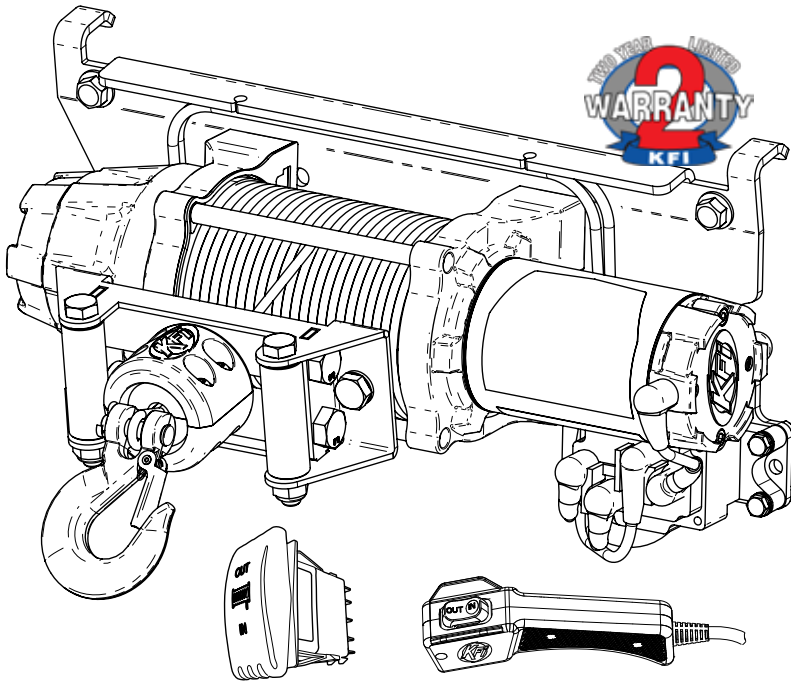




# ASSAULT SERIES

SYNTHETIC CABLE  
UTV WINCH KIT

MODEL #**ASPR-50**  
**5,000 LB. (2268 KG)**



OPERATOR'S MANUAL



## READ AND SAVE THIS MANUAL.



This manual contains important safety precautions which should be read and understood before operating the product.

Failure to do so could result in serious injury. This manual should remain with the product. Specifications, descriptions, and illustrations in this manual are as accurate as known at the time of publication, but are subject to change without notice.

Place serial label  
here for reference.

SERIAL NO. LABEL

Support:

  **1-877-346-2050**

or visit [www.kfiproductions.com](http://www.kfiproductions.com)

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## INTRODUCTION

Congratulations on your purchase of a KFI winch. KFI researches and develops winches to strict specifications. With proper use and maintenance, this winch will bring years of satisfying service.

### Accessories

Kappers Fabricating, Inc. manufactures, purchases, and sells accessories designed to help you get the most from your purchase. To find out more about our products, visit our web site at:

[www.kfiproducs.com](http://www.kfiproducs.com)

### This Manual


Every effort has been made to ensure the accuracy and completeness of information in this manual. We reserve the right to change, alter, and or improve the product and this document at any time without prior notice.

Record the model as well as date and place of purchase for future reference. Have this information available when ordering parts and when making technical or warranty inquiries.


KFI TECHNICAL SUPPORT TEAM
1-877-346-2050
MODEL NUMBER
ASPR-50
SERIAL NUMBER
DATE OF PURCHASE
PURCHASE LOCATION

## SAFETY DEFINITIONS


The purpose of safety symbols is to attract your attention to possible dangers. The safety symbols, and their explanations, deserve your careful attentions and understanding. The safety warnings do not by themselves eliminate any danger. The instructions or warnings they give are not substitutes for proper accident prevention measures.

 **DANGER**


DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

 **WARNING**

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

 **CAUTION**

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

 **NOTICE**

NOTICE indicates information considered important, but not hazard-related (e.g. messages relating to property damage or physical injury).

# IMPORTANT SAFETY INSTRUCTIONS

**⚠ WARNING** Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

**⚠ WARNING** Read this manual thoroughly before operating the winch. Failure to follow instructions could result in serious injury or death.

**⚠ WARNING** Do not exceed the rated capacity.

**⚠ DANGER** Do not use this winch for lifting or moving people or animals.

**⚠ DANGER** Keep yourself and others a safe distance to the side of the cable when under tension.

**⚠ DANGER** Never step over a cable or near a cable under load.

**⚠ WARNING** The cable may break before the motor stalls. For heavy loads at or near rated capacity, use a pulley block/snatch block to reduce the load on the cable.

**⚠ WARNING** Do not move the vehicle to pull a load (towing) on the winch cable. This could result in cable breakage.

**⚠ WARNING** Pull only on area of the vehicle as specified by the vehicle manufacturer.

**⚠ WARNING** Do not use the winch to secure or hold a vehicle for a long period of time. Do not use the winch to secure a vehicle for transport.

**⚠ WARNING** Disconnect the remote control and battery leads when not in use for extended periods.

**⚠ WARNING** Avoid “shock loads” by using the control switch intermittently to take up slack in the cable. “Shock loads” can far exceed the rated capacity for the winch cable and drum.

Do not accelerate your vehicle while winching. Loss of traction can cause a shock load on the cable. Do not use cable as a pull strap.

**⚠ WARNING** Batteries contain acid and produce explosive gases. Keep sparks, flames and cigarettes away from batteries at all times. Wear safety glasses and protect the eyes at all times. Do not lean over the batteries during operation.

**⚠ WARNING** Do not use as a hoist. Do not use for overhead lifting.

**⚠ WARNING** When re-spooling the cable, ensure that the cable spools in the under-wind position with the cable entering the drum from the bottom, not the top.

To re-spool correctly, and while wearing gloves, keep a slight load on the cable while pushing the remote button to draw in the cable. Walk toward the winch not allowing the cable to slide through your hands. Do not let your hands get within 12 in. of the winch while re-spooling. Turn off the winch and repeat the procedure until a few feet of cable are left. Disconnect the remote control and finish spooling by rotating the drum by hand with the clutch disengaged. Keep hands clear of the fairlead and drum while the winch is under power.

**⚠ CAUTION** If the motor stalls, do not maintain power to the winch.

Electric winches are designed and made for intermittent use and should not be used in constant duty applications.

