SWITCH-N-GO®

HOIST SYSTEMS &
INTERCHANGEABLE TRUCK BODIES

INSTALLATION MANUAL

ENG-0001-INS-SNG
PN:3300000
Revision 11/25/2020

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Refer to this manual during the upfit & installation of the Switch-N-Go® hoist system, and accessory component(s)

Table of Contents

General Warnings

Warning Labels & Indicators

DANGER

⚠ DANGER

Indicates a hazardous situation that, if not avoided, could result in serious injury or even death

CAUTION

⚠ CAUTION

Indicates to hazardous situations that, if not avoided, could result in minor to moderate injury

WARNING

⚠ WARNING

Indicates to hazardous situations that, if not avoided, could result in minor to severe injury

NOTICE

⚠ NOTICE

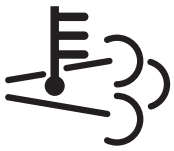
Indicates information considered important, but not hazard-related

⚠ DANGER

Be sure to wear appropriate eye or face protection when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation.

⚠ DANGER

Welding, oxygen-fuel cutting, or grinding sparks can cause fuel to ignite which in turn can lead to injury or death. Always take adequate steps to avoid ignition of fuel from fuel tanks when welding, oxygen-fuel cutting or grinding during equipment.



⚠ DANGER

Heat from the trucks' exhaust system can cause hydraulic component failure and may lead to a fire which could cause injury or death. Always install equipment in locations where heat from the exhaust will not damage any hydraulic component.

⚠ DANGER

Damage to the brake lines during equipment installation, or installing bolts or equipment in such a way that a line will rub and become damaged can lead to failure of the brakes, which can lead to severe injury or death. Always take adequate steps to prevent brake line damage during installation and isolate brake lines from installed equipment.

⚠ WARNING

Failure to install or operate the Switch-N-Go® Hoist System, as described in Installation or Operation Manual may result in a faulty component or malfunction, and may void vehicle or Switch-N-Go® warranty, and or may cause serious injury or death.

NOTICE

READ AND UNDERSTAND THE INSTALLATION MANUAL THOROUGHLY BEFORE INSTALLATION OF THE SWITCH-N-GO® HOIST SYSTEM.

ONLY AUTHORIZED TRAINED INSTALLERS OF TRUCK BODIES AND HOIST SYSTEMS, WHO ARE AWARE OF FEDERAL AND STATE D.O.T. REGULATIONS AND LOCAL REGULATIONS, SHOULD INSTALL THE SWITCH-N-GO® SYSTEM. THE SYSTEM MUST ABIDE BY THE NATIONAL TRUCK EQUIPMENT ASSOCIATION (NTEA) STANDARDS. AS TRAINED INSTALLERS, PLEASE USE SAFE PRACTICES TO ELIMINATE HAZARDS FROM ELECTRICAL, HYDRAULIC AND/OR MECHANICAL PARTS DURING INSTALLATION. THIS MANUAL IS WRITTEN ONLY FOR THOSE TRAINED IN THE KNOWLEDGE OF VEHICLE/TRUCK CHASSIS; DRILLING AND WELDING RESTRICTIONS, NEUTRALIZING VEHICLES FUEL SYSTEMS, AND UNDERSTANDING/ KNOWLEDGE OF ELECTRICAL DIAGRAMS.

⚠ NOTICE

The Switch-N-Go® Hydraulic System components are designed to be compatible with each other. If hydraulic components are substituted with incompatible components, all liability and warranty for the hoist will be voided.

It is the Installer's responsibility to recognize that incompatible hydraulic components may result in failure of the hoist, which may result in damaging the vehicle, system, or other property, or result in severe injury or death.

⚠ NOTICE

Installation of a Switch-N-Go® system to the chassis of a truck will change the center of gravity, Please refer to proper vehicle handling techniques when navigating turns and traveling on uneven ground.

⚠ NOTICE

Installation of the Switch-N-Go® hoist system is not complete until the installer was verified the safety decals are properly located and the system is fully tested. Once the system is working as intended, complete the installation completion checklist, located in the back of this manual. Review Switch-N-Go® operator manual and vehicle manufacturer owner manual before using the system, as this may result in injury or loss of vehicle and/or system if not done correctly.

⚠ WARNING

During Installation of a Switch-N-Go® System, DO NOT WELD TO THE CHASSIS. As this may result in voiding vehicle warranty. Properly follow instructions during installation of Switch-N-Go® Hoist System.

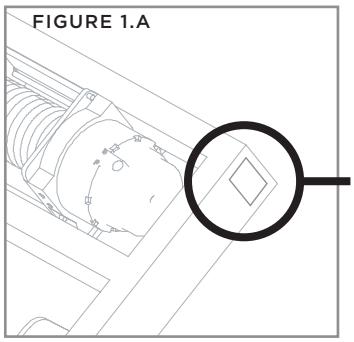
⚠ DANGER

Adjusting the connection of the hydraulic hoist to a hydraulic pump system with more pressure (psi) or flow (GPM) than recommended by the hoist manufacturer can lead to damage, serious injury or death.

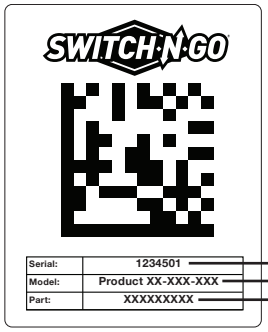
System Overview

Understanding Your Switch-N-Go®

FIGURE 1.A



Before Installing the Switch-N-Go® System, please review and understand the hoist system. Identify the serial/model identification tag, located on the passenger side of the Switch-N-Go® top hoist frame, near the front.



SERIAL NUMBER

This unique identification number or serial number is specific to each model number, manufacturing date and is assigned to sales purchasing order. The Serial Number is used for any warranty claims or technical support.

SERIAL NUMBER

S 8 8 8 8

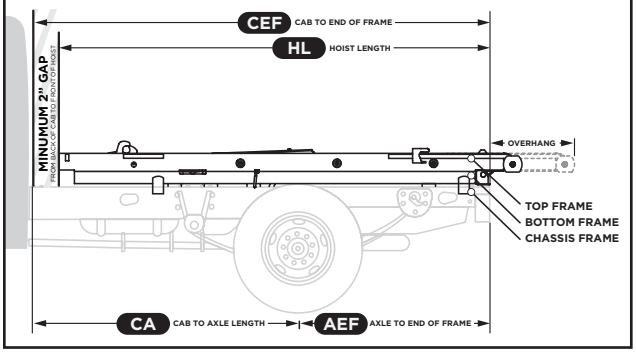
MODEL NAME

This model is a generic name and not unique to one model. This model name is 4-part identification code as show below.

PART NUMBER

This part is a number sequence is for product ordering.

FIGURE 1.B



MODEL EXAMPLE

ELECTRIC MODEL Indicators —

11S-520-12E-PW

1 2B 3 4

HYDRAULIC MODEL Indicators —

14-520-18H

1 2A 3 4

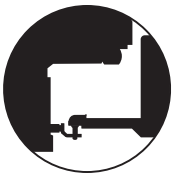
Indicators on the next page provide brief descriptions of how to understand your hoist model name.

1

HOIST LENGTH

The Switch-N-Go® model length is unitized by foot increments. The length is less than the cab to end of frame (CEF) of the vehicle chassis ranging from 9′ (108″) up to 14′ (168″). Systems that are shorter or longer are acceptable but require additional modifications or accessories. For additional information see your vehicle manufacturer's up-fit documents.

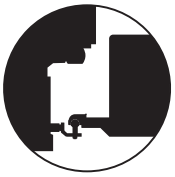
2A



ORIGINAL FRAME

The Switch-N-Go® hoist system has an 18″ body overhang. This is shown in the model name, without an "S" character following the hoist length.

2B



S-MODEL FRAME

The Switch-N-Go® hoist system has an available 6″ body overhang for easier access to the hitch under the truck body. This is shown in the model name by "S" following the hoist length.

3

SCISSOR HOIST SERIES

The Scissor hoist model series is built by Rugby™ for the Switch-N-Go® Hoist Systems. For more information see your Hoist Manual provided with your installation kit.

4

ELECTRIC SYSTEM

The Switch-N-Go® Electric system is an electric over hydraulic system that has an electric winch and an hydraulic hoist. This system is designed for up to 6 loaded winch draws per operational day. The System utilizes a hydraulic scissor hoist, allowing for unlimited dumping. The Switch-N-Go® electric over hydraulic system is equipped with a pre-wired (PW) electric winch and a separate on-board electric powered pressure hydraulic hoist. This type offers two winch capacities, 12,000lbs or 15,000lbs — indicated by a 12 or 15 in the model name followed by an "E" for electric. This is ideal for vehicle GVWR between 13,000lbs - 26,000lbs. The Electric over Hydraulic is supplied with a 600 amp fuse, power and ground wires in the Electric installation components kit.

HYDRAULIC SYSTEM

The Switch-N-Go® Hydraulic system is an full hydraulic system that has an hydraulic winch and an hydraulic hoist. This system is designed to handle an unlimited number of winches & lifts per day. The Switch-N-Go® full hydraulic system utilizes a hydraulic pump, supplied by either a "live" drive style power take-off (PTO) or underhood clutch pump, for both the winch and the hoist. The Hydraulic model offers two combined hydraulic powered winch/hoist capacities, 15,000lbs or 18,000lbs — indicated as by a 15 or 18 in the model name followed by an "H" for hydraulic. This is ideal for vehicle GVWR between 19,000lbs - 33,000lbs. The full hydraulic system requires more components installed onto the truck including a hydraulic pump, reservoir & additional hoses, which are not provided with the hydraulic system installation components kit.

Pre-Installation

Vehicle Certification Labels

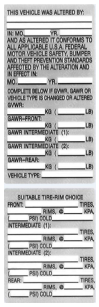
SWITCH-N-GO® VEHICLE CERTIFICATIONS

THE SWITCH-N-GO® HOIST SYSTEM MUST BE CERTIFIED INSTALLED TO THE NATIONAL TRUCK EQUIPMENT ASSOCIATION STANDARDS. The Vehicle Certification Label must be completed by the installer after the installation(s) is completed.

Visit Switch-N-Go® portal network to view links to the NTEA WorkTruckCert:

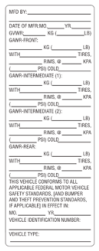
www.switchngo.com/rc/labels-certifications

ALTERED VEHICLE CERTIFICATION (GRAY LABELS)



Gray labels are used by manufacturers that alter a vehicle — prior to the first retail sale — that has been certified in the final stage. Examples of altering include all manufacturing operations performed that affect an applicable Federal Motor Vehicle Safety Standard (i.e., snowplow installation on a pickup, pickup box removal, etc.). A self-voiding feature eliminates the threat of unauthorized tampering. Labels provide for metric and English units of measure as required by CFR part 567.5.

FINAL-STAGE CERTIFICATION (WHITE LABELS)



White labels are used by the final-stage manufacturer if the vehicle cannot be completed and certified within the guidance and limitations provided in the Incomplete Vehicle Document. The final-stage manufacturer is responsible for ensuring the completed vehicle conforms to any applicable Federal Motor Vehicle Safety Standards. Labels provide for metric and English units of measure as required by CFR part 567.5.

LOAD CARRYING CAPACITY MODIFICATION (YELLOW LABELS)

If you are adding permanently attached equipment in excess of 1.5 percent times the gross vehicle weight rating or 100 pounds (whichever is less) to a vehicle — and not changing tires or wheels — the existing load carrying capacity of the vehicle placard must be updated. The Load Carrying Modification Label can be applied within 25 millimeters (approximately one inch) of the existing vehicle placard.

Installation Kit Components

In addition to the specific model installation kit (Electric or Hydraulic). The Switch-N-Go® system requires that you install all of the components provided in the common installation kit.

COMMON INSTALLATION KIT

	Part Number	Qty.	Description
CONTROLLER/PENDANT	3190114	1	Control pendant with 4′ Cord with 6-pole round plug
IN-CAB HARNESS	3190116	1	240″ Cord with 6-pole round receptacle
SMALL PARTS KIT	3160117	4	1/4″ x 1″ Self Tapping Screws
	2000102	4	7 1/2″ Plastic Zip Ties
	3160105	4	Rubber Loop Straps
	3160196	6	16-14 AWG Ring Terminal Wire Connector Ends (blue)
	3190113	1	Brown Cord Connector
	3160189	1	Sealing Ring
	3160190	1	1/2″ Rigid Conduit Locknut
	3160130	8	1/2″-13 x 1 1/2″ HHCS Grade 8 Bolt
	3160193	8	1/2″ Lock Washer
	3160194	8	1/2″-13 Grade 8 Hex Fin Nut
MOUNTING PLATE KIT	3300004	9	3/8″x 4″ x 5″ Spacer Chassis Plates
	3300005	6	Bottom Frame Tie Down Brackets
	3300006	2	Bottom Frame Angle Mounting Brackets
ADDITIONAL TOOLS	3210101	1	Wire rope lubricant aerosol can
MANUAL KIT	3300000	1	Installation Manual
	3300001	1	Operator Manual
	3300002	1	Winch Manual
	3300003	1	Scissor Hoist Manual
	3240104	2	Hoist Warning Decal
	3240101	2	Hoist Danger Decal
BODY PROP ROD*	3300007	1	620 Scissor Hoist Body Prop Rod Kit
SYSTEM MODEL CABLE*	3210131	1	CABLE 7/16″ 12,000lbs in 25′ length - (red)
	3210134	1	CABLE 1/2″ Standard 15,000lbs in 25′ length- (purple)
	3210135	1	CABLE 1/2″ Heavy Duty 18,000lbs in 25′ length - (red)

*Reference hoist model for specific part provided in installation kit

OPTIONAL COMPONENTS

The Optional Switch-N-Go® components are not required but must abide by DOT regulations and must follow NTEA standards and regulations when installing on to vehicle chassis. These Components may be shipped in addition to the Installation kit.

	Part Number	Qty.	Description
19.5″ FENDER KIT	3170841	2	19.5″ Plastic Fender
	3170178	2	19.5″ Fender Mounting Kit
	3170347	2	19.5″ Fender Support Hardware Kit
22.5″ FENDER KIT	3171003	2	22.5″ Plastic Fender
	3170179	2	22.5″ Fender Mounting Kit
	3170148	2	22.5″ Fender Support Hardware Kit
NARROW FRAME BRACKET	4210128	1	Bracket for exclusively 31″ width vehicle chassis frames
FUEL FILLER BRACKET	4000201	1	Fuel Filler Bracket for hoses to maintain below body clearance
BUMPERS†	6119000	1	90″ Versa™ Bumper
	6119200	1	90″ Versa™ Bumper with welded D-rings
	???????	1	Versa™ Bumper Installation Manual
	3301401	1	Bumper side tubes Hardware kit
	3301402	1	Bumper rear chassis Hardware kit
	3301403	1	Bumper front chassis Hardware kit

†Reference vehicle specs for specific kit provided in components list

ELECTRIC INSTALLATION KIT

ELECTRICAL WIRES

Part Number	Qty.	Description
3190128	1	Power Wire - #1/0 AWG (216" length)
3190129	1	Ground Wire - #2 AWG (48" length)

ELECTRICAL HARDWARE

3190130	1	600 AMP ANL Fuse
3190131	1	Fuse Block Holder
3190100	2	2/0 Ring Terminal Connectors

⚠ NOTICE

The electric over hydraulic system does require additional components to be installed on the vehicle which are not provided with the common or electric installation components kit. The System requires that the upfitted vehicle be installed with a heavy duty alternator (150 AMP minimum) and installation of two deep cycle 750 CCA batteries.

HYDRAULIC INSTALLATION KIT

ELECTRICAL WIRES

Part Number	Qty.	Description
3190128	1	Power Wire - #1/0 AWG (216" length)
3190129	1	Ground Wire - #2 AWG (48" length)

ELECTRICAL HARDWARE

3190132	1	25 AMP ATO/ATC Blade Fuse
3190133	1	Inline Blade Fuse Holder
1220104	2	22-18 AWG Wire Butt Splice Connectors (red)

⚠ NOTICE

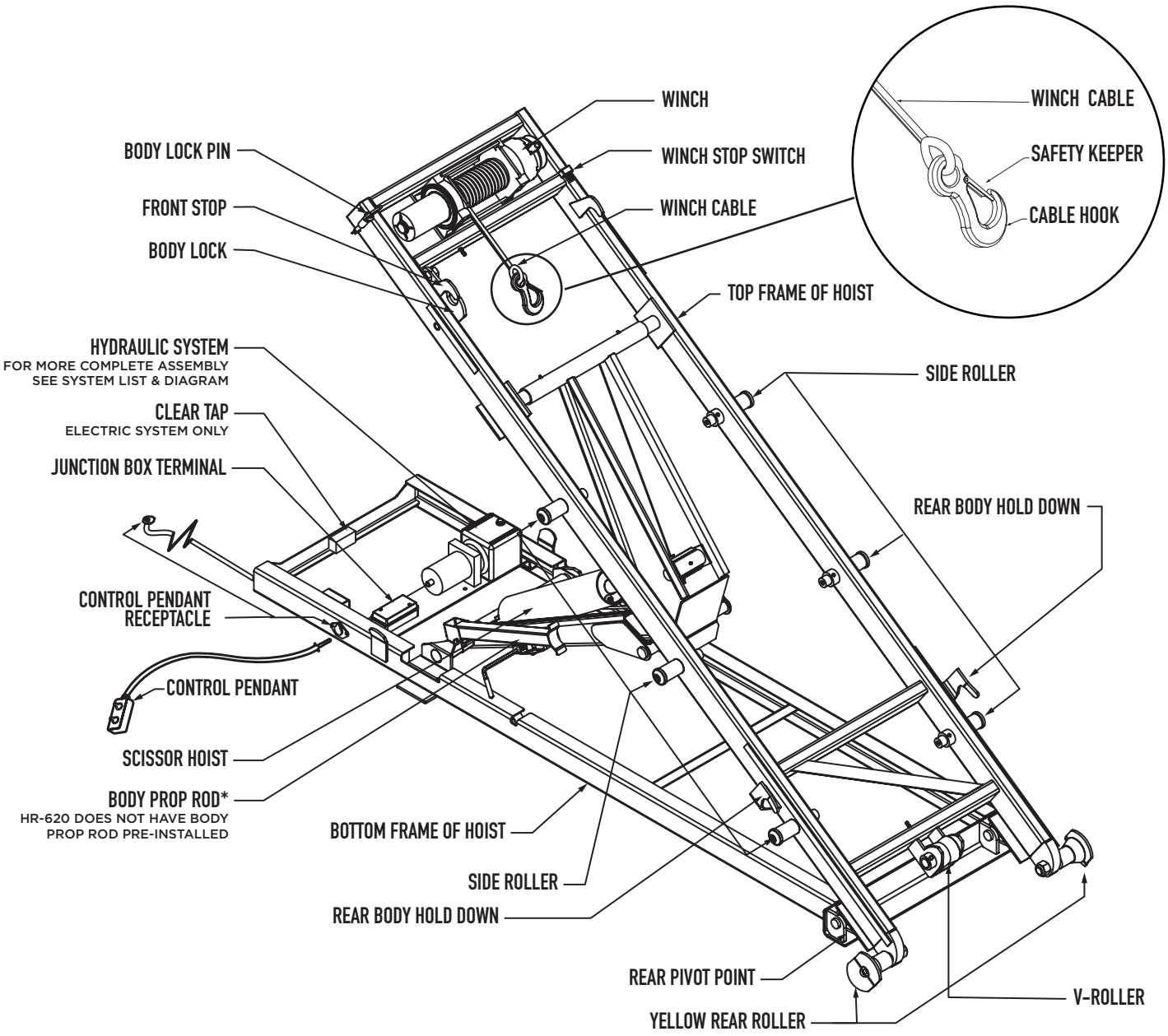
The full hydraulic system does require additional components to be installed on the vehicle which are not provided with the common or hydraulic installation components kit. This includes a 3000 psi @ 12-15 gallons per minute (GPM) hydraulic pump that is either an underhood clutch pump or "live drive" PTO, 15-20 gallon hydraulic reservoir, 1/2" minimum diameter line hose and 3/4" minimum diameter line hose. For more information see hydraulic instructions/preparations section.

⚠ WARNING

If component becomes broken or faulty, refer to warranty disclaimer provided with hoist model. If any hydraulic component provided is substituted with any parts other than OEM parts this will void your warranty. Contact the distributor where the system was purchased and/or installed to purchase OEM replacement parts.

Installation

System & Parts Overview



FOR MORE COMPLETE ASSEMBLY
SEE SYSTEM LIST & DIAGRAM
See Page 50-53

Vehicle Chassis Preparation

The Switch-N-Go® hoist system requires that the vehicle chassis is a straight frame, free of obstruction to mount upon. Ensuring the top of the vehicle's chassis is free of debris, wiring, fuel/hydraulic hoses or any obstructions that would interfere with proper installation, as this may void your Switch-N-Go® Warranty.

⚠ NOTICE

Before Installation, ensure the Switch-N-Go® hoist system maintains a minimum of 2″ (5.08cm) distance from the back of the vehicles cab/engine to prevent any contact with the cab, in accordance with NTEA standards.

⚠ NOTICE

Before Installation, ensure the Switch-N-Go® hoist system hoist length (HL) does not measure longer than the vehicles Cab to End of Frame (CEF) as this will require additional modifications to the vehicle chassis and may void vehicle's chassis warranty. Depending on the vehicle manufacturer, model or sub model, the chassis cab vehicle's Cab to End of Frame (CEF) may be to shorter or longer than the Switch-N-Go® Hoist Length (HL). This will require modifications be made to the vehicle's chassis. If any modifications are required, ensure they abide by DOT regulations and follow NTEA safety standards. Reference vehicles manufacturer documentation for proper vehicle upfitting modifications as this may result in voiding vehicle warranty.

⚠ NOTICE

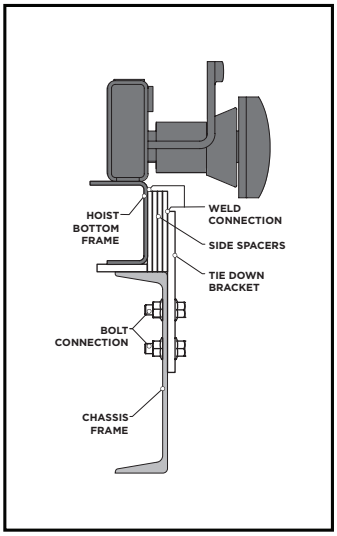
Before Installation, ensure the chassis cab vehicle frame width will accept the Switch-N-Go® hoist frame. Vehicle frames maybe wider or narrower and need additional spacers either along the hoist frame or along the chassis frame, creating a flat surface to mount.

