

CARRIER
SIDE RECOVERY SYSTEM
INSTALLATION MANUAL

JERR-DAN[®]

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General Information

PREFACE

This manual covers the following Jerr-Dan Models:

Carrier Side Recovery System (SRS-8 & SRS-10)

Jerr-Dan Corporation strives to provide information that is accurate, complete and useful.

Descriptions and illustrative material contained within this manual are as accurate as known at the time of publication and are subject to change, without notice, as a result of continuous product improvements. Jerr-Dan Corporation reserves the right to amend the information in this document at any time without prior notice.

Information contained in this manual reflects how this vehicle was built at the factory. Modifications or additions by the distributor or owner are not reflected in this manual.

This installation manual does not include service parts information for the commercial chassis (IHC, Ford, GM, etc.).

That information is provided by the chassis manufacturer.

When ordering parts, please refer to your unit's Sales Order Number, Serial Number and Model Number. This information is found on the aluminum tag riveted to the rear side of the unit.

MANUFACTURED BY
JERR-DAN
An Oshkosh Corporation Company

SERIAL NO. [] MODEL NO. []

STRUCTURAL CAPACITY: [] LBS. IDENT. NO. []

WINCH RATING: [] LBS. WIRE ROPE WORKING LIMIT: [] LBS.

DO NOT EXCEED THE ABOVE STRUCTURAL RATINGS AND CAPACITIES.
SAFETY IS NO ACCIDENT. FOLLOW ALL INSTRUCTIONS ON CONTROLS AND UNIT.
PATENT PENDING 710

Additional or replacement manuals can be ordered by calling Jerr-Dan Parts at 717-597-7111. Price and availability will be quoted at time of the request.

Please report comments and/or errors by contacting Jerr-Dan Corporation's Technical Publications Department by e-mail at technicalpublications@jerr-dan.com or by FAX on 717-593-2362.

Patents Pending.

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To alert personnel to hazardous operating practices, safety messages are used throughout the manual. Each safety message contains a safety alert symbol and a signal word to identify the hazard's degree of seriousness.

 **CAUTION**

Identifies when a potentially hazardous situation exists and may result in a minor or moderate injury or property damage.

 **WARNING**

Identifies when a potentially hazardous situation exists and could result in death or serious injury.

 **DANGER**

Identifies when an imminently hazardous situation exists and can result in death or serious injury.

This manual describes installation instructions for the Carrier Side Recovery System. Read the instructions thoroughly prior to starting installation. Sketches are provided to give visual aid and may not look the same as what you are working with because of make of truck and model year. All work performed in relation to the mounting of Jerr-Dan bodies should be performed by qualified and experienced personnel.

These instructions are intended to be a guide. Procedures may vary from individual to individual and from shop to shop based on the tools and equipment available and the experience of the mechanics doing the installation. There are, however, certain areas where any deviation from the recommended procedure will cause unsatisfactory operation and reduced life of the unit. Any deviation from these mounting instructions should be done with thought and planning. Jerr-Dan will not accept responsibility for poor workmanship and improper installations.

Tools/Special Equipment Needed

Proper tools will ease the installation of your Jerr-Dan unit and insure proper installation. The following is a list of special tools and equipment recommended for use during the installation of your Jerr-Dan unit.

- Crane or Overhead Winch
- 4-5 C Clamps (heavy duty 8" or larger)
- Straight Edge (36" or longer)
- Sockets/Wrenches/Screwdrivers
- Torque Wrench
- Drill
- Tape Measure
- Wire Cutters
- Wire Crimpers
- Framing Square

Unpacking /Kit Disassembly / Contents - Figure 1

The kit for the SRS contains two components: the SRS structure and the SRS crate which contains the various loose items required to properly install the SRS according to these instructions.

If your SRS was ordered in combination with a carrier, the items in the SRS crate may be packaged with the deck crate.

The SRS may be shipped laying flat or vertically. Take care when removing the SRS structure from the shipping vehicle as not to damage the SRS or other items on the same shipment.

WARNING

**Do not lift the Side Recovery System by the lightbar support.
Damage to the lightbar support may occur.**

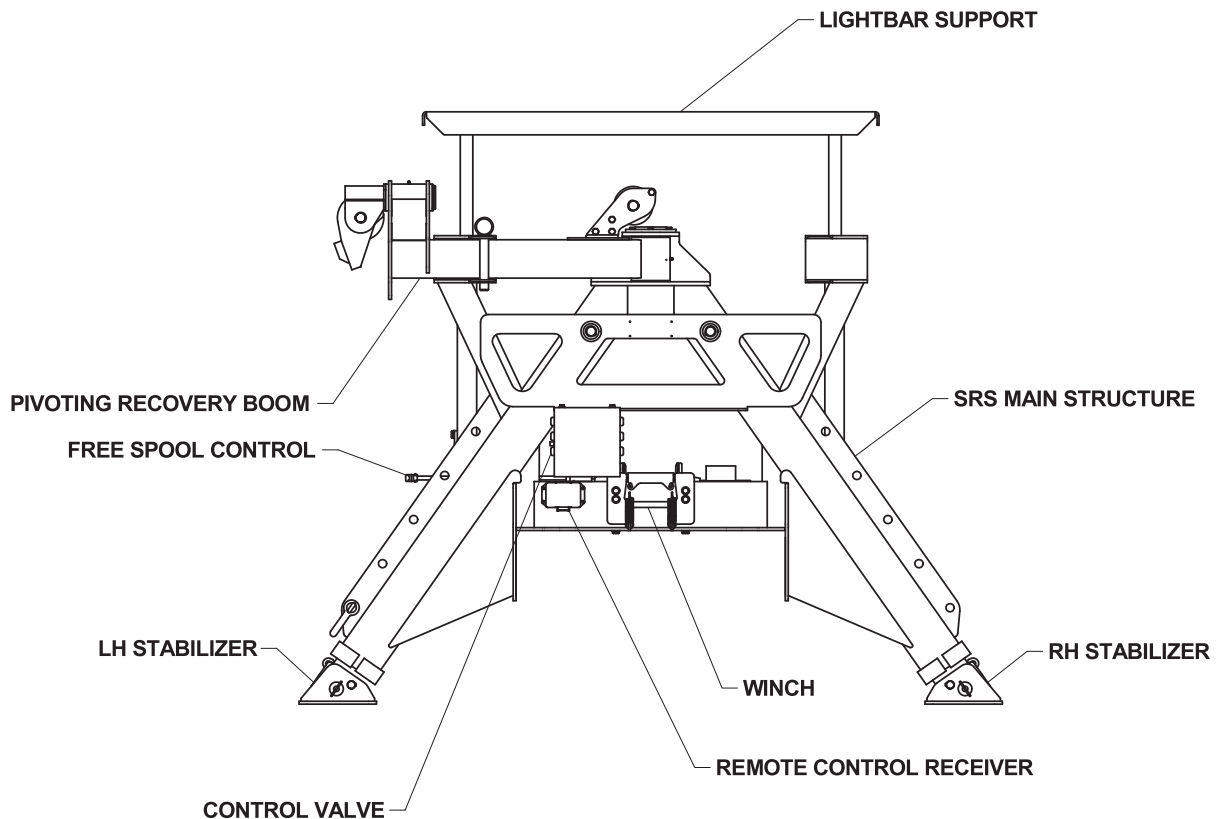


Figure 1 - SRS Components

The following items are included in the standard SRS crate:

Jerr-Dan P/N	Description	Qty
4831000126	1/4" Frame Spacer	2
4831000127	1/8" Frame Spacer	2
7105201650	5/8" dia x 2" Flange Capscrew	12
7660202347	5/8" dia Flange Locknut	12
7970000077	Winch Cable (SRS-8 only)	1
7970000070	Winch Cable (SRS-10 only)	1
7804000007	Shackle	1
7002000519	Snatch Block	1
4567133075	Pressure Hose, 1/2" dia x 75"	1
4570000104	Return Hose, 3/4" dia x 114"	1
4570000308	Suction Hose, 1 1/4" dia x 111"	1
7274000080	Return Hose T Clamp	2
7443000445	1" NPT M-F-F Tee	1
7443000374	1" NPT Barb Fitting	1
7819000005	Hose Sleeve, 6'	1
7274000053	P Clamp	4
7115150850	5/16" Dia x 1" Capscrew	4
7950150161	5/16" Dia Flatwasher	4
7660152601	5/16" Dia Locknut	4
7950180153	1/2" Dia Flatwasher	2
7660182601	1/2" Dia Locknut	2
9295310047	Remote Control Transmitter with rubber boot & belt clip	1

The following items are included with the Work Light Option, LWH-SRS:

Jerr-Dan P/N	Description	Qty
7590000223	Work Light	2
7552000397	Wire Harness	1
7280000011	Plastic Clip	6

The following items are included with the Field Retrofit Kit Option, SRS-FIELD:

Jerr-Dan P/N	Description	Qty
7552000398	Wire Harness	1
4587000005	Free Spool Z Bracket	1
4178000674	Free Spool Bracket, Steel	1
4178000764	Free Spool Bracket, Aluminum	1
7115151250	5/16" Dia x 1 1/2" Capscrew	2
7950150161	5/16" Dia Flatwasher	4
7660152601	5/16" Dia Locknut	2
7330000478	Decal - Lube Chart	1
7330000495	Decal - Free Spool	1
7759000004	1/8" Dia Pop Rivets	4
7894000004	15" Tie Straps	15

CHASSIS PREPARATION

Preparation Notes

Chassis preparation involves rear frame cutoff, and relocating and modifying components for installation of your Jerr-Dan unit. Different factory options and truck modifications will warrant the modification of these instructions. All chassis modifications should be done by qualified and experienced personnel and according to guidelines found in chassis manufacturer's body builder books.

Jerr-Dan will not accept responsibility for poor workmanship and improper installations. We recommend that you do not attempt to modify any chassis until you obtain expert guidance from the truck manufacturer. Always follow the recommendations of the truck manufacturer.

CAUTION

When modifying the truck chassis, become familiar with the location of the brake lines, fuel lines, wiring harnesses, and fuel tanks so as not to cause damage to these components.

CAUTION

Always disconnect the positive wire from the battery before welding any components on the chassis or body. Damage to batteries and/or electrical components can result from welding.

NOTE

To protect the rear window and paint from damage, cover the cab with a protective blanket before starting work.

The Side Recovery System requires an additional 12" of Cab to Axle / Cab to Tandem above the standard carrier deck installation.