**⚠ CAUTION** Never release the free spool clutch when there is a load on the winch.

**⚠ CAUTION** Use the Hand-Saver strap when handling the winch hook for spooling or unspooling the cable.

**⚠ CAUTION** Use gloves to protect hands when handling the cable. Never let the cable slide through your hands.

**⚠ CAUTION** Do not wrap the cable around any object and hook it back onto itself.

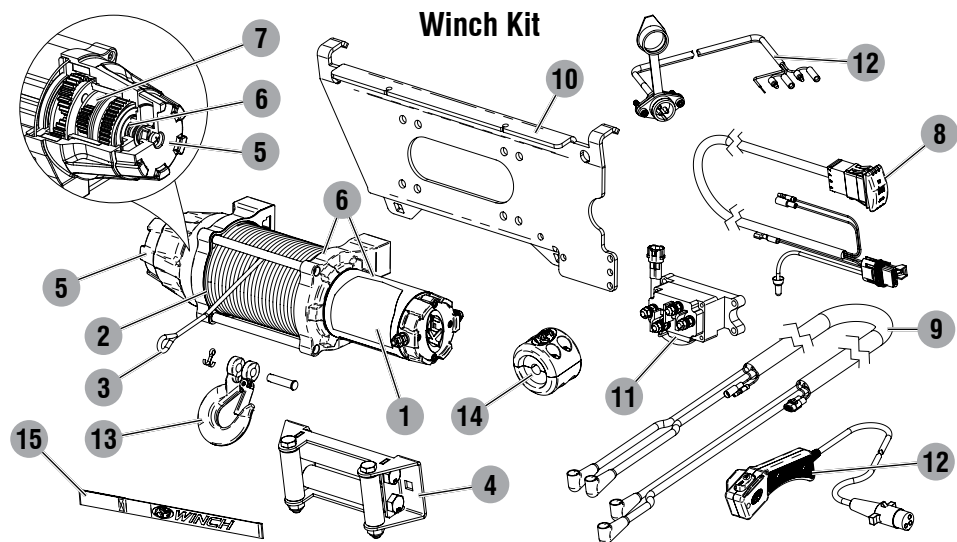
**⚠ CAUTION** Apply blocks to the wheels of the vehicle when on an incline.

**⚠ CAUTION** Duration of winching pulls should be kept as short as possible.

If the motor becomes uncomfortably hot to the touch, stop winching immediately and let it cool down for a few minutes. Do not pull for more than one minute at or near the rated load.

## CONTROLS AND FEATURES

Read this operator's manual before operating your winch. Familiarize yourself with the location and function of the control features. Save this manual for future reference.



1. **Motor** – 1.22 HP 12V DC motor provides power to the planetary gear mechanism.
2. **Winch Drum** – The winch drum is the cylinder on which the cable is stored. It can feed or wind the cable depending on the switch assembly.
3. **Synthetic Cable** – 15/64 in. x 50 ft. Synthetic cable designed specifically for load capacity of 5,000 lbs. (47 usable feet with five wraps on the drum). The synthetic cable feeds onto the drum in the “under wind” position through the roller fairlead (4) and is looped at the end to accept the clevis hook pin (13).
4. **Roller Fairlead** – When using the winch at an angle the roller fairlead acts to guide the synthetic cable onto the drum and minimize damage to the cable from abrasion on the winch mount or bumper.
5. **Free Spooling Clutch** – The clutch allows the operator to manually disengage (“Release”) the spooling drum from the gear train. Engaging the clutch (“Engage”) locks the winch into the gear system.
6. **Braking System** – Braking action is automatically applied to the winch drum when the winch motor is stopped or there is a load on the cable.
7. **Planetary Gear System** – The reduction gears convert the winch motor power into extreme pulling forces. This system allows high torque while maintaining compact size and light weight.
8. **Switch Harness w/ UTV Dash Mounted Rocker Switch** – Premium look & quality dash mounted switch for easy access. Plugs directly into power harness and OEM bus bar.
9. **Power Harness** – Model specific pre-installed wiring.
10. **Model Specific Winch Mount** – Winch mount designed specifically for select UTVs.
11. **Contactor** – Power from the vehicle battery flows through the weather sealed solenoid switch before being directed to the winch motor.
12. **Hand Held Remote and Socket** – Spool the winch in/out while up to 14ft away with a corded remote control.
13. **Clevis Hook** – Provides a means for connecting the looped ends of cables to an anchor.
14. **Cable Hook Stopper** – Protects the rollers, motors, and gears.
15. **Hand Saver Strap** – Used to assist cable feed.

## INSTALLATION

This KFI 5,000 lb Plug & Play winch assembly is designed to be a direct fit up to the specific UTV Models specified in our online application chart.

### Disconnect the Battery

1. Start by making sure that the vehicle is on a level surface, shifted into park, and turned off. Locate the battery compartment, normally under the passenger seat or rear passenger seat. Lift the seat and remove any storage bin to gain access to the battery (Figure 1).



Figure 1.

**⚠ WARNING** Keep the Positive (+) battery terminal covered by its protective boot at all times. DO NOT let tools come into contact with both terminals simultaneously to prevent injury!

2. Disconnect the Negative (-) terminal from the battery and position it safely away from the battery post.

### Remove Front Bumper

3. Locate four bolt locations [A & B] on the front bumper as indicated in Figures 2 & 3. The exact bumper style may vary depending on vehicle model.
4. Next, remove (2) nuts and (2) bolts at locations [A] (lower bolts). Remove (2) nuts from the upper frame bolts at locations [B].

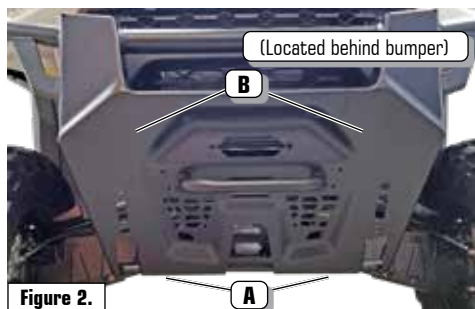


Figure 2.

Support the bumper while removing the last two bolts; set bumper and all hardware aside.

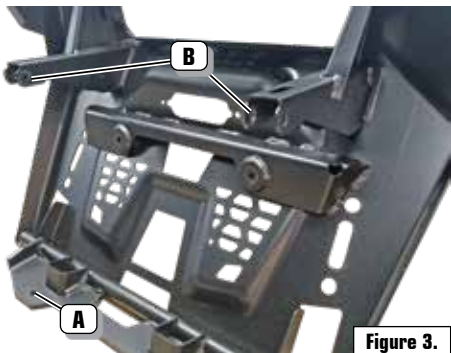


Figure 3.

### Install the Winch Assembly

This Plug and Play Winch Kit comes pre-assembled and ready to install. After mounting the winch assembly, additional wiring harnesses are connected to complete installation.

5. After removing the bumper, prepare the winch assembly by removing it from packaging and arrange the pre-assembled power harness as shown in Figures 4 & 6.

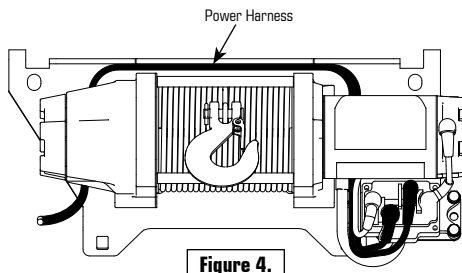


Figure 4.

Fasten (2) zip ties [E] to upper mount plate flange as shown to secure power harness.

6. On the vehicle, locate two frame hard points [C] as shown in [Figure 5](#). Carefully lift the winch assembly and place mount hooks [D] (See [Figures 5 & 6](#)) onto frame at hard points [C]. Be sure the wiring harness clears frame and mount.



Figure 5.

