



SP **SERIES**™
www.sidepuller.com

OPERATIONS MANUAL



In The Ditch™
TOWING PRODUCTS



Operations Manual





Operations Manual



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WARRANTY INFORMATION

Limited Warranty

In The Ditch™ Towing Products (ITD) warrants to the original purchaser that each new In The Ditch™ Towing Products (ITD) product will be free from defects in material and workmanship for a period of twelve (12) months from date placed in service. The purchaser must promptly notify ITD in writing of any failure in material or workmanship. In no event shall ITD accept such notification later than twelve (12) months from date placed in service.

ITD's obligation under this warranty, statutory or otherwise, is limited to the repair or replacement at the ITD factory, or at a point designated by ITD, of such part or parts as shall appear upon inspection by ITD to be defective in material or workmanship. This warranty is not transferable. This warranty does not obligate ITD to bear the cost of labor or transportation charges in connection with the repair or replacement of any parts found to be defective, nor shall it apply to a product upon which repairs or alterations have been made unless authorized by ITD.

Except as expressly set forth in this warranty, ITD makes no other warranty, express or implied, and hereby disclaims all other warranties including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. ITD shall in no event be liable for claimed downtime, claimed loss of profits or good will, or any other special, incidental, indirect, or consequential damages concerning or relating to any product or parts, whether based on negligence, strict liability, breach of contract, breach of warranty, misrepresentation, or any other legal theory, regardless of whether the loss resulted from any general or particular requirement which ITD knew or had reason to know about at the time of sale.

ITD makes no warranty, express or implied, as to the finished products manufactured or supplied by another manufacturer and supplied by ITD to purchaser, including, but not limited to, any vehicle to which an ITD product may be affixed or any accessories or Wire Rope, and ITD expressly disclaims any implied warranties of merchantability and fitness for a particular purpose as to such equipment or products. This language shall in no way affect or diminish the rights of the purchaser to rely on such warranties as are extended by such manufacturers or supplies. ITD shall, to the extent permitted under applicable law, pass on to the purchaser such manufacturer's or seller's warranty.

The customer must obtain a RGA number from ITD prior to any work beginning, and the customer agrees to bear all costs. Winch, Boom Heads, and Cylinder are replaced under manufacturer's discretion. Please Note: Merchandise covered by a manufacturer's warranty must be sent directly to the manufacturer for replacement or repair.

ITD, whose policy is one of continuous improvement, reserves the right to improve its products through changes in design or materials as it may deem desirable without being obligated to incorporate such changes in products previously sold.

This warranty is not intended to cover or include the following items, which are set forth by way of example and not limitation:

- A. Normal deterioration of trim, paint, lettering, appearance of items due to wear or exposure to weather, road conditions, road treatments, etc.
- B. Any damage or defect due to accident, misuse, abuse, operation exceeding rated loads, improper or unauthorized repairs, failure to provide reasonable and necessary maintenance, or uses of which the equipment was not designed or intended.
- C. Alterations or modifications that affect performance, operations, or reliability.

It is expressly understood that ITD makes no implied warranty that ITD products shall be fit for the purpose of lifting or moving people or for any other improper use. Field modification of this unit without the advice and consent of our Engineering Department will void all warranties and any guarantees pertaining to both purchased components used in the manufacture of this unit, as well as structurally fabricated parts supplied by us. Use of other than factory or factory authorized parts will render the warranty void.

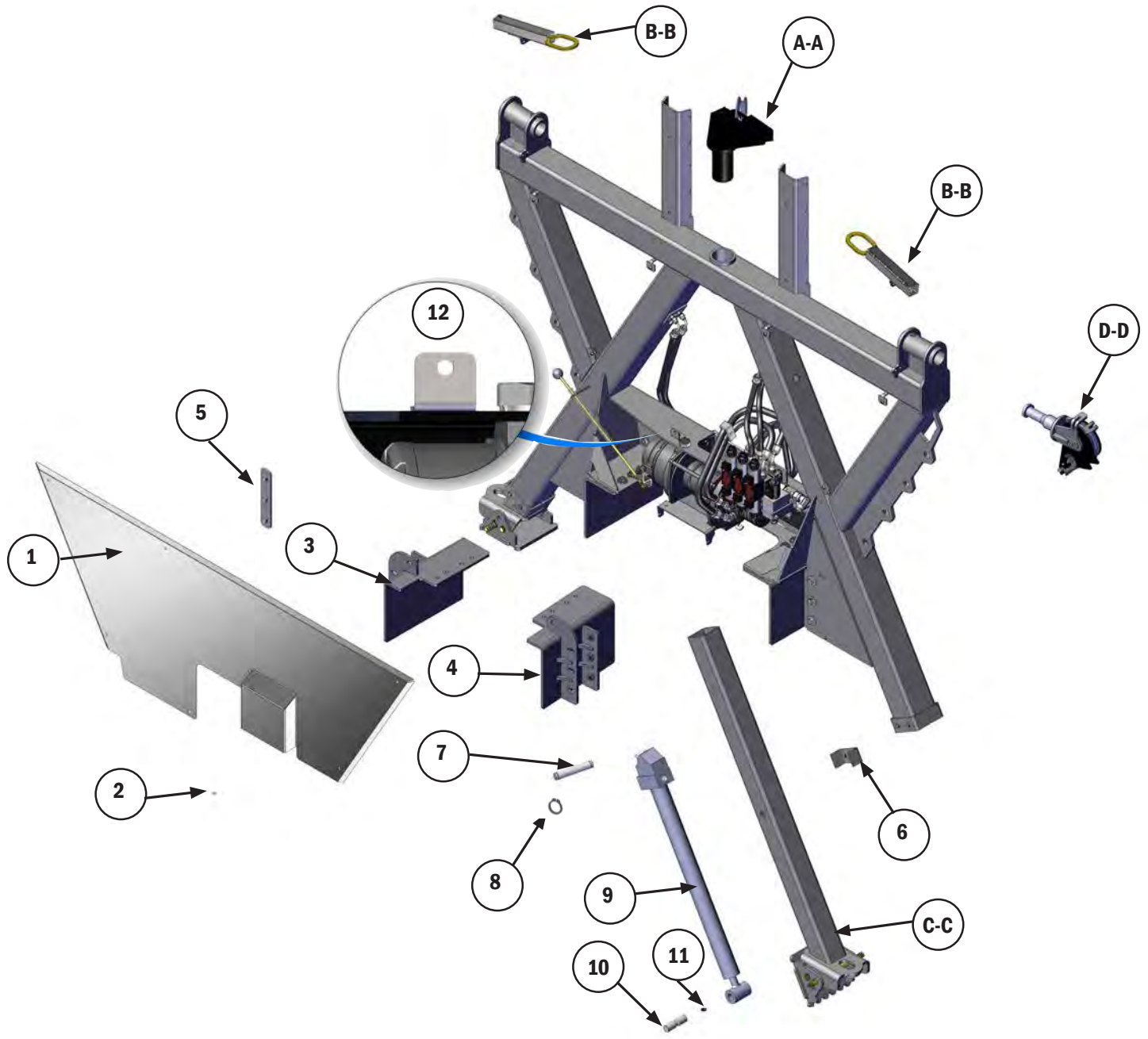
Notice to Owner or User

It is the responsibility of the owner or user to go to **www.intheditch.com** to register your SP Series™ SidePuller™ within 90 days of purchasing unit.

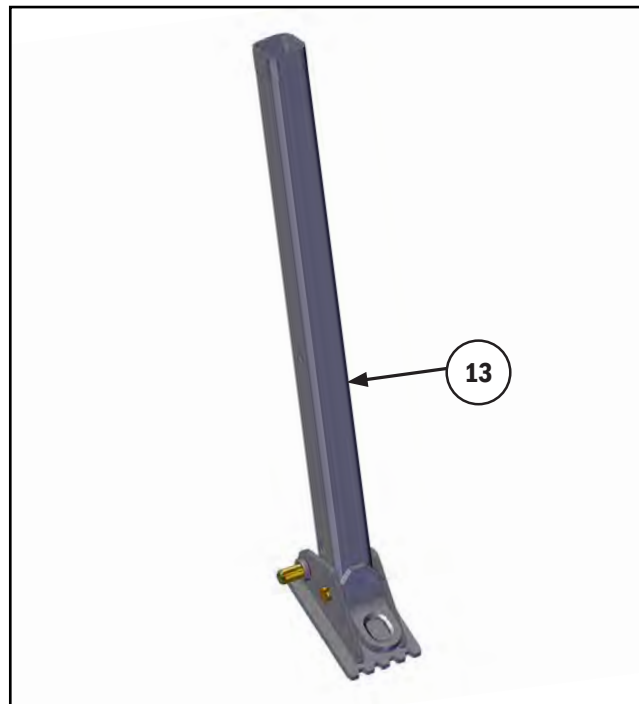
It is essential that the Owner or User of the SP Series™ SidePuller™ keep a copy of this manual in the truck which the SP Series™ SidePuller™ is in service. You can download a PDF copy onto your computer or mobile device from **www.intheditch.com** or email **sales@intheditch.com** to request a physical copy.

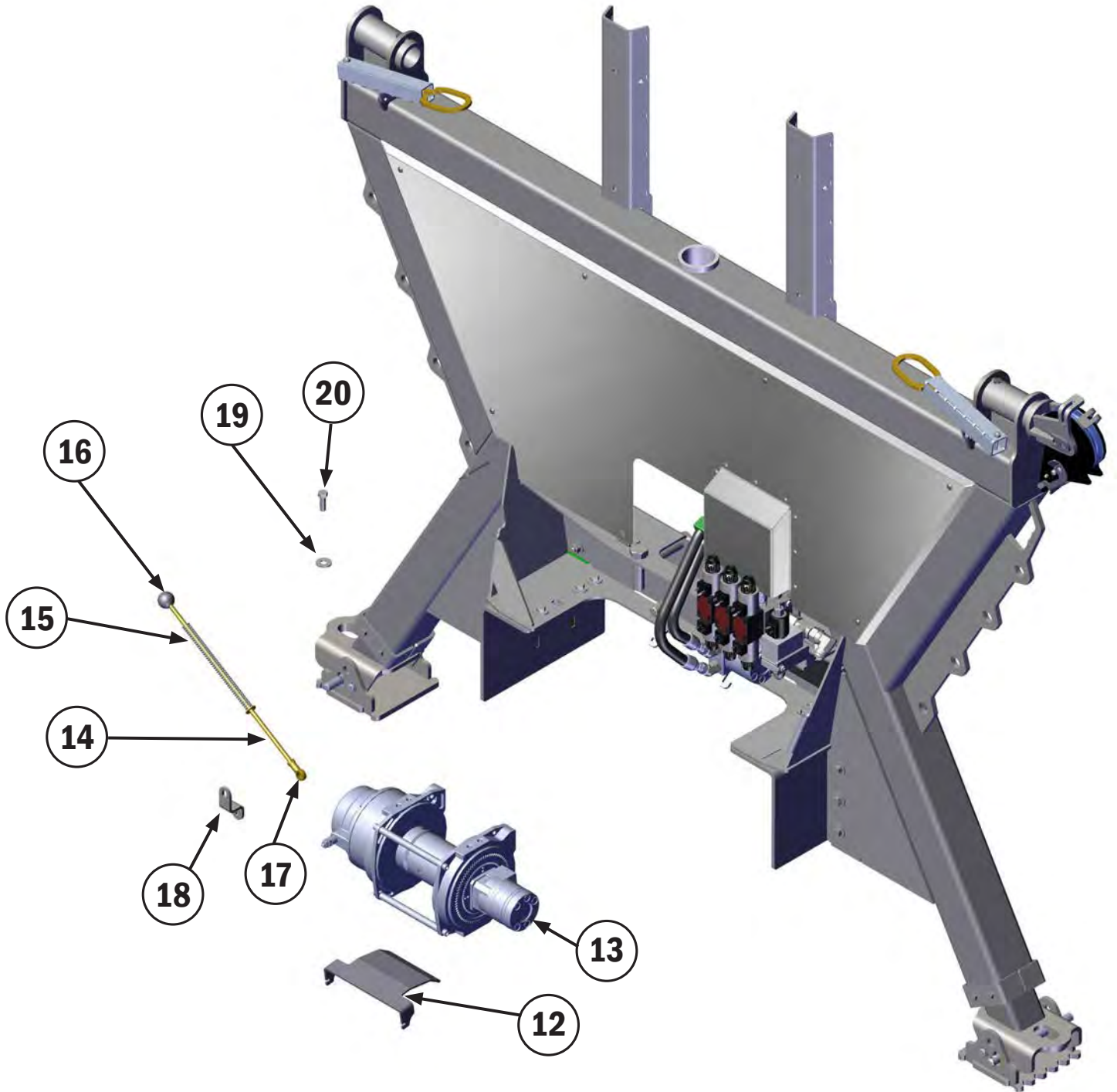
www.intheditch.com

**Contact The Ditch Tech Support, 8:00 am to 5:00PM MST Mon through Friday
1-888-993-4824. sales@intheditch.com**



Item #	Part #	Description
NOT SHOWN	ITD1275	Polished Stainless Steel Rear Accent Panel SP8000™
NOT SHOWN	ITD4523	Polished Stainless Steel Rear Accent Panel SP9000™
1	ITD4722	Polished Stainless Steel Rear Accent Panel SP9000™ (with Integrated Controls)
2	Hardware	SS 1/4"-20 x 3/4" Truss Head Screw
3	ITD4534	L. H. Mounting Base
4	ITD4540	R. H. Mounting Base
5	ITD4724	Nut Plate Assembly for Mounting Base
6	ITD4119	SP9000™ Lower Leg Shim
7	ITD4673	SP9000™ Upper Cylinder Pin
8	ITD7069	1" Snap Ring
9	ITD4189	SP9000™ Leg Cylinder
10	ITD4117	SP9000™ Lower Cylinder Pin
11	Hardware	3/8" Knurled Set Screw
12	ITD4696	Bolt On SS Tab Mount
13	Discontinued	SP8000™ Inner Leg Assembly (Discontinued, replaced with ITD4138 pg 11)

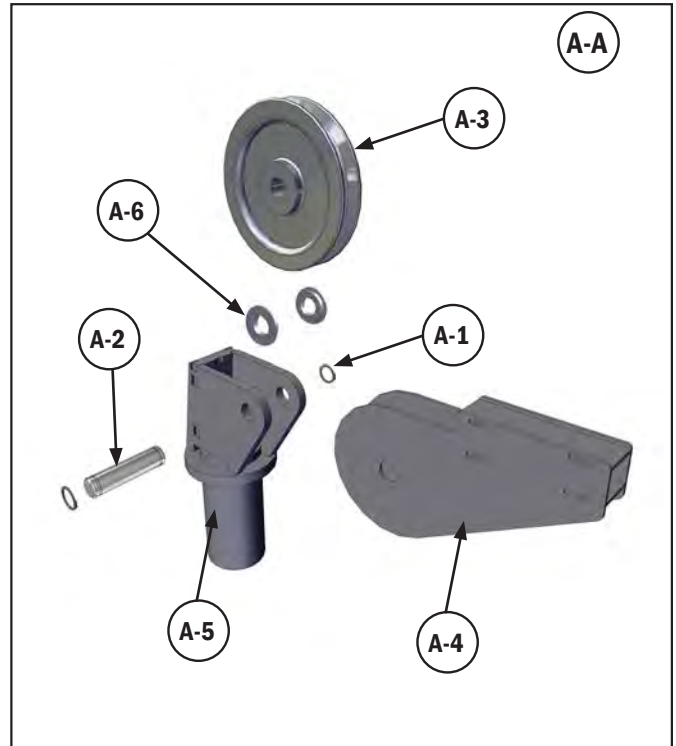




Item #	Part #	Description
12	ITD4141	SP9000™ Tensioner Plate
13	ITD4188	9,000lb Hydraulic Winch
14	ITD4072	Free Spool Rod
15	ITD4096	Free Spool Spring
16	ITD7044	Pull Knob - 3/8" -16
17	ITD4093	Free Spool Rod End
NOT SHOWN	Hardware	3/8" 24 fine Thread Nut
18	ITD4162	Winch Offset Lever
19	Hardware	M12 x 24mm Washer
20	Hardware	M12-1.75X40mm Bolt
NOT SHOWN	ITD4094	3/8" X100 Wire Rope (Steel Core)
NOT SHOWN	ITD4095	Winch Tensioner Spring

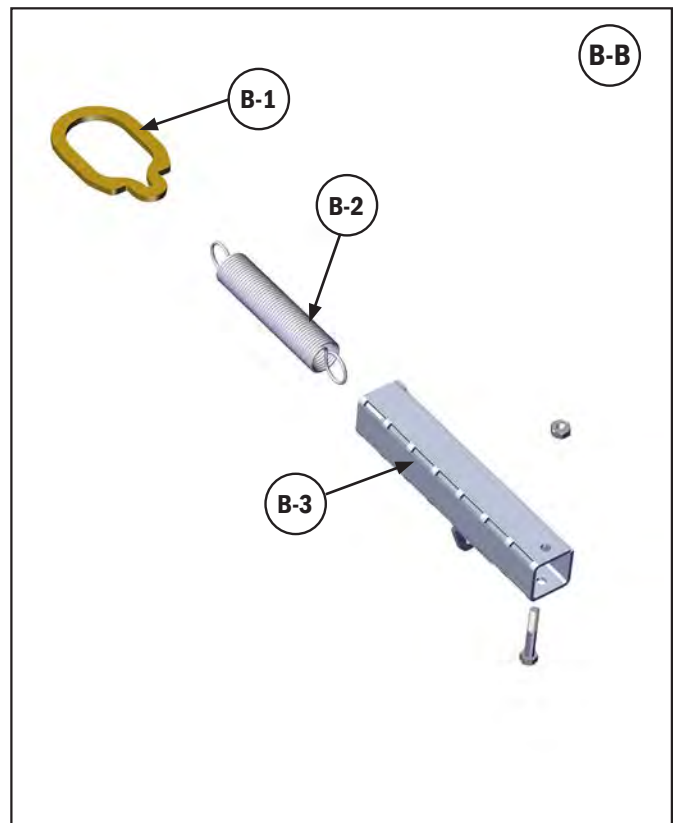
CENTER RECOVERY BOOM HEAD

Item #	Part #	Description
A-A	ITD4044	Center Recovery Boom Head
A-1	ITD7074	3/4" Snap Ring
A-2	ITD4054	Center Recovery Boom Head Sheave Pin
A-3	ITD4053	SP9000™ - SP12,000™ Sheave
A-4	ITD4050	Center Recovery Boom Head Wire Rope Guide
A-5	ITD4045	Center Recovery Boom Head Main Body
A-6	ITD4757	3/4" Nylon Bushing



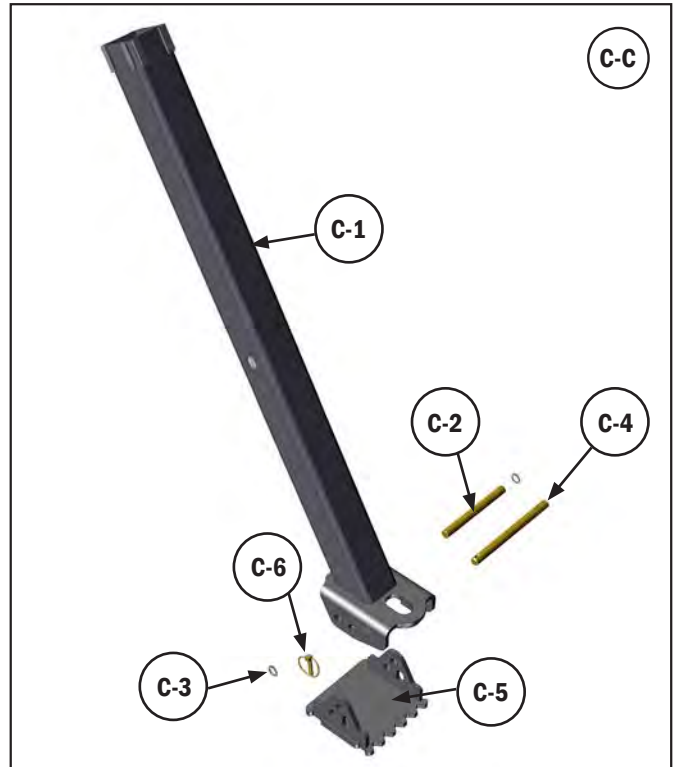
SPRING TUBE

Item #	Part #	Description
B-B	ITD4192 (R or L)	Spring Tube Tie Back Assembly
B-1	ITD4066	Pear Link
B-2	ITD4067	Spring Tube Replacement Spring
B-3	ITD4135	Replacement Spring Tube Body SP9000™, SP12,000™



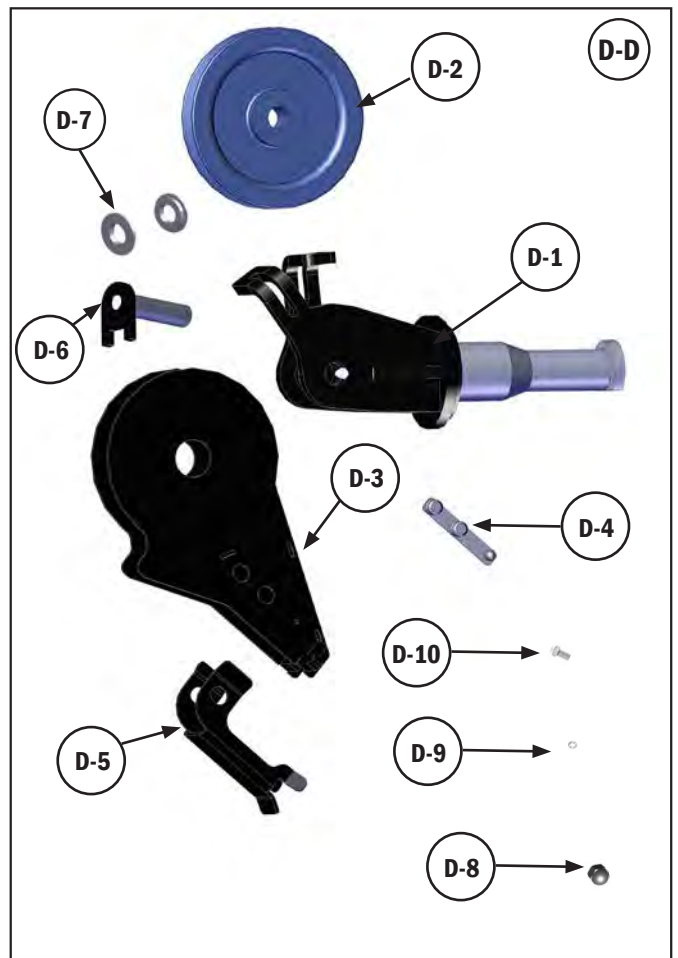
INNER LEG ASSEMBLY

Item #	Part #	Description
C-C	ITD4138	Complete Inner Leg Assembly (No Cylinder)
C-1	ITD4661	S9000™ Inner Leg
C-2	ITD4140	SP9000™ Foot Pivot Pin
C-3	ITD7074	3/4" Snap Ring
C-4	ITD4097	SP9000™ Removable Foot Pin
C-5	ITD4128	SP9000™ Stabilizer Foot
C-6	ITD7099	5/16" Lynch Pin



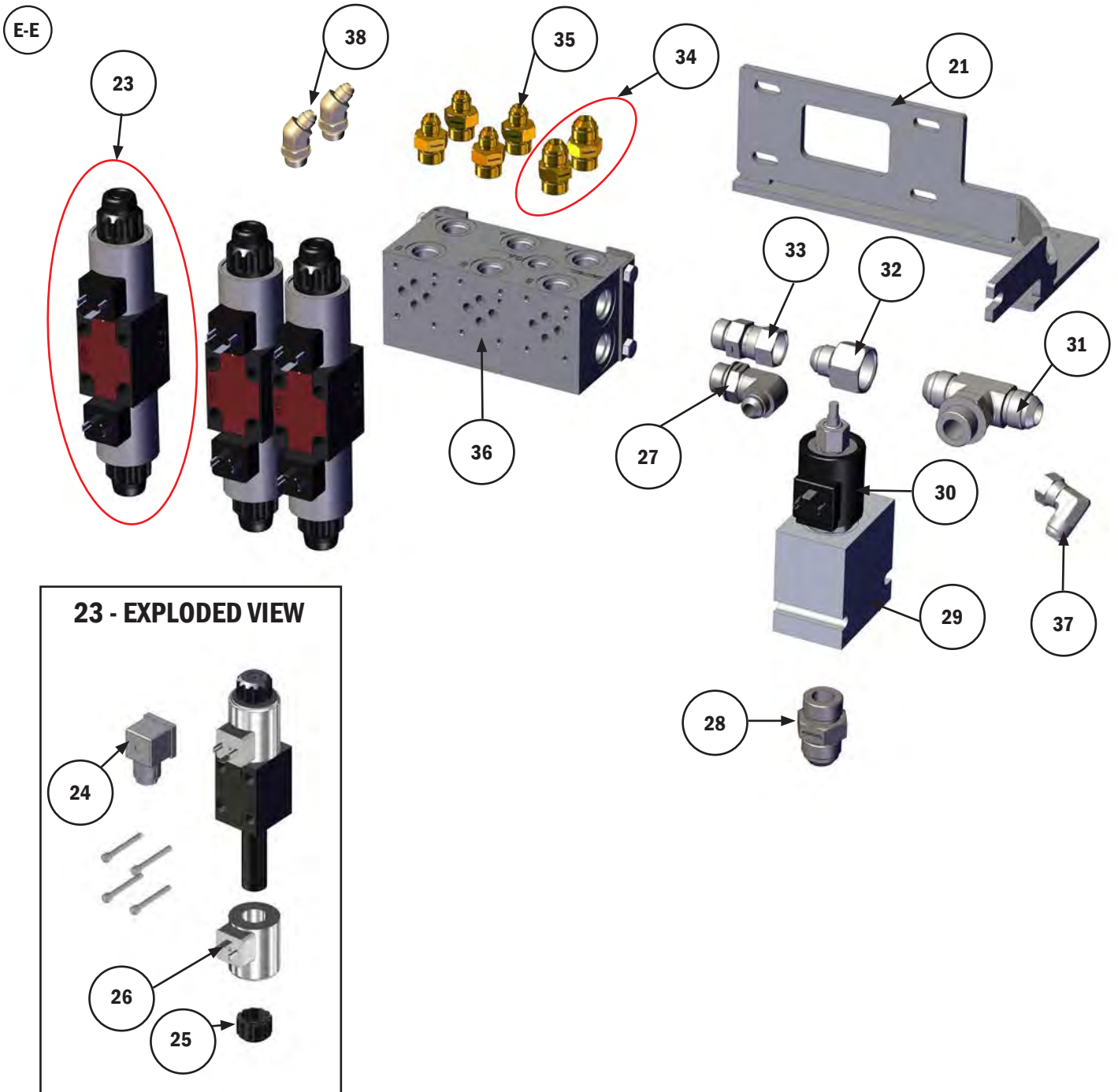
OUTER RECOVERY BOOM HEAD

Item #	Part #	Description
D-D	ITD4229	Outer Recovery Boom Head Assembly
D-1	ITD4212	Outer Recovery Boom Head Main Body
D-2	ITD4053	SP9000™ - SP12,000™ Sheave
D-3	ITD4224	Outer Recovery Boom Head Wire Rope Guide
D-4	ITD4236	Snap Button Assembly
D-5	ITD4223	Wire Rope Guide Cover
D-6	ITD4227	Outer Recovery Boom Head Sheave Pin
D-7	ITD4757	3/4" Nylon Bushing
D-8	1137703	#6 SS Acorn Nut
D-9	1171005	#6 SS Flat Washer
D-10	0145560	#6-32 X 5/16" Hex SS Screw



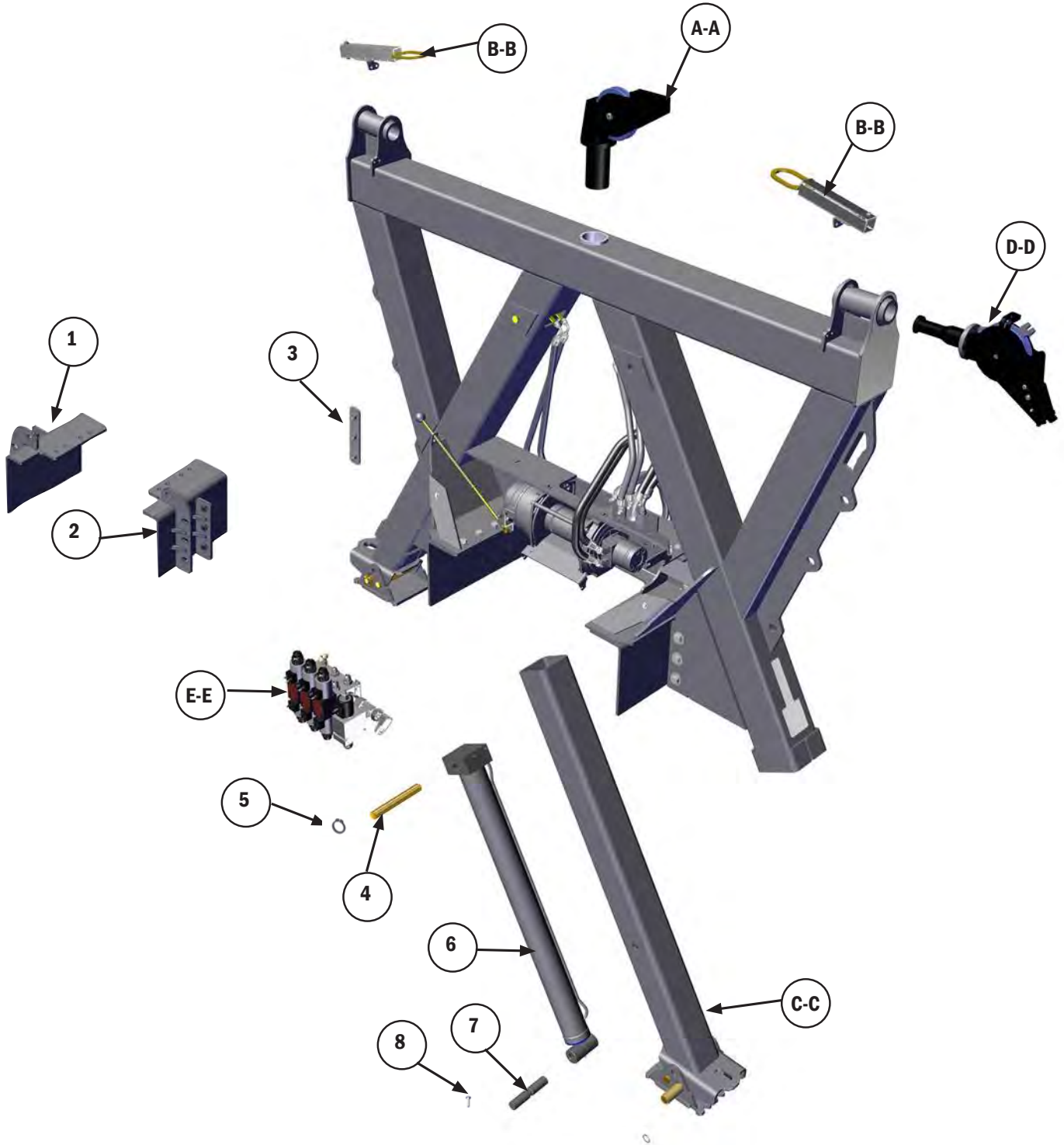
VALVE ASSEMBLY

Item #	Part #	Description
E-E	ITD4164	SP9000™- SP12,000™ Valve Body Kit (12 Volt)
21	ITD4492	Bolt-On Valve Body Bracket Assembly
22	ITD4232	Wireless - Receiver and Transmitter Kit
23	ITD4170	D03 Valve Assembly (Cylinder)
24	ITD4676	Electrical Connector for Coil (w/ Gasket)
25	ITD4677	Rubber Cap
26	ITD4703	12 Volt Coil
27	ITD4685	#12 JIC 90° Return to Tank
28	ITD4683	#12 JIC Diverter Valve to Beyond
29	ITD4163	Diverter Valve without Coil
30	ITD4163S	Diverter Valve Coil Only
31	ITD4686	#12 JIC Tee
32	ITD4687	#12 + #10 Reducer
33	ITD4688	#10 - #8 Swivel Reducer
34	ITD4689	#8 JIC Manifold to Winch Lines
35	ITD4690	#6 JIC Manifold to Cylinder Lines
36	ITD4187	Valve Manifold Assembly
37	ITD4776	90° JIC #12
38	ITD4780	45° JIC #6 + #8

