



PIERCE

PULLING FOR YOU

Owner's Manual:
PS654 WINCHES



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Industrial Winch Owner's Manual

The 654 series worm drive winch is a powerful tool and must be used with extreme care. Deviating from the manual's instructions may cause personal injury. You may void your warranty if you do not follow the precautions and guidelines outlined in this manual. Keep this manual in a safe place to reference safety and installation instructions, maintenance guidelines and operating recommendations.

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Shipment Contents

PSG54K and PSG54MK

- 1 – Winch
- 1 – Remote Control
- 1 – Clutch Lever
- 1 – Key
- 8 – Winch Mounting Bolts
- 8 – 3/8" Lock Washer
- 1 – Set Screw
- 1 – Owner's Manual

PSG54HK

- 1 – Winch
- 1 – Clutch Lever
- 1 – Key
- 1 – Hydraulic Motor
- 1 – Motor Coupler
- 8 – Winch Mounting Bolts
- 2 – ½" x 1 ½" Motor Bolts
- 8 – 3/8" Lock Washer
- 2 – 1/2" Lock Washer
- 2 – 1/4" Set Screw
- 1 – Owner's Manual

PSG54EK

- 1 – Winch
- 1 – Owner's Manual
- 2 – Pierce Winch Oil

Specifications

ELECTRIC WINCHES

Model	Description	Capacity	Voltage	Ampere	Dimensions	Speed	Weight	Motor	Ratio	Rotation	Gear Train	Clutch	Brake
PS654-8K	9,000 lb DC 8" drum	4.5 T	12 V	400 amps with load	Cable capacity: 3/8" x 100' Unit: 16 1/4" x 13 1/2" Drum 3.5" x 8"	14 fpm	88 lbs	1.5 hp	470:1	CW/CCW	Worm Gear	Dog	Worm Gear
PS654-11K	9,000 lb DC 11" drum	4.5 T	12 V	400 amps with load	Cable capacity: 3/8" x 125' Unit: 19 1/4" x 13 1/2" Drum 3.5" x 11"	14 fpm	92 lbs	1.5 hp	470:1	CW/CCW	Worm Gear	Dog	Worm Gear
PS654-8MK	12,500 lb DC 8" drum	6 T	12 V	400 amps with load	Cable capacity: 3/8" x 100' Unit: 16 1/4" x 8" x 13 1/2" Drum 3.5" x 8"	9 fpm	88 lbs	1.5 hp	520:1	CW/CCW	Worm Gear	Dog	Worm Gear
PS654-11MK	12,500 lb DC 11" drum	6 T	12 V	400 amps with load	Cable capacity: 3/8" x 125' Unit: 19 1/4" x 8" x 13 1/2" Drum 3.5" x 11"	9 fpm	94 lbs	1.5 hp	520:1	CW/CCW	Worm Gear	Dog	Worm Gear
PS654-8EK	7,500 lb AC 8" drum	3.75 T	110/220 V	17.40 amps at 115V	Cable capacity: 3/8" x 100' Unit: 26" x 15" x 17 1/2" Drum 3.5" x 8"	4 fpm	120 lbs	1.5 hp	460:1	CW/CCW	Worm Gear	Dog	Worm Gear
PS654-11EK	7,500 lb AC 11" drum	3.75 T	110/220 V	17.40 amps at 115V	Cable capacity: 3/8" x 125' Unit: 26" x 15" x 17 1/2" Drum 3.5" x 11"	4 fpm	130 lbs	1.5 hp	460:1	CW/CCW	Worm Gear	Dog	Worm Gear
PS654-8EMK	11,000 lb AC 8" drum	5.5 T	110/220V	17.40 amps at 115V	Cable capacity: 3/8" x 125' Unit: 26" x 15" x 17 1/2" Drum 3.5" x 8"	2.5 fpm	120 lbs	1.5 hp	520:1	CW/CCW	Worm Gear	Dog	Worm Gear
PS654-11EMK	11,000 lb AC 11" drum	5.5 T	110/220V	17.40 amps at 115V	Cable capacity: 3/8" x 125' Unit: 26" x 15" x 17 1/2" Drum 3.5" x 11"	2.5 fpm	130 lbs	1.5 hp	520:1	CW/CCW	Worm Gear	Dog	Worm Gear

HYDRAULIC WINCHES

Model	Description	Capacity	Max Oil Flow	Pressure	Dimensions	Speed	Weight	Motor	Ratio	Rotation	Gear Train	Clutch	Brake
PS654-8HK	9,000 lb Hydraulic 8" drum	4.5 T	15 gpm	2,000 psi	Cable capacity: 3/8" x 100' Unit: 16 1/4" x 8" x 13 1/2" Drum 3.5" x 8"	18 fpm	67 lbs	4.8 cu. in/rev	60:1	CW/CCW	Worm Gear	Dog	Worm Gear
PS654-11HK	9,000 lb Hydraulic 11" drum	4.5 T	15 gpm	2,000 psi	Cable capacity: 3/8" x 125' Unit: 19 1/4" x 8" x 13 1/2" Drum 3.5" x 11"	18 fpm	67 lbs	4.8 cu. in/rev	60:1	CW/CCW	Worm Gear	Dog	Worm Gear

Safety Precautions

DRESS PROPERLY

- DO NOT wear loose fitting clothing or jewelry.
- Tie back long hair.
- Wear leather gloves when handling the wire rope.
- Wear non-skid footwear during winch operation.
- Wear eye and ear protection during operation.

KEEP A SAFE DISTANCE

- DO NOT step over or under the wire rope.
- All onlookers must keep away from the work area.
- Never work on or around the winch drum when the winch is operating.
- DO NOT alter your winch in any way. Alterations may weaken the structural integrity of the winch and void your warranty.
- Operate your winch with an unobstructed view.
- Read the following safety information carefully before attempting to operate your winch. Keep this manual for future reference.

General Safety Information

DO NOT MISUSE YOUR WINCH

- DO NOT lift items vertically. The winch was designed for horizontal use only.
- DO NOT operate the winch with less than eight wraps on the drum. The set screw on the drum is not designed to hold pull force of cable.
- Avoid continuous pulls from extreme angles. This will cause the wire rope to jam as it piles up on one side.
- Use a nylon sling when winching. Hooking the wire rope to itself will cause considerable damage to the wire rope.
- DO NOT move your vehicle to assist the winch in pulling the load. The combination of the winch and vehicle pulling could overload the wire rope and winch.
- Never release the free spool clutch when a load is connected to the winch.
- DO NOT exceed the pulling limitations of this winch.
- DO NOT shock loads when winching. A shock load occurs when increased force is suddenly applied to the wire rope.
- DO NOT use your winch as a hoist.
- DO NOT use your winch to lift, support or transport people.
- DO NOT alter the warning instruction labels.
- DO NOT overheat your winch. Use your winch intermittently.
- Only use your winch for direct winching. Do not use your winch for jerking loads, towing or securing a load. Any damage incurred as a result of such action will void the warranty.
- DO NOT winch near electrical power lines.

DO NOT ABUSE THE WIRE ROPE

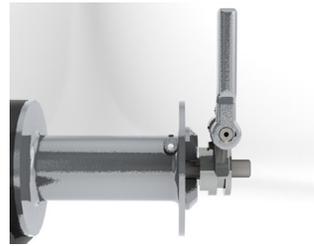
- Never carry your winch by the wire rope.
- Never yank the wire rope from the winch.
- Keep the wire rope from heat or sharp edges.

DO NOT OVERWORK YOUR WINCH

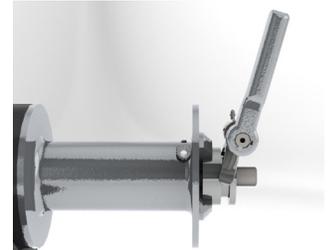
- DO NOT maintain power if the motor stalls.
- DO NOT exceed maximum line pull ratings.
- DO NOT overload your winch's pulling capacity. We recommend the use of a pulley block to double line the wire rope on heavy loads.
- DO NOT prolong pulls. The electric winch is designed for intermittent use only. If the motor becomes very hot stop the winch and let it cool down for several minutes.

AVOID UNINTENTIONAL STARTING

- The winch clutch must be disengaged when not in use and fully engaged when in use. The winch dog will disengage from the drum if the clutch is not fully engaged.



DISENGAGED



ENGAGED

- The warranty will be voided if the winch is used when not properly engaged.
- Failure to use the winch without fully engaging the clutch may result in personal and property damage.
- Power must be disconnected when not in use.

MAINTAIN YOUR WINCH

- Before use, you must check your winch carefully.
- Damaged equipment must be properly repaired or replaced by the manufacturer or an authorized service center.
- Inspect and maintain the wire rope and winch frequently.
- Replace frayed rope strands immediately.
- Use only factory approved switches, remote controls and accessories.
- Check the tightness of the mounting bolts and electrical connections periodically.

RE-SPOOL THE WIRE ROPE

- Wear leather gloves while re-spooling wire winch rope.
- ATTENTION: DO NOT allow the wire rope to thread through your hand.
- Keep a slight load on the wire rope while re-spooling. Hold the wire rope with one gloved hand and the remote control in the other.