Refer to the minimum Cab-to-Axle chart to the right when selecting and mounting your SRS. Special mounting scenarios are possible for 21' decks on a 150" CA chassis. Refer to Technical Bulletin 08-251 or contact Jerr-Dan Application Engineering for details.

Deck Length	Carrier Minimum CA with Wheel Lift
19'	132"
20'	144"
21'	156"
22'	156"
24'	174"
26'	198"
28'	222"

Chassis Frame Preparation

1. Make sure the area 16" behind back the of cab on both outboard sides of the chassis frame are clear of any fuel tanks, battery boxes, air tanks, etc. If so, relocate components in accordance to the chassis manufacture. See *Figure 2*.

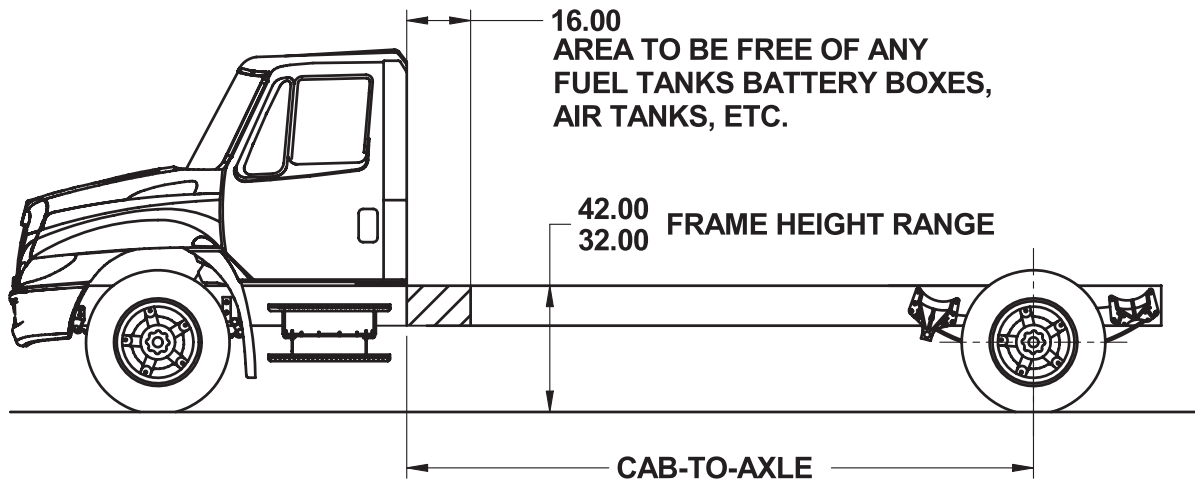


Figure 2 - Chassis Frame Preparation

INSTALLATIONS

Side Recovery System Structure Installation

1. Set the SRS structure onto the chassis truck frame and position as shown in Figure 3 and temporarily clamp into place. Make sure that the SRS structure is square and level with the truck frame.
2. Place the 1/8" and 1/4" spacers between the truck frame and SRS to center the structure on the truck frame as needed.
3. Using the holes in the mounting plates as a template, drill 12 (6 each side) 0.640" diameter holes thru the truck frame. **Be careful that you do not drill into fuel lines, brake lines, or electrical wires.**
4. Secure the SRS structure with 12 (6 each side) 5/8" dia x 2" flanged head capscrews and 5/8" dia flanged locknuts. **Torque capscrews to 135 ft-lbs.**
5. Remove the temporary clamps.

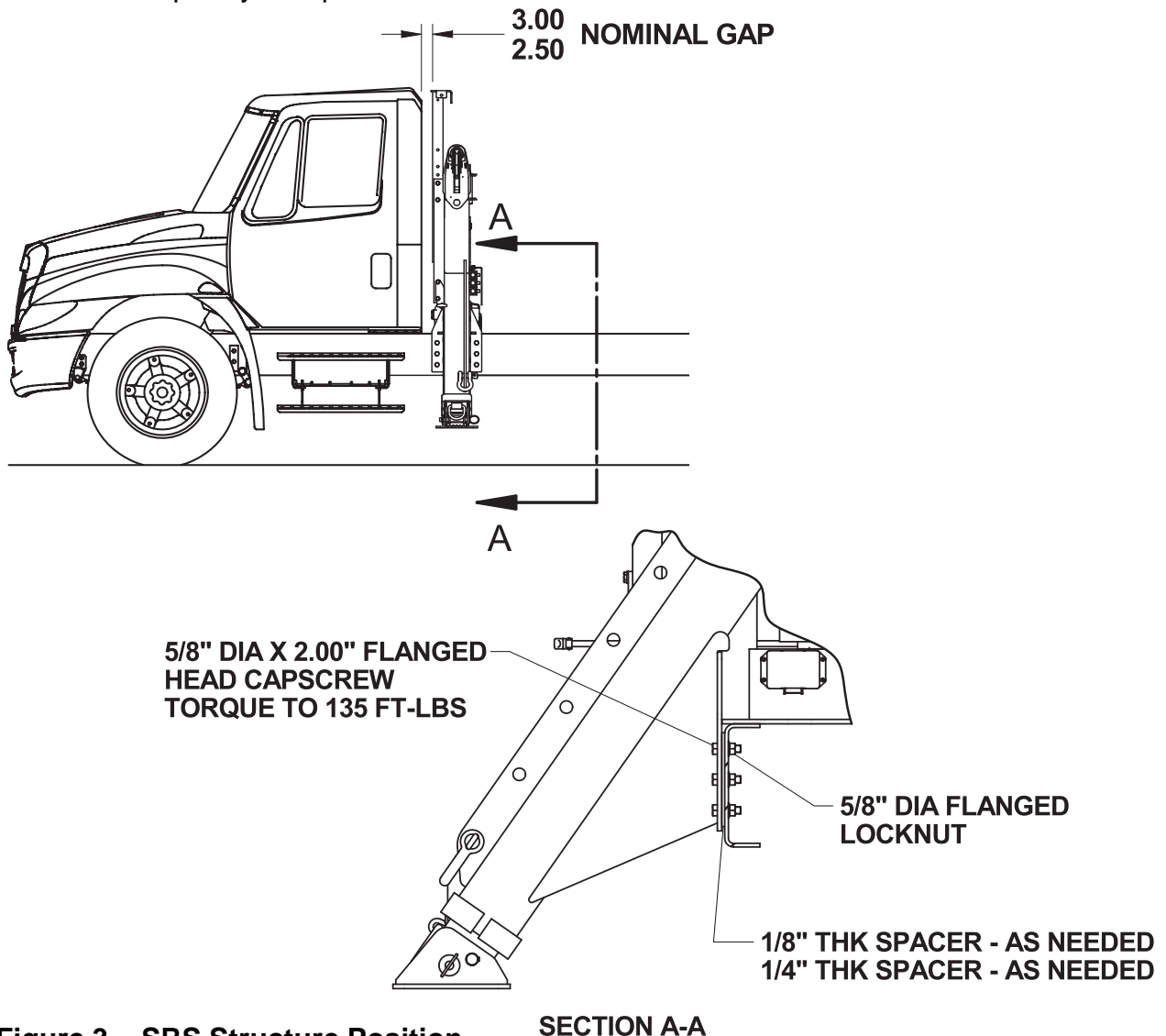


Figure 3 - SRS Structure Position

Hydraulic Hoses - Supply/Pressure/Return

The supply, pressure and return hydraulic lines on the SRS are connected in-line with the Carrier's supply, pressure and return lines. See *Figure 4*.

1. Connect one end of the 1 1/4" suction hose to the suction port of the hydraulic pump.
2. Connect one end of the 1/2" pressure hose to the pressure port of the pump.
3. Route the pressure hose toward the control valve on the SRS and the suction hose toward the hydraulic tank. Secure the hoses to the truck frame as needed.
4. Connect the other end of the 1 1/4" suction hose to the suction port of the hydraulic tank.
5. Connect the other end of the 1/2" pressure hose to the pressure port (P) of the SRS control valve body. See *Figure 5*.
6. Connect one end of the 3/4" return hose to the tank port of the SRS control valve body and secure with a T clamp. See *Figure 5*.
7. Connect the 1" NPT M-F-F Tee to the hydraulic tank return filter. Lubricate the hydraulic tank fittings with permatex type lubricant. See *Figure 6*.
8. Connect the 1" NPT Barb Fitting to the 1" NPT M-F-F Tee. See *Figure 6*.
8. Route the 3/4" return hose to the hydraulic tank filter and connect the other end to the 1" NPT Barb Fitting and secure with a T clamp. See *Figure 6*.
9. Connect the standard carrier 3/4" pressure hose from the main control valve to the hose coming out of the power beyond port on the SRS control valve. See *Figure 7*.

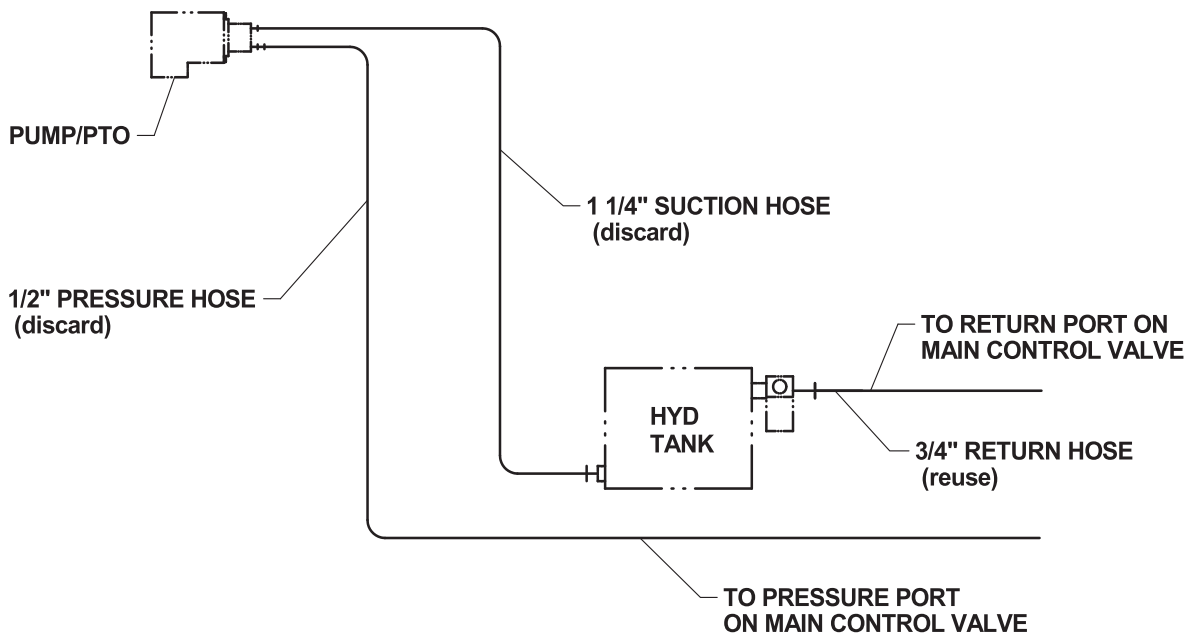


Figure 4 - SRS Hydraulic Supply, Pressure and Return Hoses (Before)