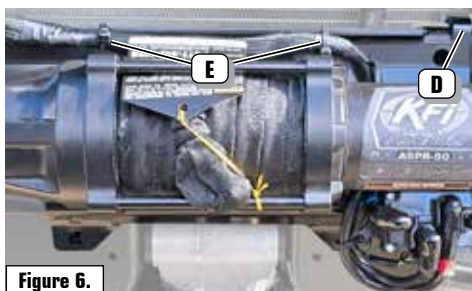


Figure 6.

7. Secure the mount plate to the vehicle frame by partially installing (2x) M10 x 25mm Hex Head Bolts from the provided hardware kit at locations [F]. See [Figure 7](#). Do not fully tighten. Leave loose for adjustment.

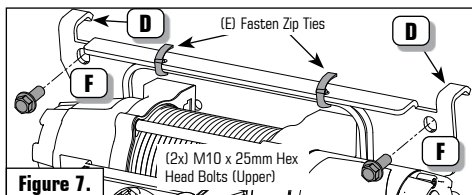


Figure 7.

8. Install (2x) M10 x 25mm Carriage Head Bolts and (2x) M10 Nylock Nuts from the hardware kit into locations [G] as shown in [Figure 8](#). Note fastener

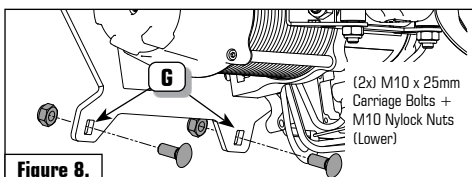


Figure 8.

orientation; place Carriage Bolt heads to the outside (winch side) and nut inside the frame. Do not fully tighten.

9. Finally, uniformly tighten all installed hardware from **Steps 6 thru 8** to the recommended torque spec of 37 ft-lbs [50 N-m].

## Install the Roller Fairlead

10. Cut the zip tie holding the Synthetic Cable to the winch tie bar. Freespool the winch and pull out a length of cable.

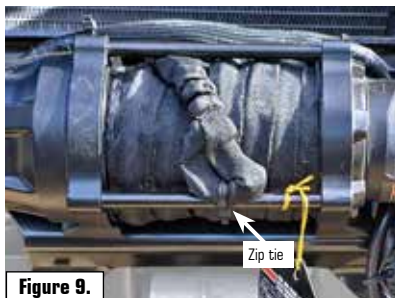


Figure 9.

11. Assemble the Roller Fairlead to the bumper previously removed in **Step 4**. See [Figure 10](#). Fasten using (2x) M10 x 20mm Hex Bolts, (2x) M10 Lock Washers, and (2x) M10 Nylock Nut included with the hardware kit.

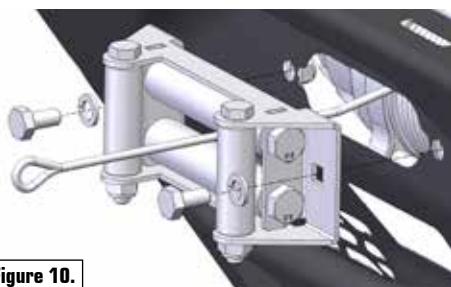


Figure 10.

12. Pull the Synthetic Cable through the Roller Fairlead opening. Leave slack for hook installation.
13. Reinstall bumper onto vehicle frame. Reinstall upper frame bolts removed in **Step 4**. Loosely fasten hardware. Reinstall lower bolts removed in **Step 4**. Evenly and securely tighten all hardware to manufacturer's specification.



14. Assemble Cable Hook Stopper and Clevis Hook to the Synthetic Cable per [Figure 11](#). Bend Cotter Pin around Clevis Pin to secure in place. Apply Hand Saver Strap to Clevis Hook.

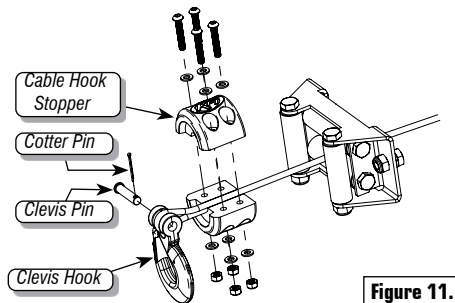


Figure 11.

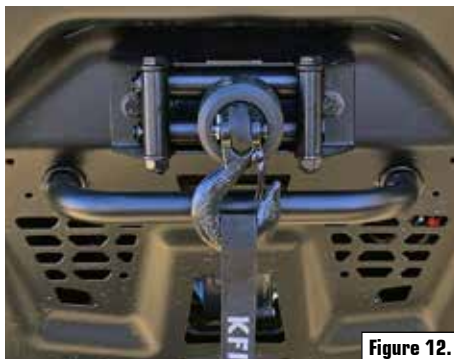


Figure 12.

## Wiring - Route Power Harness

**NOTICE** WIRING INSTRUCTIONS FOR SPECIFIC 2018+ MODEL VEHICLES ONLY. Older models may require battery extension kit KFI part #ASPR-EXT. Follow additional instructions with kit.

**WARNING** Failure to follow specific wiring instructions may result in damage to your wiring system or equipment.

**CAUTION** Never route electrical wires across any sharp edges, through or near moving parts, or near parts that become hot. Power wires are routed on the passenger side of the vehicle, to the side of the radiator. Stay clear of the cooling fan and use zip ties to secure wires in place.

**CAUTION** Power cables should not be drawn taut. Leave some slack for cable movement.

15. From the passenger side of the vehicle, route the remaining power harness under frame rail [H] (see [Figure 7](#)) and up behind the plastic radiator guard, while following the round tube frame [J] ([Figure 8](#)) to the side of the radiator.

Note: Bumper not shown for clarity.

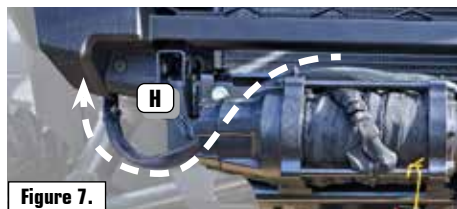


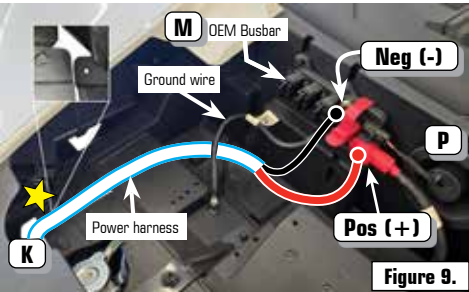
Figure 7.

16. Secure the Power Harness to the vehicle at specific points using included push-in zip ties at the starred locations; taking up slack as you go. See [Figure 8](#). Route harness through outlet [K] into front hood compartment.

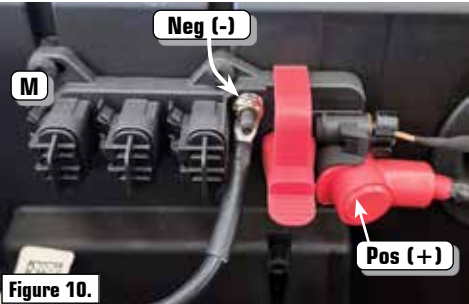


Figure 8.

17. Route power harness thru opening [K], secure with push in zip tie at starred location in [Figure 9](#). Bring leads near OEM busbar [M].



