



OPERATOR MANUAL

S-003
PN:3300001
Revision 11/25/2020

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REGISTER YOUR HOIST SYSTEM

Improve your Switch-N-Go® experience by taking a few minutes to register your hoist system.

To register your hoist system, you will need the following information:

- Hoist Model Name (Ex. xx-xx-xxx-xx)
- Serial Number (found on the driver's side of the hoist system)
- Proof of Purchase (invoice or bill of sale)
- Company Installation Information

You can find more about this information on page 19, UNDERSTANDING YOUR HOIST SYSTEM.

Once all required fields are completed, select REGISTER at the bottom of the form to receive confirmation of your hoist system registration.



SCAN THIS CODE

to register for your warranty or visit us at switchngo.com/registerhoist



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Please read and follow all safety decals and the operator manual before using the Switch-N-Go® Hoist System & Interchangeable Truck Bodies.

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OPERATOR PRECAUTIONS

You must be trained to operate a Switch-N-Go® hoist system. The operator manual is not a training manual. It is a guide to help trained and authorized operators safely operate this Switch-N-Go® hoist system by illustrating and emphasizing the correct techniques. However, this manual cannot cover every possible situation that may result in an accident and the operator must watch for potential hazards during operation of the hoist system.

This product is built to take hard use, but not excessive abuse. It is only as safe and efficient as the operator and person maintaining it. Do not use it for unintended purposes. Do not make any repairs unless you have been trained in safe vehicle and Switch-N-Go® hoist system procedures and/or are authorized by your vehicle/system owner. The Switch-N-Go® electric system is designed for up to 6 loaded winch draws per operational day. Exceeding the 6 loaded winch draws per operational day will cause the electric winch motor to overheat, resulting in permanent damage. Let the winch motor cool down before resuming operation. The Switch-N-Go® hydraulic system is designed for unlimited number of winch draws and lifts per day. Before you start operating the winch or hoist, be sure you understand all the procedures. Likewise, do not operate a damaged or malfunctioning vehicle or hoist system.

KNOW YOUR TRUCK. Practice operating your system safely. Keep your truck in safe operating condition with the correct and proper maintenance.

Do not consume/use drugs or alcohol before or during operating/driving of machinery



Always maintain a safe operating distance to vehicles, or structures or surroundings



WARNING INDICATORS

Safety decals or instructional procedures are placed in this manual and on the hoist system and truck bodies to provide safe operating precaution or procedures to identify potential hazards. Misuse or failure to operate the system as instructed can lead to damage, serious injury or death.

 **DANGER**

 **DANGER**

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

 **WARNING**

 **WARNING**

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

 **CAUTION**

 **CAUTION**

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

NOTICE

 **NOTICE**

Indicates information considered important, but not hazard-related



WINCH PRECAUTIONS

- Before initial use of your winch, test the system is working properly. **TO MAKE SURE KEEP HANDS AWAY FROM WINCH CABLE AND HOOK WHILE WINCH TESTING.**
- Never touch the winch cable or hook while it is in tension or under load. Even at rest, the winch cable may have tension.
- Always wear heavy-duty leather gloves when handling the winch cable as to protect hands from contact with the lubricated wire cable.
- Never handle the winch cable while another individual is operating the controls of the system or vehicle.
- Always stand clear of the winch cable and or loaded body during operation of the winch, as a cable may pull loose or breaks while under load this can cause damage or injury. Always be mindful of your own safety and the safety of others
- Always be certain the cable that you intend to use is capable of withstanding the load.
- Operate the winch with common sense and never wrap the cable around an object or a person and hook it back to the winch cable as this will cause damage or injury.
- The winch must maintain a minimum of 5 wraps on the drum in the direction indicated on the winch. With fewer wraps, the winch cable could break loose from the drum under heavy load.
- The winch cable spooling can accidentally be reversed by running the winch cable all the way out and respool in the opposite direction causing the winch spool in when control is toggled "OUT".
- Never exceed the rated capacities of the system's winch or vehicle's (GVWR) by understand the weight of the lifted load.
- Always load a body parallel with the hoist to minimize the coil buildup of winch cable on only one end of the spooling drum.

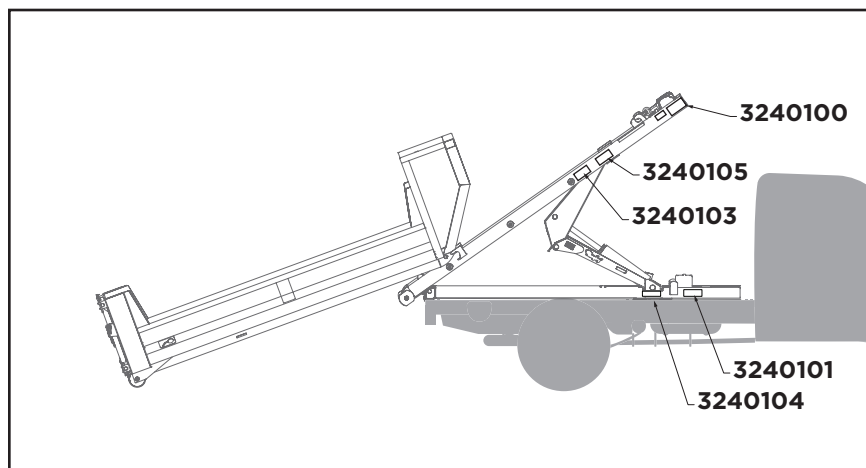
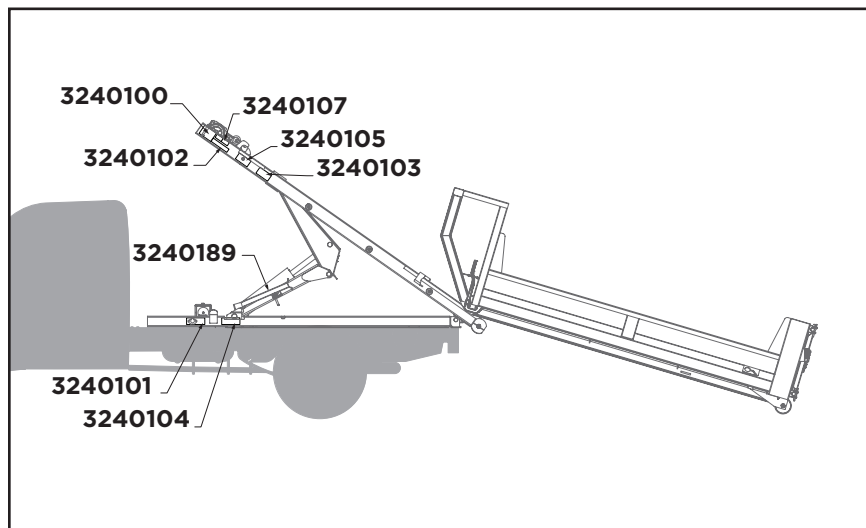


- Operate the winch controls smoothly, and reduce any slack to avoid shock loads which can momentarily exceed the winch and winch cable rating.
- The life of the winch cable is directly related to the care it receives. New winches cables or replacement winch cables, **MUST BE STRETCHED AND RESPOOLED UNDER LOAD** before operating the winch. Failure to do this will result in premature winch cable damage.
- To prepare the winch for heavy loads, un-spool the winch cable and tightly level wind winch cable onto the drum. Draw the body with minimal winch cable on drum. This will minimize winch cable damage, such as mashing and kinking, caused from top layers pulling down into bottom layers when short pulls are made. The greatest loading power is available at the first layer on the drum, decreasing with each successive coil.
- Always inspect winch cable for mashed, pinched, or frayed areas when winching the cable "OUT", as this severely reduces the original tensile strength of the winch cable and should be replaced if there are any cable issues.
- When spooling in winch cable, be sure to distribute the winch cable evenly and tightly onto the drum. This prevents the top layers of winch cable from being drawn into the bottom layers of the winch cable and creating a "bind". If the winch cable binds on the drum, the winch and/or winch cable may be damaged. A "BOUND" winch cable will reel out only a short distance and then reel back in even though the winch is being toggled "OUT". A "BOUND" winch cable must be corrected before using the winch. Should the winch cable become "BOUND", connect the hook to a load, then by alternately the Winch "IN" then "OUT", the winch cable will usually work itself free. In any event, **DO NOT PUT YOUR HANDS ANYWHERE NEAR THE WINCH CABLE WHEN WORKING A BIND FREE.**
- Before using the electric winch, inspect the control pendant cord for cracks, pinched spots, frayed wires, and loose connections. A damaged, shorted cord could cause the winch to operate incorrectly.



SAFETY DECALS

Safety Decals have a replacement part number and are available upon request through your local Switch-N-Go® Dealer.



⚠ DANGER

**STAND CLEAR
WHILE OPERATING**

3240101

⚠ WARNING



ROLL-OVER HAZARD

RAISE HOIST
ONLY ON FIRM
LEVEL SURFACE
AND LOAD TRUCK
UNIFORMLY



STRIKING & SHOCK HAZARD

CHECK
OVERHEAD
CLEARANCE
BEFORE
RAISING HOIST

FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY OR DEATH

3240102

⚠ WARNING

**OPERATE ONLY ON
FIRM LEVEL SURFACE**

3240103

⚠ WARNING



HYDRAULIC SAFETY

ESCAPING FLUID UNDER PRESSURE CAN PENETRATE THE SKIN
CAUSING SERIOUS INJURY. AVOID THIS HAZARD BY RELIEVING
PRESSURE BEFORE DISCONNECTING HYDRAULIC LINES.
TIGHTEN ALL CONNECTIONS BEFORE APPLY PRESSURE

SEARCH FOR LEAKS WITH A PIECE OF PAPER. PROTECT HANDS AND BODY FROM HIGH PRESSURE FLUID LEAKS.
IF AN ACCIDENT OCCURS, SEE A DOCTOR IMMEDIATELY. ANY FLUID INJECTED INTO THE SKIN MUST BE SURGICALLY
REMOVED WITHIN A FEW HOURS OR GANGRENE AND LOSS OF THAT BODY PART MAY OCCUR AND EVEN DEATH
WITHOUT TREATMENT.
WEAR PROTECTIVE EYE WEAR AND GLOVES FOR THIS PROCEDURE.

3240104

⚠ WARNING

**USE ONLY WITH EMPTY
BODY AND ENGINE OFF**

3240105

⚠ DANGER



CRUSHING HAZARD

STAY OUT FROM UNDER THE BODY
WHEN HOIST IS OPERATED
DURING DUMPING OPERATIONS,
NO ONE MUST BE ALLOWED TO
STAND IN OR MOVE THROUGH THE
AREA WHERE THE BODY AND HOIST
OPERATE OR INTO AN AREA WHERE
AN UPSET LOAD MIGHT FALL.
OPERATOR MUST REMAIN AT
CONTROLS DURING OPERATIONS

⚠ WARNING



CRUSHING HAZARD

BEFORE REMOVING
DETACHABLE TRUCK
BODY, PLACE IN A CLEAR
AREA OF BODY LENGTH
PLUS 5 FEET

FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY OR DEATH

3240105

⚠ DANGER



**DO NOT
STAND
BEHIND**



PINCHING HAZARD

**DO NOT
STAND
BETWEEN**

FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY OR DEATH

3240106

⚠ WARNING



THE FRONT BODY
LOCK MUST BE PIN
LOCKED TO SECURE
THE BODY DURING
DUMPING.

3240107



HOIST WARNINGS

DANGER

Bouncing or jerking of the hoist is to be avoided as it may result in component failure, injury or death.

DANGER

Do not raise or drive a raised body against another object. Doing so could result in equipment or property damage, injury or death.

WARNING

The hoist cylinder shall not serve as a structural member to absorb side loads; the cylinder shall only provide a lifting force along the axis of the cylinder, no force radial to the cylinder should be applied to the cylinder as damage could result.

WARNING

Do not operate hoist until bystanders are free and clear of the hoist and body.

WARNING

Never exceed the Gross Vehicle Weight Rating (GVWR) or the Gross Axle Weight Rating (GAWR) of your vehicle. Overloading of a truck can cause truck component damage, injury or death.

CAUTION

Unlatch tailgate prior to elevating a loaded dump body as excessive forces on the rear of the dump body may result in component failure.

CAUTION

Never operate hoist on unlevel and/or soft terrain.



HYDRAULIC WARNINGS

⚠ CAUTION

Relieve the pressure before disconnecting hydraulic lines. Tighten all connections before applying HYDRAULIC pressure. Protect hands and body from high-pressure fluid leaks. Wear protective eyewear and gloves if accessing the hydraulic system or searching for leaks with a piece of paper.

⚠ WARNING

Never place any body part between the hoist scissor action and hoist frame UNLESS the body prop rod is "ENGAGED" to hold up the hoist. Use the body prop rod to hold the hoist upright for instances where certain kinds of equipment maintenance are performed.

⚠ WARNING

DO NOT LENGTHEN THE CONTROL PENDANT CORD. The length of the cord has been carefully measured to decrease the chance of the operator being injured during the loading/unloading process.

⚠ WARNING

Be AWARE of your surroundings when operating the hoist/winch from inside the truck cab. It is recommended that you operate the hoist system alongside of the vehicle to observe the loading/unloading process.



WINCH WARNINGS

! CAUTION

Do not exceed the line pull rating shown on the winch identification label. Exceeding the winch pull rating will abuse the motor and burn it up. Do not exceed the maximum rating of the winch cable being used.

! CAUTION

Do not exceed duty cycle rated on the electric winch of body changes per day. The electric winches are rated for intermittent duty operation only (reference page 21). For heavy loads, wait approximately 1 hour between body changes.

