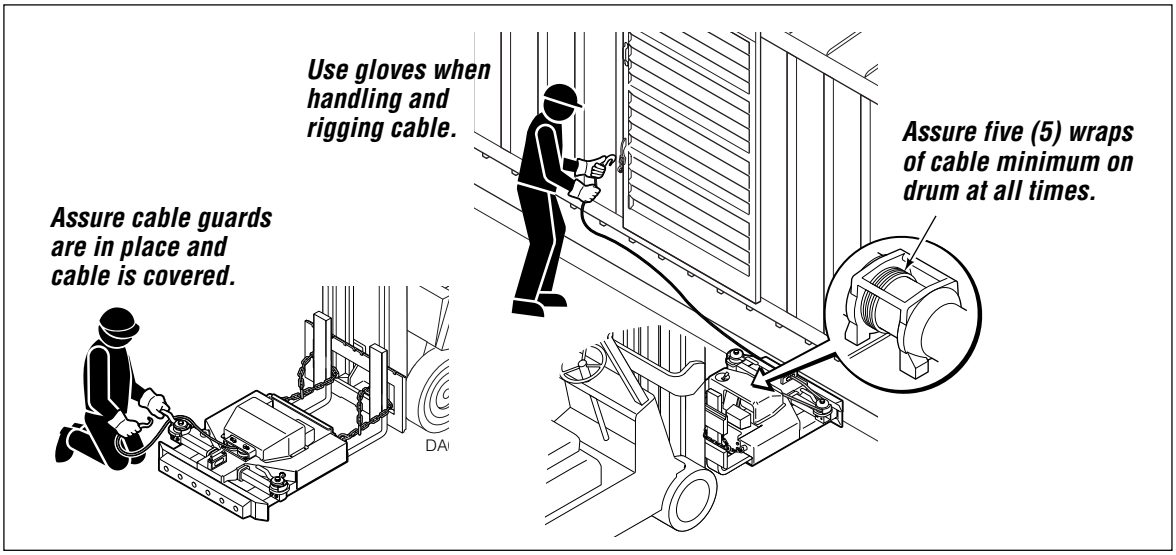


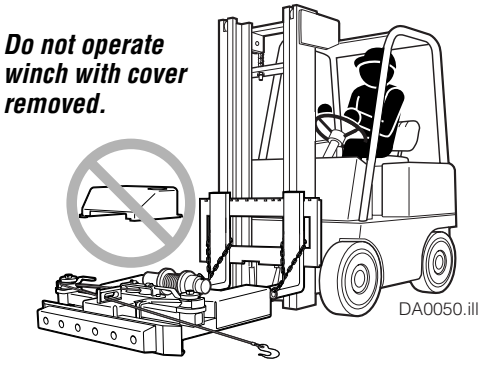
Front View - Fully Optioned Base Unit

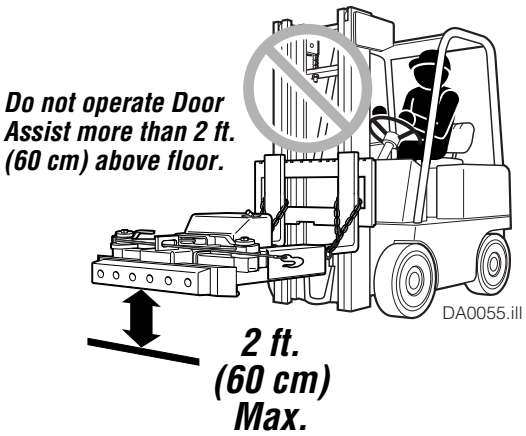
Safety Rules – Boxcar Door Assist

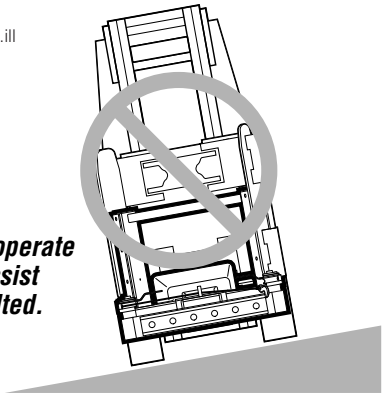












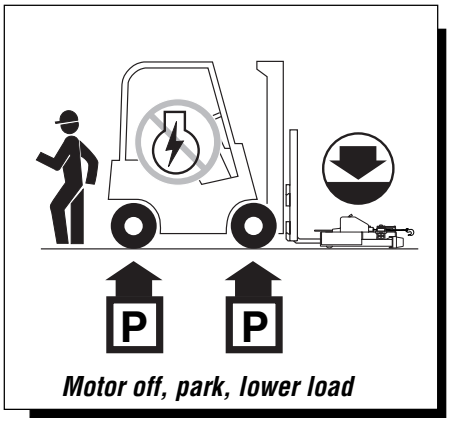
CAUTION: Electrical interlocks prevent unsafe operation with unit tilted, raised too high, or overloaded. (Faults reset automatically in 2-10 sec.)

No riders

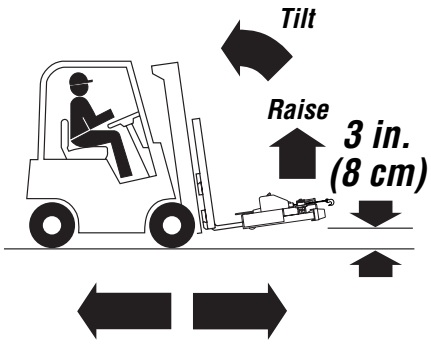
No reaching through mast

No standing under load

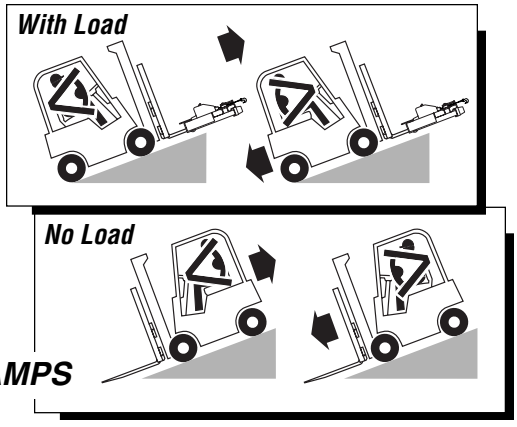
GA0172.ill



Motor off, park, lower load

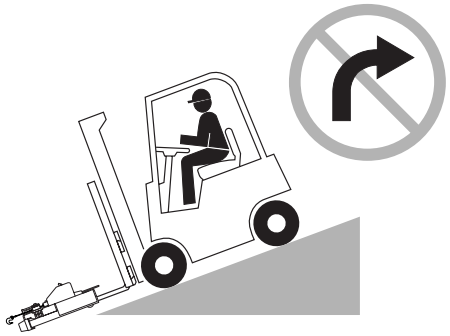


Traveling empty

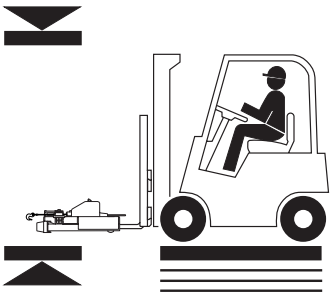


RAMPS

No parking on ramp



No turning on ramp



Watch clearances

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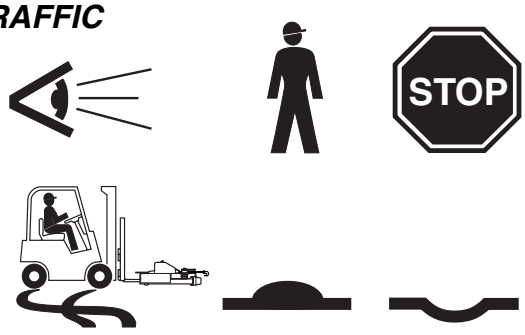
TRAFFIC

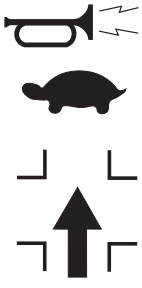


Wet floors

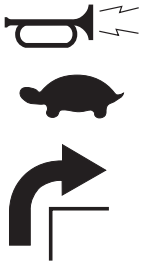
Bumps

Dips

Slow for two-way traffic



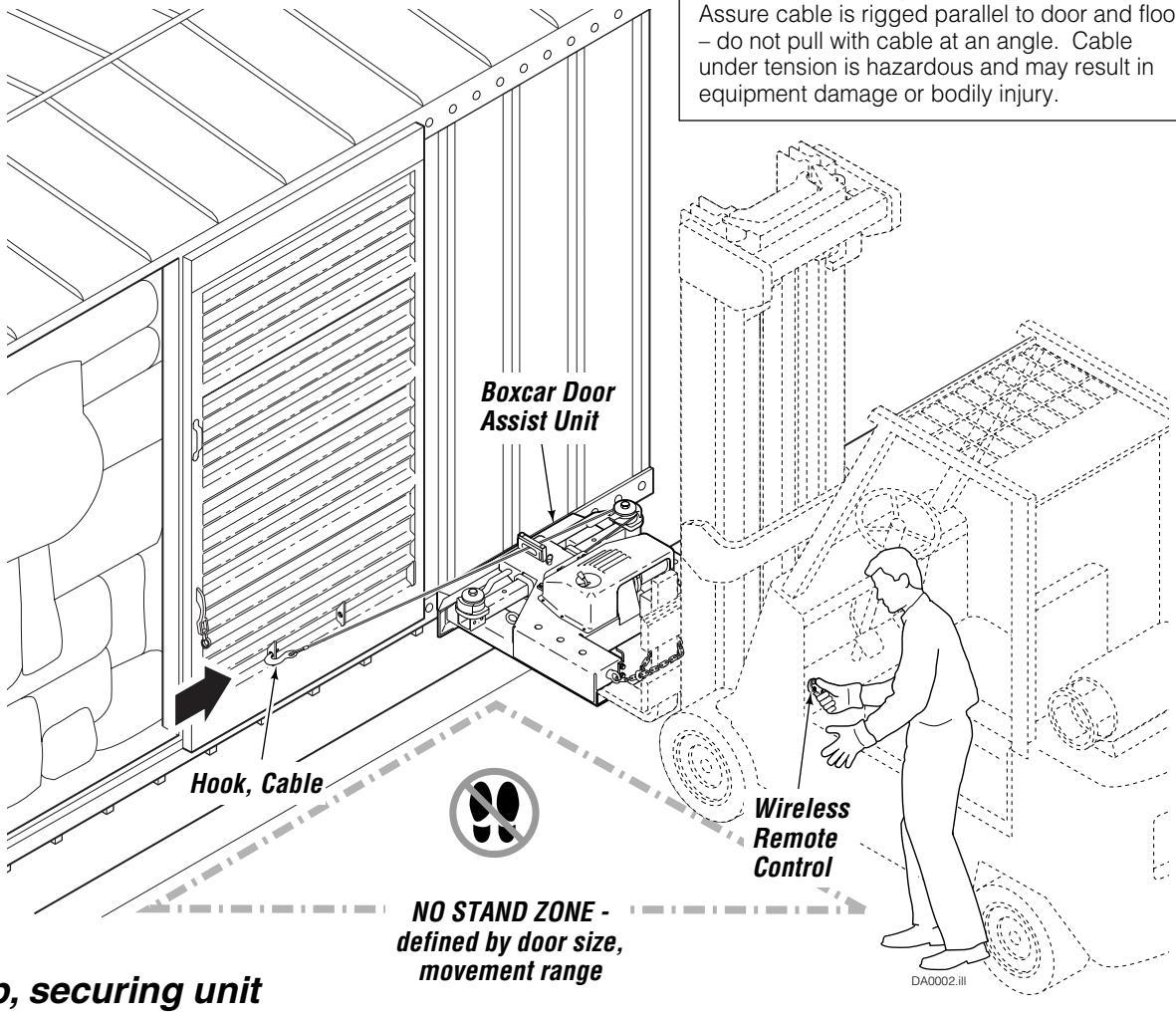
Sound horn, slow at intersection



Sound horn, slow at corner

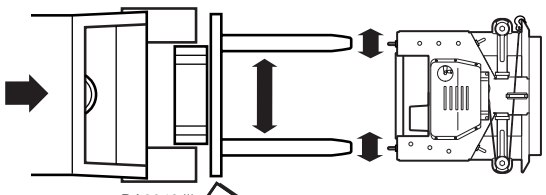
General setup for opening boxcar doors

WARNING – Remain in truck or stay clear of No Stand Zone when opening or closing boxcar door. Assure cable is rigged parallel to door and floor – do not pull with cable at an angle. Cable under tension is hazardous and may result in equipment damage or bodily injury.