18. Attach the red power harness Positive (+) lead to the OEM busbar [M] Positive (+) post. See [Figures 9 & 10](#). Attach power harness Negative (-) lead to busbar Ground (-) post.



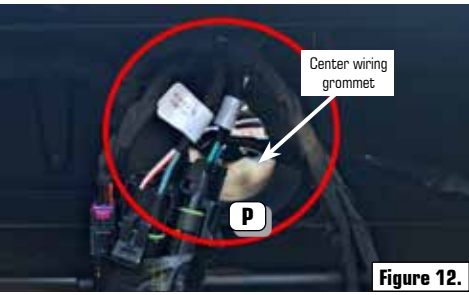
Wiring - Install Switch Harness



19. Locate the dashboard center section, most easily identified by two cupholders, see [Figure 11](#).



20. Gain access to the center wiring grommet [P] (see [Figure 12](#)) by pulling out two plastic rivets [N] ([Figure 11](#)) and removing the plastic center section. Wiring from the Switch Harness is routed from the dashboard through the wiring grommet [P], into the front compartment that is shown in ([Figure 9](#)).

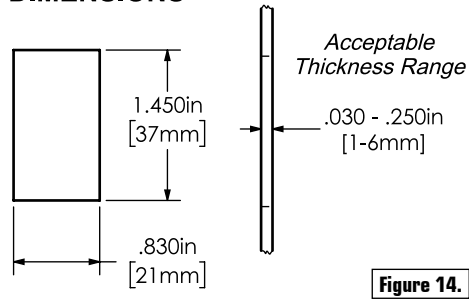


21. Locate the center dash switch panel shown in [Figure 13](#). Choose an available knockout to mount the Dash Rocker Switch.



22. Check knockout size first! (See [Figure 14](#)). Using an appropriate cutting tool, such as a knife or boxcutter, finish cutting out the switch location to size.

PANEL MOUNTING DIMENSIONS



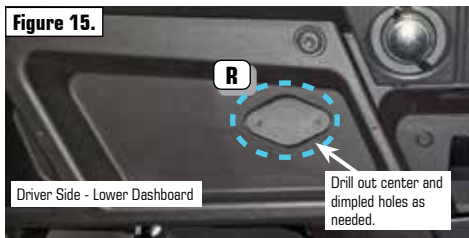
**NOTICE** MEASURE the available knockout size, if the blank size does not match diagram in [Figure 14](#), then drill holes and cut plastic to match the recommended knockout size.

23. Route the Switch Harness thru the dash knockout, pulling Switch Harness connectors into the center wiring grommet [P] and into the front compartment. Align the Dash Rocker Switch control with "Out" at the top and push the switch assembly into the knockout firmly until locked in place.
24. If installing the optional Hand Remote, follow the next steps; otherwise skip to **Step 28** (Completing the Install).

### Corded Hand Remote (optional)



25. Determine a mounting location for the Hand Remote Socket. You may use the stock location provided with your vehicle [R] (see [Figure 15](#)) or another suitable location such as the glove box.

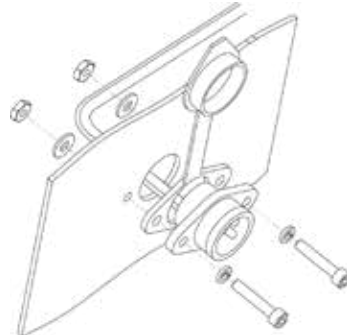
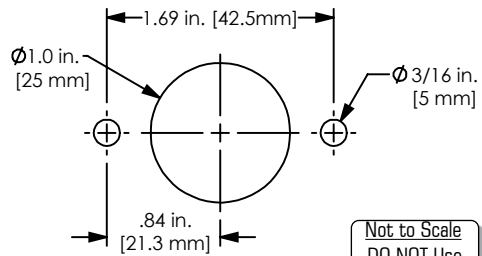


**NOTICE** Regardless of location, some finishing such as drilling or cutting the center hole is required on all vehicles.

26. Drill holes per [Figure 16](#) or finish the stock remote socket location to size and assemble the socket as shown.



**NOTICE** Use the dimensions shown or the rubber socket cap as a template to drill.



**Figure 16.**

27. Route socket wires back to and through the central wiring grommet defined in **Steps 20 thru 23**, into the front compartment.

Proceed to the final installation steps on **Page 10**.

## Completing the Install - Final Steps

28. Connect the Power Harness to the OEM Busbar [M] (Figure 17). Connect all remaining wiring routed to the front compartment per diagram in Figure 18.



Figure 17.

29. Per Figure 18, connect Switch Harness and Power Harness control wires, Green to Green and Black to Black using the bullet connectors. Pull insulators over completed connections.
30. If using the Hand Remote Socket, connect both the Power Harness and Dash Rocker Switch to the Remote Socket as shown in Figure 18.

31. If using the Hand Remote Socket, be certain to connect the Red, ignition fed, +12V terminals [T]. Pull insulator over completed connection.
32. Reconnect battery Negative (-) terminal. Replace any protective boot. Start vehicle and test for winch operation. See **Page 19** for Troubleshooting information.
33. Take up slack on wires and secure with zip ties.
34. Replace all covers removed in previous steps.
35. Read the following sections on safe Winch Operation before using it for the first time.



**WARNING** DO NOT CONNECT the pre-terminated Red Wire labeled CONSTANT +12V to accessories used in this Winch Kit to prevent damage to the components or vehicle.

## Wiring Harness Diagram

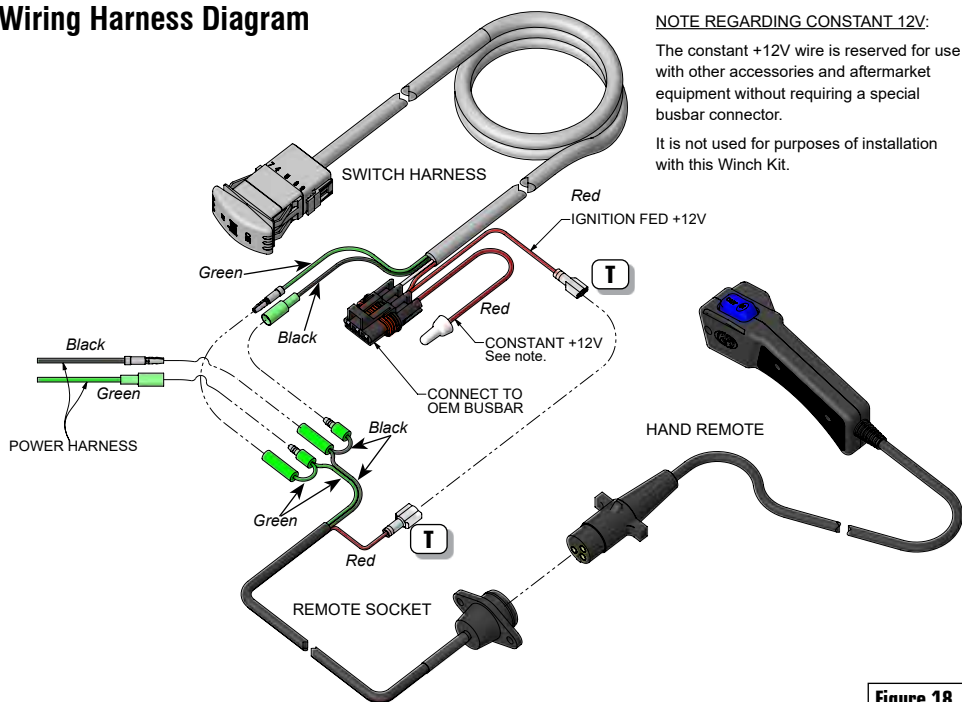


Figure 18.