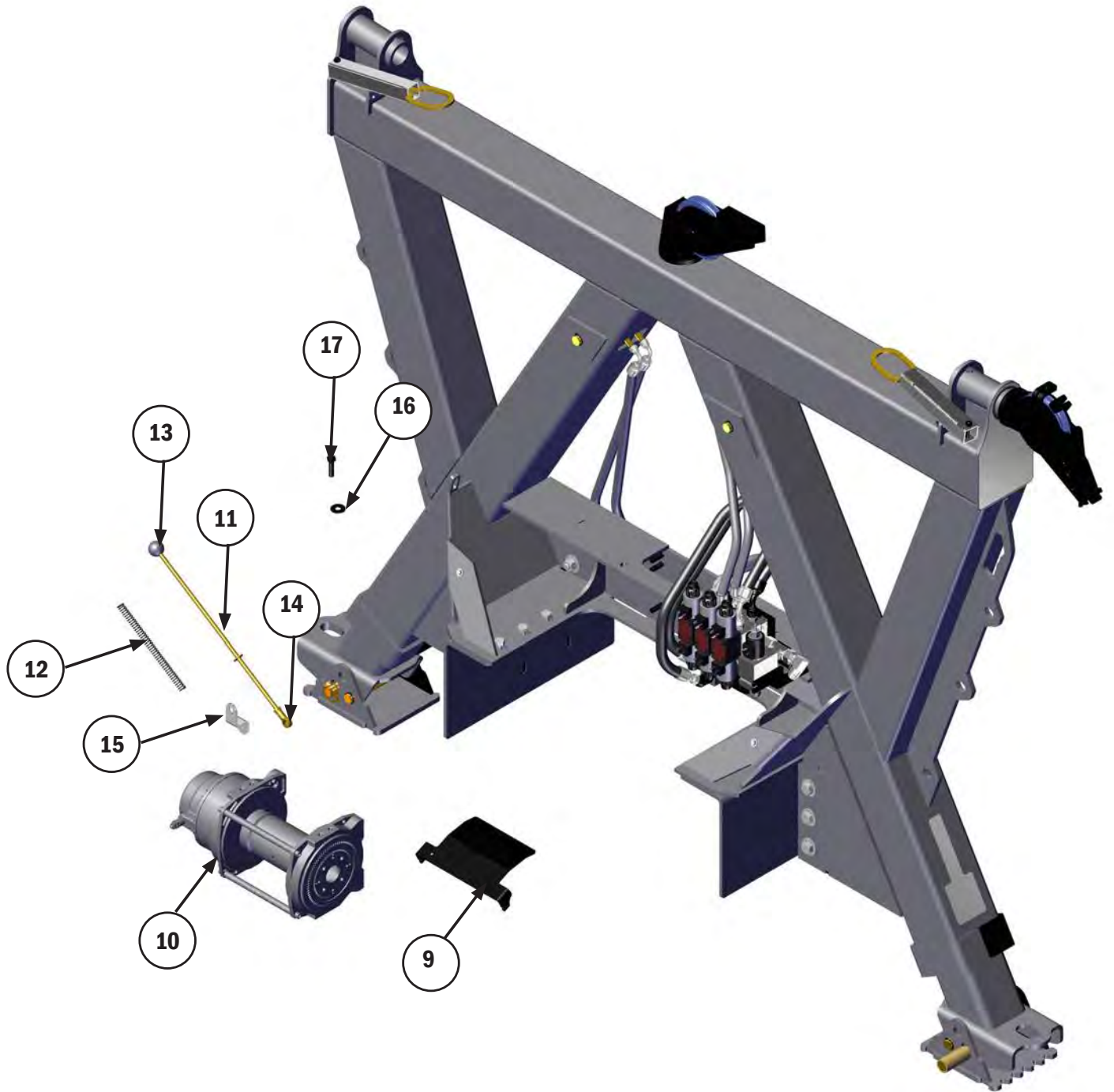


PARTS AND ACCESSORIES

SP12,000 REPLACEMENT PARTS



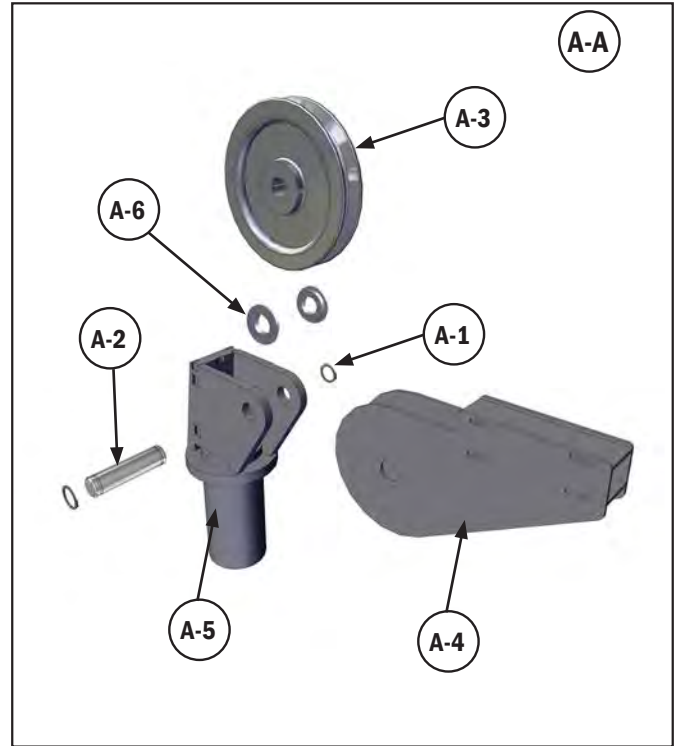
Item #	Part #	Description
1	ITD4769-L	L.H. Mounting Base
2	ITD4769-R	R.H. Mounting Base
3	ITD4773	SP12 Nut Plate
4	ITD4014	SP12,000™ Upper Cylinder Pin
5	ITD7069	1" Snap Ring
6	ITD4061	SP12,000™ Leg Cylinder
7	ITD4007	SP12,000™ Lower Cylinder Pin
8	Hardware	3/8" Knurled Set Screw



Item #	Part #	Description
9	ITD4038	SP12,000™ Tensioner Plate
10	ITD4062	12,000lb Hydraulic Winch
11	ITD4072	Free Spool Rod
12	ITD4096	Free Spool Spring
13	ITD7044	Pull Knob - 3/8" -16
14	ITD4093	Free Spool Rod End
N/A	Hardware	3/8" 24 fine Thread Nut
15	ITD4162	Winch Offset Lever
16	Hardware	M12 x 24mm Washer
17	Hardware	M12-1.75X40mm Bolt
N/A	ITD4063	7/16" X100 Wire Rope (Steel Core)
N/A	ITD4095	Winch Tensioner Spring

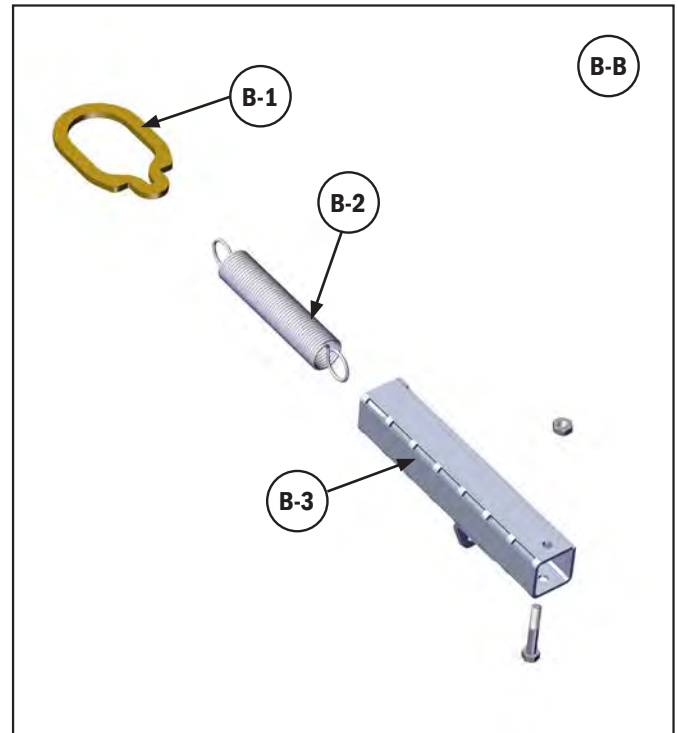
CENTER RECOVERY BOOM HEAD

Item #	Part #	Description
A-A	ITD4044	Center Recovery Boom Head
A-1	ITD7074	3/4" Snap Ring
A-2	ITD4054	Center Boom Head Sheave Pin
A-3	ITD4053	6" Sheave
A-4	ITD4050	Center Boom Head Wire Rope Guide
A-5	ITD4045	Center Boom Head Main Body
A-6	ITD4757	3/4" Nylon Bushing



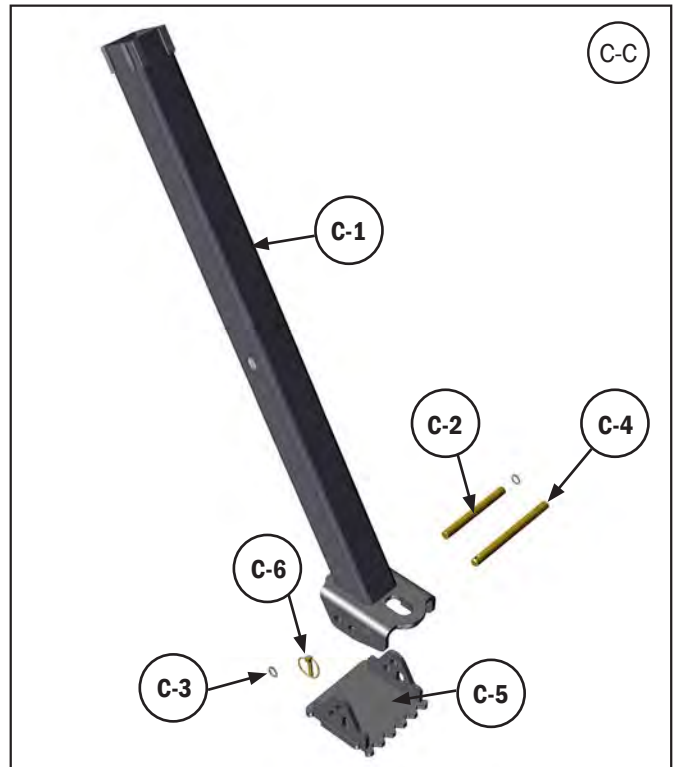
SPRING TUBE

Item #	Part #	Description
B-B	ITD4192 (R or L)	Spring Tube Tie Back Assembly
B-1	ITD4066	Pear Link
B-2	ITD4067	Spring Tube Replacement Spring
B-3	ITD4135	Replacement Spring Tube Body SP9000™ -SP12,000™



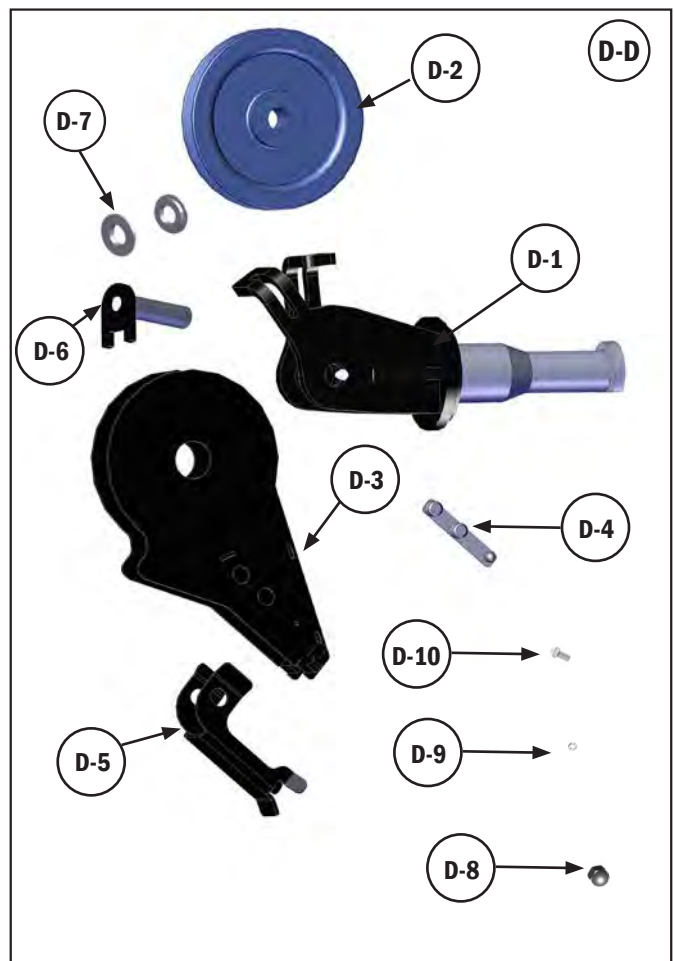
INNER LEG ASSEMBLY

Item #	Part #	Description
C-C	ITD4028	Complete Inner Leg Assembly (No Cylinder)
C-1	ITD4029	SP12,000™ Inner Leg (No Foot)
C-2	ITD4034	SP12,000™ Foot Pivot Pin
C-3	ITD7074	3/4" Snap Ring
C-4	ITD4040	SP12,000™ Removable Foot Pin
C-5	ITD4035	SP12,000™ Stabilizer Foot
C-6	ITD7099	5/16" Lynch Pin



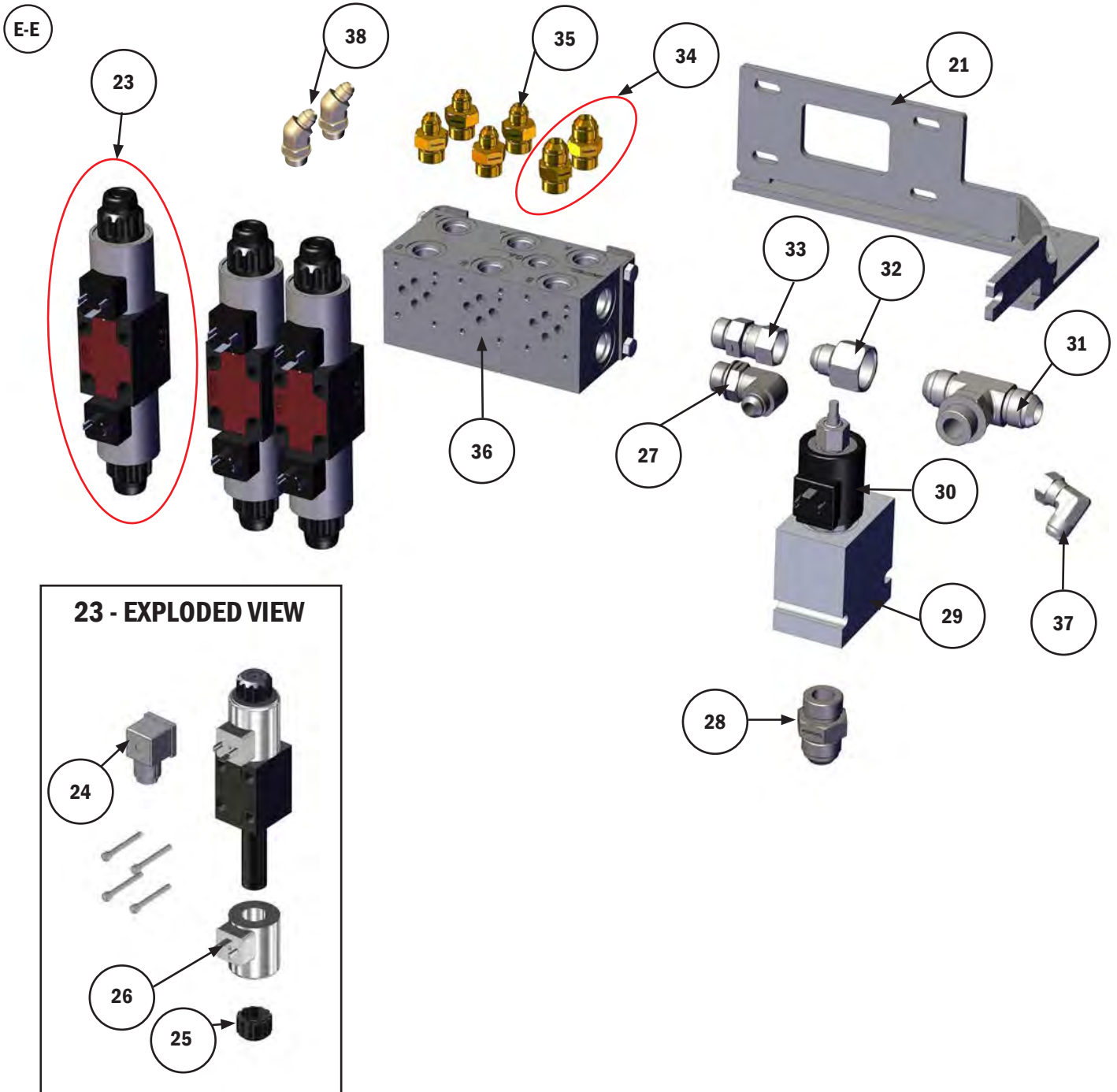
OUTER RECOVERY BOOM HEAD

Item #	Part #	Description
D-D	ITD4229	Outer Recovery Boom Head Assembly
D-1	ITD4212	Outer Recovery Boom Head Main Body
D-2	ITD4053	SP9000™ - SP12,000™ Sheave
D-3	ITD4224	Outer Recovery Boom Head Wire Rope Guide
D-4	ITD4236	Snap Button Assembly
D-5	ITD4223	Wire Rope Guide Cover
D-6	ITD4227	Outer Recovery Boom Head Sheave Pin
D-7	ITD4757	3/4" Nylon Bushing
D-8	1137703	#6 SS Acorn Nut
D-9	1171005	#6 SS Flat Washer
D-10	0145560	#6-32 X 5/16" Hex SS Screw



VALVE ASSEMBLY

Item #	Part #	Description
E-E	ITD4164	SP9000™- SP12,000™ Valve Body Kit (12 Volt)
21	ITD4492	Bolt-On Valve Body Bracket Assembly
22	ITD4232	Wireless - Receiver and Transmitter Kit
23	ITD4170	D03 Valve Assembly (Cylinder)
24	ITD4676	Electrical Connector for Coil (w/ Gasket)
25	ITD4677	Rubber Cap
26	ITD4703	12 Volt Coil
27	ITD4685	#12 JIC 90° Return to Tank
28	ITD4683	#12 JIC Diverter Valve to Beyond
29	ITD4163	Diverter Valve without Coil
30	ITD4163S	Diverter Valve Coil Only
31	ITD4686	#12 JIC Tee
32	ITD4687	#12 + #10 Reducer
33	ITD4688	#10 - #8 Swivel Reducer
34	ITD4689	#8 JIC Manifold to Winch Lines
35	ITD4690	#6 JIC Manifold to Cylinder Lines
36	ITD4187	Valve Manifold Assembly
37	ITD4776	90° JIC #12
38	ITD4780	45° JIC #6 + #8

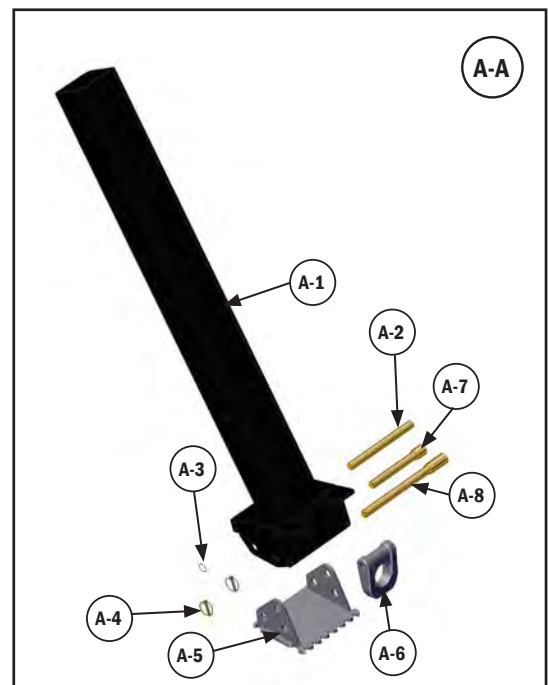


SP20,000™ PARTS OVERVIEW

Item #	Part #	Description
1	ITD4156	SP20,000™ Aluminum Hook Slide Tray
2	ITD7248	SP20,000™ Flipper Air Valve
3	ITD4177	SP20,000™ Hydraulic Winch
4	ITD4183	SP20,000™ Leg Cylinder
5	ITD4181	SP20,000™ Lower Cylinder Pin
6	ITD4182	SP20,000™ Upper Cylinder Pin
7	ITD7069	1" Snap Ring
8	ITD4497	Long Hydraulic Fitting
9	ITD 4693	Sun Counter Balance Valve 3000 PSI
10	ITD4694	Sun Counter Balance Valve Manifold

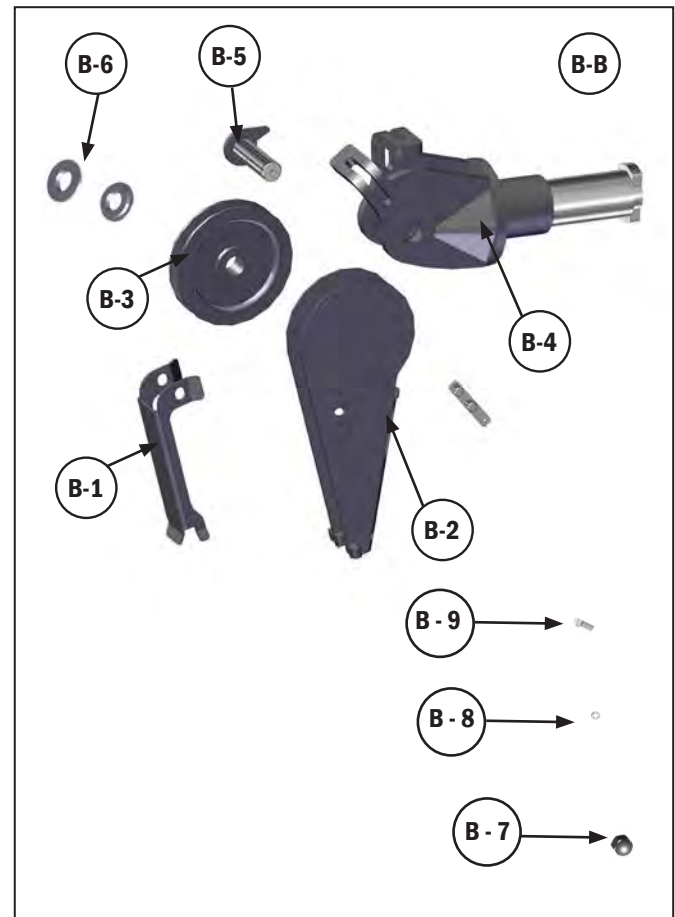
INNER LEG ASSEMBLY

Item #	Part #	Description
A-A	ITD4663	SP20,000™ Complete Inner Leg Assembly (No cylinder)
A-1	ITD4178	SP20,000™ Inner Leg Only (No Stabilizer Foot)
A-2	ITD4077	SP20,000™ Main Foot Pivot Pin
A-3	ITD7069	1" Snap Ring
A-4	ITD7099	5/16" Lynch Clip
A-5	ITD4085	Stabilizer Foot
A-6	ITD4092	SP20,000™ Removable D-Ring
A-7	ITD4176	SP20,000™ Removable D-Ring Pin
A-8	ITD4074	SP20,000™ Removable Foot Pin



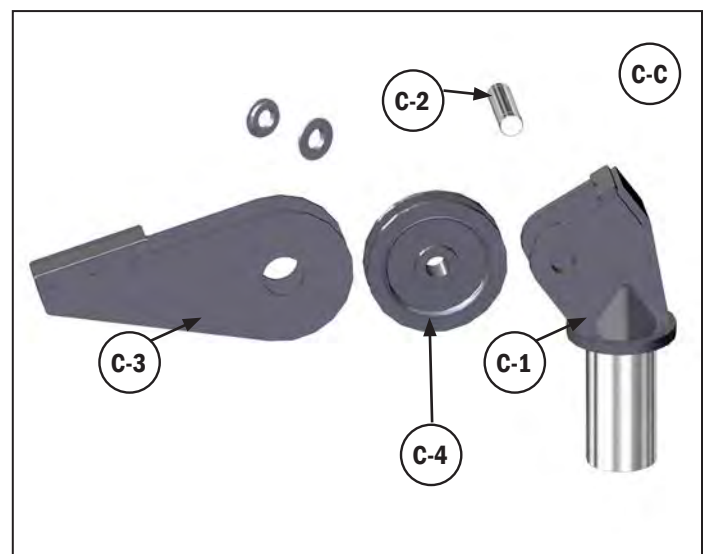
OUTER RECOVERY BOOM HEAD

Item #	Part #	Description
B - B	ITD4185	SP20,000™ Outer Recovery Boom Head
B - 1	ITD4206	SP20,000™ Outer Recovery Boom Head Snap on Guide Cover
B - 2	ITD4207	SP20,000™ Outer Boom Head Wire Guide (No Cover)
B - 3	ITD4208	SP20,000™ Sheave
B - 4	ITD4195	SP20,000™ Outer Recovery Boom Head Main Weldment
B - 5	ITD4210	SP20,000™ Outer Recovery Boom Head Sheave Pin
B - 6	ITD4783	1" Nylon Bushing
B - 7	1137703	#6 SS Acorn Nut
B - 8	1171005	#6 SS Flat Washer
B - 9	0145560	#6-32 X 5/16" Hex SS Screw



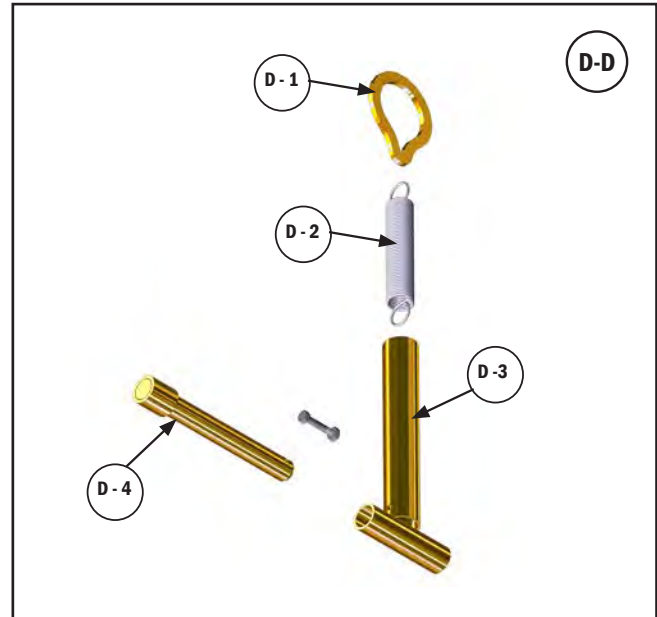
CENTER RECOVERY BOOM HEAD

Item #	Part #	Description
C - C	ITD4184	SP20,000™ Center Boom Head Complete Assembly
C - 1	ITD4273	SP20,000™ Center Boom Head Main Weldment
C - 2	ITD4242	SP20,000™ Center Boom Head Sheave Pin
C - 3	ITD4402	SP20,000™ Boom Head Wire Guide
C - 4	ITD4208	SP20,000™ Boom Head Sheave
C - 5	ITD4783	1" Nylon Bushing



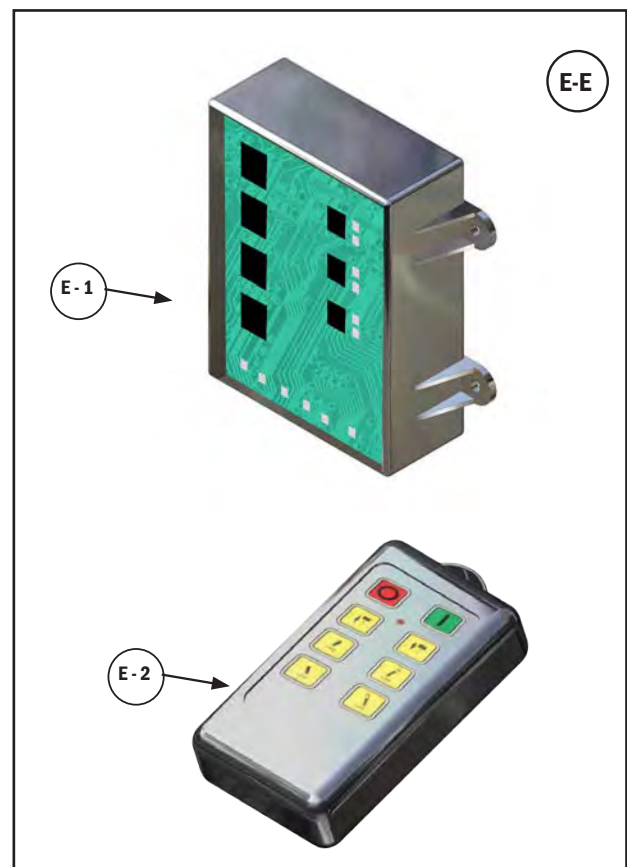
SPRING TUBE

Item #	Part #	Description
D - D	ITD4078	SP20,000™ Spring Tube Assembly
D - 1	ITD4066	SP20,000™ Spring Tube Pear Link
D - 2	ITD4067	SP20,000™ Spring Tube Replacement Spring
D - 3	ITD4078	SP20,000™ Replacement Spring Tube
D - 4	ITD4182	SP20,000™ Upper Cylinder Pin