WIDER THAN 34″ WIDTH CHASSIS

The vehicle frame with is wider than the 34″ hoist frame:

REQUIRES

- Tie Down Brackets
- Side Spacers on Hoist
- Mounting Angle Brackets with extensions

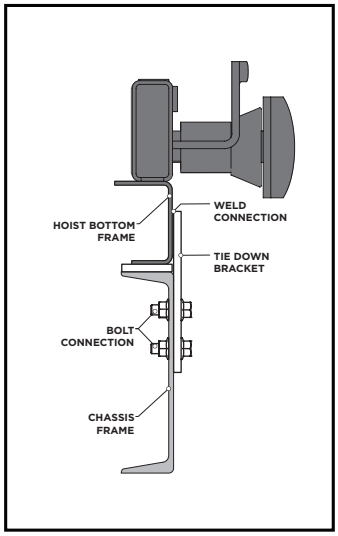


FLUSH SIDE 34″ WIDTH CHASSIS

The vehicle frame is appoximately equal to 34″ hoist frame:

REQUIRES

- Tie Down Brackets
- Mounting Angle Brackets

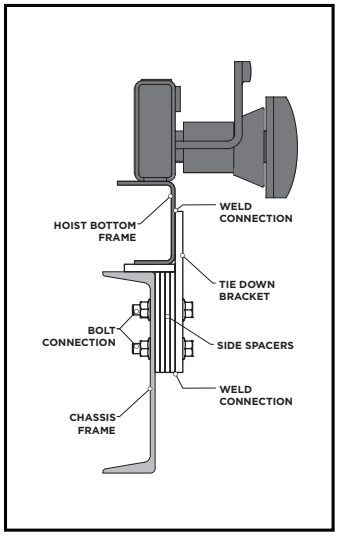


NARROWER THAN 34″ WIDTH CHASSIS

The vehicle frame with is narrower than the 34″ hoist frame:

REQUIRES

- Tie Down Brackets
- Side Spacer on Chassis
- Mounting Angle Brackets

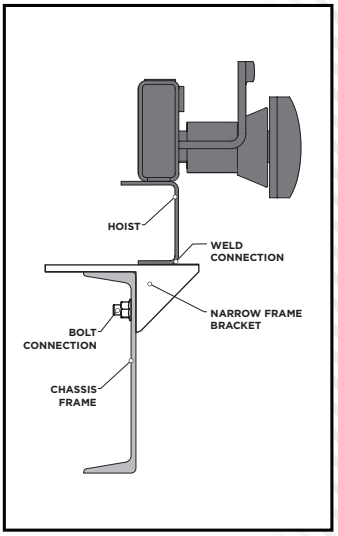


NARROW 31″ WIDTH CHASSIS

The vehicle frame with equal to 31″ hoist frame:

REQUIRES

- Narrow Frame Bracket (Not Included 4210128)

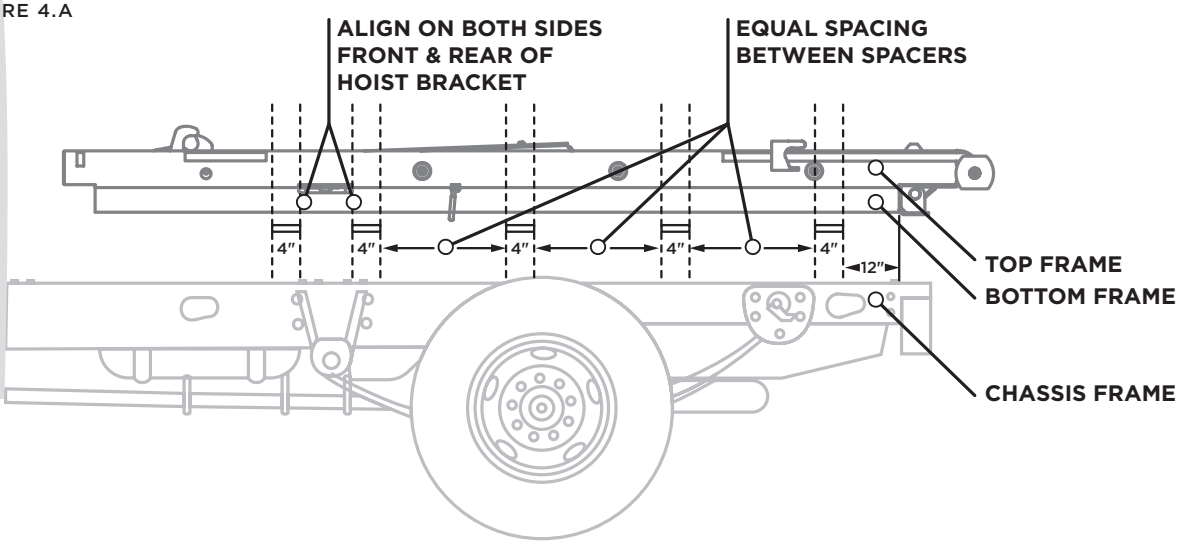


SPACER PLATES

Once the preparations are complete, make sure the top of the vehicle chassis is obstruction-free (wires gooseneck hitch, hoses, crossmembers, fuel tanks, or other accessories) and the vehicle chassis is flat and level.

Step 1— Place the 3/8"x 3" x 4" plate spacers on top of the Driver-side chassis, show in Figure 4.A.

FIGURE 4.A



DRIVER-SIDE SPACERS PLATE ARRANGEMENT

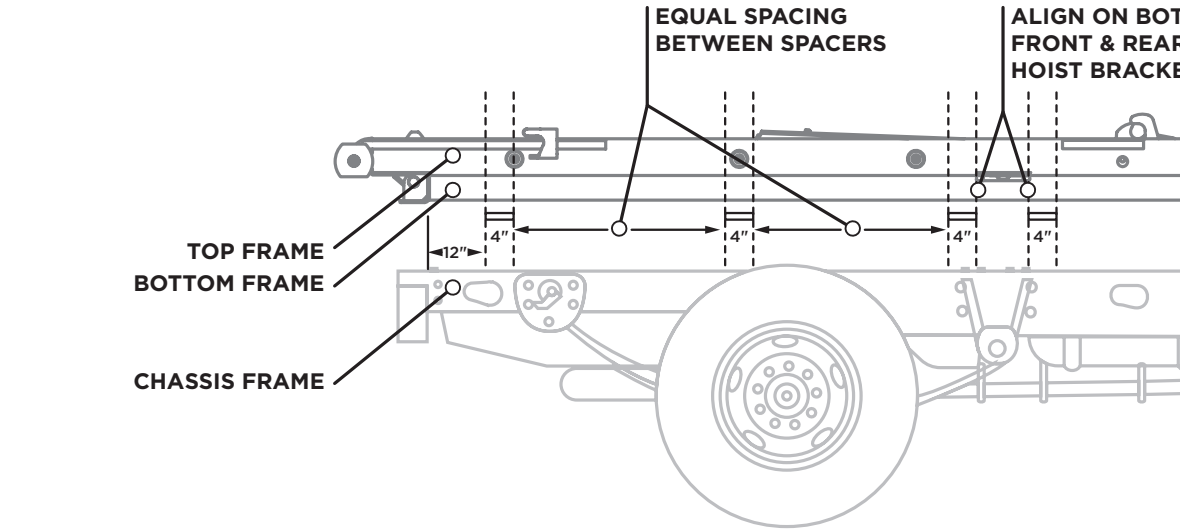
Position (2) spacers on either side of the lower scissor bracket aligning them next to the front and rear edge.

Position (1) spacer 12" from the rear pivot point on the bottom frame.

- Position (1) spacer with even spacing between the scissor bracket and the rear pivot point.

Step 2— Place the 3/8"x 4" x 3" plate spacers on top of Passenger-side chassis, show in Figure 4.B.

FIGURE 4.B



PASSENGER-SIDE SPACERS PLATE ARRANGEMENT

- Position (2) spacers on either side of the lower scissor bracket aligning them next to the front and rear edge.

Position (1) spacer 12" from the rear pivot point on the bottom frame.

Position (2) spacers with even spacing between the scissor bracket and the rear pivot point.

Step 3— Securely lift the hoist above the prepared vehicle chassis. Position the hoist so the end of the vehicle's chassis is even with the rear pivot point of the bottom frame.

Step 4— Lower the hoist onto the chassis making sure there is a 2" (91.44 cm) minimum distance between the vehicle's cab/engine and the hoist frame.

Step 5— Check spacers are even with the outside of the hoist bottom frame and have not moved from the position as shown in Figure 3.A, 3.B & 3.C.

Step 6— Once all (9) spacers are level with hoist, secure hoist spacers to chassis frame with clamp.

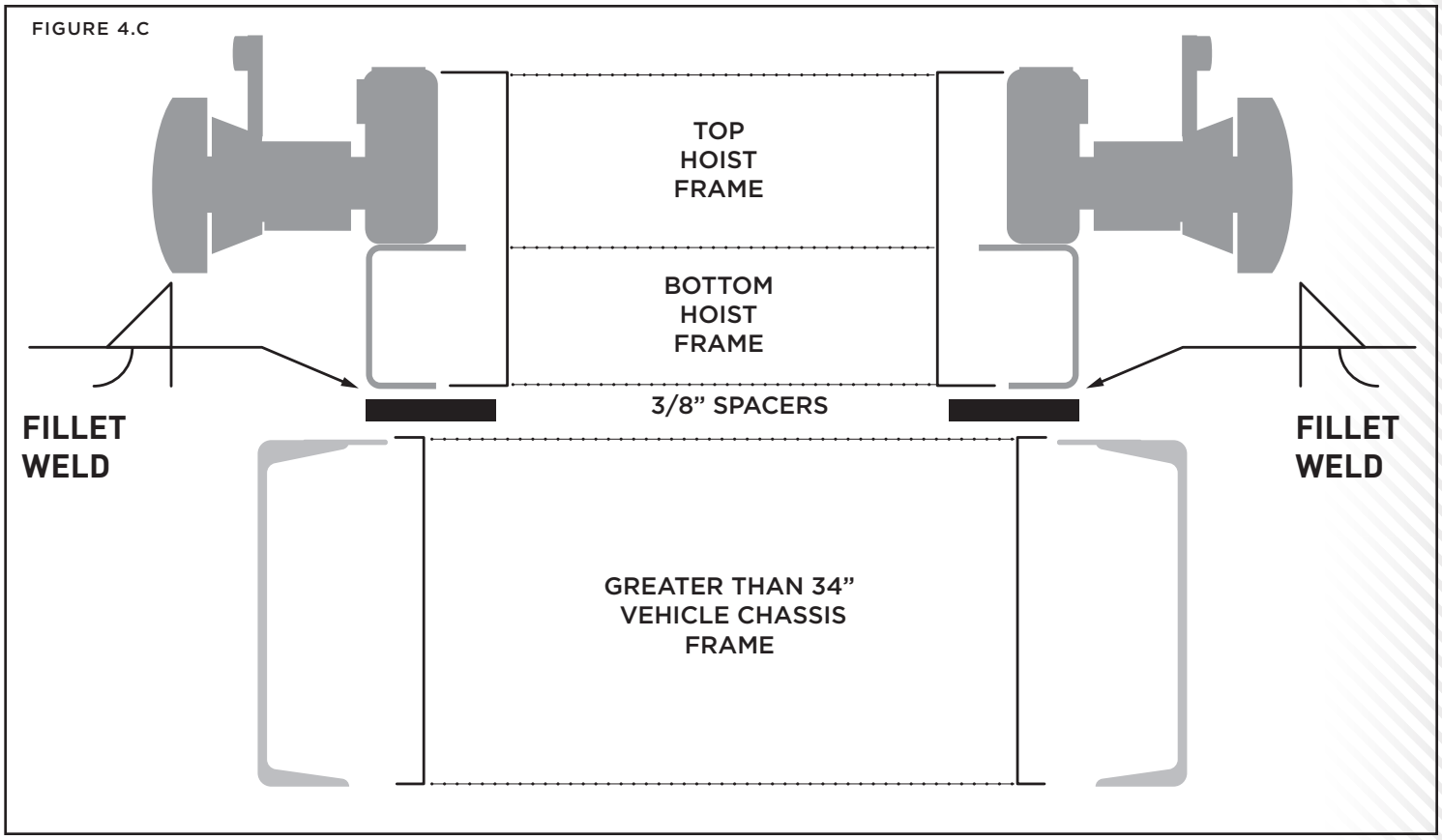
Step 7— Weld the spacers to the Switch-N-Go® hoist bottom frame as indicated in Figure 4.C.

Step 8— Once all (9) locations are completely welded remove clamps holding spacers, grind the welds and clean the surface. ■

⚠ WARNING

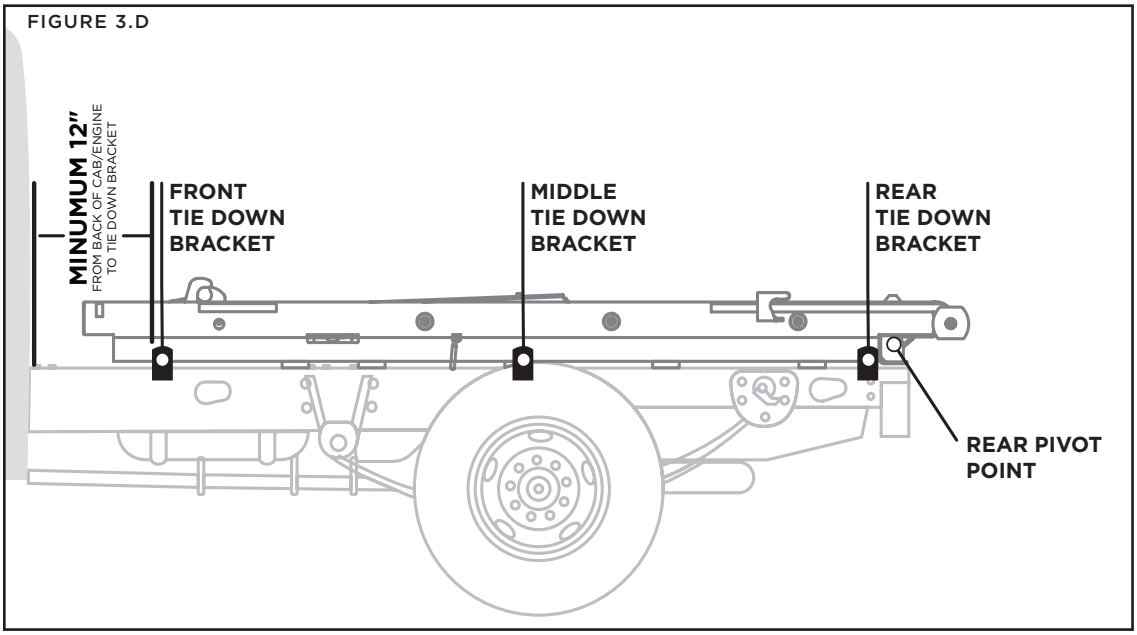
DO NOT WELD TO THE VEHICLE CHASSIS. This may void the vehicle or Switch-N-Go® warranty and/or may cause serious injury or death.

FIGURE 4.C



TIE DOWN BRACKETS

FIGURE 3.D



TIE DOWN BRACKET ARRANGEMENT

- Position the front (2) tie down brackets no closer than 12" from the back of the cab/engine.
- Position the rear (2) tie down brackets next to the rear pivot point on the hoist bottom frame.
- Position middle (2) tie down brackets equal distance from the front and rear tie down brackets.

Step 1— Place (3) tie down brackets provided in the installation kit on both driver and passenger sides for a total of (6) as indicated in Figure 3.D.

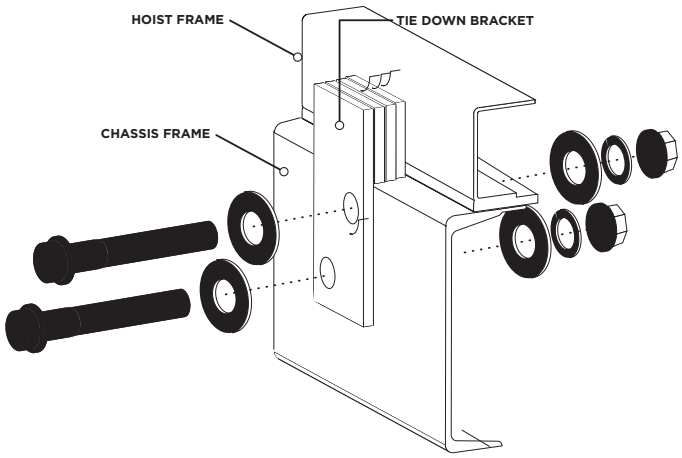
Step 2— Clamp each tie down bracket to the hoist frame ensuring it rests level with the side of the chassis frame and hoist frame.

Step 3— Drill a 1/2" Ø diameter hole through the tie down brackets and spacers into the chassis frame through the corresponding pre-punched holes.

Step 4— Place (1) 1/2"Ø 13 UNC x necessary length grade 8 hex cap bolt in each tie down bracket drilled holes with (1) washer on the exterior of the chassis frame.

Step 5— On the inside of the frame, fasten (1) flat washer, (1) locking washer and (1) 1/2" nut, and secure with torque driver, with 80 lbs-ft of torque on each bolt. See Figure 3.E.

FIGURE 3.E



⚠ NOTICE

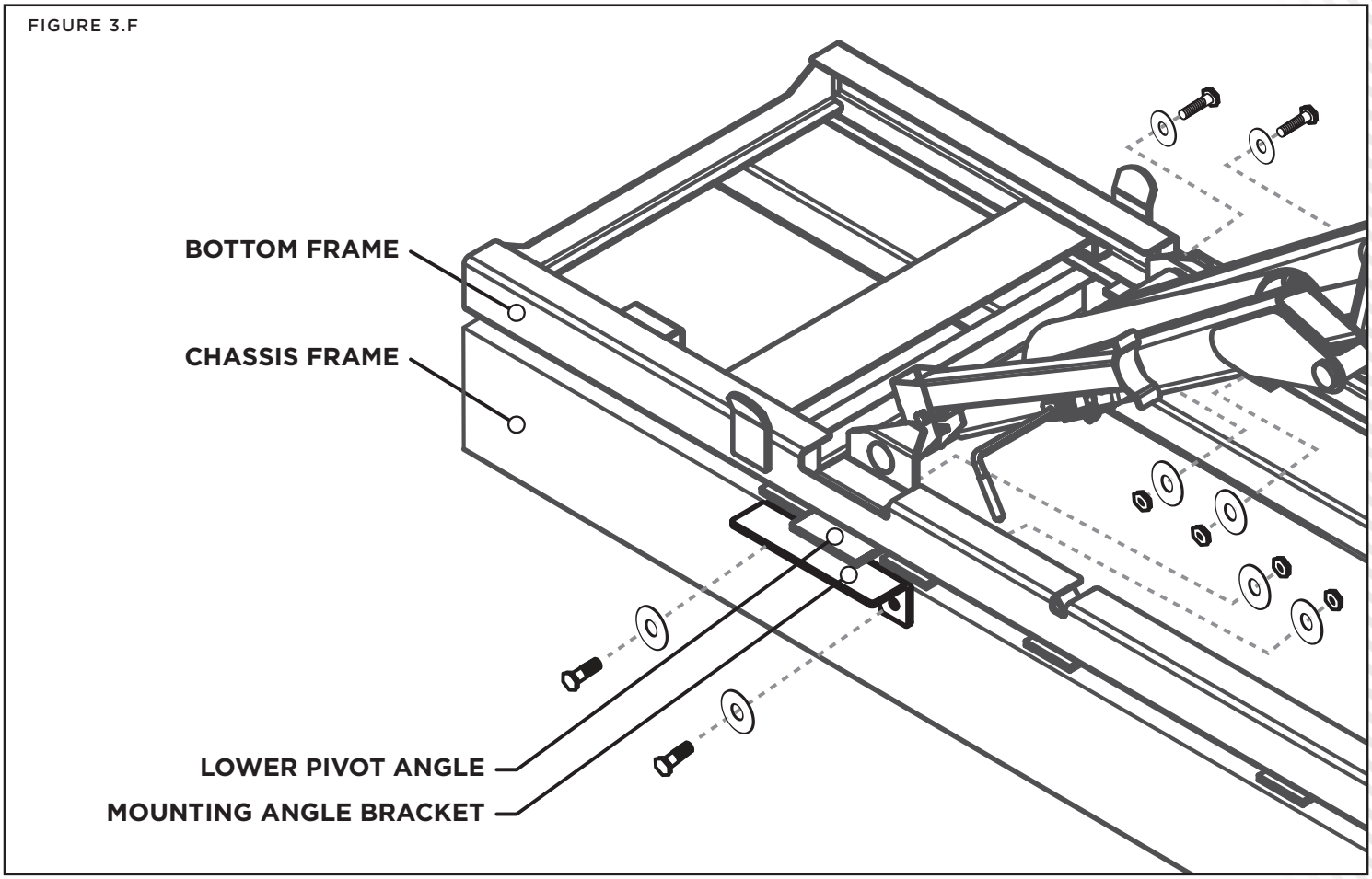
Properly torque all bolts and nuts so they do not loosen and result in malfunction or cause damage to vehicle(s) or hoist system.

Step 6— Weld the (6) tie down brackets to the Switch-N-Go® hoist bottom frame ONLY.

⚠ WARNING

DO NOT WELD TO THE VEHICLE CHASSIS. This may void the vehicle or Switch-N-Go® warranty, and or may cause serious injury or death.

FIGURE 3.F



Step 7— Place (2) mounting angle brackets provided in the installation kit, on both driver and passenger sides under the lower pivot points on the bottom hoist frame and mark the frame where hole will be drilled as indicated in Figure 3.F.

Step 8— Drill the marked holes from the mounting brackets into the vehicle chassis frame.

Step 9— Place (1) 1/2"Ø 13 UNC x 1 1/2" grade 8 hex cap bolt in each mounting angle bracket drilled holes with (1) washer on the exterior of the chassis frame.

Step 10— On the inside of the frame fasten (1) flat washer, (1) locking washer and (1) 1/2" nut, and secure using torque driver, with 80 lbs-ft of torque on each bolt.

⚠ NOTICE

Properly torque all bolts and nuts so they do not loosen and result in malfunction or cause damage to vehicle(s) or hoist system.

Step 11— Weld the (2) lower pivot angles to the top surface of the mounting angle brackets.

⚠ WARNING

DO NOT WELD TO THE VEHICLE CHASSIS. This may void the vehicle or Switch-N-Go® warranty, and/or may cause serious injury or death.

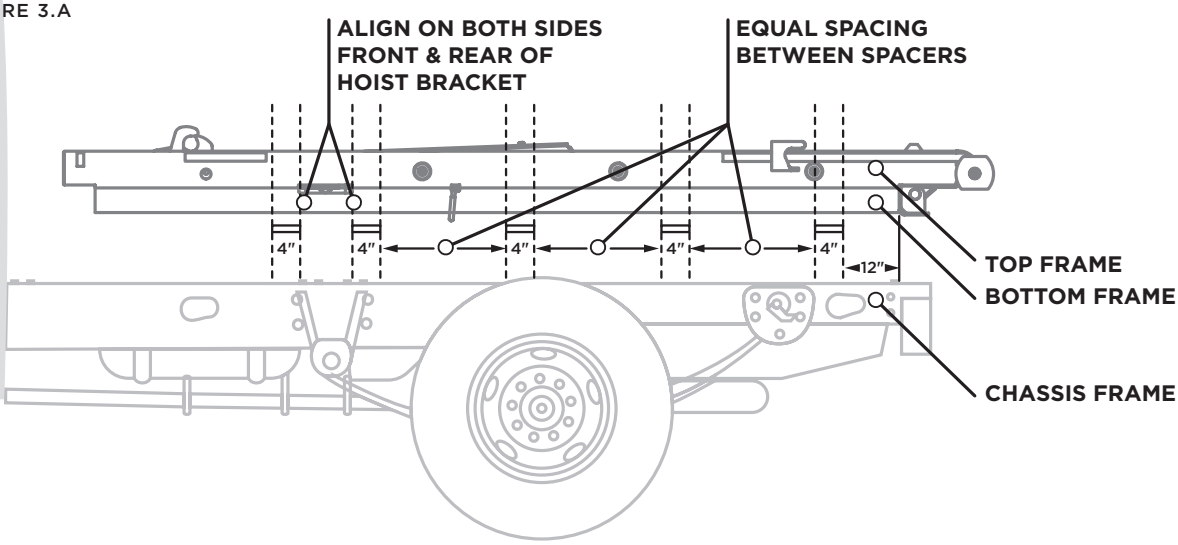
Step 12— Remove clamps holding the mounting brackets, grind the welds and clean surface. ■

SPACER PLATES

Once the preparations are complete, make sure the top of the vehicle chassis is obstruction-free (wires gooseneck hitch, hoses, crossmembers, fuel tanks, or other accessories) and the vehicle chassis is flat and level.

Step 1— Place the 3/8"x 3" x 4" plate spacers on top of the Driver-side chassis, show in Figure 3.A.

FIGURE 3.A



DRIVER-SIDE SPACERS PLATE ARRANGEMENT

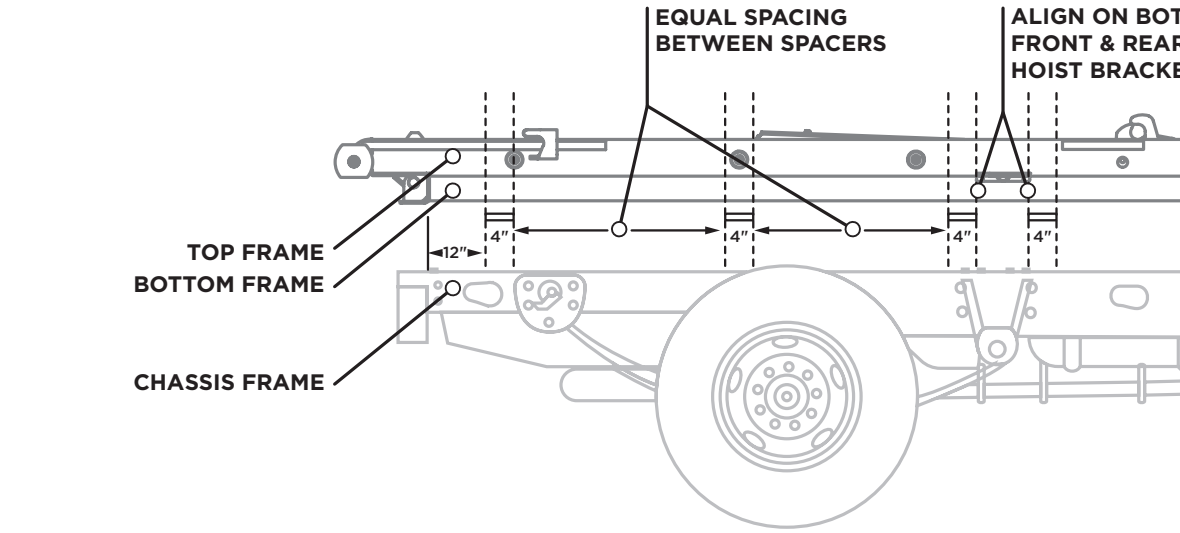
Position (2) spacers on either side of the lower scissor bracket aligning them next to the front and rear edge.

Position (1) spacer 12" from the rear pivot point on the bottom frame.

- Position (1) spacer with even spacing between the scissor bracket and the rear pivot point.

Step 2— Place the 3/8"x 4" x 3" plate spacers on top of Passenger-side chassis, show in Figure 3.B.

FIGURE 3.B



PASSENGER-SIDE SPACERS PLATE ARRANGEMENT

- Position (2) spacers on either side of the lower scissor bracket aligning them next to the front and rear edge.