! CAUTION

Disconnect the control pendant when not in use, as this prevents accidental activation of hoist or winch while driving.

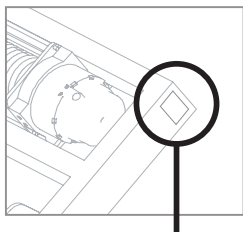
! WARNING

Shock loads result when the winch cable is spooled out before the body is ready to let gravity roll it off the Switch-N-Go® system. It is necessary to keep the cable tight at all times. Just one significant shock load with a heavy body can cause a winch failure.



UNDERSTANDING YOUR SWITCH-N-GO® SYSTEM

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

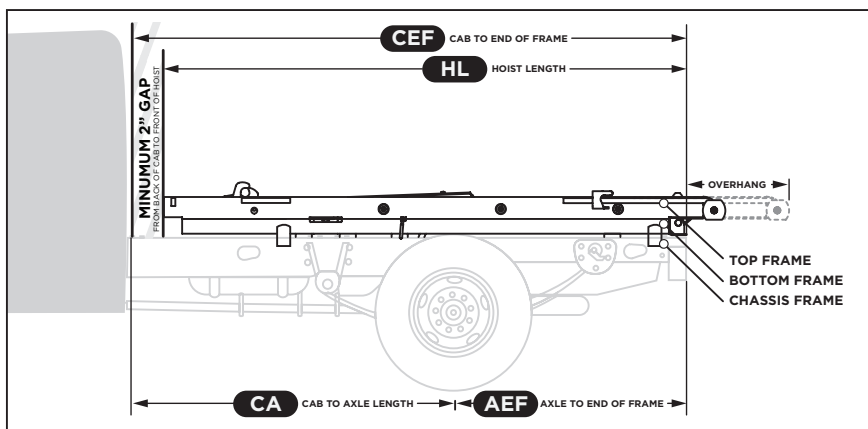
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MODEL NAME

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.





ELECTRIC
MODEL
Indicators —

11S-520-12E-PW**1****2^B****3****4**

HYDRAULIC
MODEL
Indicators —

14-520-18H**1****2^A****3****4**

Indicators on the example are provide below with brief descriptions of how to understand your hoist model name.

**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.

**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.

**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.

**ELECTRIC HOIST 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. This system utilizes hydraulic scissor hoist, allowing for unlimited dumping. The Switch-N-Go® full electric operation system is equipped with a pre-wired (PW) electric winch and a separate on-board electric powered pressure hydraulic hoist. The Electric model offers two winch capacities, 12,000lbs or 15,000lbs — indicated as 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 system is supplied with a 600 amp fuse, power and ground wires in the electric system installation components kit.

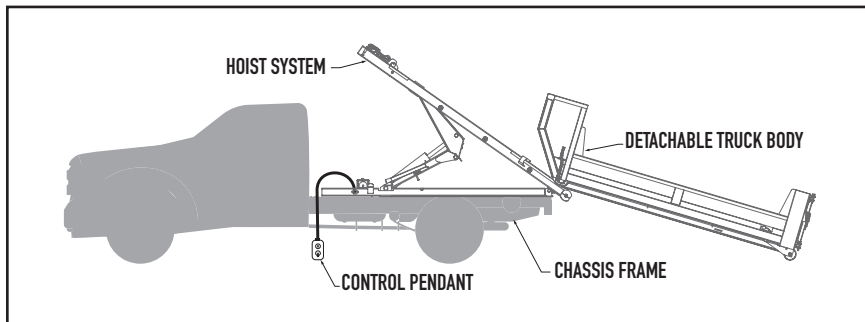
4

**HYDRAULIC HOIST SYSTEM**

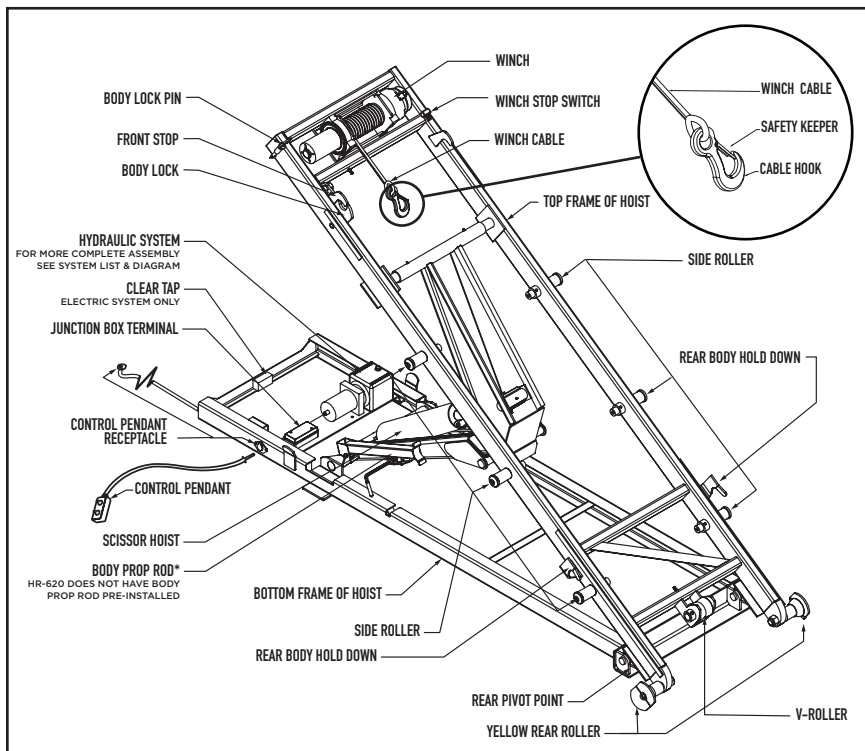
The Switch-N-Go® Hydraulic system is a full hydraulic system that has an hydraulic winch and an hydraulic hoist. This system is designed to handle an unlimited number of winch draws & lifts per day. This system utilizes a hydraulic pump, supplied by either a "live" drive style power take-off (PTO) or 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 hydraulic system requires more components installed onto the truck including a hydraulic pump, reservoir, filter & additional hoses, which are not provided with the hydraulic system installation components kit.



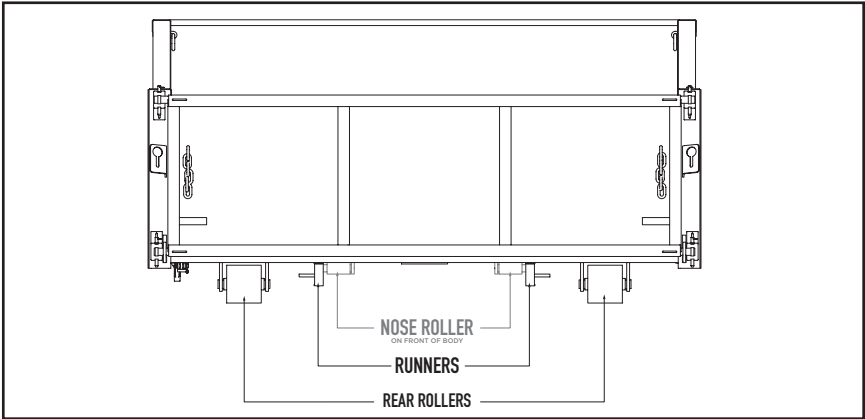
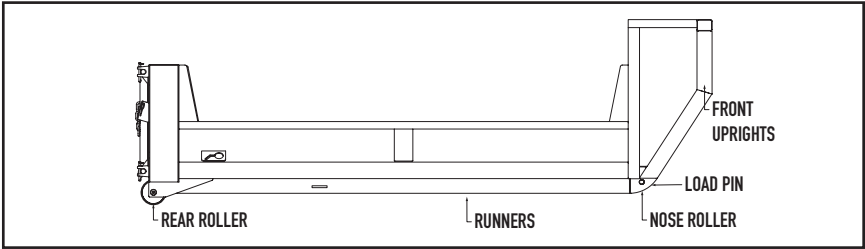
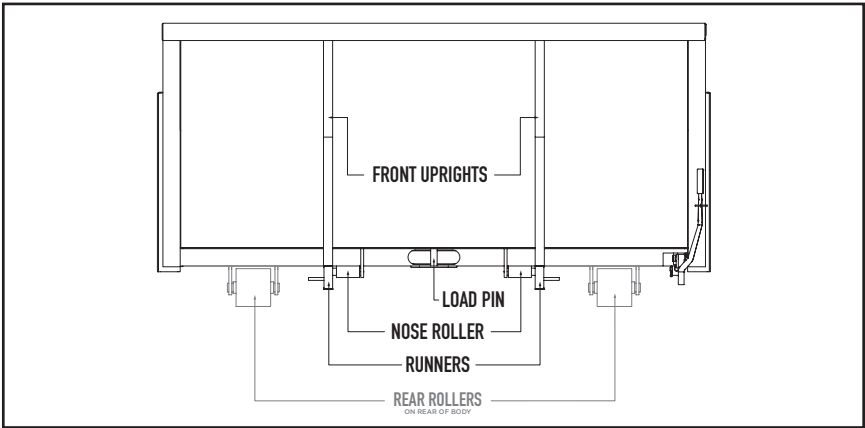
HOIST SYSTEM DIAGRAM



COMMON PARTS DIAGRAM



COMMON TRUCK BODY DIAGRAMS





ELECTRIC SYSTEM REQUIREMENTS

The electric over hydraulic system does require components that are provided in the electric installation kit during hoist system installation. This system requires that one 600 AMP ANL fuse and fuse holder be installed within the vehicle engine compartment, preferably near the battery.

Additional Vehicle Installation Components

- Alternator - A heavy duty alternator with a 150 AMP minimum capacity
- Batteries - Two deep cycle 750 CCA or greater batteries
- Fluid - 3.5 quarts of hydraulic oil equivalent to Grade 32 (such as ATF-Dextron II or Mobile DTE 13)

⚠ CAUTION

Make sure to test that the alternator and batteries 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.

⚠ WARNING

The battery is capable of providing its unlimited current in the event of a short circuit. If a short circuit occurs, damage to the wiring or a fire may result. Fuses provide the most reliable circuit protection. Failure to provide circuit protection may result in a fire and damage the vehicle. A 600 AMP ANL fuse is provided with electric installation kit. Install the fuse on the battery power supply cable, as close as possible to the battery.

ELECTRIC WINCH RATINGS

Winch Capacities	Maximum Lifted Load	Electric Current Draw at 12V Max Load	Maximum Loaded Body Lifts Per day	Winch Operation Cooldown
12E	12,000lbs	420 AMPS	up to 6 lift	approximately 1 hour
15E	15,000lbs	561 AMPS		



HYDRAULIC SYSTEM REQUIREMENTS

The full hydraulic system requires components that are provided in the hydraulic installation kit during hoist system installation. This system requires that the 25 AMP Blade type fuse and fuse holder be installed with in the vehicle engine compartment, preferably near the battery and the fuse box.

Additional Vehicle Installation Components

- Pump - A 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.
- Hoses - Hose that is flame resistant and rated for use of hydraulic oil with a minimum burst pressure of 3000 PSI. Need varying lengths of the hose in both 1/2" and 3/4" diameter inch hose.
- Tank - A 15-20 gallon tank rated for hydraulic oil use with a basket strainer in the filler tube.
- Filter - A hydraulic inline filter with an internal bypass is recommended.
- Fluid -18-20 gallons of hydraulic oil equivalent to Grade 32 (such as ATF-Dextron II or Mobile DTE 13)

DANGER

Connecting the hoist to a hydraulic system with more pressure (psi) or flow (gpm) than is recommended by the hoist manufacturer can lead to damage, serious injury or death.



MAXIMUM HYDRAULIC PRESSURES SETTINGS & FLOW RATES

Failure to follow the pressure and flow rate specifications below may result in winch and hoist premature wear or failure.

WARN® HYDRAULIC 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 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-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-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

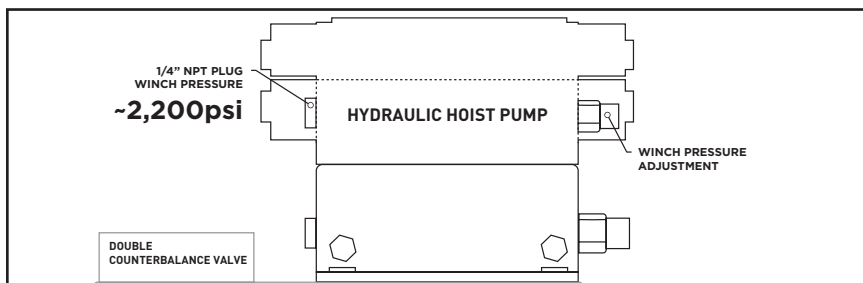
HR-620

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



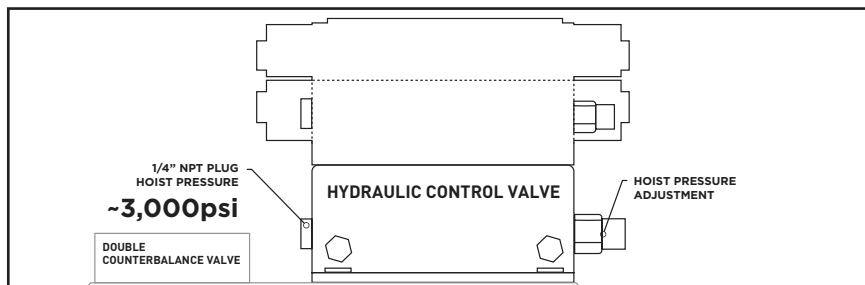
ADJUST WINCH PRESSURE



If the hydraulic winch pressure preset needs to be adjusted, follow the procedure to adjust the winch pressure.