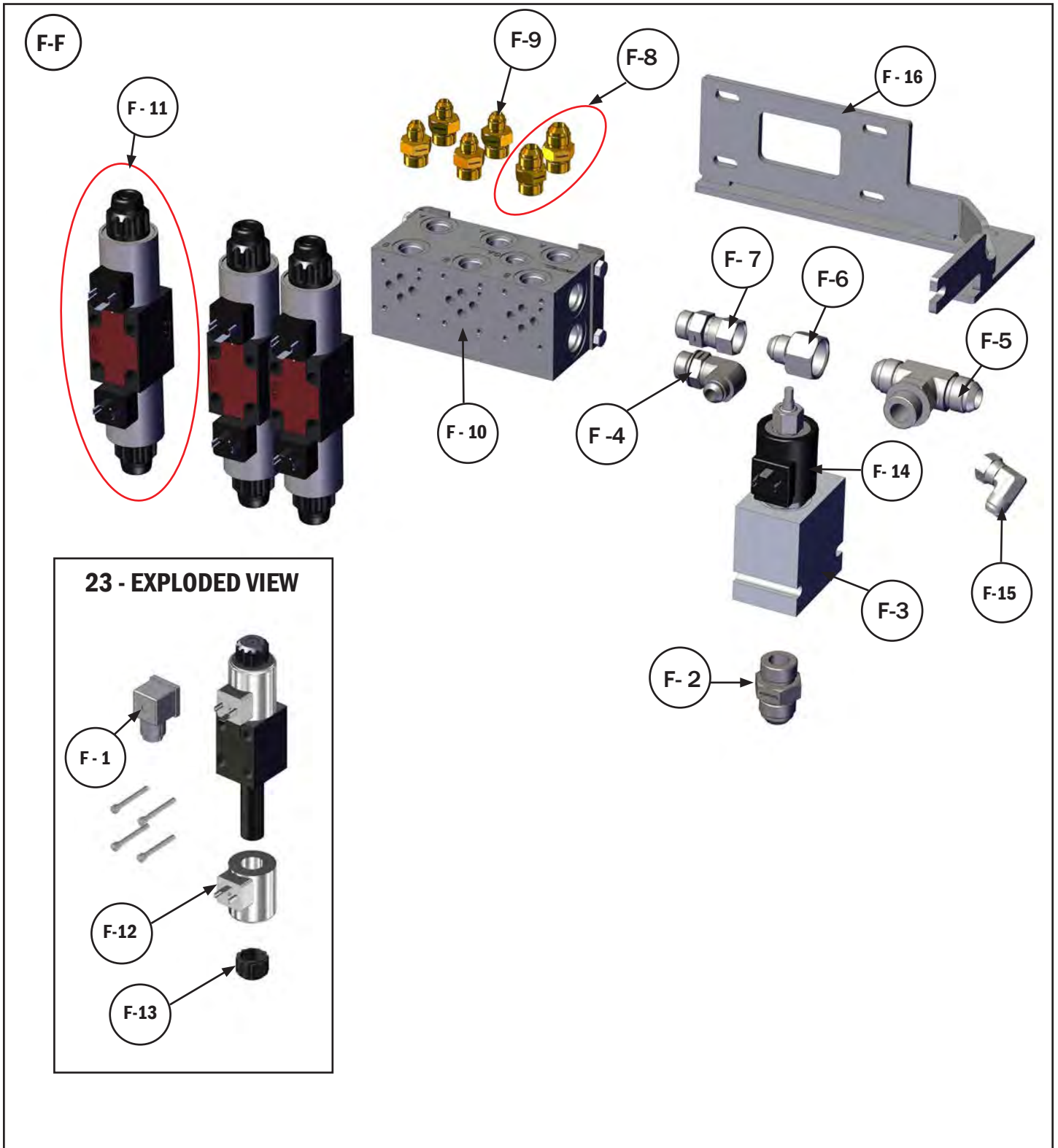


WIRELESS RECEIVER AND TRANSMITTER KIT WITH HARNESS

Item #	Part #	Description
E - E	ITD4232	Wireless Receiver and Transmitter Kit with Harness
E - 1	ITD4692	Wireless Receiver with Harness
E - 2	ITD4460	Hand Held Transmitter for Wireless Remote



Item #	Part #	Description
F - F	ITD4175	SP20,000™ Valve Body Kit (12 Volt)
F - 1	ITD4676	Electrical Connector for Solenoid (w/ Gasket)
F - 2	N/A	#12 JIC Diverter Valve to Beyond
F - 3	ITD4163	Diverter Valve
F - 4	N/A	#12 JIC 90 deg Return To Tank
F - 5	N/A	JIC Tee
F - 6	N/A	#12 + #10 Reducer
F - 7	N/A	#10 -#8 Swivel Reducer
F - 8	N/A	#8 JIC Manifold to Winch Lines
F - 9	N/A	#6 JIC Manifold to Cylinder Lines
F - 10	ITD4187	SP20,000™ Manifold Assembly
F - 11	ITD4170	D03 Valve Assembly (Cylinder)
F - 12	N/A	SP20,000™ Export 12 Volt Coil
F - 13	N/A	Rubber Cap
F - 14	ITD4163S	Diverter Valve Coil Only
F - 15	ITD4776	90° JIC #12
F - 16	ITD4492	Bolt-On Valve Body Bracket Assembly



SAFETY AND PRECAUTIONS

WARNING



**OWNER'S MANUAL MUST BE KEPT WITH VEHICLE AT ALL TIMES.
READ MANUAL BEFORE OPERATING UNIT!**



This manual is supplied to you with your In The Ditch™ Towing Products (ITD) unit to better familiarize the owner/operator with the proper operation and maintenance of their unit. The information contained in this manual should be thoroughly understood by all operating and maintenance personnel to insure the safety of the operator of this unit and to prolong the operating life of this unit.

Owner, User, and Operators

ITD appreciates your choice of one of our SP Series™ SidePullers™ for your application. Our number one priority is user safety which is best achieved by our joint efforts. We feel that you can make a major contribution to safety if you, as the equipment owners or operator follow our recommendations of safety guidelines and precautions.

1. Comply with all federal, state and local regulations.
2. Read, understand and follow the instructions in the manual
3. Use good, safe work practices in a common sense way.
4. Only have authorized and trained operators running the SidePuller™.
5. Improper use of this equipment can be dangerous! Incorrect operation can result in bodily injury to the operator and bystanders. Therefore, a thorough understanding of the “operating principles” and “operating instructions” as found in this manual is essential.
6. Study each Operating Procedure before using the SidePuller™. Apply common sense to assure safety to yourself and bystanders.
7. Plan ahead. Work safely. Avoid accidental damage and injury. If an accident does occur, react quickly with the tools and skills at hand. Familiarize yourself with the use of a first aid kit and fire extinguisher. Know where and how to get assistance.

General Precautions

1. Before operating any unit in the SP Series™, perform a walk around visual inspection of the SidePuller™. (Refer to SP Series™ Operation Section)
2. Before operating a SidePuller™, refer to the SidePuller's capacity labels on the Mast Base of the SidePuller™ and in the Specifications section of your Operating Manual. For Chassis Capacity, consult your truck dealer. Never exceed Manufacturer's Load Rating. The stipulations pertinent to these ratings shall always be carefully observed. Ratings shown are based on the structural design of the SidePuller™, NOT the capacity of your vehicle. It is always unsafe to apply any load which is greater than the rated load shown on the Data Plate.
3. Do not use this equipment except on solid, level surface with the truck brakes locked and the wheels chocked.
4. Operate all controls slowly and smoothly to avoid damage to the SP Series™ SidePuller™ or injury to self.
5. Do not operate, walk or stand behind a loaded Winch Line. Do not crawl under a suspended load, or allow anyone else to do so.
6. Do not use the SP Series™ SidePuller™ for the movement, or lifting of humans!
7. Never exceed Working Load Limits of Wire Rope.
8. Keep feet, hands, and all body parts clear of Stabilizer Legs' pinch points. Use your legs and not your back to lift and stow Stabilizer Legs.
9. Always wear protective items such as safety glasses, gloves, reflective clothing and safety shoes.

SidePuller™ INSTALLATION

UNPACKING THE SP9000™ SIDE PULLER™

- 1 - When you receive your SidePuller™, please immediately inspect for Damage during the shipping process.
- 2 - We recommend you remove all the contents from your SP Shipping Stand and inventory them this will help you familiarize yourself with the parts and hardware that is shipped with your SidePuller.

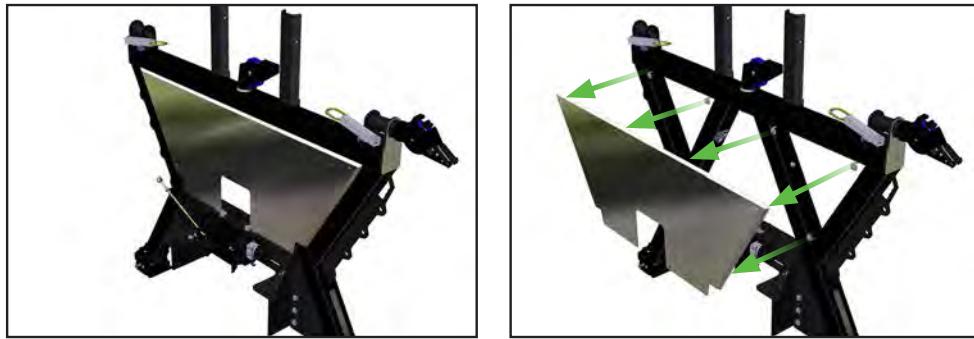


Please go to www.intheditch.com and watch the SidePuller™ Installation Video before starting the installation Process.

 VIDEO ONLINE
www.intheditch.com

- 3 - If Your SidePuller™ has a Rear Stainless Steel Accent Panel Fig 1-1, In The Ditch™ recommends that you remove it prior to installation. This will help you gain access to bolts and also prevent scratches to the accent panel.

FIG 1-1

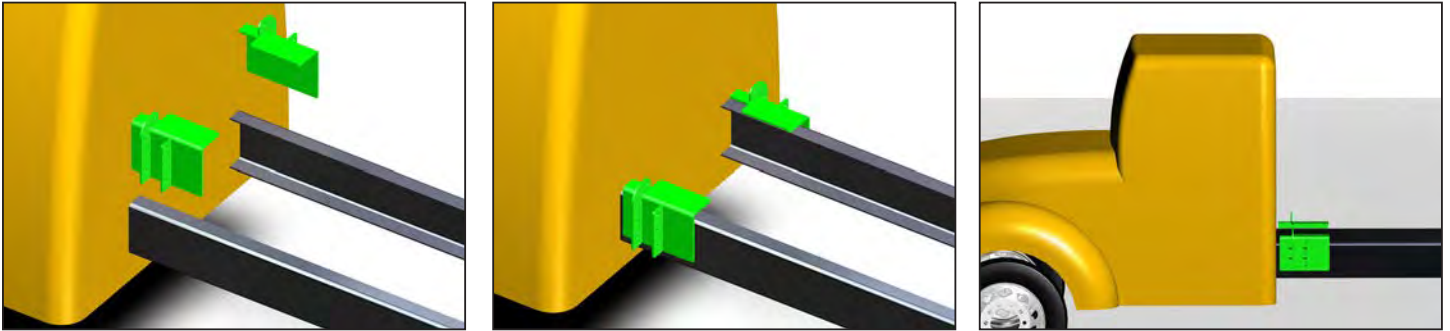


If you have any questions during the installation process, don't hesitate to contact In The Ditch™ Tech Support, 8:00 am to 5:00PM MST Monday through Friday 1-888-993-4824. You can also email your question to sales@intheditch.com. We are here to help you in any way we can.

Special Note to Installer. People's Lives may depend on the quality of the installation of this SidePuller™. Please take the time to follow all instructions and guidelines to ensure the installation quality is what our customers deserve.

SP9000™ SidePuller™ Install

1 - Install the SidePuller™ Mounting Plates as a Mock up and decide the best location for the SidePuller™. ITD Recommends 2" to 4" Cab Clearance Note See Figure SP9-1 PG 32 to establish correct Cab to SidePuller™ clearance for your application.



2 - Install SP9000™ Mounting Plates onto frame rail. Use (6) Grade 8 x 5/8" Bolts on each Mounting Plate.

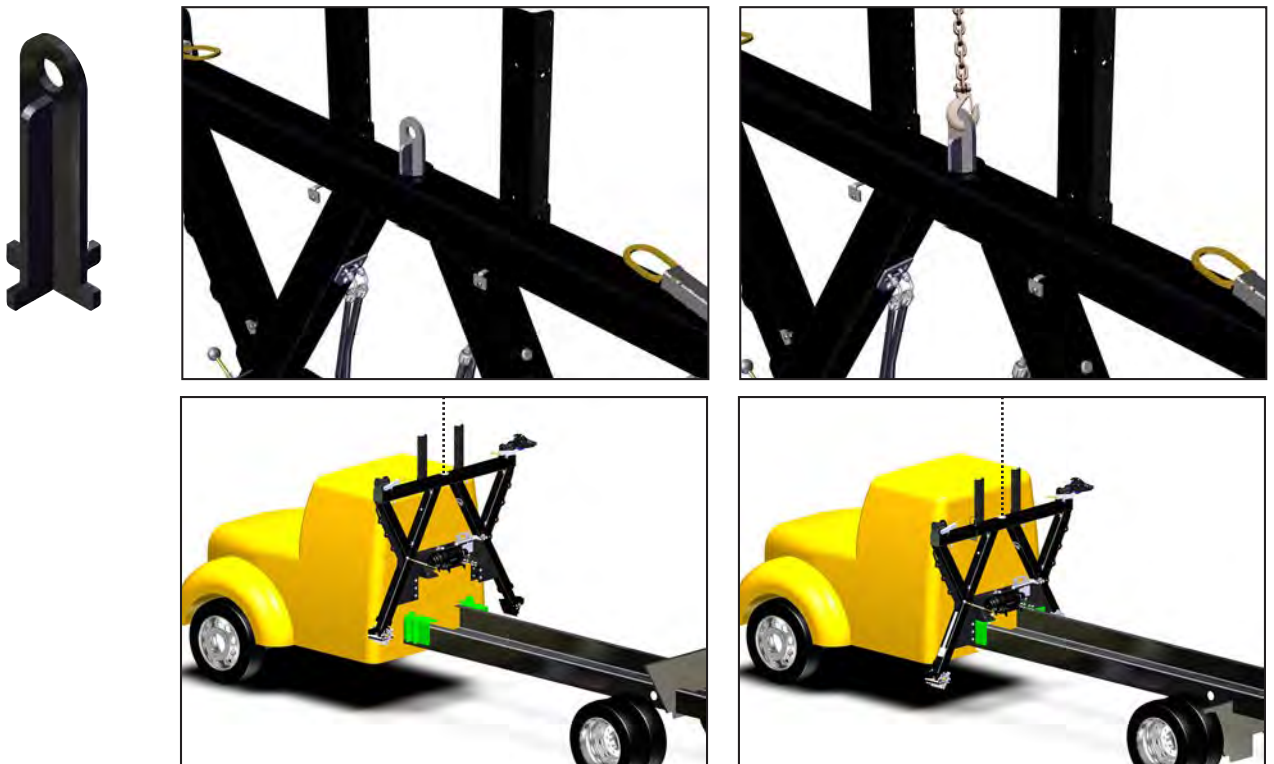


TECH TIP

Use Loctite Brand Blue 242 Medium Strength Thread Locker on All Bolts

3 - Lift your SidePuller™ and Place onto Mounting Plates. You can use ITD4667 Optional Lifting Attachment (sold separately)

ITD4667



4 - Attach SidePuller™ to Mounting Plates. SP9000™ use (6) ½” Grade 8 Bolts and (4) ½” Grade 8 Bolts in each side Fig SP9-1.

5 - SP9000™ should be installed a minimum of 2 inches behind cab of truck. Allowing enough room for cab flex (See Figure SP9-1).

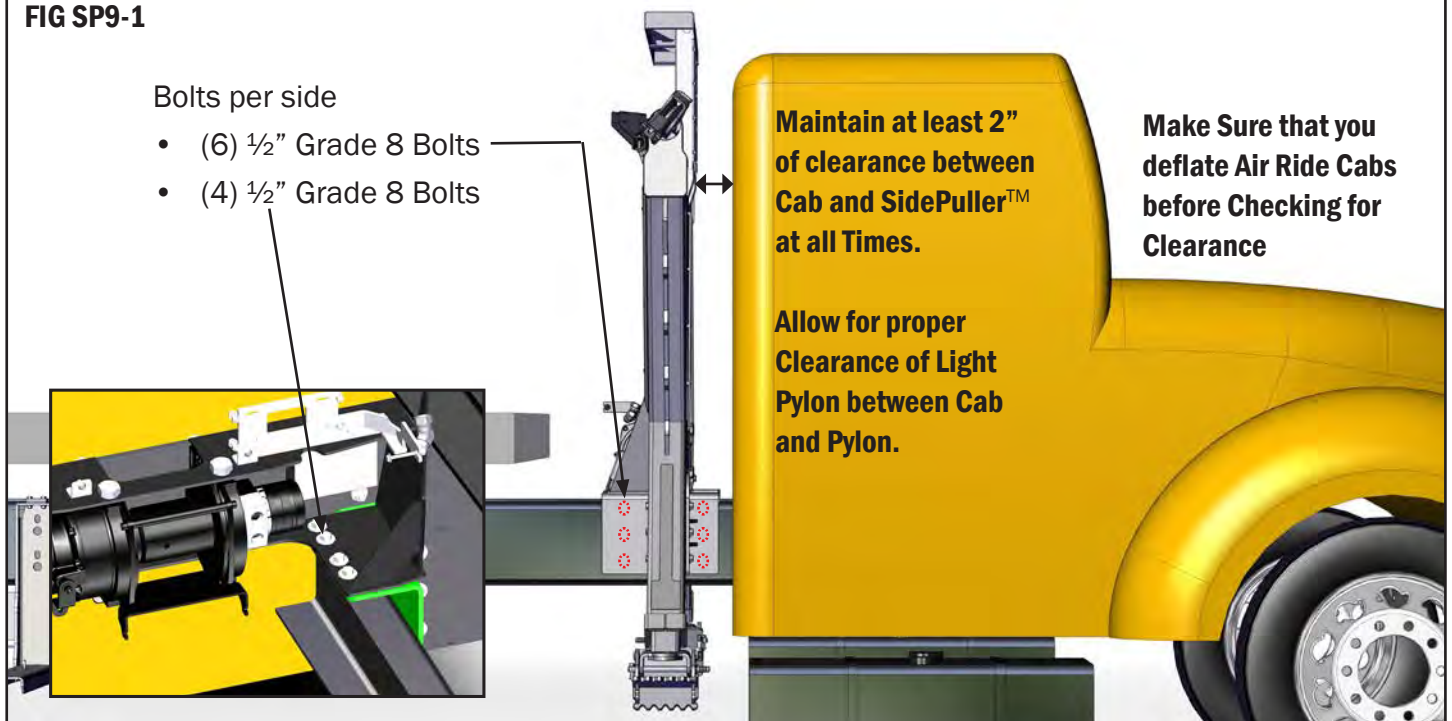
- (6) ½” Grade 8 Bolts
- (4) ½” Grade 8 Bolts

Chassis Recommendations	
Minimum GVWR	15,000 lbs
Maximum GVWR	26,000 lbs
Minimum Frame Height	32 - Inches
Maximum Frame Height	36 - Inches
Minimum Frame Width	34 - Inches
Maximum Frame Width	34 ¾ - Inches
Minimum Additional C.A.*	12 - Inches

*Recommended. Additional clearance may be desired for winch operation/maintenance. If less space is required, consult drawings or talk to a representative

SP9000 INSTALLATION

FIG SP9-1



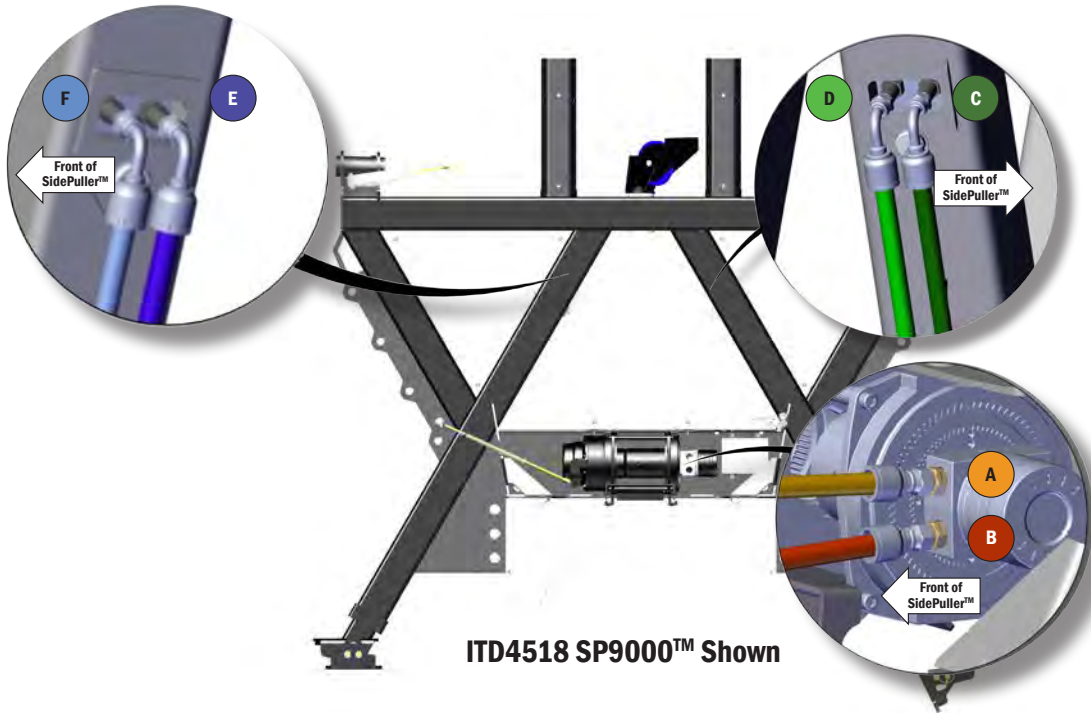
TECH TIP

- Tightening Torque for ½” Grade 8 Bolts. 90 ft-lbs
- Tightening Torque for 5/8” Grade 8 Bolts. 180 ft-lbs

SP9000™ Hydraulics

Due to the varying hydraulic valve options when installing an SP9000™, this section will only cover functions of each port. Proper installation and operation is left to the integrity of the installer. If further information is required please contact a ITD Tech Dept representative.

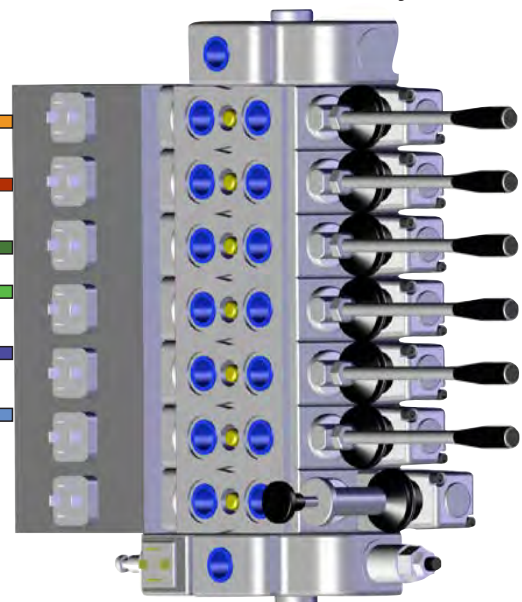
FIG SP9-2A



From Valve Body Plumb Hydraulic Lines Into Ports

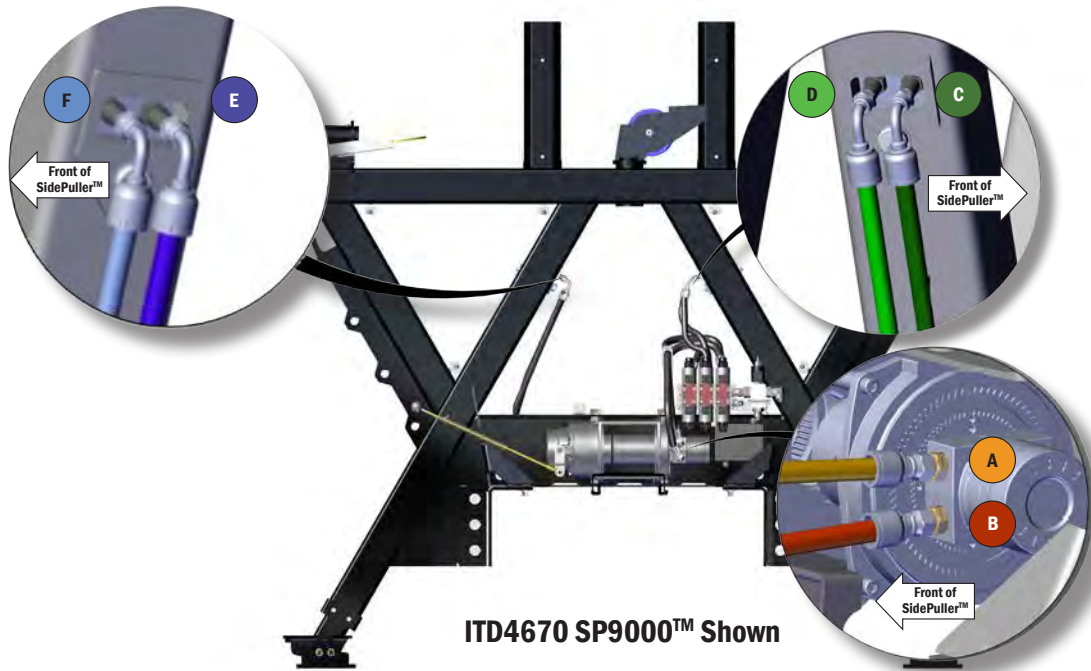
PORT	FUNCTION
A	Winch In
B	Winch Out
C	Right Leg DOWN
D	Right Leg UP
E	Left Leg DOWN
F	Left Leg UP

Wrecker or Carrier Valve Body



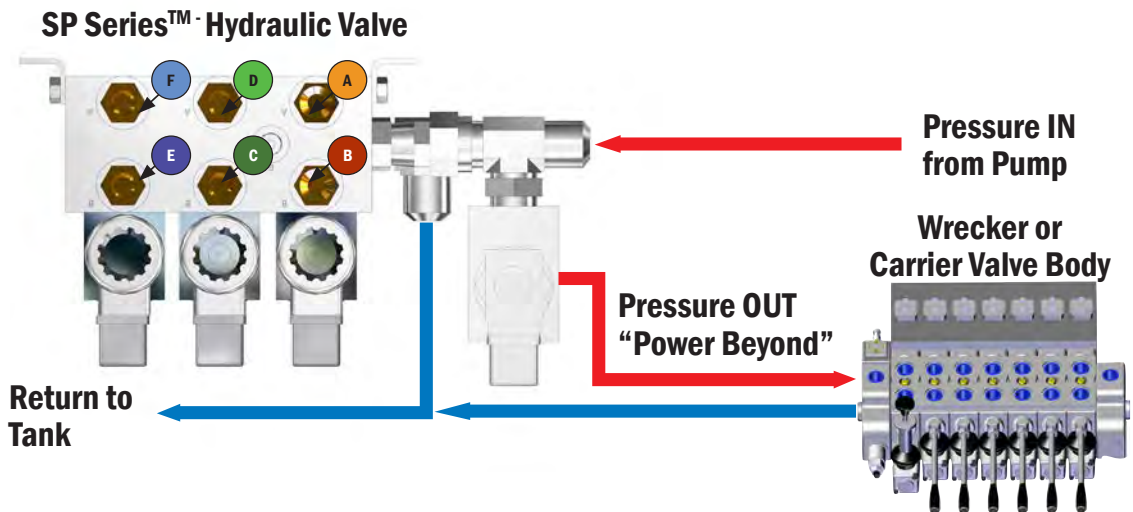
SP9000™ with Integrated controls Hydraulics

FIG SP9-2B



SP9000 INSTALLATION

PORT	FUNCTION
A	Winch In
B	Winch Out
C	Right Leg DOWN
D	Right Leg UP
E	Left Leg DOWN
F	Left Leg UP



When routing The Hoses to the Outrigger /Stiff Leg Ports on the SP9000™. Zip Tie the Hoses to the Rear of Your SidePuller™ using the SidePuller™ Routing System.



TECH TIP

For Outrigger/Stiff Leg Hoses you can use either 1/4" or 3/8" Diameter Hydraulic Hoses with a minimum working pressure of 3,000psi.

For Winch Supply Hoses ITD recommends 1/2" Diameter Hydraulic Hoses.

Electrical

- 1 - Your SidePuller™ with Integrated Controls is Pre Wired from In The Ditch™.
- 2 - Supply 12 Volt Power to the SP Wireless Receiver Wiring Harness Red 12 Volt Input Wire. FIG 2-1 PG 71



TECH TIP

- Use Red color 12 Gauge Wire
- Note that SidePullers Operate in Harsh Environments and people's lives and lively hood depend on proper installation. Please take the time to use Heat Shrink Connectors and wiring loom to protect the wiring of your SidePuller™.

- 3 - We recommend that you Use a Cab Mounted Switch to prevent accidental operation of Wireless Function.
- 4 - Use SP wire routing system to route hoses and electrical wiring . This will prevent hoses and wires from wear and extend the working life.
- 5 - Use 25 Amp Fuse, Prior to In Cab Switch.

SidePuller™ Installation for SP9000™: Optional Light Pylon

- 1 - If Pylon Has Stainless Steel Accent Panels, Please remove and set aside.
- 2 - Install Pylon onto SidePuller™ Pylon Mounts and adjust to the correct height for your application.



TECH TIP

Use Vice Grips to clamp Pylon in Place (Use Rag to protect Paint)

- 3 - Drill (4) 5/16" Bolt Holes into SP Pylon Mounts, use pre drilled Holes in Pylon as a Template.
- 4 - Bolt Pylon to Mount Using Provided Stainless Steel Hardware

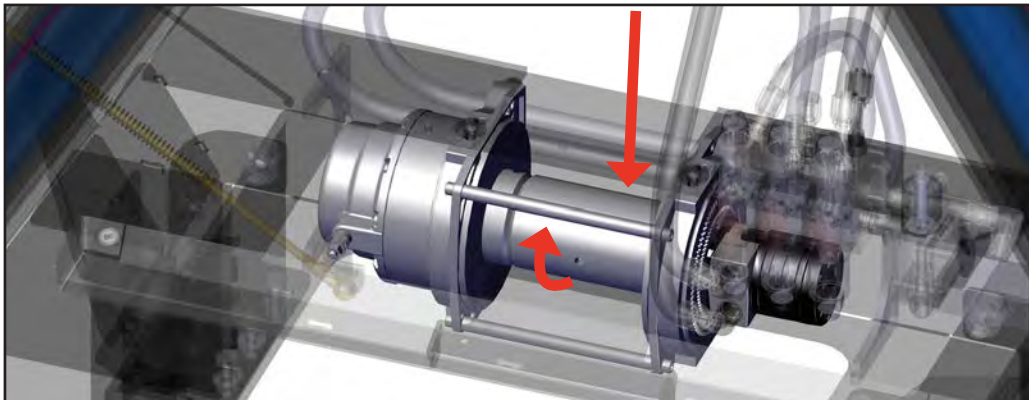
WARNING

INSTALLATION SHOULD BE PERFORMED BY A PROFESSIONAL TOWING EQUIPMENT DEALER!

Installation: Final Checks

- 1 - Check all Mounting Bolts and ensure they are torqued properly.
- 2 - Remove and discard Safety Bar that holds Stabilizer Legs in the Shipping Position.
- 3 - Engage Truck Hydraulics and ensure that Stabilizer Legs go up and down properly.
- 4 - Check Winch Rotation is correct. Fig SP9-3

FIG SP9-3



- 5 - Shut Truck off and Install Wire Rope. Start by Reeving the Wire through the center boom head and down to winch. When installing Wire Rope into Winch please refer to winch Operating Manual for Instructions.

In The Ditch
TOWING PRODUCTS

TECH TIP

We cannot express enough the importance of keeping your wire rope well lubricated. ITD recommend that you lube your new rope and lube wire at least once per month.