Position (1) spacer 12" from the rear pivot point on the bottom frame.

Position (2) spacers with even spacing between the scissor bracket and the rear pivot point.

Step 3— Securely lift the hoist above the prepared vehicle chassis. Position the hoist so the end of the vehicle's chassis is even with the rear pivot point of the bottom frame.

Step 4— Lower the hoist onto the chassis making sure there is a 2" (91.44 cm) minimum distance between the vehicle's cab/engine and the hoist frame.

Step 5— Check spacers are even with the outside of the hoist bottom frame and have not moved from the position as shown in Figure 3.A, 3.B & 3.C.

Step 6— Once all (9) spacers are level with hoist, secure hoist spacers to chassis frame with clamp.

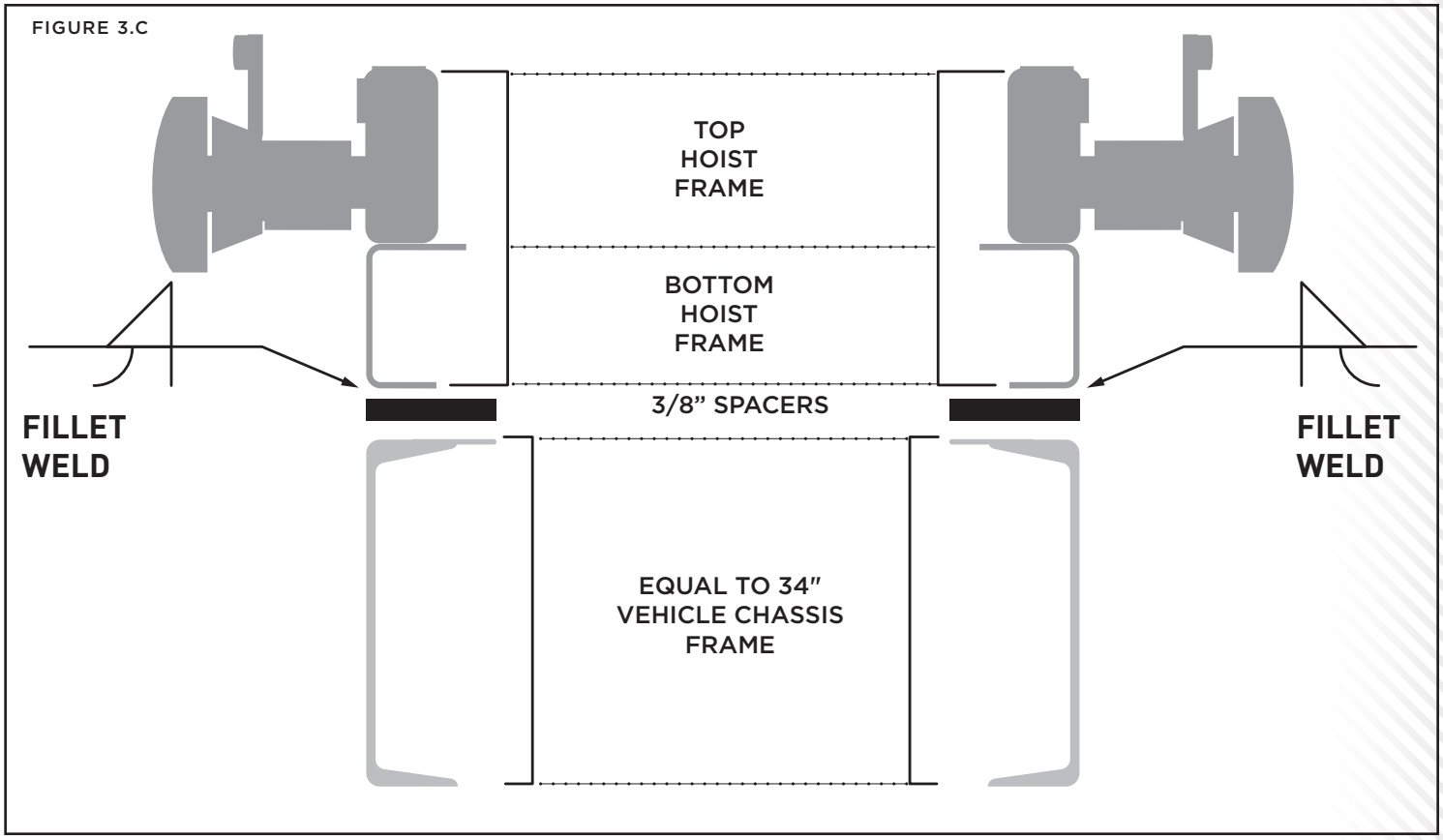
Step 7— Weld the spacers to the Switch-N-Go® hoist bottom frame as indicated in Figure 3.C.

Step 8— Once all (9) locations are completely welded remove clamps holding spacers, grind the welds and clean the surface. ■

⚠ WARNING

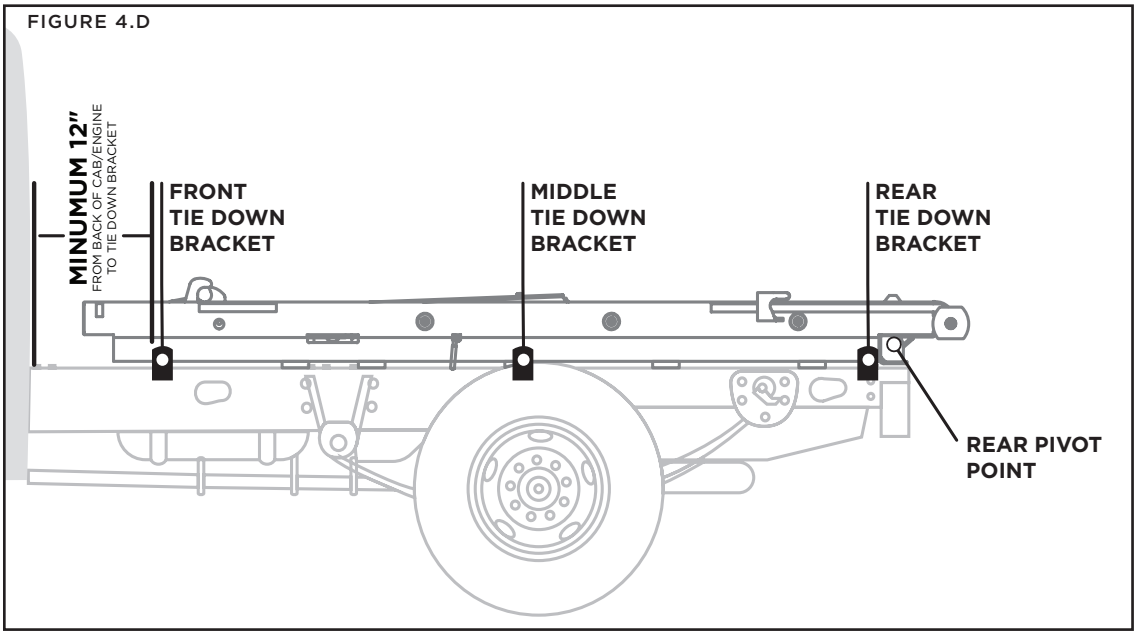
DO NOT WELD TO THE VEHICLE CHASSIS. This may void the vehicle or Switch-N-Go® warranty and/or may cause serious injury or death.

FIGURE 3.C



TIE DOWN BRACKETS

FIGURE 4.D



TIE DOWN BRACKET ARRANGEMENT

- Position the front (2) tie down brackets no closer than 12" from the back of the cab/engine.
- Position the rear (2) tie down brackets next to the rear pivot point on the hoist bottom frame.
- Position middle (2) tie down brackets equal distance from the front and rear tie down brackets.

Step 1— Place (3) tie down brackets provided in the installation kit on both driver and passenger sides for a total of (6) as indicated in Figure 4.D.

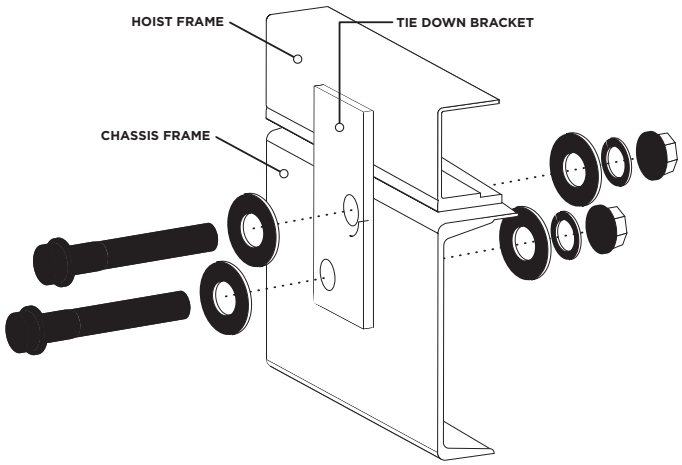
Step 2— Clamp each tie down bracket to the hoist frame ensuring it rests level with the side of the chassis frame and hoist frame.

Step 3— Drill a 1/2" Ø diameter hole through the tie down bracket into the chassis frame through the corresponding pre-punched holes.

Step 4— Place (1) 1/2"Ø 13 UNC x 1 1/2" grade 8 hex cap bolt in each tie down bracket drilled holes with (1) washer on the exterior of the chassis frame.

Step 5— On the inside of the frame, fasten (1) flat washer, (1) locking washer and (1) 1/2" nut, and secure with torque driver, with 80 lbs-ft of torque on each bolt. See Figure 4.E.

FIGURE 4.E



⚠ NOTICE

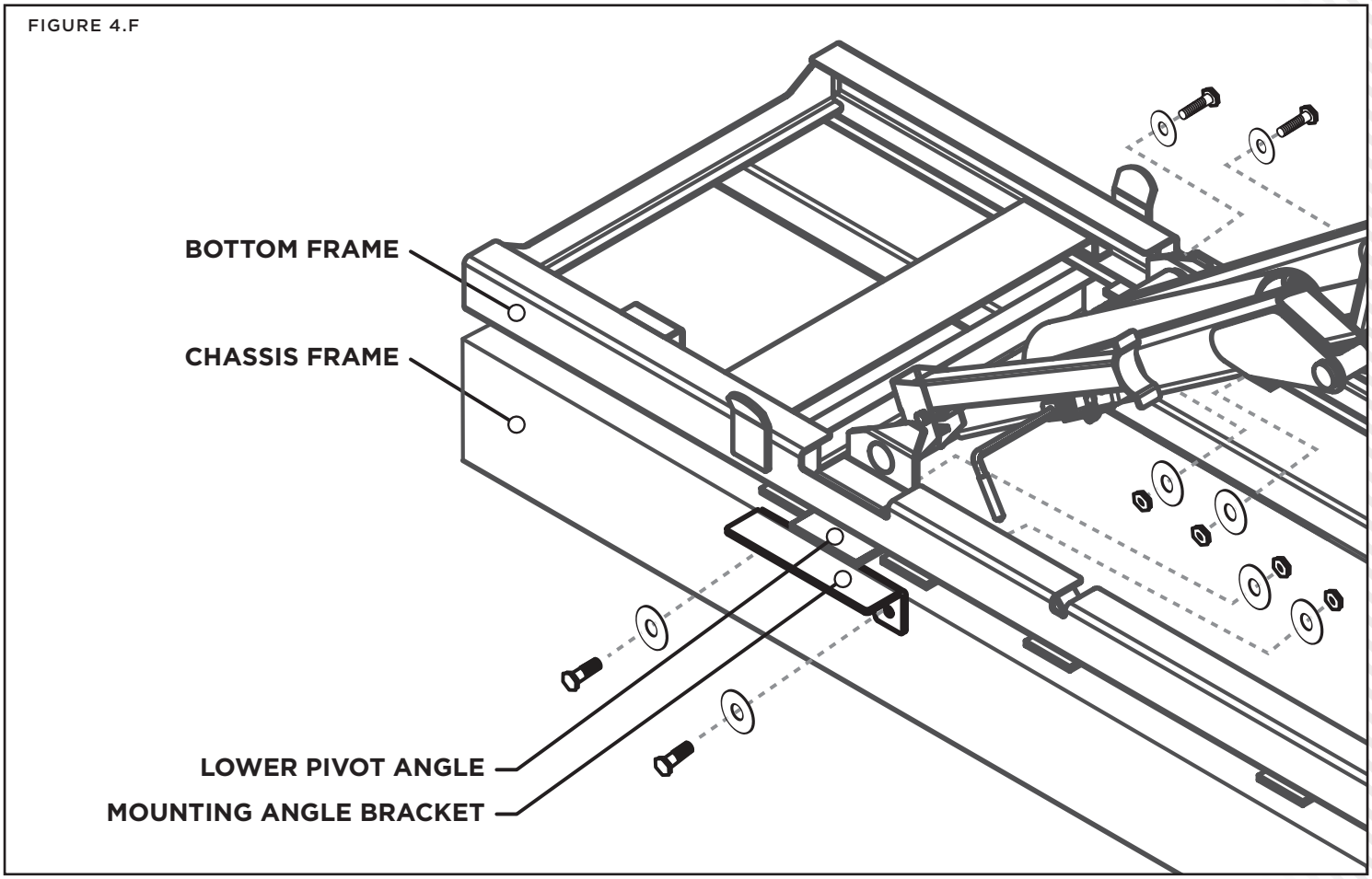
Properly torque all bolts and nuts so they do not loosen and result in malfunction or cause damage to vehicle(s) or hoist system.

Step 6— Weld the (6) tie down brackets and spacers to the Switch-N-Go® hoist bottom frame ONLY.

⚠ WARNING

DO NOT WELD TO THE VEHICLE CHASSIS. This may void the vehicle or Switch-N-Go® warranty, and or may cause serious injury or death.

FIGURE 4.F



Step 7— Place (2) mounting angle brackets provided in the installation kit, on both driver and passenger sides under the lower pivot points on the bottom hoist frame and mark the frame where hole will be drilled as indicated in Figure 4.F.

Step 8— Drill the marked holes from the mounting brackets into the vehicle chassis frame.

Step 9— Place (1) 1/2″Ø 13 UNC x 1 1/2″ grade 8 hex cap bolt in each mounting angle bracket drilled holes with (1) washer on the exterior of the chassis frame.

Step 10— On the inside of the frame fasten (1) flat washer, (1) locking washer and (1) 1/2″ nut, and secure using torque driver, with 80 lbs-ft of torque on each bolt.

⚠ NOTICE

Properly torque all bolts and nuts so they do not loosen and result in malfunction or cause damage to vehicle(s) or hoist system.

Step 11— Weld the (2) lower pivot angles and additional extensions to the top surface of the mounting angle brackets.

⚠ WARNING

DO NOT WELD TO THE VEHICLE CHASSIS. This may void the vehicle or Switch-N-Go® warranty, and/or may cause serious injury or death.

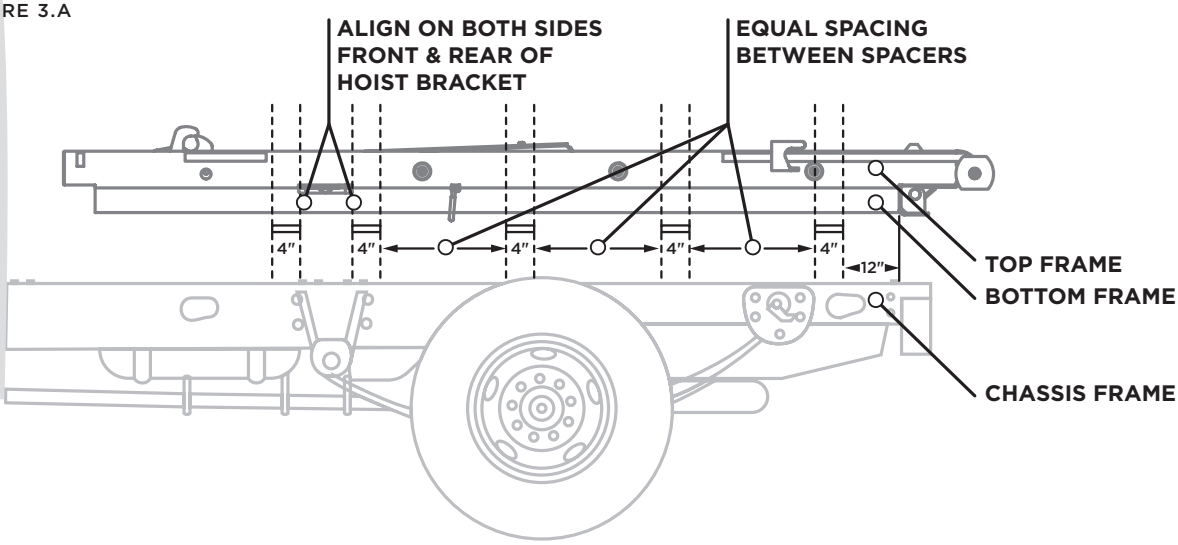
Step 12— Remove clamps holding the mounting brackets and additional extensions, grind the welds and clean surface. ■

SPACER PLATES

Once the preparations are complete, make sure the top of the vehicle chassis is obstruction-free (wires gooseneck hitch, hoses, crossmembers, fuel tanks, or other accessories) and the vehicle chassis is flat and level.

Step 1— Place the 3/8"x 3" x 4" plate spacers on top of the Driver-side chassis, show in Figure 3.A.

FIGURE 3.A



DRIVER-SIDE SPACERS PLATE ARRANGEMENT

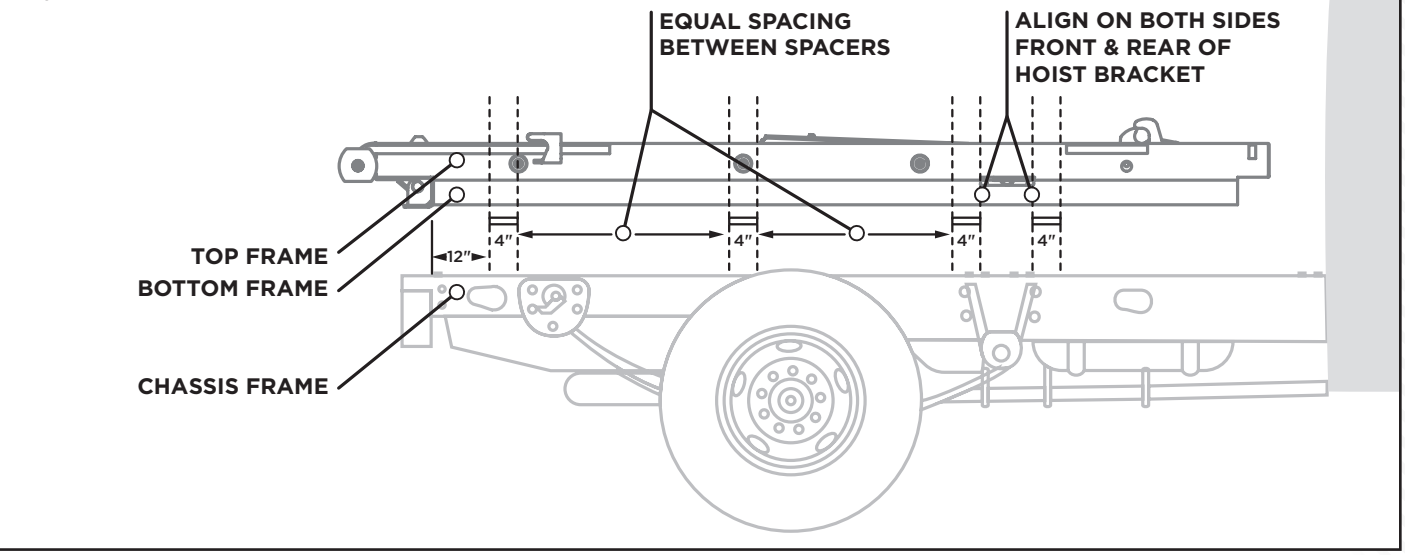
Position (2) spacers on either side of the lower scissor bracket aligning them next to the front and rear edge.

Position (1) spacer 12" from the rear pivot point on the bottom frame.

- Position (1) spacer with even spacing between the scissor bracket and the rear pivot point.

Step 2— Place the 3/8"x 4" x 3" plate spacers on top of Passenger-side chassis, show in Figure 3.B.

FIGURE 3.B



PASSENGER-SIDE SPACERS PLATE ARRANGEMENT

- Position (2) spacers on either side of the lower scissor bracket aligning them next to the front and rear edge.

Position (1) spacer 12" from the rear pivot point on the bottom frame.

Position (2) spacers with even spacing between the scissor bracket and the rear pivot point.

Step 3— Securely lift the hoist above the prepared vehicle chassis. Position the hoist so the end of the vehicle's chassis is even with the rear pivot point of the bottom frame.

Step 4— Lower the hoist onto the chassis making sure there is a 2" (91.44 cm) minimum distance between the vehicle's cab/engine and the hoist frame.

Step 5— Check spacers are even with the outside of the hoist bottom frame and have not moved from the position as shown in Figure 3.A, 3.B & 3.C.

Step 6— Once all (9) spacers are level with hoist, secure hoist spacers to chassis frame with clamp.

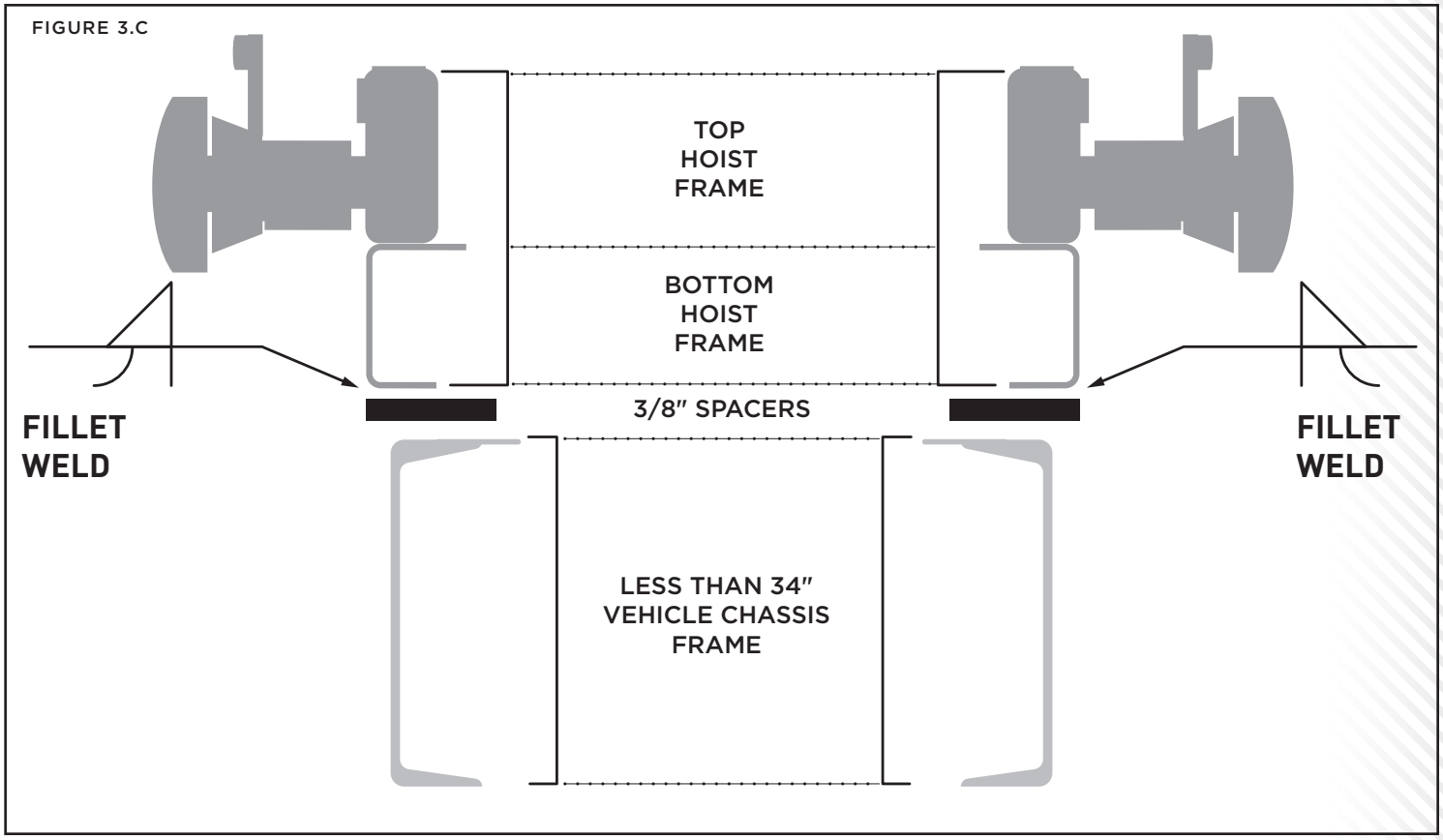
Step 7— Weld the spacers to the Switch-N-Go® hoist bottom frame as indicated in Figure 3.C.