Operation Recommendations

- DO NOT attach tow hooks to the winch mount.
- Use a snatch block to double your winch capacity, half the winch speed and maintain a direct line pull to the center of the rollers.
- Use rated D ring or bow shackles in conjunction with an approved tree trunk protector to provide a safe anchor point.
- Position blocks under your vehicle's wheels when winching.
- Lay a heavy blanket or jacket over the wire rope when pulling heavy loads. Should wire rope failure occur the cloth may help prevent wire rope backlash.
- Use a crowbar or cable tensioner (PSCT8 or PSCT11) when guiding the wire rope over the drum. Never use your fingers.
- To reach the maximum rated line pull be sure the input voltage between the motor terminals is continuously 12 VDC. Note: This winch only reaches the maximum rated line pull with the first layer of cable around the drum when pulling the loads.
- Plug in the remote control and engage the clutch before spooling. DO NOT engage the clutch while the motor is running.

- When using your winch to move a load, place the vehicle transmission in neutral, set vehicle brake and lock all wheels. The vehicle engine should be running during winch operation. If winching is performed with the engine off the battery may be too weak to restart the engine.
- Use chains or straps to secure the load, not your winch cable.
- Stay alert while winching. Stop every meter or five feet to ensure the wire rope is neatly wound around the drum.
- After winch operation, spool the extended cable tightly around the drum.
- Always release the load after operation.
- Store the remote control inside your vehicle.
- Inspect the control before use.
- Unless specified, Pierce AC winches are not equipped with free spool.

Electrical Recommendations

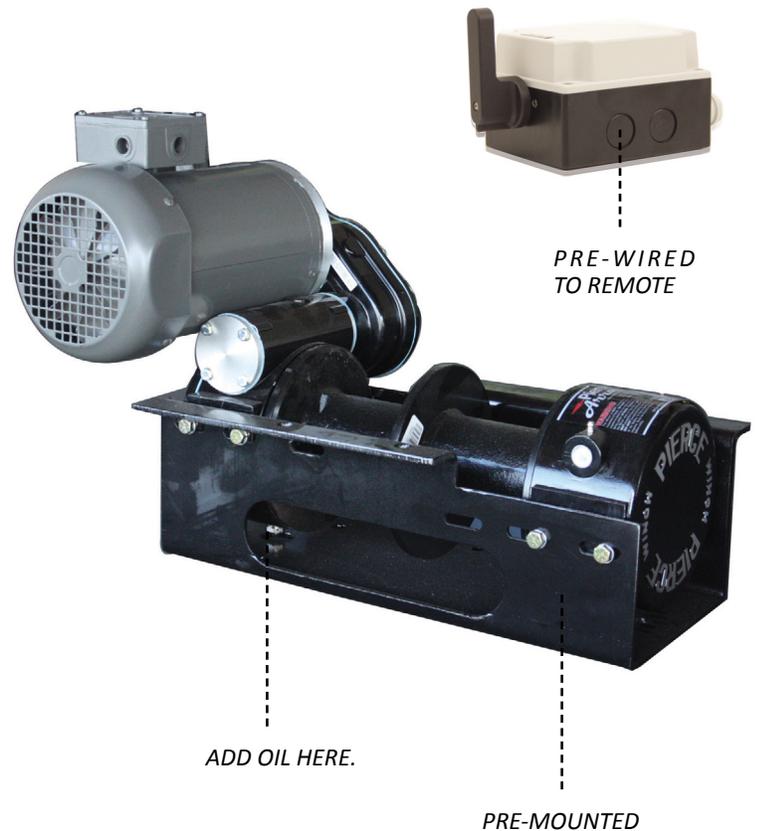
PS654K . PS654MK . PS654EK

ATTENTION: Failure to use a battery disconnect switch may void your warranty.

- Performance of an electric winch depends entirely upon its power supply. The winch will draw between 70 to 400 amps depending on the load. Under heavy pulling, even the largest batteries will become weak. Always leave the vehicle running when winching. You may also install a high ampere alternator to improve the winch performance.
- The single wire extending from the winch should be attached to the positive post of a 12 V battery. The minimum size conductor to use is a #4 welding lead. A #2 welding leading is highly recommended. Winch performance is directly related to conductor size and power supply. A larger conductor size is always preferable but is required if more than ten feet is used. Always install a ground cable of at least #4 gauge from the negative battery post to one of the motor mounting bolts on the winch. DO NOT connect the ground wire to any of the electrical terminals on the motor.
- A good ground wire is very important for successful winching. Both the winch and the solenoid assembly must be grounded. A bad ground may cause the winch not to run at all. Run the ground wire from one of the motor mounting bolts to the negative terminal on your battery.
- A battery disconnect switch (PS025) is highly recommended when installing the winch. The operator or user must use some type of disconnect switch with a capacity of 400 amps when installing and operating the winch. The winch is to be left disconnected when not in use or unattended. Installing the winch directly to the battery supply will void the warranty.
- Make sure all cables are tight on both the ring connector and on the stud where they are attached. Care must be taken when installing a cable on the motor terminals. Nuts closest to the motor housing should be held with a wrench to prevent the stud from turning inside the motor. See page 6 for the wiring diagram.
- DO NOT continue to winch when the battery power is low. Low voltage and amperage will cause the solenoids and the motor to overheat. Running the winch with a weak battery will often cause the points of the solenoids to become welded together.

Installation

PS654EK



MOUNTING

1. Your PS654 winch is shipped fully assembled, mounted, wired and oiled.

LUBRICATION

1. You must lubricate your new winch before use.
2. Flip the winch up-side-down.
3. Empty one Pierce Winch Oil container into the main gear housing and one container into the transfer housing.
4. NOTE: A small amount of oil see page is normal due to vent plugs. The motor supplied is not waterproof and should be covered if installed outdoors.

ELECTRICAL CONNECTIONS

1. Connect the plug to an outlet with a dedicated 20 amp. breaker.

PS654HK

MOUNTING

1. Before installation ensure the mounting frame in use is capable of withstanding the winch's rated capacity.
2. Ensure the motor, drum and gear housing is properly aligned.
3. The clutch housing must be 1/16"-1/8" from the drum.
4. Mount to a flat surface using grade 5 or better bolts that are 3/8" thick and lock washers.
5. Your mounting plate must be six millimeters or 1/4" thick. If a heavier mounting plate is used the bolts must be lengthened accordingly.
6. All eight bolts should penetrate the mounting pads on the main gear housing and clutch housing by 3/4".

LUBRICATION

1. This winch is pre-greased and will not require oil. If the gears are changed at any time use 20% Lucas HD oil stabilizer and 80% 15w-40 oil.
2. Lubricate both grease zerts on the clutch lever every six months with automotive grease (Mystic JT-6).

INSTALLING THE HYDRAULIC MOTOR COUPLER

1. Place the larger end of the coupler on the motor shaft.
2. Tighten the set screw in the coupler on the motor shaft.
3. Fit the motor and coupler to the winch ensuring that the key stays on the worm shaft.
4. Lastly, tighten the two bolts holding the hydraulic motor to the hydraulic housing coupler.
5. If the hydraulic motor is not running freely when operating, loosen the two large bolts one complete turn, briefly run the winch, and re-tighten the two bolts.

HOSE CONNECTIONS

1. Connect two 1/2 in. NPT hydraulic hoses from the winch to the hydraulic power source.

STEP BY STEP PROCESS: Installing the PS654 (EK and MK) Electric Winch

Parts and Equipment Used Installation

WINCH

PS654-11K

Pierce 9,000 lb. has an 11" drum. It has a worm gear final drive, 60:1, and incorporates an additional reduction in the transfer case. It has an overall ratio of 470:1, giving these winches a no load line speed of 14' per minute (full cable on spool). Spool capacity is 125' of 3/8" cable, 200' of 5/16" cable.

ANGLE MOUNTS

PT037

The winch frame we use is the PT037. Pre-drilled and notched 1/4" x 2" x 2" angle iron mounting brackets for all PS654 series winches with 8" or 11" drums. Use these mounts to recess your winch in a semi-hidden application or build your own custom mount.

ELECTRICAL PARTS

PS501

During the PS654 installation, we used the PS501. 600V supply cable by Essex. Contains 30 gallon strands of class K copper for extra flexibility (#4=413 Strands, #2=651 Strands). ExCELENE jacket resists oil, burning, abrasion, and cold weather.

PS501R

We had also used the PS501R as the ground cable on step 6A. Standard # 4 gauge red jacket welding cable. It acts as a power supply for winches, pumps, etc.

PS025

Use this lever operated safety cutoff switch for any electric winch or pump installation, including our PS654-11K. Protect your equipment from damage due to solenoid sticking or shorting. The safety cut-off switch is highly recommended to use with your PS series winch. Please keep in mind that your warranty may be voided without one.

HOIST

PS65620

During the PS654 installation, we recommend the Pierce 1 Ton Mini Chain Hoist. Lift with 20' of chain and over one ton of pulling power. Use in a covered area. Our shop uses these hoists daily for lifting wreckers, flat beds and heavy equipment. We used the PS65620 during step 3.

Additional Recommended Tools

- Measuring tape
- 9/16" Wrench or Socket
- 17" Wrench
- Crowbar
- Work Gloves
- Safety Goggles
- First Aid Kit



PS654-11K



PT037



PS65620



PS025



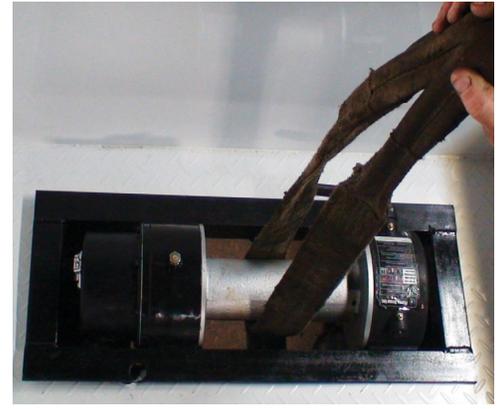
1. After removing the winch from the box, install the angle mounts onto the winch frame.