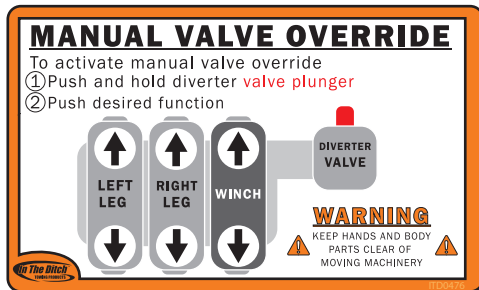
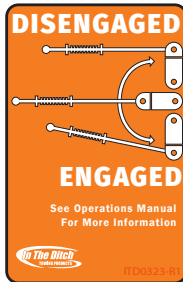
In The Ditch
TOWING PRODUCTS

RIGGING TIP

-Be sure to record the Working Load Limit (W.L.L.) of your wire rope before you use it. The W.L.L. of your wire rope should never be exceeded. It is the responsibility of the equipment operator to inspect wire rope and to not overload it.

-Keep a minimum of 5 wraps of Wire Rope on Your Winch at all times.

6 - Please install Decals if your SidePuller™ was not shipped with the decals installed. We take great pride in manufacturing the SidePuller™ and we hope you have the same pride by display the SidePuller™ Brand Decals. Decals not only enhance the look of your SidePuller™, they serve as a warning to certain areas of your SidePuller™.



We have done our very best to share with you the installation practices. It is now time for you to start enjoying your SidePuller™. Please read the Operations Section of this Manual. If you feel we could add more information to this manual please contact us with your suggestions. We would love to hear from you.

Contact The Ditch Tech Support, 8:00 am to 5:00PM MST Mon through Friday 1-888-993-4824. You can also email your suggestion to sales@intheditch.com

SidePuller™ INSTALLATION

UNPACKING THE SP12,000™ SIDE PULLER™

- 1 - When you receive your SidePuller™, please immediately inspect for damage during the shipping process.
- 2 - We recommend you remove all the contents from your SP Shipping Stand and inventory them; this will help you familiarize yourself with the parts and hardware that is shipped with your SidePuller™.



TECH TIP

Please go to www.intheditch.com and watch the SidePuller™ Installation Video before starting the installation process.

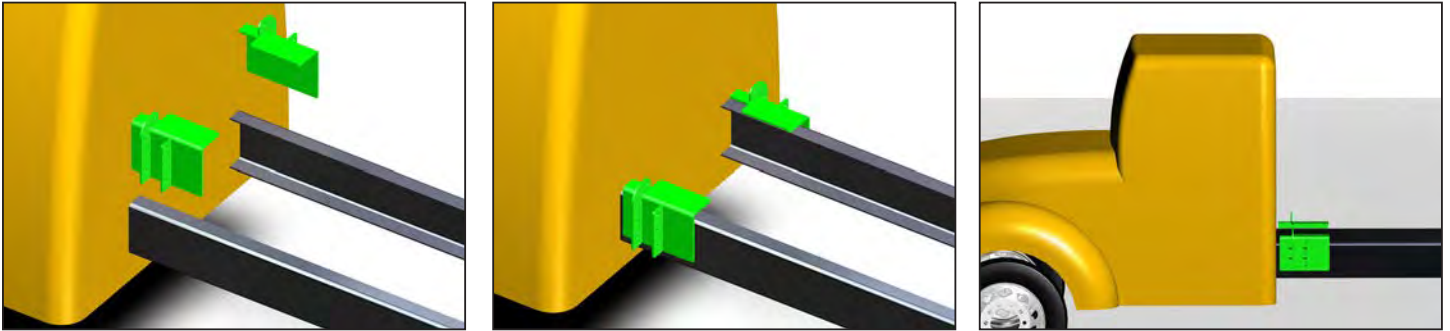


If you have any questions during the installation process, don't hesitate to contact In The Ditch™ Tech Support, 8:00 am to 5:00PM MST Monday through Friday 1-888-993-4824. You can also email your question to sales@intheditch.com. We are here to help you in any way we can.

Special Note to Installer. People's Lives may depend on the quality of the installation of this SidePuller™. Please take the time to follow all instructions and guidelines to ensure the installation quality is what our customers deserve.

SP12,000™ INSTALLATION SPECIFICATIONS

1 - Install the SidePuller™ Mounting Plates as a Mock up and decide the best location for the SidePuller™. ITD Recommends 2" to 4" Cab Clearance Note See Figure SP12-1 PG 40 to establish correct Cab to Side Puller Clearance for your application.



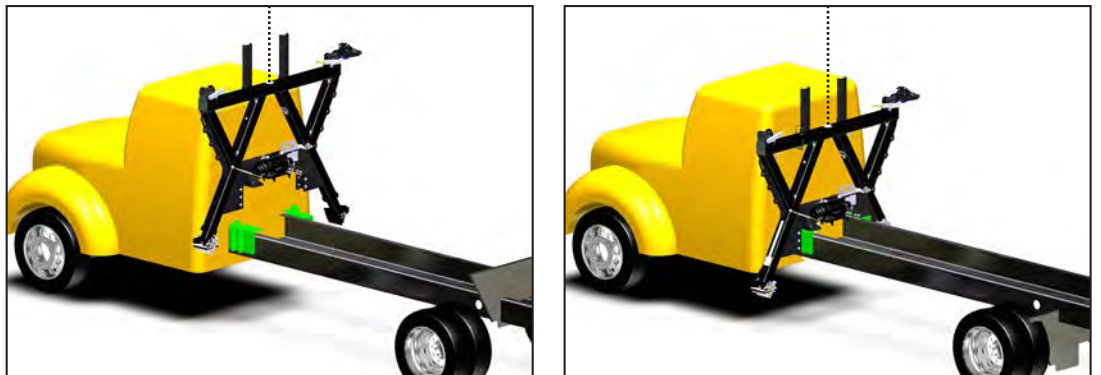
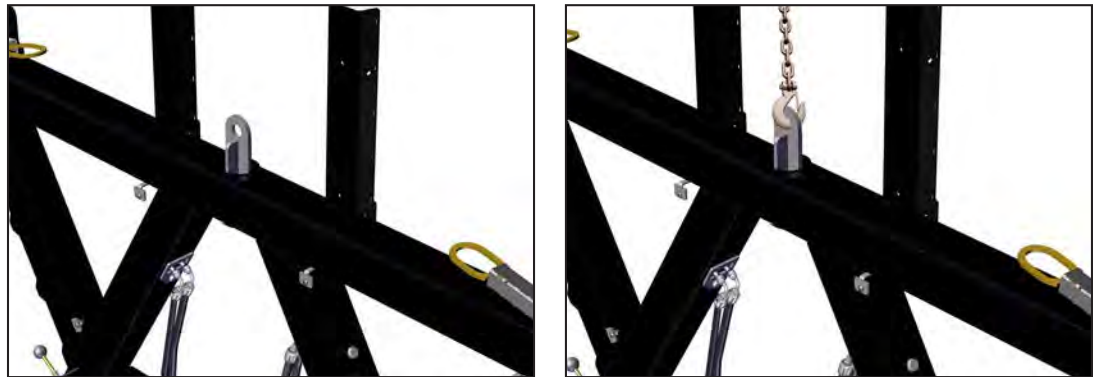
2 - Install SP12,000™ Mounting Plates onto Frame. Use (8) Grade 8 x 5/8" Bolts on each Mounting Plate

TECH TIP

Use Loctite Brand Blue 242 Medium Strength Thread Locker on All Bolts

3 - Lift your SidePuller™ and Place onto Mounting Plates. You can use ITD4667 Optional Lifting Attachment (sold separately)

ITD4667



4 - Attach SidePuller™ to Mounting Plates
 SP12,000™ use (8) 5/8" Grade 8 Bolts and
 (3) 1/2" Grade 8 Bolts in each side Fig SP12-1

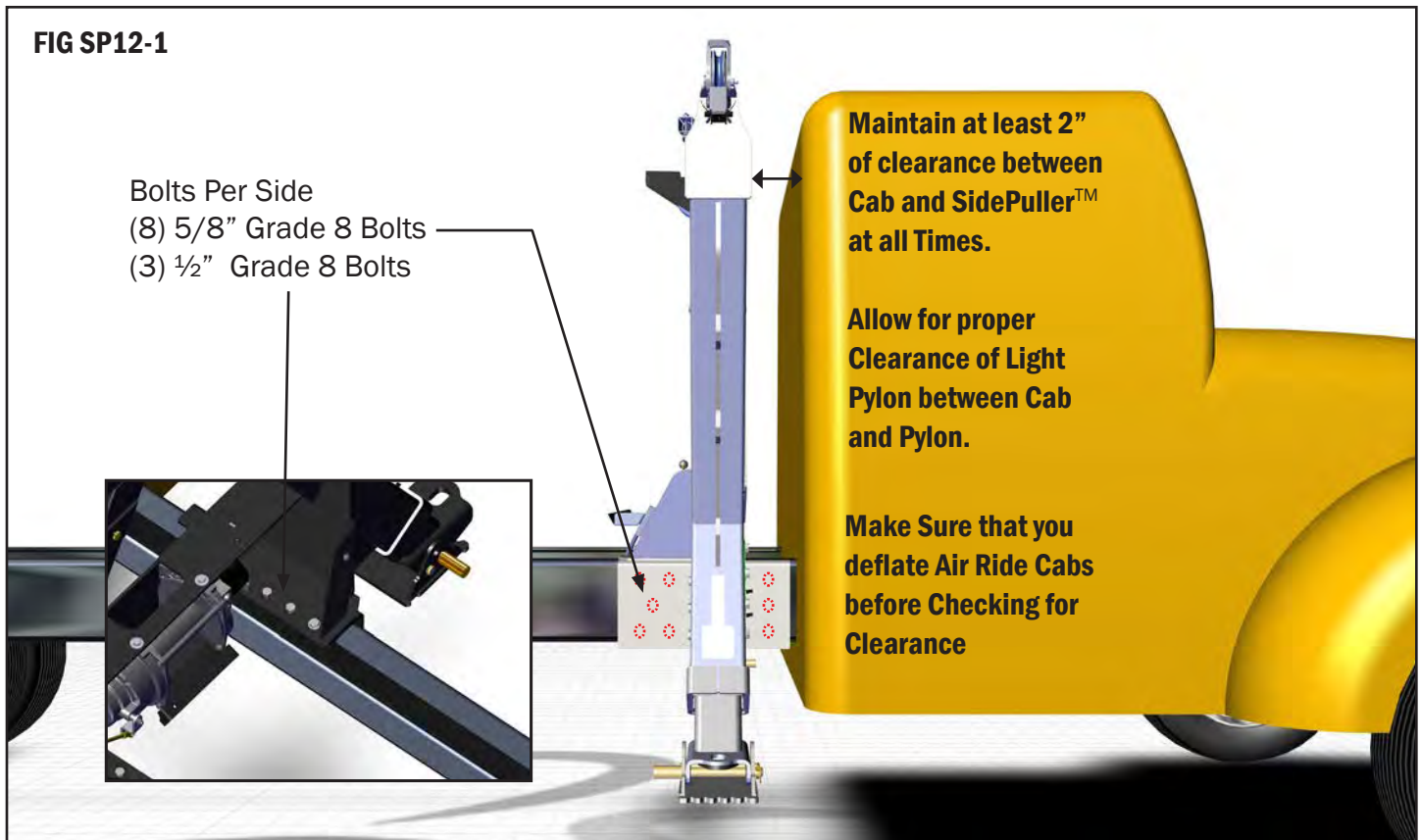
5 - SP12,000™ should be installed a minimum of 2 inches behind cab of truck. Allow enough room for cab flex (See Figure SP12-1).

- (8) 5/8" Grade 8 Bolts
- (3) 1/2" Grade 8 Bolts

*Recommended. Additional clearance may be desired for winch operation/maintenance. If less space is required, consult drawings or talk to a representative

Chassis Recommendations	
Minimum GVWR	26,000 lbs
Maximum GVWR	33,000 lbs
Minimum Frame Height	34 - Inches
Maximum Frame Height	40 - Inches
Minimum Frame Width	34 - Inches
Maximum Frame Width	34 3/4 - Inches
Minimum Additional C.A.*	19 - Inches

SP12,000 INSTALLATION



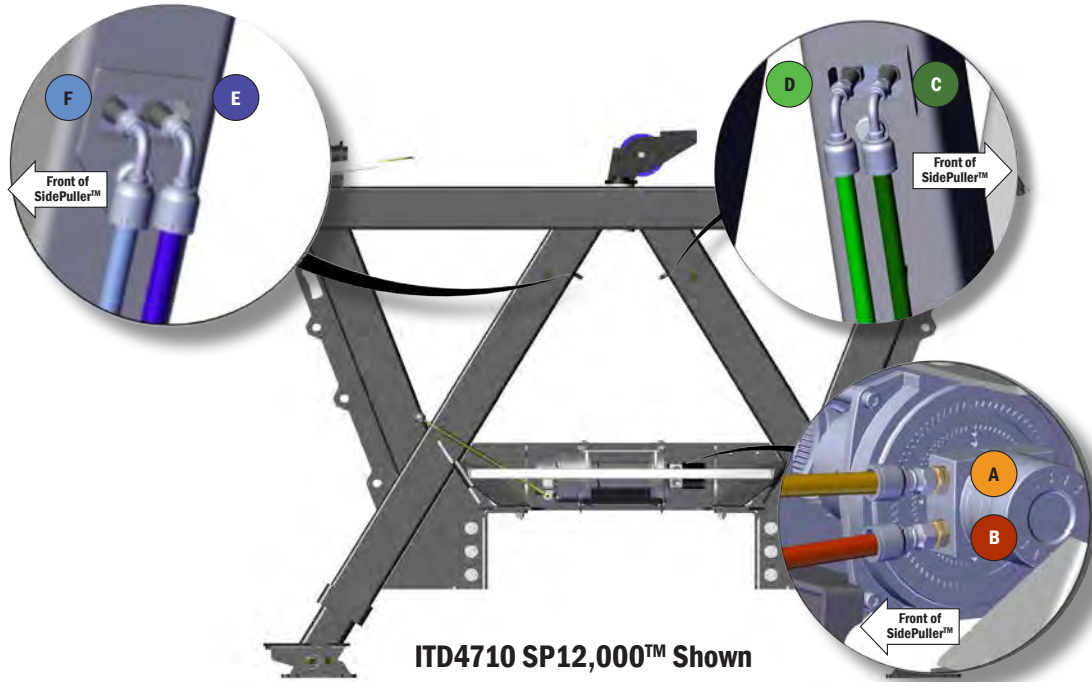
In The Ditch™ TOWING PRODUCTS **TECH TIP**

- Tightening Torque for 1/2" Grade 8 Bolts. 90 ft-lbs
- Tightening Torque for 5/8" Grade 8 Bolts. 180 ft-lbs

SP12,000™ Hydraulics

Due to the varying hydraulic valve options when installing an SP12,000™, this section will only cover functions of each port. Proper installation and operation is left to the integrity of the installer. If further information is required please contact a ITD Tech Dept representative.

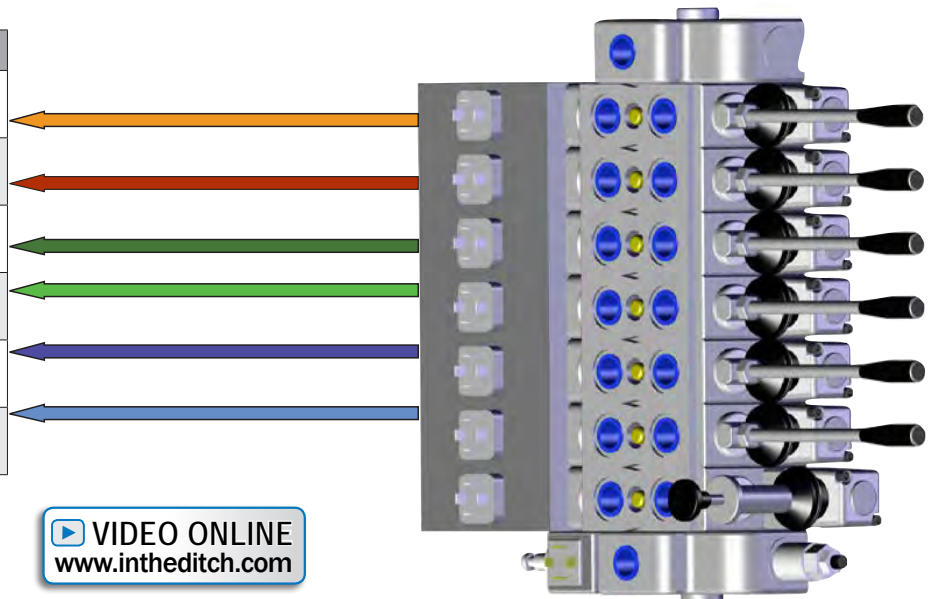
FIG SP12-2A



From Valve Body Plumb Hydraulic Lines Into Ports

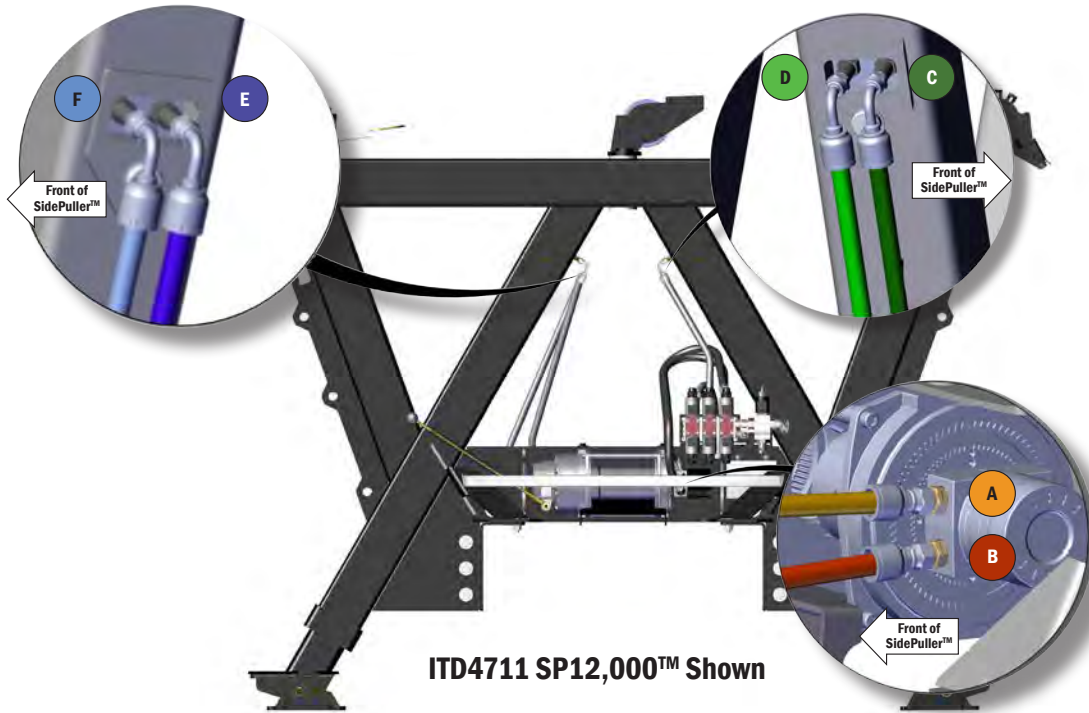
Wrecker or Carrier Valve Body

PORT	FUNCTION
A	Winch In
B	Winch Out
C	Right Leg DOWN
D	Right Leg UP
E	Left Leg DOWN
F	Left Leg UP



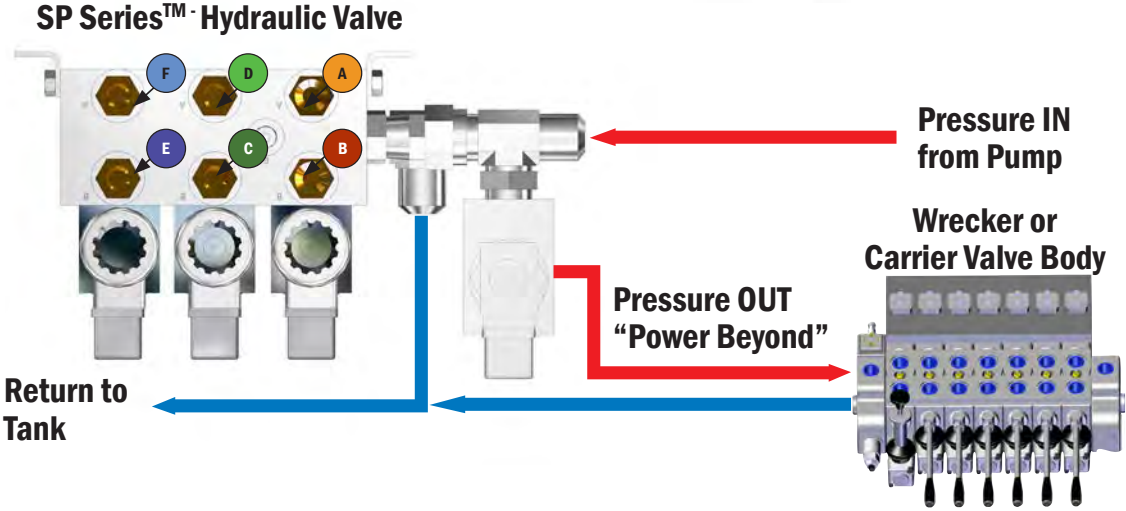
 VIDEO ONLINE
www.intheditch.com

FIG SP12-2B



SP12,000 INSTALLATION

PORT	FUNCTION
A	Winch In
B	Winch Out
C	Right Leg DOWN
D	Right Leg UP
E	Left Leg DOWN
F	Left Leg UP



When routing The Hoses to the Outrigger /Stiff Leg Ports on the SP9000™ Zip Tie the Hoses to the Rear of You SidePulley™ using the SidePulley™ Routing System.

In The Ditch™ TOWING PRODUCTS TECH TIP

For Outrigger/Stiff Leg Hoses you can use either 1/4" or 3/8" Diameter Hydraulic Hoses with a minimum working pressure of 3,000psi.

For Winch Supply Hoses we recommend 1/2" Diameter Hydraulic Hoses.

Electrical

- 1 - Your SidePuller™ with Integrated Controls is Pre Wired from In The Ditch™.
- 2 - Supply 12 Volt Power to the SP Wireless Receiver Wiring Harness Red 12 Volt Input Wire. FIG 2-1 PG 71

In The Ditch™ TECH TIP TOWING PRODUCTS

- Use Red color 12 Gauge Wire
- Note that SidePullers™ Operate in Harsh Environments and people's lives and lively hood depend on proper installation. Please take the time to use Heat Shrink Connectors and wiring loom to protect the wiring of your SidePuller.

- 3 - We recommend that you Use a Cab Mounted Switch for this function to prevent accidental operation of Wireless Function.
- 4 - Use wire routing system to route hoses and electrical wiring . This will prevent hoses and wires from wear and extend the working life.
- 5 - Use 25 Amp Fuse, Prior to In Cab Switch.

SidePuller™ Installation for SP12,000™: Optional Pylon Mount

- 1 - When Installing / Welding Light Pylon Mounts to the SP12,000™ we find it best if you install the mounts onto the Pylon first.
- 2 - Using a helper, stand Pylon and Mounts into position on your SidePuller™ and use masking tape to locate area to be welded. Remove Pylon and Mount.
- 3 -Using a helper, Install Pylon and Pylon Mount as 1 unit. Tack weld into position. Stand back and look at all angles to ensure Pylon is copasetic before final welding.
- 4 - Bolt Pylon to Mount Using Provided Stainless Steel Hardware

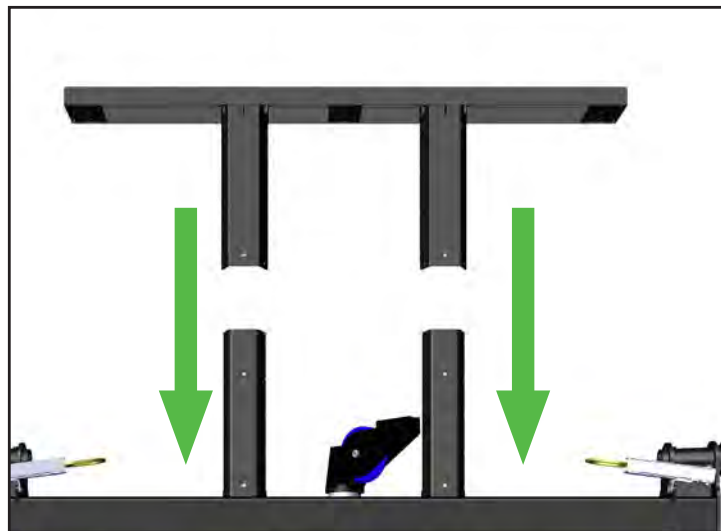


In The Ditch™ TECH TIP TOWING PRODUCTS

Mask off area outside of area to be welded, use buffer to remove paint in weld area. The masking tape will help prevent damage to painted areas that do not need buffed off.

SidePuller™ Installation for SP12,000™: Optional Light Pylon

- 1 - If Pylon Has Stainless Steel Accent Panels, Please remove and set aside.
- 2 - Install Pylon onto SidePuller™ Pylon Mounts and adjust to the correct height for your application.
- 3 - Drill (4) 5/16" Bolt Holes into SP Pylon Mounts, use pre drilled Holes in Pylon as a Template.
- 4 - Bolt Pylon to Mount Using Provided Stainless Steel Hardware



Use Vice Grips to clamp Pylon in Place (Use Rag to protect Paint) wiring of your SidePuller.

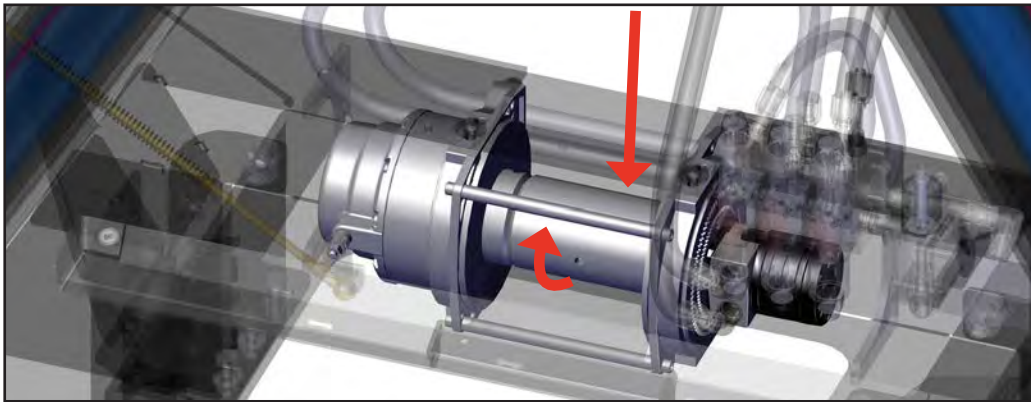
WARNING

INSTALLATION SHOULD BE PERFORMED BY A PROFESSIONAL TOWING EQUIPMENT DEALER!

Installation: Final Checks

- 1 - Check all Mounting Bolts and ensure they are torqued properly.
- 2 - Remove and discard Safety Bar that holds Stabilizer Legs in the Shipping Position.
- 3 - Engage Truck Hydraulics and ensure that Stabilizer Legs go up and down properly.
- 4 - Check Winch Rotation is correct. Fig SP12-3

FIG SP12-3



- 5 - Shut Truck off and Install Wire Rope. Start by Reeving the Wire through the center boom head and down to winch. When installing Wire Rope into Winch please refer to winch Operating Manual for Instructions.

In The Ditch™
TOWING PRODUCTS

TECH TIP

We cannot express enough the importance of keeping your wire rope well lubricated. We recommend that you lube your new rope and lube wire at least once per month.

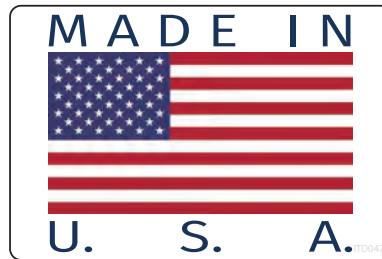
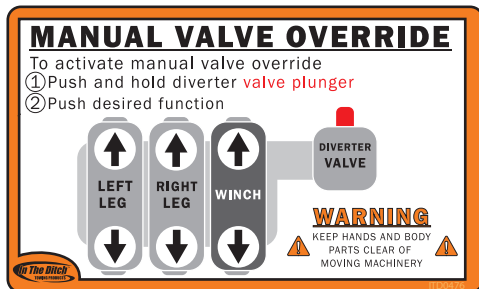
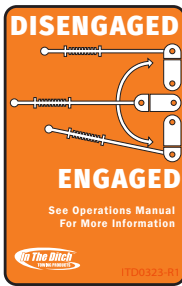
In The Ditch™
TOWING PRODUCTS

RIGGING TIP

-Be sure to record the Working Load Limit W.L.L. of your wire rope before you use it. The W.L.L. of your wire rope should never be exceeded. It is the responsibility of the equipment operator to inspect wire rope and to not overload it.

-Keep a minimum of 5 wraps of Wire Rope on Your Winch at all times.

6 - Please install Decals if your SidePuller™ was not shipped with the decals installed. We take great pride in manufacturing the SidePuller™ and we hope you have the same pride by display the SidePuller™ Brand Decals. Decals not only enhance the look of your SidePuller™, they serve as a warning to certain areas of your SidePuller™.



We have done our very best to share with you the installation Practices. It is now time for you to start enjoying your SidePuller™. Please read the Operations Section of this Manual. If you feel we could add more information to this manual please contact us with your suggestions. We would love to hear from you.

**Contact The Ditch Tech Support, 8:00 am to 5:00PM MST Mon through Friday
1-888-993-4824. You can also email your suggestion to sales@intheditch.com**

SIDEPULLER™ INSTALLATION

UNPACKING THE SP20,000™ SIDEPULLER™

- 1 - When you receive your SidePuller™, please immediately Inspect for Damage during the shipping process.
- 2 - We recommend you remove all the contents from your SP Shipping Stand and inventory them this will help you familiarize yourself with the parts and hardware that is shipped with your SidePuller™.



TECH TIP

Please go to intheditch.com and watch the SidePuller™ Installation Video before starting the installation Process.



If you have any questions during the installation process, don't hesitate to contact In The Ditch™ Tech Support, 8:00 am to 5:00PM MST Monday through Friday 1-888-993-4824. You can also email your question to sales@intheditch.com We are here to help you in any way we can.