## General Tips for Safe Operation

Your ASPR-50 winch is rated at 5,000 lbs. capacity in first layer (max) when spooling the first cable layer on the drum. Overloads can damage the winch, motor and/or cable.

The vehicle engine should be kept running during operation of the winch to minimize battery drain and maximize power and speed of the winch. If the winch is used for a considerable time with the engine off the battery may be drained and too weak to restart the engine.

Get to know your winch before you actually need to use it. We recommend that you set up a few test runs to familiarize yourself with rigging techniques, the sounds your winch makes under various loads, the way the cable spools on the drum, etc.

Inspect the cable and equipment before each use. A frayed or damaged cable should be replaced immediately. Use only manufacturer's identical replacement cable with the exact specifications.

Inspect the winch installation and bolts to ensure that all bolts are tight before each operation.

Store the remote control inside your vehicle in a place that it will not be damaged.

Any winch that appears to be damaged in any way, is found to be worn, or operates abnormally **MUST BE REMOVED FROM SERVICE UNTIL REPAIRED**. It is recommended that the necessary repairs be made by a manufacturer's authorized repair facility.

Pull only on areas of the vehicle as specified by the vehicle manufacturer.

Only attachments and/or adapters supplied by the manufacturer are to be used.

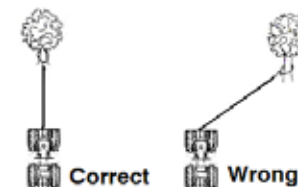
## Self Recovery

Locate a suitable anchor such as a strong tree trunk or boulder. Always use a sling as an anchor point.

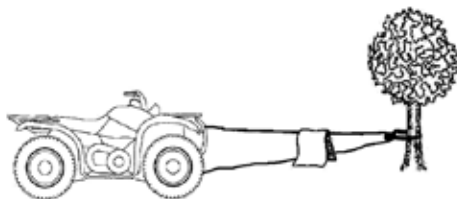


Your winch is equipped with a roller fairlead to help guide the cable and to reduce binding on short side pulls.

Do not winch from an acute angle as the cable will pile up on one side of the drum causing damage to cable and the winch.



Short pulls from an angle can be used to straighten the vehicle. Long pulls should be done with the cable straight out from the winch/vehicle.



When pulling a heavy load, place a cable hook stopper, blanket or jacket over the cable five or six feet from the hook.

In the event of a cable snap it will dampen the snap back. For additional protection open the hood of the vehicle.

## Winching Techniques

1. Take time to assess your situation and plan your pull.
2. Put on gloves to protect your hands.
3. Release the clutch and free-spool the winch; it's faster than using the switch and saves battery power.
4. Attach the hook strap to the clevis hook.
5. Pull out the cable to your desired anchor point using the hook strap.
6. Secure the clevis hook to the anchor point: Sling, chain or snatch block. Do not attach the hook back onto the cable.
7. Engage the clutch.
8. Start your engine to ensure power is being replenished to the battery.
9. Power in the cable guiding the cable under tension to draw up the slack in the cable. Once the cable is under tension, stand clear. Never step over the cable.
10. Double check your anchors and make sure all connections are secure.
11. Inspect the cable. Make sure there are at least 5 wraps of cable around the winch drum.
12. Place a Cable Hook Stopper over the cable approximately 5 to 6 feet from the hook.
13. Clear the area. Make sure all spectators stand clear and that no one is directly in front or behind the vehicle or anchor point.
14. Begin winching. Be sure that the cable is winding evenly and tightly around the drum. The vehicle that is being winched can be slowly driven to add assistance to the winching process. Avoid shock loads; keep the cable under tension.
15. The vehicle to be winched should be placed in neutral and the parking brake released. Only release the loads to the winch. This can damage the winch, cable and vehicle.
16. The winch is meant for intermittent use. Under full load with a single line rig do not power in for more than a minute without letting the motor cool down for a few minutes and then resume the winching operation.
17. The winching operation is complete once the vehicle is on stable ground and is able to drive under its own power.
18. Secure the vehicle. Be sure to set the brakes and place the vehicle in park.
19. Release the tension on the cable. The winch is not meant to hold the vehicle for long periods of time.
20. Disconnect the cable from the anchor.
21. Rewind the cable. Make sure that any cable already on the drum has spooled tightly and neatly. If not, draw out the cable and re-spool from the point where the cable is tight.
22. Keep your hands clear of the winch drum and fairlead as the cable is being drawn in.
23. Secure the hook and hook strap.
24. Disconnect the remote control and store in a clean, dry place.
25. Clean and inspect connections and mounting hardware for next winching operation.
26. Never use the winch as a tie down.
27. Use brake pedal when under full tension.

## Synthetic Cable Usage

Exercising proper care to prolong the usable life of a Synthetic Cable is your responsibility.

1. **Minimize Cable Abrasion** – Use the supplied protective sheath when the cable comes in contact with trees, rocks, or other sharp abrasive objects. The sheath is design to stay in position while the cable slips through it during use.
2. **Keep the Cable Clean** – Dirt, sand, and debris will cause abrasion. Use the protective sheath to cover the cable on the spool once the cable is in the stowed position.
3. **Avoid Sharp Bends** – If the cable is positioned at a sharp angle, the strength under load will decrease and cable damage or failure may result.
4. **Correct Spool Winding** – When re-spooling cable without a load, it is always better to have someone apply a load to the line while you reel in evenly. Re-spool the cable evenly and tightly on the drum. If cable is wound loosely, it may become wedged under adjacent layers and bind.
5. **DO NOT Grease or Oil** – Do not lubricate synthetic cable with greases or oils. Keep grease and oil away at all times.

## Snow Plow Usage

Winches are commonly used to lift a Snow Plow System, but precautions and correct usage are required to prevent costly damage.

**NOTICE** Follow these precautions before using your Winch to lift a Plow. Failure to do so may result in damage to your winch or vehicle frame.

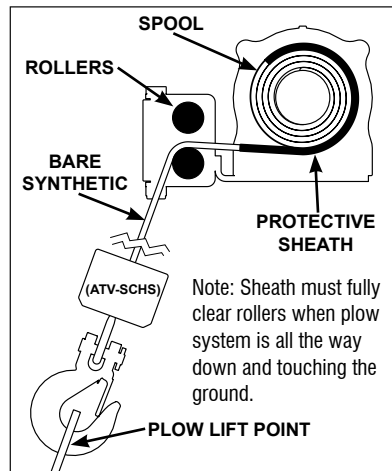
1. Stop the plow before full lift height - failure to do so will cause the winch to pull against itself (i.e. “bottom out”) and will cause damage to the winch components, your plow frame and your vehicle frame.