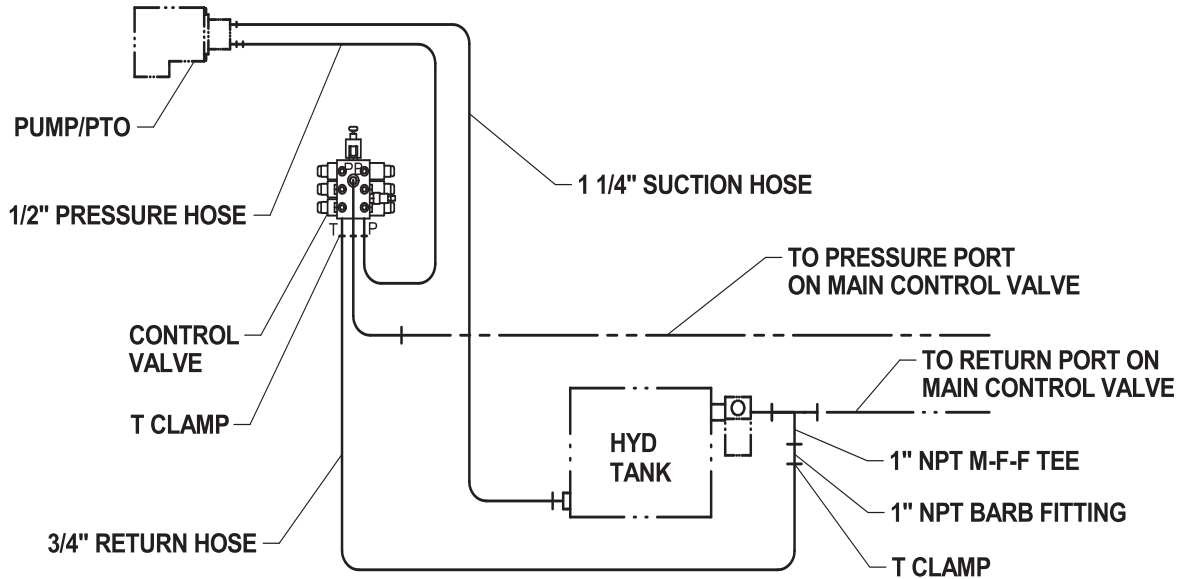


Figure 4 - SRS Hydraulic Supply, Pressure and Return Hoses (After)

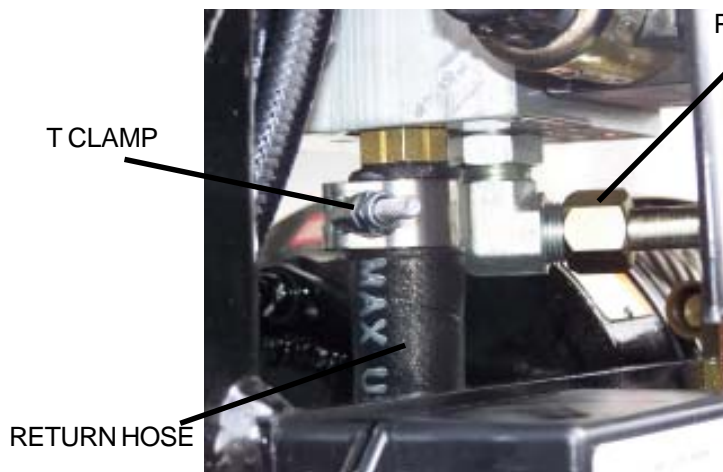


Figure 5 - SRS Control Valve



Figure 7 - Power Beyond Port



Figure 6 - Hydraulic Tank Return Lines

Light Bar Support Adjustment

1. Remove the four (two each side) 1/2" dia capscrews, flatwashers and locknuts from the lightbar support.
2. Adjust the lightbar support so the top of the support is flush with the top of the chassis cab. See *Figure 7*.
3. Reinsert the removed hardware and tighten to secure to lightbar support.

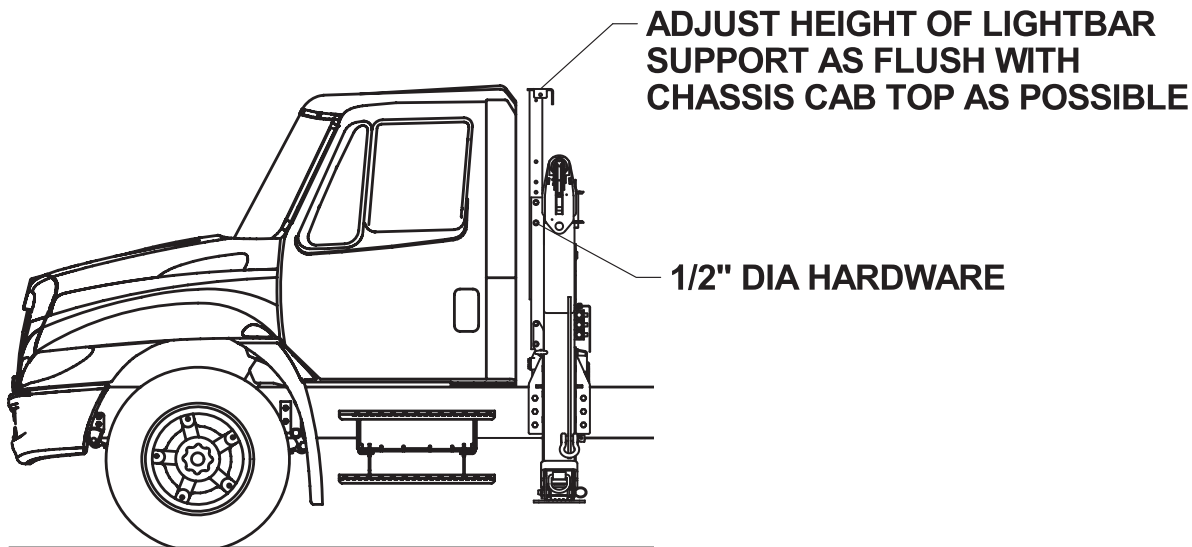
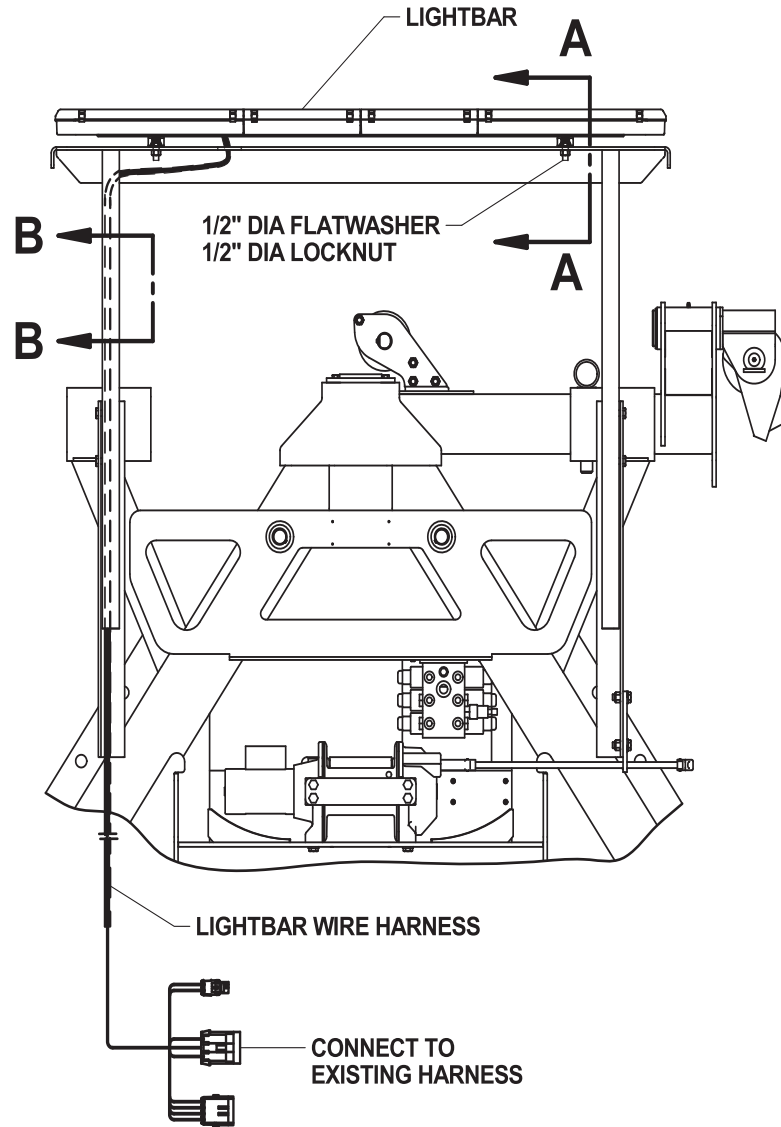


Figure 7 - Lightbar Support Adjustment

Light Bar Installation - *Figure 8*

1. Install the lightbar using the hardware supplied with the lightbar option.
2. Use a 1/2" diameter flatwasher and 1/2" diameter locknut to secure each lightbar mount to the lightbar support .
3. Route the lightbar harness down the passenger side lightbar support leg and secure using the four 1/2" P clamp, 5/16" dia x 2" capscrew, 5/16" dia flatwasher and 5/16" dia locknut.
4. Connect the three connectors to the existing cab to sub harness.
5. Secure all parts of the harness from movement and contact from sharp edges.