- Step 1—** Raise the hoist "UP" halfway approximately 25° angle which reveals about 8" of the cylinder stroke.
- Step 2—** Engage body prop rod by setting the prop rod vertically and lock into place
- Step 3—** Lower the hoist "DOWN" until the prop rod is nestled on the lift tube or into the prop cup on the side of frame. If HR series scissor hoist system is not equipped with a prop rod, then contact the company that completed the installation and refer to Installation Manual, HR-620 PROP ROD INSTALL section.
- Step 4—** Remove the winch pressure 1/4" NPT plug on the the hydraulic hoist pump.
- Step 5—** Insert 3000psi pressure gauge into the 1/4" NPT hole.
- Step 6—** Hook the cable hook to a detached truck body and winch "IN" the body.
- Step 7—** While operating the winch the "IN" and "OUT" read the gauge, which should read approximately 2200 psi of pressure.
- Step 8—** Loose the winch pressure 9/16" jam nut.
- Step 9—** Rotate the 5/32" threaded stem to adjust pressure:
(one full rotation is equal to approximately 600 psi)
⌚ CLOCKWISE | INCREASE PRESSURE
⌚ COUNTERCLOCKWISE | DECREASE PRESSURE
- Step 10—** When desired pressure is achieved, re-tighten the winch pressure 9/16" jam nut.
- Step 11—** Remove the pressure gauge and install the 1/4" NPT plug back in the hydraulic control valve. ■

ADJUST HOIST PRESSURE



If the hydraulic hoist pressure preset needs to be adjusted, follow the procedure to adjust the hoist pressure.

- Step 1—** Raise the hoist "UP" halfway approximately 25° angle which reveals about 8" of the cylinder stroke.
- Step 2—** Engage body prop rod by setting the prop rod vertically and lock into place
- Step 3—** Lower the hoist "DOWN" until the prop rod is nestled on the lift tube or into the prop cup on the side of frame. If HR series scissor hoist system is not equipped with a prop rod, then contact the company that completed the installation and refer to Installation Manual, HR-620 PROP ROD INSTALL section.
- Step 4—** Remove the hoist pressure 1/4" NPT plug on the the hydraulic control valve.
- Step 5—** Insert 3000psi pressure gauge into the 1/4" NPT hole.
- Step 6—** Lift the hoist "UP" and disengage the prop rod so it rests in the prop rod hanger.
- Step 7—** Lower the hoist all the way "DOWN" while reading that the gauge should read approximately at 2200 psi of pressure.
- Step 8—** Rotate the 7/16" hoist pressure adjustment bolt:
 - ⌚ CLOCKWISE | INCREASE PRESSURE
 - ⌚ COUNTERCLOCKWISE | DECREASE PRESSURE
- Step 9—** When desired pressure is achieved, remove the pressure gauge and install the 1/4" NPT plug back in the hydraulic control valve. ■

BODY PROP ROD WARNINGS & USE

Body prop rod: Federal Regulation 29 CFR 1926.601, (b)(10), requires the use of a body prop rod. Accordingly, all hoists will include a body prop rod for a positive means of support. The purpose of the body prop rod is to provide a safety strut for supporting the hoist, when maintenance or repairs are performed on an unloaded truck body in the raised position. The body prop rod is for use only when the truck body is empty or removed. Ensure to read all the warning, caution and danger labels before operating the hoist system.

⚠ DANGER

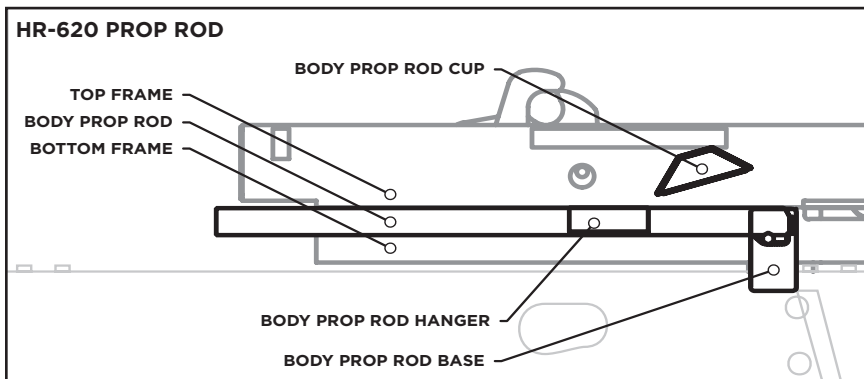
The body prop rod is only to be used to prop a body with no load in the body, or unloaded body on system. Serious injury or death may occur if the body prop rod is misused.

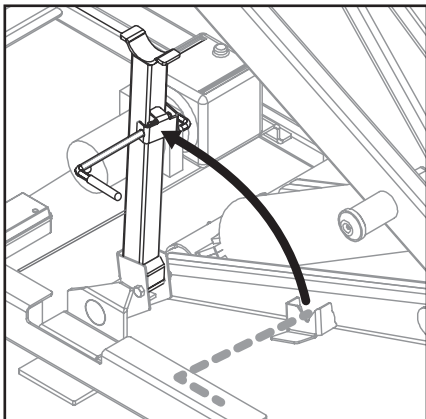
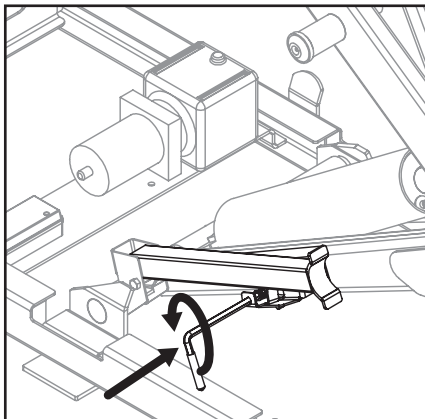
⚠ WARNING

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.

⚠ CAUTION

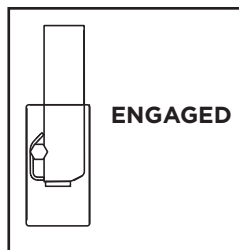
Do not power the winch system while the body is on the body prop rod.





OPERATE THE BODY PROP ROD

- Step 1—** Using the control pendant, raise the hoist "UP" halfway to approximately 25° angle which reveals about 8" of the cylinder stroke, sufficient height equal to the prop rod length.
- Step 2—** Grasp the prop handle lever at arms length and push inward on the handle.
- Step 3—** Rotate the prop handle clockwise.
- Step 4—** Lift upward on the prop rod handle and the body prop rod will raise to a vertical position.
- Step 5—** Engage body prop rod by setting the prop rod vertically and lower the hoist "DOWN" until the prop rod is nestled on the lift tube or into the prop cup on side of frame.
- Step 6—** Disconnect any power to the control pendant and vehicle so that the hoist is not operated accidentally.
- Step 7—** To lower or disengage the body prop rod, operate this procedure in reverse. ■



OPERATING PRECAUTIONS

Please read all instruction before proceeding. Failure to follow these instructions could damage the vehicle or cause injury or death.

⚠ WARNING

DO NOT OVER WORK THE WINCH. The electric winch can only operate for 3-5 minutes at its maximum load limit, and then must cool off for approximately 1 hour before operating again.

⚠ WARNING

Do not attach the cable hook to the any part on the vehicle and lower the hoist down. The hoist must be lowered down before securing the cable hook on to the top frame. Failure to do so may result in major damage to the top and bottom frame of the hoist. As this may result in damaging the hoist system or not function properly.

⚠ CAUTION

It is not recommended pulling a full capacity loaded body over the rear rollers of the hoist. The extra stress of the excessive weight overhanging the rear axle may cause damage to the truck. Check your vehicle's rear axle rating located inside the driver door pillar or inside the door panel.

⚠ CAUTION

It may be necessary to let the truck roll under the load to minimize the stress on the winch when the terrain will not permit normal loading. The operator must be in the truck cab for this style of loading.

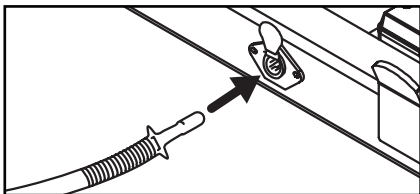
⚠ CAUTION

During cold weather it is recommended that the body be placed on blocks so that it does not freeze to the ground.



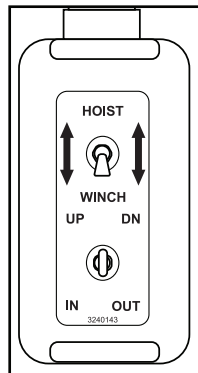
OPERATING THE CONTROL PENDANT

Step 1— Connect the control pendant into the in-cab pendant receptacle or into the outside pendant receptacle located on the driver's side of the bottom hoist frame.

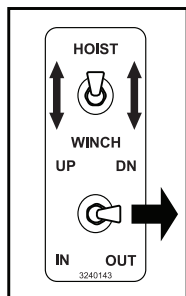


Step 2— Understand your control pendant: It has one selector switch and one 2-way toggle switch.

- The switch that is closest to the wire, is labeled the [Hoist-Winch] and controls the power between the hoist and winch.
- The toggle that is farthest from the wire, serves dual purpose for the system, controlling both the hoist's "UP" and "DOWN" and the winch's "IN" and "OUT", depending on which direction the selector switch is active.



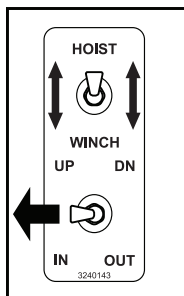
Step 3— To operate the hoist system using the control pendant, select direction of switch [hoist-winch] and move the toggle left and right for desired action. ■



**SWITCH UP
[HOIST]**

"DN" DIRECTION

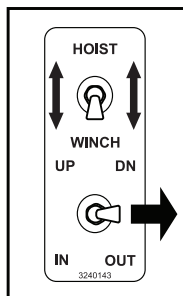
HOIST LOWERS



**SWITCH UP
[HOIST]**

"UP" DIRECTION

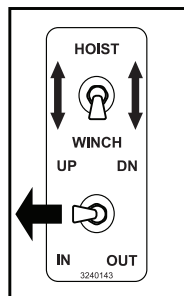
HOIST RISES



**SWITCH DOWN
[WINCH]**

"OUT" DIRECTION

WINCH OUTWARD



**SWITCH DOWN
[WINCH]**

"IN" DIRECTION

WINCH INWARD



ATTACHING THE CABLE HOOK

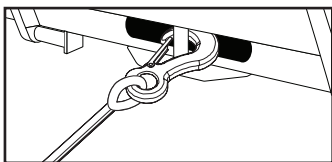
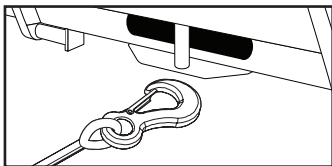
Always wear heavy-duty leather gloves when handling the winch cable. It is extremely important to wear protective gloves while operating the winch or handling the wire rope.

Always inspect winch cable for mashed, pinched, or frayed areas when toggling the winch cable "OUT", as this severely reduces the original tensile strength of the winch cable and replace if necessary.

Step 1— Toggle the winch cable "OUT" enough cable to reach the truck body and also to ensure there is a minimum of 5 wraps on the winch drum at all times.

Step 2— With the cable hook in hand locate the load pin on the truck body, located in the middle of the truck body front end.

Step 3— Attach the cable hook to the load pin, ensuring the safety keeper is secure closed, and not frozen open. ■



REMOVING THE CABLE HOOK

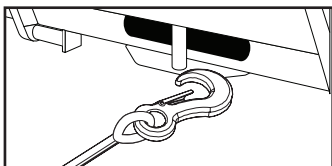
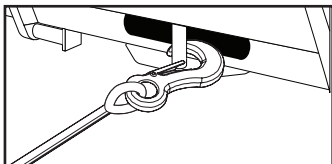
Never touch the winch cable or hook while there is tension or is under load, the winch cable may have tension, even at rest.

Step 1— Toggle the winch cable "OUT" until there is no tension on the cable, leaving at least 5 wraps on the winch drum.

Step 2— Press inward on the safety keeper on the cable hook.

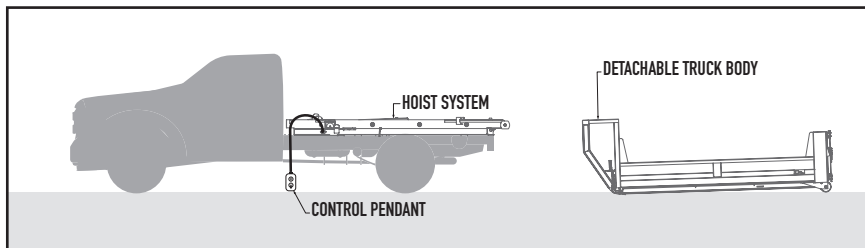
Step 3— Remove the cable hook from the load pin.