Tip: When placing the frame on to mount, make sure the hole as shown in the image is directly above the oil fill.



2. Measure the finished winch frame to ensure a clean placement on the truck bed.

Tip: Making sure to have the correct dimensions of the frame is critical for an easy install.



3. As dimensions match, place the winch carefully onto the truck bed. As shown, framing the angle mounts are an option for a clean, more finished look.



4. After successfully placing the winch on your truck, mount the frame. Using a total of eight grade 8, or "G8" bolts at least 3/8" thick is required. Lock washers as well.

Tip: All 8 bolts should penetrate the mounting pads on the main gear housing and clutch housing at exactly 3/4" deep.



5a. Next, connect the power cable from the solenoid to a positive power source. Wire a 4 gauge ground from the winch motor directly to the negative terminal of the truck battery using the PS501R.



5b. Also, install and connect the safety cutoff switch at any easy, reachable distance from the winch. The cable we used was the PS501.

Tip: If the 4 gauge wire can't reach the truck's battery, be sure to use our 2 gauge to reach the battery for lengths over 10'.



6. After connecting the cutoff switch and the ground line to the truck battery, install the wire rope onto the drum as shown. Feed the remaining length onto the winch drum while keeping the tension high.

7. Next, power the newly mounted and installed winch. Pull the cable in while applying resistance and tension. Otherwise, the cable will let loose on you and will tangle on the drum.

Tip: Have a partner grab the hook on the end of the cable and pull enough to emulate that resistance needed.

Operation

The first use of your winch must be a test run during a non-recovery situation. During this trial run begin to recognize the sound of a steady pull, a heavy pull, load jerking or shifting.

SPOOLING THE WIRE ROPE

1. Wear leather gloves while spooling. ATTENTION: DO NOT allow the wire rope to thread through your hand.
2. Unwind the wire rope carefully along the floor to avoid kinking.
3. Place the end of the wire rope in to the hole on the side of the drum. The wire rope will protrude ½" - 1". Tighten the set screw.
4. Keep a slight load on the wire rope while spooling.
5. Using the remote control, wrap the wire rope on to the drum until the load is recovered. Make sure the wire rope lays smoothly on to the drum without spacing or overlapping using a crowbar or cable tensioner.

TEST RUN

1. Spool the wire rope until the red mark appears at five wraps.
2. Under a load of 500 lbs (230 kg) re-spool the wire rope. This will stretch the new wire rope and create a tight wrap around the drum.

PS654K . PS654MK

1. Place the transmission in neutral and apply the parking brake or lock the wheels.
2. Spool the winch cable and connect to an anchor point.
3. Engage the clutch by shifting it into the IN position. Use force to engage the clutch. If the freewheel easily moves IN and Out of position then the winch is not fully engaged. NOTE: When the clutch is engaged your load will be securely held until the remote is used.
4. Check cable rigging before proceeding.
5. Plug in the winch remote control located on the solenoid assembly. NOTE: To ensure safe operation, it is recommended that winch operation take place from the driver's position.
6. Start vehicle engine, select neutral or park and maintain idle engine speed.
7. Using the remote control, press IN or OUT until the vehicle has been retrieved. Regularly check to ensure the cable is winding onto the drum evenly.
8. Secure your load using straps or chains.
9. Re-spool the wire rope after the winch operation is completed.

PS654HK

1. Apply the parking brake or lock the wheels.
2. Spool the winch cable and connect to an anchor point.
3. Engage the clutch by shifting it into the IN position. Use force to engage the clutch. If the freewheel easily moves IN and Out of position then the winch is not fully engaged. NOTE: When the clutch is engaged your load will be securely held until the remote is used.
4. Check cable rigging before proceeding.
5. Secure the load using chains or straps, not your winch wire rope.
6. To ensure safe operation, it is recommended that winch operation take place from the driver's position. Re-spool the wire rope after the winch operation is completed.

PS654EK

1. Turn on the breaker.
2. Spool the cable and connect to an anchor point.
3. Check the cable rigging before proceeding.
4. Re-spool the wire rope after the winch operation is completed.

Maintenance

PS654K . PS654MK

1. Winches are pre-greased and do not require additional lubrication. If the gears are changed at any time use 20% Lucas HD oil stabilizer and 80% 15w-40 oil.
2. Check the grease fittings.
3. Check all the electrical connections to ensure good contact and no corrosion. Replace as needed.
4. Check all accessible bolts to ensure they are tightly bound.
5. Check the wire rope for kinks or frays. Replace with a wire rope of equal strength.
6. Check the clutch dog, clutch yoke and drum for damage.
7. Contact your service center or the manufacturer before servicing your winch.

PS654HK

1. Winches are pre-greased and do not require additional lubrication. If the gears are changed at any time use 20% Lucas HD oil stabilizer and 80% 15w-40 oil.
2. Check the grease fittings.
3. Check the hose connections to ensure good contact and no leaks. Replace as needed.
4. Check all accessible bolts to ensure they are tightly bound.
5. Check the wire rope for kinks or frays. Replace with a wire rope of equal strength.
6. Check the clutch dog, clutch yoke and drum for damage.
7. Contact your service center or the manufacturer before servicing your winch.

PS654EK

1. Check oil levels.
2. Check all electrical connections.
3. Check all accessible bolts to ensure they are tightly bound.
4. Check the wire rope for kinks or frays. Replace with a wire rope of equal strength.
5. Contact your service center or the manufacturer before servicing your winch.

Frequently Asked Questions

Q: Can I increase the line speed of my worm drive winch?

A: Yes, but you will lose about half of your pulling power. On electric winches, a simple exchange of gears can provide up to a 50% line speed increase, and on hydraulic winches, you can change your motor to one with a different displacement.

Q: How much wire rope will my winch hold?

A: The 8" drum will hold 100' of 3/8" cable, and the 11" drum will hold 125'.

Q: Can I use a fuse to protect my winch and vehicle?

A: Use of a fuse, or some circuit interrupting device, is highly recommended. A better idea would be to use a breaker. High amp fuses are costly, and amperage spikes are not uncommon when winching. A breaker that will throw at 400 amps is ideal. It may cost more in the beginning, but will far outweigh the cost of replacing 400 amp fuses. Cut-off switches are less costly, while not preventing amperage spikes, they will allow you to disconnect power in the event of a short in the winch.

Q: Does my winch need it's own battery?

A: Most electrical systems aren't designed for accessories like a winch. Your winch will work with your OEM battery, but there is a heavy amperage load while winching. Think of the amperage to start your truck. It would be like starting your truck the whole time you are winching. It is a good idea to use a deep cycle battery, or even add a battery to your system just for your winch if you can. Just make sure your charging system can handle the load as well.

Q: How much and what type of oil does my winch need?

A: Each housing takes 6-8 ounces of oil. We recommend using our special blend of Pierce Winch Oil. The viscosity range depends on use and location. You need a minimum of 30W but in some regions a heavy gear oil is too thick.

Q: How can I test my motor?

A: Disconnect all three wires from your motor, making sure to mark which wire is which for reconnection. Supply a solid ground connection to the motor casing. Next, connect 12V to field terminal, F1. Take a long screwdriver, or similar tool, and make contact between field terminal, F2, and the armature post. This should bridge the electrical connection and start your motor. Now do this with the opposite field terminal. Connect power to F2, then make contact from F1 to the armature post. Again, your motor should run. See diagram on page 5. If the motor is unresponsive to both tests the motor must be replaced with a PS534H Pierce 12V motor.

Motor Test Procedure

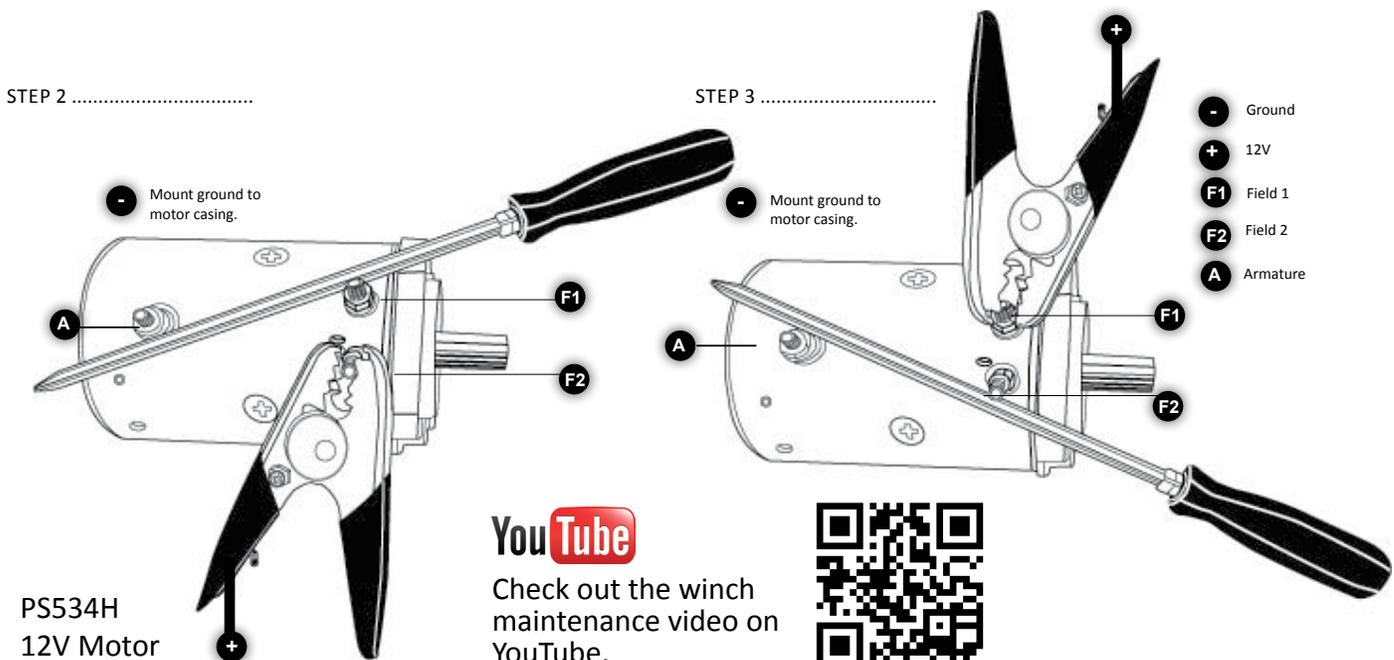
If your motor is unresponsive please follow these steps to test the power. If the test proves unsuccessful, your motor will need to be replaced with a PS534H.