Picking up, securing unit

1 Adjust forks to slot width **OR** Position roll clamp pads on towers ABOVE fork slots **OR** Position bale clamp pads on towers, pads EVEN with bottom of unit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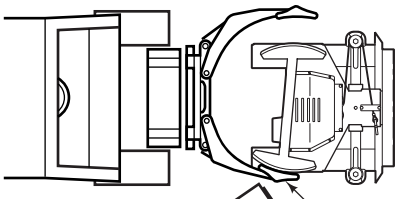
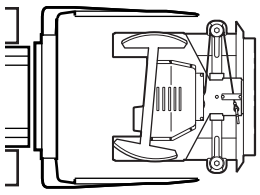

RC1217.ill

Short Arm on RH side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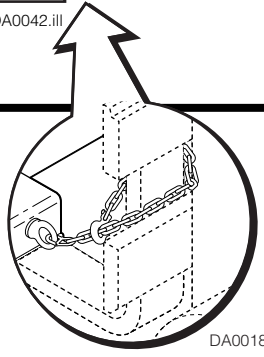
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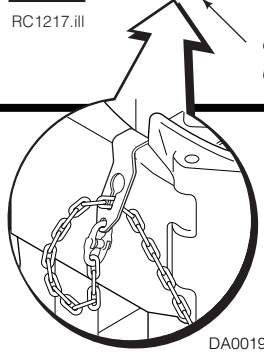
2 Pick up or clamp unit and attach safety chains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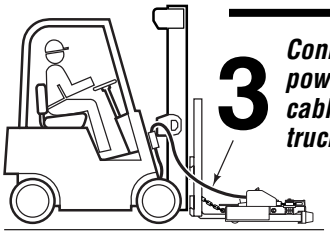

DA0023.ill

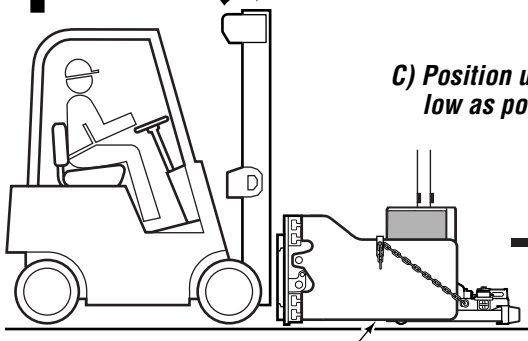
3 Connect power cable to truck

Opening, closing doors on open docks

1 *A) Tilt mast vertical*

C) Position unit as low as possible

2 ft. (60 cm) Max.



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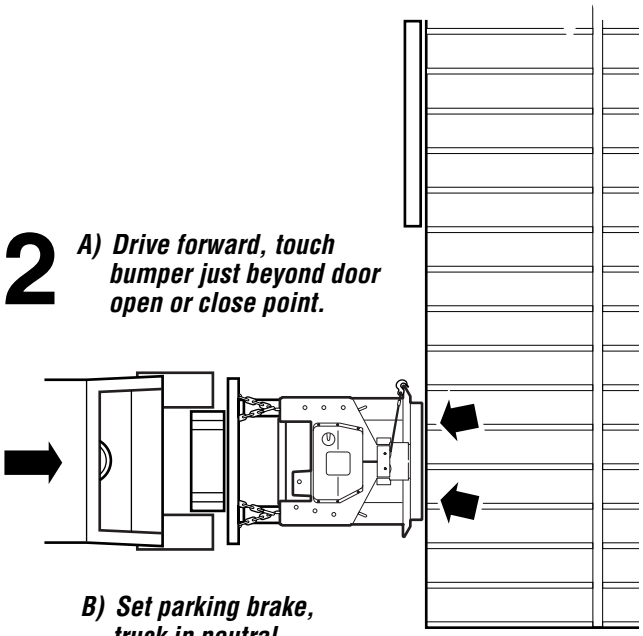
B) Bale Clamp: Pads aligned with bottom of unit

2 *A) Drive forward, touch bumper just beyond door open or close point.*



B) Set parking brake, truck in neutral.

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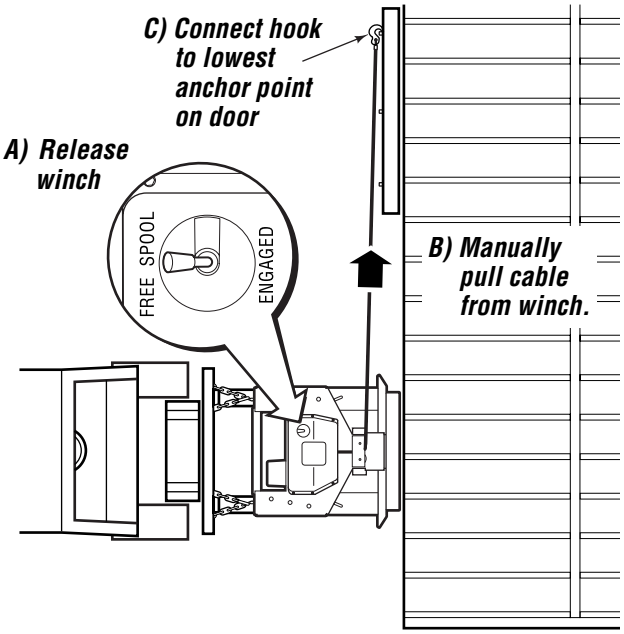
C) Connect hook to lowest anchor point on door

3 *A) Release winch*

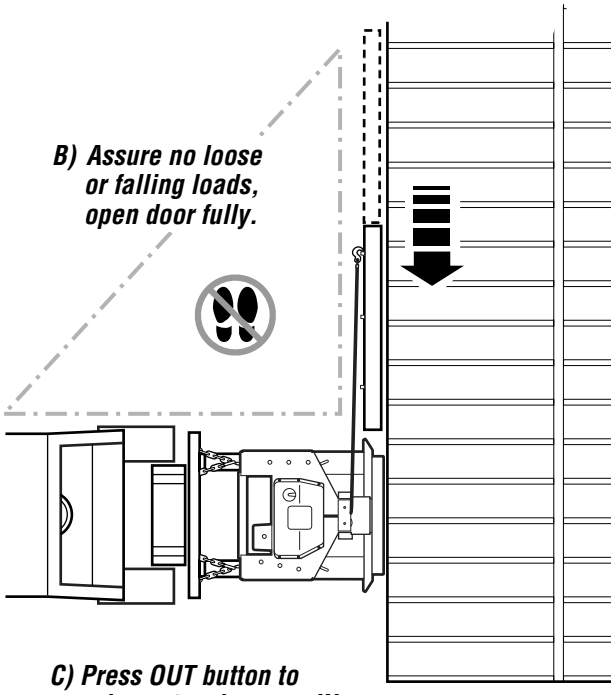


B) Manually pull cable from winch.

DA0022.ill

4 *A) Engage winch, use IN buttons on remote to pull door partially open.*

B) Assure no loose or falling loads, open door fully.



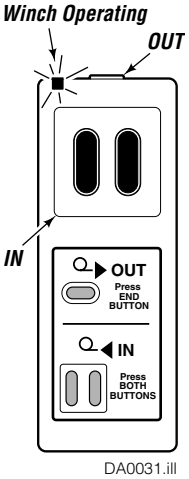
C) Press OUT button to release tension, use IN buttons to rewind cable.

DA0026.ill

USING WIRELESS REMOTE

- Operate winch by pressing both **IN** buttons simultaneously.
- Use **OUT** button to release cable tension only. Wait for motor to stop before reversing direction.
- LED will blink when winch operates. Replace Remote's batteries if LED does not light.

Programming receiver for new Remote: Assure Door Assist Unit is level. Press and hold right-side **IN** button until winch 'pulses' or 'jumps'. Test by pressing **OUT**.



DA0031.ill

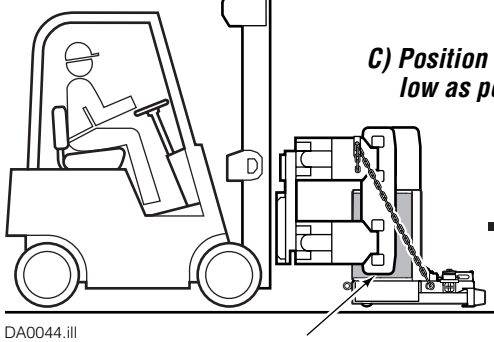
WARNING: Do not continue pulling if overload sensor deactivates winch. Check for damaged door or load fouling door. Reposition unit or cable connection point on door before trying again.

Opening, closing doors in close quarters using narrow doorway boom

1 A) Tilt mast vertical

C) Position unit as low as possible

2 ft. (60 cm) Max.



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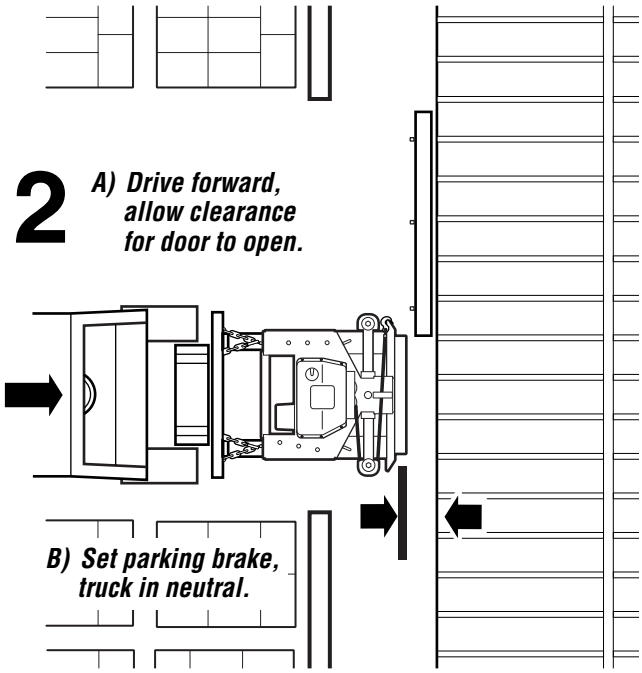
B) Roll Clamp: Pads positioned above fork pockets

2 A) Drive forward, allow clearance for door to open.



B) Set parking brake, truck in neutral.