**NOTICE** Winch damage such as stripped gears, broken housings and bent or damaged parts caused by exceeding your plow’s lift height are not covered under warranty.

2. Do not continue to hold the Spool In button to power the winch while reversing your vehicle or other instances where the operator may become distracted while plowing.

## Protective Sheath

3. Repeated spooling of a short length of cable will increase heat and friction where the rollers contact the synthetic cable. Minimize wear and the possibility of premature failure by **SLIDING THE PROTECTIVE SHEATH BACK UP THE SPOOL**.
4. When the plow system is in the DOWN position, freespool out enough additional cable that you can slide the sheath back up the spool (approx 7-8 ft more). Push the sheath back up thru the optional Cable Hook Stopper and the rollers. Re-spool the winch.
5. Be sure that the sheath completely clears the roller fairlead once spooled tightly onto the winch. The sheath will wrap around several layers on the spool. Reposition the sheath back near the hook when not used for plowing.





## MAINTENANCE

The owner/operator is responsible for all periodic maintenance.

Complete all scheduled maintenance in a timely manner. Correct any issue before operating the winch.

**WARNING** Never operate a damaged or defective winch.

**WARNING** Improper maintenance will void your warranty.

**NOTICE** For service or parts assistance, contact our help line at 1-877-346-2050.

## Motor

Periodically when not used very often, or after wet / damp conditions. Be sure to run the motor in free spool until the motor is warm. This helps dry out any moisture and condensation trapped inside the housing.

## Lubrication

All moving parts within the Electric Winch have been Lubricated using high temperature lithium grease at the factory. No internal lubrication is required under normal conditions.

If the winch is subjected to extreme conditions lubrication may be required using a high temperature lithium grease. Retract Cable Assembly onto drum being careful not to allow kinking or over heating of the winch.

**NOTICE** Do NOT attempt to lubricate or grease the synthetic cable. Grease and oil will attract dirt and debris which cause abrasion.

## Synthetic Cable Inspection

Periodically, inspect the synthetic cable for wear. When new, it will have a smooth finish (see Figure A).



After normal use, the outer surface will appear slightly fuzzy (see Figure B). This is expected and protects the underlying fibers.



Once approximately 25% of the outer fibers show wear (see Figure C), the cable must be replaced.



Inspect the inner and outer fibers by compressing the cable (see Figure D).





Look for powdered fiber or abrasion (signs of internal wear). Consider the amount of wear on the internal fibers when determining the percent of wear for replacement.



Glossy or glazed sections (see Figure E) in the cable are usually caused by compression, such as the cable being wound on the drum or through a pulley block. This is considered normal.

**NOTICE** If you compress (see Figure D) a glazed section of cable (see Figure E) and it remains hardened, then the cable has suffered heat damage and must be replaced.

**WARNING** Sharp edges and rough surfaces will shorten cable life. Inspect the cable and protective sheath before use. Replace cable immediately if it has cut strands, fused or melted fibers, odd stiff sections, chemical contamination, flat areas, or lumps that cannot be eliminated after flexing the cable.

## Cable Assembly Replacement

It is recommended that any modifications be performed by a manufacturer's authorized repair facility, and that only manufacturer-supplied parts be used

1. Rotate the clutch cap to the "Release" position.
2. Extend Cable Assembly to its full length. Note how the existing cable is connected to the inside of the drum.
3. Remove old Cable Assembly and attach new one.
4. Rotate the clutch cap to the "Engage" position.

**NOTICE** Inspect cable before and after each use. If cable becomes frayed it must be replaced.

SPECIFICATIONS

Performance:

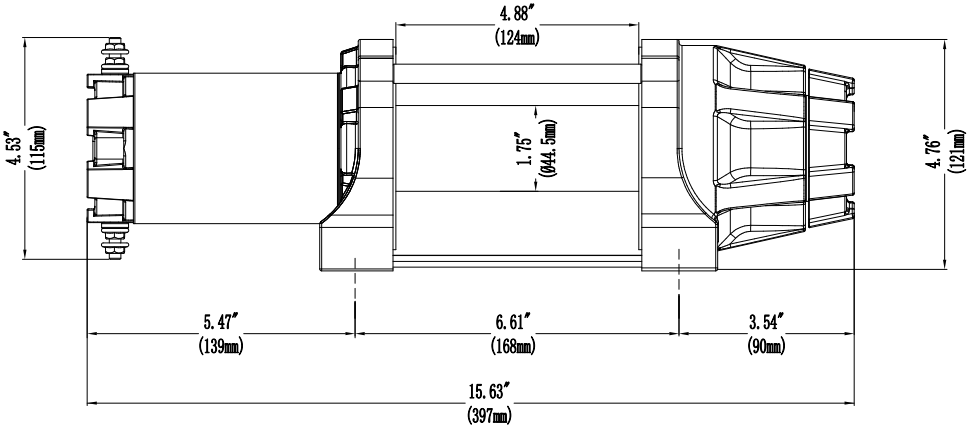
Rated Pull .....	5,000 lb (2268 kg)	Mounting Bolt Pattern.....	6.6 in. x 3.00 in. (16.8 cm x 7.6 cm)
Gear Reduction Ratio .....	180:1	Overall Dimensions .....	15.63 in. (L) x 4.45 in. (W) x 4.76 in. (H)
Motor.....	Permanent Magnet, 1.22 HP (DC 12V)		(39.7 cm x 11.3 cm x 12.1 cm)
Drum Size.....	1.75 x 4.88 in. (44.5 x 81 mm)		
Cable Dimensions ..	15/64 in. x 50 ft. (6.0mm x 15.24m)		
Net Weight .....	29.8 lb. (13.5 kg)		

Line Speed and Motor Current (First Layer)							
Line Pull	LB	0	1500	2500	3500	4500	5000
	KG	0	680	1134	1588	2041	2268
Line Speed (12 VDC)	FPM	12.46	9.8	8.2	6.8	4.5	3.0
	MPM	3.8	3.0	2.5	2.1	1.4	0.9
Max Current	A	30	75	105	140	200	240
Run Time *	Minutes	1	1	1	1	1	1
Cooling Time **	Minutes	5	5	5	5	5	5