STEP 1: Remove any wires connected to A, F1 and F2.

STEP 2: Apply power to F2. Connect terminal A to F1 with a screwdriver.

STEP 3: Apply power to F1. Connect terminal A to F2 with a screwdriver.

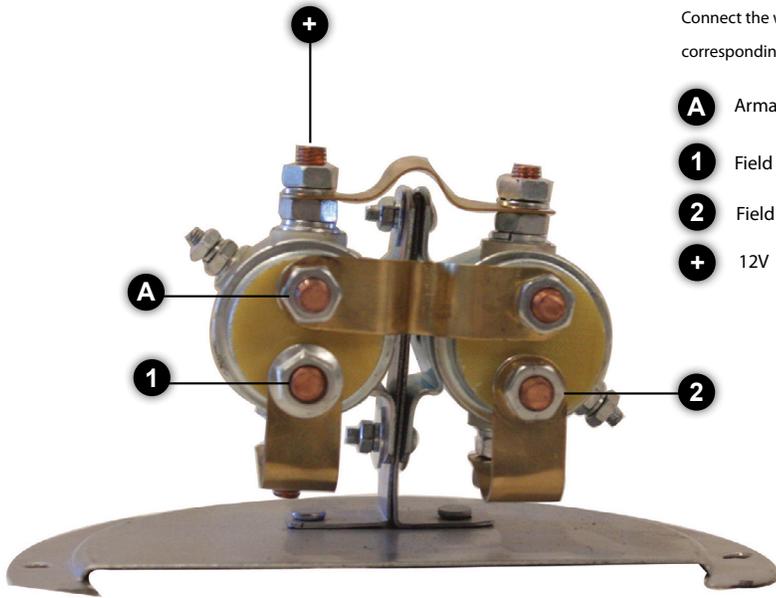
NOTE: The motor must be grounded to the motor casing not the electrical terminals.



Electrical Connections: Replacement Parts

PS528C SOLENOID ASSEMBLY AND PS534H PIERCE 12V MOTOR

In the event that a solenoid assembly, motor, male or female plug requires replacement please use the diagrams below to connect the wires.



PS528C
ROUND SOLENOID
ASSEMBLY

WIRING CHART

Connect the wires to the corresponding signs.

- A** Armature Post
- 1** Field 1
- 2** Field 2
- +** 12V

PS528C MOTOR

Use the Pierce PS534H or PS534CH Motor on the PS528C round solenoid assembly.



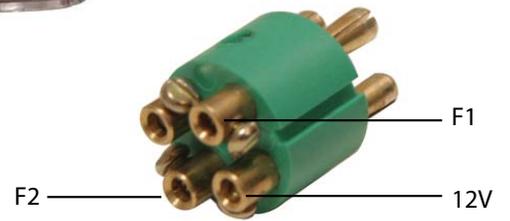
PS534H
Pierce 12V Motor

P215F AND P215M MALE AND FEMALE PLUG

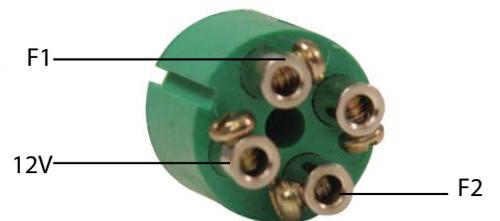
This diagram depicts standard wiring for Pierce PS654 industrial winches and remotes. 18 - 14 gauge wire is highly recommended for hook up.



P215F



P215M

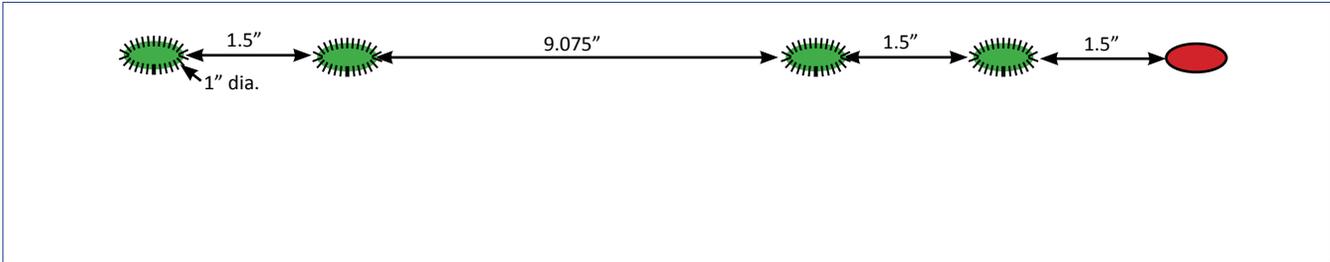


Mounting Patterns

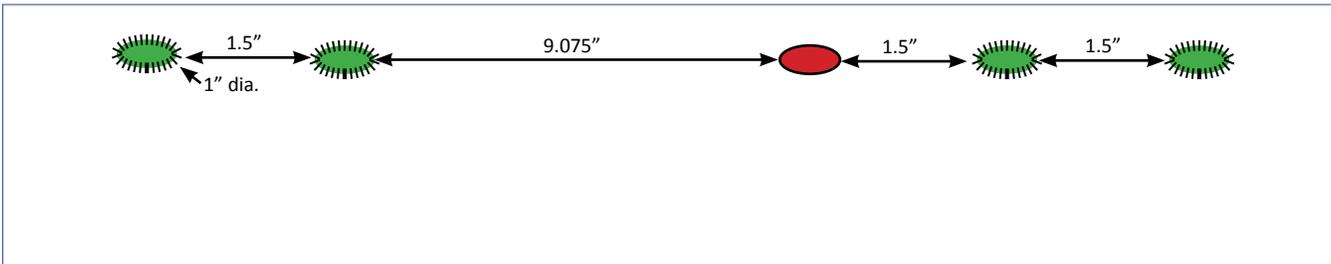
These mounting patterns are intended to be used with Pierce pre-drilled and notched 1/4" x 2" x 2" angle iron mounting brackets angle iron mounts (PT037). Use these mounts to recess your winch in a semi-hidden application or build your own custom mount.

All measurements are center-to-center.