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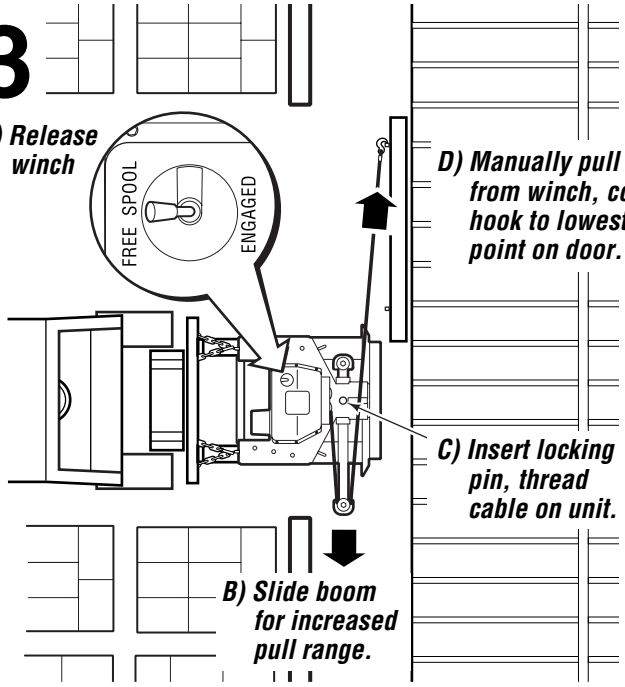
3

A) Release winch



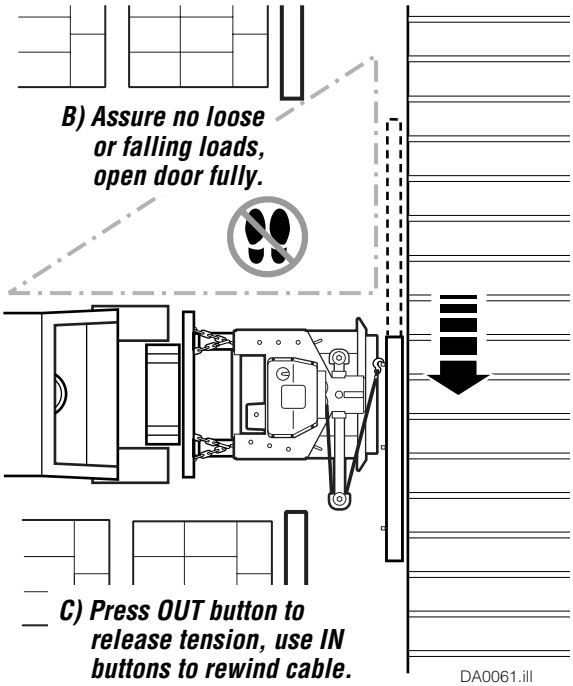
D) Manually pull cable from winch, connect hook to lowest anchor point on door.

C) Insert locking pin, thread cable on unit.

B) Slide boom for increased pull range.

DA0040.ill

4 A) Engage winch, use IN buttons on remote to pull door partially open.



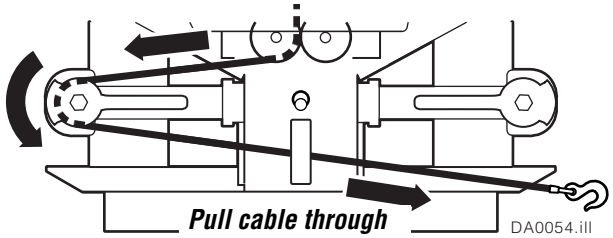
B) Assure no loose or falling loads, open door fully.

C) Press OUT button to release tension, use IN buttons to rewind cable.

DA0061.ill

THREADING CABLE

Loop around sheave, under cable guard.



DA0054.ill

Pull cable through guide, except when boom is extended

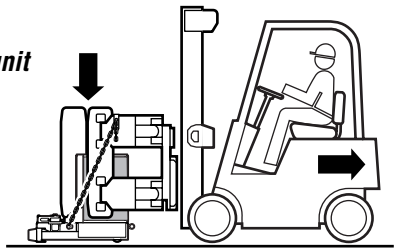
WARNING: Do not continue pulling If overload sensor deactivates winch. Check for damaged door or load fouling door. Reposition unit or cable connection point on door before trying again.

OPERATOR'S GUIDE

Disengaging and Stowing

CAUTION – All cables and chains must be disconnected and properly stowed before disengaging unit from truck. Follow the procedure shown:

3 ***Lower unit to floor.***



5 ***Disengage unit.***

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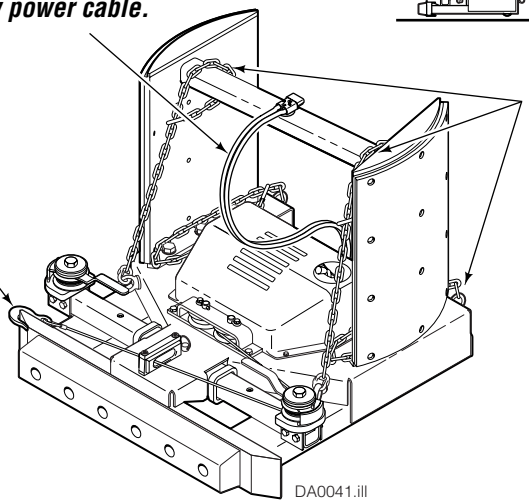
2 ***Disconnect and stow power cable.***

4 ***Disconnect and stow safety chains or hooks.***

1 ***Assure cable is rewound with hook stowed.***



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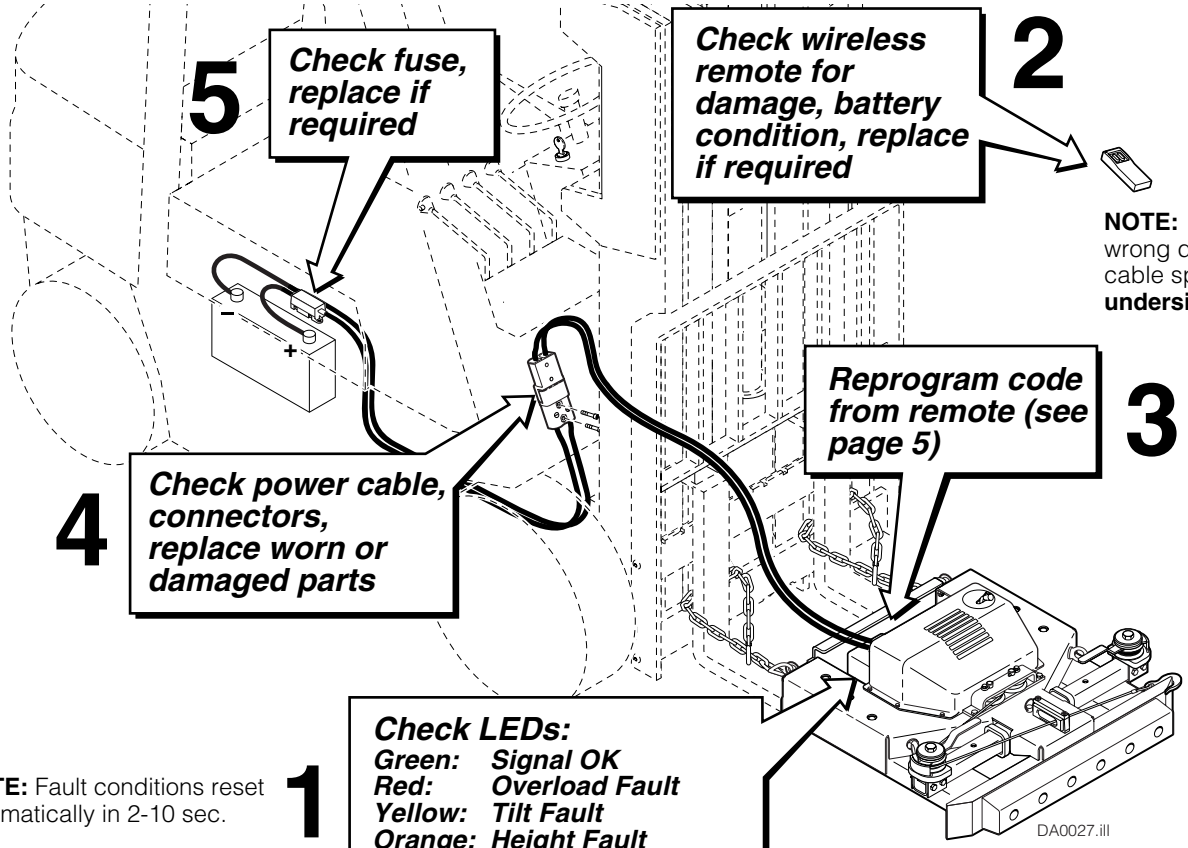
TROUBLESHOOTING



5 ***Check fuse, replace if required***

Check wireless remote for damage, battery condition, replace if required **2**

NOTE: If winch runs in wrong direction assure cable spools from **underside** of drum.

Reprogram code from remote (see page 5) **3**

4 ***Check power cable, connectors, replace worn or damaged parts***

NOTE: Fault conditions reset automatically in 2-10 sec.

1 ***Check LEDs:***

Green:	***Signal OK***
Red:	***Overload Fault***
Yellow:	***Tilt Fault***
Orange:	***Height Fault***
(all on):	***Overload sensor installed backwards***

DA0027.ill

SAFE OPERATION AND MAINTENANCE

OSHA Regulations – Industrial Trucks and Attachments

(Specific Regulations from OSHA 1910.178 and 1917.17)

WARNING: The safe operation and maintenance of industrial trucks is regulated by Occupational Safety and Health (OSHA) regulations 1910.178 and American National Standards Institute (ANSI) Safety Standard for Powered Industrial Trucks, ANSI B56.1. When operating and maintaining industrial trucks equipped with attachments you should pay particular attention to the following sections of these regulations. You should be familiar with **all** sections of these regulations. **Ask your employer for the complete regulations.**

(a) **General Requirement**

(4) Modifications and additions which affect capacity and safe operation shall not be performed by the customer or user without manufacturers prior written approval. Capacity, operation and maintenance instruction plates, tags or decals shall be changed accordingly.

(5) If the truck is equipped with front-end attachments other than factory installed attachments, the user shall request that the truck be marked to identify the attachments and show the appropriate weight of the truck and attachment combination at maximum elevation with load laterally centered.

(6) The user shall see that all nameplates and markings are in place and maintained in a legible condition.

(e) **Safety Guards**

(2) If the type of load presents a hazard, the user shall equip fork trucks with a vertical load backrest extension in accordance with:

(a)(2) All new powered industrial trucks acquired and used by an employer after February 15, 1972 shall meet the design and construction requirements for powered industrial trucks established in the "American National Standard for Powered Industrial Trucks, Part II, ANSI B56.1", except for vehicles intended primarily for earth moving or over-the-road hauling.

(l) **Operator Training**

Only trained and authorized operators shall be permitted to operate a powered industrial truck. Methods shall be devised to train operators in the safe operation of powered industrial trucks.