VIEW FROM BACK OF CAB LOOKING REARWARD

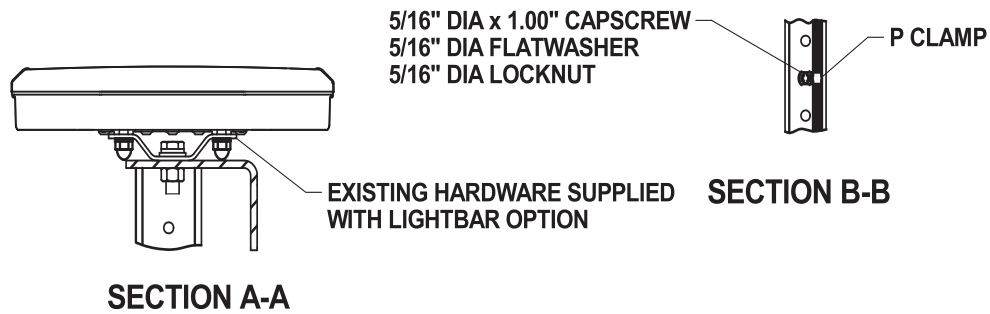
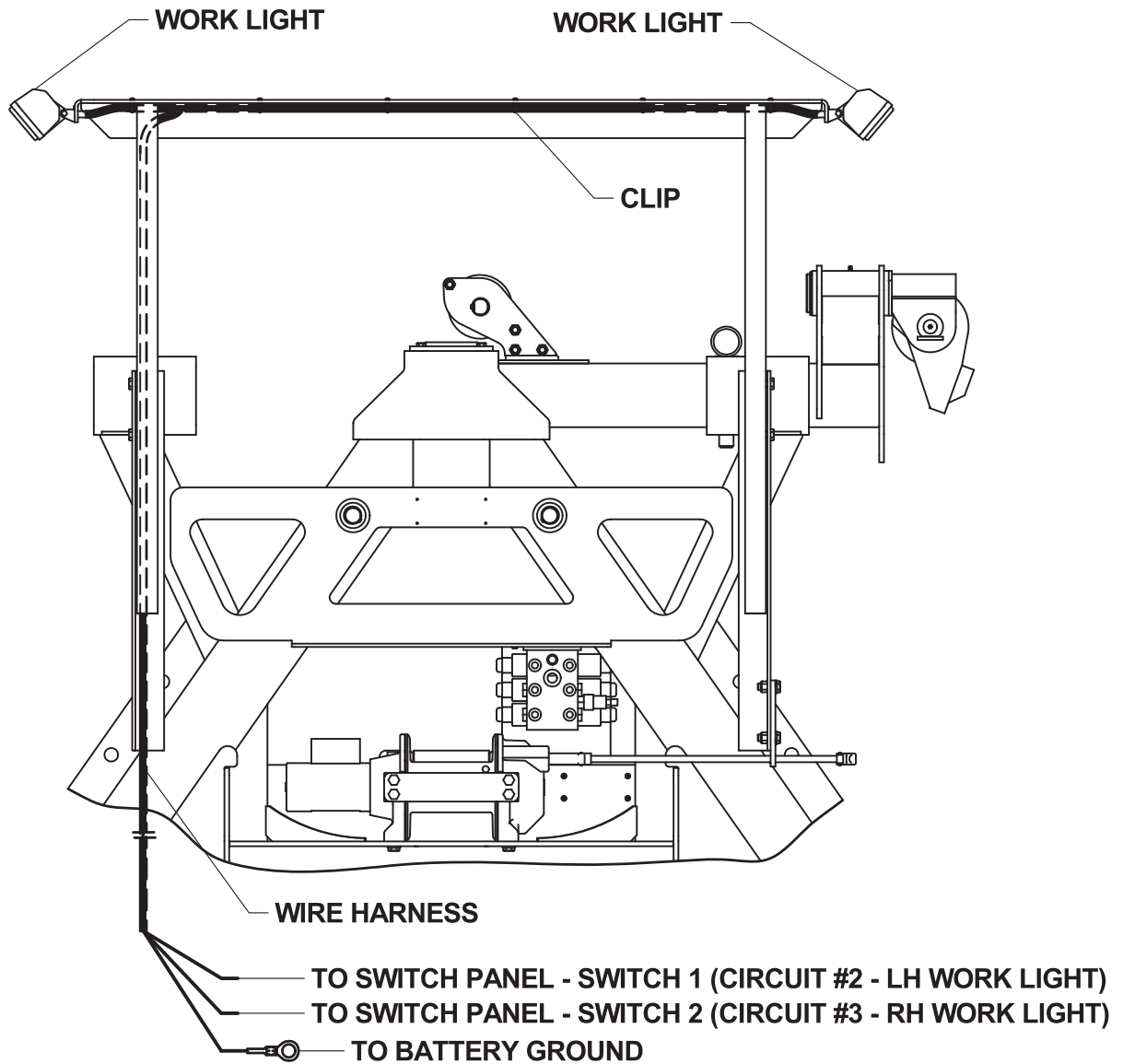


Figure 8 - SRS Lightbar Installation

Work Light Installation - Figure 9

1. Install the left hand and right hand work lights to the lightbar support ends using the hardware supplied with the work lights.
2. Install the six plastic clips into the holes in the lightbar support.
3. Plug the connectors on the wire harness into the work light connectors. Route the wire harness along the top of the lightbar support and secure with the plastic clips.
4. Route the wire harness down the passenger side lightbar support leg and secure to the lightbar harness using tie straps.
5. Route the ring terminal end of the wire harness to the battery and connect to the ground side.
6. Route the two bunt end wire to the switch panel in the cab and connect each to separate switches.
7. Secure all parts of the harness from movement and contact from sharp edges.



VIEW FROM BACK OF CAB LOOKING REARWARD

Figure 9 - SRS Work Light Installation

Remote Controls Harness Installation - Figure 10

1. The remote control harness is shipped connected to the receiver box and control valve with the power supply feed tie strapped to the winch cable tensioner.
2. Cut the tie strap and route the remote controls power feeds on the harness to the battery.
3. Connect the ring terminal lead with the 10 amp fuse to the positive terminal on the battery.
4. Connect the other ring terminal to the negative terminal on the battery.

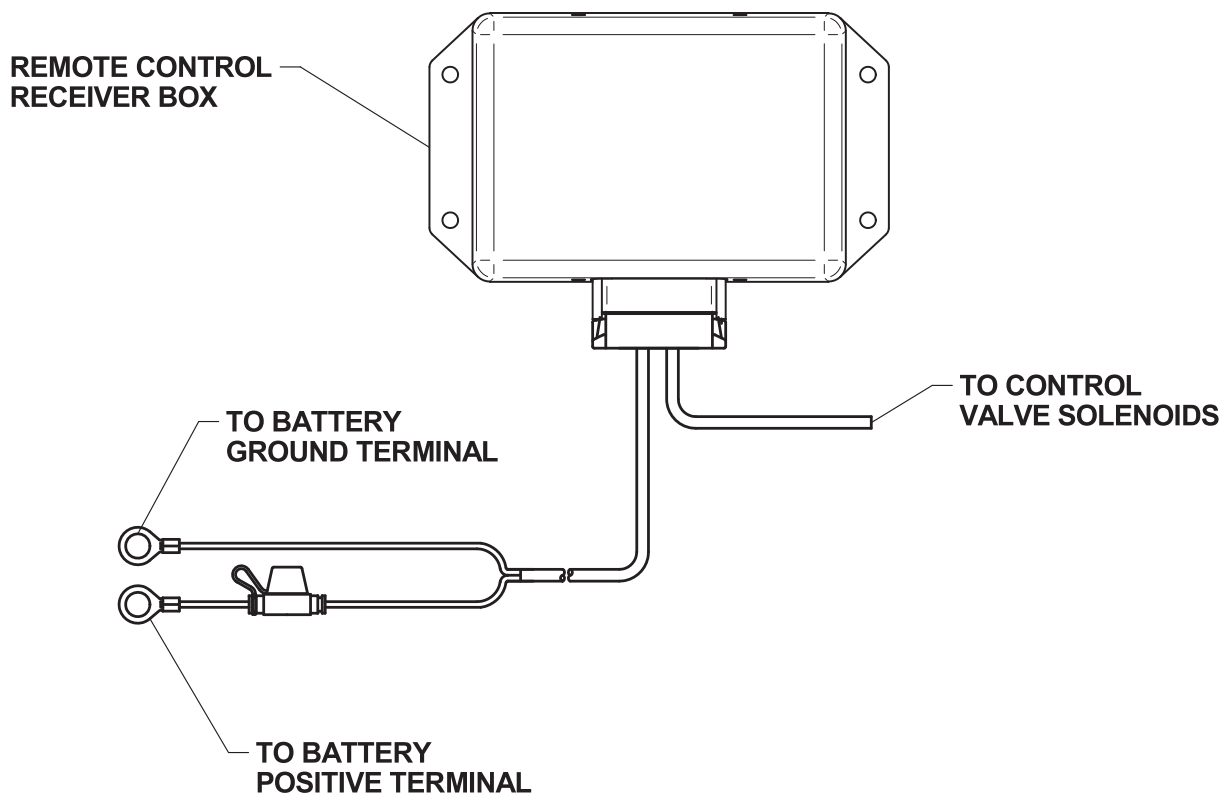


Figure 10 - Remote Controls Harness Installation

Winch Cable Installation

1. Unwind winch cable by rolling it out along the ground to prevent kinking. Securely wrap the end of the cable opposite the hook with plastic or similar tape to prevent fraying.
2. Feed the taped end of the cable through the pivot sheave assembly, the pivoting recovery boom idler sheave and pivoting recovery boom bearing to the winch drum. See Figure 11.
3. Following the cable installation procedure outlined in the winch installation manual, install the winch cable on the winch drum as shown in Figure 12.