Step 8— Once all (9) locations are completely welded remove clamps holding spacers, grind the welds and clean the surface. ■

⚠ WARNING

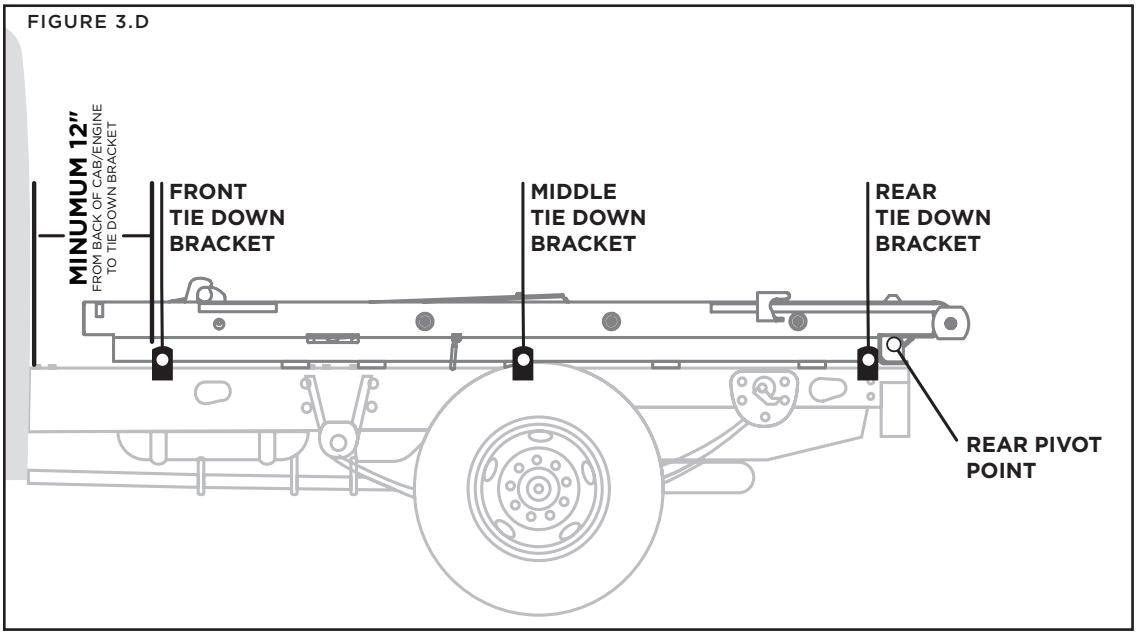
DO NOT WELD TO THE VEHICLE CHASSIS. This may void the vehicle or Switch-N-Go® warranty and/or may cause serious injury or death.

FIGURE 3.C



TIE DOWN BRACKETS

FIGURE 3.D



TIE DOWN BRACKET ARRANGEMENT

- Position the front (2) tie down brackets no closer than 12" from the back of the cab/engine.
- Position the rear (2) tie down brackets next to the rear pivot point on the hoist bottom frame.
- Position middle (2) tie down brackets equal distance from the front and rear tie down brackets.

Step 1— Place (3) tie down brackets provided in the installation kit on both driver and passenger sides for a total of (6) as indicated in Figure 3.D.

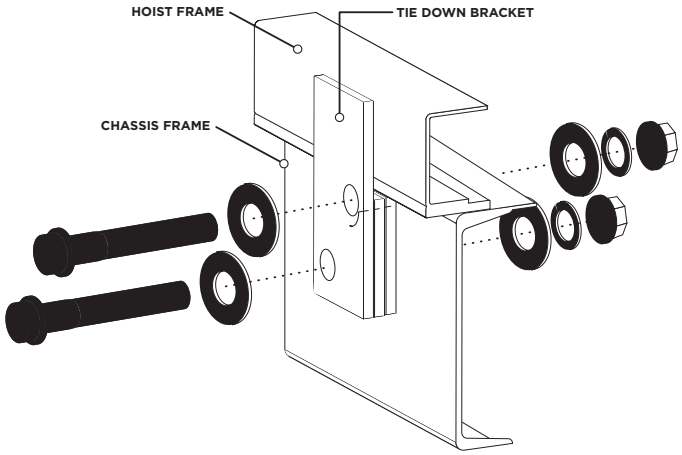
Step 2— Clamp each tie down bracket to the hoist frame ensuring it rests level with the side of the chassis frame and hoist frame.

Step 3— Drill a 1/2" Ø diameter hole through the tie down brackets and spacers into the chassis frame through the corresponding pre-punched holes.

Step 4— Place (1) 1/2"Ø 13 UNC x 1 1/2" grade 8 hex cap bolt in each tie down bracket drilled holes with (1) washer on the exterior of the chassis frame.

Step 5— On the inside of the frame, fasten (1) flat washer, (1) locking washer and (1) 1/2" nut, and secure with torque driver, with 80 lbs-ft of torque on each bolt. See Figure 3.E.

FIGURE 3.E



⚠ NOTICE

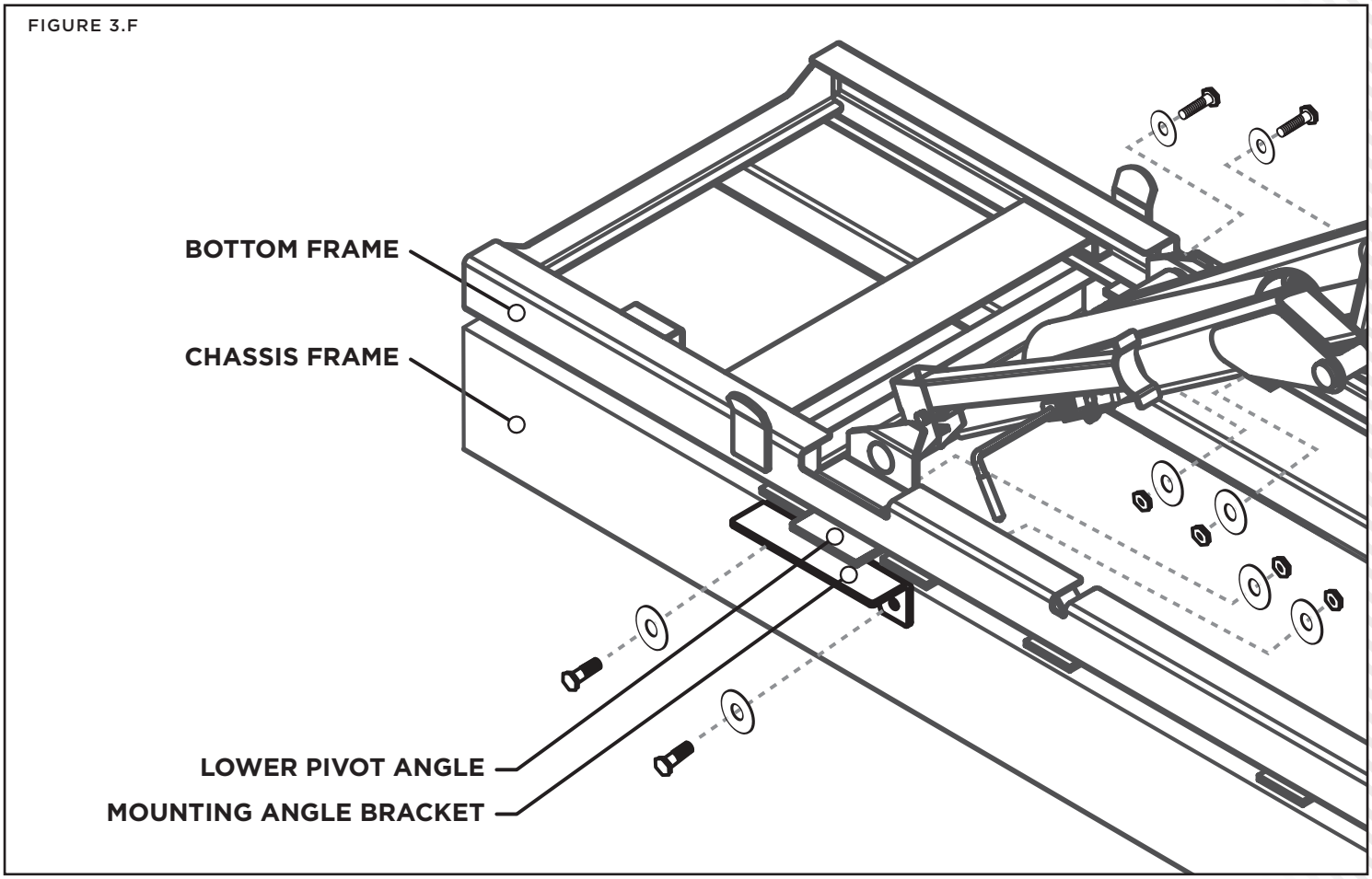
Properly torque all bolts and nuts so they do not loosen and result in malfunction or cause damage to vehicle(s) or hoist system.

Step 6— Weld the (6) tie down brackets to the Switch-N-Go® hoist bottom frame ONLY.

⚠ WARNING

DO NOT WELD TO THE VEHICLE CHASSIS. This may void the vehicle or Switch-N-Go® warranty, and or may cause serious injury or death.

FIGURE 3.F



Step 7— Place (2) mounting angle brackets provided in the installation kit, on both driver and passenger sides under the lower pivot points on the bottom hoist frame and mark the frame where hole will be drilled as indicated in Figure 3.F.

Step 8— Drill the marked holes from the mounting brackets into the vehicle chassis frame.

Step 9— Place (1) 1/2"Ø 13 UNC x 1 1/2" grade 8 hex cap bolt in each mounting angle bracket drilled holes with (1) washer on the exterior of the chassis frame.

Step 10— On the inside of the frame fasten (1) flat washer, (1) locking washer and (1) 1/2" nut, and secure using torque driver, with 80 lbs-ft of torque on each bolt.

⚠ NOTICE

Properly torque all bolts and nuts so they do not loosen and result in malfunction or cause damage to vehicle(s) or hoist system.

Step 11— Weld the (2) lower pivot angles to the top surface of the mounting angle brackets.

⚠ WARNING

DO NOT WELD TO THE VEHICLE CHASSIS. This may void the vehicle or Switch-N-Go® warranty, and/or may cause serious injury or death.

Step 12— Remove clamps holding the mounting brackets, grind the welds and clean surface. ■

NARROW FRAME BRACKET

The narrow frame bracket is used to support and attach the hoist system to the vehicles chassis on 31" vehicle chassis frames.

⚠ NOTICE

With narrow 31" width chassis which utilizes the narrow frame bracket, you will be substituting your tie down brackets and spacers provided in the kit with the narrow frame brackets.

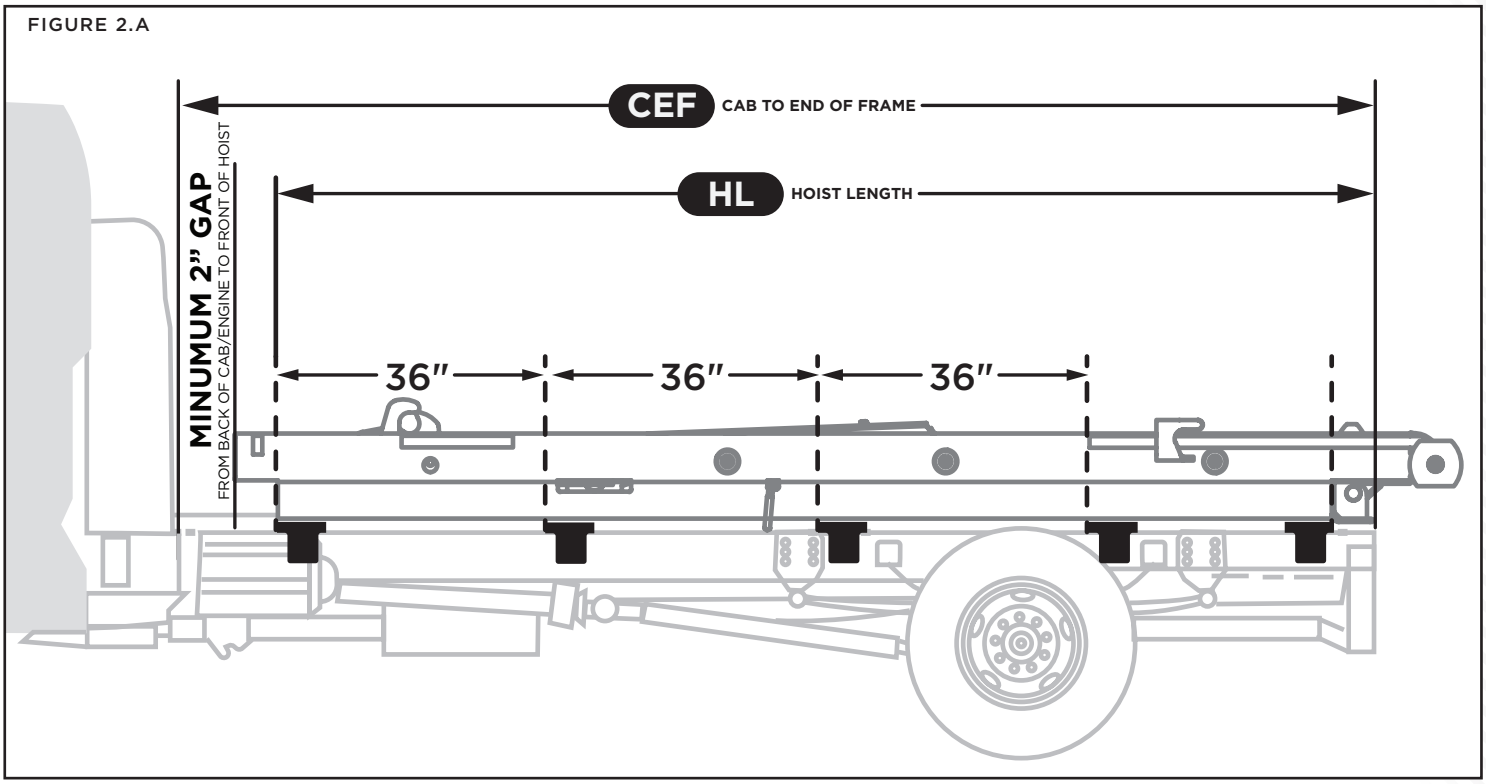
Step 1— Position (1) narrow frame bracket on top of the chassis frame with a minimum of 2" (5.08cm) from the vehicle's cab/engine, as shown in Figure 2.A.

Step 2— Position (1) bracket for every 36" (91.44cm) along the hoist's length, as needed to support hoist evenly across the vehicle's chassis.

Step 3— Position (1) bracket just behind the rear pivot point.

Step 4— Before fastening brackets ensure brackets ensure there is a level and flat surface to mount the hoist system to the vehicle's chassis frame.

FIGURE 2.A



Step 5— Drill into the chassis frame through the bracket holes vehicle frame.

Step 6— Fasten each bracket by inserting (2) 1/2"Ø diameter bolts into the holes and secure them with lock washer and nut on the inside of the vehicle chassis, as shown in figure 2.B.

Step 7— Check that all fastened brackets are even and flat for hoist system to rest on top. Tightly fasten each 1/2" nuts and bolts to 64 ft-lbs.

Step 8— Securely lift the hoist above the prepared vehicle chassis.

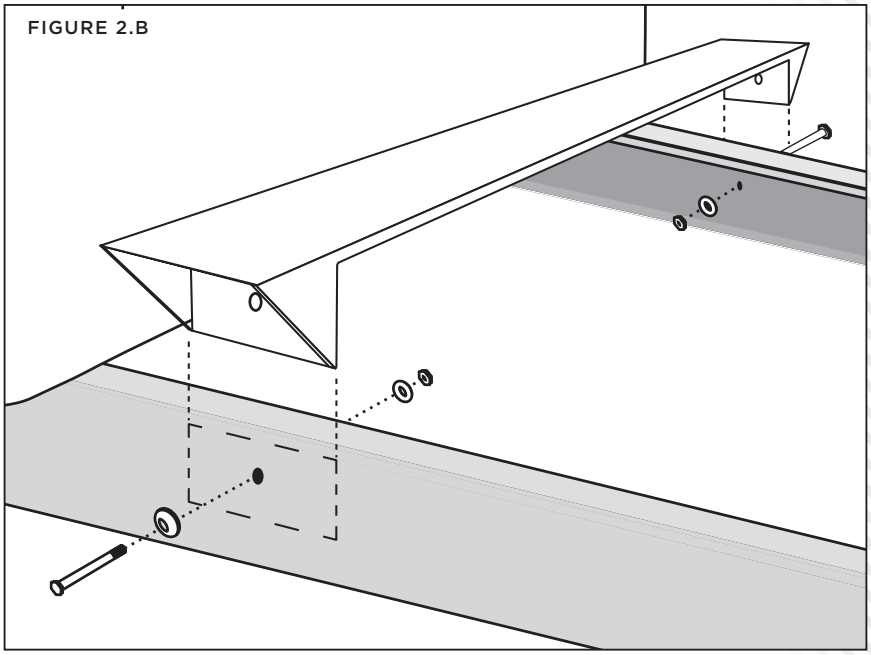
Step 9— Position the hoist so the end of the vehicle's chassis is even with the rear pivot point of the bottom frame. Lower the hoist onto the chassis making sure there is a 2" (91.44 cm) minimum distance between the vehicle's cab/engine and the hoist frame.

Step 10— Secure narrow frame brackets to chassis frame with clamps.

Step 11— Weld the narrow frame bracket to the Switch-N-Go® hoist bottom frame as indicated in Figure 2.C.

Step 12— Once brackets are completely welded remove clamps holding spacers, grind the welds and clean the surface. ■

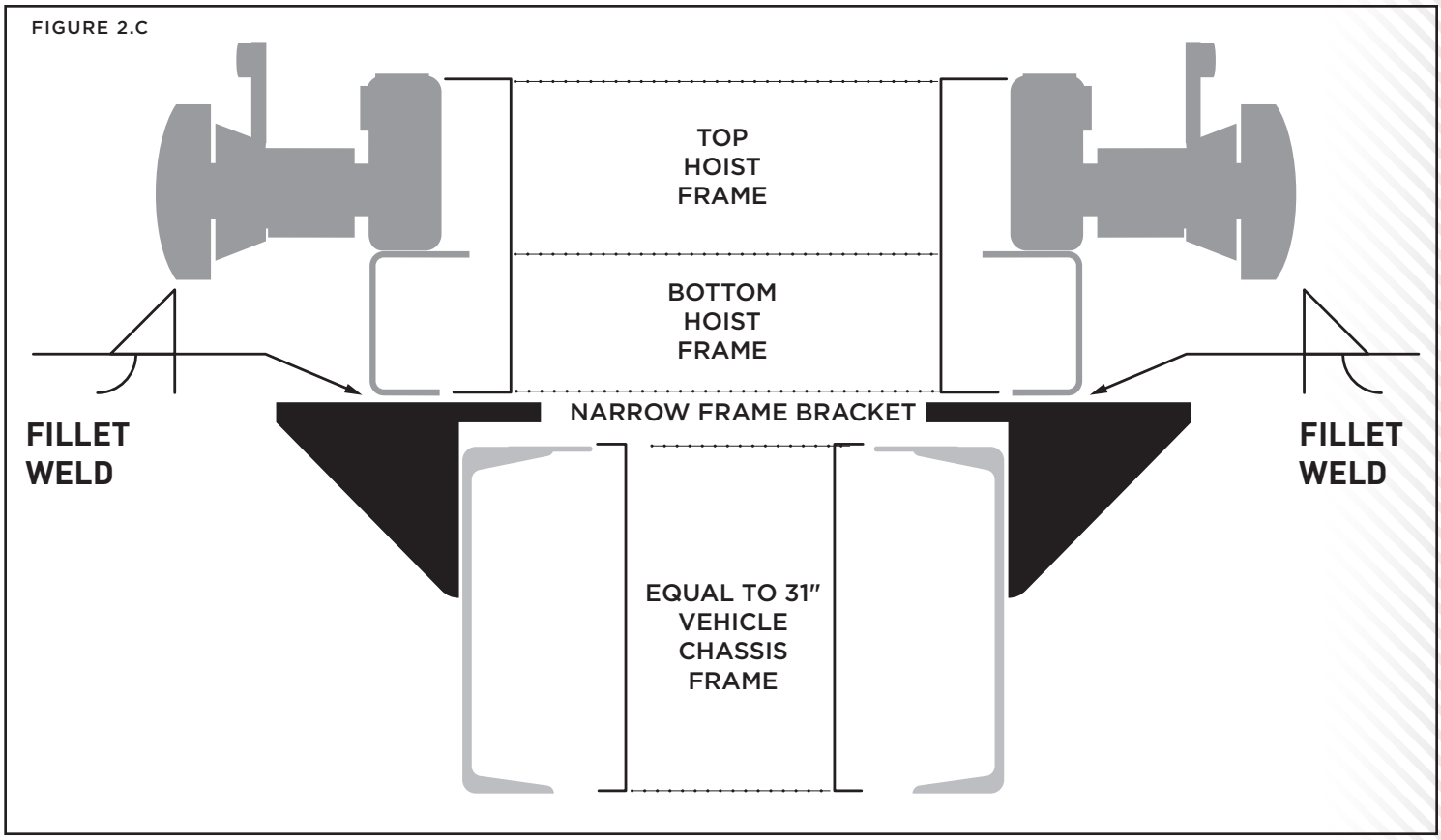
FIGURE 2.B



⚠ WARNING

DO NOT WELD TO THE VEHICLE CHASSIS. This may void the vehicle or Switch-N-Go® warranty and/or may cause serious injury or death.

FIGURE 2.C



Electrical Preparation

DISCONNECT THE BATTERY

Step 1— Place vehicle in park (P) position, and let foot off brake pedal.

Step 2— Turn off vehicle by either turning the key or pressing the vehicle start/stop button without pressing on the brake pedal.

Step 3— Disconnect the (-) cable by safely loosening the connector nut on the battery terminal. Repeat this process for the additional battery.

Step 4— Disconnect the (+) cable by safely loosening the connector nut on the battery terminal. Repeat this process for the additional battery.

Step 5— Do not allow battery terminals to come in contact with either the truck components or vehicle chassis frame as this could cause a short circuit and result in fire or serious damage, injury or death. ■

In-Cab Harness Installation

The Switch-N-Go® hoist system features an additional in-cab control pendant receptacle, that allows for hoist & winch control inside of the vehicle's cab.

INSTALLATION OF IN-CAB CONTROL PENDANT RECEPTACLE

Step 1— Ensure the vehicle is turned off and batteries are disconnected before continuing steps to install the in-cab harness.

Step 2— Position the location for the in-cab receptacle with easy access from the driver seat and a position that does not interfere with any of the vehicle system(s). Reference your vehicle manufacturing documentation for information for adding in-cab harness & wiring.

Step 3— Drill a 1" hole in which the in-cab receptacle will be placed. Check that you are not drilling into a bracket or wiring.

Step 4— Route the wire through the hole and to the Switch-N-Go® junction box located on the hoist bottom frame as show in figure 5.A and secure it to the vehicle chassis and hoist frame.

Step 5— Attach the in-cab harness receptacle bracket with self tapping screws provided.

Step 6— On the wire end, Peel back the insulation enough that the wire can reach all the terminals within the junction box, slip on the socket plugs to the wire.

Step 7— Crimp on the supplied ring terminals to each of the connectors on each of the wire ends. On hydraulic system the white wire is to be cut or not connected in the junction box.

Step 8— Match specific color pendant wires with the appropriate colors marked from the hoist frame pendant control receptacle, as show in figure 5.B or 5.C.

INSTALLATION OF GROUND WIRING

Step 1— Route the ground #2 gauge wire provided in the installation kit from the battery area to a clean and bare attachment point on the vehicle chassis.

Step 2— Attach one end of the ground wire to clean and bare point on the vehicle chassis, with a crimp on lug.

Step 3— Attach the other end of the ground wire to the battery (-) terminal connector.