(m) **Truck Operations**

(1) Trucks shall not be driven up to anyone standing in front of a bench or other fixed object.

(2) No person shall be allowed to stand or pass under the elevated portion of any truck, whether loaded or empty.

(3) Unauthorized personnel shall not be permitted to ride on powered industrial trucks. A safe place to ride shall be provided where riding of trucks is authorized.

(4) The employer shall prohibit arms or legs from being placed between the uprights of the mast or outside the running lines of the truck.

(5i) When a powered industrial truck is left unattended, load engaging means shall be fully lowered, controls shall be neutralized, power shall be shut off and brakes set. Wheels shall be blocked if the truck is parked on an incline.

(5ii) A powered industrial truck is unattended when the operator is 25 feet or more away from the vehicle which remains in his view, or whenever the operator leaves the vehicle and it is not in his view.

(5iii) When the operator of an industrial truck is dismounted and within 25 feet of the truck still in his view, the load engaging means shall be fully lowered, controls neutralized and the brakes set to prevent movement.

(6) A safe distance shall be maintained from the edge of ramps or platforms while on any elevated dock or platform or freight car. Trucks shall not be used for opening or closing freight doors.

(10) A load backrest extension shall be used whenever necessary to minimize the possibility of the load or part of it from falling rearward.

(n) **Traveling**

(4) The driver shall be required to slow down and sound the horn at cross isles and other locations where vision is obstructed. If the load being carried obstructs forward view, the driver shall be required to travel with the load trailing.

(7i) When ascending or descending grades in excess of 10 percent, loaded trucks shall be driven with the load upgrade.

(7iii) On all grades the load and load engaging means shall be tilted back if applicable, and raised only as far as necessary to clear the road surface.

(o) **Loading**

(1) Only stable or safely arranged loads shall be handled. Caution shall be exercised when handling off-center loads which cannot be centered.

(2) Only loads within the rated capacity of the truck shall be handled.

(3) The long or high (including multiple-tiered) loads which may affect capacity shall be adjusted.

(4) Trucks equipped with attachments shall be operated as partially loaded trucks when not handling a load.

(5) A load engaging means shall be placed under the load as far as possible; the mast shall be carefully tilted backward to stabilize the load.

(6) Extreme care shall be used when tilting the load forward or backward, particularly when high tiering. Tilting forward with load engaging means elevated shall be prohibited except to pick up a load. An elevated load shall not be tilted forward except when the load is in a deposit position over a rack or stack. When stacking or tiering, only enough backward tilt to stabilize the load shall be used.

(p) **Operation of the Truck**

(1) If at any time a powered industrial truck is found to be in need of repair, defective, or in any way unsafe, the truck shall be taken out of service until it has been restored to safe operating condition.

(q) **Maintenance of Industrial Trucks**

(1) Any power-operated industrial truck not in safe operating condition shall be removed from service. All repairs shall be made by authorized personnel.

(5) All parts of any such industrial truck requiring replacement shall be replaced only by parts equivalent as to safety with those used in the original design.

(6) Industrial trucks shall not be altered so that the relative positions of the various parts are different from what they were when originally received from the manufacturer, nor shall they be altered either by the addition of extra parts not provided by the manufacturer or by the elimination of any parts. Additional counter-weighting of fork trucks shall not be done unless approved by the truck manufacturer.

(7) Industrial trucks shall be examined before being placed in service and shall not be placed in service if the examination shows any condition adversely affecting the safety of the vehicle. Such examinations shall be made at least daily. When industrial trucks are used on a round-the-clock basis, they shall be examined after each shift. Defects when found shall be immediately reported and corrected.

Railroad Facilities (Ref. 1917.17)

(h) Before being opened fully, doors shall be opened slightly to ensure that the load has not shifted during transit. Special precautions shall be taken if the doors being opened are visibly damaged.

(i) If powered industrial trucks are used to open railcar doors, the trucks or the railcar doors shall be equipped with door opening attachments. Employees shall stand clear of the railcar doors while they are being opened and closed.

(j) Only railcar door openers or powered industrial trucks equipped with door opening attachments shall be used to open jammed doors.

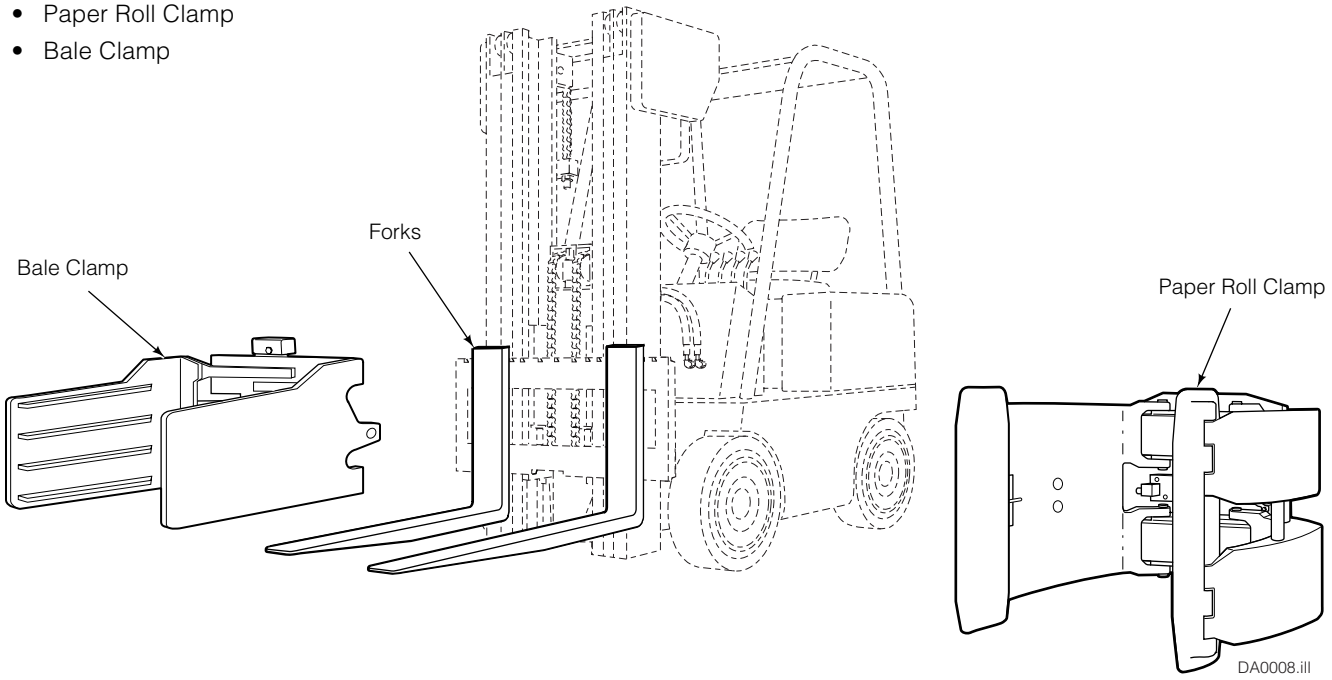
Truck Requirements

An IC lift truck with forks or clamp attachment is required to pick up the Boxcar Door Assist Unit. Electrical power from the truck battery is required to operate the unit.

WARNING – Lift truck must weigh 8000 lbs. (3630 Kg) minimum when using Boxcar Door Assist. Use of lighter truck not recommended.

Forks or Clamp Attachment

- Forks (2 x 5 x 48 in. L maximum)
- Paper Roll Clamp
- Bale Clamp



Electrical Power

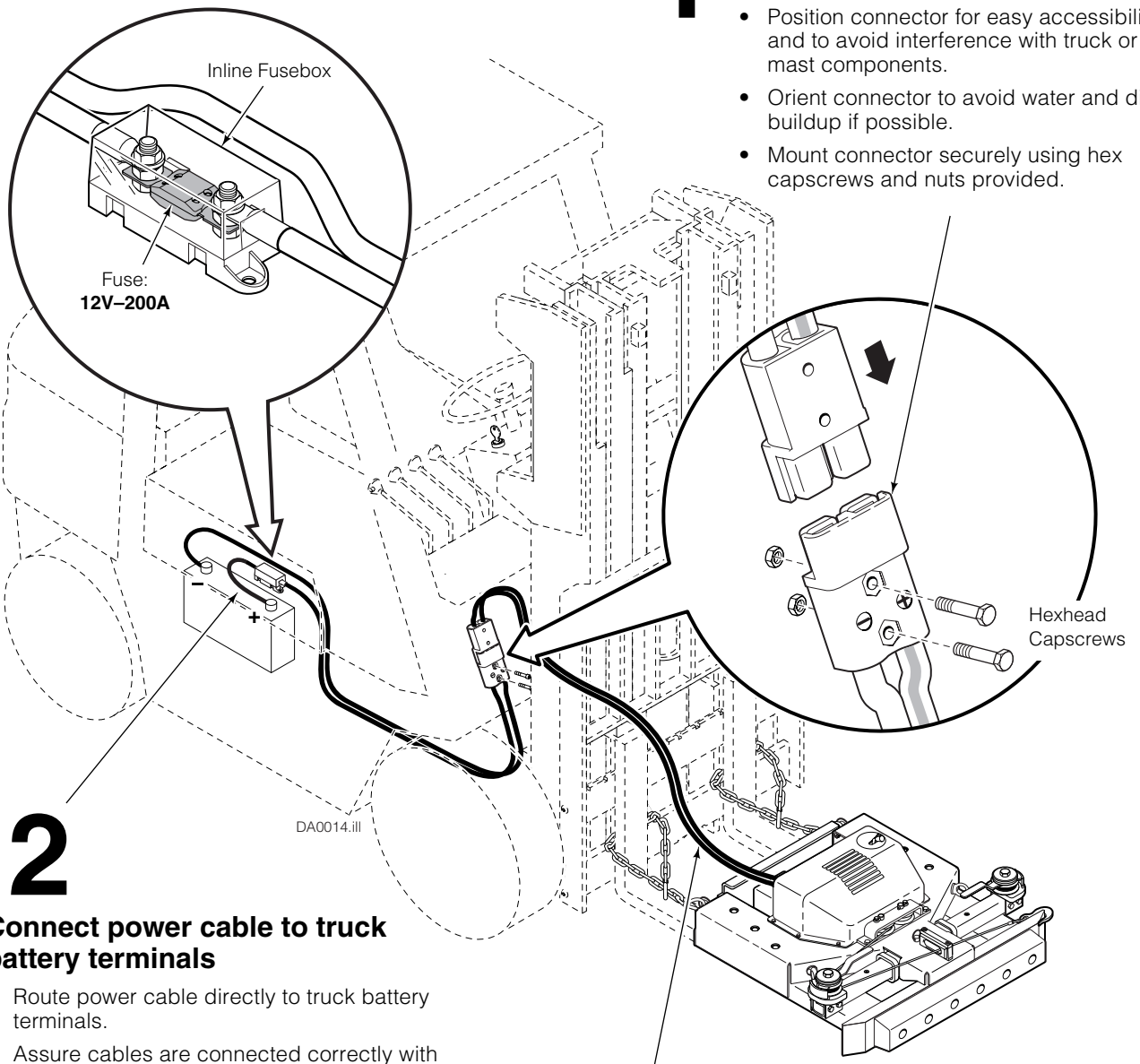
- A 12V, 200 Amp electrical source is required to operate the internal winch. Electrical power cabling and connector plugs are supplied with the unit (see Page 12 for electrical cable installation).