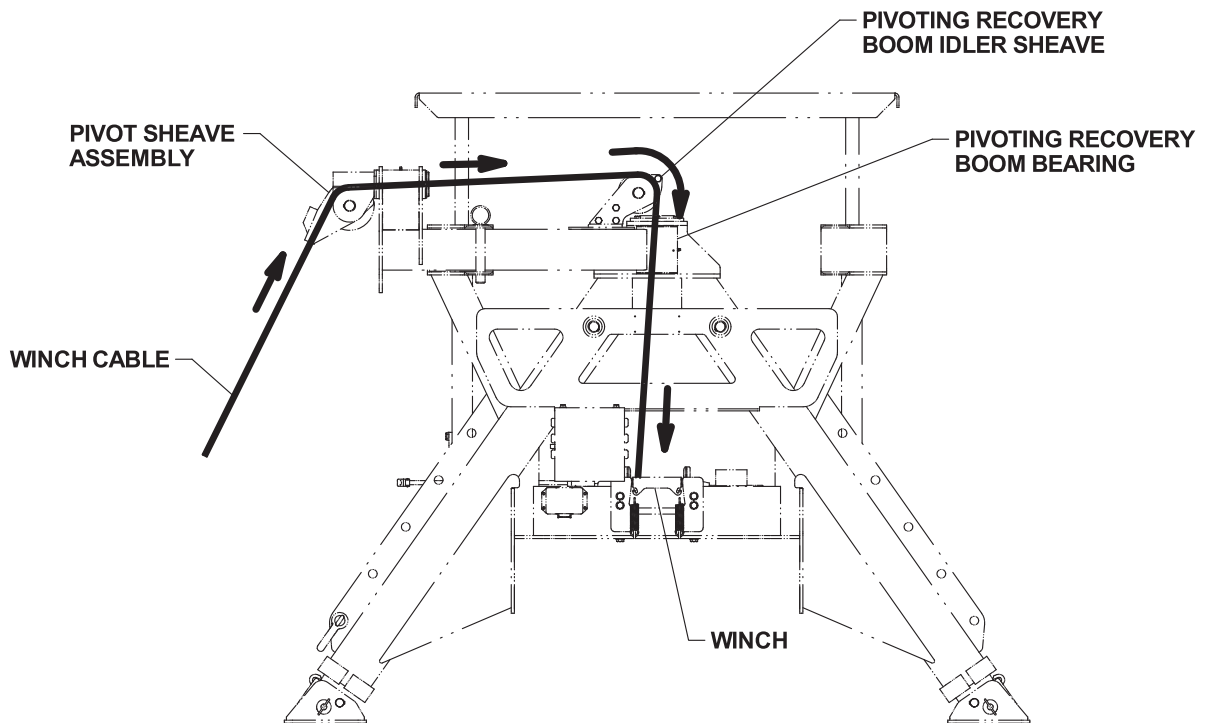


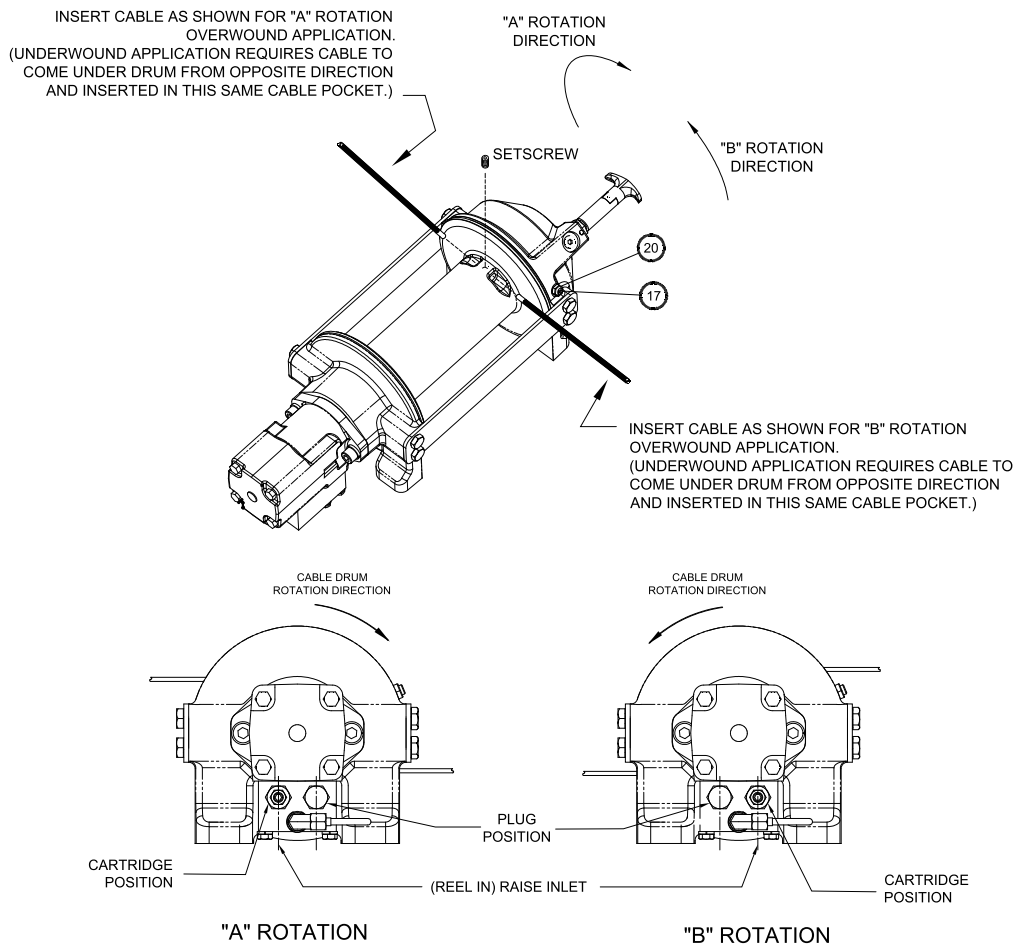
Figure 11 - Winch Cable Installation

CABLE INSTALLATION

An A or B decal on the clutch end bearing indicates the spooling direction of the cable. Also, a letter A or B is stamped in the end bearing on the clutch end indicating rotation direction. If the decal is damaged or unreadable, contact Customer Service for additional instructions to determine proper direction. To reverse the rotation direction, exchange positions of the cartridge and plug shown below.

1. Unwind cable by rolling it out along the ground to prevent kinking. Securely wrap end of cable, opposite hook, with plastic or similar tape to prevent fraying.
2. Place taped end of cable into hole in cable drum as shown below. Use the 3/8-16NC x 1/2 long hex socket drive setscrew (included with drum assembly item # 1) to secure cable to drum.
3. Carefully run winch in the "reel-in" direction. Keeping tension on end of cable, spool all the cable onto the cable drum, taking care to form neatly wrapped layers.

After installing cable, check freespool operation. Disengage clutch and pull on cable at a walking speed. If cable birdnests, loosen jam nut (item # 20) and turn nylon setscrew (item # 17) clockwise to increase drag on drum. If cable pull is excessive, loosen nylon setscrew by turning counterclockwise. Tighten jam nut when proper setting is obtained. **CAUTION: OVER-TIGHTENING OF JAM NUT MAY STRIP NYLON SETSCREW.**



3

Figure 12 - Winch Cable Installation

Field Retrofit Installation

If your SRS is being mounted on an existing unmounted or mounted Carrier deck, an optional field retrofit kit is available to provide the proper parts to convert the headboard, electrical & hydraulic systems and decals

Removal of Bolt-On Headboard

1. Remove the winch free spool components keeping all the parts except the Z bracket on the 8,000lb and 10,000 lb winches for later use. See *Figure 13*.
2. If equipped with a lightbar or headboard work lights, disconnect the wiring harness located under the deck on the passenger side.
3. Remove the headboard by removing the four fasteners securing the headboard to the deck.