Step 4— Hook the cable hook to one of the rear hold down located on the top frame of the hoist. ■



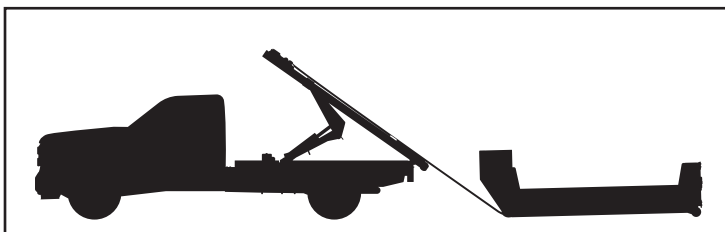


LOADING BODY WITHOUT CARGO



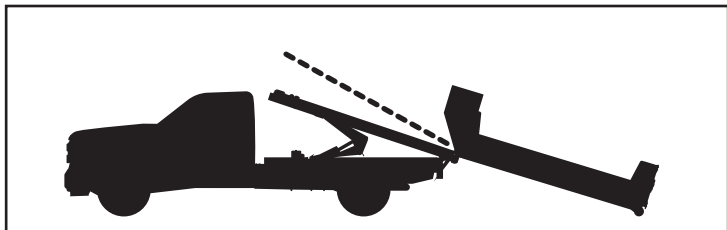
Ensure the vehicle is on a level and firm surface, away from any overhead obstructions.

- Step 1—** Position the vehicle about 5 feet away from the unloaded truck body and ensure the vehicle is parallel with truck body.
- Step 2—** Connect the control pendant to a control receptacle located either inside the vehicle's cab or on the hoist bottom frame.
- Step 3—** Attach the cable hook to the load pin on the truck body, ensure the safety keeper on the cable hook is securely closed.
- Step 4—** Toggle the hoist "UP" to approximately a 30° angle.

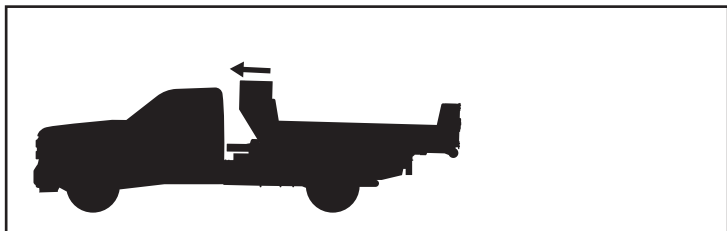


- When loading with the operator outside the vehicle cab, the operator is standing next to the hoist; **ENGAGE THE VEHICLE'S PARKING BRAKE.**
- When loading with the operator inside the vehicle cab; **DISENGAGE THE VEHICLE'S PARKING BRAKE, AND PLACE THE VEHICLE IN NEUTRAL** as this will allow the vehicle to roll under the loaded body as you toggle the winch "IN".

- Step 5—** Toggle the winch cable "IN", and ensure the winch cable is properly directed through the V-roller and the truck body's front uprights are even between the yellow rear rollers.



- Step 6—** Toggle the hoist "DOWN" to nearly match the angle of the body's runner rails.
- Step 7—** Toggle the winch "IN" until the truck body's rear rollers are off the ground.
- Step 8—** Toggle the hoist "DOWN" until the top frame is 10" above the bottom frame, as this will relieve the winch draw due to lifting the truck body against the force of gravity.



- Step 9—** Toggle the winch "IN" at this lower angle until the truck body comes against the front stops.
- Step 10—** The winch stop switch will shut-off and halt winching the body inward.
- Step 11—** Toggle the hoist "DOWN" all the way down to rest the top frame onto the bottom frame of the hoist and lock the front body lock to the bottom frame.

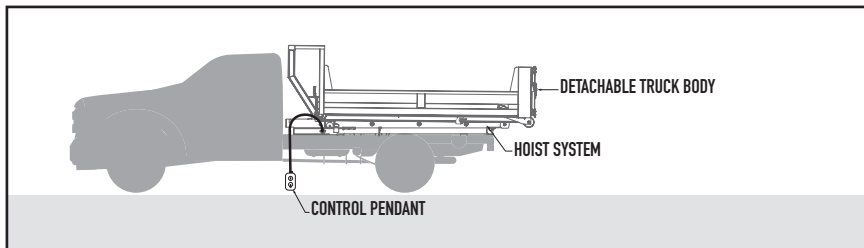
⚠ WARNING

Do not lower the hoist down entirely before the winch cable is retracted all the way, otherwise the body will not be secured into the front body lock.

- Step 12—** Disconnect control pendant from the control receptacle and safely stow away inside the cab. ■



UNLOADING BODY WITHOUT CARGO

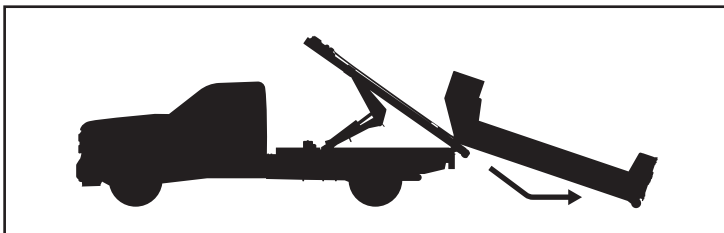


Ensure the vehicle is on a level and firm surface, away from any overhead obstructions.

- Step 1—** Position the vehicle's body ensuring there is enough space to unload the body and add 5 feet of working space behind the truck body once unloaded from the vehicle.
- Step 2—** ENGAGE THE VEHICLE'S PARKING BRAKE.
- Step 3—** Toggle the hoist "UP" to approximately 35-45° angle.

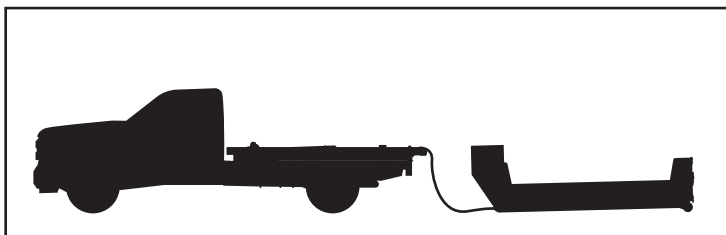


- Step 4—** Toggle the winch "OUT" to allow the body to roll downward off the hoist guide rollers. The rear rollers of the truck body will touch the ground and continue to move backwards.





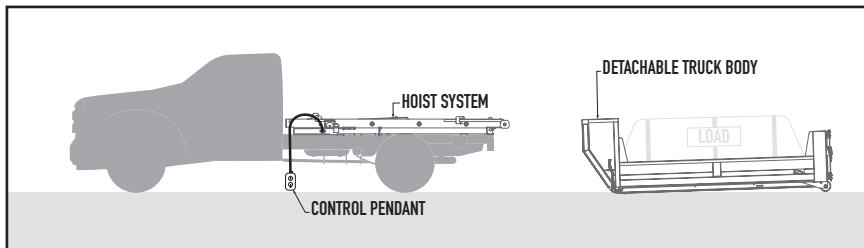
- Step 5—** Toggle the winch "OUT" until the front of the truck body has completely made contact with the ground.
- Step 6—** Continue to toggle the winch "OUT" allowing enough slack in the winch cable, ensure to keep a minimum of 5 wraps of cable on the winch drum.
- Step 7—** Toggle the hoist "DOWN " to finish lowering the hoist all the way down.
- Step 8—** DISENGAGE THE VEHICLE'S PARKING BRAKE.
- Step 9—** Move the vehicle forward away from the truck body to access the cable hook on the body, without placing tension on the winch cable.



- Step 10—** Unhook the cable hook from the truck body.
- Step 11—** Secure the cable hook to one of the rear hold downs located on the top frame of the hoist frame.
- Step 12—** Disconnect pendant controller from the control receptacle and safely stow away inside the cab. ■



LOADING BODY WITH HEAVY CARGO



! WARNING

Before lifting any heavy load, review this loading precautions checklist:

- Check the safety keeper on the winch cable hook is securely closed around the truck body load pin before lifting.
- Check the winch cable is in working condition, and will withstand the load of truck body and load during lifting.
- Check the winch cable is evenly wound on the drum with a minimum of 5 wraps around the winch drum.
- Check the winch cable is properly directed through the v-roller on the rear of the hoist top frame.
- Check to be sure that no individual is between the vehicle and the truck body.
- Check the height required for the motion of loading being lifted is not obstructed by structures or over-head obstacles.

Ensure the vehicle is on a level, firm surface and away from over-head obstacles.

Step 1— Position the vehicle about 5 feet away from the truck body, and the vehicle is parallel with truck body.

Step 2— Connect the control pendant to a control receptacle located either inside the vehicle's cab or on the hoist bottom frame.



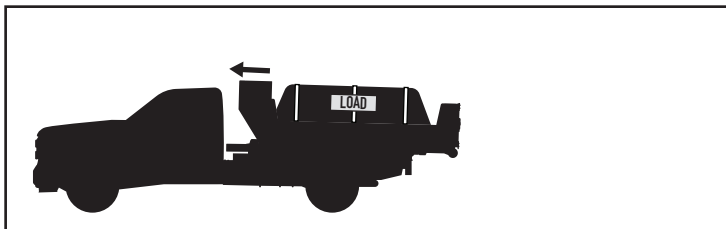
- Step 3—** Ensure the load is secured properly and is distribute evenly, as uneven loads may cause the vehicle to roll-over.
- Step 4—** Attach the cable hook to the load pin on the truck body, ensure the safety keeper on the cable hook is securely closed.
- Step 5—** Toggle the winch cable "IN", and ensure the winch cable is properly directed through the V-roller and the truck body's front uprights are even between the yellow rear rollers.
- Step 6—** Toggle the hoist "UP" to 50° maximum system angle.
- Step 7—** With the operator sitting in the driver's seat, DISENGAGE THE PARKING BRAKE and put the vehicle in neutral.
- Step 8—** Toggle the winch "IN" until the body rails touch both of the yellow rear rollers, allowing the vehicle to roll under the loaded body as you winch inward.
- Step 9—** Toggle the hoist "DOWN" to nearly match the angle of the body's runner rails. Now Winch "IN" the body until the body's rear rollers are off the ground.
- Step 10—** Continue Toggle the winch "IN" until the loaded truck body is pulled about 1/2 of the way up the hoist rails.



⚠ DANGER

At any time while hoisting the loaded truck body; The front vehicle's front wheels lift off the ground STOP! This is an OVERLOAD UNSAFE CONDITION. Unload the hoist and lighten the load in the truck body, then restart the loading procedure with heavy cargos.

- Step 11—** Slowly toggle the hoist "DOWN" until the top frame is 10" above the bottom frame, as this relieves the winch draw added due to lifting against the force of gravity.



- Step 12—** Toggle the winch "IN" at this lower angle until it comes against the front stops.
- Step 13—** The winch stop switch will shut-off/halt the winch from winching inward operation.
- Step 14—** Toggle the hoist "DOWN" all the way down, this will lock the front body lock and rest the top frame onto the bottom frame of the hoist.

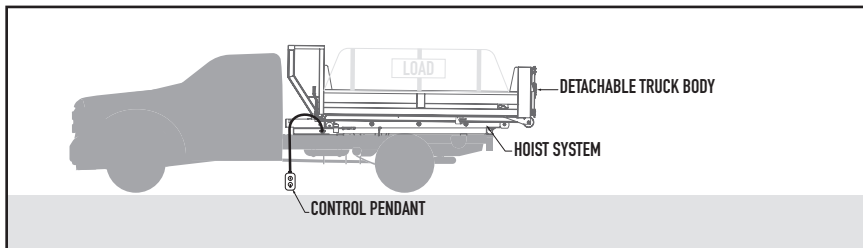
⚠ WARNING

Do not lower the hoist down entirely before the winch cable is retracted all the way, otherwise the body will not be secured into the front body lock.

- Step 15—** Disconnect control pendant from the control receptacle and safely stow away inside the cab. ■



UNLOADING BODY WITH HEAVY CARGO



⚠ WARNING

Failure to follow these instructions could cause truck damage or instability, with front wheels coming off the ground.

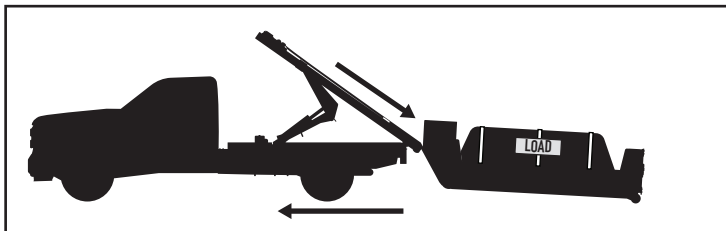
⚠ WARNING

Shock loads result when the winch cable is spooled out before the body is ready to let gravity roll it off the Switch-N-Go® system. It is necessary to keep the cable tight at all times. Just one significant shock load with a heavy body can cause winch failure.

Ensure the vehicle is on a level, firm surface and away from over-head obstacles.

- Step 1—** Position the vehicle's body ensuring there is enough space to unload the body with 5 feet of working space behind the truck body once unloaded from the vehicle.
- Step 2—** Connect the control pendant into the in-cab control receptacle.
- Step 3—** THE VEHICLE PARKING BRAKE MUST BE ENGAGED, with the operator in the driver seat, apply the parking brake.
- Step 4—** Toggle the hoist "UP" to approximately 45° angle, as this will stabilize the distribution of vehicle and load weight.
- Step 5—** Press in the vehicle's brake pedal and disengaged the vehicle's parking brake then and put the vehicle in neutral.
- Step 6—** Toggle the winch "OUT" until the loaded truck body's rear rollers touches the ground.

- Step 7—** Slowly let your foot off the brake, allowing the load to push the vehicle forward out from under the load until the load is sitting firmly on the ground.
- Step 8—** Move the vehicle approximately 5 feet forward while continuing to toggling the winch "OUT" until the front of the body has made complete contact with the ground.