Electrical Installation

The Boxcar Door Assist Unit requires DC power from the truck electrical system. Use the No. 2-gauge twin cable and connectors supplied with the unit.

1 Determine location on truck cowl for power connector

- Position connector for easy accessibility and to avoid interference with truck or mast components.
- Orient connector to avoid water and dirt buildup if possible.
- Mount connector securely using hex capscrews and nuts provided.



2 Connect power cable to truck battery terminals

- Route power cable directly to truck battery terminals.
- Assure cables are connected correctly with positive-to-positive and negative-to-negative. Use cable ties as necessary to secure cable.
- Mount fuesbox solidly to truck if possible, or secure with cable ties to prevent movement.

WARNING – Power cable on truck is always 'hot' and will carry very high current. Assure cable is connected correctly and protected against pinch points or chafing that could cause accidental grounding.

3 Connect power cable from winch to cowl connector for test.

WARNING: After completing any service procedure, always test the Boxcar Door Assist Unit through a complete cycle. First test with no load, then test with a load to make sure the unit operates correctly before returning it to the job.

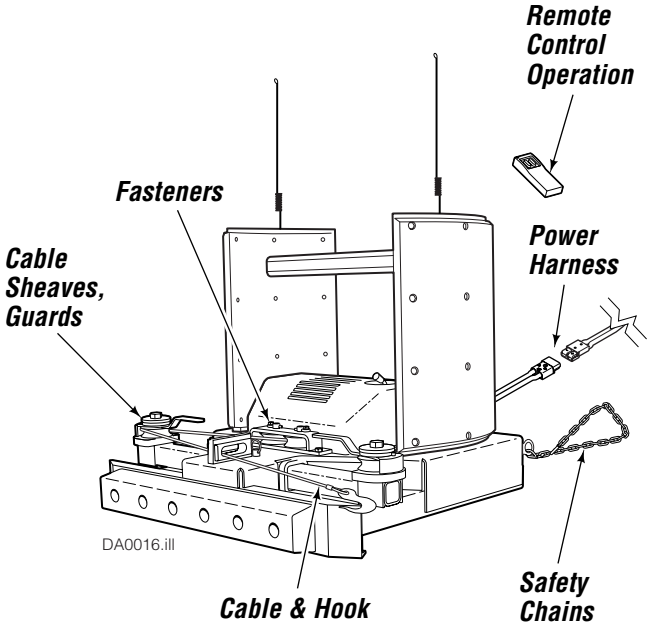
Daily

Check items shown each day. Report problems to your supervisor.

100-Hour

Complete the following inspection and maintenance on the Boxcar Door Assist Unit:

- Check safety chains, hooks and chain anchors for damage. Replace damaged or missing parts.
- Check for loose or missing fasteners. Tighten or replace if necessary.
- Check cable sheaves and cable guards for freedom and proper operation. Replace damaged or worn parts.
- Check electrical power cable and connectors for damage. Replace damaged or worn parts
- Check winch cable/hook by pulling out to full length and assuring there are no frayed or broken strands or kinks in the cable. Replace cable if it does not meet the above inspection criteria.



500-Hour

- Replace winch cable.

1000-Hour

- Replace cable sheeves.

1.0 Winch Drive Assembly

There are no field-servicable items on the winch drive assembly except for the cable/wire rope.

1.1 Winch Cable Replacement

The winch cable must be replaced properly to prevent damage. Follow the procedure below:

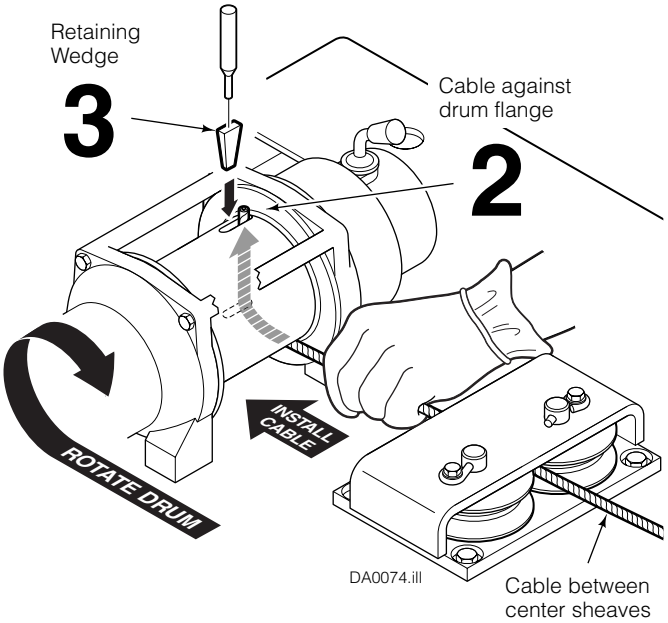
1 Remove the large safety cover and the leaf-spring brake on the rear of the cable drum. Free-spool the cable out fully and remove cable. **NOTE:** To disengage cable, loosen retaining wedge by tapping from side-to-side.

2 Route the free end of a new cable through the center sheaves to the **underside** of the drum. Insert the cable through the slot in the drum so the free end extends slightly above the drum surface.
IMPORTANT: Assure cable is against drum flange.

3 Insert the retaining wedge alongside the cable and tap into the slot. **IMPORTANT:** Assure wedge and cable are flush with drum surface when fully seated.

4 Reinstall leaf-spring brake and use IN buttons on remote to wind the cable, under tension, onto the drum. **IMPORTANT:** Assure cable is under tension and spools onto drum from underside (see illustration).

WARNING: Cable must be spooled onto winch drum from **underside**. Winch will not operate correctly if cable is spooled from top. See safety decal on brake.



CAUTION: Use gloves when handling and rigging cable. Serious injuries may result from frayed ends or broken strands.

2.0 Sheaves, Cable Guards, Guide Block

Sheave bearings are permanently sealed and require no periodic lubrication. Replace worn or damaged parts as described below:

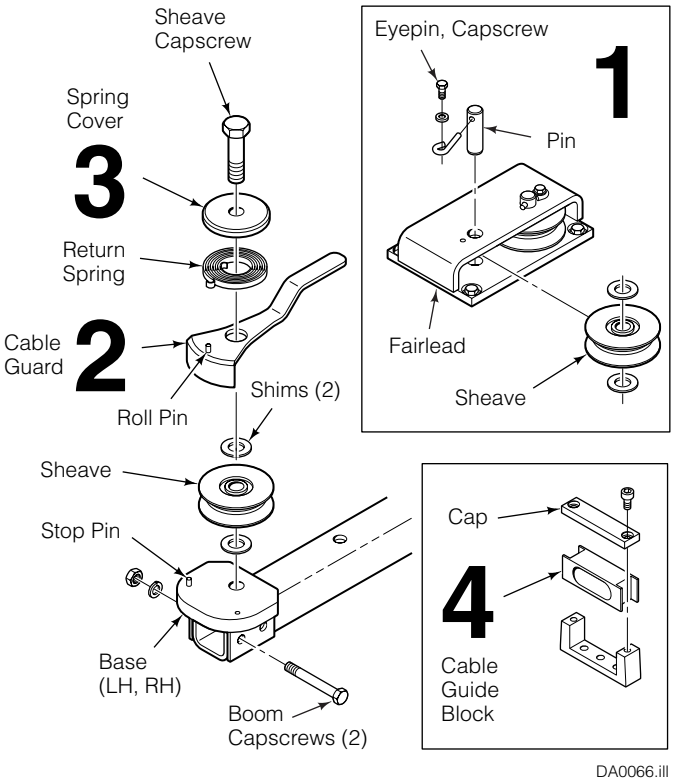
1 Remove the capscrews and eyepins and remove the center sheeves. Note location of shims. Replace with new parts as shown.

2 Remove damaged cable guard, spring, or complete sheave assembly. Replace with new parts as shown.

3 To obtain proper rotational force on the cable guard, loosen the sheave capscrew and turn the knurled spring cover until the spring tab contacts the roll pin. Rotate the spring cover 1/2-turn more and tighten the sheave capscrew. Cable guard handle should rotate freely 180 degrees (handle outward) and snap back into the safety position against the stop pin (handle inward). Tighten the capscrews as follows:

Sheave Capscrew – 175 ft.-lbs. (240 Nm).
Base Capscrews – 50 ft.-lbs. (66 Nm)
Fairlead Eyepin Capscrews – 5 ft. lbs. (8 Nm)

4 Remove and replace worn or damaged guide block. Install the metal cap and tighten the capscrews to 30 ft.-lbs. (40 Nm).



3.0 Electrical

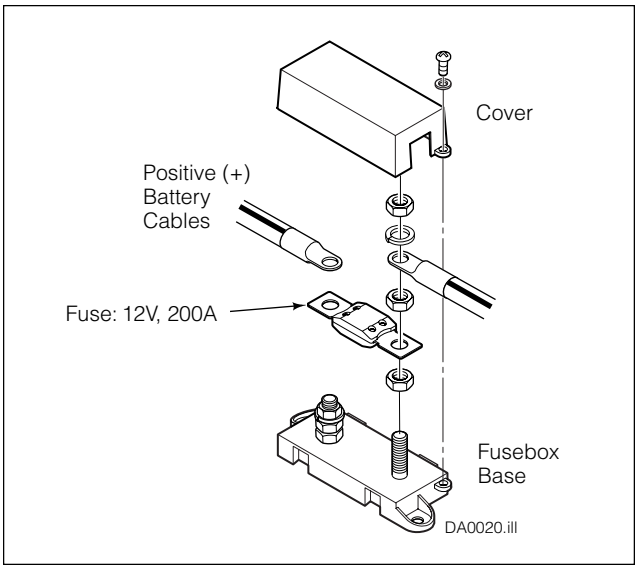
3.1 Main Power Fuse

1 Locate the main power cable fusebox (Recommended location is near the truck battery).

2 Remove the cover and replace the fuse as shown. Assure that the stud terminals are reassembled as shown.

CAUTION: Assure that the replacement fuse is the correct ampere rating for the winch:

12V system – 200 Amp (Part No. 6017353)



3.2 Power Cable Harness

CAUTION: Before working on the contactor and cabling, disconnect the positive battery cable at the truck battery.