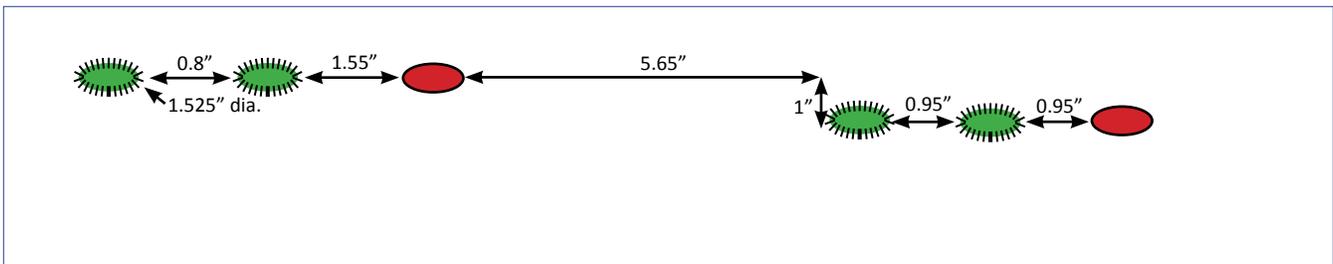
PS654-K-MK-HK 8" DRUM



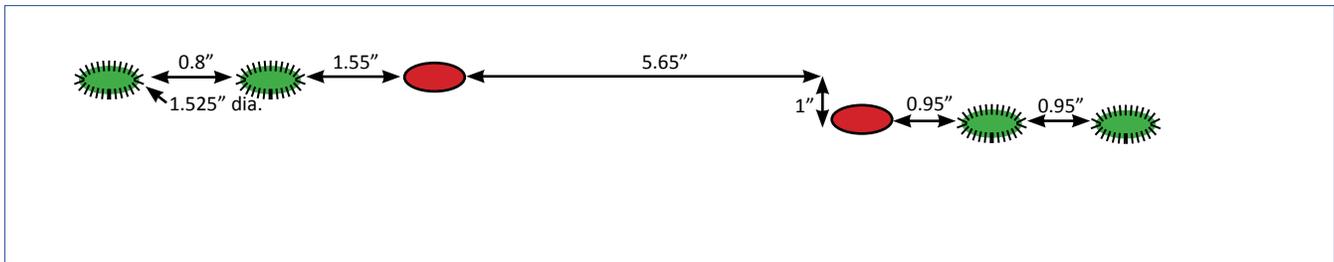
PS654-K-MK-HK 11" DRUM



PS654-EK 8" DRUM



PS654-EK 11" DRUM

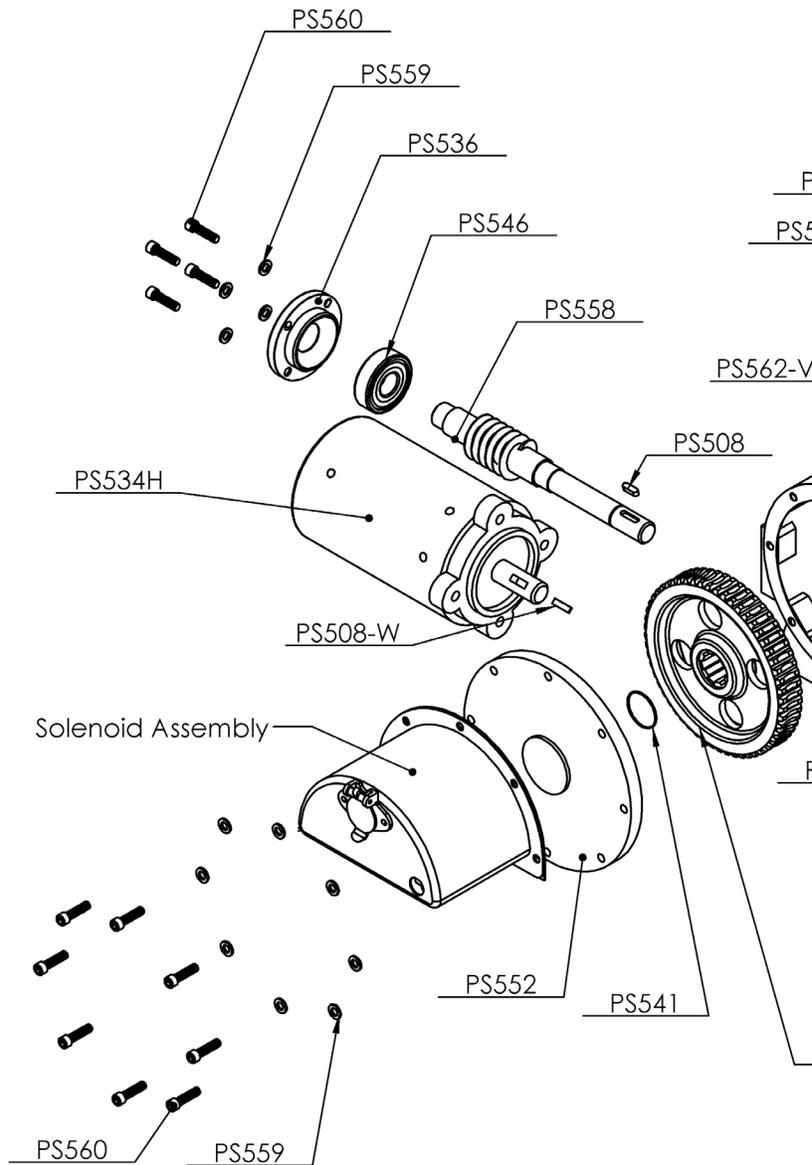
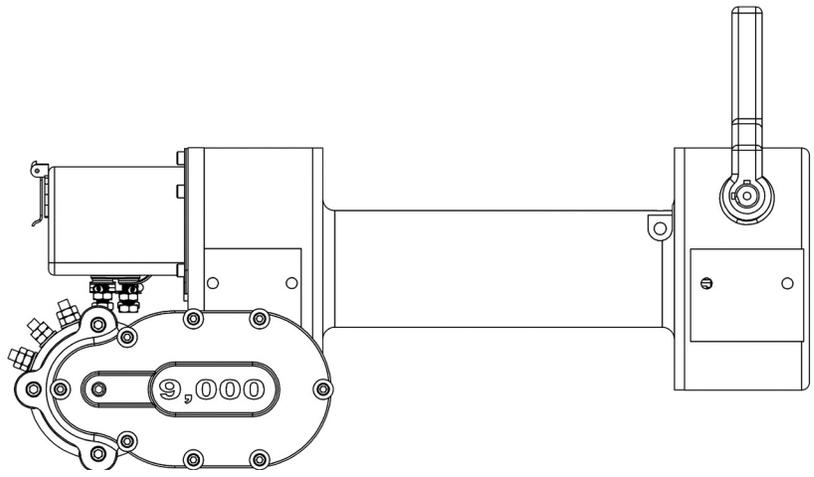


 USE  DON'T USE

PS654-K

9,000 LB. ELECTRIC WINCH

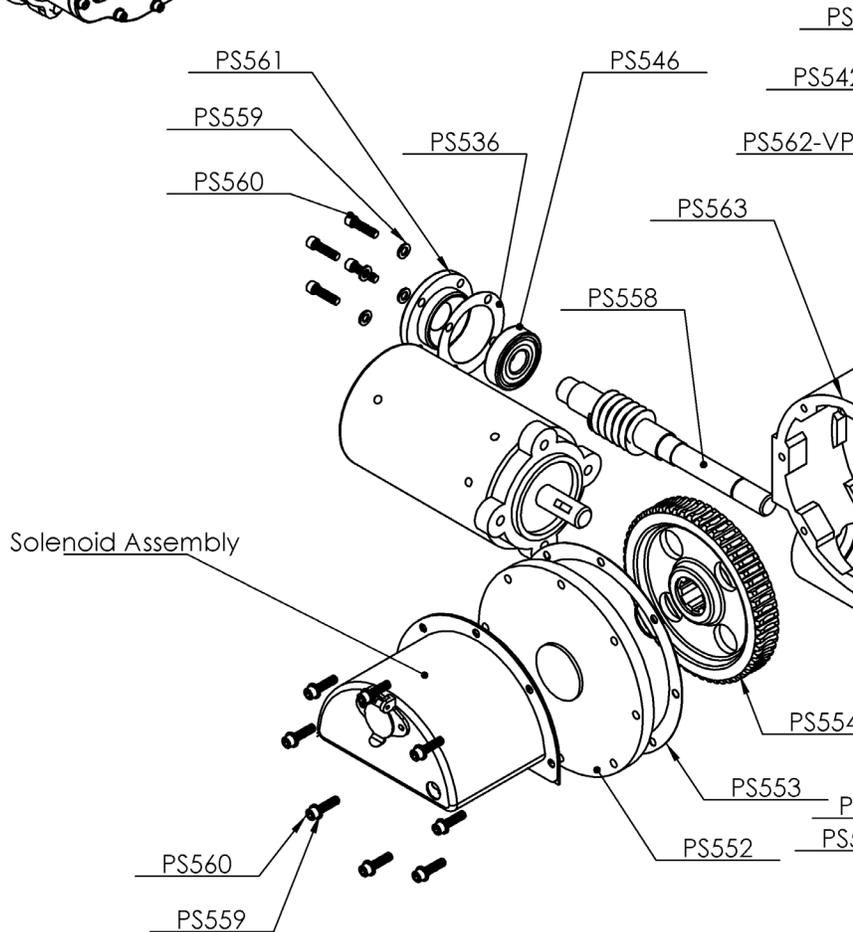
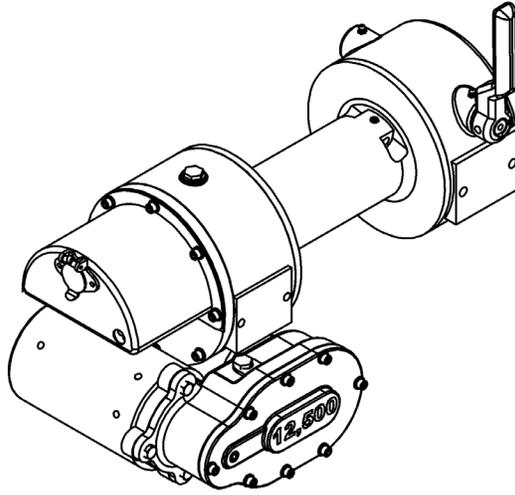
PS508	Motor Transfer Key
PS508W	Motor Woodruff Key
PS509	.25" x 1.75" Mounting Screw
PS510	Motor Mount Screw
PS512	Small External Snap Ring Retainer
PS513	Idler Gear
PS514	Transfer Gear
PS516	Long PW Key
PS517	Power Shaft
PS518	Screw Set for Motor Gear
PS519A	Motor Drive Gear
PS520	Transfer Housing Cover
PS534H	12V Motor
PS536	Worm Gasket
PS539	Large External Snap Ring Retainer
PS540	.055 Thrust Washer
PS541	Medium External Snap Ring Retainer
PS542	Drag Brake Spring
PS543	Nylon Drag Brake
PS544	3/8 in. Lock Washer
PS546	Winch Bearing
PS549	Drum Set Screw
PS551	Grease Fitting
PS552	Main Gear Housing Cover
PS554	Main Gear
PS55511	11 in. Shaft
PS5558	8 in. Shaft
PS556A	Motor Seal
PS557	Open Bearing Cap
PS558	Worm Gear
PS559	1/4 in. A/N Washer
PS560	1/4 in. Allen Head Cap Screw
PS562VP	3/8 in. Pipe Thread Vent
PS563	Main Gear Housing
PS56411	11 in. Drum
PS5648	8 in. Drum
PS565	Clutch Dog
PS567	Shift Yoke
PS5671	Shift Yoke Shaft Spring
PS568	Drum Bushing
PS569	Clutch Housing
PS570	Clutch Shaft
PS571	Handle Key
PS572	Clutch Handle Set Screw
PS573	Clutch Lever
PS515	Spacer