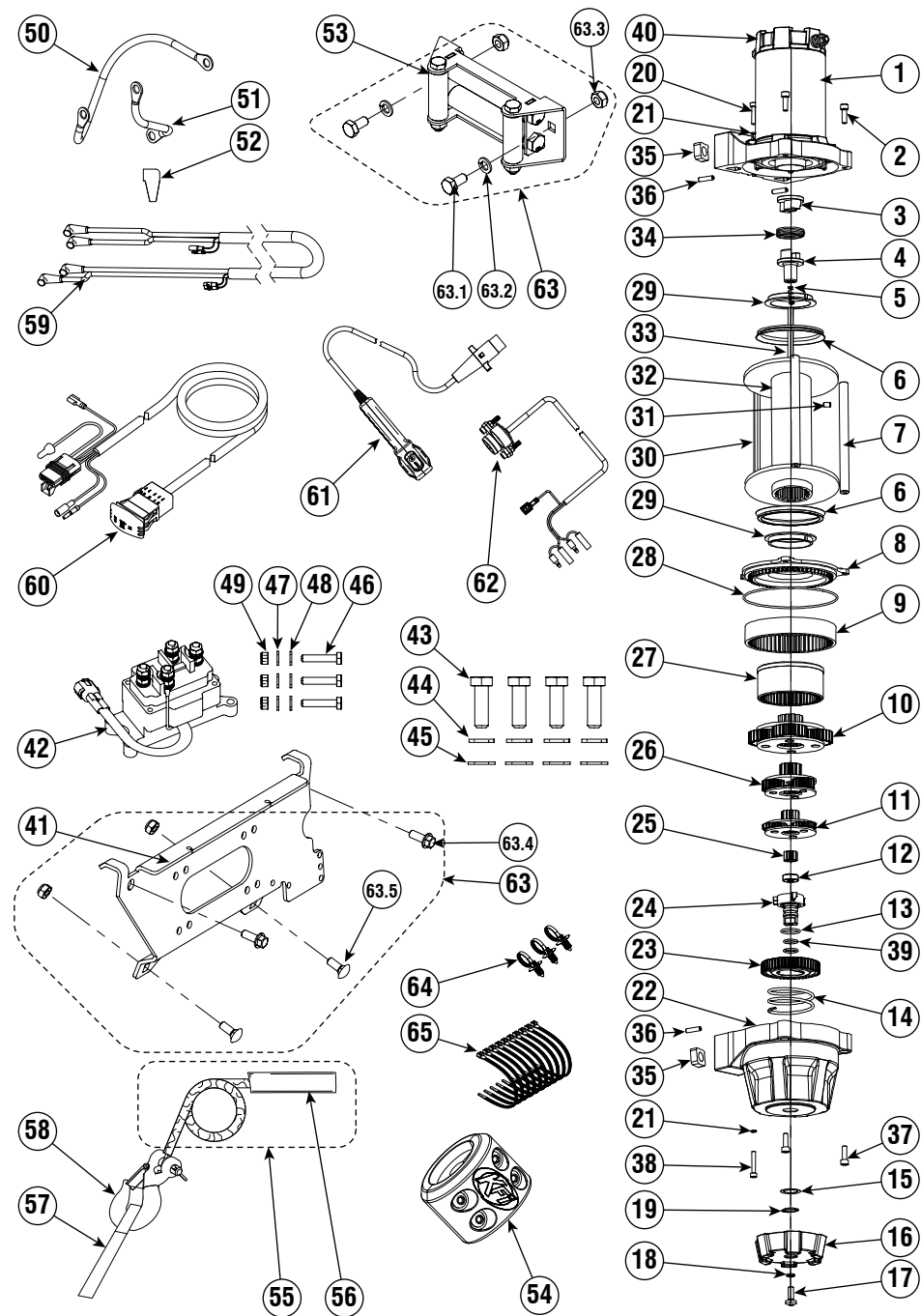
\* If the motor becomes uncomfortably hot to the touch, stop winching immediately and let it cool down for 5 minutes. Do not pull for more than one minute at or near the rated load.

\*\* Electric winches are designed and made for intermittent use and should not be used in constant duty applications.

Line Pull and Cable Capacity Per Layer					
Layers of Cable on Drum		1	2	3	4
Rated Line Pull	LB	5000	4040	3389	2919
	KG	2268	1833	1537	1324
Cable Capacity	FT	10.9	24.4	40.6	50
	M	3.3	7.4	12.3	15.2



Parts Diagram



## Parts List

#	Part Number	Description	Qty
1	MOTOR-AS50	Motor Assembly	1
2	HW-0023-B	Screw M5 x 16 Socket	2
3	WP-0026	Coupling, I	1
4	WP-0055	Coupling, II	1
5	WP-0079	Spring, Shaft	1
6	WP-0061	Delf-seal Packing	2
7	WP-0080	Tie Bar Ø10 x 129	2
8	WP-0054	Clutch Cover, Assault	1
9	WP-0068	Gear Ring, I	1
10	WP-0065	Gear Carrier Asm, Output	1
11	WP-0064	Gear Carrier Asm, Input	1
12	WP-0078	Bearing 606 Sealed	1
13	WP-0077	O-Ring Ø19 x 2.4	1
14	WP-0085	Spring, Clutch	1
15	HW-0024	Washer SS Ø16	1
16	WP-0002	Clutch Cap, Assault	1
17	HW-0007-B	Screw M6 x 16 Phillips	1
18	HW-0006	Washer M6 Lock	1
19	HW-0004	Circlip Ø15	1
20	HW-0025-B	Screw M4 x 20 Socket	1
21	HW-0020-B	Washer M4 Lock	2
22	WP-0067	Gear Housing	1
23	WP-0053	Cam, Clutch Gear	1
24	WP-0052	Bushing, Axis Support	1
25	WP-0084	Gear, Input, Sun	1
26	WP-0063	Gear Carrier Asm	1
27	WP-0069	Gear Ring, II	1
28	WP-0075	O-Ring Ø100 x 1.9	1
29	WP-0062	Bushing, Drum	2
30	WP-0073	Hex Tie Bar 6 x 131	1
31	WP-0025	Set Screw M5 x 8	1
32	WP-0057	Drum, Steel, Wide	1
33	WP-0071	Shaft, Hexagon, H6 x 187	1
34	WP-0027	Spring, Coupling	1
35	WP-0049	Square Nut	4
36	WP-0050	Pin, Spring, Ø3 x 14	4
37	HW-0026-B	Screw M5 x 18 Socket	2
38	HW-0019-B	Screw M4 x 25 Socket	1
39	WP-0076	O-Ring Ø13 x 2	2
40	AS-CAPKIT	Motor End Cap Assembly	1
41	101687	Winch Mount, Ranger	1
42	AP-CONT	Contactora, AP	1

#	Part Number	Description	Qty
43	HW-0008-B	Bolt M8 x 25	4
44	HW-0009-B	Washer M8 Lock	4
45	HW-0016-B	Washer M8	4
46	HW-0067-B	Bolt M6 x 30	3
47	HW-0003-B	Washer M6	3
48	HW-0006-B	Washer M6 Lock	3
49	HW-0014-B	Nut M6 Nylock	3
50	WP-0215	Winch Wire, 6GA x 200mm, Blue	1
51	WP-0216	Winch Wire, 6GA x 95mm, Yellow	1
52	WP-0092	Terminal Protector	8
53	SE-WRF	Roller Fairlead, Wide, Stealth	1
54	ATV-SCHS	Split Cable Hook Stopper	1
55	SYN25-S50	Cable, Synthetic, 15/64" x 50ft	1
56	UTV-RPS	Protective Sheath, Replacment	1
57	WP-0030-BLK	Hand Saver Strap, Black	1
58	SE-HOOK	Clevis Hook, 1/4"	1
59	WP-0204	Power Harness	1
60	WP-0205	Switch Harness	1
61	WP-0159	Hand Remote, Controller, Asm	1
62	WP-0203	Hand Remote, Socket, AP Asm	1
63	HK-503	Hardware Kit, Black	1
63.1	HW-0010-B	Bolt M10 x 20	2
63.2	HW-0011-B	Washer M10 Lock	2
63.3	HW-0012-B	Nut M10 Nylock	4
63.4	HW-0068-B	Flange Bolt M10 x 25	2
63.5	HW-0069-B	Carriage Bolt M10 x 25	2
64	WP-0196	Push In Zip-Tie, 1/4"	3
65	P800507	Zip-Tie, 8in	10