Boxcar Door Assist Unit

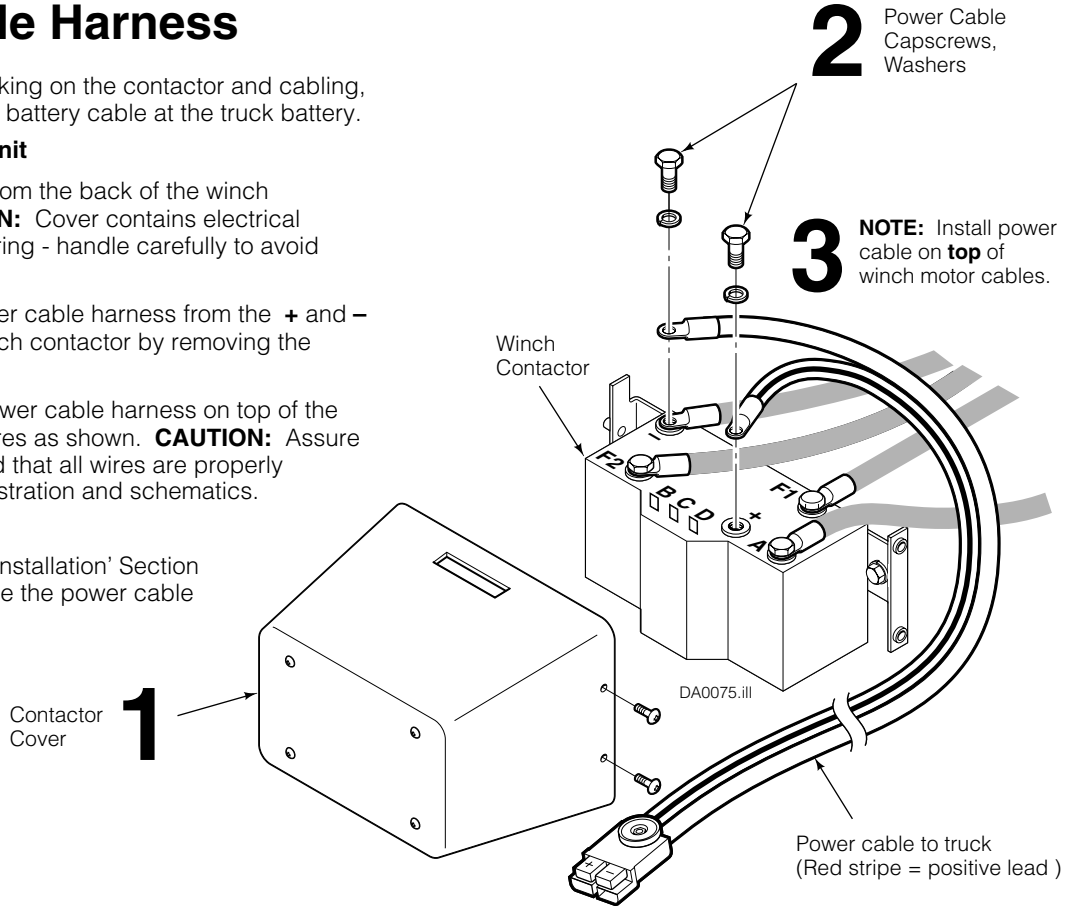
1 Remove the cover from the back of the winch contactor. **CAUTION:** Cover contains electrical components and wiring - handle carefully to avoid damage.

2 Disconnect the power cable harness from the **+** and **–** terminals on the winch contactor by removing the capscrews.

3 Connect the new power cable harness on top of the other cables and wires as shown. **CAUTION:** Assure **correct polarity** and that all wires are properly reattached. See illustration and schematics.

Truck

Refer to the 'Electrical Installation' Section in this Manual to replace the power cable harness on the truck.



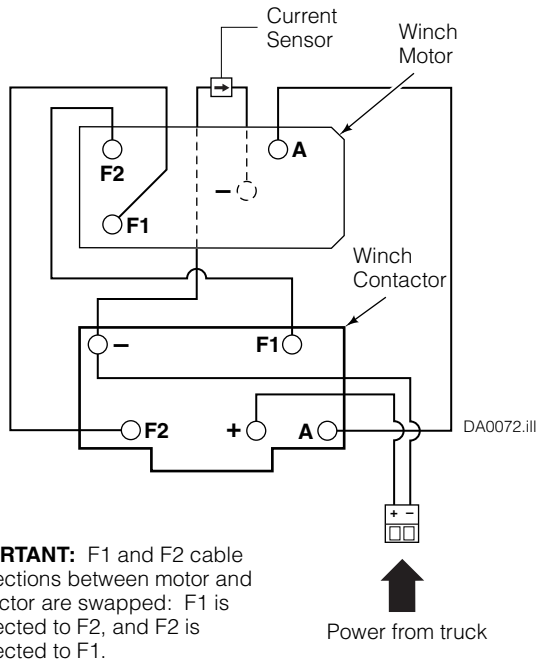
3.3 Winch Contactor, Motor Power Cables

CAUTION: Before working on the contactor and cabling, disconnect the positive battery cable at the truck battery.

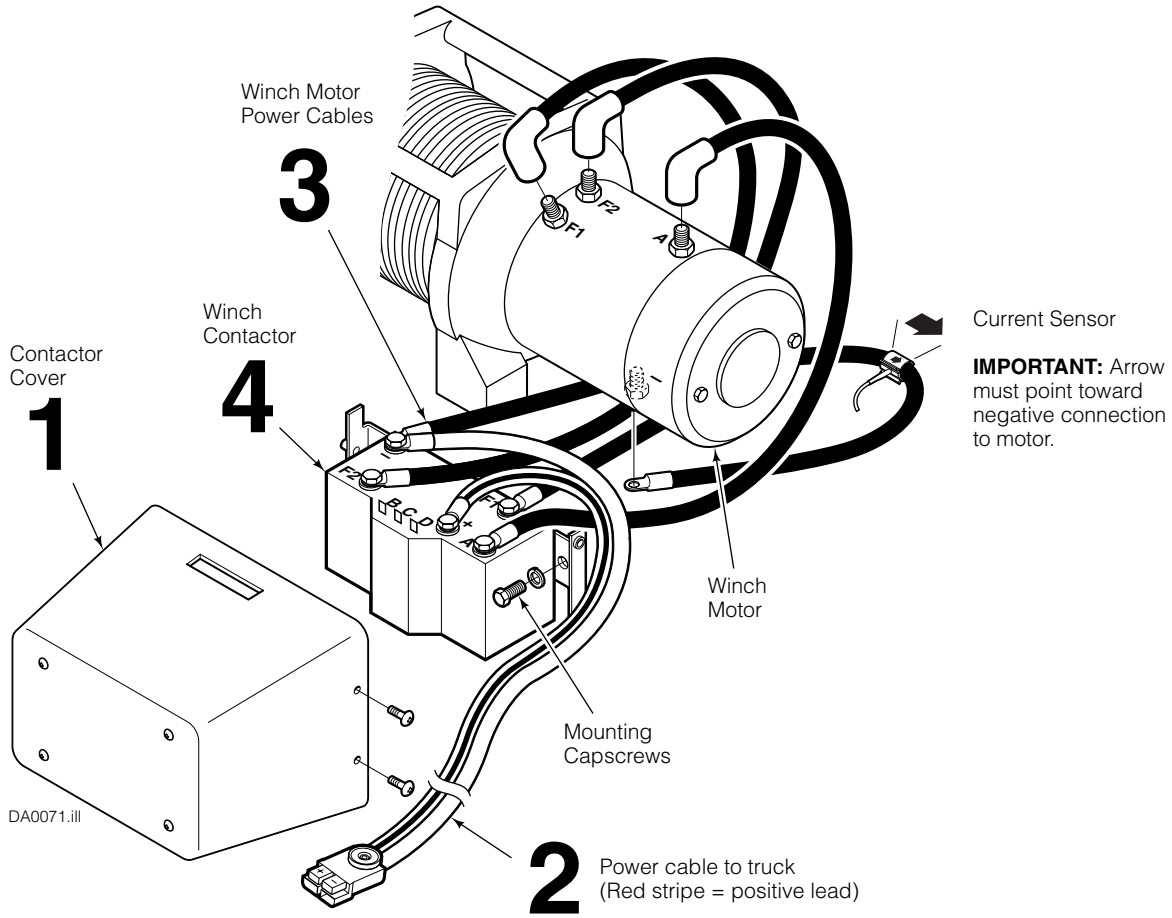
1. Remove the cover from the contactor.
   CAUTION: Both covers contain electrical components and wiring – handle carefully to avoid damage.
2. Disconnect the main power cable harness from the **+** and **–** terminals on the winch contactor. For reassembly, the main power cable is installed on **top** of the other cables and exits along the RH side (driver's view) of the contactor (see illustration below).
3. Disconnect the remaining cables and wire harnesses from the contactor. Remove the contactor from the frame. For reassembly, tighten the capscrews to 5 ft.-lbs. (8 Nm).
4. For reassembly, reverse the above procedures with the following exceptions:
   - Install a new winch contactor.

     CAUTION: Assure all cables and wires are reconnected properly and with the **correct polarity**. Serious damage may result with the cables misconnected. Refer to illustrations and schematics for correct hookup.

ELECTRICAL SCHEMATIC



IMPORTANT: F1 and F2 cable connections between motor and contactor are swapped: F1 is connected to F2, and F2 is connected to F1.



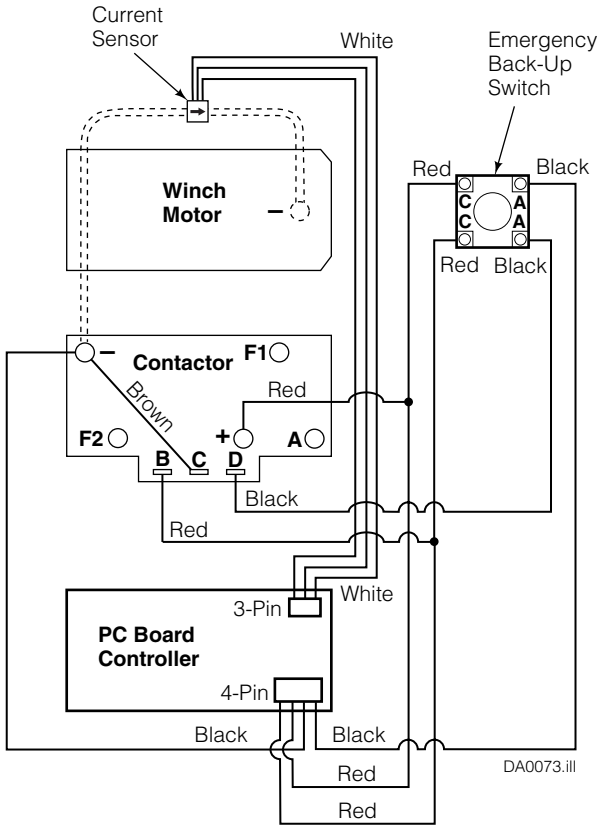
3.4 PC Board Controller and Wiring Harnesses