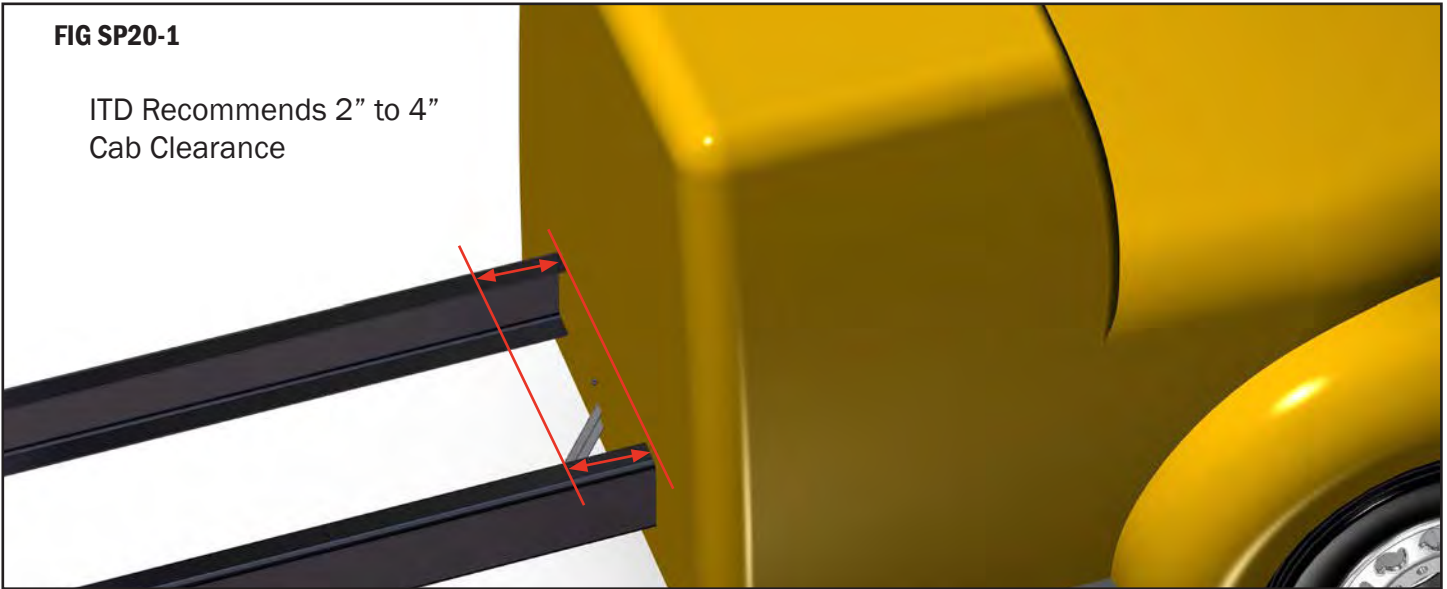
Special Note to Installer. People's Lives may depend on the quality of the installation of this SidePuller™. Please take the time to follow all instructions and guidelines to ensure the installation quality is what our customers deserve.

SP20,000™ INSTALLATION SPECIFICATIONS

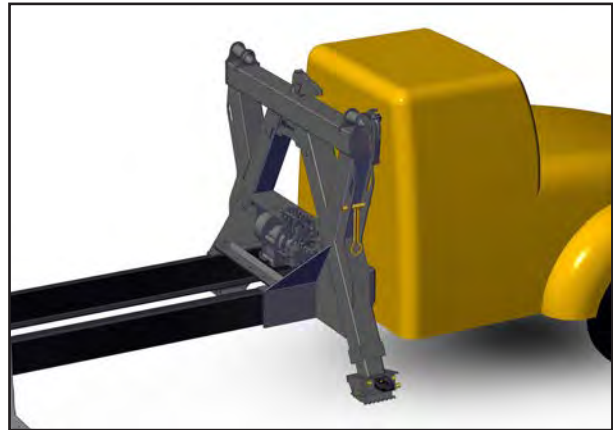
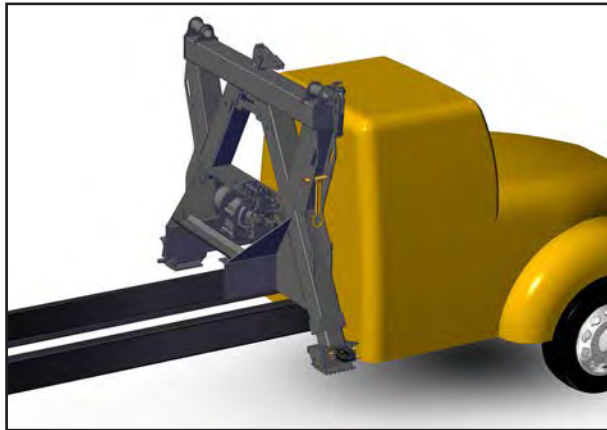
1 – Use Masking Tape to represent SP20,000™ Mounting Plates and Tape to Truck Frame. Use Masking Tape as Mock up and decide the best location for the SidePuller™. ITD Recommends 2” to 4” Cab Clearance Note See Figure SP20-1 to establish correct Cab to SidePuller™ Clearance for your application.

FIG SP20-1

ITD Recommends 2” to 4”
Cab Clearance



2 – Lift your SidePuller™ and Place onto Frame Rails and Locate.



If you will be using a SP Pylon. Allow for proper Clearance of Light Pylon between Cab and Pylon.

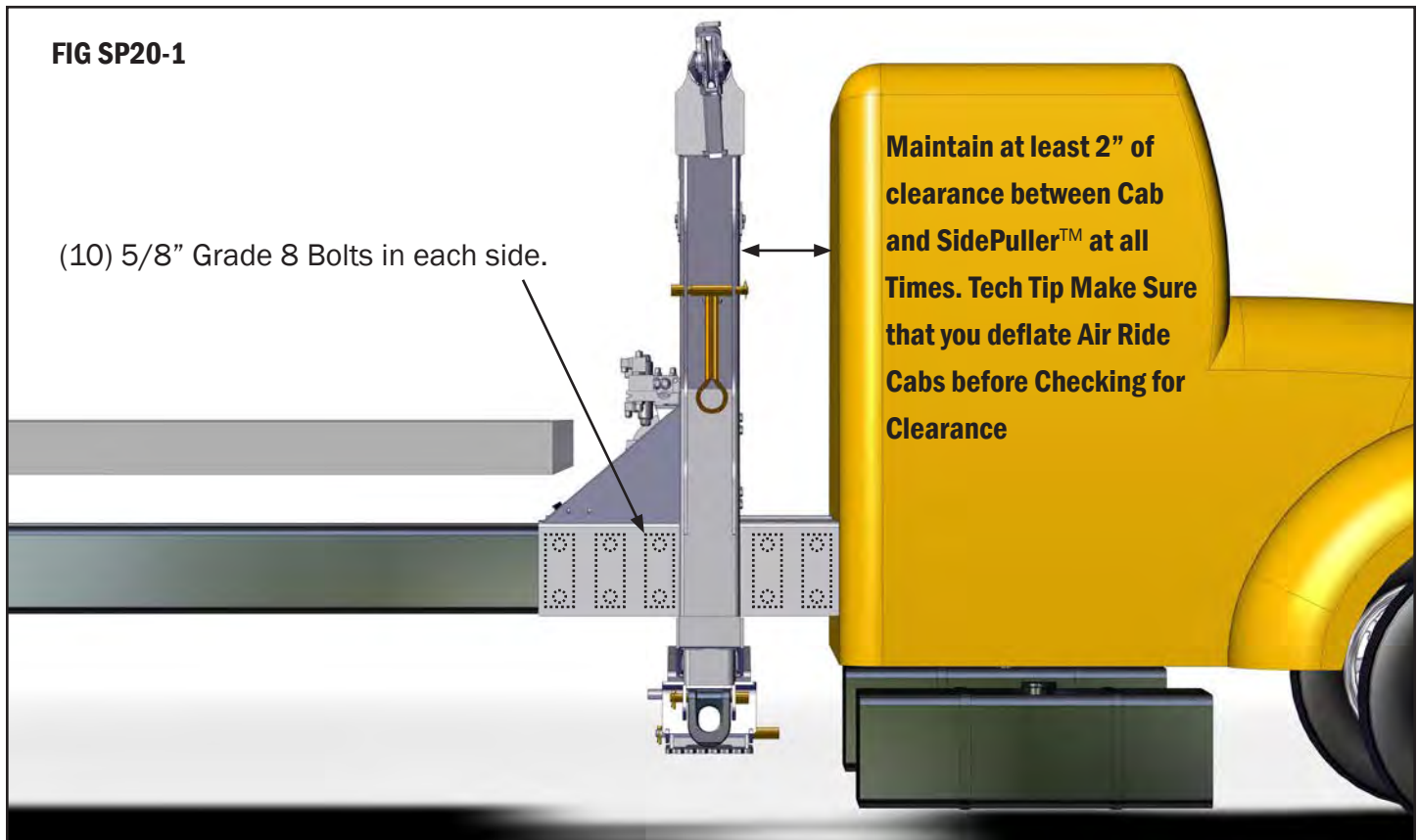
3 - Calculate the correct Shim Thickness to take up the space between the frame rail and the SidePuller™
FIG SP20-1 Note your SP20,000™ was shipped with (2) 3/16” - 0.1875 shims and (2) 10 Gauge Shims.

4- Install Shims and drill Pilot Holes through SidePul-ler™ Mounting Plate, Shim and Frame Rails. When-ever Possible, use existing truck frame holes. After Drilling Pilot Holes, Drill out mounting holes to 5/8” Diameter Holes.

5 – Attach SidePuller™ to Frame Rails and Shims use (10) 5/8” Grade 8 Bolts in each side.

*Recommended. Additional clearance may be desired for winch operation/maintenance. If less space is required, consult drawings or talk to a representative

Chassis Recommendations	
Minimum GVWR	30,000 lbs
Maximum GVWR	50,000 lbs
Minimum Frame Height	40 - Inches
Maximum Frame Height	46 - Inches
Minimum Frame Width	34 - Inches
Maximum Frame Width	34 ¾ - Inches
Minimum Additional C.A.*	27 - Inches



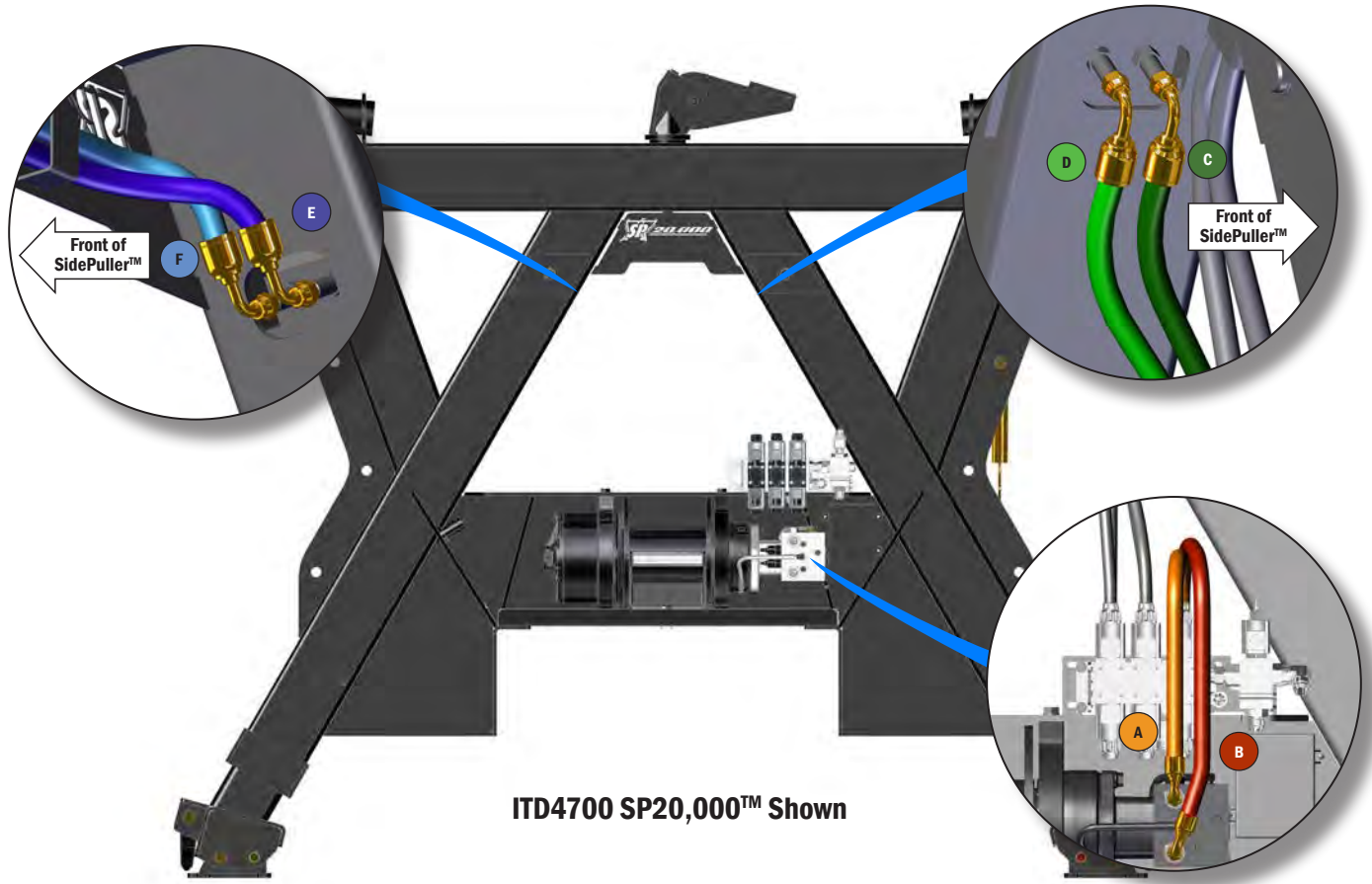
In The Ditch™ TOWING PRODUCTS **TECH TIP**

- Use Loctite Brand Blue 242 Medium Strength Thread Locker on All Bolts
- Tightening Torque for 5/8” Grade 8 Bolts. 180 ft-lbs

SP20,000™ Hydraulics:

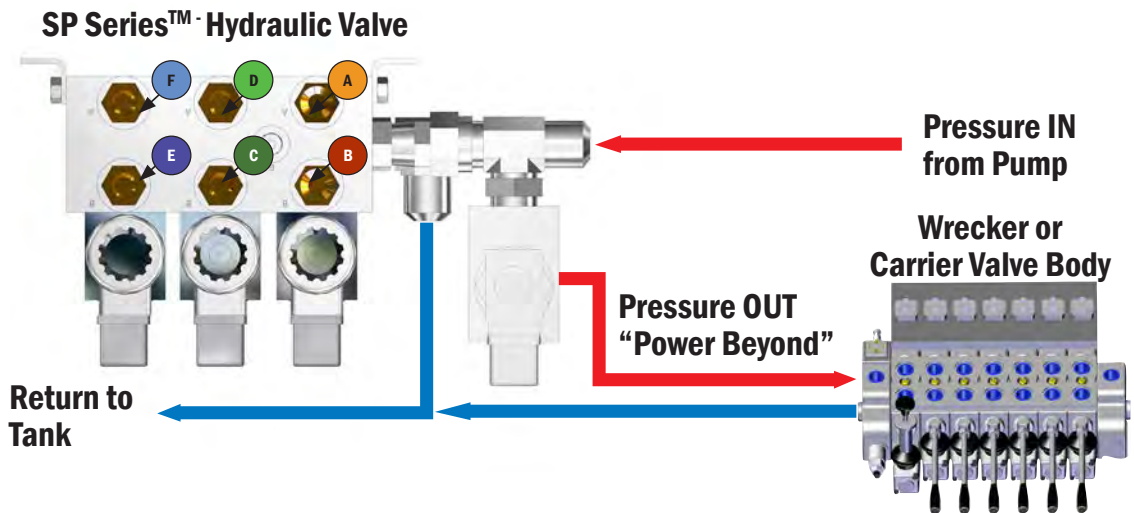
FIG SP20-2

SP20,000 INSTALLATION



ITD4700 SP20,000™ Shown

PORT	FUNCTION
A	Winch In
B	Winch Out
C	Right Leg DOWN
D	Right Leg UP
E	Left Leg DOWN
F	Left Leg UP



Electrical

- 1 - Your SidePuller™ with Integrated Controls is Pre Wired from In The Ditch™.
- 2 - Supply 12 Volt Power to the SP Wireless Receiver Wiring Harness Red 12 Volt Input Wire. FIG 2-1 PG 71



TECH TIP

- Use Red color 12 Gauge Wire
- **Note that SidePullers™ Operate in Harsh Environments and people's lives and lively hood depend on proper installation. Please take the time to use Heat Shrink Connectors and wiring loom to protect the wiring of your SidePuller.**

3 - We recommend that you Use a Cab Mounted Switch for this function to prevent accidental operation of Wireless Function.

4 - Use wire routing system to route hoses and electrical wiring . This will prevent hoses and wires from wear and extend the working life.

5 - Use 25 Amp Fuse, Prior to In Cab Switch.

SidePuller™ Installation for SP20,000™: Optional Pylon Mount

- 1 - When Installing / Welding Light Pylon Mounts to the SP20,000™ we find it best if you install the mounts onto the Pylon first.
- 2 - Using a helper, stand Pylon and Mounts into position on your SidePuller™ and use masking tape to locate area to be welded. Remove Pylon and Mount.
- 3 -Using a helper, Install Pylon and Pylon Mount as 1 unit. Tack weld into position. Stand back and look at all angles to ensure Pylon is before final welding.
- 4 - Bolt Pylon to Mount Using Provided Stainless Steel Hardware



TECH TIP

Mask off area outside of area to be welded, use buffer to remove paint in weld area. The masking tape will help prevent damage to painted areas that do not need buffed off.

SidePuller Installation for SP20,000™: Optional Light Pylon

- 1 - If Pylon Has Stainless Steel Accent Panels, Please remove and set aside.
- 2 - Install Pylon onto SidePuller Pylon Mounts and adjust to the correct height for your application.
- 3 - Drill (4) 5/16" Bolt Holes into SP Pylon Mounts, use pre drilled Holes in Pylon as a Template.
- 4 - Bolt Pylon to Mount Using Provided Stainless Steel Hardware



TECH TIP

Use Vice Grips to clamp Pylon in Place (Use Rag to protect Paint)wiring of your SidePuller.

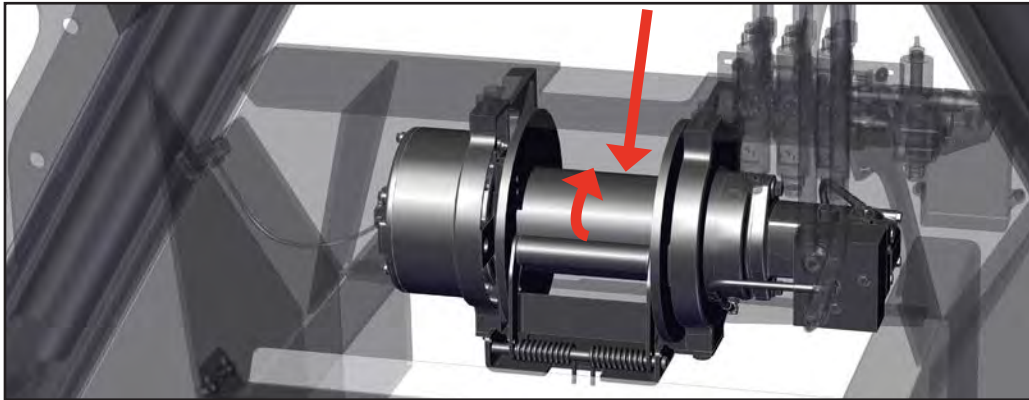
WARNING

INSTALLATION SHOULD BE PERFORMED BY A PROFESSIONAL TOWING EQUIPMENT DEALER!

Installation: Final Checks

- 1 - Check all Mounting Bolts and ensure they are torqued properly.
- 2 - Remove and discard Safety Bar that holds Stabilizer Legs in the Shipping Position.
- 3 - Engage Truck Hydraulics and ensure that Stabilizer Legs go up and down properly.
- 4 - Check Winch Rotation is correct. Fig SP20-3

FIG SP20-3



- 5 - Shut Truck off and Install Wire Rope. Start by receiving the Wire through the center boom head and down to winch. When installing Wire Rope into Winch please refer to winch Operating Manual for Instructions.



TECH TIP

We cannot express enough the importance of keeping your wire rope well lubricated. We recommend that you lube your new rope and lube wire at least once per month.



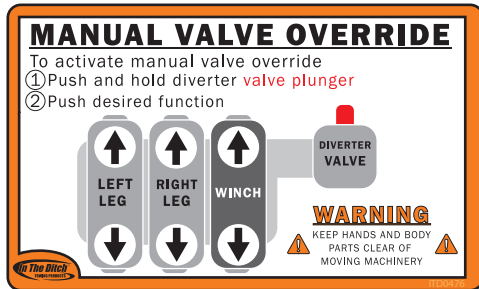
RIGGING TIP

-Be sure to record the Working Load Limit WLL of your wire rope before you use it. The WLL of your wire rope should never be exceeded. It is the responsibility of the equipment operator to inspect wire rope and to not overload it.

-Keep a minimum of 5 wraps of Wire Rope on Your Winch at all times.

6 - Please install Decals if your SidePuller™ was not shipped with the decals installed. We take great pride in manufacturing the SidePuller™ and we hope you have the same pride by display the SidePuller™ Brand Decals. Decals not only enhance the look of your SidePuller™, they serve as a warning to certain areas of your SidePuller™.

SP20,000 INSTALLATION



We have done our very best to share with you the installation Practices. It is now time for you to start enjoying your SidePuller™. Please read the Operations Section of this Manual. If you feel we could add more information to this manual please contact us with your suggestions. We would love to hear from you.

**Contact The Ditch Tech Support, 8:00 am to 5:00PM MST Mon through Friday
1-888-993-4824. You can also email your suggestion to sales@intheditch.com**

SP SERIES™ OPERATIONS

Walk Around Visual Inspection

Before operating SP Series™ SidePuller, perform a walk around visual inspection of the unit.

1. Inspect for evidence of physical damage such as cracking, bending, or deformation of plates and welds.
2. Inspect carefully for cracking or flaking of paint. Flaking or cracking of paint may indicate a dangerous crack in the structure beneath.
3. Examine Wire Rope for fraying, splintering, or other signs of stress that may weaken its load capacity. If Wire Rope is damaged, remove from service immediately. Never exceed manufacturer's working load limit (WLL).
4. Ensure the Wire Rope is safely stowed with hook securely attached to the wire rope tieback.
5. Inspect all hardware: mounting bolts, nuts, pins, and safety latches. Loose or missing hardware should be properly tightened or replaced with manufacturer's specified hardware.
6. For travel, the Stabilizer Legs must be in stowed position and PTO disengaged.
7. Inspect all hydraulic hoses for fluid leaks, especially those which flex or move in service. Ensure all hydraulic fluid levels are at fill capacity. Secure all caps and filler plugs for all systems. Hydraulic system leaks must be repaired before the SidePuller is operated.



WARNING

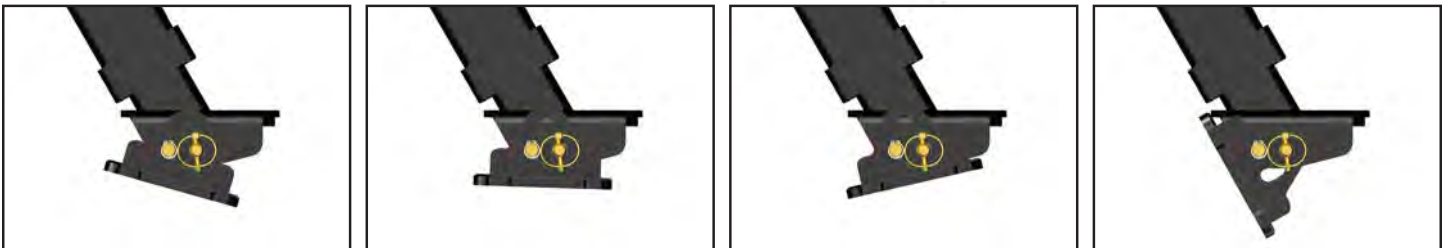
DO NOT OPERATE SP SERIES™ UNIT UNTIL ALL REPAIRS ARE MADE!



Using the SP Series™ Stabilizer Legs

- 1 - Use Caution When Lowering Stabilizer Legs to ensure there is nothing in the way of Stabilizer Foot when it comes down.
- 2 - Do not use the Stabilizer Legs to lift your truck of the ground. The Stabilizer legs are meant for truck stabilizing only.

SP SERIES OPERATIONS



WARNING

USE EXTREME CAUTION WHEN DEPLOYING THE STABILIZER LEG, ASSURING NOT TO CRUSH OR SEVER THE FOOT!

Ground Penetrating Grousers

To use the Ground Penetrating Grouser feature. Remove the Removable Foot Pin, Fold the Grouser down, reinstall Pin and Lynch Clip.



TECH TIP

Make sure the Removable Pin is install in the proper direction to prevent possible interference with anything while being retracted

When using SidePuller™ on Concrete or Asphalt Surface we do not recommend the use of the Ground Penetrating Grousers.



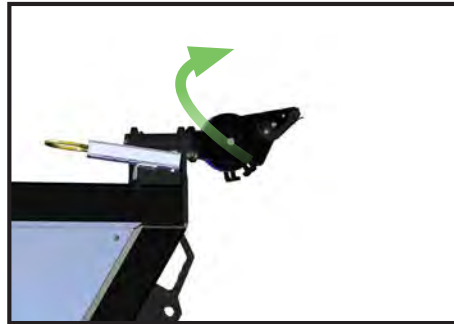
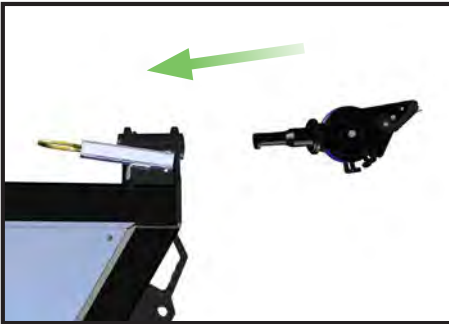
WARNING

USE EXTREME CAUTION WHEN DEPLOYING THE STABILIZER LEG, ASSURING NOT TO CRUSH OR SEVER THE FOOT!

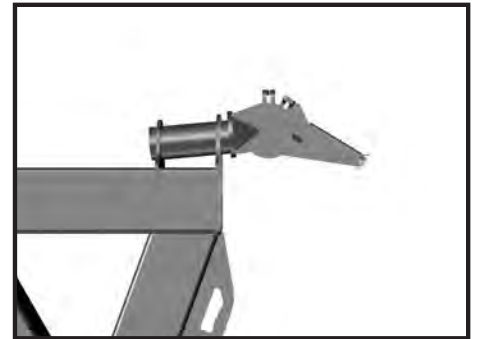
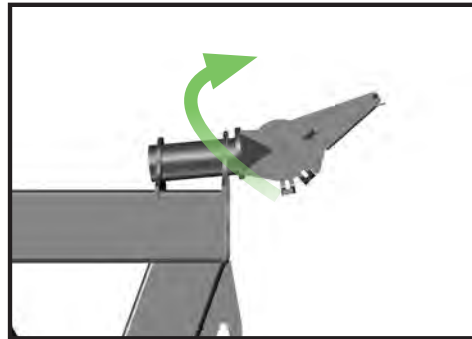
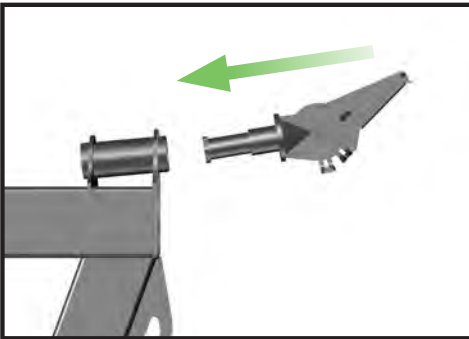
Installing the Outer Recovery Boom Head

1. Holding the Outer Recovery Boom Head 90-degrees to the Receiver tube, insert it into the outer boom head receiver until the flange of the Outer Recovery Boom Head tongue meets the mouth of the cylinder
2. Rotate the Outer Recovery Boom Head 180 degrees to secure it in its locked upright position.
3. To ensure the Outer Recovery Boom Head is in its locked position, pull it away from the unit to guarantee the cylinder lock pin is engaged with the flange of the Removable Boom Head receiver shaft.

SP9000™ / SP12,000™ OUTER RECOVERY BOOM HEAD



SP20,000™ OUTER RECOVERY BOOM HEAD



WARNING



WHEN USING THE OUTER RECOVERY BOOM HEAD USE CAUTION TO KEEP WITHIN THE BOOM HEAD RECOVERY ZONE



SP9000™/ SP12,000™ OUTER BOOM HEAD



**Upper end of usable recovery zone
75° Recovery Range**



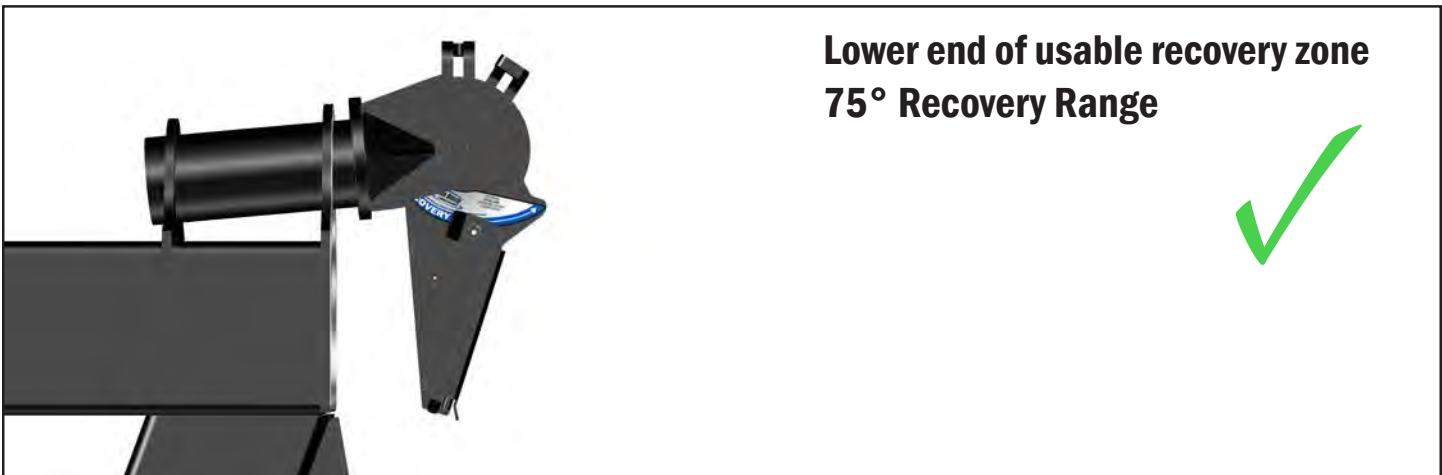
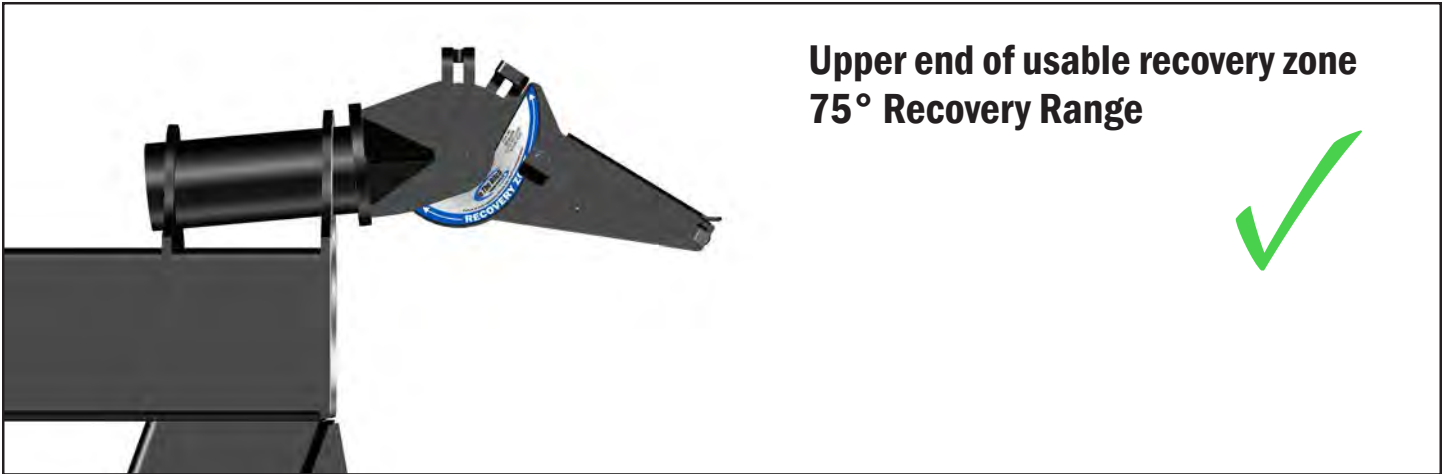
**Lower end of usable recovery zone
75° Recovery Range**



Warning: Boom head is operating out of recommended recovery zone

SP20,000™ OUTER BOOM HEAD

SP SERIES OPERATIONS



WARNING

WIRE ROPE COVER MUST BE USED AT ALL TIMES



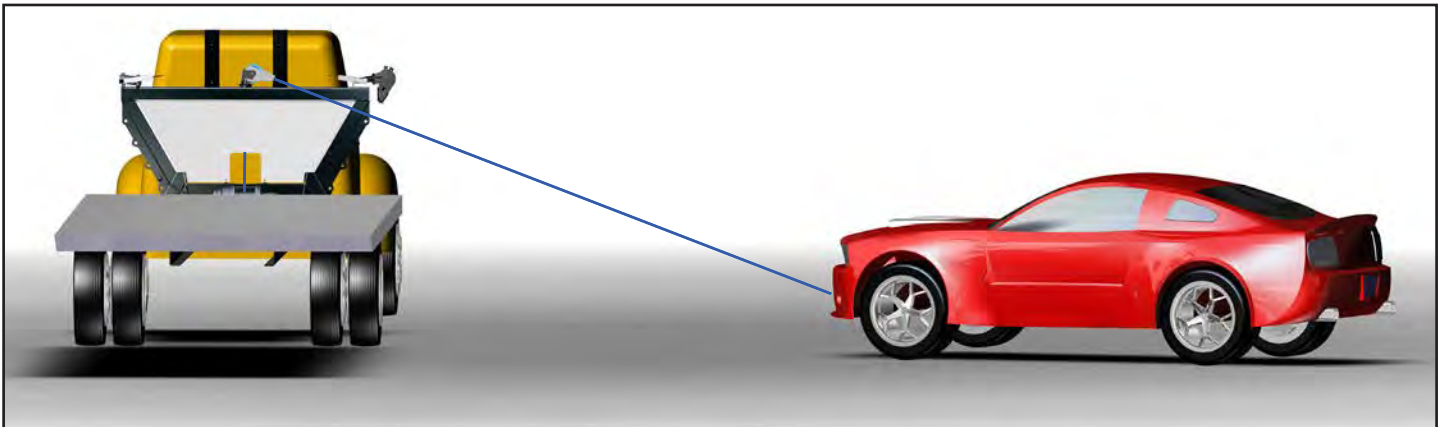
Recovery Assessment

1. Find a solid level surface from which to operate the SidePuller™.
2. Determine the Wire Rope Rigging and Recovery Scenarios.
3. Determine Stabilizer Leg use.
4. Determine Outer Removable Boom Head use. If not using Removable Boom Head skip the section and continue on.