- Step 9—** Toggle the hoist "DOWN " to finish lowering the hoist all the way down.
- Step 10—** Move the vehicle backward creating slack in the cable.
- Step 11—** Unhook the cable hook from the truck body.
- Step 12—** Secure the cable hook to one of the rear hold downs located on the top frame of the hoist frame.
- Step 13—** Disconnect pendant controller form the control receptacle and safely stow away inside the cab. ■



DUMPING CARGO

Ensure the vehicle is on a level, firm surface and away from over-head obstacles as to prevent from tipping over when the load is being raised upward to the dump position.

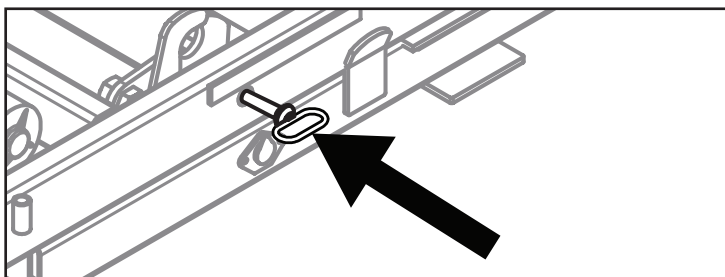
Step 1— Ensure there are no over-head obstacles that can be hit by the rising hoist and loaded body.

WARNING

Always look to make sure the area and immediate surroundings where you wish to dump are clear-behind and overhead.

Step 2— Locate the body lock pin on the driver-side of the top hoist frame above the control receptacle.

Step 3— Insert the body lock pin into the outside hole on the driver-side hoist top frame, near the front lock and body lock.



WARNING

The body pin must be in the front body lock at all times during the dumping procedure. If the body pin is not in the front body lock, insert into the hoist with a hairpin clip. This is to prevent the body from sliding while dumping.

Step 4— Disengage the tailgate latch and release and set the the safety chains

Step 5— Toggle the hoist "UP" to the desired angle (up to 50° angle), review table for one of the common material dumping angles, on the next page.



- Step 6—** If the load does not completely begin to fall from the body, slowly pull the vehicle forward, to dislodge the load from the truck body to let it fall from the truck body.
- Step 7—** Once completed, toggle the hoist "DOWN".
- Step 8—** Refasten the tailgate latch and safety chains.
- Step 9—** Disconnect control pendant from the control receptacle and safely stow away inside the cab. ■

MATERIAL DUMPING SLIDING ANGLE

Maximum Switch-N-Go® System Dumping Angle **50°**

Material	MAX. ANGLE
Ashes, dry	33°
Ashes, moist	36°
Asphalt	45°
Asphalt (crushed)	30-45°
Bark (wood refuse)	45°
Bran	30-45°
Brick	40°
Chalk	45°
Cinders (damp)	34°
Cinders (dry)	33°
Cinders (wet)	31°
Clay (dry lump)	25-40°
Clay (wet/excavated)	15°
Clover seed	28°
Coal, soft	30°
Coconut (shredded)	45°
Coffee bean (fresh)	35-45°
Concrete	30°
Earth, compact	50°
Earth, loose	28°
Flour (corn)	30-40°
Flour (wheat)	45°
Garbage	30°

Material	MAX. ANGLE
Granite	35-40°
Gravel	40°
Gravel (crushed stone)	45°
Gravel (natural w/ sand)	25-30°
Malt	30-45°
Rubble	45°
Sand (dry)	34°
Sand (water filled)	15-30°
Sand (wet)	45°
Sand and crushed stone	27°
Sand, moist	40°
Shingles	40°
Snow	38°
Stone	30°
Stone, broken	27°
Stone, crushed	30°
Wheat	27°
Snow	38°
Sand, moist	40°
Sand and crushed stone	27°
Urea (Granular)	27°
Wheat	27°



Operational Weight Capacities

CALCULATING THE MAXIMUM CARGO WEIGHT

The legal maximum cargo weight is calculated by subtracting the "Total Unloaded Vehicle Weight" from the "Gross Vehicle Weight Rating". The "Gross Vehicle Weight Rating" is listed on the vehicle manufacturing tag located on the inside of vehicle frame of the driver door. The "Total Unloaded Vehicle Weight" is calculating by finding the sum of the truck's curb weight, occupants, truck body, the Switch-N-Go® hoist system and upfitted options. See below for examples on how to calculate the Legal Maximum Cargo Weight.

Total Unloaded Vehicle Weight

Total Unloaded Vehicle Weight = truck's curb weight + occupants + body + hoist system

EXAMPLE	
Truck curb weight	7,250lbs
Occupants (2 persons weighing approximately 225lbs each)	450lbs
Switch-N-Go® hoist system & 9 ft. dump body w/ rear bumper	1,400lbs
Total Unloaded Vehicle Weight (TUVW)	= 9,100lbs

Legal Maximum Cargo Weight

Legal Maximum Cargo Weight = Gross Vehicle Weight Rating - Total Unloaded Vehicle Weight

EXAMPLE	
Gross Vehicle Weight Rating (GVWR)	19,500lbs
Total Unloaded Vehicle Weight (TUVW)	9,100lbs
Legal Maximum Cargo Weight	= 10,400lbs

Maximum Cargo Volume

Measure the inside of the truck's body length, width and height. Use the formula below to find the truck's body maximum cargo volume. Maximum Payload Volume = Inside Body Length (inches) X Inside Body Width (inches) X Inside Body Height (inches)

EXAMPLE	
Inside Dump Body Length	10' (120")
Inside Dump Body Width	7' 4" (88")
Inside Dump Body Height	1' (12")
Maximum Cargo Volume	73.3ft³
Maximum Cargo Volume	= 2.72 yd³



CALCULATING THE ACTUAL CARGO WEIGHT

The actual cargo weight is calculated taking vehicle's Maximum Cargo Volume (table shown on previous page) and multiply it to the approximate Material Density Weight (chart shown on the next page). Compare this Actual Cargo Weight, against Legal Maximum Cargo Weight (calculated on the previous page).

Actual Cargo Weight

Actual Cargo Weight = Maximum Cargo Volume x (Material Density ÷ cubic yards)

EXAMPLE

Dump Body Maximum Cargo Volume	2.72yd³
Material Density Sawdust* (chart shown on page 46-47)	354lbs/yd³
Actual Cargo Weight	= 936lbs

Difference of Vehicle Cargo Permitted Weight

Difference of Vehicle Permitted Cargo Weight = Legal Maximum Cargo Weight - Actual Cargo Weight

Legal Maximum Cargo Weight	10,400lbs
Actual Cargo Weight	963lbs
Difference (lighter than legal maximum cargo weight)	= 5,635lbs

The Actual Cargo Weight of loaded sawdust is lighter than the legal maximum cargo weight of a 10' dump body, with a difference of 5,635lbs, this example vehicle cargo weight is then legal to haul.

EXAMPLE

	2.72yd³
Material Density Gravel* (chart shown on page 46-47)	4509lbs/yd³
Actual Cargo Weight	1,249lbs

Legal Maximum Cargo Weight	10,400lbs
Actual Cargo Weight	12,264lbs
Difference (heavier than legal maximum cargo weight)	= -1,864lbs

The Actual Cargo Weight of loaded gravel is heavier than the legal maximum cargo weight of a 10' dump body, with a difference of -1,864lbs, this example vehicle is then NOT legal to haul.

DENSITY OF MATERIALS

Material¹

(lbs/yd³)

Alfalfa	432	256
Apples	1080	641
Asbestos - shredded	539	320
Ashes - wet	1230	730
Ashes - dry	961	570
Asphalt, crushed	1215	721
Barley	1027	609
Beans	973	577
Beans, soy	1215	721
Beets	1215	721
Borax, fine	1431	849
Bran	432	256
Brick, common red	3240	1922
Brick, fire clay	4050	2403
Brick, silica	3455	2050
Brick, chrome	4725	2803
Brick, magnesia	4320	2563
Buckwheat	1107	657
Cardboard	1161	689
Cement - clinker	2174	1290
Cement, Portland	2538	1506
Cement, mortar	3644	2162
Cement, slurry	2431	1442
Chalk, solid	4212	2499
Charcoal	351	208
Cinders, furnace	1539	913
Cinders, Coal, ash	1080	641
Clay, dry excavated	1836	1089
Clay, wet excavated	3078	1826
Clay, dry lump	1809	1073
Clay, fire	2296	1362
Clay, wet lump	2700	1602
Clay, compacted	2943	1746
Clover seed	1296	769
Coal, Anthracite, solid	2538	1506
Coal, Anthracite, broken	1863	1105
Coal, Bituminous, solid	2269	1346
Coal, Bituminous, broken	1404	833
Coconut, shredded	593	352
Coffee, fresh beans	946	561
Coffee, roast beans	728	432
Concrete, Asphalt	3781	2243
Concrete, Gravel	4050	2403
Concrete, Limestone/Portland	3996	2371
Copra, medium size	892	529
Copra, meal, ground	1080	641

Cork, solid	405	240
Cork, ground	270	160
Corn, on the cob	1215	721
Corn, shelled	1215	721
Glass, Cullet	2700	1602
Grain, Culm	1269	753
Dolomite, solid	4886	2899
Earth, dry	2105	1249
Earth, moist	2431	1442
Earth, wet	2700	1602
Earth, dense	3374	2002
Earth, mud loose	2916	1730
Earth, packed	2565	1522
Fertilizer, acid phosphate	1620	961
Flaxseed, whole	1215	721
Flour, wheat	1000	593
Garbage/rubbish	811	481
Glass, window	4347	2579
Granite, solid	4536	2691
Granite, broken	2781	1650
Grain - Maize	1281	760
Grain - Barley	1011	600
Grain - Millet	1281	760
Grain - Wheat	1315	780
Gravel, loose, dry	2565	1522
Gravel, with sand, natural	3240	1922
1/4-2" size gravel, dry	2835	1682
Gravel, wet 1/4 to 2 inch	3374	2002
Gypsum, solid	4698	2787
Gypsum, broken	2174	1290
Gypsum, crushed	2700	1602
Gypsum, pulverized	1890	1121
Halite (rock salt), broken	2538	1506
Ice, solid	1549	919
Ice, crushed	1000	593
Lignite, dry	1350	801
Lime, quick, lump	1431	849
Lime, quick, fine	2024	1201
Lime, stone, large	4536	2691
Lime, stone, lump	2592	1538
Lime, hydrated	811	481
Lime, wet or mortar	2596	1540
Limestone, solid	4401	2611
Limestone, broken	2619	1554
Limestone, pulverized	2350	1394
Linseed, whole	1269	753

Malt	566	336
Manure	674	400
Marble, solid	4320	2563
Marble, broken	2646	1570
Mica, solid	4859	2883
Mica, broken	2700	1602
Mica - flake	876	520
Mortar, wet	4050	2403
Nickel silver	14229	8442
Oats	728	432
Oats, rolled	512	304
shells, ground	1431	849
Paper,	2024	1201
Peanuts, shelled	1080	641
Peanuts, not shelled	458	272
Peat, dry	674	400
Peat, moist	1350	801
Peat, wet	1890	1121
Pitch	1943	1153
Plaster	1431	849
Potatoes, white	1296	769
Pumice, stone	1080	641
Rubber, caoutchouc	1593	945
Rubber, manufactured	2565	1522
Rubber, ground scrap	811	481
Rye	1188	705
Saltpeter	2024	1201
Sand, wet	3240	1922
Sand, wet, packed	3509	2082
Sand, dry	2700	1602
Sand, packed	2835	1682
Sand, water filled	3240	1922
Sand with stone/gravel, dry	2781	1650
Wet Sand with Gravel, wet	3405	2020
Sandstone, solid	3916	2323
Sandstone, broken	2309	1370
Sawdust	354	210
Shale, solid	4509	2675
Shale, broken	2673	1586
Slate, solid	4536	2691
Slate, broken	2174	1290
Slate, pulverized	2296	1362
Snow	811	481
Soda Ash, heavy	1820	1080
Soda Ash, light	728	432
Rocks/Stones	4239	2515

Tar	1943	1153
Trap rock, solid	4859	2883
Trap rock, broken	2943	1746
Turf	674	400
Dry Black Walnuts	1027	609
Wheat	1296	769
Wheat, cracked	1134	673
Wool	2215	1314
Wool	82	1314

Wood ²	(lbs/yd ³)	(kg/m ³)
Apple	1112	660
Ash, black	910	540
Ash, white	1129	670
Aspen	708	420
Balsa	287	170
Bamboo	506	300
Birch (British)	1129	670
Cedar, red	641	380
Cypress	860	510
Douglas Fir	893	530
Ebony	1618	960
Elm (Wych)	1163	690
Elm (Rock)	1374	815
Iroko	1104	655
Larch	994	590
Lignum Vitae	2158	1280
Mahogany (Honduras)	919	545
Maple	1273	755
Oak	994	590
Oak (Red)	1188	705
Pine (Oregon)	893	530
Pine (Canadian)	590	350
Pine (Red)	624	370
Redwood (American)	758	450
Spruce (Canadian)	758	450
Spruce (Sitka)	758	450
Sycamore	994	590
Teak	1112	660
Willow	708	420
Pecan wood	1269	753
Bark, wood refuse	405	240
Cottonwood	701	416

(¹) Simetric.co.uk. (2010, July 15). Density of Materials-Material or Alloy. Retrieved from https://www.simetric.co.uk/si_metals.htm. (²) Simetric.co.uk. (2016, February 24). Density of Materials-Wood. Retrieved from https://www.simetric.co.uk/si_wood.htm

WINCH MAINTENANCE

Routinely maintain to your hoist system and winch by observing the weekly, monthly and yearly checklists. All the hoist systems winches generally require very little periodic maintenance, but there are a few actions that should be taken to ensure that the winch is always in top working condition. Follow the proper procedures located below or located in the troubleshoot section.