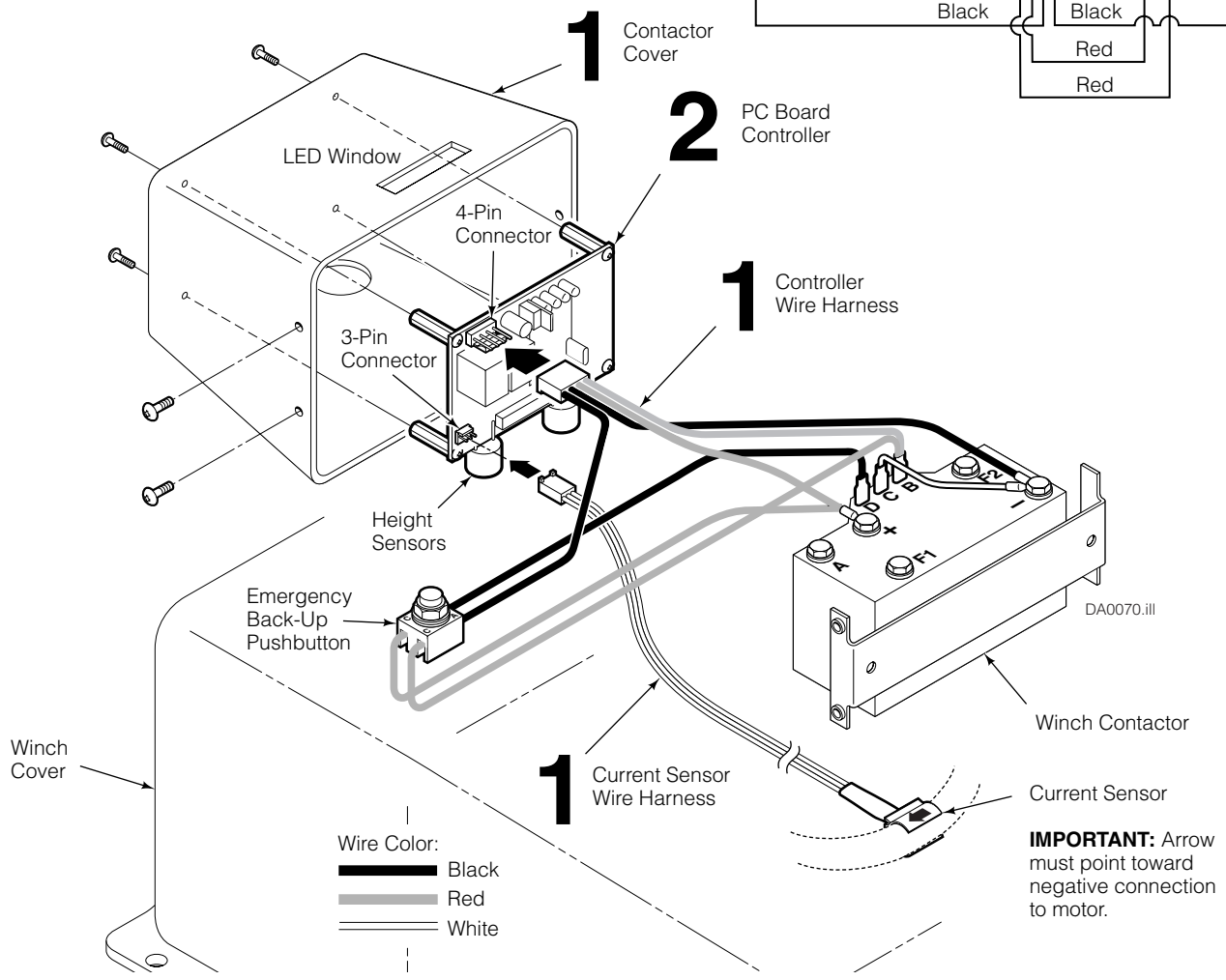
The PC board controller is located inside the small plastic cover on the rear of the Boxcar Door Assist. No field-serviceable components are located on the PC board. Replace as a complete unit as described below:

1. Remove the cover from the winch contactor on the backside of the Boxcar Door Assist. Disconnect the two (2) wire harness connectors from the PC board.
2. Remove the PC Board by removing the four (4) screws that fasten it to the inside of the cover.
3. For reassembly, reverse the above procedures with the following exceptions:
   - Assure both wiring harnesses are properly connected (see schematic and illustration).
   - Assure current overload sensor is installed on negative cable between contactor and motor, with arrow pointing toward motor connection. Secure sensor to large cable with wire tie .

     IMPORTANT: If current sensor is installed backwards, motor will start briefly and stop, and all LEDs will illuminate. To correct, rotate sensor 180 degrees and reinstall.

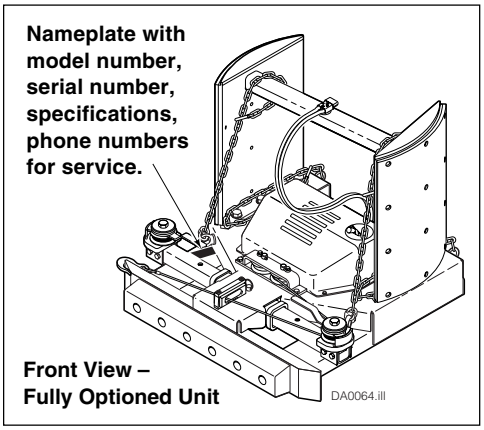
WIRING HARNESS SCHEMATIC

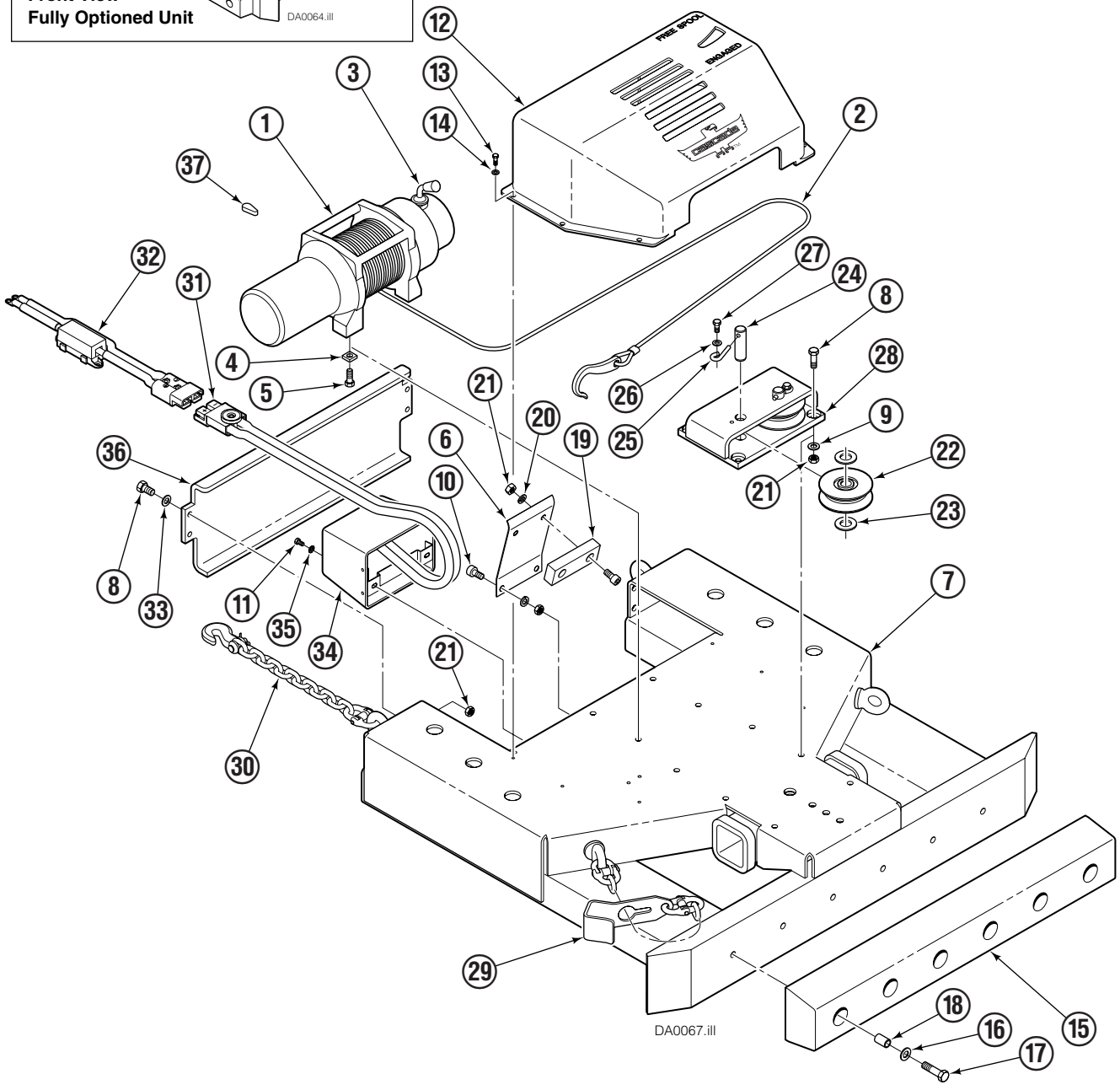




Product Identification – This Section shows replacement parts for the Boxcar Door Assist Unit. Product model number and serial number can be found on the nameplate, or stamped underneath, and must be provided when ordering replacement parts.

WARNING: For the safety of yourself and others, DO NOT install the parts shown in this Manual unless you have thoroughly reviewed the appropriate service procedures.





15A			
REF	**QTY**	**PART NO.**	**DESCRIPTION**
		6024568	Base Unit
1	1	6015241	Winch – 12 Volt
2	1	6025812	Cable Assembly ▲
3	1	6020248	Knob ▲
4	4	6001	Square Nut, .375
5	4	629516	Capscrew, .375 x 1.00
6	1	6024660	Spring Tensioner
7	1	6019902	Platform Weldment
8	8	768538	Capscrew, M10 x 30
9	4	209043	Washer, M10
10	4	767614	Capscrew, M10 x 20
11	2	3550	Capscrew, .25 x .375
12	1	6020238	Winch Cover
13	6	206321	Capscrew, M6 x 16
14	6	202346	Washer, M6
15	1	6020229	Bumper, Rubber
16	6	202348	Washer, M12
17	6	768556	Capscrew, M12 x 45
18	6	6020689	Bushing
19	1	6024331	Brake Pad
20	4	787383	Washer, M10
21	12	787381	Nut, M10
22	2	6016660	Sheave ◆
23	4	683162	Shim ◆
24	2	6020106	Pin ◆
25	2	682999	Eye Pin ◆
26	2	787398	Washer, M8 ◆
27	2	767961	Capscrew, M8 x 16 ◆
28	1	6021248	Fairlead Weldment ◆
29	2	6021751	Safety Chain Assembly
30	2	6021355	Safety Chain Assembly
31	1	6019453	Wire Assembly, Base Unit
32	1	6019450	Wire Assembly/Fuseblock, Truck
33	8	206322	Washer, M10
34	1	6021112	Controller Assembly
35	2	6389	Lockwasher, .25
36	1	6021752	Guard
37	1	6028481	Cable Wedge Anchor ●