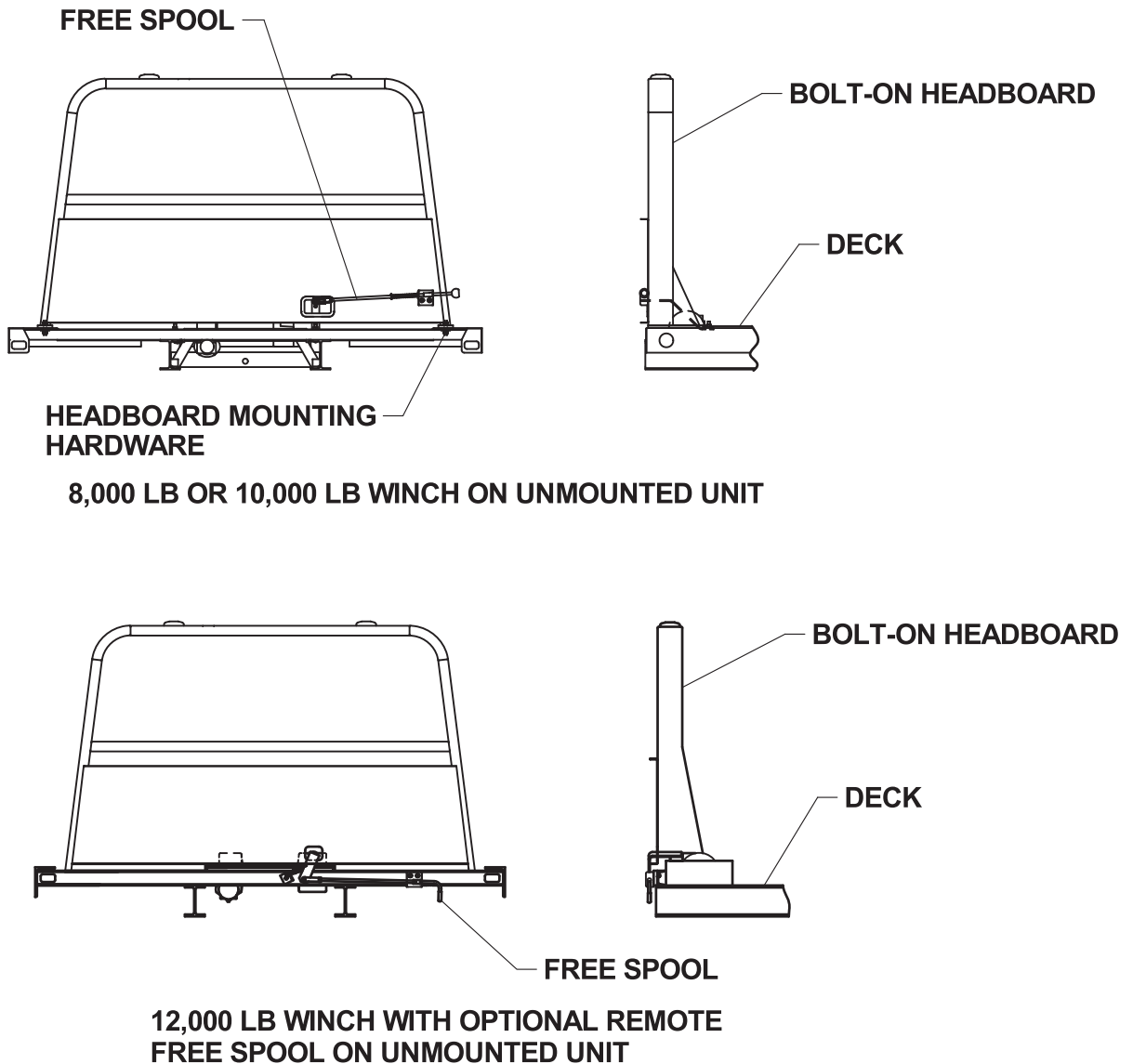


Figure 13 - Bolt-On Headboard Removal

Free Spool Reinstallation

8,000 lb or 10,000 lb Winch

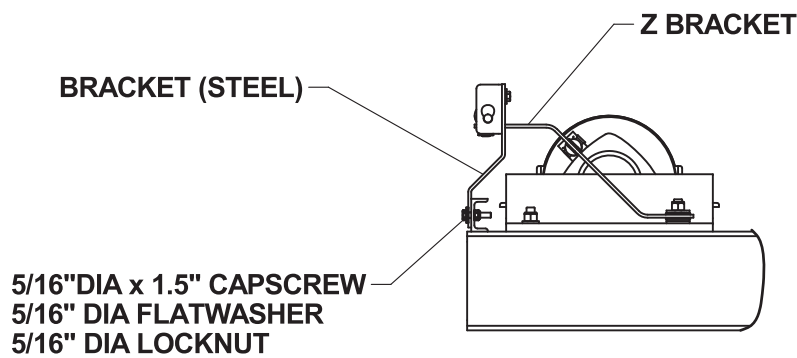
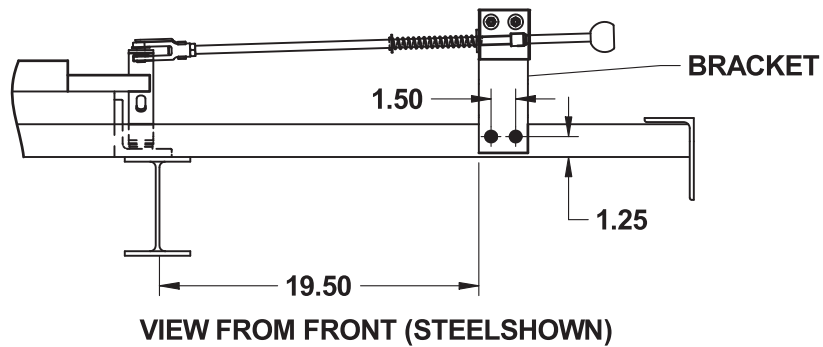
1. If the Carrier deck is a steel or wood deck, reassemble the free spool components using the Z bracket supplied in the kit. Locate the steel bracket as shown in Figure 14 and either weld into place or drill two 3/8" dia holes through the bracket and front deck angle per the dimensions in Figure 12 and secure using the 5/16" hardware.
2. If the Carrier deck is an aluminum deck reassemble the free spool components using the Z bracket supplied in the kit. Locate the aluminum bracket as shown in Figure 12 and drill two 3/8" dia holes front deck plate using the holes in the bracket as a template and secure using the 5/16" hardware.

12,000 lb Winch with Free Spool Option

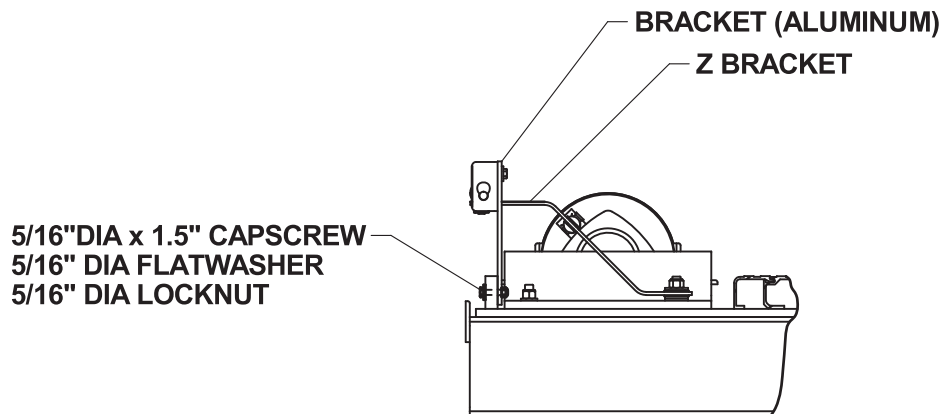
1. Reassemble the free spool components. *See Figure 15.*
2. If the free spool components interfere with the SRS, parts can be ordered through Jerr-Dan Parts to reduce the distance the free spool handle extends. The parts required are an Arm Weld (P/N 3020000123) and an Angle (P/N 4017001504).

 **CAUTION**

A 1/4" gap is required between the ferrule end and the mounting bracket side. Refer to Technical Bulletin 05-202 for further details. See Figure 16.

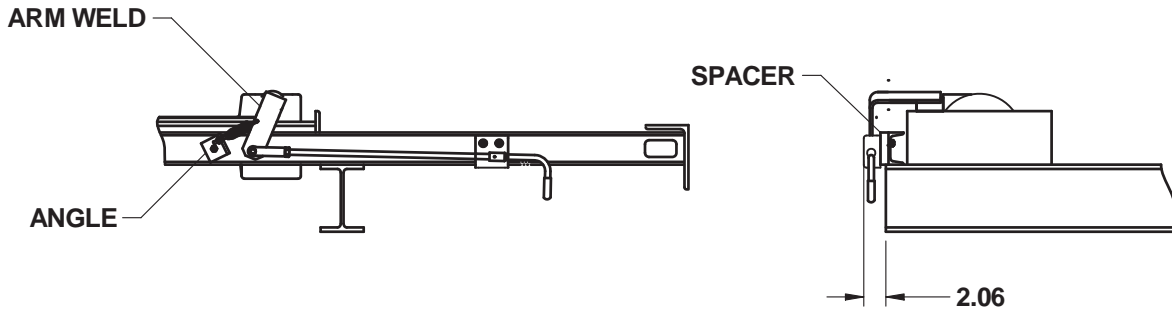


8,000 LB OR 10,000 LB WINCH ON A STEEL OR WOOD DECK

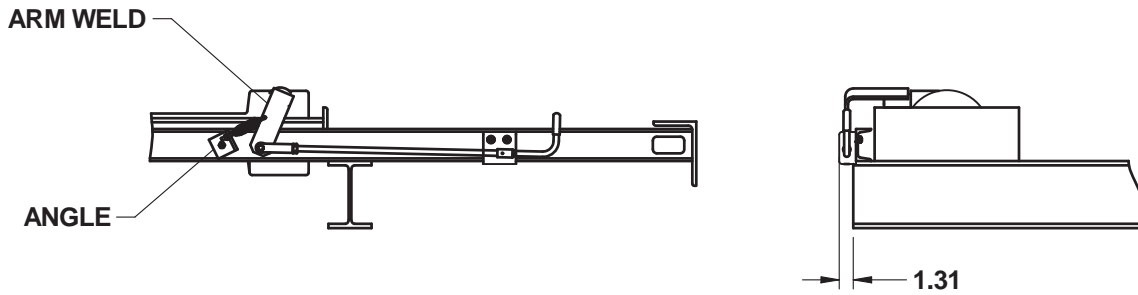


8,000 LB OR 10,000 LB WINCH ON AN ALUMINUM DECK

Figure 14 - 8,000 lb and 10,000 lb Winch Free Spool Installation



12,000 LB WINCH FREE SPOOL USING BOTL-ON HEADBOARD SET-UP



12,000 LB WINCH FREE SPOOL USING STATIONARY HEADBOARD SET-UP

Figure 15 - 12,000 lb Winch Free Spool Installation

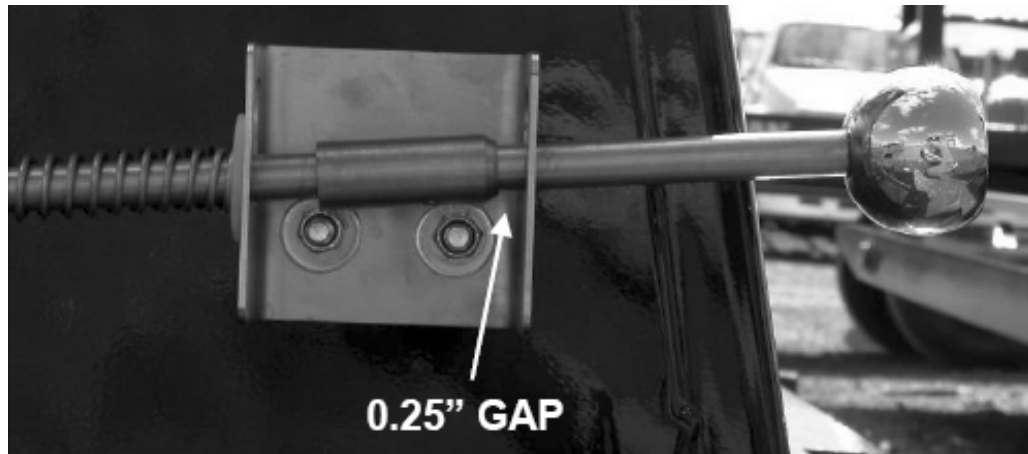


Figure 16 - Winch Free Spool Adjustment

Hydraulic Supply, Pressure and Return Line Installation

The supply, pressure and return hydraulic lines on the SRS are connected in-line with the Carrier's supply, pressure and return lines. Follow the instructions under the 'Hydraulic Hoses - Supply/Pressure/Return' section.

Decal Installation

1. Install the carrier Lube Chart decal on the hydraulic tank. See Figure 17.
2. Install the Free Spool Operation decal on the deck headboard mounting plate. See Figure 17.