WEEKLY

- Inspect tire pressure and maintain according to your vehicle's tire pressures.
- Inspect the winch cable for visible damage such as kinks, knots, mashed or frayed portions and broken strands, every time the winch is operated. If the winch cable is damaged, replace if necessary before it breaks under load, as this could result in serious injury or damage and follow replacement procedure on page 53.
- Inspect the winch brake for slippage or cable drifting on a regular basis visually observe the winch brake while operating the winch, under load. If the winch drum continues to turn more than a 1/4 revolution in 15 minutes after the toggle is released, the brake may need to be replaced. Reference the Warn® brake service kit instructions for replacement procedure.

MONTHLY

- Inspect components on the system and reapply rust prevention lubrications to the following components:
 - Front body locks
 - Electrical connections
 - All moving rollers/wheels
- Lubricate the winch cable with cable lubrication provided with the hoist system
- Locate all guide rollers and hoist grease fittings as show in the grease fitting diagram on page 56-57.



- Inspect all rollers and roller shafts for excessive wear or fractures, then replace any parts/components that are improperly work or damaged or broken. See page 50, for replacement parts or contact your local distributor/dealer for more information.
- Inspect the winch cable for visible damage such as kinks, knots, mashed or frayed portions and broken strands, every time the winch is operated. If the winch cable is damaged, replace if necessary before it breaks under load, as this could result in serious injury or damage, and follow replacement procedure on page 53.
- Check hydraulic fluid levels, if fluid is needed follow procedure on page 54-55.
- Inspect all bolts, nuts and rollers on the hoist, ensure they are tightened to the proper torque, see reference chart on page 58. Replace any damaged or broken bolts or fasteners with grade 5 or better.
- Inspect hydraulic fittings & hoses for cracks & damage.
- Inspect all electrical wiring on the hoist system or accessories for damage, by checking lights and controls are in proper working order, reference troubleshooting on page 70.

YEARLY

- Replace the system's hoist hydraulic fluid, with the procedure can be found on page 54-55.
- Fully Inspect the vehicle chassis and Switch-N-Go® hoist frame for cracks or deformation, excessive wear, if the system or vehicle has damage refer to troubleshoot or contact your local distributor for more information.



REPLACEMENT PARTS

We have built your vehicle to the highest standards using quality parts. Contact your local distributor for information about replacement parts by directly reaching out to us.



Visit us on the web at
switchngo.com/locator



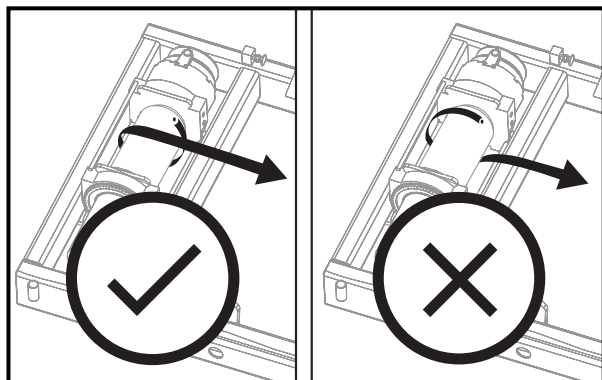
Contact us toll-free at
(888) 311-0867



WINCH CABLE REPLACEMENT

This winch cable replacement is for Warn® 12,000lbs, 15,000lbs or 18,000lbs winches.

The cable feeds out from the topside of the Switch-N-Go® hoist system either Electric or Hydraulic winches.



⚠ WARNING

Always maintain a minimum of five wraps of the cable on the drum while operating the winch. Failure to do so may result in the cable to pull free of the winch drum and drop the load.

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 wrapped 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 wraps 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. ■

ELECTRIC SYSTEM HYDRAULIC FLUID CHANGE

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

⚠ WARNING

When performing maintenance with hoist in the raised position, always have body prop rod in place with an empty or removed truck body from the vehicle.

- Step 1—** Unload the body by following the procedures as stated in this manual as shown on page 34-43. This procedure requires there be no truck body on hoist. Ensure to stow the body prop rod and lower the hoist all the way down.
- Step 2—** Using a siphon pump, remove all of the old fluid from the hydraulic tank.
- Step 3—** Remove breather cap on hydraulic reservoir tank.
- Step 4—** Completely fill the hydraulic tank using 3.5 quarts hydraulic oil equivalent to Grade 32 (such as ATF-Dextron II or Mobile DTE 13) to the maximum fill level into the hydraulic reservoir.
- Step 5—** Raise the hoist "UP" halfway to approximately 25° angle which reveals about 8" of the cylinder stroke.
- Step 6—** Engage body prop rod, by setting the prop rod vertically and lock into place then and lower the hoist "DOWN" until the prop rod is nestled on the lift tube or into the prop cup on side of frame.
- Step 7—** Continue to fill the Hydraulic reservoir leaving 1/2" void from the top of the reservoir. Carefully loosen the feed line on the hydraulic hoist cylinder, until a small amount of hydraulic oil weeps out, removing any trapped air pockets.
- Step 8—** Ensure feed and return lines are tight and not leaking.
- Step 9—** Cycle the hoist system "UP" and "DOWN", and continue filling the reservoir leaving 1/2" from the top of the reservoir. Place and tighten the breather cap on the reservoir.
- Step 10—** Lift the hoist "UP", disengage the prop rod and continue to lower the hoist "DOWN". ■



HYDRAULIC SYSTEM HYDRAULIC FLUID CHANGE

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

WARNING

When performing maintenance with hoist in the raised position, always have body prop rod in place with an empty or removed truck body from the vehicle.

- Step 1—** Unload the body by following the procedures as stated in this manual as shown on page 34-43. This procedure requires there be no truck body on hoist. Ensure to stow the body prop rod and lower the hoist all the way down.
- Step 2—** Using a siphon pump, remove all of the old fluid from the hydraulic tank.
- Step 3—** Remove breather cap on hydraulic reservoir tank.
- Step 4—** Completely fill the hydraulic tank using 18-20 quarts hydraulic oil equivalent to Grade 32 (such as ATF-Dextron II or Mobile DTE 13) to the maximum fill level into the hydraulic reservoir.
- Step 5—** Raise the hoist "UP" halfway to approximately 25° angle which reveals about 8" of the cylinder stroke.
- Step 6—** Engage body prop rod, by setting the prop rod vertically and lock into place then and lower the hoist "DOWN" until the prop rod is nestled on the lift tube or into the prop cup on side of frame.
- Step 7—** Continue to fill the hydraulic reservoir leaving 1/2" void from the top of the reservoir. Carefully loosen the feed line on the hydraulic hoist cylinder, until a small amount of hydraulic oil weeps out, removing any trapped air pockets.
- Step 8—** Ensure feed and return lines are tight and not leaking.
- Step 9—** Cycle the hoist system "UP" and "DOWN", and continue filling the hydraulic reservoir remains full.
- Step 10—** Lift the hoist "UP", disengage the prop rod and continue to lower the hoist "DOWN". ■



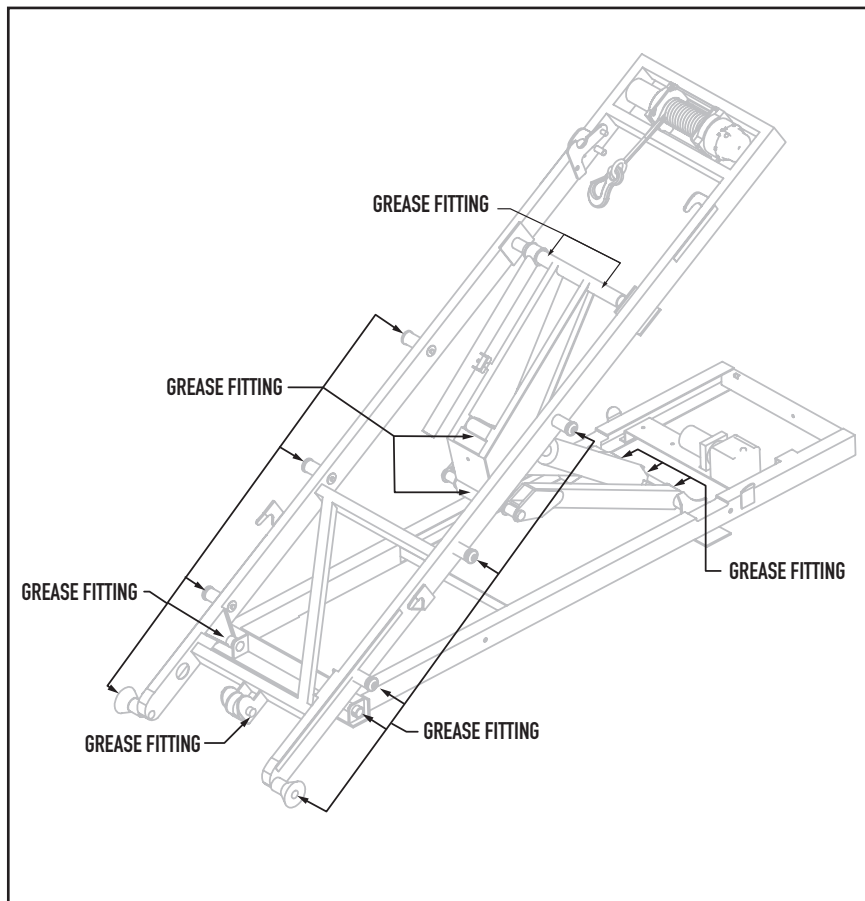
LUBRICATING THE HOIST SYSTEM & BODIES

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

- Lubricate all grease fittings as shown below with run out grease or marine grease.
 - (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



All Switch-N-Go® Hoist Systems & Bodies moving parts are equipped with grease fittings indicated in the grease fitting diagram on the next page or with this yellow label.

GREASE FITTING DIAGRAM



SYSTEM TEST & PRE-OPERATION CHECKLIST





Failure to properly test and check the system may result in premature wear, the system not to function properly or a system failure, reference the TROUBLESHOOT section, on page 68.

- ☐ **Ensure you have been properly instructed how to operate the Switch-N-Go® upfitted vehicle.**
 - Ensure you have been instructed how to insert the control pendants, into the control receptacle(s).
 - Ensure you have be instructed how to load and unload truck bodies using the hoist system, with both loads and empty.
 - Ensure you are aware the GVWR, TUVW, hoist system weight, load capacities of the hoist system and the vehicle, both are located on the vehicle's driver inside pillars or inside the door panel.
- ☐ **Check all nuts and bolts are properly torqued, using the torque chart on shown on page 58.**
- ☐ **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 damage.**
- ☐ **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 that the batteries and fuses are connected and are working properly.**



- ☐ **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.
- ☐ **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 toggling the "UP" to raise it up to 50° and "DOWN" to the horizontal position, using the control pendant.**

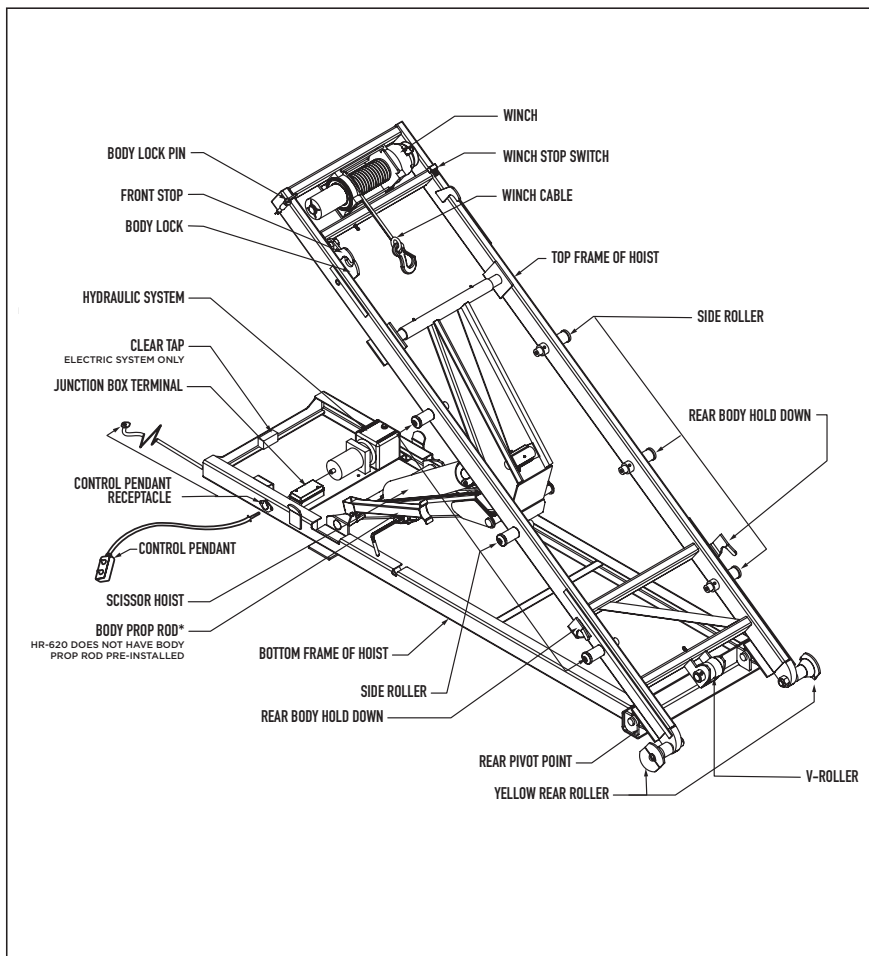
TORQUE TABLE

Size	 Grade 2		 Grade 5		 Grade 8		 18-8 S/S	
	Coarse	Fine	Coarse	Fine	Coarse	Fine	Coarse	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