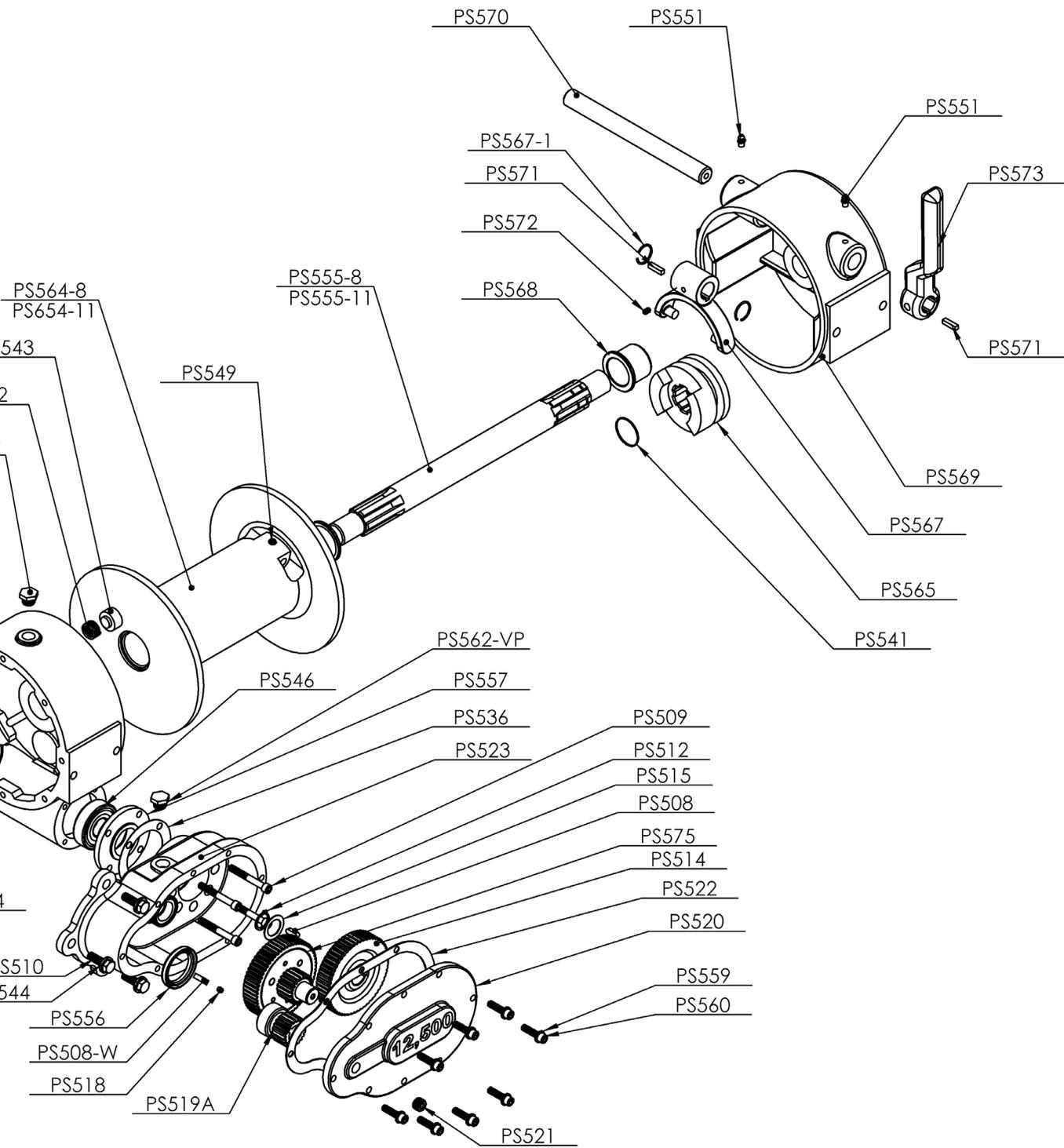


PS654-MK

12,500 LB. ELECTRIC WINCH

PS508	Motor Transfer Key
PS508W	Motor Woodruff Key
PS509	.25" x 1.75" Mounting Screw
PS512	Small External Snap Ring Retainer
PS514	Transfer Gear
PS515	Spacer
PS518	Screw Set for Motor Gear
PS519A	Gear New Motor Drive
PS520	Transfer Housing Cover
PS521	Winch Plug
PS522	Transfer Housing Gasket
PS523	Transfer Housing Gear
PS536	Worm Gasket
PS541	Medium External Snap Ring Retainer
PS542	Drag Brake Spring
PS543	Nylon Drag Brake
PS546	Winch Bearing
PS549	Drum Set Screw
PS551	Grease Fitting
PS552	Main Gear Housing Cover
PS553	Main Gear Gasket
PS554	Main Gear
PS55511	11 in. Shaft
PS5558	8 in. Shaft
PS556	Motor Seal
PS557	Cap Bearing Open
PS558	Worm Gear
PS559	1/4 in. A/N Washer
PS560	1/4 in. Screw Head Allen Head
PS561	Closed Bearing Cap
PS562VP	3/8 in. Thread Pipe Vent
PS563	Main Gear Housing
PS56411	11 in. Drum
PS5648	8 in. Drum
PS565	Clutch Dog
PS567	Shift Yoke
PS5671	Shift Yoke Shaft Spring
PS568	Drum Bushing
PS569	Clutch Housing
PS570	Clutch Shaft
PS571	Handle Key
PS572	Clutch Handle Screw Set
PS573	Clutch Lever
PS575	Planetary Gear
PS510	Motor Mount Screw
PS544	3/8 in. Lock Washer

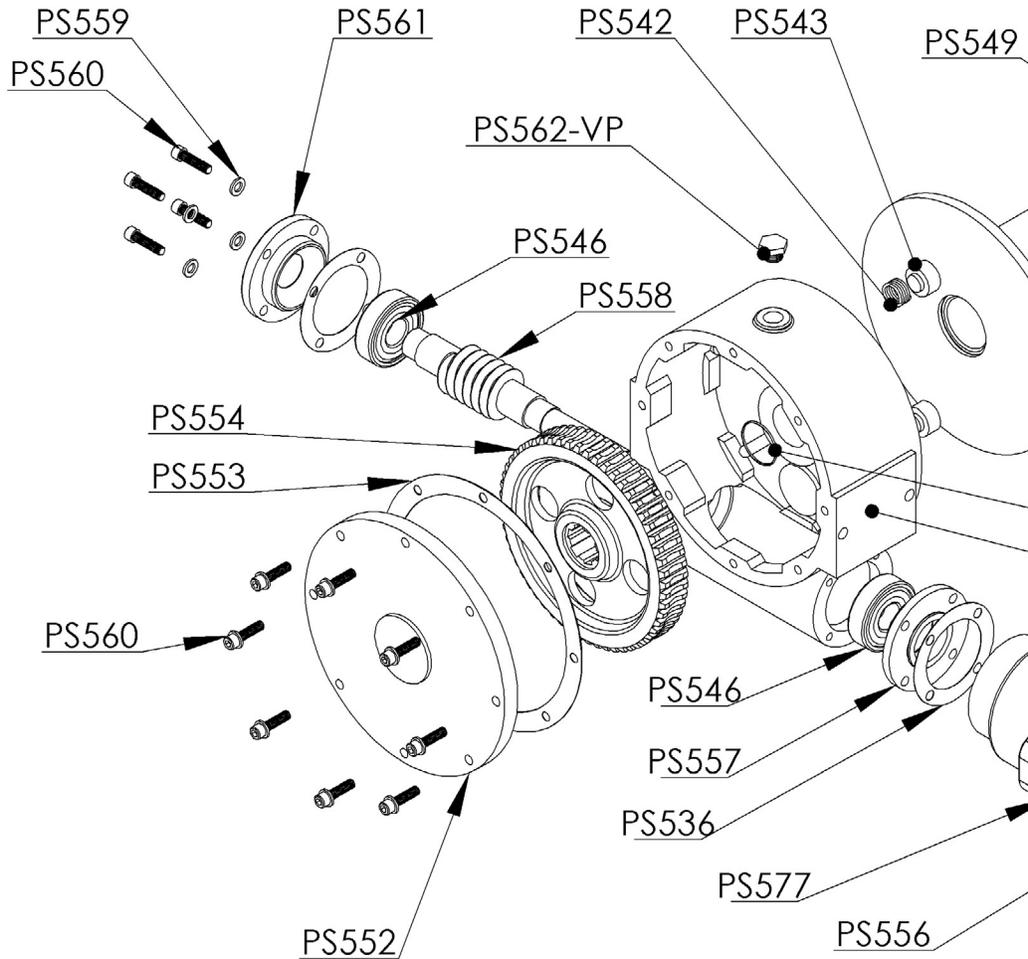
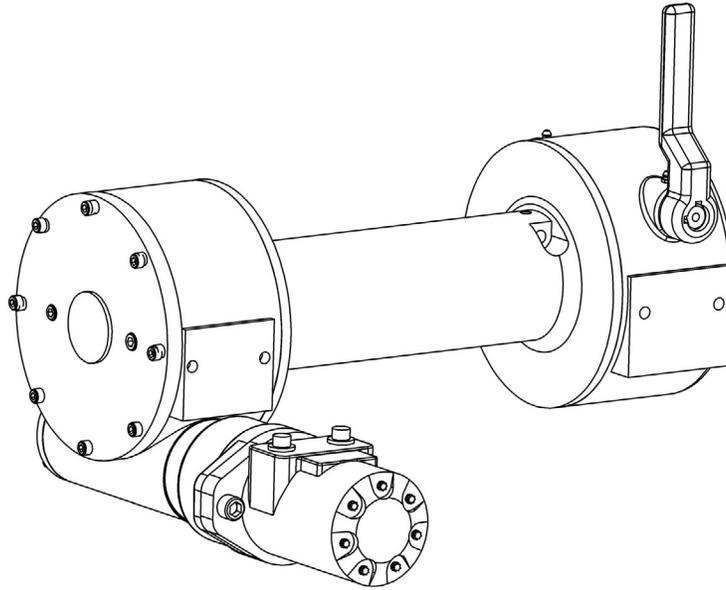