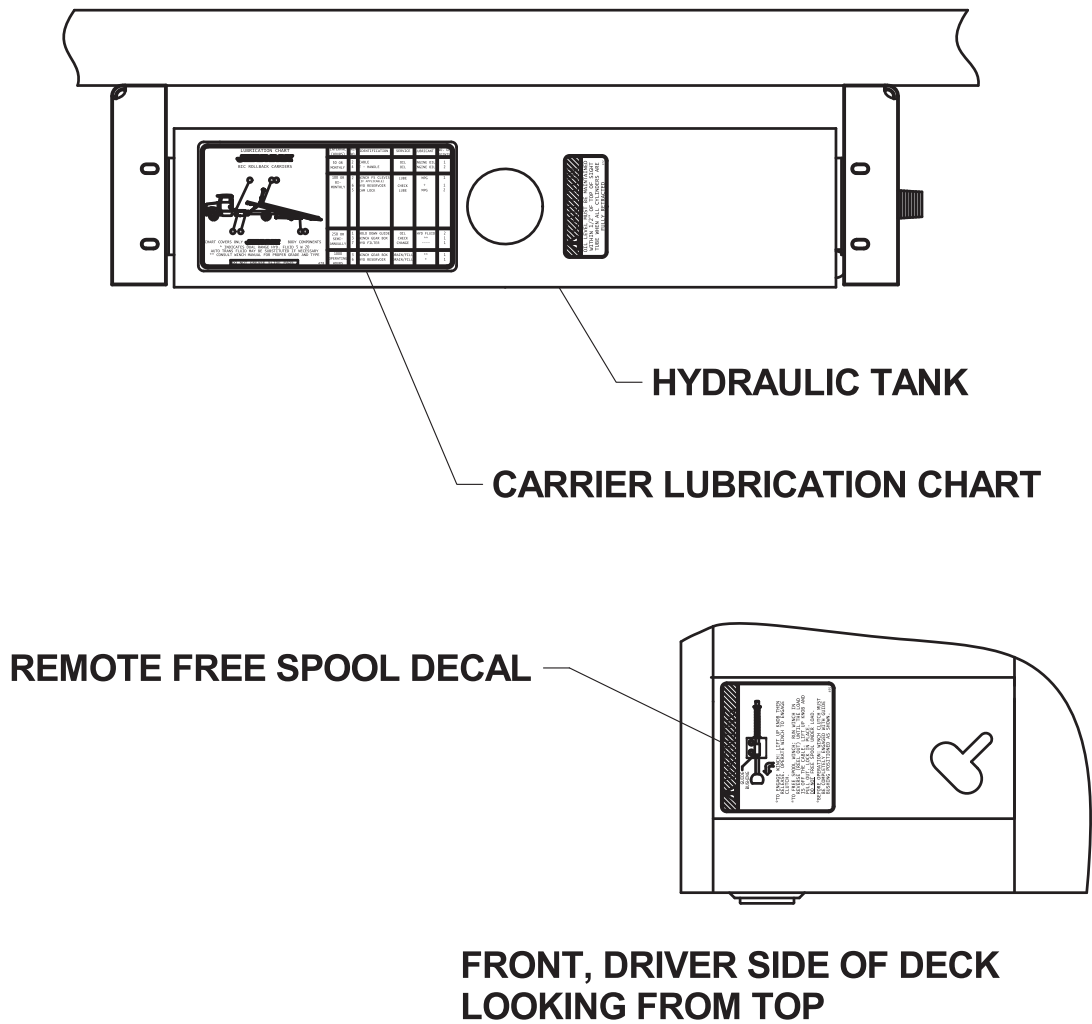


Figure 17 - Decal Relocation

Lightbar Wiring Installation

1. If unit is supplied with electrical harnesses for a bolt-on headboard, insert the field retrofit harness into the sub-to-cab and the subframe harnesses and into the subframe and subframe-to-deck harnesses. See Figure 18.
2. Route the harness along the chassis frame to the passenger side of the SRS structure and connect to the lightbar harness. Secure the harness with tie straps.
3. If unit is supplied with electrical harnesses for a stationary headboard, the field retrofit harness is not required.

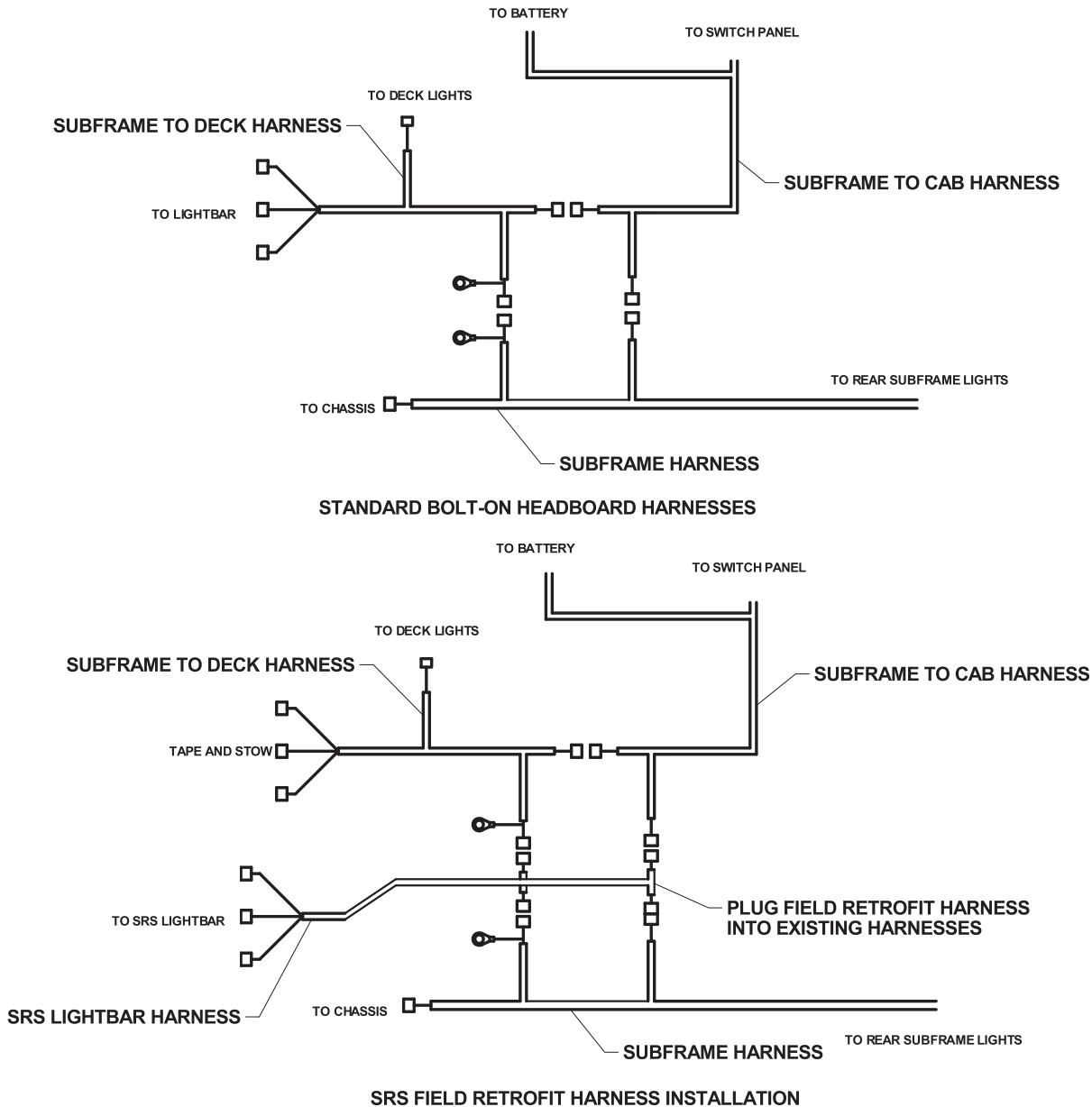


Figure 18 - Lightbar Wiring Installation

S.T.A.R. / Structural Rating Placard Installation

1. If your unit is a Standard Duty Carrier with a S.T.A.R. placard on the headboard, request a new placard from Engineering by Faxing a new request to 717-593-2399. Indicate on request that unit has an SRS. Remove old placard and replace with new placard. See *Figure 19*.
2. If your unit is a Medium or Heavy Duty Carrier, relocate the existing Structural Rating Placard using the four pop rivets to the driver side of the SRS. See *Figure 19*.