## TROUBLESHOOTING

Problem	Cause	Solution
Motor does not run, Contactor makes a click sound.	Incorrect Wiring	Check Winch Wiring Diagram, make sure all wires are correctly connected.
	Incorrect Wiring	Hand Remote / Mini Rocker Switch wires must be connected green to green and black to black.
	Loose battery cable connections	Hand tighten nuts on all cable connections.
	Motor Issue	Contact KFI Technical Support
	Water has entered motor	Allow to drain and dry. Run in short burst with load until completely dry.
	Brake Spring installed backwards	Contact KFI Technical Support.
Motor does not run, NO click sound from Contactor.	Incorrect Wiring	Check Winch Wiring Diagram, make sure all wires are correctly connected.
	Switch Ignition Wire	Check connection to an ignition fed source. Must supply 12V with the key on and vehicle running.
	Contactor malfunctioning	Contact KFI Technical Support.
	Switch malfunctioning	Contact KFI Technical Support.
Motor runs, Spool turns in one direction only.	Incorrect Wiring	Check wiring diagram, verify switch wires (black/green) are properly connected and making good contact.
	Defective or stuck Contactor	Tap contactor to loosen plungers.
	Defective Switch assembly	Replace Switch assembly.
	Contactor malfunctioning	Contact KFI Technical Support.
Motor runs, Spool does NOT turn.	Clutch not engaged	Rotate Clutch Cap to Engage.
	Broken Coupler / stripped Shaft	Replace Coupler or Shaft
Spool turns, but no movement from Cable	Cable not attached to Spool	Contact KFI Technical Support.
Motor runs slowly or without normal power.	Insufficient current or voltage.	The battery is weak, recharge. Run winch with vehicle motor running (battery should have a strong charge).
	Loose or corroded battery cable connections	Clean, tighten, or replace.
	Worn Brushes	Replace with End-Cap Kit (#AS-CAPKIT) Contact KFI Technical Support.
Motor overheating	Winch running time too long	Allow winch to cool down periodically.

For further support, contact:

### KFI Tech Support

Mon-Thr 8:00 AM - 5:00 PM (CST/CDT)

Fri 7:00 AM - 1:00PM (CST/CDT)

Toll Free: 1-877-346-2050

tech@kfiproducs.com

### KFI Products Website Support:

Common installation, maintenance, and troubleshooting guides are available on our website.

<https://www.kfiproducs.com/support.html>

## WARRANTY

KAPPERS FABRICATING, INC.  
2 YEAR LIMITED LIFETIME WARRANTY

### Warranty Qualifications

Kappers Fabricating Inc. (KFI) will register this warranty upon receipt of your Warranty Registration Card and a copy of your sales receipt from one of KFI's resale locations as proof of purchase. Please submit your warranty registration and your proof of purchase within Fifteen (15) days of the date of purchase.

### Repair/Replacement Warranty

KFI warrants to the original purchaser that mechanical components will be free of defects in material and workmanship for the usable lifetime of the product (180 days for commercial use); and electrical components will be free of defects in material and workmanship for (2) years (180 days for commercial use); from the original date of purchase. Transportation charges on product submitted for repair or replacement under this warranty are the sole responsibility of the purchaser. This warranty only applies to the original purchaser and is not transferable.

### Do Not Return The Unit To The Place Of Purchase

Contact KFI's Technical Service and KFI will troubleshoot any issue via phone or e-mail. If the problem is not corrected by this method, KFI will, at its option, authorize evaluation, repair or replacement of the defective part or component at a KFI Service Center. KFI will provide you with a case number for warranty service. Please keep it for future reference. Repairs or replacements without prior authorization, or at an unauthorized repair facility, will not be covered by this warranty.

### Warranty Exclusions

This warranty does not cover the following repairs and equipment:

#### Normal Wear

Winches need periodic parts and service to perform well. This warranty does not cover repair when normal use has exhausted the life of a part or the equipment as a whole.

### Installation, Use and Maintenance

This warranty will not apply to parts and/or labor if this winch is deemed to have been misused, neglected, involved in an accident, abused, loaded beyond the winch's limits, modified, installed improperly or wired incorrectly to any electrical component. Normal maintenance is not covered by this warranty.

### Other Exclusions

- The winch cable or synthetic cable.
- Cosmetic defects such as paint, decals, etc.
- Accessory parts such as storage covers.
- Misuse, abuse, neglect, acts of God, terrorism and causes beyond the control of KFI.
- Problems caused by parts that are not original Kappers Fabricating Inc. parts.
- Cable Stacking and Water Submersion or Damage Caused by Water.

### Warranty Procedure

1. Contact KFI Technical support to acquire a Return Authorization (RA) number.
2. KFI may request additional materials (such as original sales receipt, date of purchase, technical details, or photos of Product condition) prior to issuing an RA number.
3. At the discretion of KFI, Buyer shall mail, ship, or otherwise deliver to KFI the Warrantied Product, at the address noted below.

### Limits of Implied Warranty and Consequential Damage

Kappers Fabricating Inc. disclaims any obligation to cover any loss of time, use of this product, freight, or any incidental or consequential claim by anyone from using this winch. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE

A unit provided as an exchange will be subject to the warranty of the original unit. The length of the warranty governing the exchanged unit will remain calculated by reference to the purchase date of the original unit.

This warranty gives you certain legal rights which may change from state to state. Your state may also have other rights you may be entitled to that are not listed within this warranty.

## **Contact Information**

### **Address**

KFI Products  
Winch Customer Service  
P.O. BOX 32  
721 SATA DRIVE  
SPRING VALLEY, MN 55975

### **Corporate**

KAPPERS FABRICATING, INC.  
P.O. BOX 32  
1015 INDUSTRIAL DR.  
SPRING VALLEY, MN 55975

### **Customer Service**

Mon - Thr 8:00 AM - 5:00 PM (CST/CDT)  
Fri - 7:00 AM - 1:00 PM (CST/CDT)  
Toll Free: 1-877-346-2050 Opt 1  
Fax No: 1-507-346-2010  
E-mail: [sales@kfiproducs.com](mailto:sales@kfiproducs.com)

### **Technical Service**

Mon - Thr 8:00 AM - 5:00 PM (CST/CDT)  
Thr - 7:00 AM - 1:00 PM (CST/CDT)  
Toll Free: 1-877-346-2050 Opt 2  
E-mail: [tech@kfiproducs.com](mailto:tech@kfiproducs.com)

### **Website**

<https://www.kfiproducs.com>



**1-877-346-2050**

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