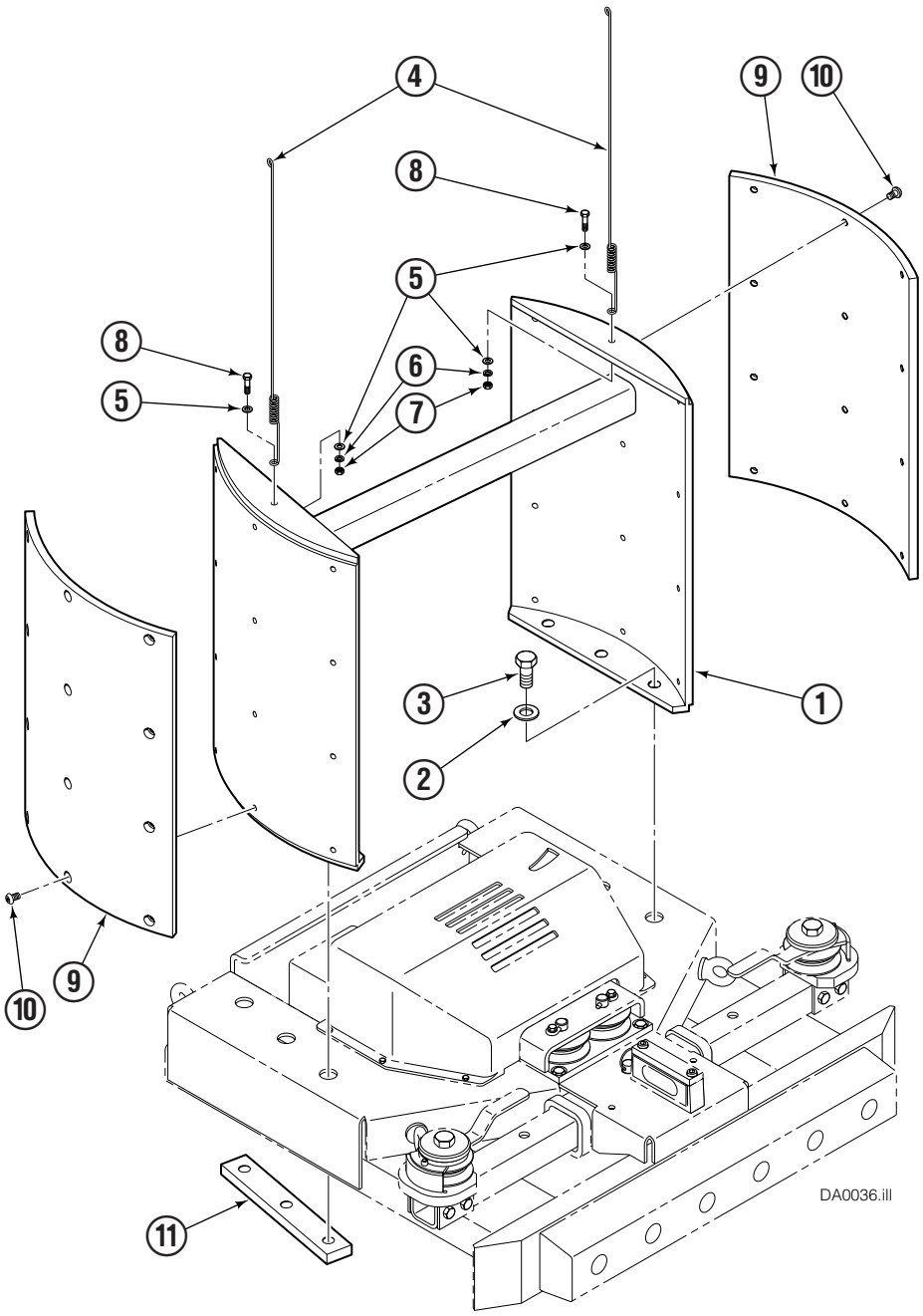
▲ Included with Winch.

◆ Included in Center Sheave Assembly 6021908.

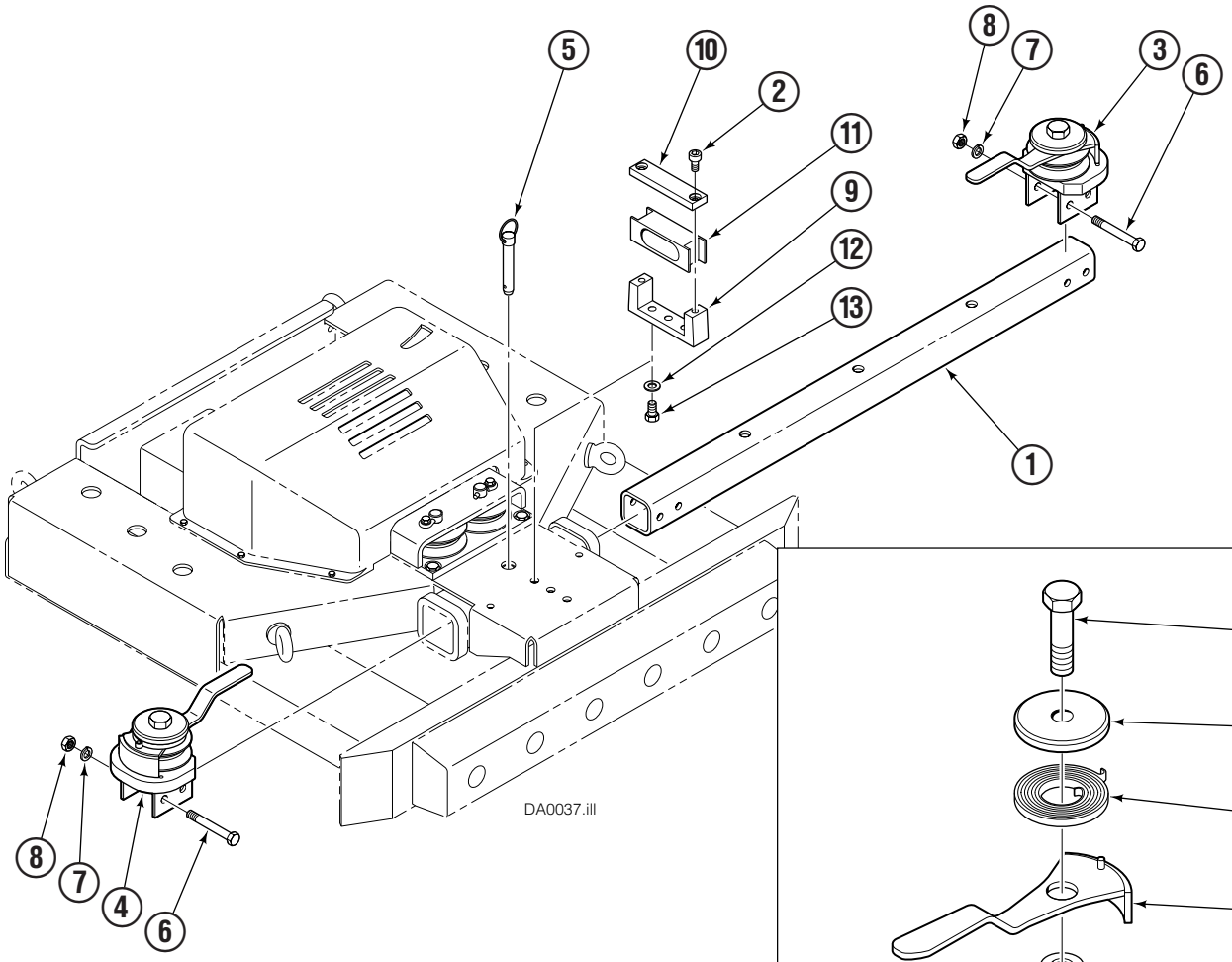
● Included in Cable Assembly 6025812.

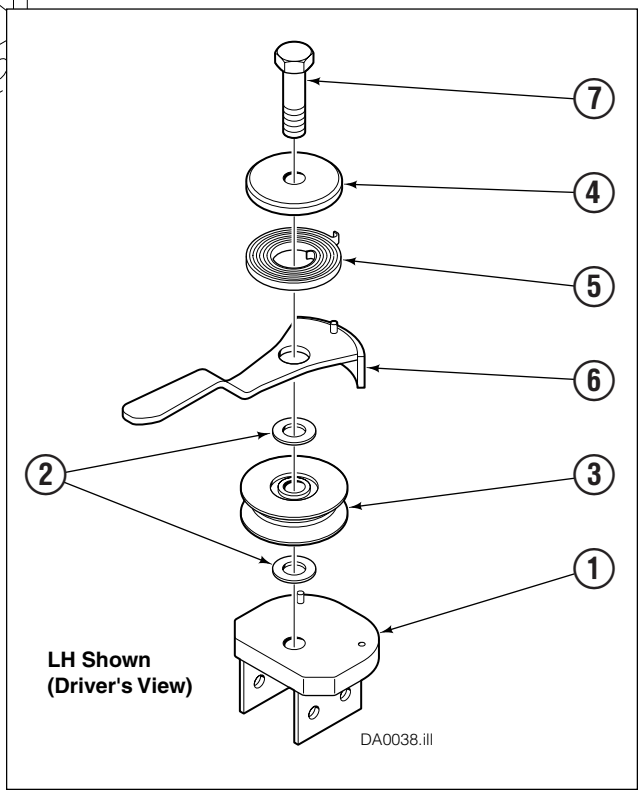
Reference: SK-7152.

Multi-Clamp Tower Assembly



Tower			
REF	**QTY**	**PART NO.**	**DESCRIPTION**
		6021945	Tower Assembly
1	1	6020171	Tower Weldment
2	6	215419	Washer, M20
3	6	679082	Capscrew, M20 x 35
4	2	6020627	Whip Spring
5	4	787398	Washer, M8
6	2	686119	Lockwasher, M8
7	2	767414	Nut, M8
8	2	765352	Capscrew, M8 x 30
9	2	6020249	Rubber Pad
10	24	783608	Capscrew, M10 x 16
11	2	6020224	Bar





Boom Assembly			
REF	**QTY**	**PART NO.**	**DESCRIPTION**
		6021930	Sheave Boom Assembly
1	1	6016659	Tube – Slide
2	2	767614	Capscrew, M10 x 20
3	1	6020120	Sheave Assembly – LH ◆
4	1	6020181	Sheave Assembly – RH ◆
5	1	6018002	Pin Detent
6	4	205205	Capscrew, M12 x 90
7	4	683822	Lockwasher, M12
8	4	763025	Nut, M12
9	1	6021532	Plate
10	1	6021683	Cap
11	1	6021668	Guide
12	3	202251	Washer, M12
13	3	683821	Capscrew, M12 x 20

◆ See parts breakdown.

Sheave Assembly			
REF	**QTY**	**PART NO.**	**DESCRIPTION**
		6020120	Sheave Assembly – LH
		6020181	Sheave Assembly – RH
1	1	6020116	Base – LH
1	1	6020180	Base – RH
2	2	683161	Shim
3	1	6016660	Sheave
4	1	6018808	Sleeve
5	1	6018807	Torsion Spring
6	1	6018795	Guard
7	1	790762	Capscrew, M20 x 75

Recommended Spare Parts

Boxcar Door Assist		UNITS SERVICED		
PART NUMBER	DESCRIPTION	1-5	6-19	20-50
6016660	Sheave w/Bearing	2	2	4
6021668	Cable Guide Block	1	2	4
6021811	Cable/Hook Assembly	1	2	4
6028481	Cable Wedge Anchor	1	2	4
6026661	Wireless Remote	1	1	1
6019450	Truck Power Harness/Fuse Block	1	1	1
6017353	200A Fuse (12V)	1	2	3
6026661	Wireless Remote Battery (Panasonic ECR2032)	1	2	3

Publications

GA0098.ill

Boxcar Door Assist	
PART NO.	DESCRIPTION
6019803	User Manual (Operation, Installation, Service, Parts)
679929	Tool Catalog
673964	Literature Index Order Form
6024073	Promotional CD

Contacting Cascade

Users – Cascade product literature, service literature, parts and videos are available through authorized lift truck dealers. To find the dealer nearest you, contact:

North America/South America

Cascade Corporation
U.S. Headquarters
2201 NE 201st
Fairview, OR 97024-9718
Tel: 800-CASCADE (227-2233)
503-669-6300
Fax: 888-329-8207

Europe

Cascade N.V.
European Headquarters
P,O, Box 3009
1300 EI Almere
Damsluisweg 56
1332 ED Almere
The Netherlands
Tel: 31-36-5492911
Fax: 31-36-5492964

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