Step 4— Complete the wiring from the hoist to the battery by locating the hoist to chassis ground #2 gauge wire attached to the hoist bottom frame and bolt the crimp on lug to a clean and bare point on the vehicle chassis. ■

FIGURE 5.A

ELECTRIC OVER HYDRAULIC WIRE LOCATIONS

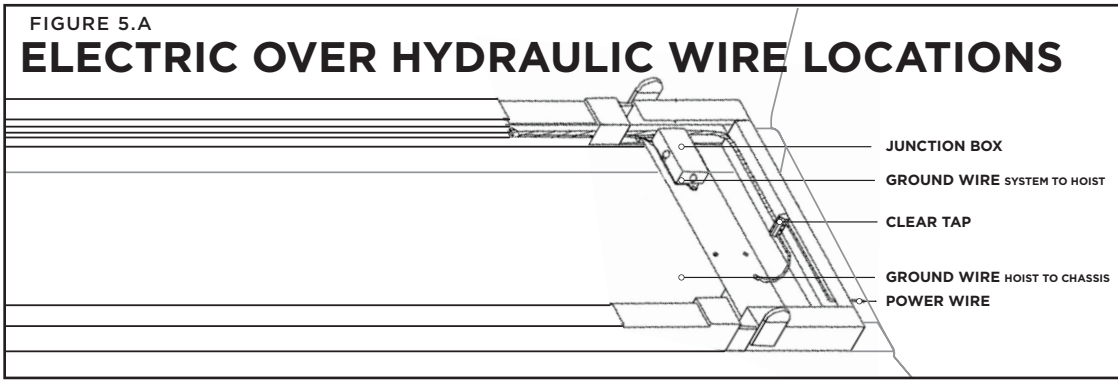


FIGURE 5.B

ELECTRIC OVER HYDRAULIC JUNCTION BOX

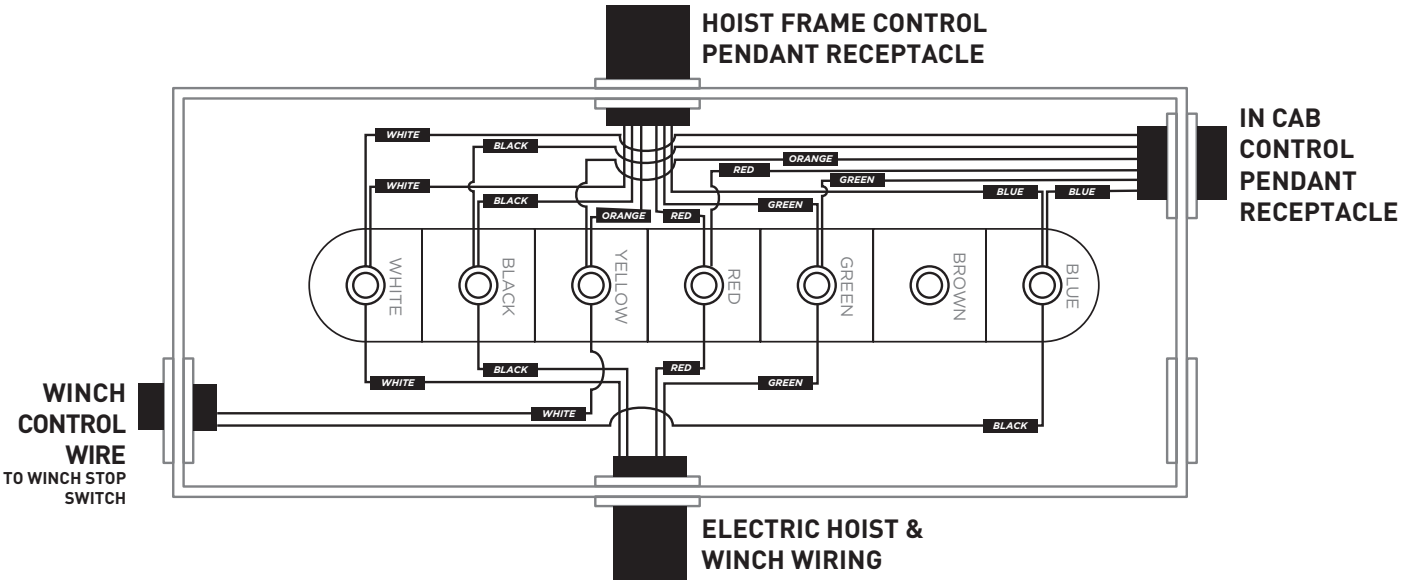
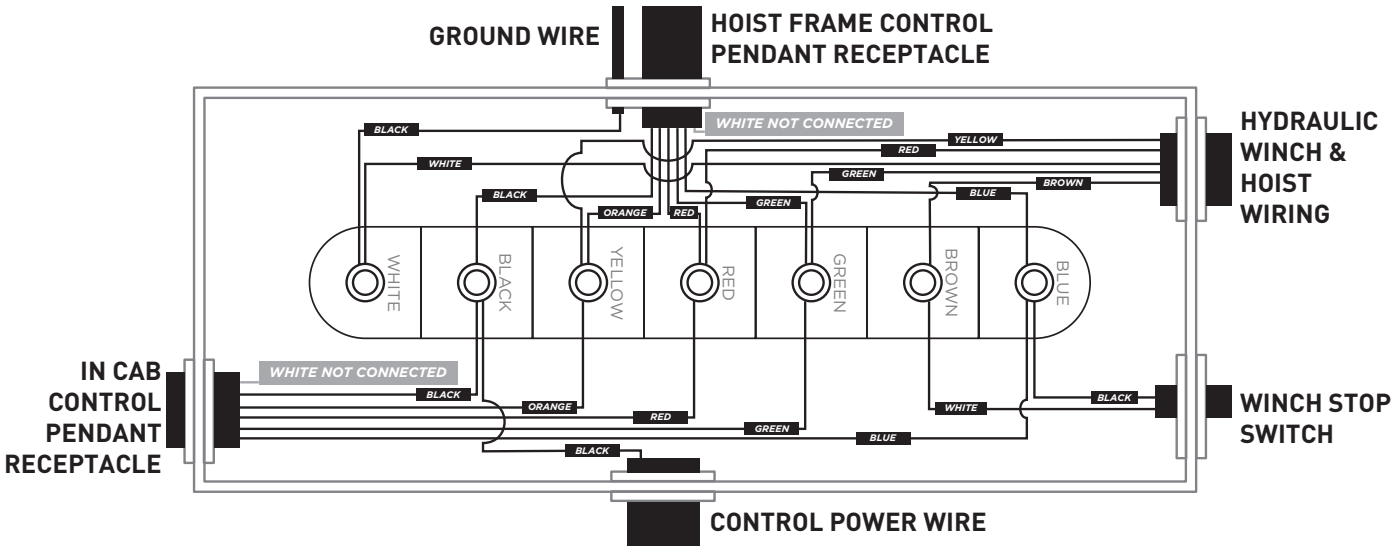


FIGURE 5.C

FULL HYDRAULIC SYSTEM JUNCTION BOX



Electric System

System Requirements

NOTICE

The Switch-N-Go® Electric system is an electric over hydraulic system that has an electric winch and an hydraulic hoist cylinder. The Switch-N-Go® Electric over Hydraulic comes pre-installed with the hydraulic hoses from the hydraulic hoist pump to the hydraulic hoist cylinder.

The installer is responsible for testing that the batteries and alternator are functioning properly and meet the system requirements as stated below. Failure to meet the requirements may result in a weak or non-functioning system.

ELECTRIC INSTALLATION KIT

	Part Number	Qty.	Description
ELECTRICAL WIRES	3190128	1	Power Wire - #1/0 AWG (216" length)
	3190129	1	Ground Wire - #2 AWG (48" length)
ELECTRICAL HARDWARE	3190130	1	600 AMP ANL Fuse
	3190131	1	ANL Fuse Block Holder
	3190100	2	2/0 Ring Terminal Connectors

REQUIRED ITEMS NOT SUPPLIED IN ELECTRIC INSTALLATION KIT

Item 1— One heavy duty alternator

Item 2— Two deep cycle 750 Cold Cranking Amps (CCA) batteries with a minimum rating of approximately 150AMP

Item 3— Hydraulic oil equivalent to Grade 32 (such as ATF-Dextron II or Mobile DTE 13)

NOTE

Reference the hoist model for the exact total system & reservoir hydraulic oil capacity

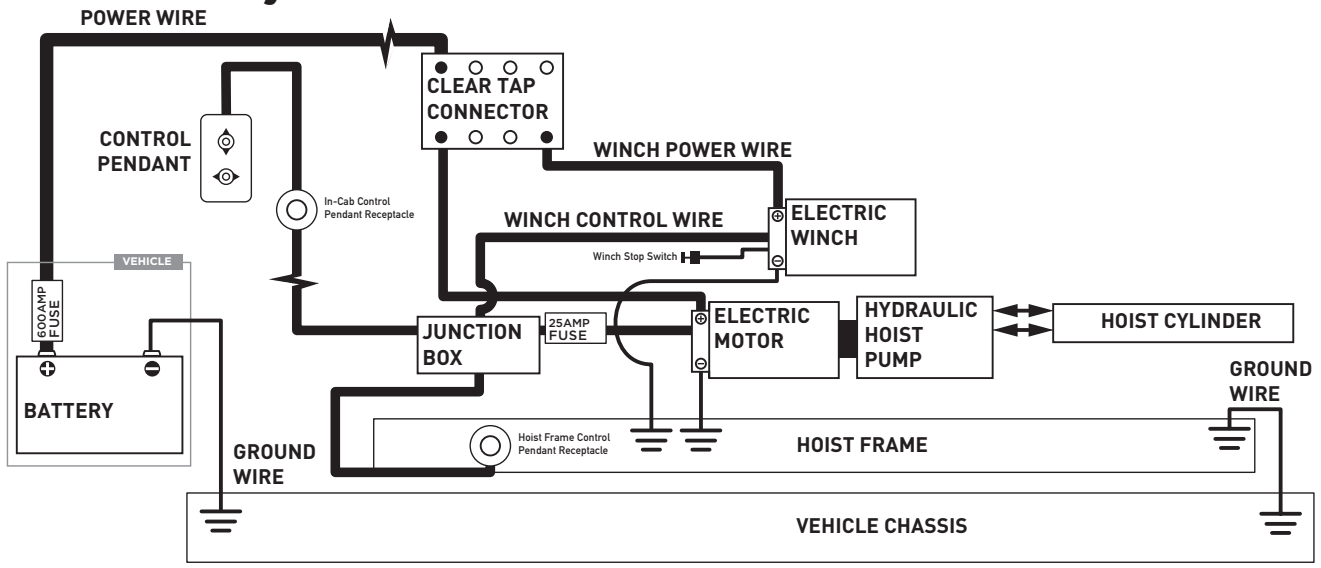
Hoist Model	Reservoir Tank (Quart)	Total Electric over Hydraulic Hydraulic Oil Capacity (Quart)
520 Series	4	7.5
540 Series	4	7.5
550 Series	4	9
620 Series	4	12

NOTICE

The Installer(s) are responsible for installation of wires and the fuse/holder. The fuse system is required to safeguard the vehicle and/or system from damage or fire in the event of a short circuit.

FIGURE 6.A

Electric over Hydraulic DIAGRAM



Ensure the ground wire from the battery terminal to the chassis has been disconnected before beginning installation of the power wire onto hoist system.

POWER WIRE INSTALLATION

Step 1— Ensure the vehicle is turned off and batteries are disconnected before continuing steps to install the power wire.

Step 2— Route the supplied 240" (18') #1/0 gauge power wire cable from the battery to the Switch-N-Go® hoist frame.

Step 3— Fasten the power wire cable along the vehicle chassis and hoist frame, free from any pinch points that may result in a weak or non-functioning system.

Step 4— Locate the {clear tap connector} on the bottom hoist forward most crossmember and connect the wire to clear tap connector indicated in figure 5.A.

FUSE & HOLDER INSTALLATION

Step 5— Locate a mountable position for the fuse holder within the vehicle engine compartment, preferably near the battery and the fuse box.

Step 6— Cut a portion of the 1/0 gauge wire for the fuse to battery from the end of the wire.

Step 7— Loosen the nuts on the fuse holder, and place the ANL 600AMP fuse on the holder.

Step 8— Crimp the 2/0 ring terminal to the end of the #1/0 gauge wire from the hoist fasten onto the fuse holder.

Step 9— Crimp the 2/0 ring terminal to the end of the shortened #1/0 gauge wire that will be connected to the (+) battery and fasten onto the fuse holder. Connect the shortened piece of wire to the other end fuse/holder terminal.

Step 10— Tighten down both of the terminal nuts and connect the fuse cover onto holder.

Step 11— DO NOT CONNECT THE WIRES TO THE BATTERY TERMINALS. Additional steps are needed before completing the Electric over Hydraulic electrical circuit.

Step 12— Refer to FINAL PREPARATIONS (page 37) section to complete the installation of the Switch-N-Go® hoist system. ■

Hydraulic System

System Requirements

⚠ NOTICE

The Switch-N-Go® hydraulic system is is a full hydraulic system pre-installed with hoses to the hydraulic winch, double counterbalance, hydraulic control valve, and hydraulic hoist cylinder. The system is not supplied with a clutch pump or "live drive" style PTO, an hydraulic tank and additional hoses from the system to required components. The installer is responsible for testing that the batteries, alternator, and hydraulic pump are functioning properly and meet the system requirements as stated below. Failure to meet the requirements may result in a weak or non-functioning system.

HYDRAULIC INSTALLATION KIT

ELECTRICAL HARDWARE

Part Number	Qty.	Description
3190132	1	25 AMP ATO/ATC Blade Fuse
3190133	1	Inline Blade Fuse Holder
1220104	2	22-18 AWG Wire Butt Splice Connectors (red)

REQUIRED ITEMS NOT SUPPLIED IN HYDRAULIC INSTALLATION KIT

Item 1— Hydraulic pump either a [Clutch Pump] or ["live drive" style Power Take Off (PTO) Pump]: that is capable of producing 3000 PSI pressure at a flow rate of 12-15 GPM

Item 2— 15-20 gallon tank rated for hydraulic oil use with a basket strainer in the filler tube

Item 3— Additional length(s) of 1/2" Ø diameter Hose for pressure lines and threaded crimp on fittings

Item 4— Additional length(s) of 3/4" Ø diameter Hose for return lines and threaded crimp on fittings

Item 5— 18-20 gallons of hydraulic oil equivalent to Grade 32 (such as ATF-Dextron II or Mobile DTE 13)

Item 6— #14 gauge control power wire for battery to junction box of Switch-N-Go® hoist system

ⓘ NOTE

Reference the hoist model for the exact total system & reservoir hydraulic oil capacity.

Hoist Model	Reservoir Tank (Gallons)	Total Full Hydraulic System Hydraulic Oil Capacity (Quart)
520 Series	15-20	7.5
540 Series	15-20	7.5
550 Series	15-20	9
620 Series	15-20	12

⚠ NOTICE

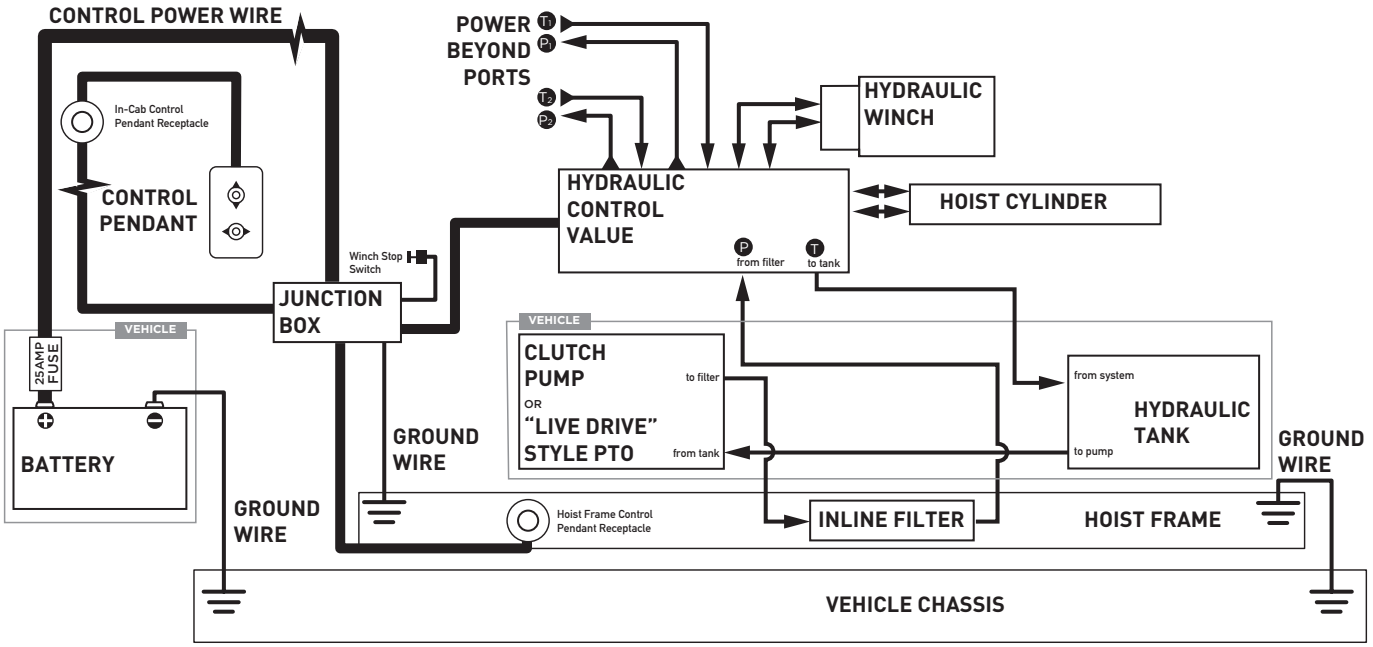
The Installer(s) are responsible for installation of wires and the fuse/holder. The fuse system is required to safeguard the vehicle and/or system from damage or fire in the event of a short circuit.

⚠ NOTICE

The Installer(s) are responsible for installation of the hydraulic pump and hoses in order to operate the hydraulic hoist or winch.

FIGURE 7.A

HYDRAULIC SYSTEM DIAGRAM



POWER WIRE INSTALLATION

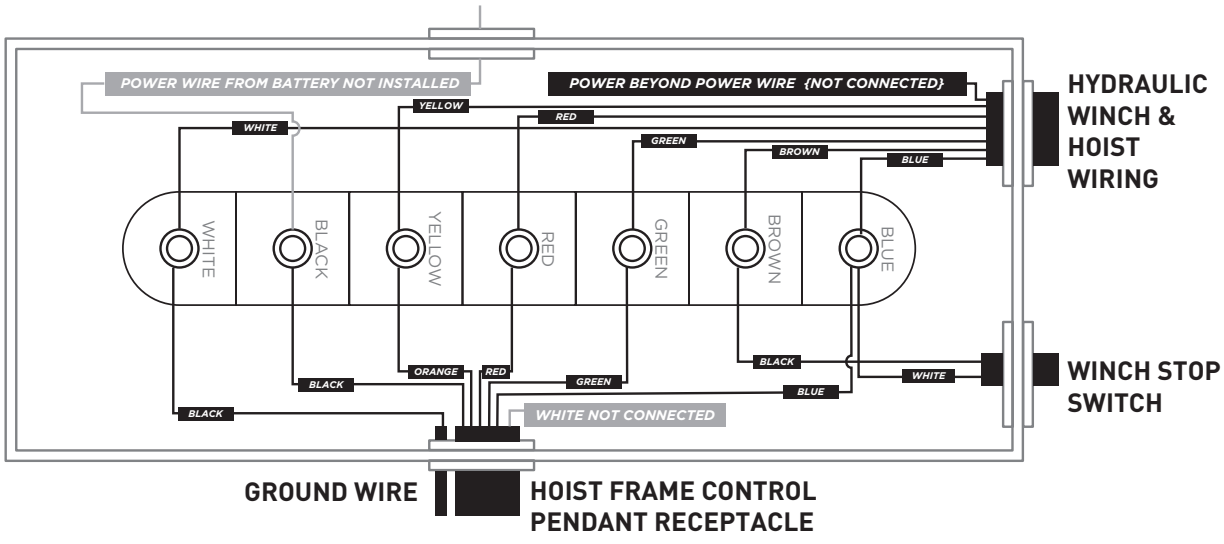
Step 1— Ensure the vehicle is turned off and batteries are disconnected before continuing steps to install the power wire.

Step 2— Install the #14 gauge control power wire from the battery into the Switch-N-Go® hoist system junction box as shown in figure 7.B.

Step 3— Fasten the control power wire along the vehicle chassis and hoist frame, free from any pinch points that may result in a weak or non-functioning system to the truck battery.

Step 4— Refer to FUSE & HOLDER INSTALLATION (page 34) section to complete the installation of the Switch-N-Go® hoist system. ■

FIGURE 7.B



FUSE & HOLDER INSTALLATION

Step 5— Within the vehicle engine compartment, locate the #14 gauge power wire and connect the inline blade fuse holder to the end of the wire.

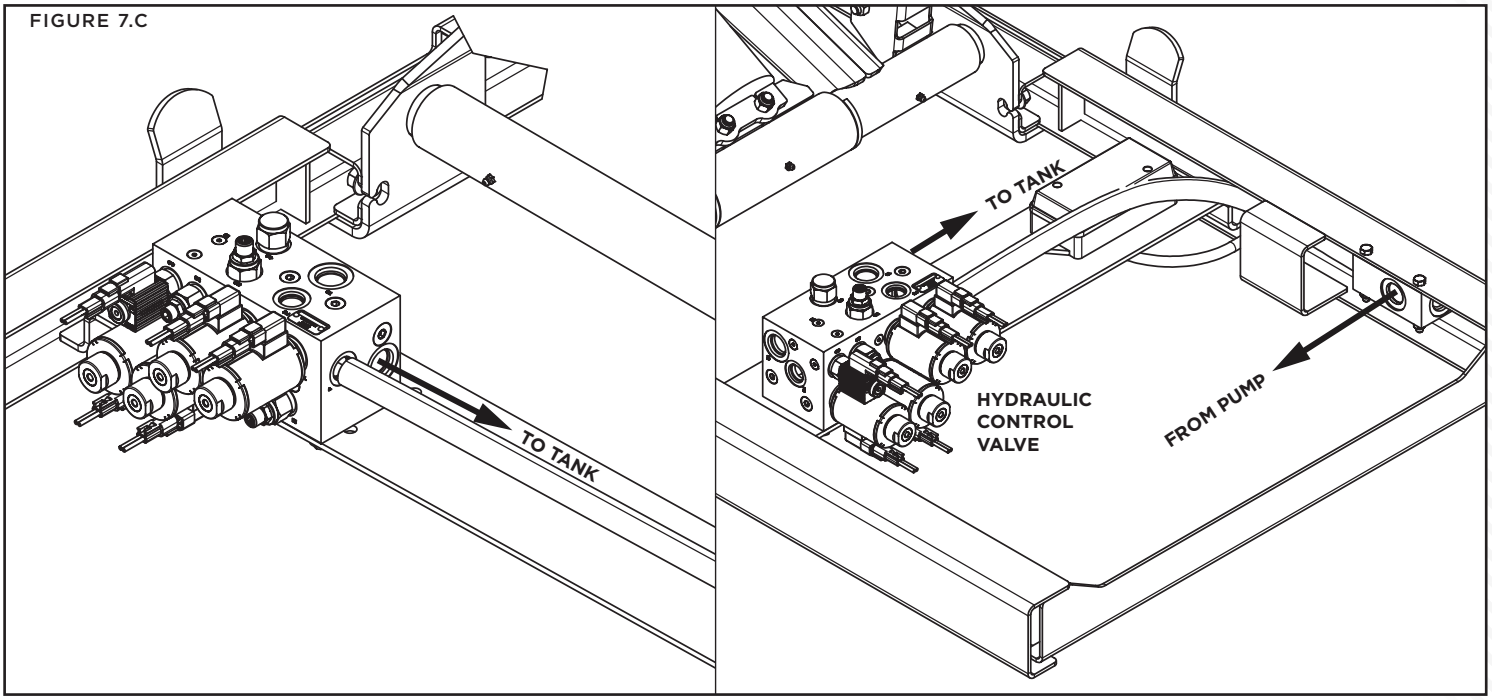
Step 6— DO NOT INSERT THE FUSE INTO THE FUSE HOLDER, only after the system has been completely installed, connect the battery first and then insert the fuse.

Step 7— DO NOT CONNECT THE WIRES TO THE BATTERY TERMINALS. Additional steps are needed before completing the hydraulic system electrical circuit.

Step 8— Refer to FINAL PREPARATIONS (page 37) section to complete the installation of the Switch-N-Go® hoist system. ■

Pump & Hose Installation

FIGURE 7.C



⚠ NOTICE

The Installer is responsible for mounting any hydraulic pump,tank, and hoses to the vehicle chassis and hoist frame. Refer to hydraulic pump manufacturer provided instructions for installation, ensuring that hoses are routed away from any pinch points, that may result in damage to the hose or system.

⚠ NOTICE

The hydraulic system supplied with the HR-series hoist is manufactured by Rugby™ Manufacturing Co, All components provided (pump, valves reservoir hoses, cylinders, etc.) are designed to be compatible with each other. If hydraulic components are substituted with incompatible components, all liability and warranty for given hoist will be voided.

It is the Installer's Responsibility to be sure they are compatible with the components supplied by Switch-N-Go®. Incompatible hydraulic components may cause failure of the hoist, which may result in damaging the vehicle, system, or other property, or result in severe injury or death.

HYDRAULIC TANK & HOSE INSTALLATION

Step 1— To prevent risk of fire, ensure the vehicle is turned off and batteries are disconnected before continuing steps to install the hydraulic hoses and tank.

Step 2— Ensure the hydraulic tank is mounted properly and can be easily accessible for routing checking and filling.

Step 3— Ensure the hydraulic pressure supply hose is fitted with an SAE-12 crimped on fitting.

Step 4— Ensure the hydraulic return hose is fitted with an SAE-12 crimped on fitting.

Step 5— Refer to FINAL PREPARATIONS (page 37) section to complete the installation of the Switch-N-Go® hoist system. ■

⚠ NOTICE

Wear protective eyewear and gloves to protect hands and eyes from high pressure fluid leaks. Once system is completely installed battery reconnected and fluids added, test connections for leaks using a dry piece of paper to detect oil leaking from fittings. If leaks occur check fittings are properly fitted and are free of leaks on hoses or fitting installed onto system.

Hydraulic Pressure & Flow Rates

⚠ NOTICE

Adjusting the pressure settings from the hydraulic model's set pressure and flow rate specifications may result in winch or hoist premature wear or failure of hydraulic system.