RIGGING TIP

You can pull directly off the center Boom Head if you are out of the Recovery Zone.



Wire Rope Rigging and Recovery Scenarios

Rigging through the Center Sheave

When rigging the Wire Rope through the Center Sheave only, recoveries can be made within a 170-degree radius behind any of the SP Series™ SidePullers™, with the elevation of the recovered vehicle being higher, lower, or equal to the unit. Do not exceed the Working Load Limit (WLL).

SP SERIES OPERATIONS

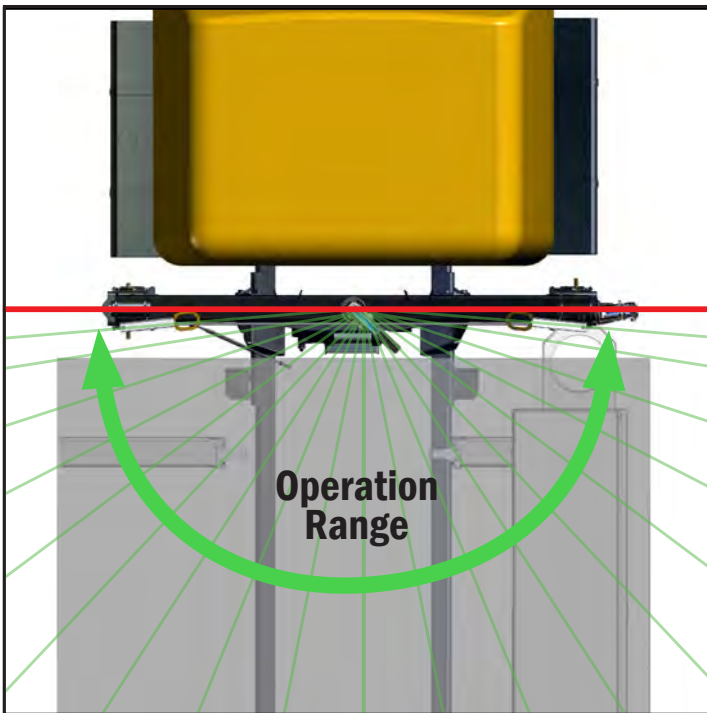
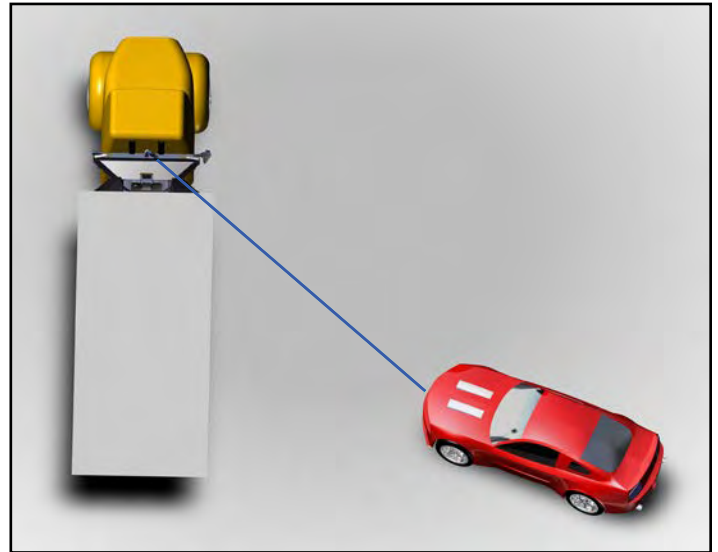


FIG SP13



Pulling from the Center Recovery Boom Head is a great technique to use. In fact we feel it should be your preferred method for winching any casualty that

is not over an embankment. You can pull Directly off the Center Boom head in any direction as long as the Wire Rope does not contact the truck as shown in figures SP13 Thru Fig SP16.

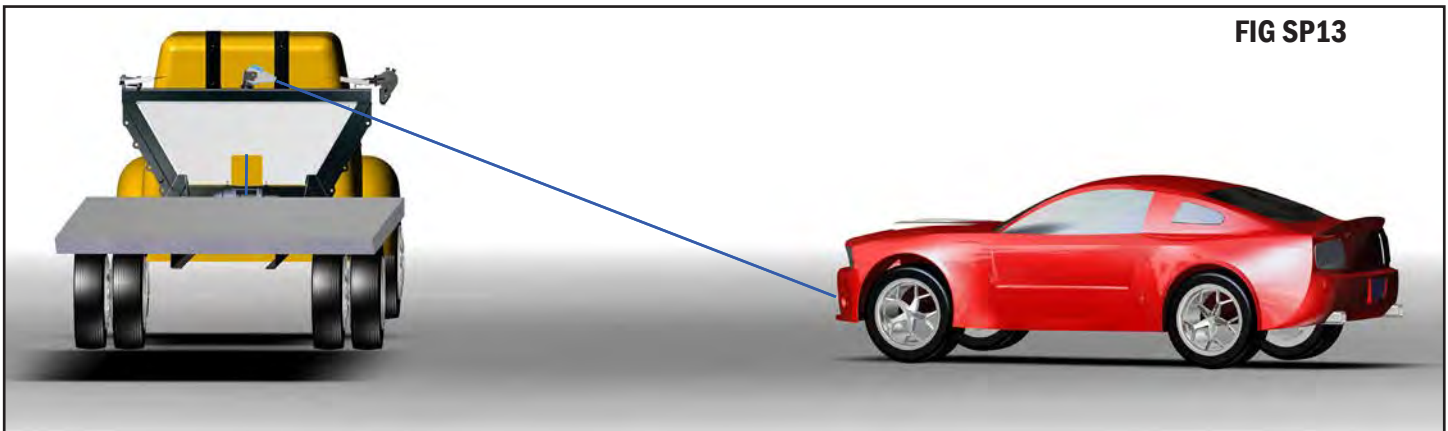
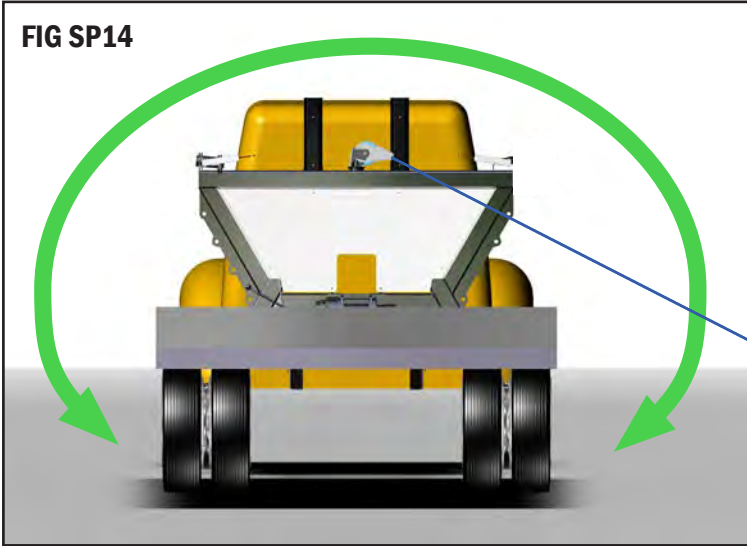


FIG SP13

FIG SP14



WARNING

BE SURE WHEN APPLYING THIS PROCEDURE THAT THE WIRE ROPE IS FREE FROM ANY OBSTRUCTIONS ON THE UNIT, THE GROUND, AND THE VEHICLE BEING RECOVERED

FIG SP15

Pull directly from center recovery boom head

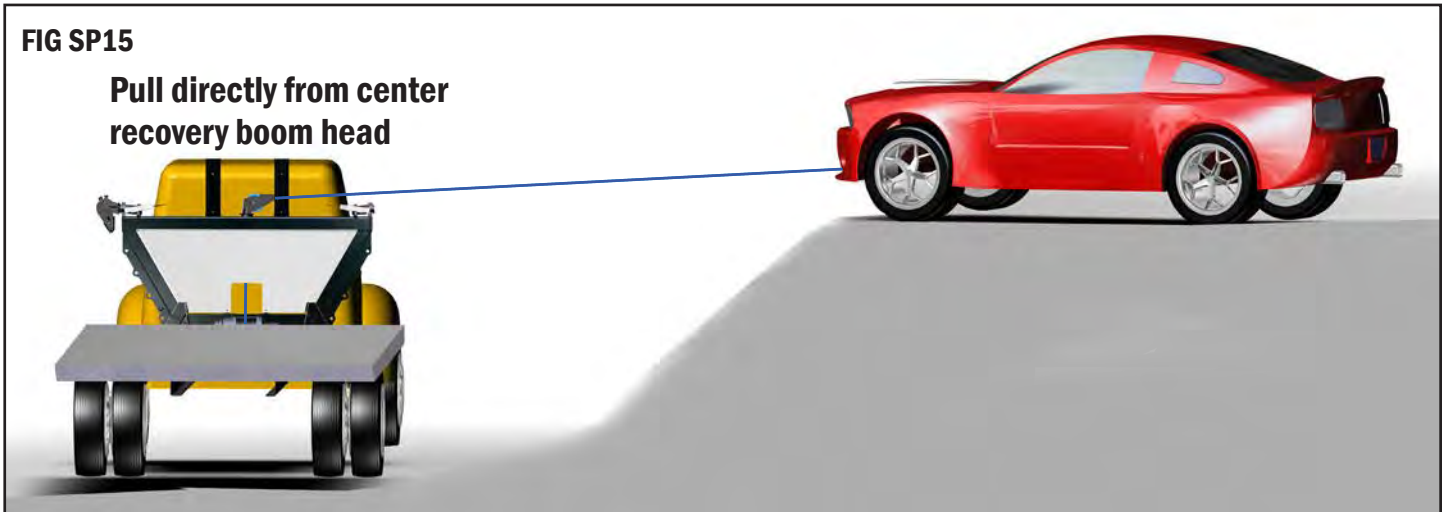
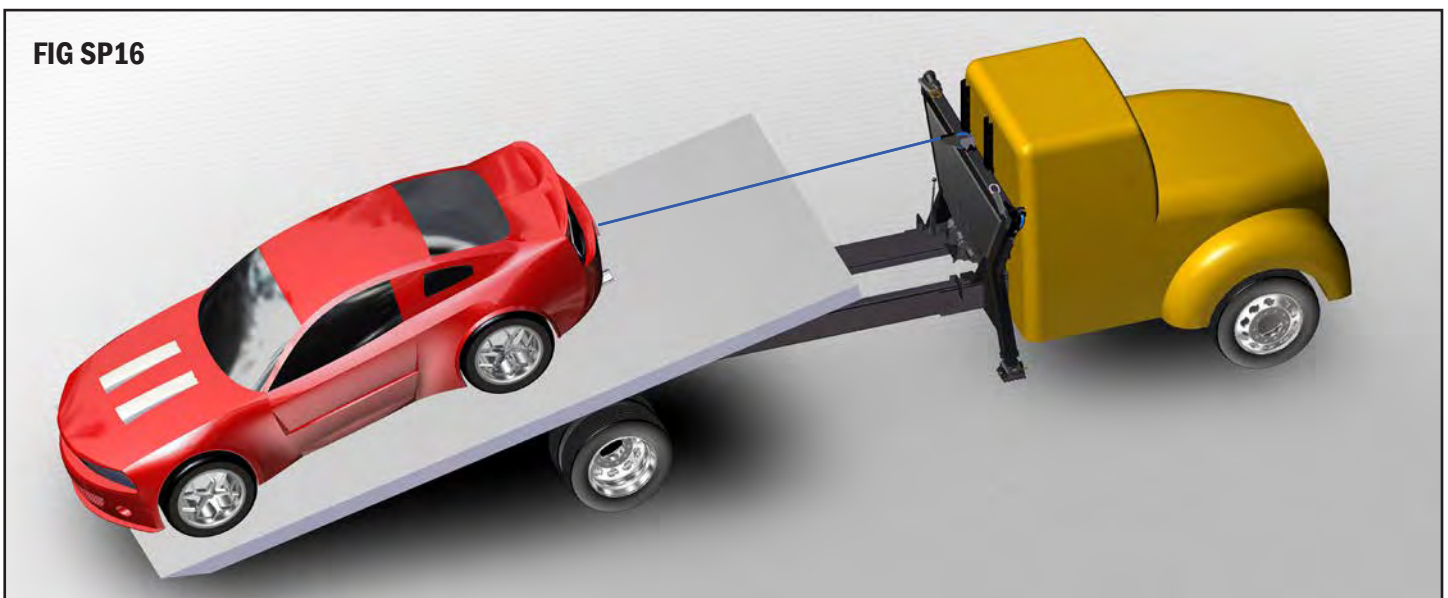


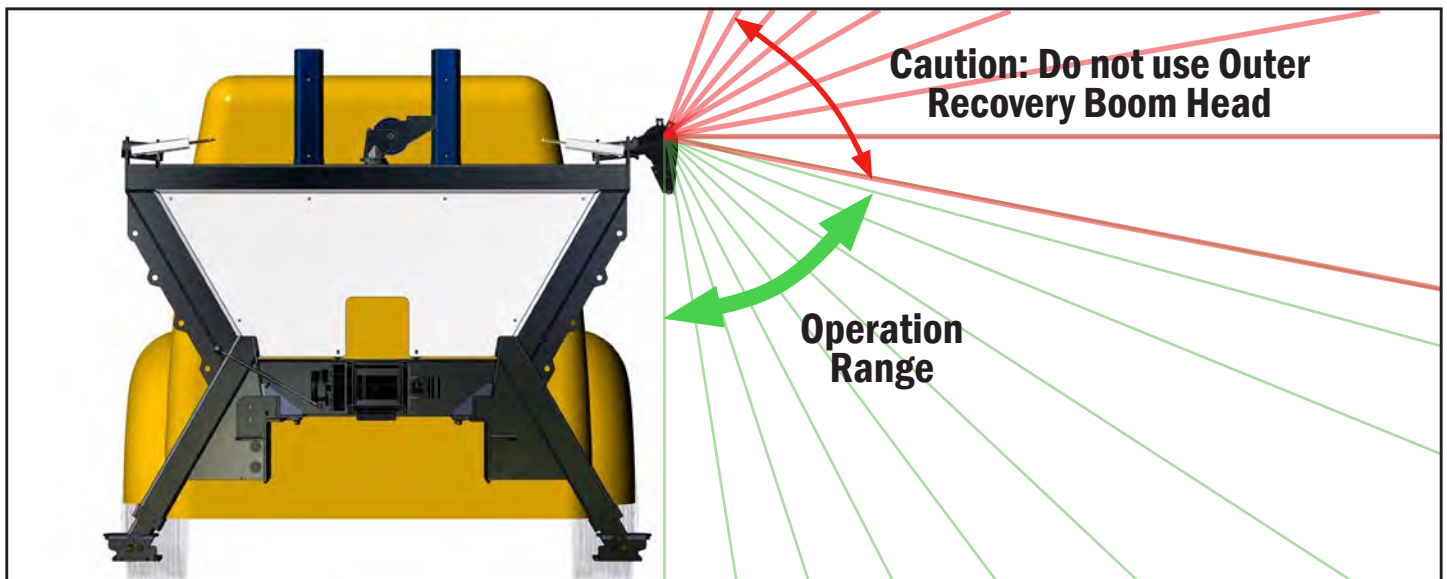
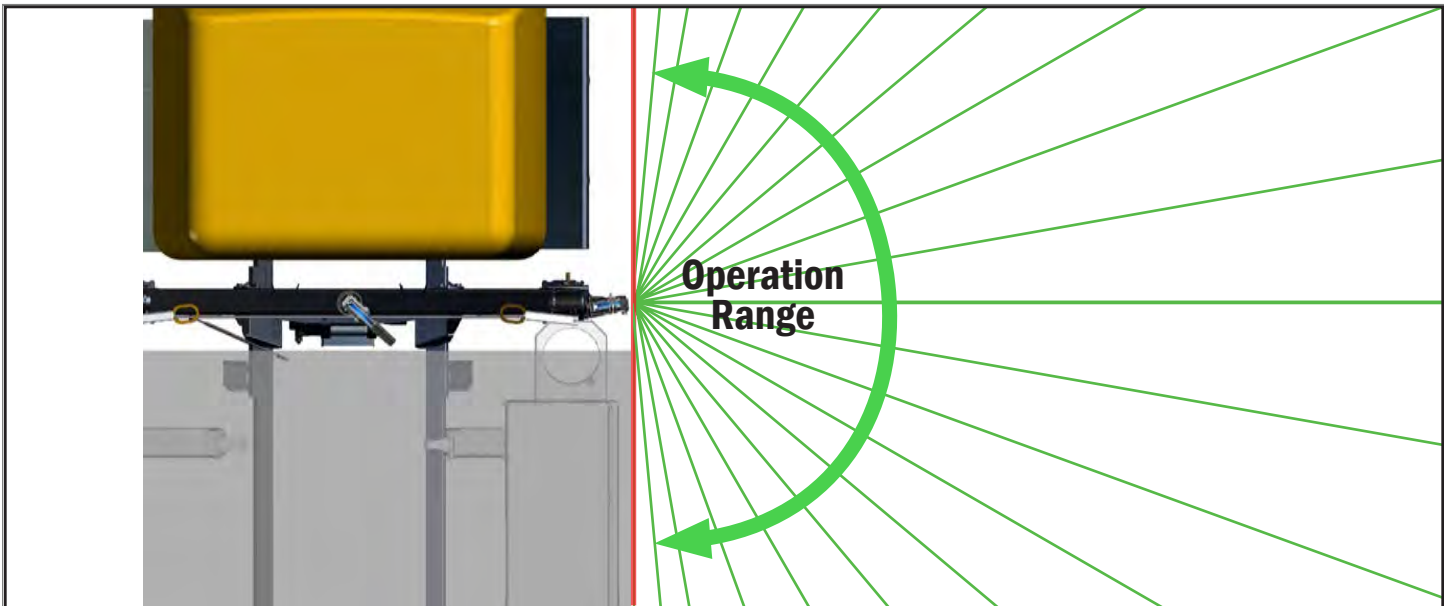
FIG SP16



Rigging through the Center Sheave and Outer Recovery Boom Head

When rigging the Wire Rope through the Center Sheave and Outer Recovery Boom Head only, recoveries are limited to a 170-degree radius perpendicular to the unit and must be well below the elevation of the Outer Boom Head. You must have at least a 15° downward angle on the wire rope.

SP SERIES OPERATIONS



WARNING

USING THIS METHOD TO RECOVER A VEHICLE THAT IS AT THE SAME ELEVATION OR HIGHER ELEVATION THAN THE UNIT MAY RESULT IN FAILURE OF THE OUTER RECOVERY BOOM HEAD AND CAN CAUSE INJURY

FIG SP18

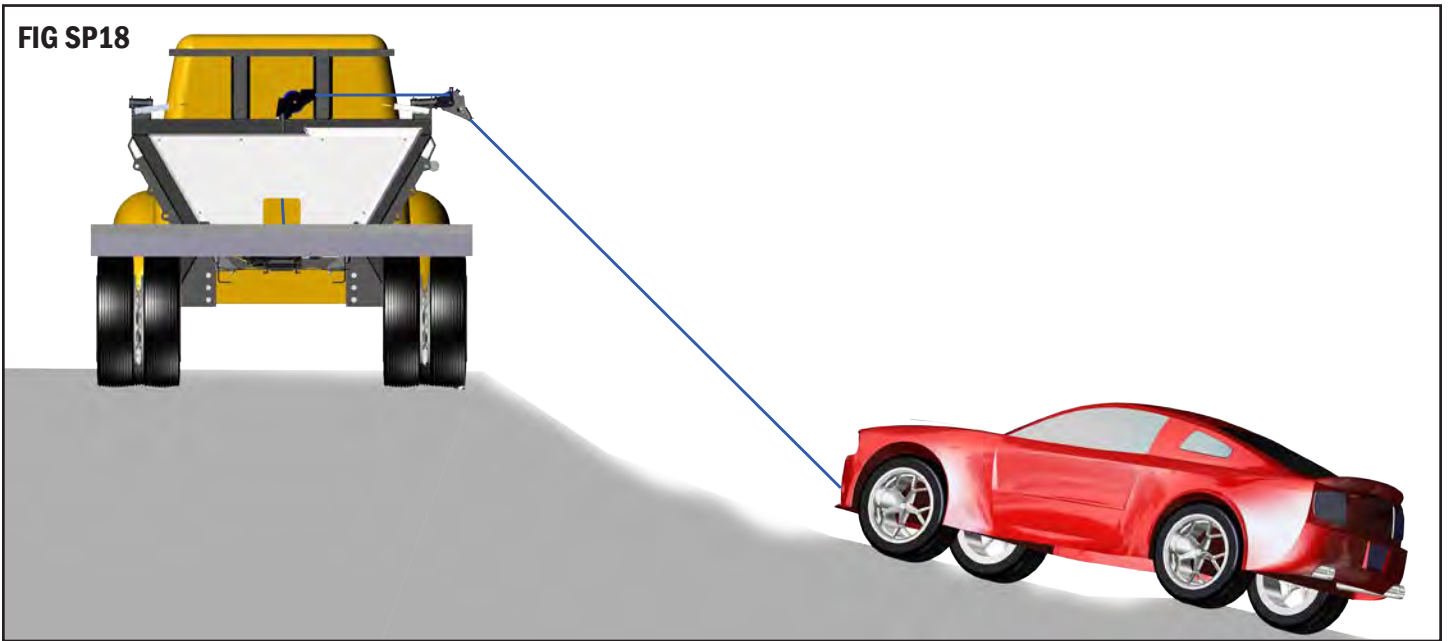


FIG SP18-A

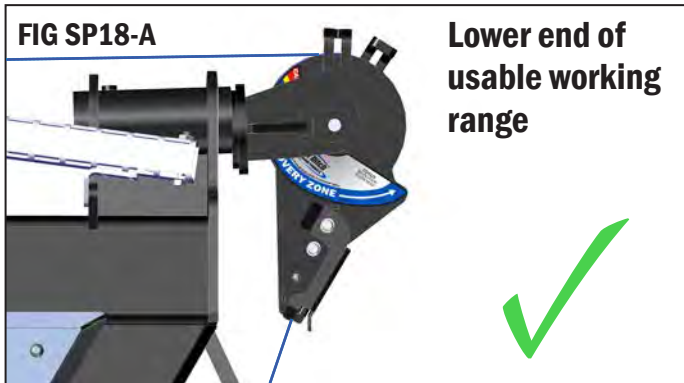


FIG SP18-C

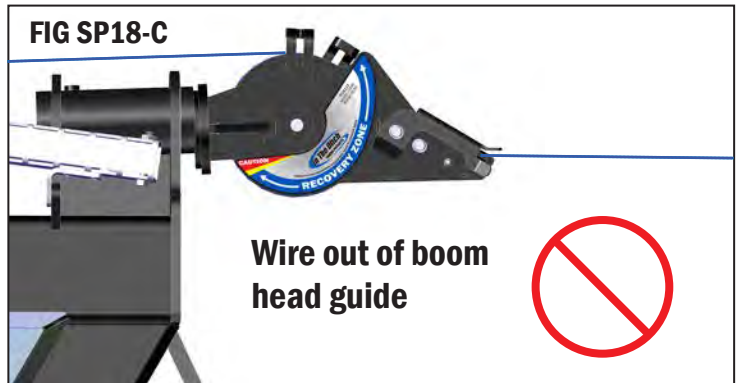


FIG SP18-B

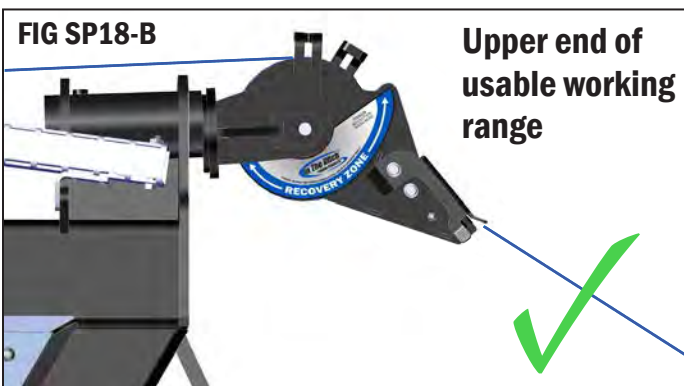


FIG SP18-D



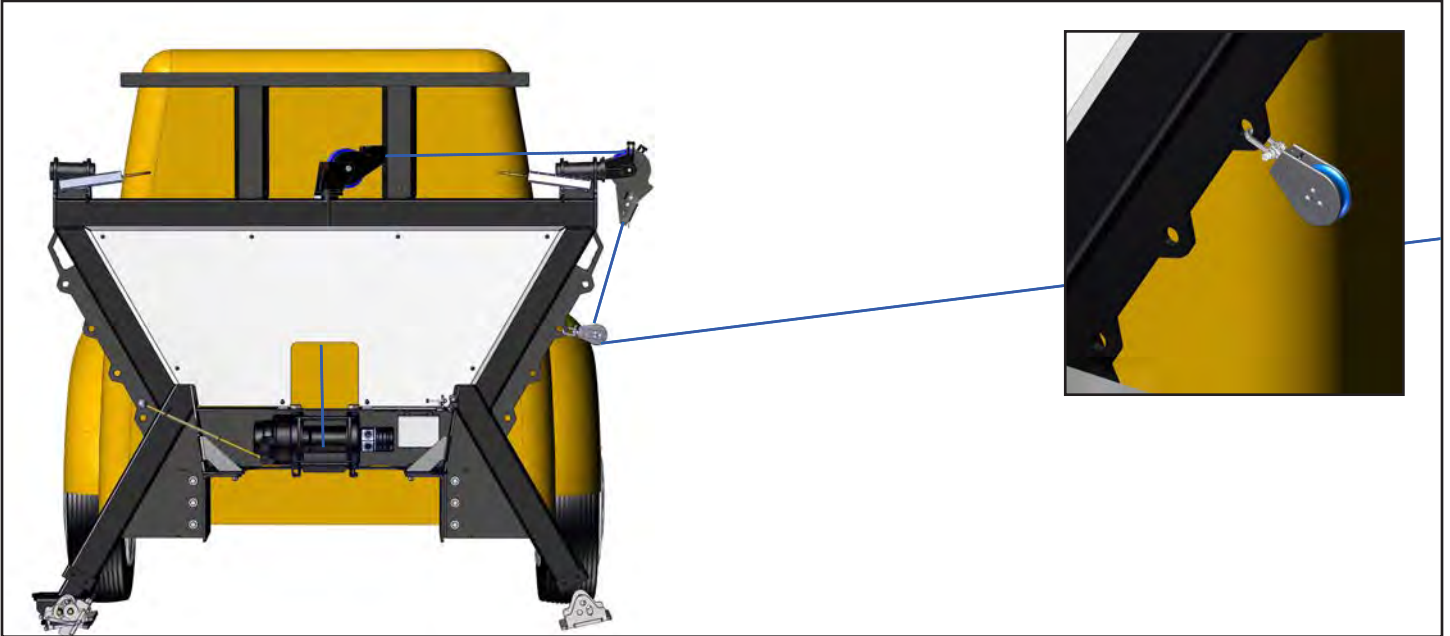
RIGGING TIP

When Rigging as shown in Fig SP18 use Caution and stay in the recovery zone Recovery Zone. Fig SP18-A & B Failure you to do so could result in personal injury Fig SP18-C & D.

Rigging through the Center Sheave, Outer Recovery Boom Head, and a Snatch Block

When rigging the Wire Rope through the Center Sheave, the Outer Recovery Boom Head, and a Snatch Block, the Snatch Block must be secured to one of Anchor Points on the upper Angle Brace. Recovery is limited to a 45-degree radius perpendicular to the unit. This rigging is best used for side pulls at an equal elevation to the unit. The maximum load capacity for this rigging is dependent upon the W.L.L. of the Wire Rope, Snatch Block, and stability of the chassis.

SP SERIES OPERATIONS



Rigging in this method give you great versatility and recovery options. You can pull in multiple directions. When rigging through a snatch block you may increase the loads on the Anchor Point. Be sure to know your line loads and understand Snatch Block Loading Effects on the SidePuller™.