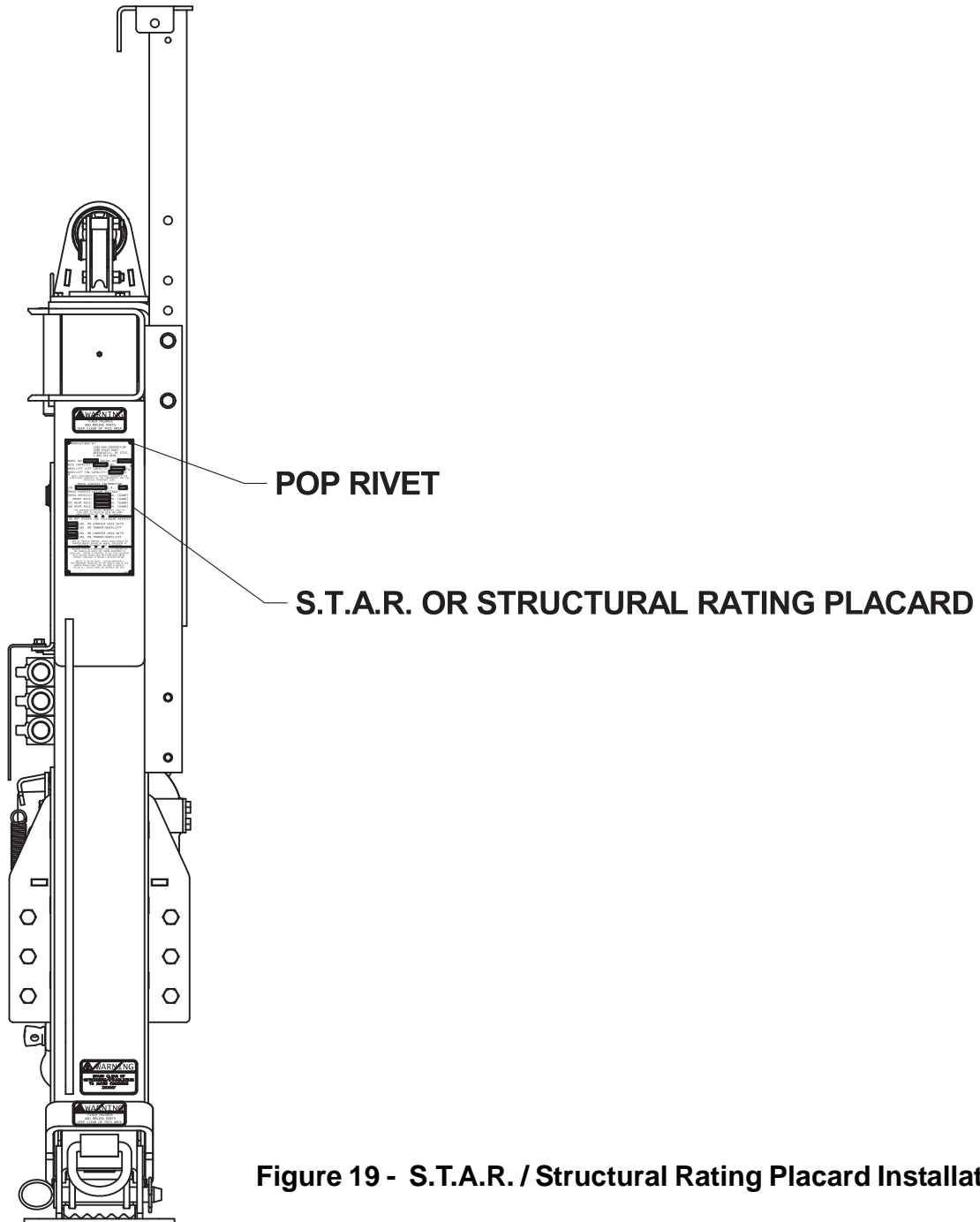
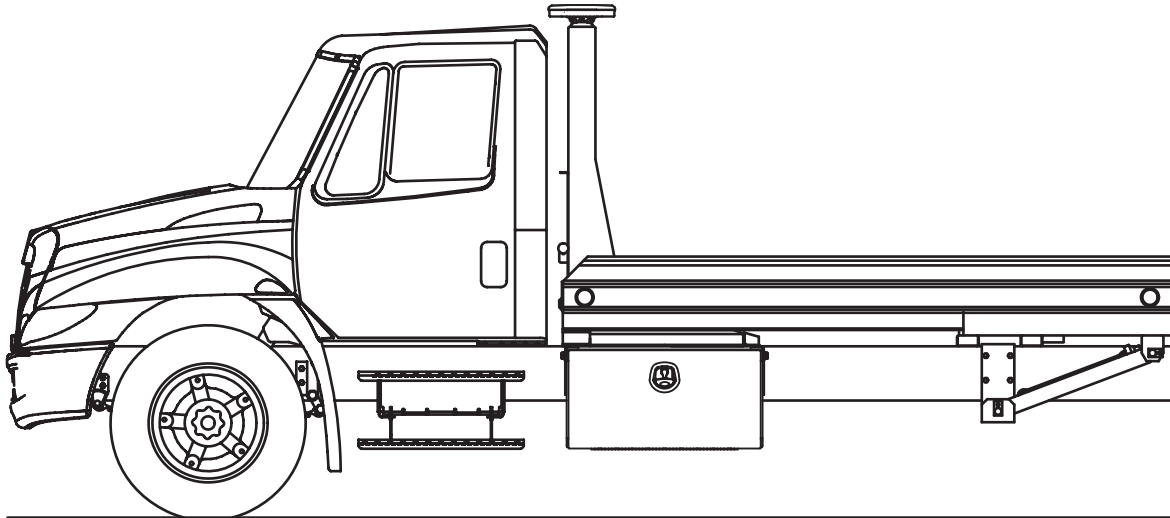


Figure 19 - S.T.A.R. / Structural Rating Placard Installation

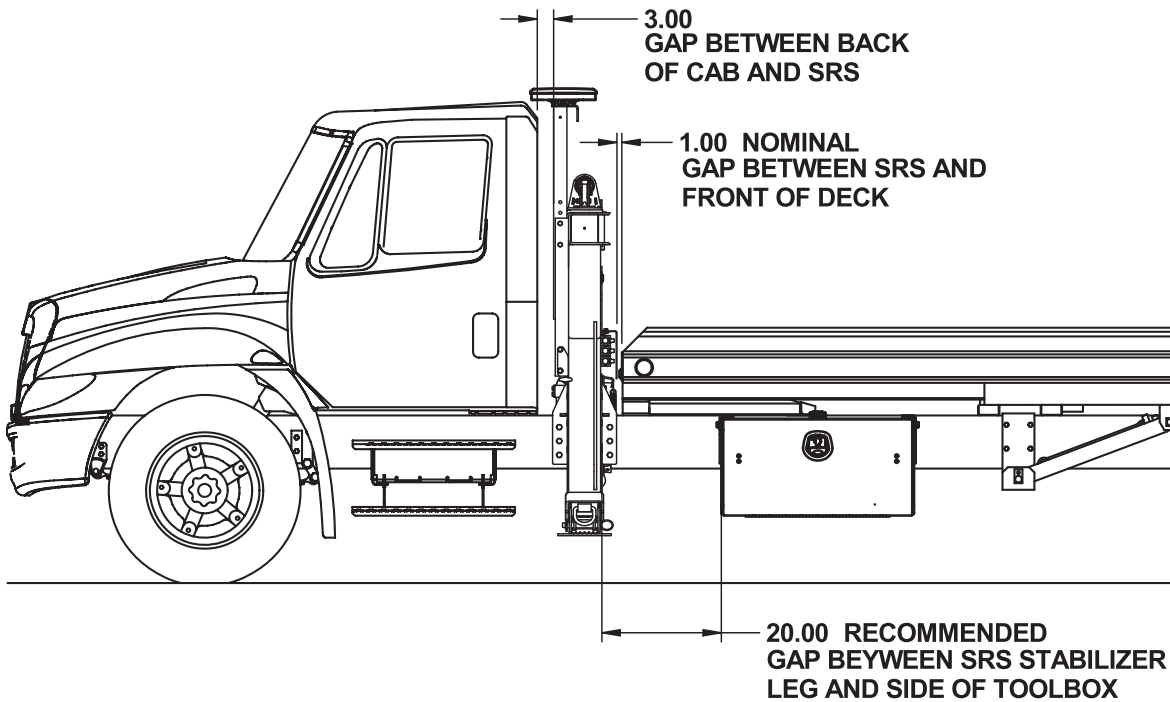
DRIVER SIDE OF SRS

Mounting The SRS On An Existing Mounted Unit

It is possible to mount your SRS on an existing chassis with a Carrier deck already mounted. Following the installation instruction under the 'Field Retrofit Installation' section. Keep in mind that the deck hold down and toolboxes will be required to be moved rearward 12". In addition, the deck roll cylinder position will need to be moved rearward which will also reduce your wheel lift reach clearance. See *Figure 20*.



MOUNTED UNIT BEFORE SRS INSTALLATION



MOUNTED UNIT AFTER SRS INSTALLATION

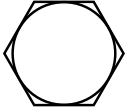

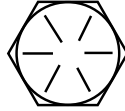
Figure 20 - Before and After Mounting

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APPENDIX DECIMAL EQUIVALENTS

FRACTION	3 PLACES	2 PLACES	MM	FRACTION	3 PLACES	2 PLACES	MM
1/64	.016	.02	0.397	33/64	.516	.52	13.097
1/32	.031	.03	0.794	17/32	.531	.53	13.494
3/64	.047	.05	1.191	35/64	.547	.55	13.891
1/16	.062	.06	1.588	9/16	.562	.56	14.288
5/64	.078	.08	1.984	37/64	.578	.58	14.684
3/32	.094	.09	2.381	19/32	.594	.59	15.081
7/64	.109	.11	2.778	39/64	.609	.61	15.478
1/8	.125	.13	3.175	5/8	.625	.63	15.875
9/64	.141	.14	3.572	41/64	.641	.64	16.272
5/32	.156	.16	3.969	21/32	.656	.66	16.669
11/64	.172	.17	4.366	43/64	.672	.67	17.066
3/16	.188	.19	4.762	11/16	.688	.69	17.462
13/64	.203	.20	5.159	45/64	.703	.70	17.859
7/32	.219	.22	5.556	23/32	.719	.72	18.256
15/64	.234	.23	5.953	47/64	.734	.73	18.653
1/4	.250	.25	6.350	3/4	.750	.75	19.050
17/64	.266	.27	6.747	49/64	.766	.77	19.447
9/32	.281	.28	7.144	25/32	.781	.78	19.844
19/64	.297	.30	7.541	51/64	.797	.80	20.241
5/16	.312	.31	7.938	13/16	.812	.81	20.638
21/64	.328	.33	8.334	53/64	.828	.83	21.034
11/32	.344	.34	8.731	27/32	.844	.84	21.431
23/64	.359	.36	9.128	55/64	.859	.86	21.828
3/8	.375	.38	9.525	7/8	.875	.88	22.225
25/64	.391	.39	9.922	57/64	.891	.89	22.622
13/32	.406	.41	10.319	29/32	.906	.91	23.019
27/64	.422	.42	10.716	59/64	.922	.92	23.416
7/16	.438	.44	11.112	15/16	.938	.94	23.812
29/64	.453	.45	11.509	61/64	.953	.95	24.209
15/32	.469	.47	11.906	31/32	.969	.97	24.606
31/64	.484	.48	12.303	63/64	.984	.98	25.003
1/2	.500	.50	12.700	1	1.000	1.00	25.400

FASTENER TORQUE SPECIFICATIONS

TIGHTENING TORQUES (FOOT-POUNDS) FOR SCREWS AND NUTS			
SIZE INCHES (MM)	 GRADE 2	 GRADE 5	 GRADE 8
1/4 (6.350)	6	8	10
5/16 (7.938)	10	14	19
3/8 (9.525)	17	27	33
7/16 (11.112)	28	45	60
1/2 (12.700)	45	68	90
9/16 (14.288)	63	100	120
5/8 (15.875)	90	135	180
3/4 (19.050)	145	230	310
7/8 (22.225)	145	380	500
1 (25.400)	220	570	760

- All torque values shown are for bolts (cap screws) and nuts that are either zinc-plated or lubricated.
- Torques shown above apply only to screws and nuts used for assembly and installation of all carrier components, not to the chassis.
- Different torque values may be given in instructions for certain components due to short thread engagement or low-strength internal threads.
- When nuts are used, tighten nuts to torques shown (screws or bolts should be held but not turned). **Always use a calibrated torque wrench.**
- Retighten nuts of all mounting screws that secure the carrier and carrier-body within 30 days after putting the vehicle into service. Thereafter, inspect and retorque such screws and nuts every 90 days and after each job that imposes extremely heavy loads on the equipment.
- Convert ft/lbs to Nm (Newton metres) by using the following formula:

$$\begin{array}{l} \text{Multiply:} \qquad \qquad \text{by:} \qquad \qquad \text{to get:} \\ \text{ft/lbs} \quad \times \quad 1.3558 \quad = \quad \text{Nm (Newton metres)} \end{array}$$

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