WARN® HYDRAULIC WINCH PRESSURE SETTINGS

9,000lbs Hydraulic System
Warn® Specifications

Maximum System Pressure	2200 psi	152 BAR
Pressure at Maximum Rated Load	2027 psi	140 BAR
Maximum Rated Input Flow	15 GPM	57 LPM
Control Valve Type	3-Position, 4-way, closed center, spring return (cylinder spool)	

12,000lbs Hydraulic System
Warn® Specifications

Maximum System Pressure	1950 psi	135 BAR
Pressure at Maximum Rated Load	2163 psi	149 BAR
Maximum Rated Input Flow	15 GPM	57 LPM
Control Valve Type	3-Position, 4-way, closed center, spring return (cylinder spool)	

15,000lbs Hydraulic System
Warn® Specifications

Maximum System Pressure	2200 psi	152 BAR
Pressure at Maximum Rated Load	2200 psi	152 BAR
Maximum Rated Input Flow	15 GPM	57 LPM
Control Valve Type	3-Position, 4-way, closed center, spring return (cylinder spool)	

18,000lbs Hydraulic System
Warn® Specifications

Maximum System Pressure	2400 psi	166 BAR
Pressure at Maximum Rated Load	1816 psi	125 BAR
Maximum Rated Input Flow	15 GPM	57 LPM
Control Valve Type	3-Position, 4-way, closed center, spring return (cylinder spool)	

RUGBY® HYDRAULIC HOIST PRESSURE SETTINGS

HR-520
Rugby® Hoist Model Specifications

Maximum Hydraulic Flow Rate	6 GPM
Maximum Pressure for Raising Portion of Dump Cycle	3200 psi
Maximum Pressure for Lowering Portion of Dump Cycle	1500 psi

HR-540
Rugby® Hoist Model Specifications

Maximum Hydraulic Flow Rate	6 GPM
Maximum Pressure for Raising Portion of Dump Cycle	3200 psi
Maximum Pressure for Lowering Portion of Dump Cycle	1000 psi

HR-550
Rugby® Hoist Model Specifications

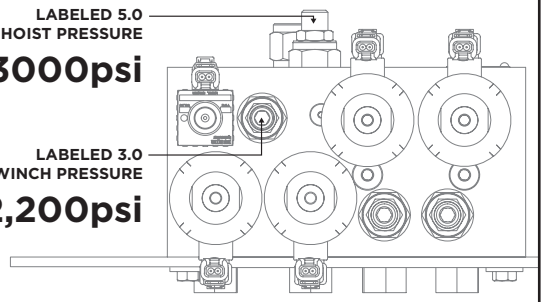
Maximum Hydraulic Flow Rate	6 GPM
Maximum Pressure for Raising Portion of Dump Cycle	3200 psi
Maximum Pressure for Lowering Portion of Dump Cycle	1000 psi

HR-620
Rugby® Hoist Model Specifications

Maximum Hydraulic Flow Rate	9 GPM
Maximum Pressure for raising portion of dump cycle	3200 psi
Maximum Pressure for lowering portion of dump cycle	1000 psi

Adjust System Pressure

FIGURE 7.D



ADJUST WINCH PRESSURE

Step 1— Raise the hoist "UP" halfway to approximately 25° angle which reveals about 8" of the cylinder stroke.

Step 2— Engage body prop rod with by setting the prop rod vertically and lock into place.

Step 3— Lower the hoist "DOWN" until prop rod is nestled in the prop cup. If HR series scissor hoist system is not equipped refer to BODY PROP ROD INSTALL (page 37) section.

Step 4— Locate the hydraulic hoses that come from the top of the hydraulic valve and lead up to the winch.

Step 5— Using a sturdy rag and wrench, cover the fitting that connects the IN hose on port A2 to the frame tube.

Step 6— Loosen the hose fitting to relieve any residual pressure in the hose, before disconnecting the hose.

Step 7— Install a 3000psi minimum pressure gage on the valve body and then reconnect the hose to the valve.

Step 8— The pressure gage should approximately read 3,000psi.

Step 9— Loosen the lock nut with a 1" open end wrench on the pressure regulating valve, indicated by a #3 at the front of the valve manifold body.

Step 10— To adjust the winch pressure use a 5/16" hex wrench to adjust the valve.

↻ CLOCKWISE | INCREASE PRESSURE

↺ COUNTERCLOCKWISE | DECREASE PRESSURE

Step 11— When desired pressure is achieved, tighten the locknut to 35-40 FT-LB.

Step 12— Cover the fittings around the pressure gage and then remove the gage from the valve and hose.

Step 13— Reconnect the hose to the valve manifold. ■

⚠ NOTICE

Read and understand these directions before attempting this adjustment. Injury or death can occur if proper safety precautions are not taken.

Perform this adjustment in a clean dry environment as contamination of the hydraulic system will degrade system performance.

ADJUST HOIST PRESSURE

Step 1— Raise the hoist "UP" halfway to approximately 25° angle which reveals about 8" of the cylinder stroke.

Step 2— Engage body prop rod with by setting the prop rod vertically and lock into place.

Step 3— Lower the hoist "DOWN" until prop rod is nestled in the prop cup. If HR series scissor hoist system is not equipped refer to BODY PROP ROD INSTALL (page 37) section.

Step 4— Locate the hydraulic hoses that come from the top of the hydraulic valve and lead up to the hydraulic cylinder.

Step 5— Using a sturdy rag and wrench, cover the fitting that connects the IN hose on port A2 to the frame tube.

Step 6— Loosen the hose fitting to relieve any residual pressure in the hose, before disconnecting the hose.

Step 7— Install a 3000psi minimum pressure gage on the valve body and then reconnect the hose to the valve.

Step 8— The pressure gage should approximately read 2,200psi.

Step 9— Lift the hoist "UP" and disengage the prop rod so it rests in the prop rod hanger.

Step 10— Lower the hoist all the way "DOWN" while reading the gauge which should read approximately 3000psi of pressure.

Step 11— Loosen the lock nut with a 1 1/16" open end wrench on the pressure regulating valve, indicated by a #3 at the front of the valve manifold body.

Step 12— To adjust the winch pressure use a 5/16" hex wrench to adjust the valve.

↻ CLOCKWISE | INCREASE PRESSURE

↺ COUNTERCLOCKWISE | DECREASE PRESSURE

Step 13— When desired pressure is achieved, tighten the locknut to 35-40 FT-LB.

Step 14— Cover the fittings around the pressure gage and remove the gage from the valve.

Step 15— Raise the hoist "UP" again and secure the prop rod.

Step 16— Cover the fittings around the pressure gage and then remove the gage from the valve and hose.

Step 17— Reconnect the hose to the valve manifold.

Step 18— Lift the hoist "UP" and disengage the prop rod so it rests in the prop rod hanger

Step 19— Cycle the hoist system "UP" and "DOWN". ■

Final Preparations

Body Prop Rod Install [HR-620 MODEL]

The HR-620 Series scissor hoist system does not have the body prop rod pre-installed on the hoist frame, and requires the up-fitter to install the body prop rod onto the vehicle after the hoist system is installed and after the system is operational.

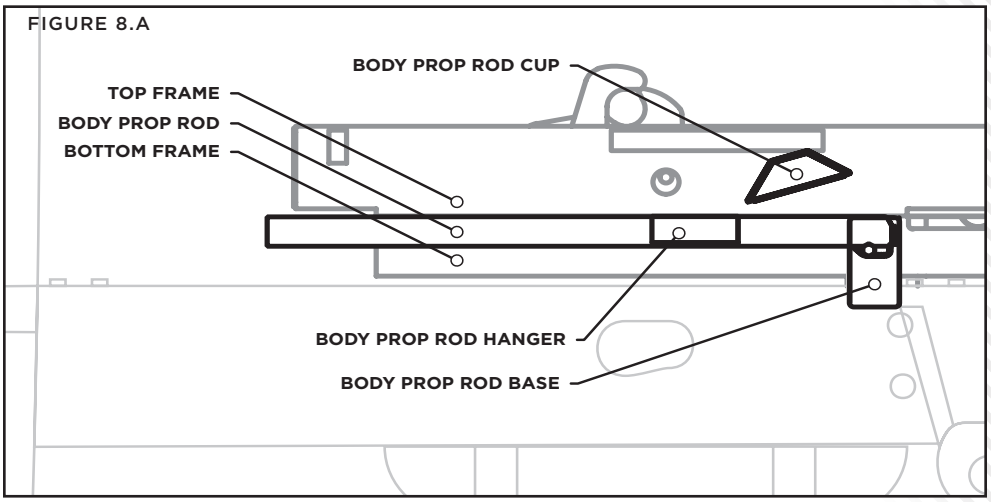
⚠ WARNING

Do not place arms, hands or any part of the body or objects between the Switch-N-Go® hoist top and bottom frame, without body prop rod engaged.

⚠ WARNING

The body prop rod is only to be used to prop a body with no load in the body, or unloaded body on system serious injury or death may occur if the body prop rod is misused.

FIGURE 8.A



⚠ CAUTION

Ensure the prop rod does not block the control pendant receptacle, when it the prop arm is in the disengaged position.

Step 1— Raise the hoist "UP" using the Control Pendant.

Step 2— Position the prop rod & cup on the outside of the hoist top frame, maintaining the prop rod base is even with the top of the hoist bottom frame.

Step 3— Ensure that when the body prop rod is disengaged or down it maintains a 2" clearance from the vehicle's cab or engine.

Step 4— Mark where the prop rod cup will be welded to the hoist top frame by resting the prop rod against the hoist in the engaged or vertical position.

Step 5— Grind off the paint in the area where the prop rod cup will be welded.

Step 6— Weld the prop rod cup to the hoist top frame and prepare for prime and paint.

Step 7— Position the prop rod under the prod rod cup and mark where the prop rod base will be fastened to the hoist bottom frame with the body prop rod engaged, as shown in figure 8.A.

Step 8— Fasten the prop rod to the hoist bottom frame.

Step 9— Once the prop rod is fastened to the hoist, operate the body prop rod down to be even with the hoist bottom frame.

Step 10— Place the prop rod hanger on the hoist bottom frame, under the prop rod so the prop rod will not bounce out of the hanger.

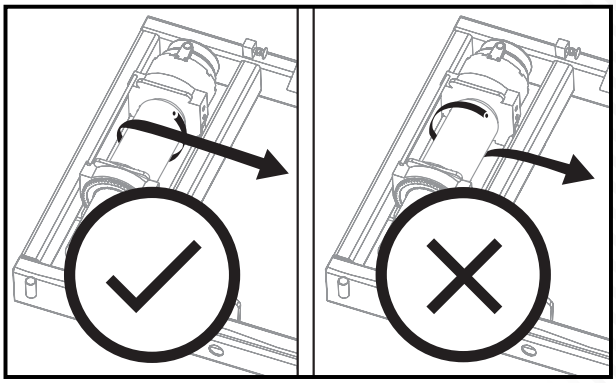
Step 11— Fasten the prop rod hanger to the hoist bottom frame. ■

Winch Cable Installation

Step 1— Wrap 1" piece of masking tape around the wire cable to prevent fraying of wire during installation.

Step 2— Insert the tapped wire cable into the cable anchor hole located on the passenger side of winch drum.

Step 3— Tighten the set screw with Allen wrench and torque to 12-15 ft-lbs. Ensure you do not over-tighten the set screw as this may result in stripping or damage screw.



Step 4— Lubricate and wind the winch "IN," coiling the wire cable as it feeds onto the winch drum. The coil must maintain a minimum of 5 coils on winch drum at all times.

Step 5— Clean any excessive lubrication with a dry cloth from hoist/vehicle components once cable is fully coiled around the drum. ■

Lubricate the Hoist System

⚠ NOTICE

Lubrication is vital to preventing premature wear as this may result in the hoist system malfunction or system failure.

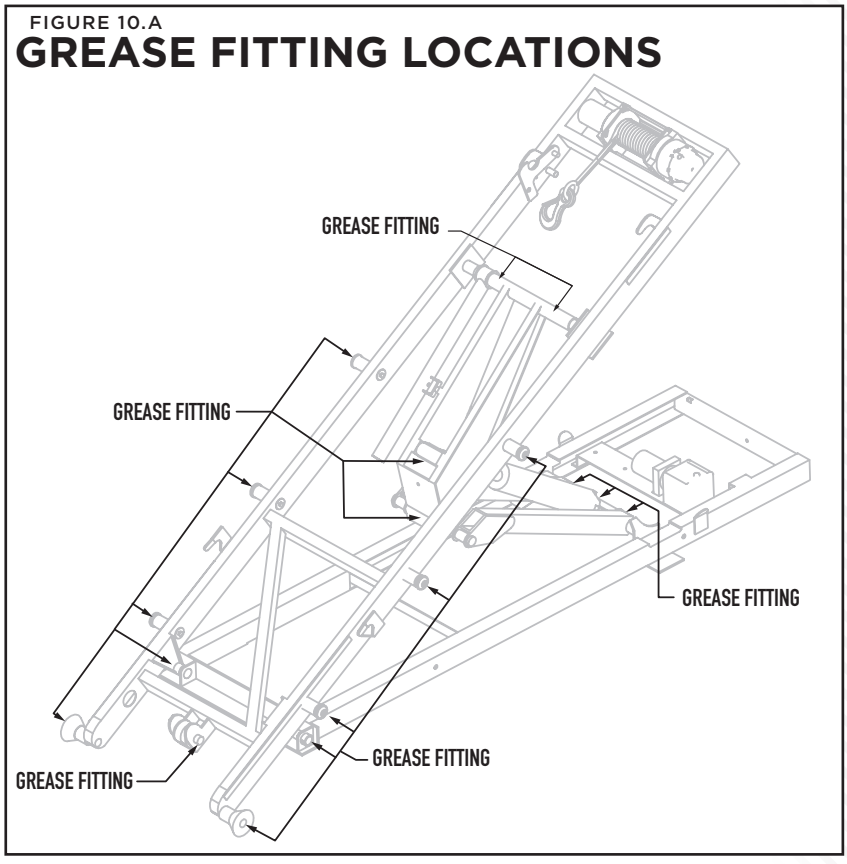
Lubricate the following locations with either run-out or marine grease, as shown in figure 10.A.

GREASE FITTING LOCATIONS

- (3) Grease fittings are located on the lower shaft scissor hoist connected to the bottom hoist frame.
- (2) grease fittings are located on the top and bottom of the middle section of the scissor hoist
- (2) Grease fittings are located on the upper shaft scissor hoist connected to the top hoist frame.
- Grease fitting(s) are located on the outside end of each of the outside black rear rollers
- A grease fitting is located on the outside end of yellow rear roller at the rear end of the system.
- (2) grease fittings are located on each of the outside rear pivot points

FIGURE 10.A

GREASE FITTING LOCATIONS



Optional Installs

Additional Links

⚠ NOTICE

Before beginning installation of any of the Switch-N-Go® bumper models, remove any rear taillights, brackets, or additional components/equipment that may be attached to the rear of the vehicle chassis.

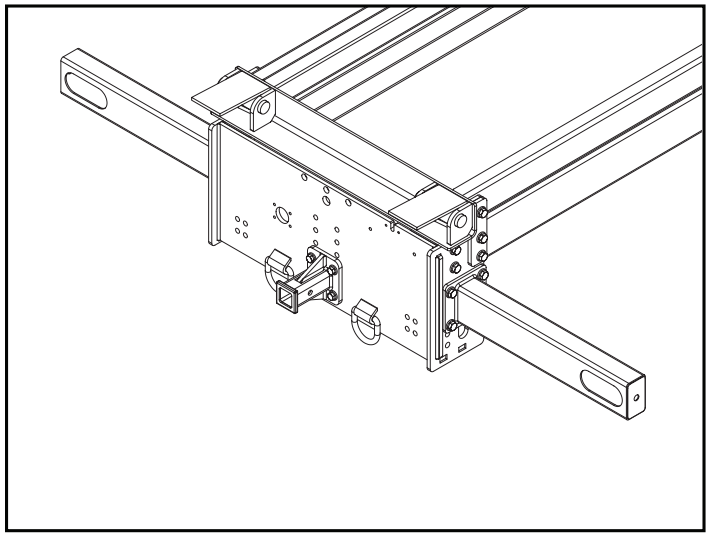
Visit Switch-N-Go® resource center to view installation instructions on all additional Switch-N-Go Products:

www.switchngo.com/rc/option-installs

REAR BUMPER
ADJUSTABLE HITCH / SIDE TUBES

REQUIRES

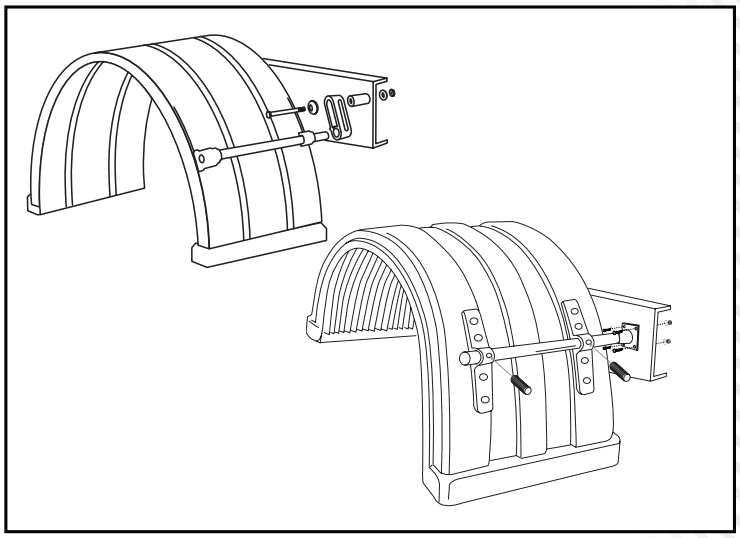
- Tie Down Brackets
- Chassis Mount Kit
- Bumper Mount Kit
- Light Kit & Harness



WHEEL FENDER
19.5" OR 22.5" AVAILABLE

REQUIRES

- Fender Support Hardware
- Fender Support Kit



System Checklist

Installation Completion Checklist

The installation completion checklist must be filled out by the installer after the installation(s) is completed. If hoist system is not operating correctly, see refer to INSTALLATION section (page 12) or TROUBLESHOOT section (page 56) within the installation manual.

- ☐ **Check all nuts and bolts are properly torqued, using the torque chart on the next page.**
- ☐ **Check to make sure all electrical connections and wires are tight and free from all pinching or cutting hazards, as this may lead to malfunctions or damages.**
- ☐ **Check to make sure the body prop rod/body cup (HR-620) is safely installed and or any body prop rod installed is working properly.**
- ☐ **Check all grease fittings are lubricated with either (run-out or marine) grease.**
- ☐ **Check the winch cable is fastened tightly and spools evenly around the drum.**
  - Ensure the Winch cable has minimum of 5 spools around the drum remaining that are when fully extended.
  - Ensure when retracting the winch cable it evenly spools around the winch drum.
- ☐ **Check all hydraulic fittings are free of leaks. When checking for leaks please wear protective eye wear and gloves to protect face and hands or body from high pressure leaks.**
  - Check all high pressure hoses, connected to the hoist, vehicle and/or system hydraulic system.
- ☐ **Check all hydraulic fluids are properly filled to levels indicated.**
- ☐ **Check that the batteries and fuses have been reconnected and are working properly.**
- ☐ **Test the functions of the control pendant are working properly.**
  - With the top switch "UP" (Hoist), operate the bottom toggle "RIGHT" to un-spool the cable, and "LEFT" on the toggle to spool the cable in.
  - With the top switch "DOWN" (Hoist), operate the bottom toggle "LEFT" to lift/raise the hoist up, and "RIGHT" on the toggle to lower the hoist down.
- ☐ **Test the system to its maximum operating capacity, by fully operating the winch cable out and in, and raising and lowering the hoist system.**
- ☐ **Apply the final warning and Danger decals provided in manual bag**

FINAL-STAGE CERTIFICATION

Once Installation Completion Checklist is completed before placing the Final Stage Certification indicated in the PRE-INSTALLATION section (page 8)

- ☐ **Complete the final-stage certification [white-label]**
- ☐ **Complete the load carrying capacity modification [yellow-label]**
- ☐ **Identify hoist identification tag as show on (page 6) & fill the hoist serial number & model**
- ☐ **Sign and initial that the vehicle is ready for operation. Please review operation manual for more information on how to properly operate the Switch-N-Go® Hoist System.**

Serial Number ☐☐☐☐☐ Model ☐☐☐☐☐☐☐☐☐☐☐☐

Installer Company _____ Installer Initials _____ Install Date __/__/____

Appendix

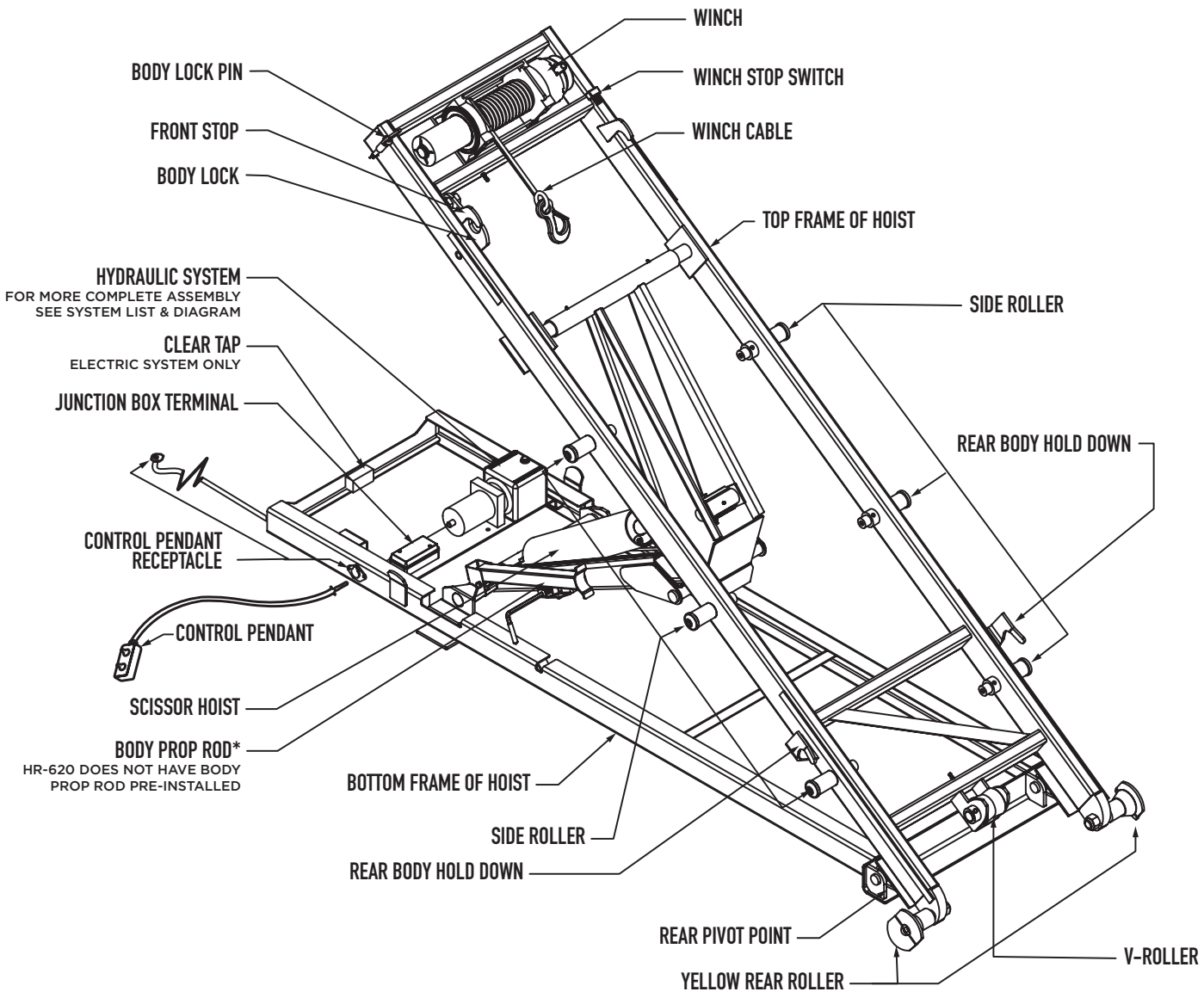
Torque Table

Size	 Grade 2 Coarse	Grade 2 Fine	 Grade 5 Coarse	Grade 5 Fine	 Grade 8 Coarse	Grade 8 Fine	 18-8 S/S Coarse	18-8 S/S Fine
#4*	—	—	—	—	—	—	5.2	—
#6*	—	—	—	—	—	—	9.6	—
#8*	—	—	—	—	—	—	19.8	—
#10*	—	—	—	—	—	—	22.8	31.7
1/4″	4	4.7	6.3	7.3	9	10	6.3	7.8
5/16″	8	9	13	14	18	20	11	11.8
3/8″	15	17	23	26	33	37	20	22
7/16″	24	27	37	41	52	58	31	33
1/2″	37	41	57	64	80	90	43	45
9/16″	53	59	82	91	115	129	57	63
5/8″	73	83	112	128	159	180	93	104
3/4″	125	138	200	223	282	315	128	124
7/8″	129	144	322	355	454	501	194	193
1″	188	210	483	541	682	764	287	289