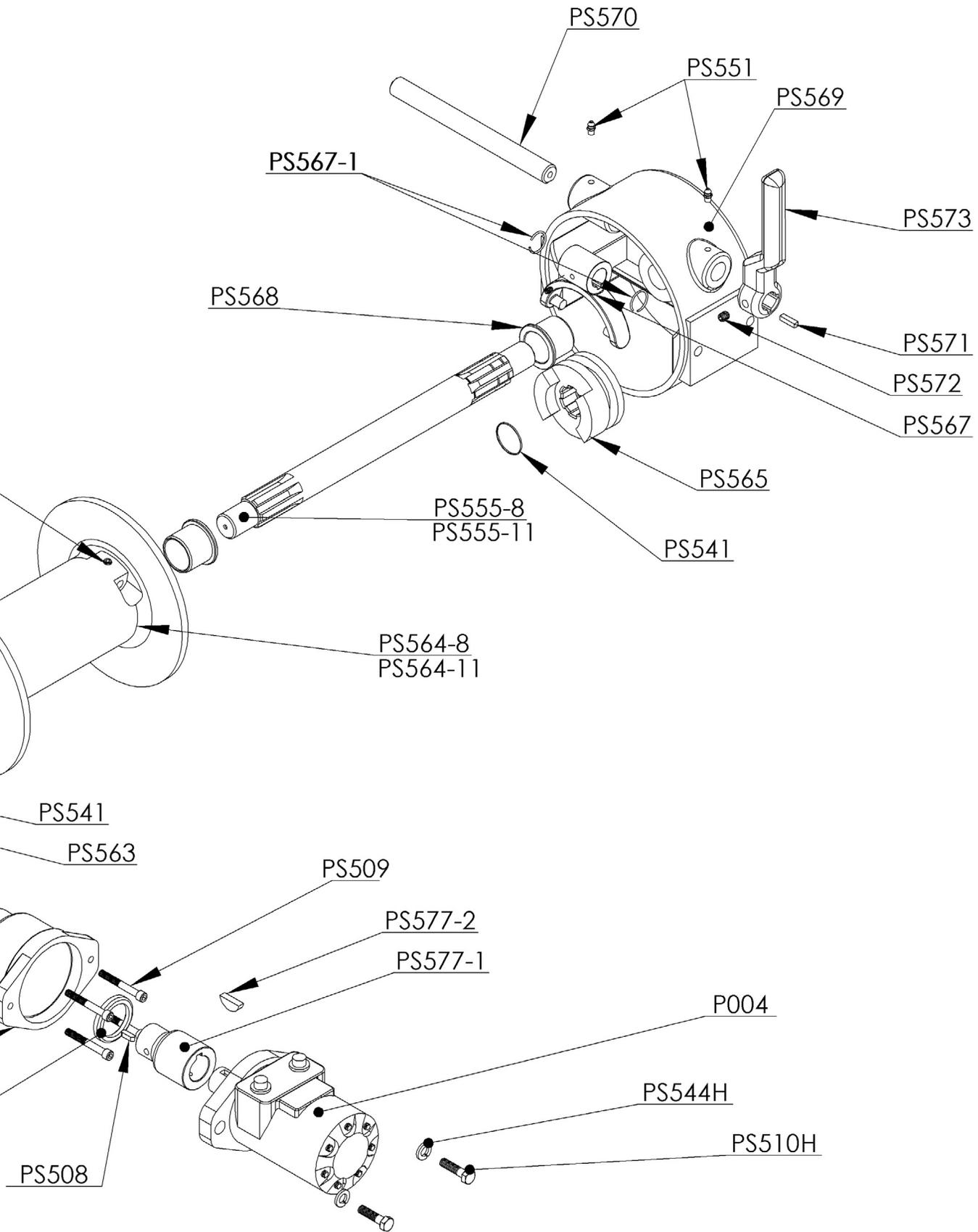


PS654-HK

9,000 LB. HYDRAULIC WINCH

P004	4.8 cu. in. Hydraulic Motor
PS508	Key Straight Transfer Motor
PS509	.25" x 1.75" Mounting Screw
PS510H	Mounting Bolt for Hydraulic Motor
PS536	Worm Gasket </td
PS541	Medium External Snap Ring Retainer
PS542	Drag Brake Spring
PS543	Nylon Drag Brake
PS544H	Hydraulic Motor Locking Washer
PS546	Winch Bearing
PS549	Drum Set Screw
PS551	Grease Fitting
PS552	Main Gear Housing Cover
PS553	Main Gear Gasket
PS554	Main Gear
PS55511	11 in. Shaft
PS5558	8 in. Shaft
PS556	Motor Seal
PS557	Cap Bearing Open
PS558	Worm Gear
PS559	1/4 in. A/N Washer
PS560	1/4 in. Screw Head Allen Head
PS561	Closed Bearing Cap
PS562VP	3/8 in. Thread Pipe Vent
PS563	Main Gear Housing
PS56411	11 in. Drum
PS5648	8 in. Drum
PS565	Clutch Dog
PS572	Shift Yoke
PS5671	Shift Yoke Shaft Spring
PS568	Drum Bushing
PS569	Clutch Housing
PS570	Clutch Shaft
PS571	Handle Key
PS572	Clutch Handle Screw Set
PS573	Clutch Lever
PS577	Hydraulic Adapter
PS5771	Hydraulic Motor Coupling
PS5772	Woodruff Key

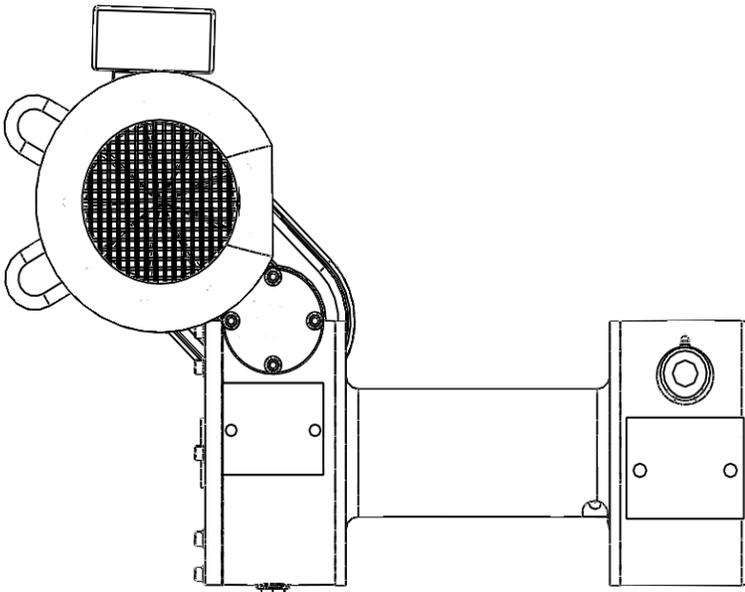
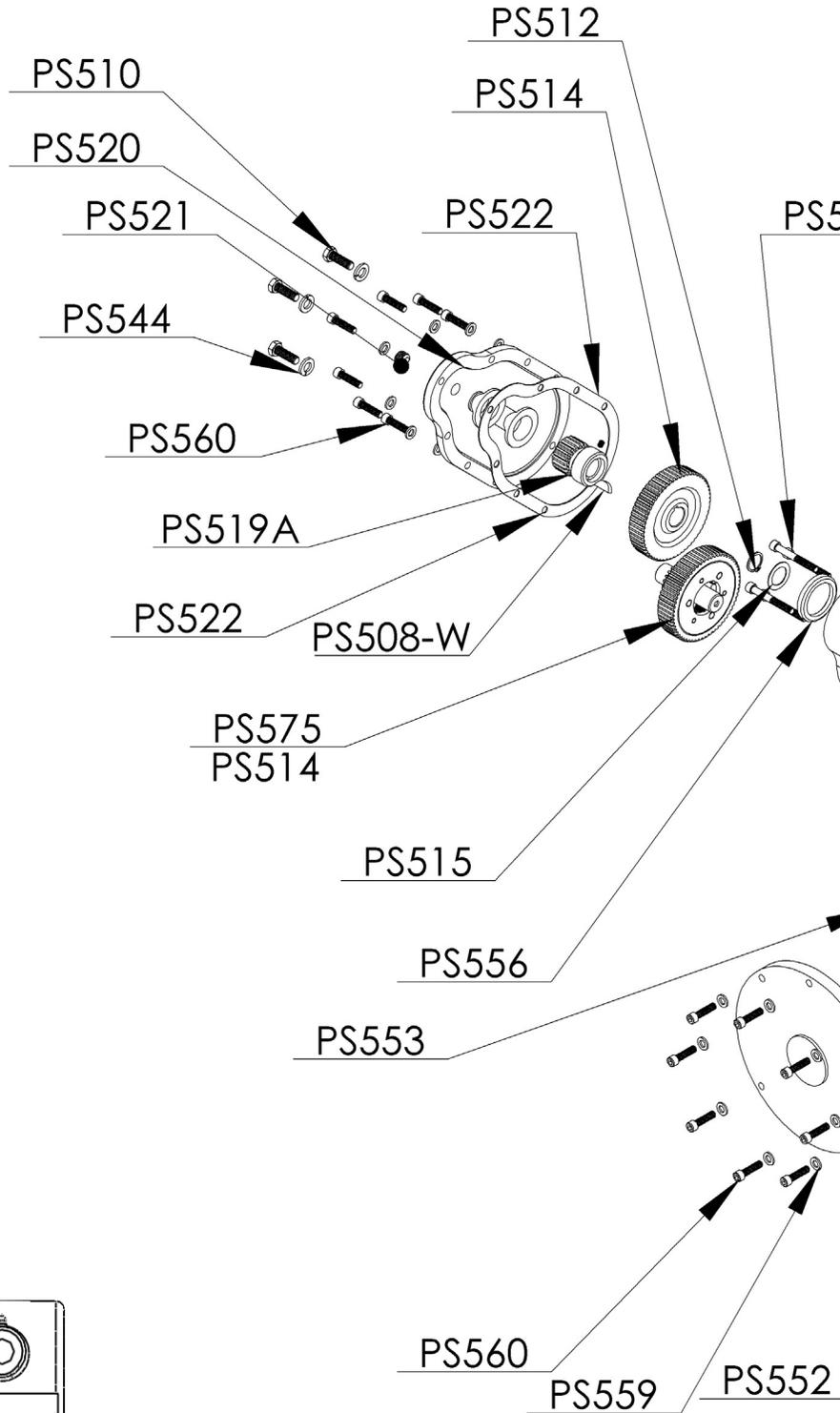