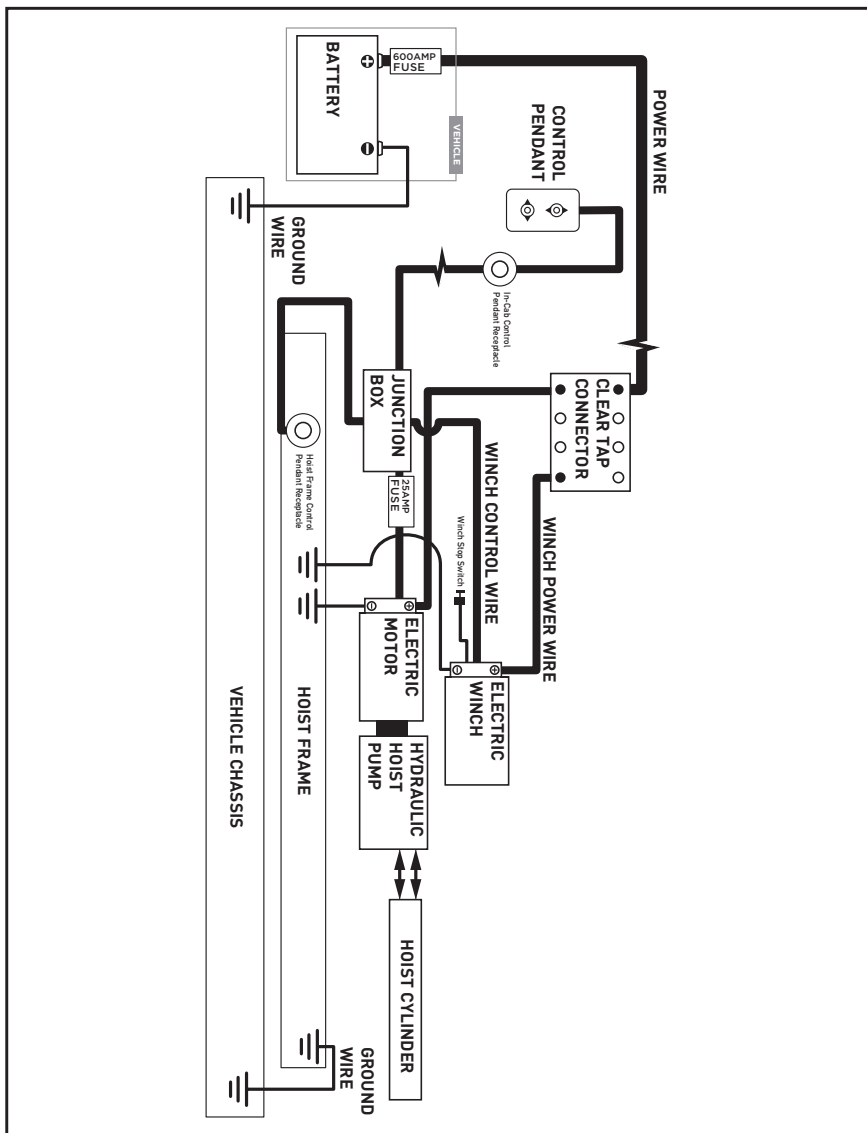
*Size from 4-10 are in lb-in
Size from 1/4 up are lb-ft

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

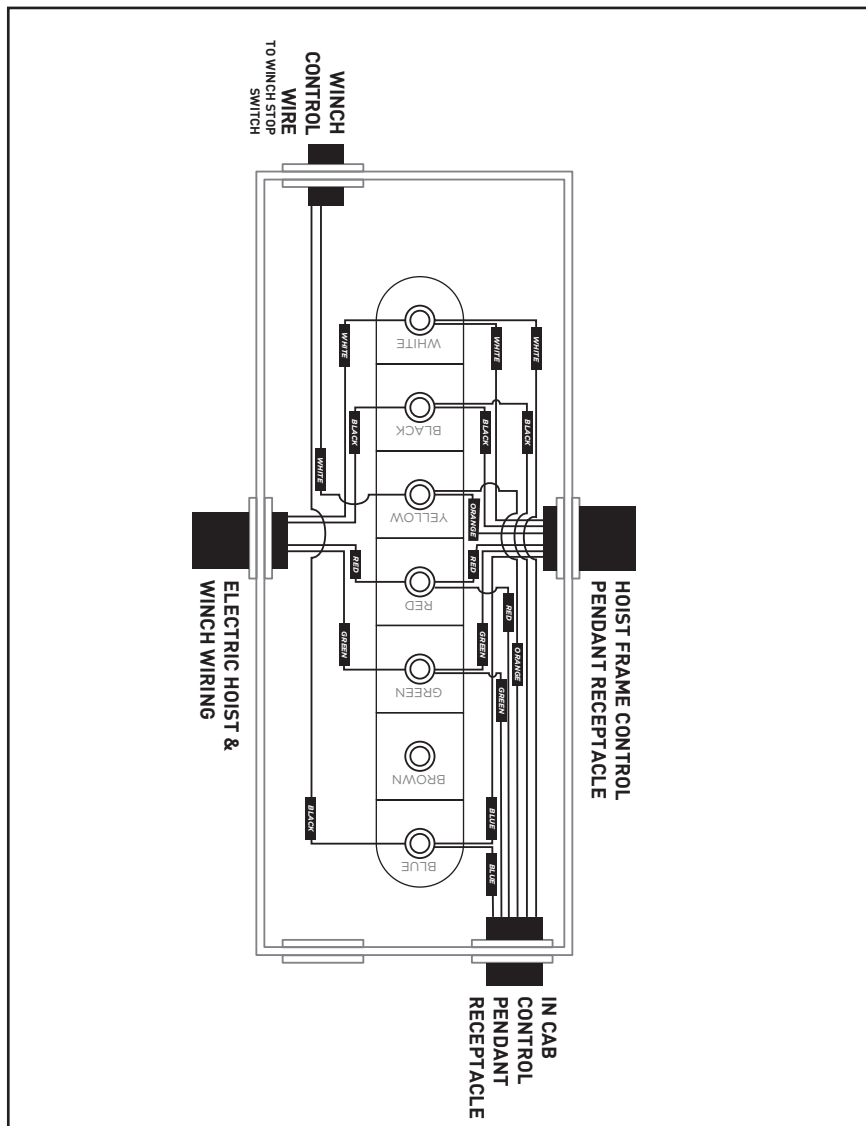
COMMON PARTS DIAGRAM



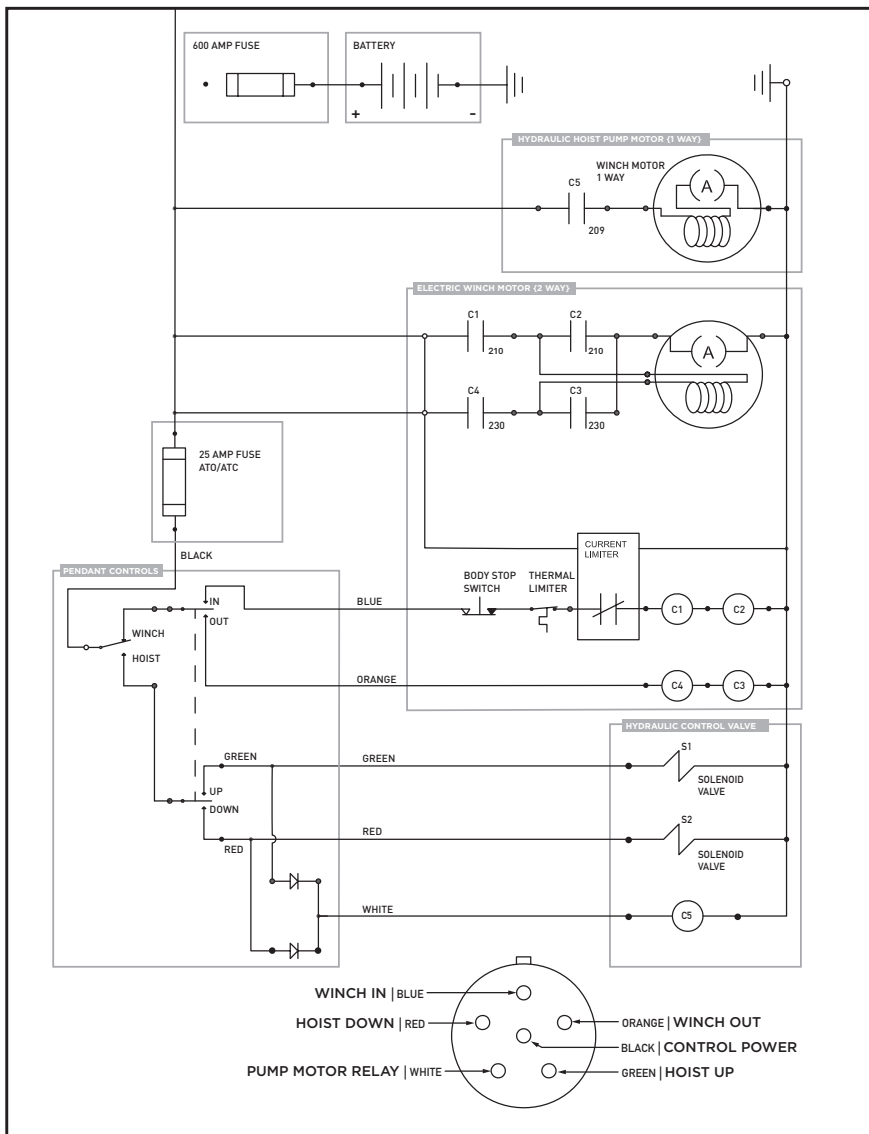
SYSTEM DIAGRAM {ELECTRIC OVER HYDRAULIC SYSTEM}



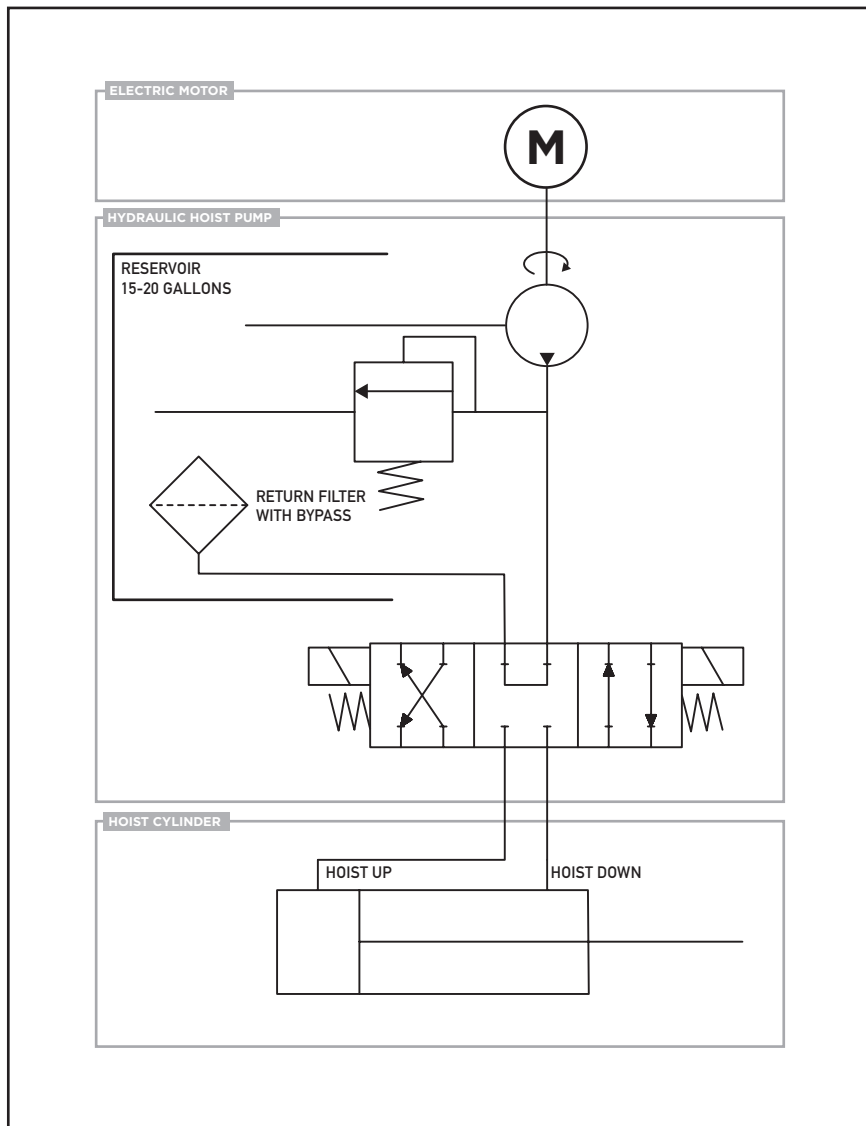
JUNCTION BOX DIAGRAM {ELECTRIC OVER HYDRAULIC SYSTEM}