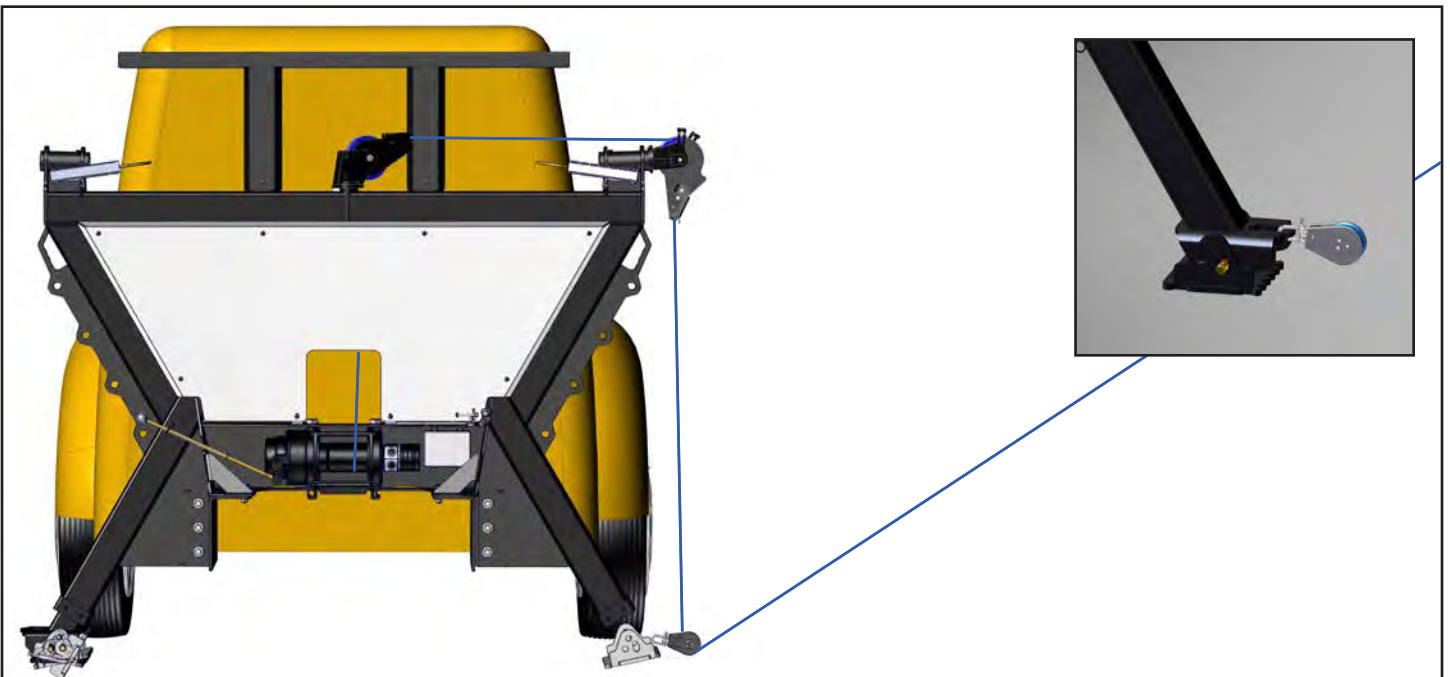
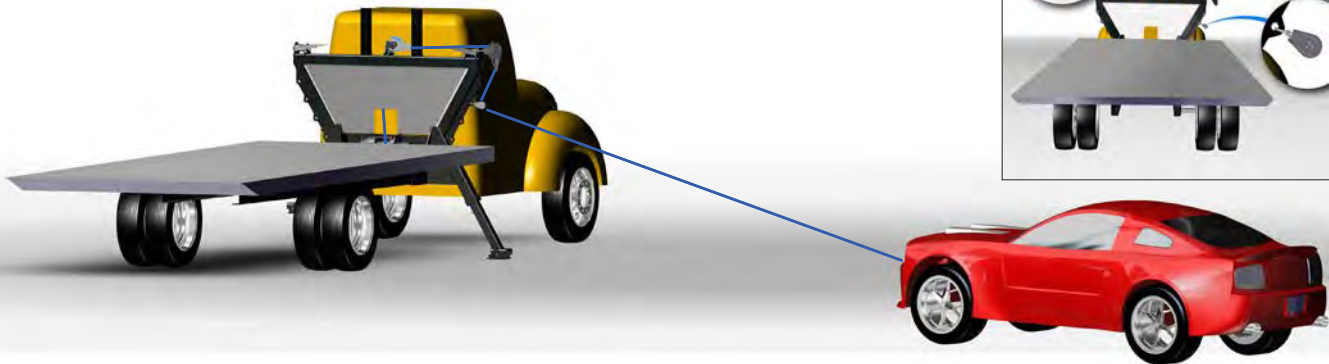


FIG SP19



When Rigging from Outer Boom Head Down through a Snatch Block you have a lot of options in the direction of pull. You can pull off any of the anchor points on the side of The SidePuller™ Fig 3-1 You can also attach Snatch Block To The Stabilizer Foot and gain a great advantage when pulling a casualty over Fig 3-2 and Fig 3-3.

FIG SP19-A

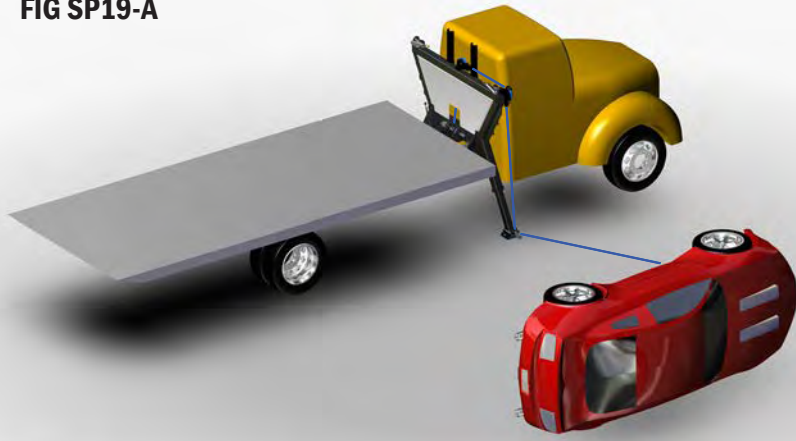
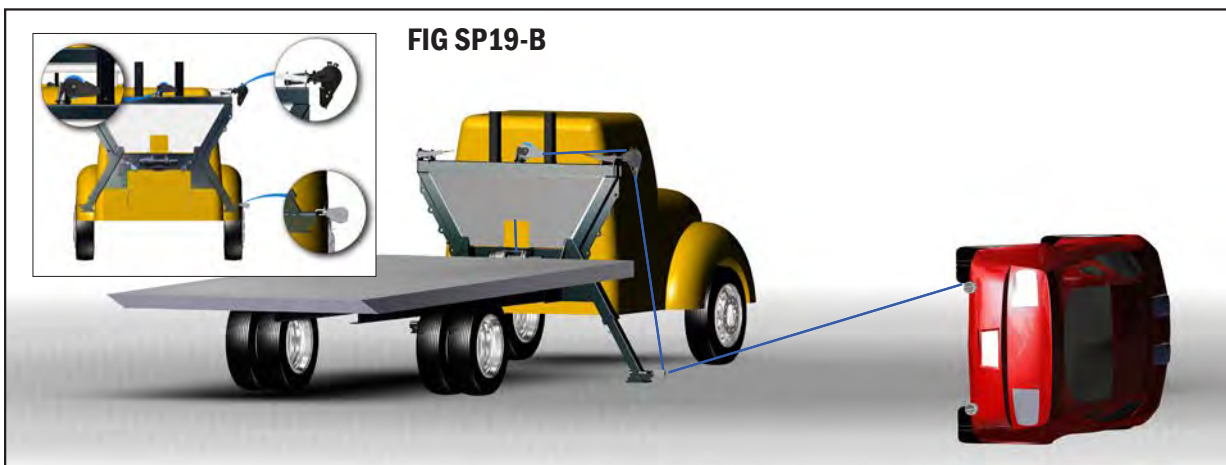


FIG SP19-B



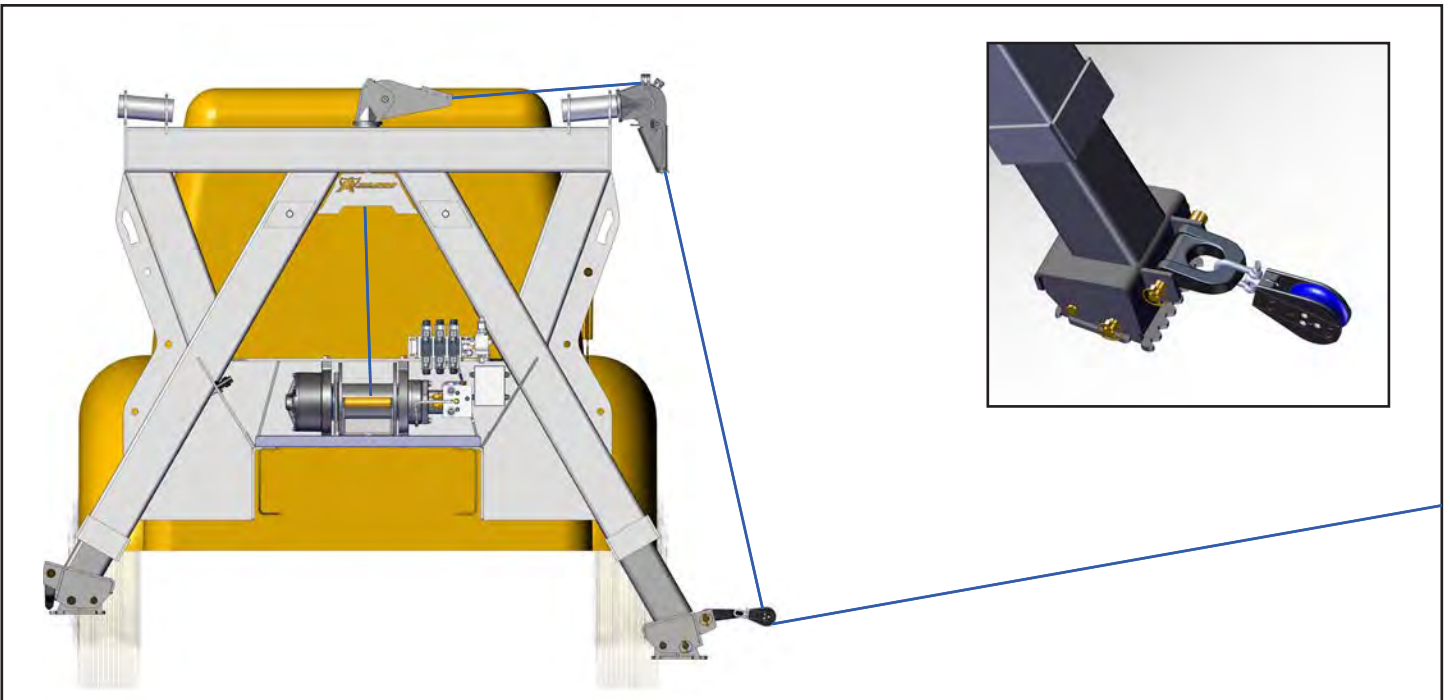
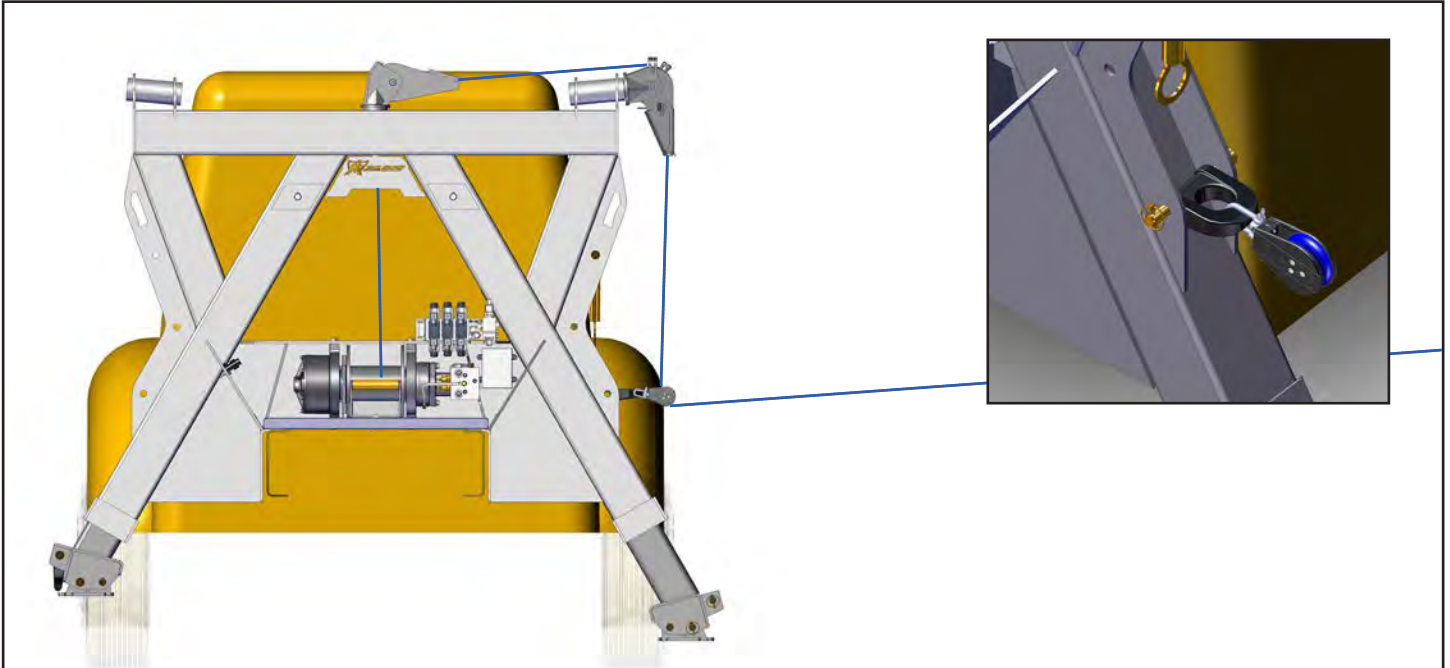
RIGGING TIP

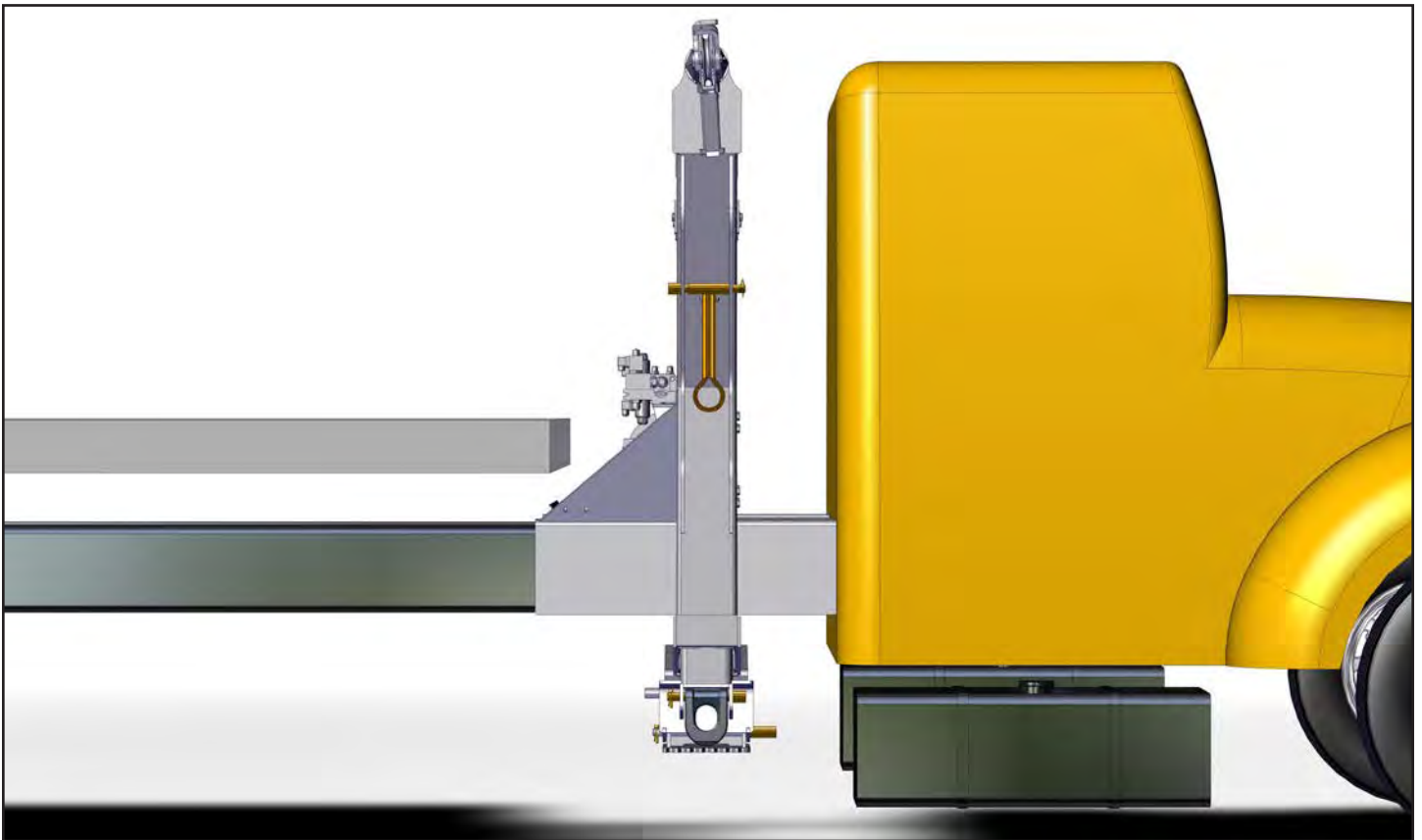
We recommend that you use a snatch block that is of the proper load rating and that has a sheave at least 12 times the diameter of the wire rope. Example 3/8" Wire rope $.375 \times 12 = 4.5"$ Sheave Wheel on your Snatch Block.

Rigging through the Center Sheave, Outer Recovery Boom Head and a Snatch Block secured to the D-Ring of the Stiff Leg

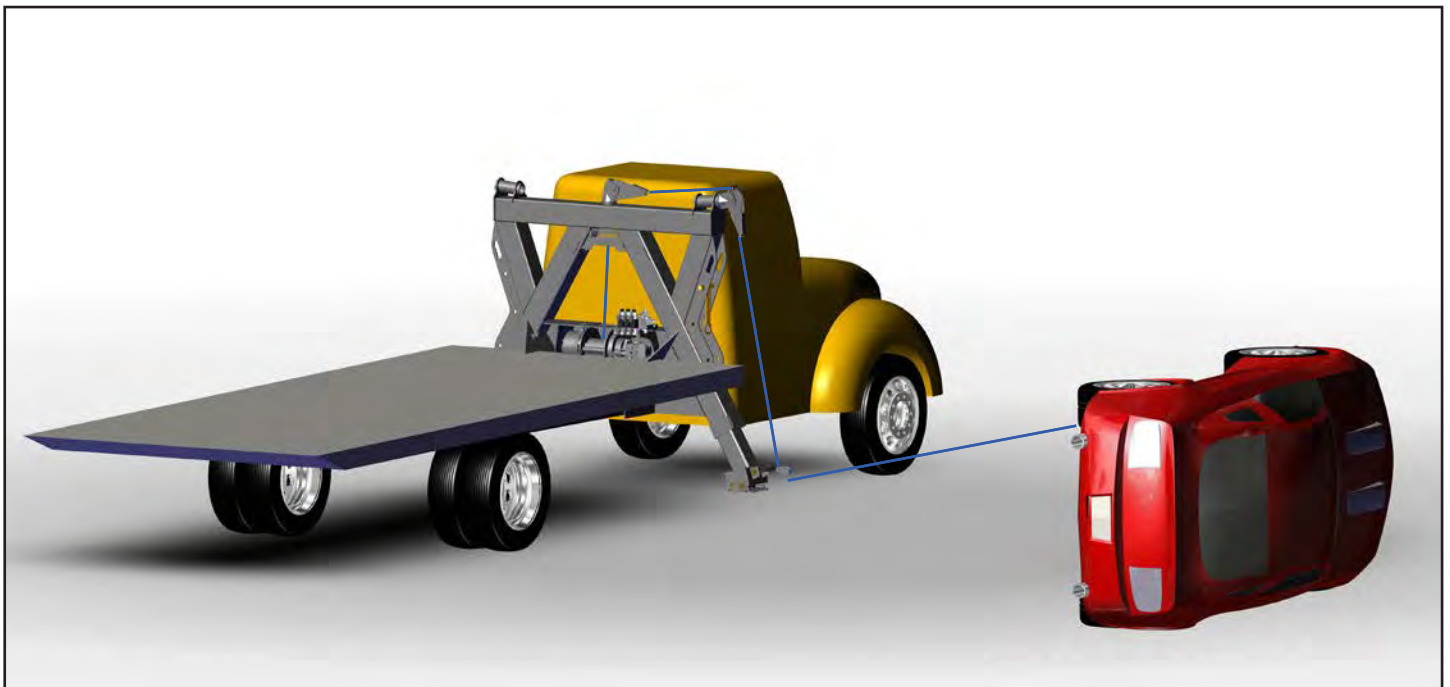
When rigging through the Center Sheave, the Outer Recovery Boom Head, and a Snatch Block secured to the D-Ring of the Stiff Leg, the Stiff Leg must be firmly planted on the ground. Recoveries are limited to a 45-degree radius perpendicular to the unit. This rigging is best used when a vehicle is up an embankment above the unit, or when a Rollover is being performed to right the recovered vehicle. The maximum load capacity for this rigging is dependent upon the W.L.L. of the Wire Rope and Snatch Block.

SP SERIES OPERATIONS





Using this rigging technique you can get a low pull and gain a great advantage on the casualty.



Winch Operation

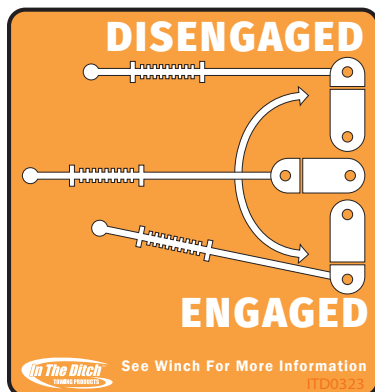
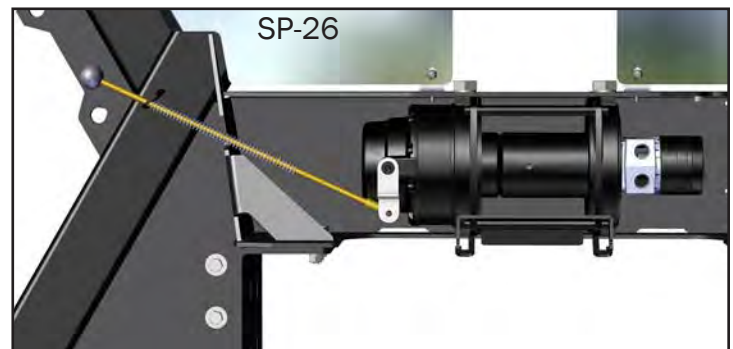
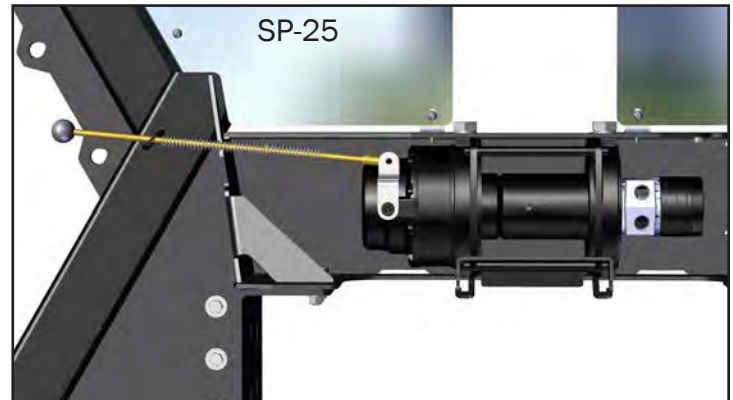
The following practices should be maintained when using the winch line.

1. Attach the Wire Rope hook to a hook-up chain or sling suitable for the object being loaded. This enables the Wire Rope to pull from the load center and help even spooling of the Wire Rope on the Winch Drum. **DO NOT** attach the Wire Rope hook directly to the object being loaded.
2. **DO NOT** wrap the Wire Rope around an object as this tends to fray or kink the wire.
3. **DO NOT** exceed the Wire Rope working load limit.
4. A minimum of 5 wraps of Wire Rope around the Winch Drum is necessary.
5. Maintain an even wire wrap on the Winch Drum and also observe and ensure that the wire does not climb up the side of the Winch Drum when in use.
6. Continually observe the Wire Rope condition for kinks, frays, or a build-up of rust. Should any of these conditions be noticed, replace the Wire Rope assembly. Check with Wire Rope dealer for out of service criteria of Wire Rope.

SP SERIES OPERATIONS

SP9000™ and SP12,000™ Free Spool Winch Option

1. The SP9000™ AND SP12,000™ uses a manually activated Free Spool Rod Handle.
2. To Disengage winch be sure Free Spool Rod Handle is in location shown in Figure SP-25
3. To Engage winch be sure Free Spool Rod Handle is in location shown in Figure SP-26

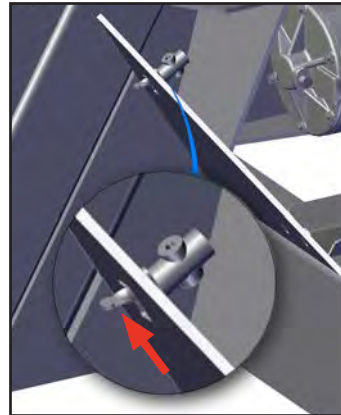


SP20,000™ Flipper Air Valve

1. The SP20,000™ Uses an Air Operated Free Spool Lever.
2. To release winch be sure Free Spool Rod Handle is in location shown in Figure SP-27
3. To engage winch be sure Free Spool Rod Handle is in location shown in Figure SP-28

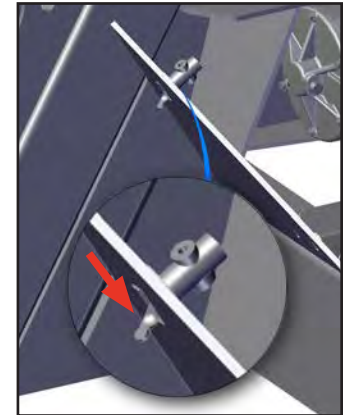


SP-27



RELEASED

SP-28

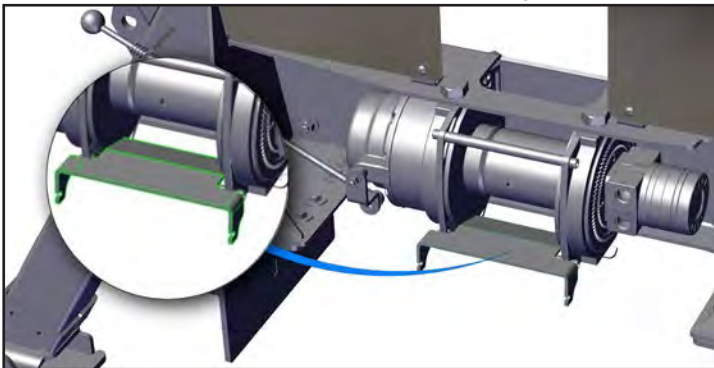


ENGAGED

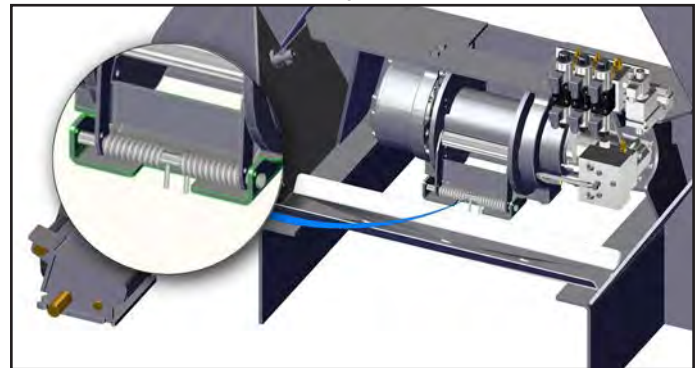
Winch Tensioner Plate

1. The SP9000™ and SP12,000™ use an ITD Exclusive Designed Tensioner Plate. This plate mounts to the bottom of your Warn Winch and is tensioned by 2 springs. Periodic inspection is required by the operator to ensure the tensioner is good operating conditions. **(Do Not operate Winch without Tensioner)**
2. The SP20,000™ uses a Warn Roller Tensioner. Periodic inspection is required by the operator to ensure the tensioner is good operating conditions. **(Do Not operate Winch without Tensioner)**

SP9000™ AND SP12,000™



SP20,000™



WARNING

BEFORE OPERATING THE WINCH, REFER TO THE WARN WINCH OPERATOR'S MANUAL FOR COMPLETE UNDERSTANDING OF WINCH OPERATING PROCEDURES.




WHEN USING THE FREE SPOOL CONTROL, YOU MUST ENSURE THAT THE DRUM CLUTCH IS REENGAGED AND FULLY SEATED BEFORE WINCHING BEGINS. IF THE DRUM CLUTCH IS NOT FULLY ENGAGED BEFORE WINCHING BEGINS, IT MAY POP OUT AND ALLOW THE WINCH TO FREE SPOOL. REFER TO WINCH OPERATIONS MANUAL.