*Size from 4-10 are in lb-in
Size from 1/4 up are lb-ft

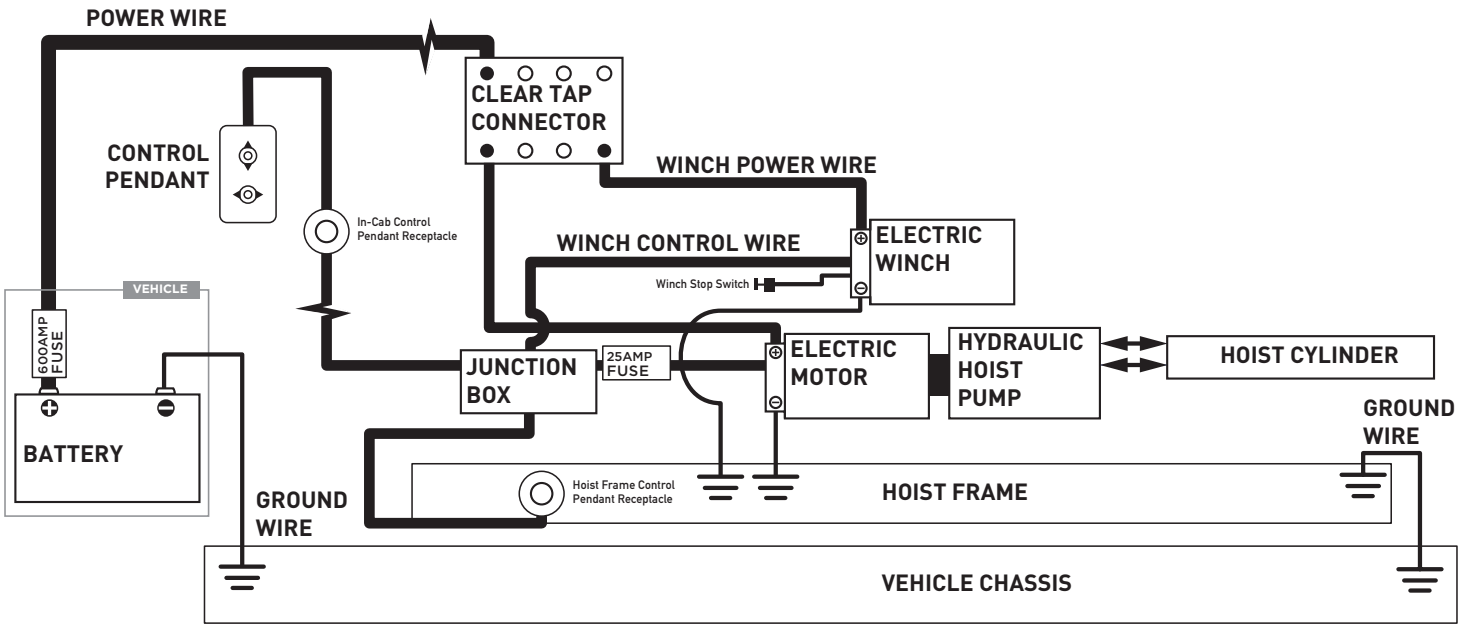
†Fine thread figures are 1-14
Grade 2,5 & 8 values are plated bolts

COMMON PARTS

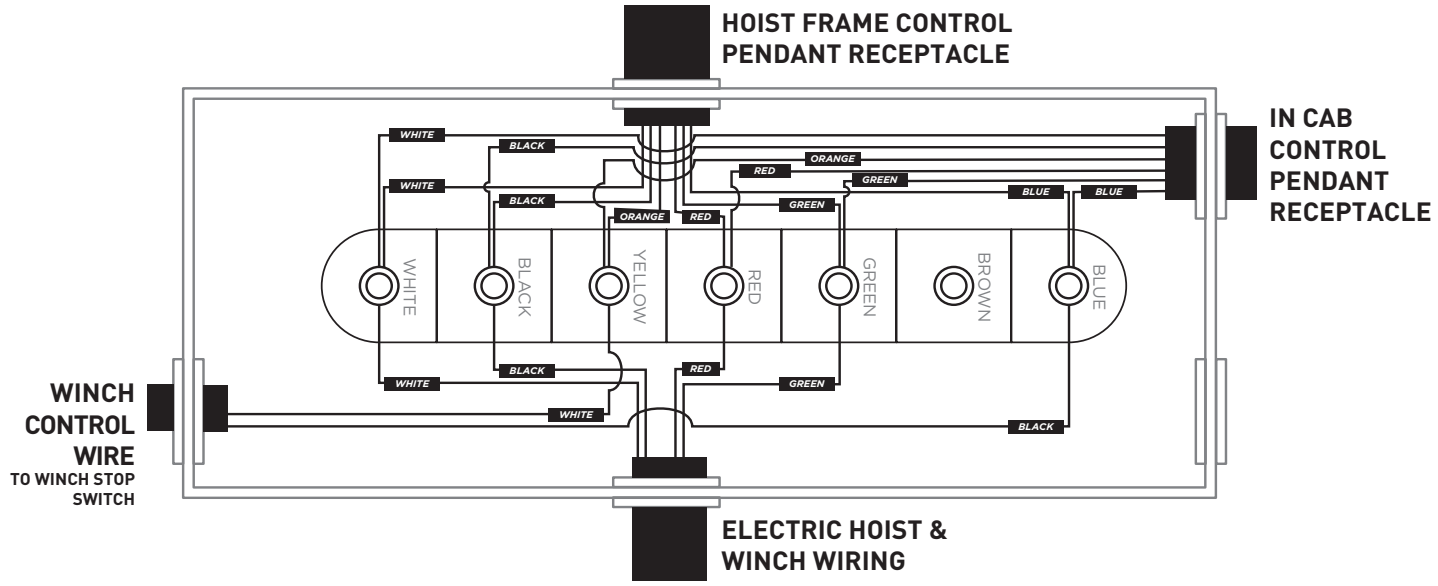


FOR MORE COMPLETE ASSEMBLY
SEE SYSTEM LIST & DIAGRAM
See Page 50-53

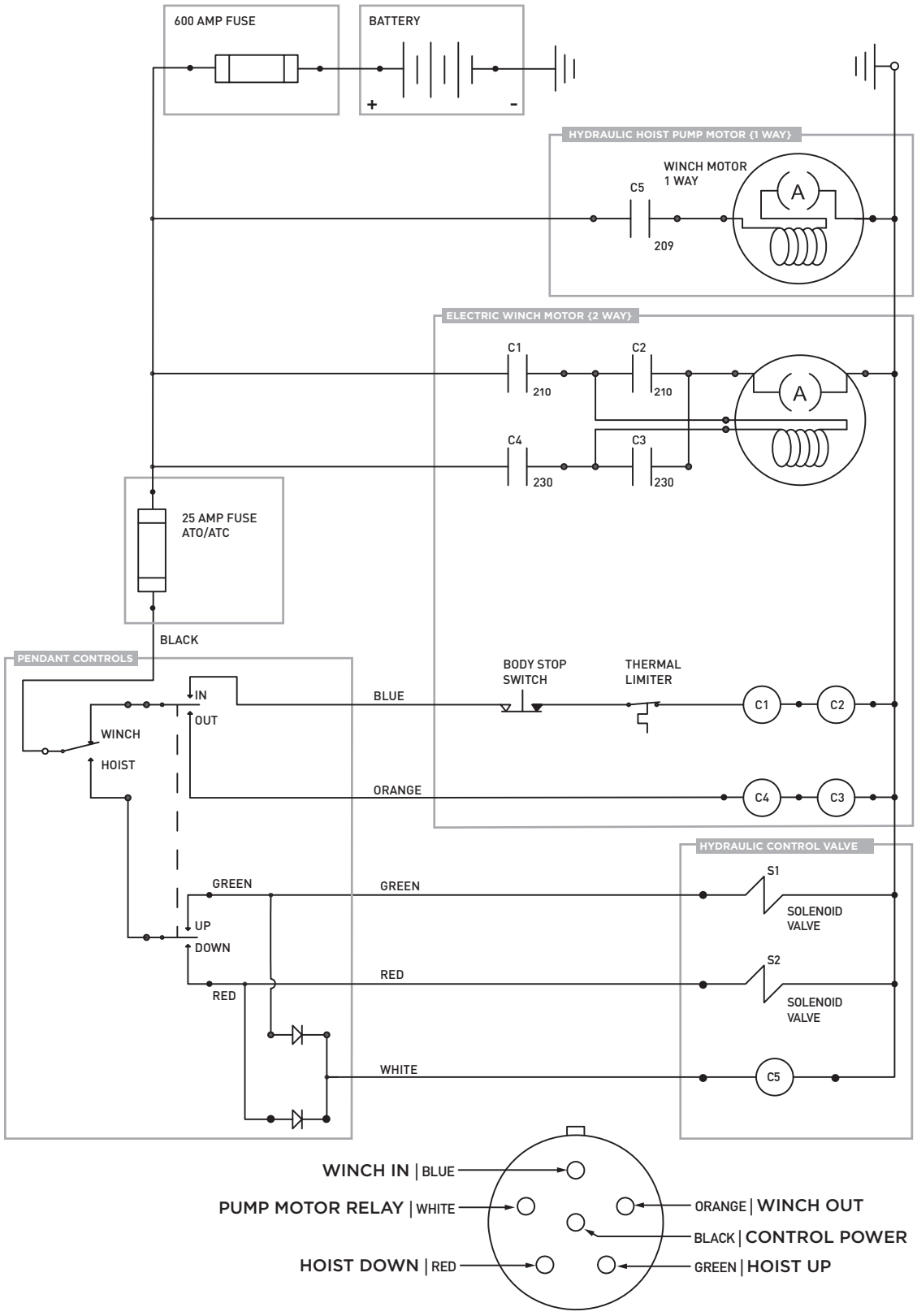
SYSTEM DIAGRAM {ELECTRIC OVER HYDRAULIC SYSTEM}



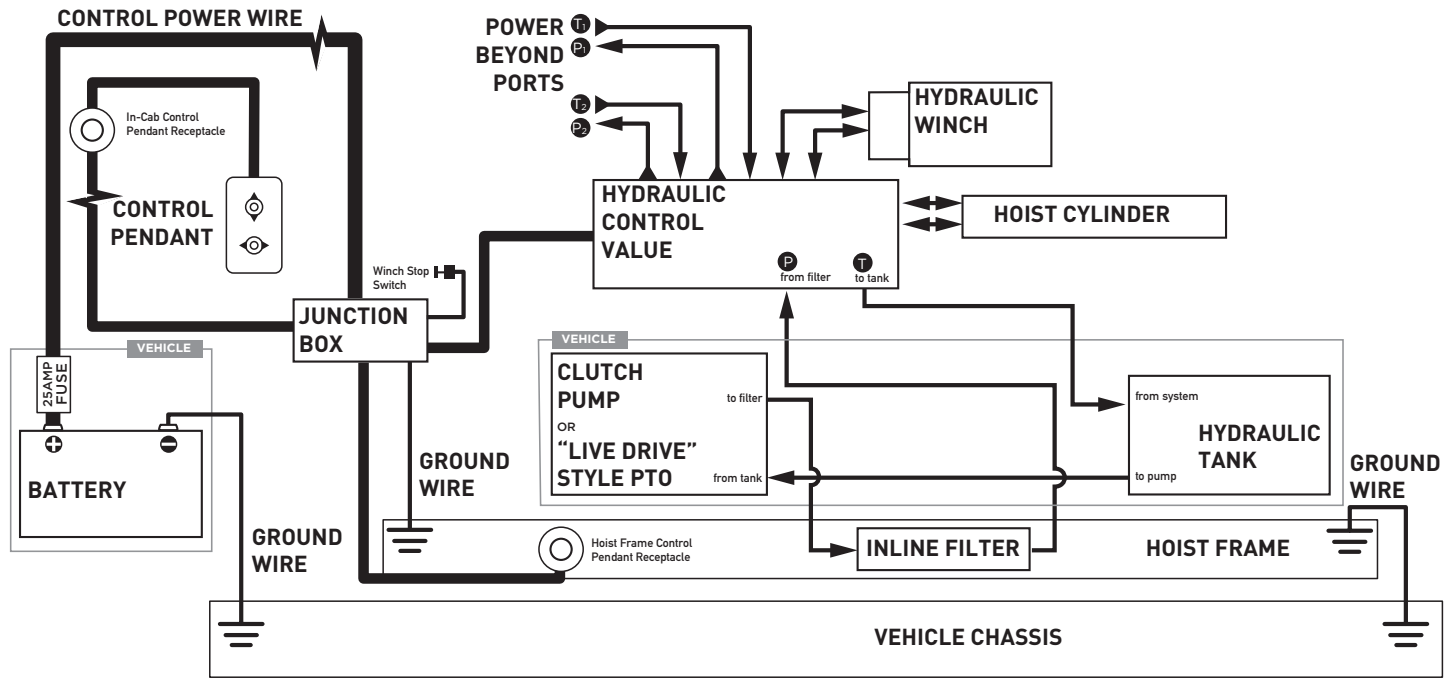
JUNCTION BOX DIAGRAM {ELECTRIC OVER HYDRAULIC SYSTEM}



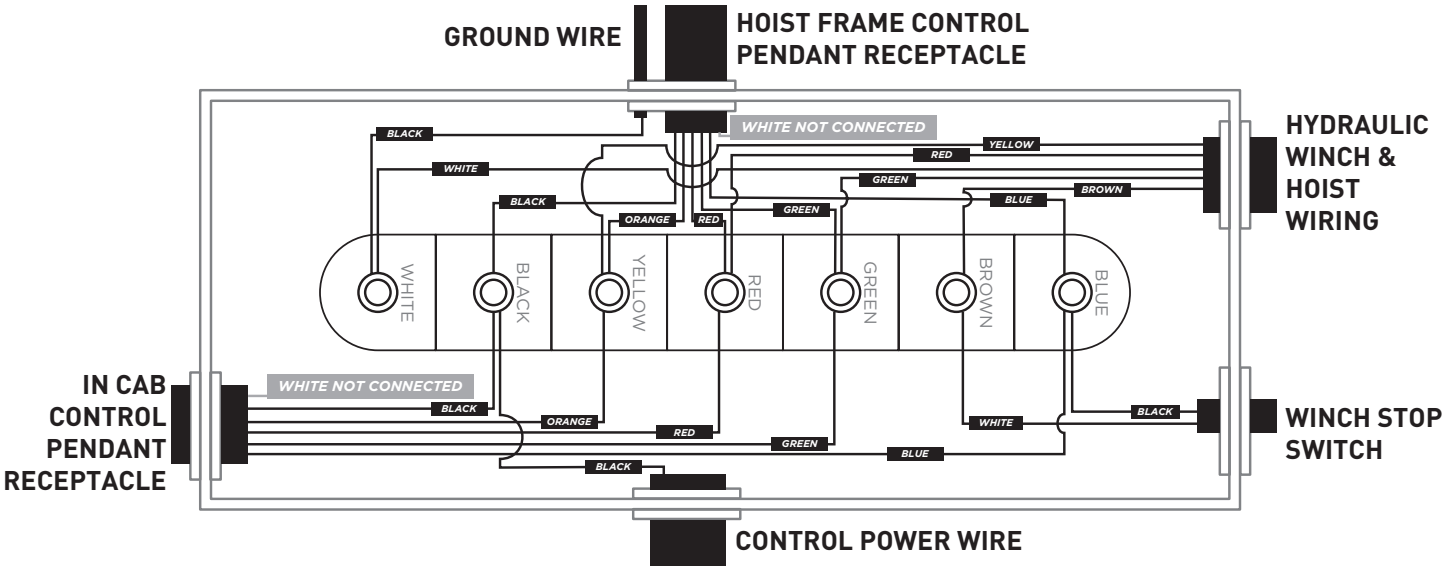
ELECTRICAL DIAGRAM {ELECTRIC OVER HYDRAULIC SYSTEM}