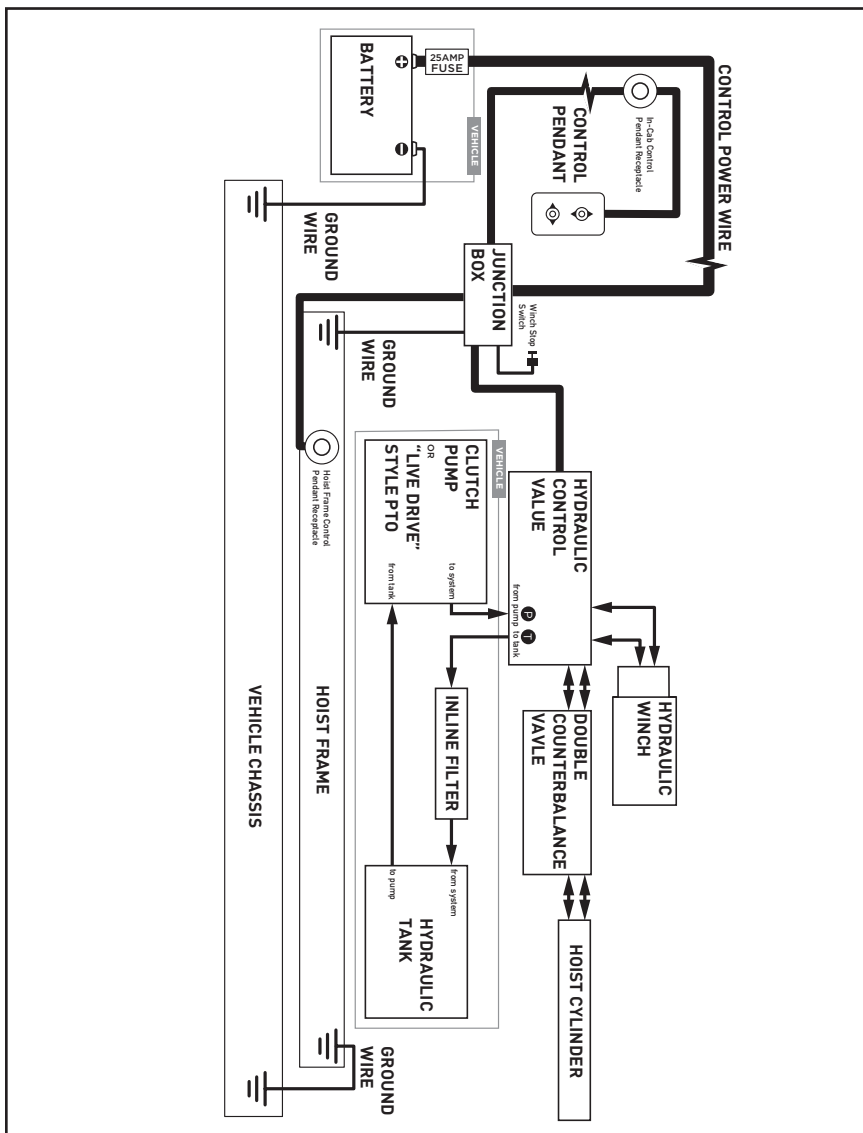
ELECTRICAL DIAGRAM {ELECTRIC OVER HYDRAULIC SYSTEM}



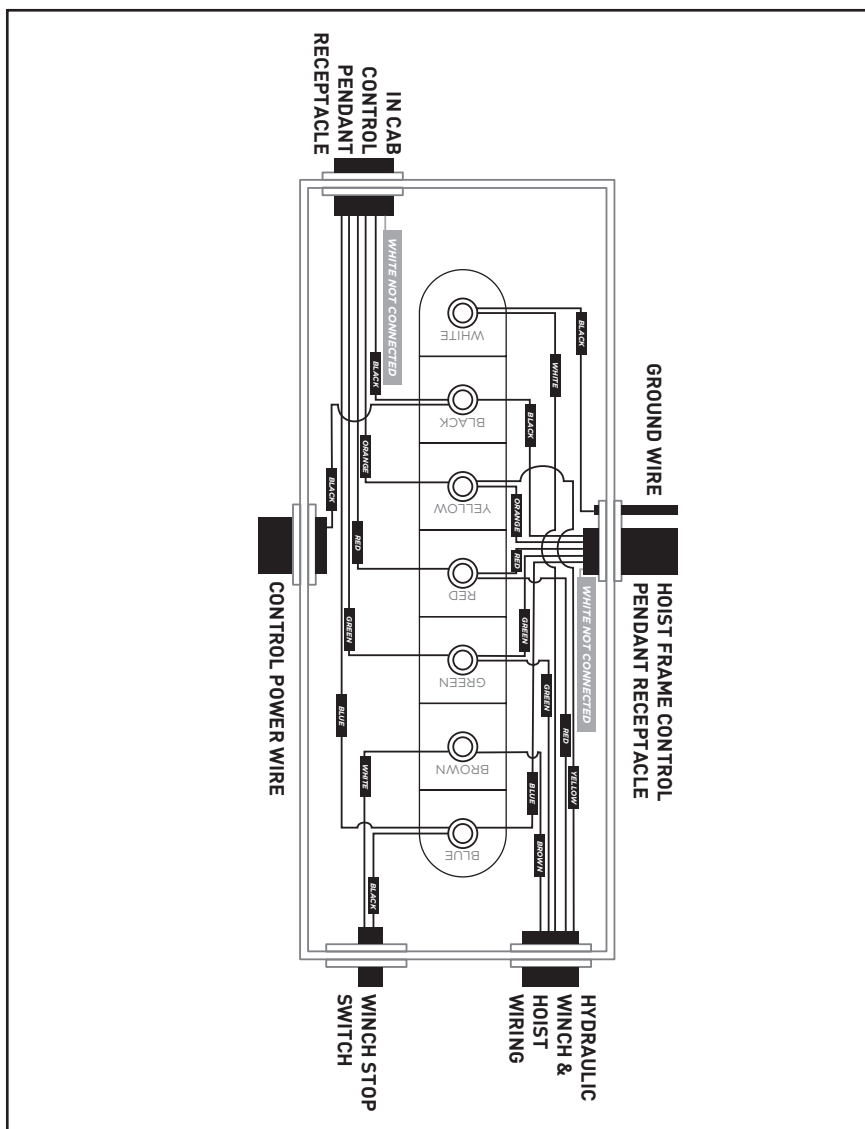
HYDRAULIC DIAGRAM {ELECTRIC OVER HYDRAULIC SYSTEM}



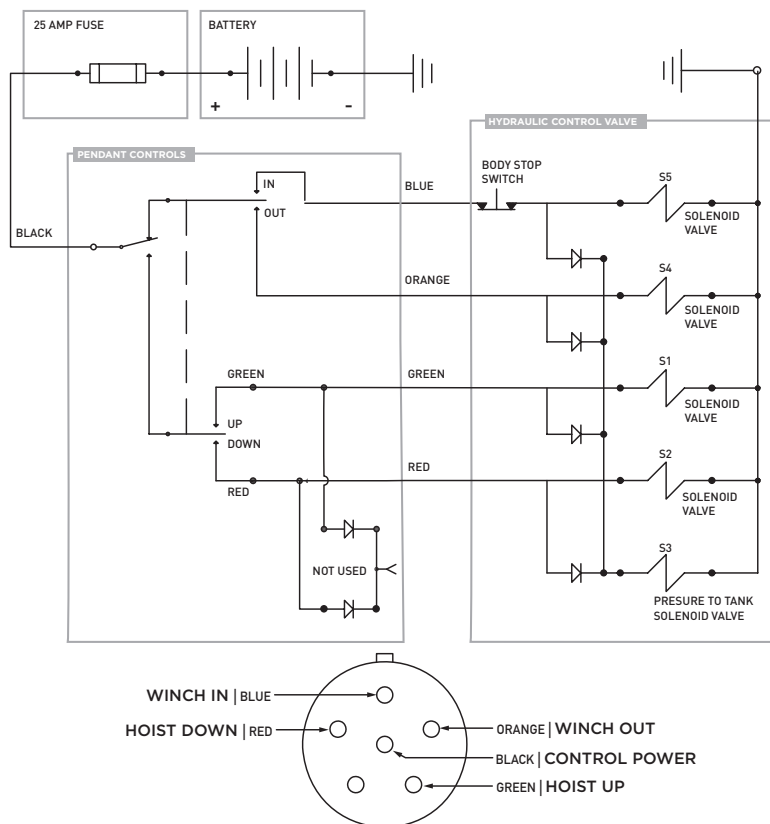
SYSTEM DIAGRAM {FULL HYDRAULIC SYSTEM}



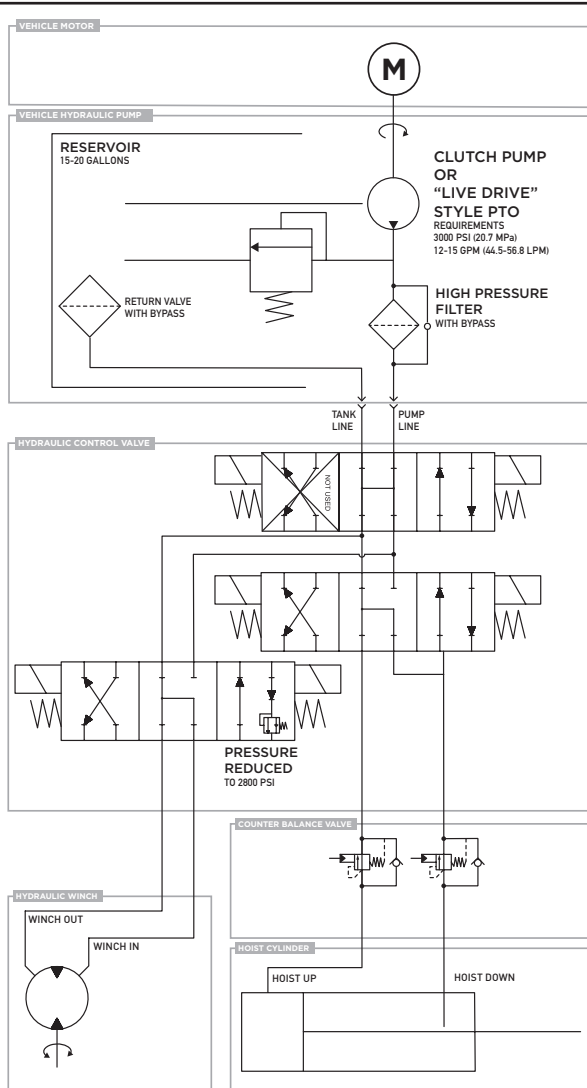
JUNCTION BOX DIAGRAM {FULL HYDRAULIC SYSTEM}



ELECTRICAL DIAGRAM {FULL HYDRAULIC SYSTEM}



HYDRAULIC DIAGRAM {FULL HYDRAULIC SYSTEM}





TROUBLESHOOTING

PROBLEM OR ISSUE	REASON FOR PROBLEM OR ISSUE	SOLUTION OR FIX
Neither winch nor hoist will respond	<ul style="list-style-type: none"> Control pendant disconnected 12V DC power disconnected Weak batteries or missing battery 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Bad wire within control pendant Battery(s) is disconnected Lack of oil within the hydraulic tank Bad 'G' coil 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Bad 'R' coil Body prop rod is engaged or is in the "UP" position Too much rear overhang weight Battery 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 	<ul style="list-style-type: none"> Replace 'R' coil Disengage body prop rod and return to the "DOWN" position Move load forward before lowering Check fuse(s), 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 break

PROBLEM OR ISSUE	REASON FOR PROBLEM OR ISSUE	SOLUTION OR FIX
Fluid leaks from hydraulic tank	<ul style="list-style-type: none"> — Clogged breather cap — Valve stuck part way "IN" — Load raises hoist cylinder faster than pump can receive oil to tank 	<ul style="list-style-type: none"> — 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	<ul style="list-style-type: none"> — Battery(s) is disconnected — Winch motor is defective 	<ul style="list-style-type: none"> — 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	<ul style="list-style-type: none"> — Wires to winch "IN" and "OUT" buttons are reversed — Winch cable was re-spoiled in the wrong direction — Cable wedged between bottom layers of winch cable 	<ul style="list-style-type: none"> — 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 moving inward when toggle is pressed "OUT" direction	<ul style="list-style-type: none"> — Wires to "IN" and "OUT" buttons are reversed — Winch was re-spoiled in the wrong direction — Cable wedged between bottom layers of winch cable 	<ul style="list-style-type: none"> — 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 OR ISSUE	REASON FOR PROBLEM OR ISSUE	SOLUTION OR FIX
Winch does not pull load on	<ul style="list-style-type: none"> Exceeded pay load capacity of winch Battery(s) is disconnected Too much ground resistance Broken or disconnected wire in pendant Too many wraps of winch cable on winch drum Loaded body may be frozen to ground Winch motor defective Winch gears damaged 	<ul style="list-style-type: none"> 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 cable to 25' length 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	<ul style="list-style-type: none"> Battery(s) is disconnected Wire to toggle in control pendant is broken or is disconnected Body lock did not disengage 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Must maintain a minimum of 5 wraps on the winch cable 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.

PROBLEM OR ISSUE	REASON FOR PROBLEM OR ISSUE	SOLUTION OR FIX
Winch motor is getting too hot during operation	<ul style="list-style-type: none">— 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	<ul style="list-style-type: none">— 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	<ul style="list-style-type: none">— Different winch load capacity model used on different capacity loaded systems	<ul style="list-style-type: none">— See winch manual attached for particular troubleshooting table and solutions





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