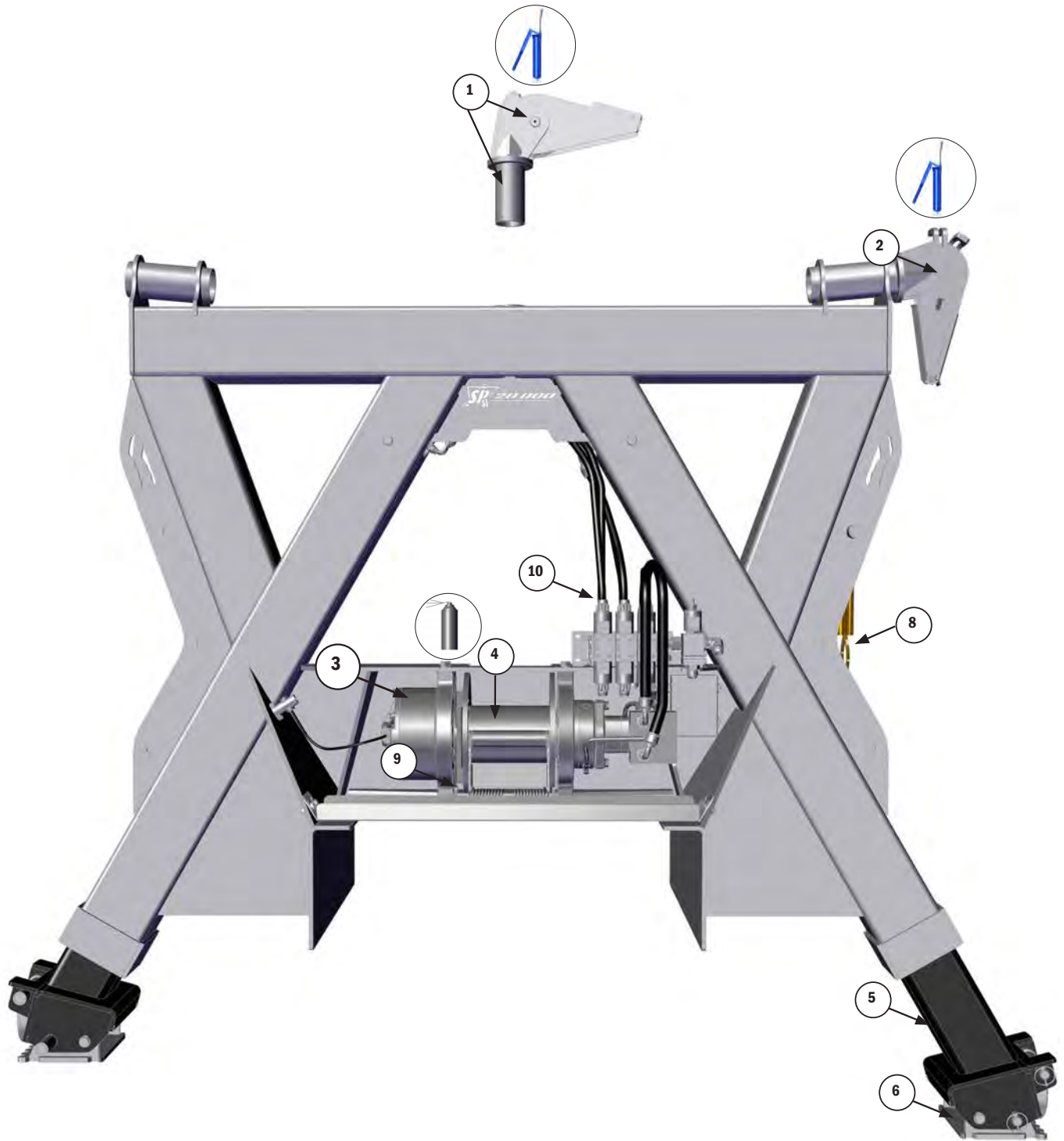
MAINTENANCE

The simple design nature of the SP Series™ SidePullers™ makes for simple maintenance. For longer life expectancy of your SP Series™ SidePullers™, efficient and safe usage, ITD recommends performing routine maintenance on the unit.

1. Perform a walk around visual inspection of the SP Series™ SidePuller™ on a per use basis. (Refer to SP Series™ Operation Section)
2. There are two (2) Lubrication Fittings or Zerks (See Figures) on the SP12,000™ & SP20,000™; one on each boom head sheave. Three (3) Lubrication Fittings or Zerks (See Figures) on the SP9000™. Grease the Zerks after each use.
3. Inspect all SP Series™ accessories before each use including Screw Pin Shackles, Wire Rope, and Snatch Blocks

MAINTENANCE CHECKLIST

- 1. Grease Center Recovery Boom Head 
- 2. Grease Outer Recovery Boom Head 
- 3. Inspect Winch
- 4. Inspect Wire Rope and Lubricate 
- 5. Inspect Inner leg Assembly
- 6. Inspect Stabilizer Foot
- 7. Inspect electrical wiring
- 8. Spring tube spring (Wire rope tie back)
- 9. Tension springs
- 10. Inspect hydraulic hoses (Models with Integrated Controls)



TECH TIP

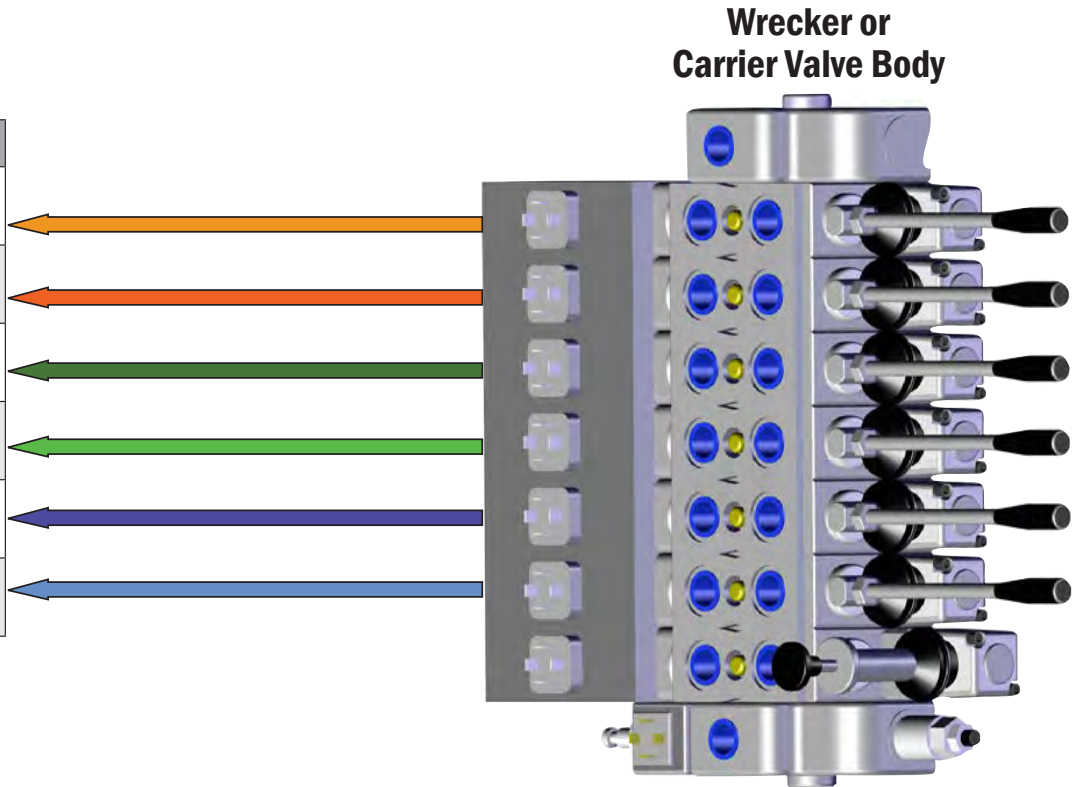
We cannot express enough the importance of keeping your wire rope well lubricated. We recommend that you lube your new rope and lube wire at least once per month.

APPENDIX: HYDRAULIC AND ELECTRICAL SYSTEMS

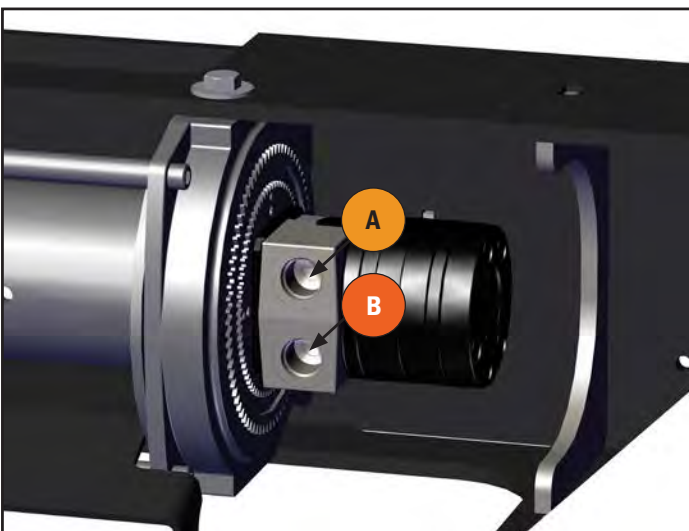
SP Series™ Product Hydraulic Schematic

SP SERIES SCHEMATICS

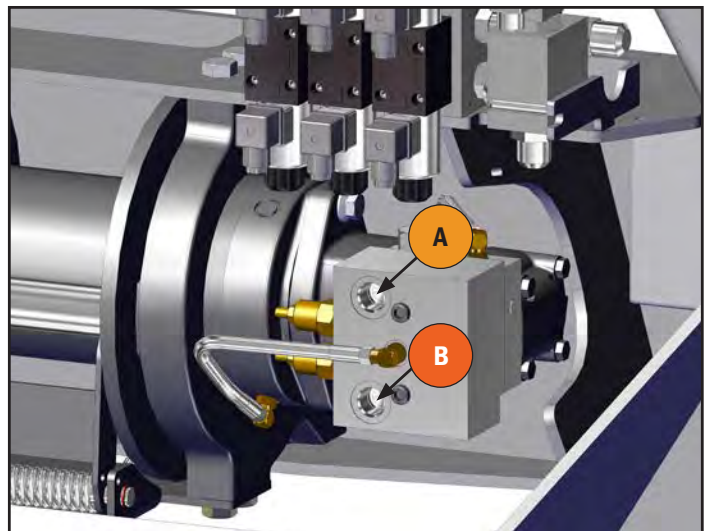
PORT	FUNCTION
A	Winch In
B	Winch Out
C	Right Leg DOWN
D	Right Leg UP
E	Left Leg DOWN
F	Left Leg UP

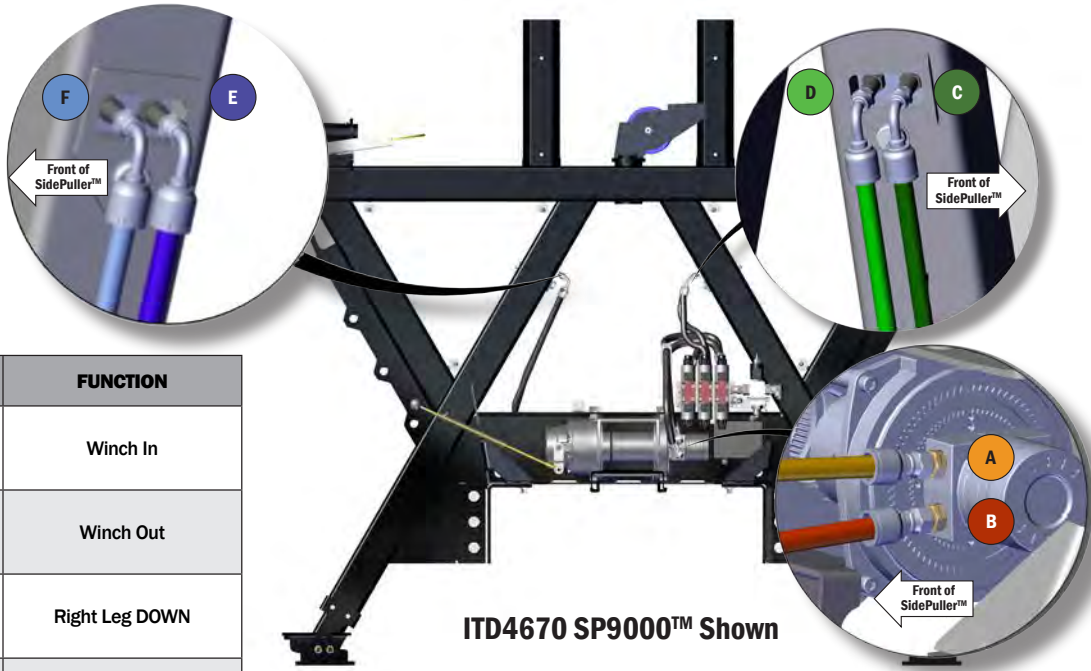


SP9000™ and SP12,000™



SP20,000™





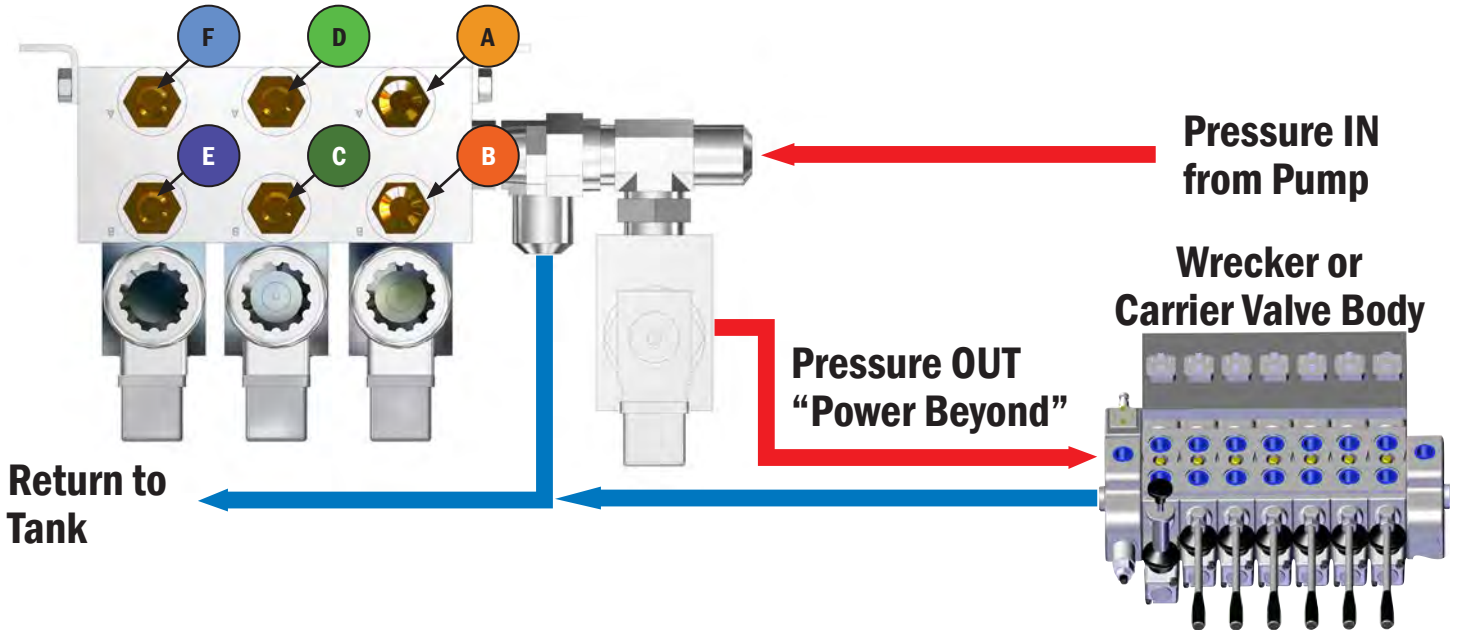
ITD4670 SP9000™ Shown

PORT	FUNCTION
A	Winch In
B	Winch Out
C	Right Leg DOWN
D	Right Leg UP
E	Left Leg DOWN
F	Left Leg UP

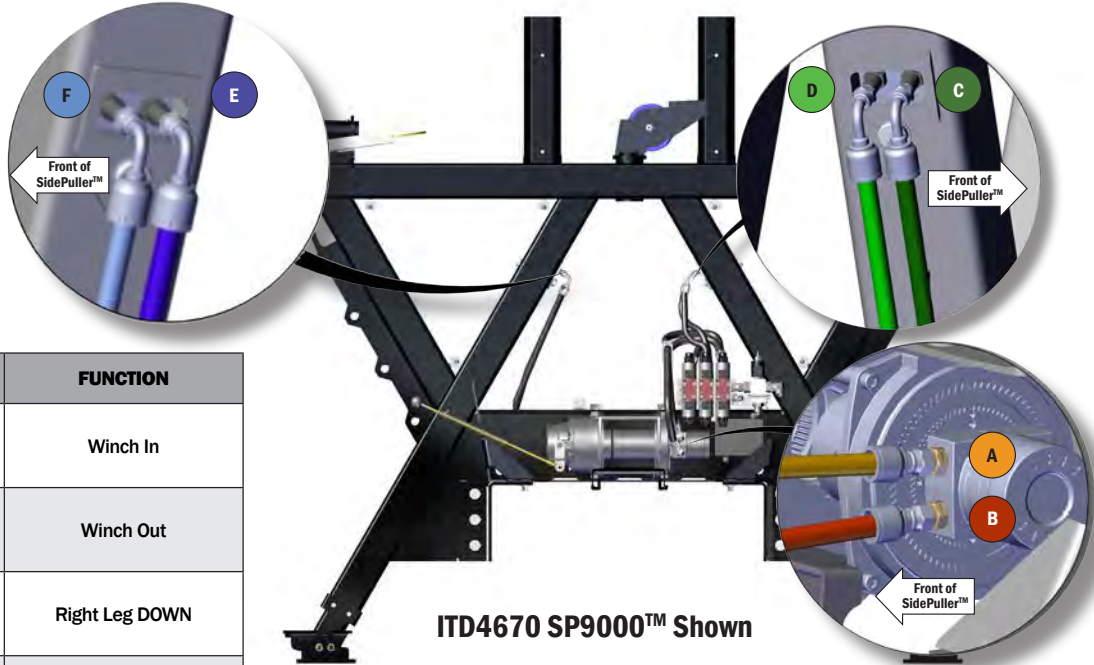
From Valve Body Plumb Hydraulic Lines Into Ports

SP Series™ Product Hydraulic Schematic (Integrated Controls with Power Beyond)

SP Series™ Hydraulic Valve



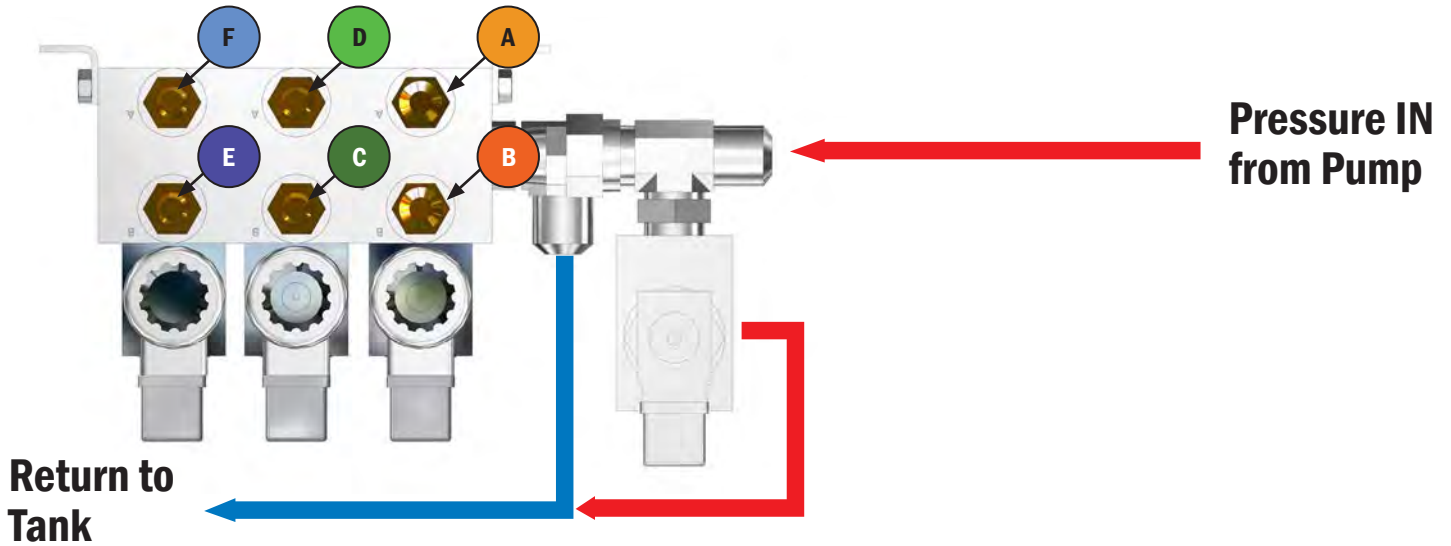
SP SERIES SCHEMATICS



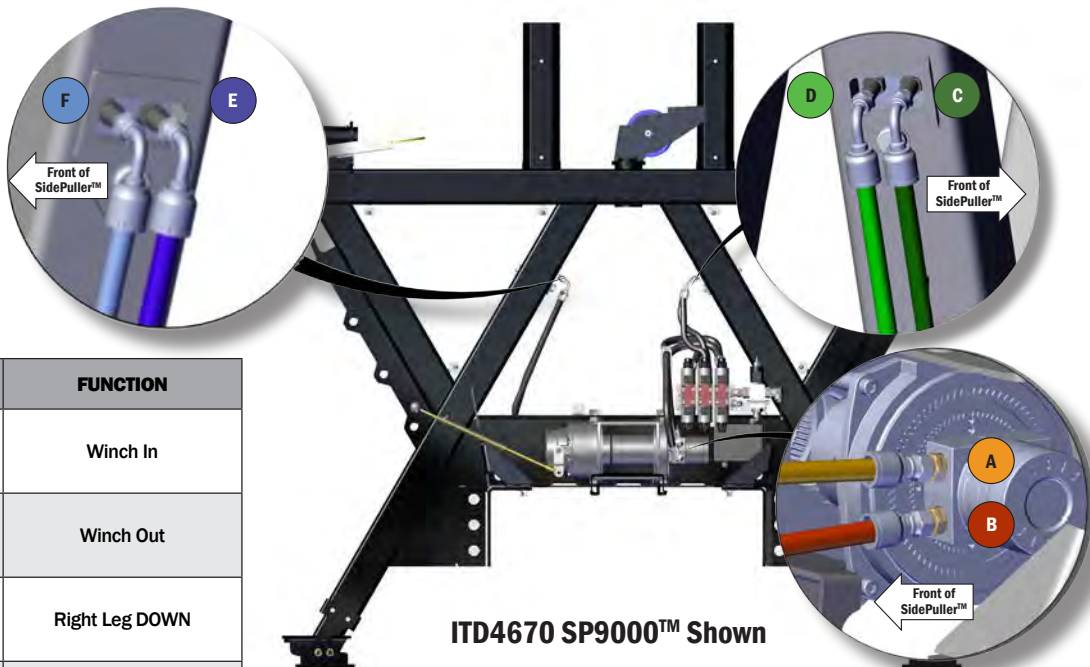
PORT	FUNCTION
A	Winch In
B	Winch Out
C	Right Leg DOWN
D	Right Leg UP
E	Left Leg DOWN
F	Left Leg UP

SP Series™ Product Hydraulic Schematic (Stand Alone System)

SPSeries™ - Hydraulic Valve



SP SERIES SCHEMATICS



ITD4670 SP9000™ Shown

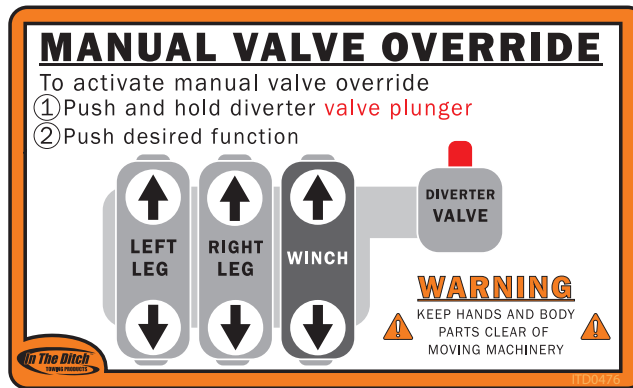
PORT	FUNCTION
A	Winch In
B	Winch Out
C	Right Leg DOWN
D	Right Leg UP
E	Left Leg DOWN
F	Left Leg UP

Manual Valve Override

In the event that your wireless remote does not work. You can manually operate your SidePuller™ control using the Manual Override Buttons. These functions are for emergency use only and should only be used to allow you to get back to the shop for repairs. Extreme Caution must be used when using the functions to ensure all body parts are clear of winch lines, winch, and stabilizer legs. To operate Override functions you must have Truck Running PTO on, Brakes set and wheels chocked.

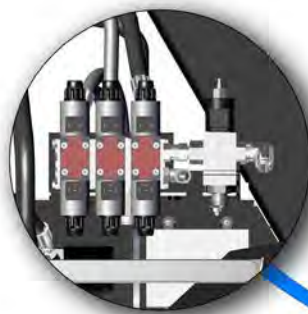
Step 1 - Remove Plastic Cap From Diverter Valve, depress and hold the Red Button.

Step 2 - While Depressing the Red Diverter Valve Button, press and hold the desired SidePuller Function.



SP Series™ Product Electrical Schematic

Hydraulic Manifold Assembly



SP Wireless Receiver Control Box

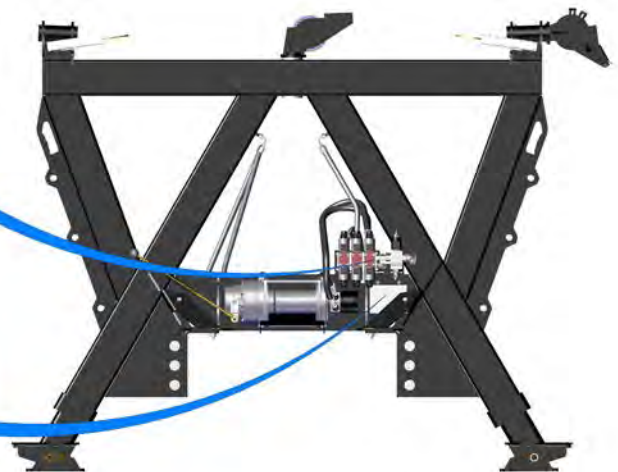
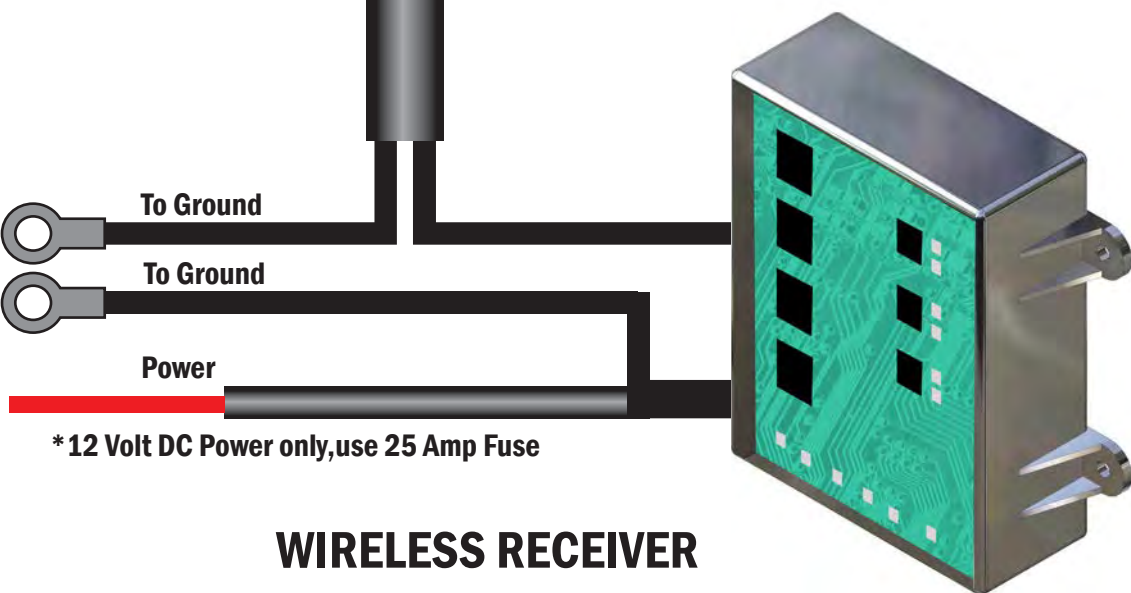
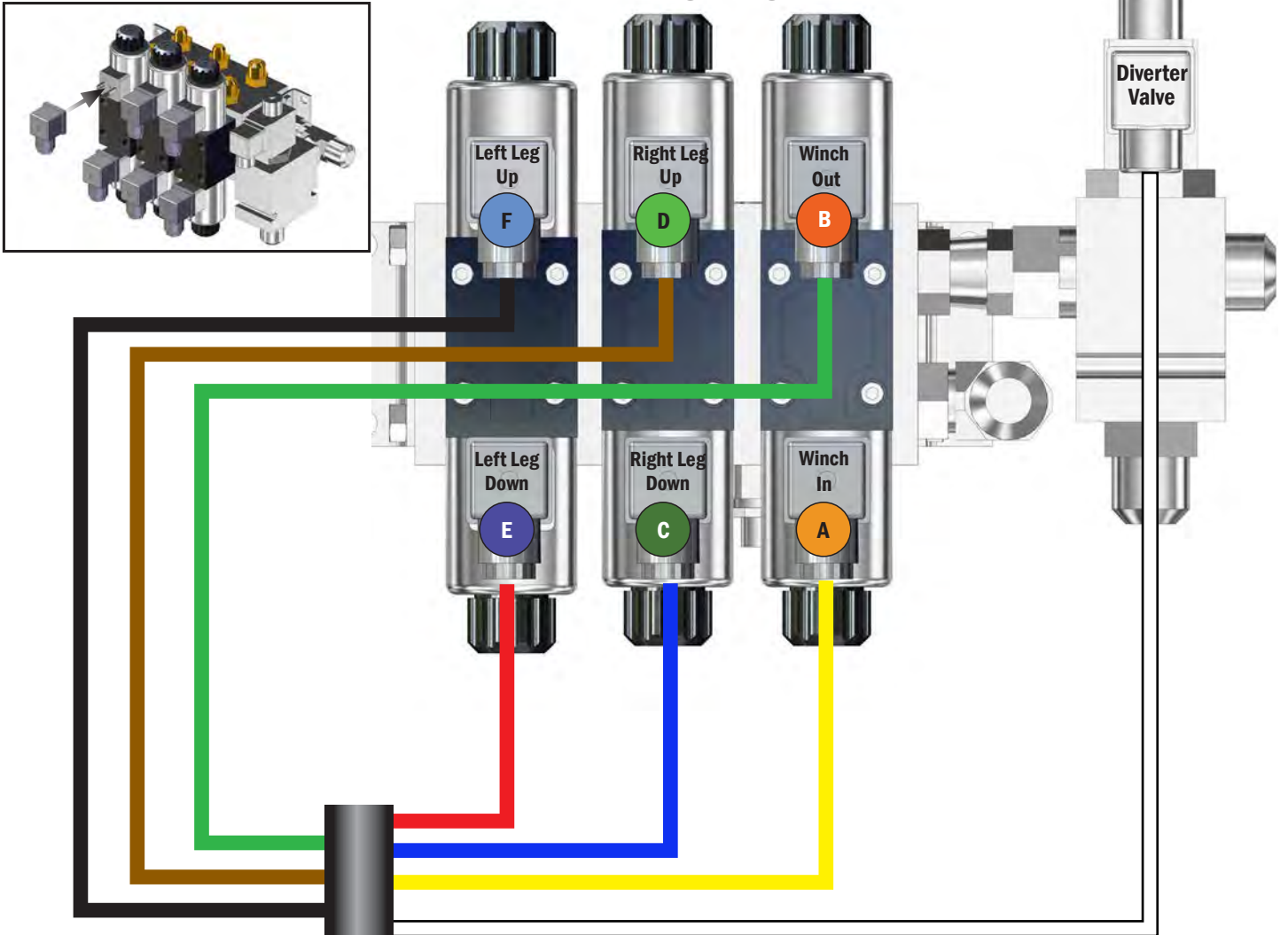


FIG 2-1

Electrical Wiring Diagram



*** 12 Volt DC Power only, use 25 Amp Fuse**

WIRELESS RECEIVER

PORT	FUNCTION
A	Winch In
B	Winch Out
C	Right Leg DOWN
D	Right Leg UP
E	Left Leg DOWN
F	Left Leg UP

The logo features the text "In The Ditch" in a large, bold, italicized sans-serif font, with a small "TM" trademark symbol to the right. Below this, the words "TOWING PRODUCTS" are written in a smaller, bold, all-caps sans-serif font. The text is centered within a blue, swoosh-like graphic that resembles a stylized oval or a motion blur effect.

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