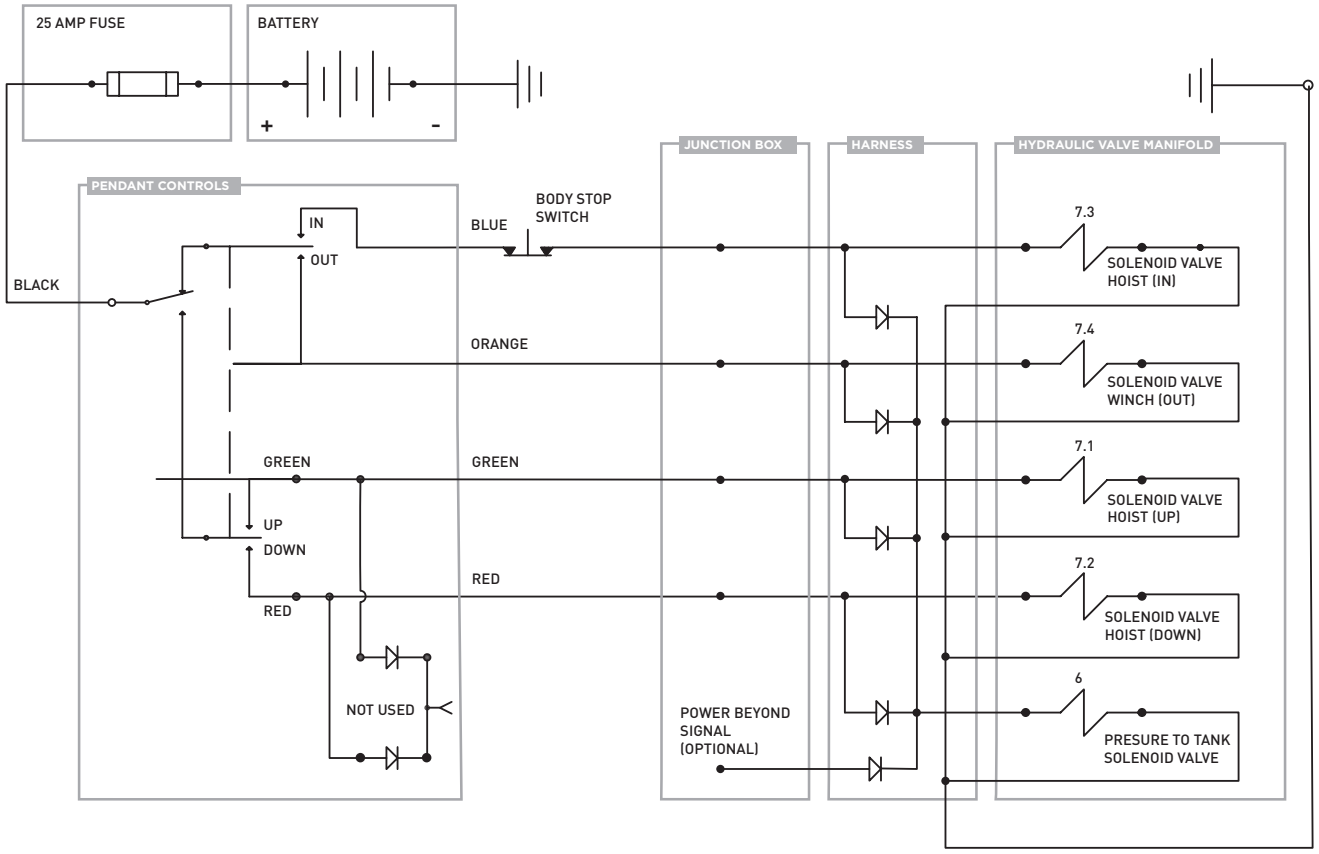
SYSTEM DIAGRAM {FULL HYDRAULIC SYSTEM}

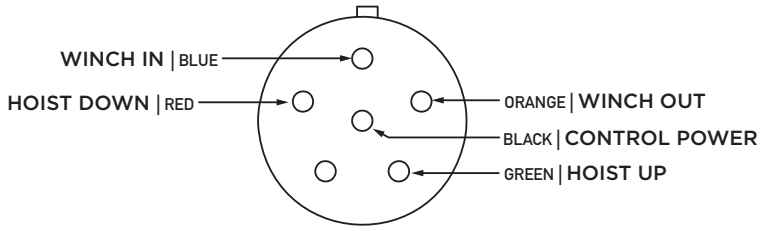


JUNCTION BOX DIAGRAM {FULL HYDRAULIC SYSTEM}

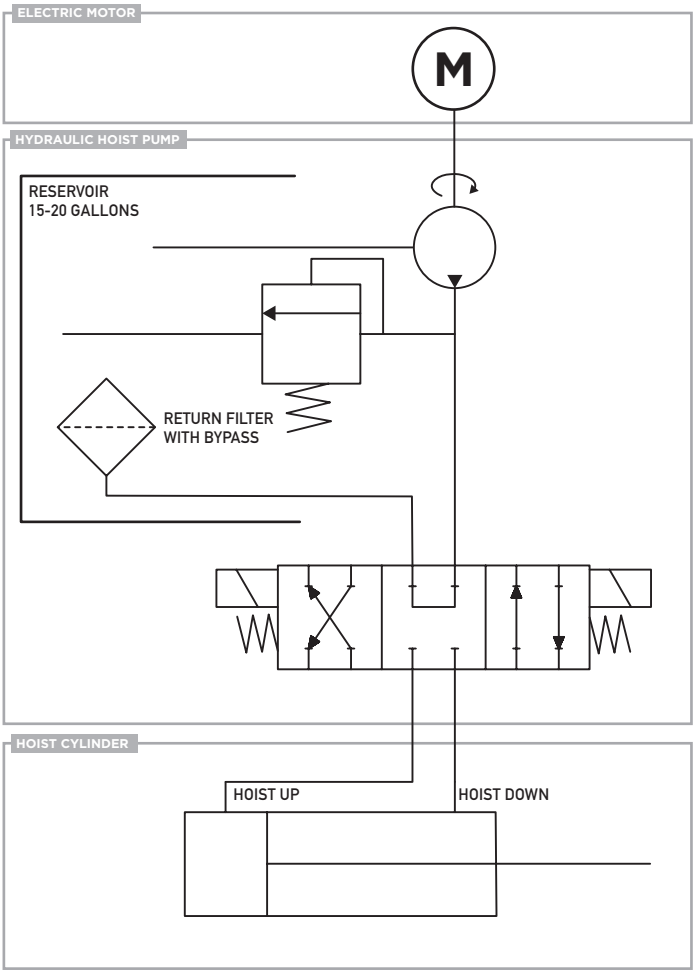


ELECTRICAL DIAGRAM {FULL HYDRAULIC SYSTEM}

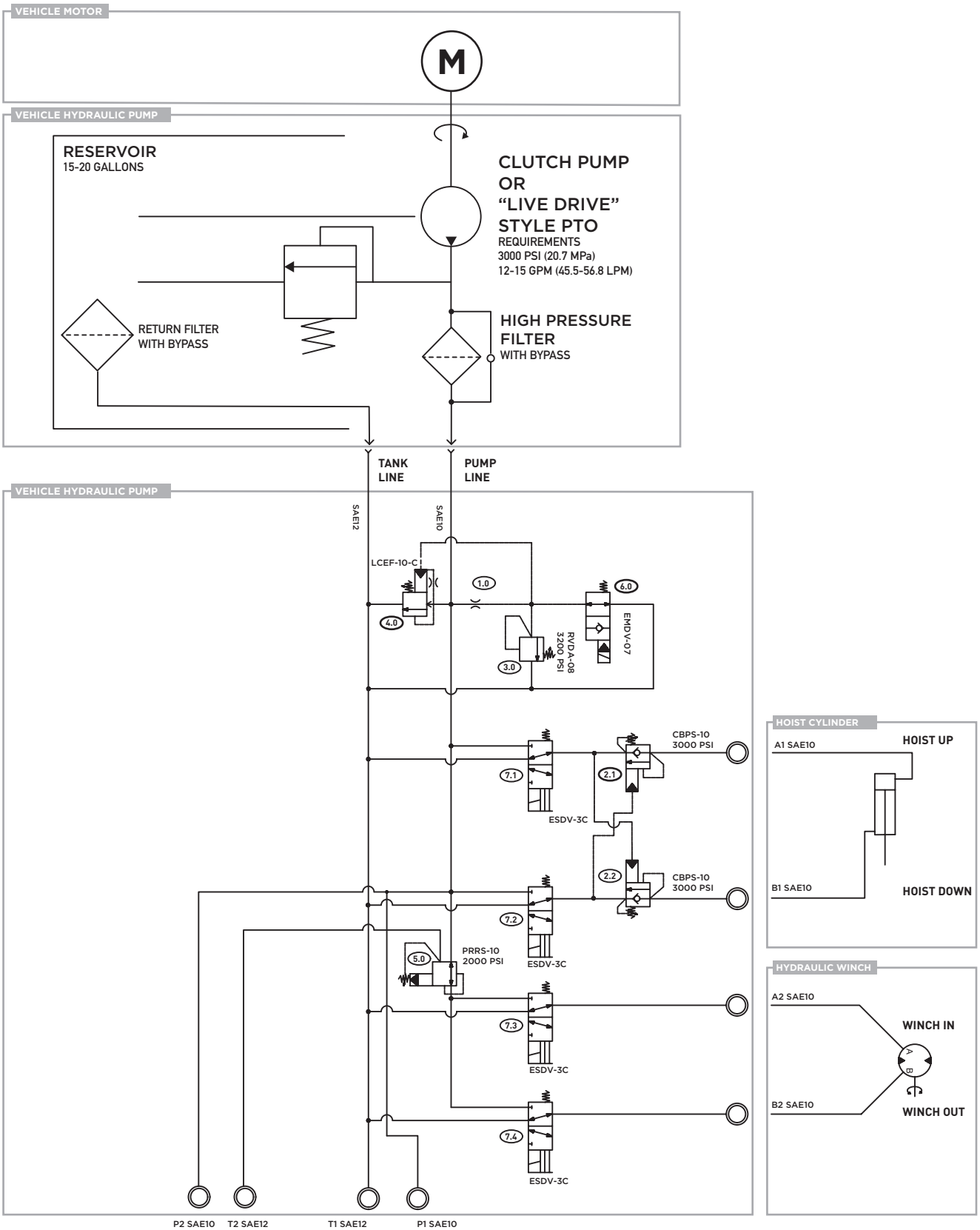




HYDRAULIC DIAGRAM {ELECTRIC OVER HYDRAULIC SYSTEM}



HYDRAULIC DIAGRAM {FULL HYDRAULIC SYSTEM}

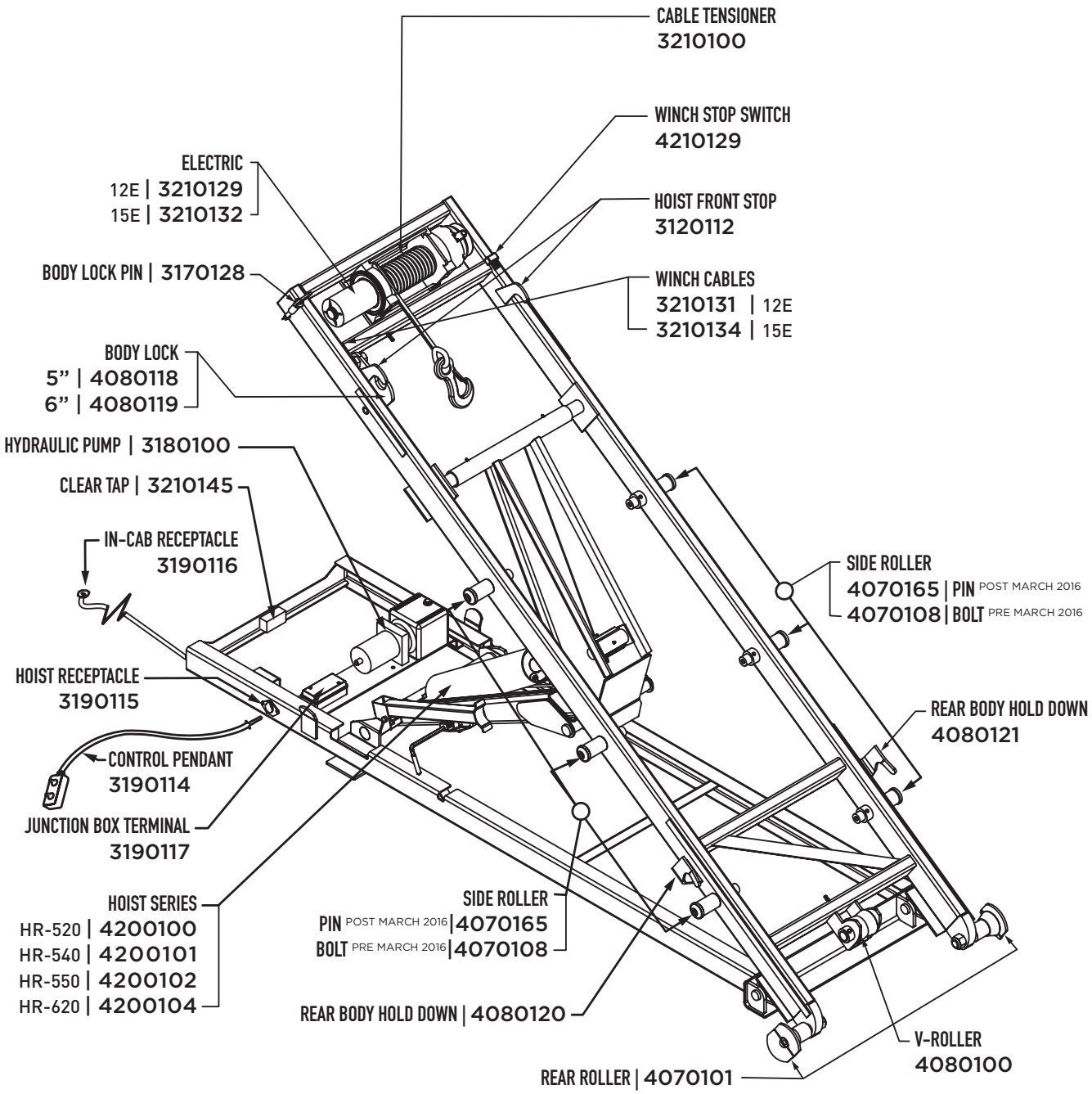


Parts/Components

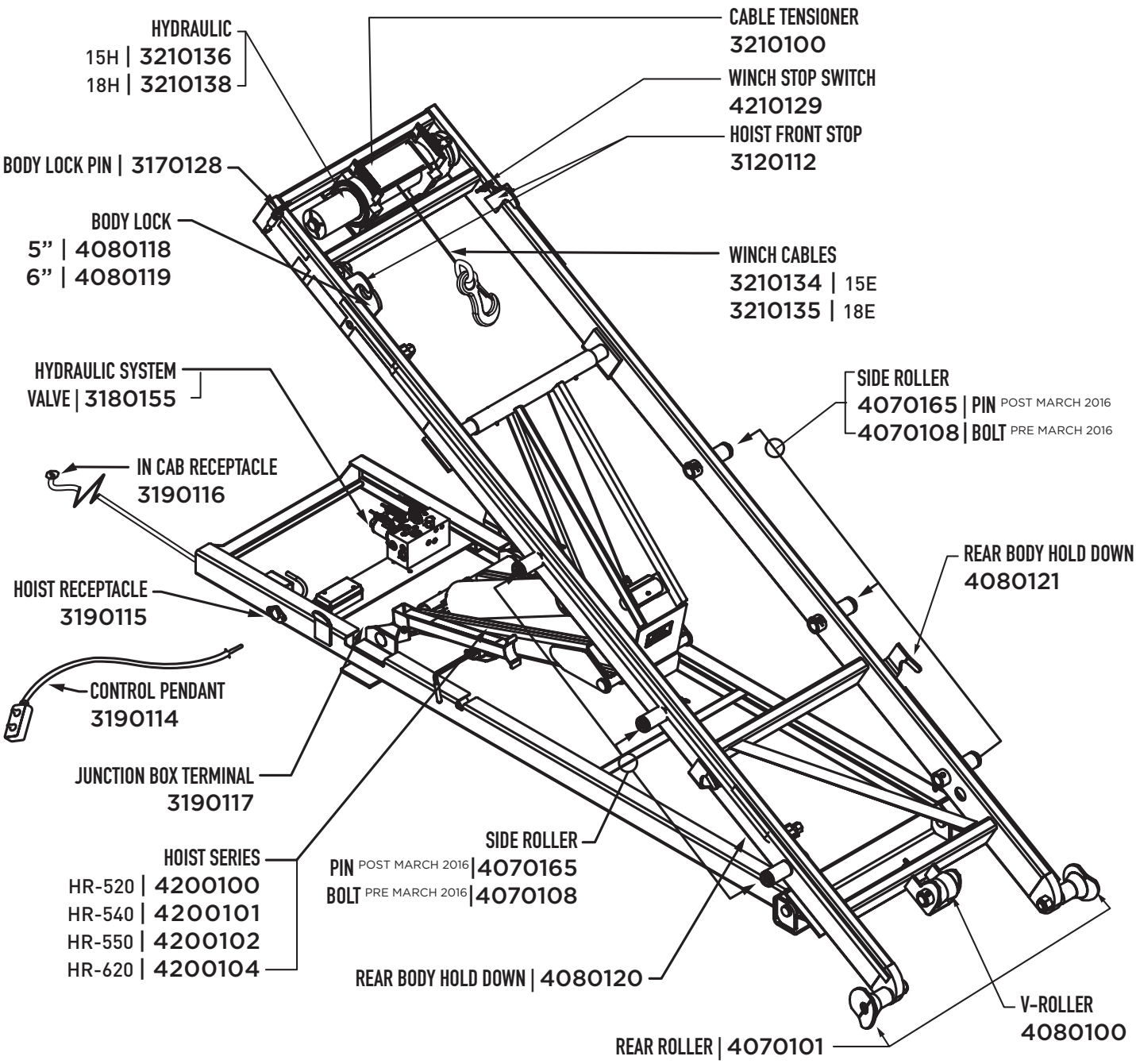
Part Number	Part Name	Description
1150133	Switch-N-Go® Pump Cover	Individual Protective Cover for the Hydraulic Motor Components
3170174	19.5" Plastic Fenders w/ Mounting Kit	One pair of plastic fenders for tires 19.5 tires, with mounting brackets kit
3170175	22.5" Plastic Fenders w/ Mounting Kit	One pair of plastic fenders for tires 19.5 tires, with mounting brackets kit
3170178	19.5" Plastic Fender Mounting Kit	Pair of 19.5" fender adjustable mounting tube and brackets
3170179	22.5" Plastic Fender Mounting Kit	Individual 22.5" fender mounting plated tubes
3170347	19.5 Fender Support Hardware Kit	Set (4) 19.5" fender mounting clamps for a 19.5" plastic fender
3170348	22.5 Fender Support Hardware Kit	Individual set (4) 22.5 fender mount clamps for a 19.5" plastic fender
3170841	19.5 Plastic Fender	Individual Replacement 19.5" plastic fender
3171003	22.5 Plastic Fender	Individual Replacement 22.5" plastic fender
3180129	Solenoid / Motor Start Cover	Individual Protective Cover over the solenoid / motor start cover
3190114	Control Pendant & 4' Cord	Individual control pendant with 4' cord with 6-pole round plug for Switch-N-Go® hoist system
3190115	6-pole Receptacle & 2' Cord	Individual 6-pole round receptacle with 2' electrical cord
3190116	6-pole Receptacle & 20' Cord	Individual 6-pole round receptacle with 20' electrical cord
3190117	Junction Box Terminal	Individual 7-terminal junction box with 5 access points
3190130	600 AMP ANL Fuse	Individual 600 AMP ANL fuse for Switch-N-Go® Electric hoist system
3190131	INLINE BLADE FUSE HOLDER	Individual 25 AMP ATO/ATC blade fuse block holder for Switch-N-Go® Hydraulic hoist system
3190132	25 AMP ATO/ATC BLADE FUSE	Individual 25 AMP ATO/ATC blade fuse for Switch-N-Go® Hydraulic hoist system
3190133	Fuse Block Holder	Individual ANL fuse block holder for Switch-N-Go® Electric hoist system
3210145	Clear Tap (Large)	Individual large 1.25T 3 sided 12 port clear tap
3210153	Contactor Control Pack Cover	Individual protective Warn® contactor control pack cover
4000201	Fuel Filler Rod	Individual fuel fill access support rod
4210128	Narrow Frame Mount Bracket	Individual narrow hoist mount bracket for 31" width chassis frames
3170128	5/8" Body Lock Pin	Individual blue poly-coated 5/8" body lock pin
3170478	Breather Cap	Individual breather cap for hydraulic pump reservoir for a Switch-N-Go® Electric hoist system
3170656	Pump Reservoir	Hydraulic pump reservoir & clamp for a Switch-N-Go® Electric hoist system
3180100	Hydraulic Pump	Bucher® hydraulic pump for a Switch-N-Go® Electric hoist system
3180101	Solenoid	Solenoid for Bucher® hydraulic pump for a Switch-N-Go® Electric hoist system
3180102	Moncoil 10V DC	Moncoil for Bucher® hydraulic pump for a Switch-N-Go® Electric hoist system
3180122	Valve Manifold	Standard valve manifold for a Switch-N-Go® Hydraulic hoist system without hoses
3180125	Power Beyond Hydraulic Valve	Power Beyond valve manifold for a Switch-N-Go® Hydraulic hoist system without hoses
3210100	Cable Tensioner for 10" Drum	Cable tensioner kit for all 10" drum Warn® winches for a Switch-N-Go® hoist system
3180155	Hydraulic Manifold w/ Harness	Bucher® replacement hydraulic manifold with harness
3180158	Directional Control Valve	Bucher® replacement directional valve cartridge
3180159	Counterbalance Valve	Bucher® Individual replacement for counterbalance valve cartridge
3180160	Pressure Relief Valve (Hoist)	Bucher® hoist system pressure relief valve cartridge
3180161	Pressure Relief Valve (WInch)	Bucher® winch pressure relief valve cartridge
3190154	Valve Solenoid (3W)	Bucher® 3w solenoid coil assembly
3190155	Valve Solenoid (27W)	Bucher® 27w solenoid coil assembly
3190153	Control Valve Wiring Harness	Bucher® Control Valve Wiring Harness
3180171	Inline Filter	Standard Hydraulic 3/4" SAE12 Inline Filter
3180173	Flexible Filter Hose	Standard Hydraulic 3/4" SAE12 Inline Filter Hose
3180174	Hard Filter Tube	Standard Hydraulic 3/4" SAE12 Filter Rigid Tube

Part Number	Part Name	Description
3210102	Relay Block	Warn® winch relay block (contactor block) for a Switch-N-Go® hoist system
3210129	Electric Winch-12,000lbs	Switch-N-Go® and Warn® replacement winch for 12,000lbs Switch-N-Go® Electric hoist system
3210130	Replacement Motor-12,000lbs	Motor for 12,000 pound Warn® winches for a Switch-N-Go® Electric hoist system
3210131	7/16" Cable-12,000lbs	7/16" Switch-N-Go® standard cable rated for 12,000lbs in a 25' length, replacement for 12E winches
3210132	Electric Winch-15,000lbs	Switch-N-Go® and Warn® replacement winch for 15,000lbs Switch-N-Go® Electric hoist system
3210133	Replacement Motor-15,000lbs	Motor for 15,000 pound Warn® winches for a Switch-N-Go® Electric hoist system
3210134	Cable 1/2" Standard-15,000lbs	1/2" Switch-N-Go® standard cable rated for 15,000lbs in a 25' length, a replacement for 15E or 15H winches
3210135	Cable 1/2"-X Heavy Duty-18,000lbs	The Switch-N-Go® 1/2" heavy duty cable rated for 18,000lbs in a 25' length, a replacement for 18H winches
3210136	Hydraulic Winch-15,000lbs	Switch-N-Go® and Warn® replacement winch for 15,000lbs Switch-N-Go® Hydraulic hoist system
3210138	Hydraulic Winch-18,000lbs	Switch-N-Go® and Warn® replacement winch for 18,000lbs Switch-N-Go® Hydraulic hoist system
4070100	V-Roller Assembly	Rear cable v-roller assembly for a Switch-N-Go® hoist system
4070101	Yellow Rear Roller Assembly	Individual yellow rear roller assembly and nut for a Switch-N-Go® hoist system
4070108	Side Roller-Bolt (discontinued)	Individual side roller with grade 8 bolt, this is the discontinued model Previously to March 2016
4070165	Side Roller-Pin	Individual side roller with cotter pin this is the current model after March 2016
4210129	Winch Stop Switch	Winch shut off switch assembly with bracket and wiring harness Switch-N-Go® hoist system
4080118	Hoist Body Lock 5"	Individual 5" body lock for Switch-N-Go® hoist system
4080119	Hoist Body Lock 6"	Individual 6" body lock for Switch-N-Go® hoist system
3120112	Hoist Front Stop	Individual hoist body stop for Switch-N-Go® hoist system
4080120	Rear Body Hold Down Driver-side	Individual rear body hold down for Switch-N-Go® hoist system on driver-side
4080121	Rear Body Hold Down Passenger-side	Individual rear body hold down for Switch-N-Go® hoist system on passenger-side

PARTS DIAGRAM {Electric over Hydraulic}



PARTS DIAGRAM {HYDRAULIC SYSTEM}



Vehicle Upfit Table

⚠ NOTE

This table is to show the Switch-N-Go® hoist model capacities:

- **Winch Load Capacity | Represents the weight strength of the winch while pulling the body onto the hoist.**
- **Dumping Capacity | Represents the maximum capacity the scissor hoist system can lift a water-level load up to approximately 50° dump angle.**
- **Minimum Cab to End of Frame | Represents the maximum distance between the vehicle's cab to end of the chassis frame.**
- **Typical Cab to Axle Length | Represents the maximum distance between the vehicle's cab to the center of the vehicle's axle.**

ORIGINAL ELECTRIC

Standard Model - 18" hoist overhang

Model Name	Winch Loading Capacity (WLC) (lbs)	Dumping Capacity (DC) (tons)	Minimum Cab to End of Frame Length (CEF) (in.)	Typical Cab to Axle Length (CA) (in.)
9-516-15E-PW	15,000	11.6	108" (9')	60"-72"
10-516-12E-PW	12,000	10.0	120" (10')	72"-84"
10-516-15E-PW	15,000	10.0	120" (10')	72"-84"
11-520-12E-PW	12,000	10.6	132" (11')	84"-96"
11-520-15E-PW	15,000	10.6	132" (11')	84"-96"
11-620-15E-PW	15,000	11.7	132" (11')	84"-96"
12-620-12E-PW	12,000	10.7	144" (12')	96"-108"
12-620-15E-PW	15,000	10.7	144" (12')	96"-108"
13-620-15E-PW	15,000	9.6	156" (13')	108"-120"
14-620-15E-PW	15,000	8.6	168" (14')	120"-138"
14-620HD-15E-PW	15,000	11.0	168" (14')	120"-138"

S-MODEL ELECTRIC

S-Model - 6" hoist overhang

Model Name	(WLC)	(DC)	(CEF)	(CA)
9S-516-12E-PW	12,000	9.5	108" (9')	60"-72"
9S-516-15E-PW	15,000	9.5	108" (9')	60"-72"
10S-516-12E-PW	12,000	9.0	120" (10')	72"-84"
10S-516-15E-PW	15,000	9.0	120" (10')	72"-84"
11S-520-12E-PW	12,000	8.6	132" (11')	84"-96"
11S-520-15E-PW	15,000	8.6	132" (11')	84"-96"
12S-620-15E-PW	15,000	9.6	144" (12')	96"-108"
13S-620-15E-PW	15,000	9.0	156" (13')	108"-120"
14S-620-15E-PW	15,000	8.1	168" (14')	120"-138"

ORIGINAL HYDRAULIC

Original - 18" hoist overhang

Model Name	(WLC)	(DC)	(CEF)	(CA)
9-516-15H	15,000	11.6	108" (9')	60"-72"
10-516-15H	15,000	10.0	120" (10')	72"-84"
11-520-15H	15,000	10.6	132" (11')	84"-96"
11-620-15H	15,000	11.7	132" (11')	84"-96"
11-620HD-18H	18,000	12.5	132" (11')	84"-96"
12-620-15H	15,000	10.7	144" (12')	96"-108"
12-620-18H	18,000	10.7	144" (12')	108"-120"
13-620-15H	15,000	9.6	156" (13')	108"-120"
13-620HD-18H	18,000	11.6	156" (13')	108"-120"
14-620HD-15H	15,000	11.0	168" (14')	120"-138"
14-620HD-18H	18,000	11.0	168" (14')	120"-138"

S-MODEL HYDRAULIC

S-Model - 6" hoist overhang

Model Name	(WLC)	(DC)	(CEF)	(CA)
9S-516-15H	15,000	9.5	108" (9')	60"-72"
10S-516-15H	15,000	9.0	120" (10')	72"-84"
11S-520-15H	15,000	8.6	132" (11')	84"-96"
11S-620-15H	15,000	10.0	132" (11')	84"-96"
11S-620HD-18H	18,000	11.7	132" (11')	84"-96"
12S-620HD-15H	15,000	10.7	144" (12')	96"-108"
12S-620HD-18H	18,000	10.7	144" (12')	96"-108"
13S-620HD-15H	15,000	9.6	156" (13')	108"-120"
13S-620HD-18H	18,000	9.6	156" (13')	108"-120"
14S-620HD-15H	15,000	9.0	168" (14')	120"-138"
14S-620HD-18H	18,000	9.0	168" (14')	120"-138"

Troubleshooting

PROBLEM OR ISSUE	REASON FOR PROBLEM OR ISSUE	SOLUTION OR FIX
Neither winch nor hoist will respond	— Control pendant disconnected — 12V DC power disconnected — Weak or missing batteries	— Reconnect Pendant Controller — Check fuse(s), if bad replace fuse(s)and reconnect battery. — Test batteries with volt meter if bad replace the batteries. Review vehicle battery requirements have been installed
Hoist will not raise	— Bad wire within control pendant — Batteries is disconnected — Lack of oil within the hydraulic tank — Bad ‘G’ coil	— Trace the damaged wire from the “UP” toggle within the control pendant and fix damaged wire(s) — Check fuse(s), if bad replace fuse(s)and reconnect battery. — Fill the hydraulic tank and check for leaks or clogged breathers. — Replace ‘G’ coil
Hoist will not lower	— Bad ‘R’ coil — Body prop rod is engaged or is in the "UP" position — Too much rear overhang weight — Batteries is disconnected — Lack of oil in hydraulic tank — Foreign obstruction between top frame and bottom frame of the hoist. — Broken or cut hydraulic line to C2 port	— Replace ‘R’ coil — Disengage body prop rod and return to the "DOWN" position — Move load forward before lowering — Check fuse(s) or batteries, if bad replace fuse(s) and reconnect battery. — Fill the hydraulic tank and check for leaks or clogged breathers — Remove any foreign object — Fix or repair hydraulic line leaks or breaks
Fluid leaks from hydraulic tank	— Clogged breather cap — Valve stuck part way "IN" — Load raises hoist cylinder faster than pump can receive oil to tank	— Clean breather cap — Take the valve out and look for foreign objects, look at the ‘R’ and ‘G’ coils — Load too heavy
Winch will not move in either direction	— Battery(s) is disconnected — Winch motor is defective	— Check fuse(s), if bad replace fuse(s)and reconnect battery. — Check fuse(s), if fuse(s) are bad replace fuse(s) — Replace the winch motor *see winch manual
Winch moving outward when Toggle is pressed "IN" direction	— Wires to winch "IN" and "OUT" buttons are reversed — Winch cable was re-spooled in the wrong direction — Cable wedged between bottom layers of winch cable	— Reverse wires to buttons in pendant — Run winch cable all the way out, and re-spool in the correct direction over the front drum and under to the cable anchor hole — Dislodge cable then check for damage.

PROBLEM/ISSUE	REASON FOR PROBLEM/ISSUE	SOLUTION/FIX
Winch moving inward when toggle is pressed "OUT" direction	— Wires to “IN” and “OUT” buttons are reversed — Winch was re-spooled in the wrong direction — Cable wedged between bottom layers of winch cable	— Reverse wires to buttons in pendant — Run winch cable all the way out, and re-spool in the correct direction over the front drum and under to the cable anchor hole — Dislodge cable then check for damage.
Winch does not pull load on	— Exceeded pay load capacity of winch — Battery(s) is disconnected — Too much ground resistance — Broken or disconnected wire in pendant — Too many coils of winch cable on winch drum — Loaded body may be frozen to ground — Winch motor defective — Winch gears damaged	— Remove portion of pay load off the loaded body — Check fuse(s), if bad replace fuse(s)and reconnect battery. — Slowly reverse vehicle under the load while winching cable "IN" — Fix or replace pendant cable or wire — Reduce the number of cable coils by shortening the 25’ length cable — During cold weather, put boards on the ground under body wheels — Replace motor in winch — Replace gears in winch
Winch will not unload the load	— Battery(s) is disconnected — Wire to toggle in control pendant is broken or is disconnected — Body lock did not disengage	— Check fuse(s), if bad replace fuse(s)and reconnect battery. — Dismantle control pendant and fix wiring or replace pendant — Pull load ahead by depressing the winch “IN” button to allow the body lock to drop out
Winch cable pulls out of the winch	— Not enough winch cable wraps around the drum of the cable winch — Too much shock load created by excessive slack in cable — Set screw in drum was not torqued to proper specs	— Must maintain a minimum of 5 wraps on the winch drum at all times — Always keep slack down to a minimum — Be sure that set screw on drum is torqued to proper specs. Torque the set screw to 12 - 15 lbs-ft.
Winch motor is getting too hot during operation	— Too long of a lift for heavy loads — Bad motor, brushes are getting worn out — Internal grounding of DC motor — Insufficient DC power source — Winching loads above rated capacity of winch. — Bad, broken or frayed connection	— Reduce lift time, 1 minute on, 5 minutes off and wait 1 hour before another lift — Replace motor — Replace motor — Check alternator, battery, and wires for damage and corrosion — Keep all loads less than the rated load of the winch. — Check all connections
All other winch problems	— Different winch load capacity model used on different capacity loaded systems	— See winch manual provided with hoist system for particular troubleshooting table and solutions

Notes

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