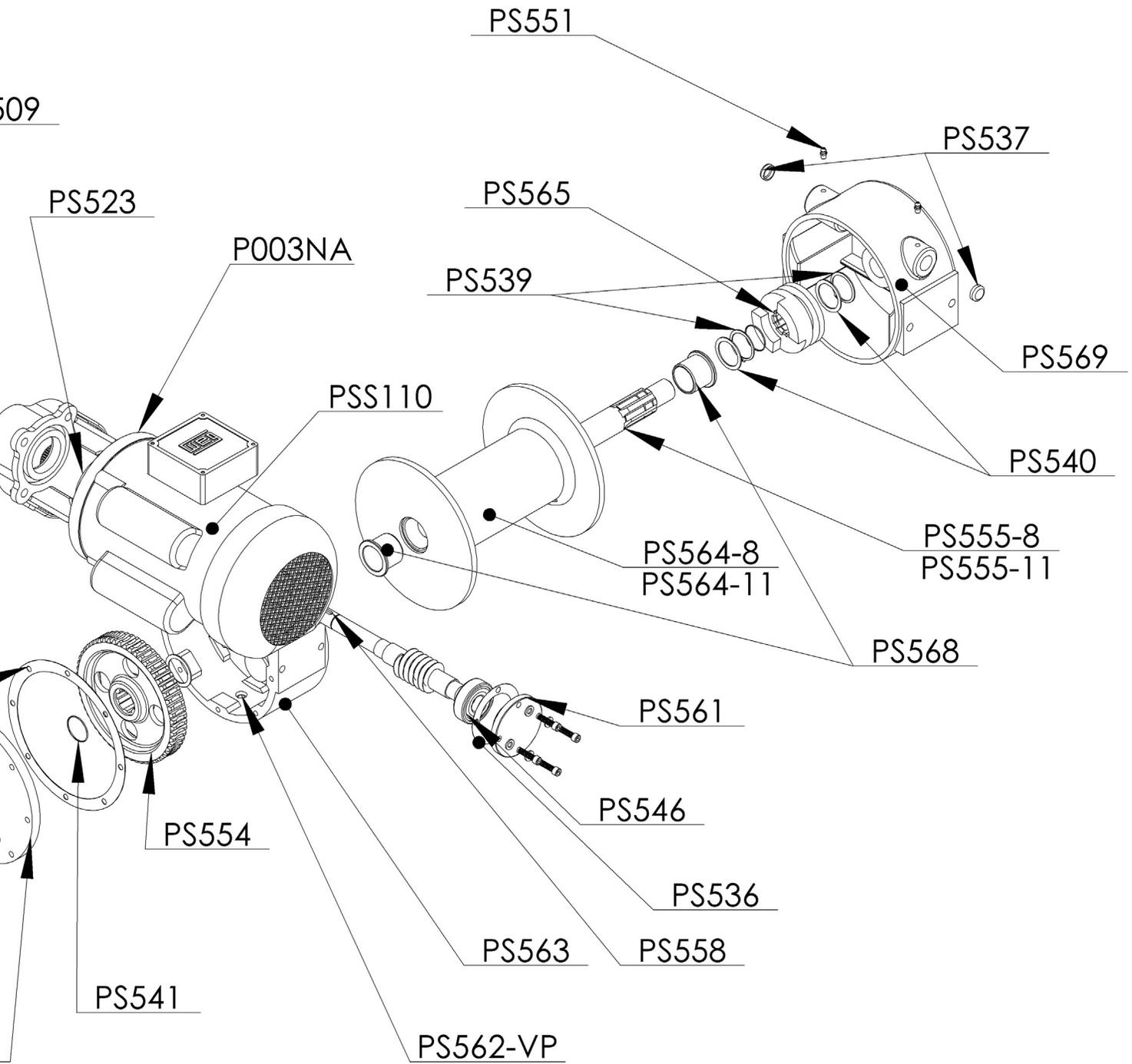
PS654-EK

7,500 OR 11,000 LB. AC WINCH

P003NA	Aluminum Adapter
PS508	Motor Transfer Key
PS508W	Motor Woodruff Key
PS509	.25" x 1.75" Mounting Screw
PS510	Motor Mount Screw
PS512	Small External Snap Ring Retainer
PS514	Transfer Gear
PS515	Spacer
PS518	Set Screw for Motor Gear
PS519A	Gear New Motor Drive
PS520	Transfer Housing Cover
PS522	Transfer Housing Gasket
PS523	Transfer Housing Gear
PS536	Worm Gasket
PS539	Large External Snap Ring Retainer
PS540	.055 Thrust Washer
PS541	Medium External Snap Ring Retainer
PS542	Drag Brake Spring
PS543	Nylon Drag Brake
PS544	3/8 in. Lock Washer
PS546	Winch Bearing
PS551	Grease Fitting
PS553	Main Gear Gasket
PS554	Main Gear
PS55511	11 in. Shaft
PS5558	8 in. Shaft
PS556	Motor Seal
PS558	Worm Gear
PS559	1/4 in. A/N Washer
PS560	1/4 in. Allen Head Cap Screw
PS561	Closed Bearing Cap
PS56411	11 in. Drum
PS5648	8 in. Drum
PS565	Clutch Dog
PS568	Drum Bushing
PS575	Planetary Gear
PSS110	110 VAC Motor



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Pierce Arrow Product Limited Warranty

Pierce Arrow Inc. warrants to the original purchaser only (whether a wholesale, OEM or retail customer) that the goods, equipment, and merchandise manufactured by Pierce Arrow are free from defects in material and workmanship. The Pierce Arrow limited warranty on parts covers such items for a period of one year on mechanical and electrical from the date of shipment by Pierce Arrow. All warranties cover only the product or product parts, and are nontransferable.

OBTAINING WARRANTY SERVICE

Pierce Arrow must be notified promptly in writing, about the defect before any means of repair have been made. The merchandise must be delivered by the purchaser to Pierce Arrow in Henrietta, Texas at the purchaser's expense. Pierce Arrow reserves the right to repair or replace the merchandise proved to be defective. The purchaser is responsible for the cost of repairs made by Pierce Arrow if the repairs are not covered by the Pierce Arrow warranty.

EXCLUSIONS

The Pierce Arrow warranty is not intended to cover normal maintenance parts, including but not limited to: wear pads, bushings, mud flaps, fender flares, light bulbs, oil filters, wire rope (winch cable), oil leakage and remote holdings. Nor is the warranty intended to cover any change or defect due to accident; misuse; improper, inadequate or unauthorized repair; failure to provide maintenance or uses for which the equipment was not intended; and normal deterioration due to weather or road conditions. Reference the owner's manual for safety, installation, operation and maintenance guidelines.

The warranty does not bear the cost of labor, transportation, shipping damages, claimed down time, loss of profit or goodwill, or any other special, incidental, indirect, or consequential damages, concerning or related to any product or part, whether based upon negligence, strict liability, breach of contract, breach of warranty, misrepresentation, or any other legal theory.

Merchandise sold by Pierce Arrow, but not manufactured by it, is not warranted by Pierce Arrow and is subject to the manufacturer's warranty only. The manufacturer's warranty is available upon request.

Pierce Arrow makes no warranty, expressed or implied, to finished products manufactured or supplied by other manufacturers, and supplied from Pierce Arrow to the purchaser, including but not limited to, any vehicle to which our products is affixed to, and any accessories.

Merchandise manufactured by Pierce Arrow is not designed or intended for the movement of people and are not to be used in the operation of elevators or other improper uses. Any improper use of the product may void the warranty.

Please contact Pierce Arrow with any questions:

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Henrietta, Texas 76365
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P: 940-538-5643
F: 940-538-4382
www.piercearrow.us



Broadcast Yourself™

Check out the winch maintenance video on YouTube.

