

CHICAGO
Electric[®]Power Tools

ELECTRIC WINCH 12 VOLT

Models 40764, 93752,
& 91905

ASSEMBLY AND OPERATION INSTRUCTIONS



Model 91905 shown. Due to continuing improvements, actual product may differ slightly from the product described herein.

Distributed Exclusively by Harbor Freight Tools[®].

3491 Mission Oaks Blvd., Camarillo, CA 93011

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**TO PREVENT SERIOUS INJURY,
READ AND UNDERSTAND ALL WARNINGS
AND INSTRUCTIONS BEFORE USE.**

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For technical questions and replacement parts, please call 1-800-444-3353.

Manual revised 07k, 08h

Specifications

Model	40764	93752	91905
Capacity	4.1 HP, 8,000 lb.	4.5 HP, 9,000 lb.	4.8 HP, 10,000 lb.
Cable	100' L x 3/8" dia. Galvanized, Aircraft Type		
Brake	Automatic Load-holding Type		
Mounting Pattern	10" x 4.5"		
Operation	Power In/ Power Out Handheld Remote Control on 12' Cable		
Fairlead Type	Hawse	Roller (parts list on page 12)	
Power Supply	12 VDC, 650 CCA or more battery		
Weight	80 lb.	85 lb.	86 lb.

Sku 40764 - 8,000 lb. capacity

Performance of First Layer			Line Pull and Cable Capacity by Layer		
Line Pull (lb.)	Line Speed (ft./min)	Amp Draw	Cable Layer	Rated Line Pull (lb.)	Cable Capacity (ft.)
0	8.2	35	1	8,000	15
2,000	7.8	100	2	6,335	38
4,000	7.2	180	3	5,243	64
6,000	6.5	230	4	4,473	95
8,000	5	285	5	3,190	100

Sku 93752 - 9,000 lb. capacity

Performance of First Layer			Line Pull and Cable Capacity by Layer		
Line Pull (lb.)	Line Speed (ft./min)	Amp Draw	Cable Layer	Rated Line Pull (lb.)	Cable Capacity (ft.)
0	8.2	35	1	9,000	15
2,000	7.8	100	2	7,300	38
4,000	7.2	180	3	6,200	64
6,000	6.5	230	4	5,400	95
8,000	5	285	5	4,200	100
9,000	4.5	290			

Sku 91905 - 10,000 lb. capacity

Performance of First Layer			Line Pull and Cable Capacity by Layer		
Line Pull (lb.)	Line Speed (ft./min)	Amp Draw	Cable Layer	Rated Line Pull (lb.)	Cable Capacity (ft.)
0	8.2	35	1	10,000	15
2,000	7.8	100	2	8,110	38
4,000	7.2	180	3	6,830	64
6,000	6.5	230	4	5,890	95
8,000	5	280	5	5,180	100
10,000	4.5	310			

Note: Performance of this winch may vary depending on variations of vehicle's battery power and other factors.

Save This Manual

You will need the manual for the safety warnings and precautions, assembly instructions, operating and maintenance procedures, parts list and diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep the manual and invoice in a safe and dry place for future reference.

Safety Warnings and Precautions

WARNING: When using tool, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.

Read all instructions before using this tool!

1. **Observe work area conditions.** Do not use machines or power tools in damp or wet locations. Don't expose to rain. Keep work area well lighted. Do not use electrically powered tools in the presence of flammable gases or liquids.
2. **Keep children away.** Children must never be allowed in the work area. Do not let them handle machines, tools, or extension cords.
3. **Do not force tool.** It will do the job better and more safely at the rate for which it was intended. Do not use inappropriate attachments in an attempt to exceed the tool capacity.
4. **Use the right tool for the job.** Do not attempt to force a small tool or attachment to do the work of a larger industrial tool. Do not use a tool for a purpose for which it was not intended. **Do not use this item for aircraft purposes. Do not exceed winch load weight capacity for your model (see Specifications on page 2).**
5. **Dress properly.** Do not wear loose clothing or jewelry as they can be caught in moving parts. Protective, electrically nonconductive clothes and nonskid footwear are recommended when working. Wear restrictive hair covering to contain long hair.
6. **Use eye protection.** Always wear ANSI-approved impact safety goggles. Heavy duty work gloves need to be worn when handling the cable.
7. **Do not overreach.** Keep proper footing and balance at all times. Do not reach over or across running machines. **Do not cross over or under cable under load.**
8. **Maintain tools with care.** Keep equipment clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect cords periodically and, if damaged, have them repaired by an authorized technician. The hook must be kept clean, dry, and free from oil and grease at all times.
9. **Remove adjusting keys and wrenches.** Check that keys and adjusting wrenches are removed from the tool or machine work surface before operating.
10. **Avoid unintentional starting.** Remove the Switch Ass'y (35) when not in use.
11. **Stay alert.** Watch what you are doing, use common sense. Do not operate any equipment when you are tired.
12. **Check for damaged parts.** Before using any tool, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its

- intended function. Check for alignment and binding of moving parts; any broken parts or mounting fixtures; and any other condition that may affect proper operation. Any part that is damaged should be properly repaired or replaced by a qualified technician. Do not use the tool if any switch does not turn On and Off properly. **Examine winch before using.** Components may be affected by exposure to chemicals, salts, and rust.
13. **Replacement parts and accessories.** When servicing, use only identical replacement parts. Use of any other parts will void the warranty. Only use accessories intended for use with this tool. Approved accessories are available from Harbor Freight Tools.
 14. **Do not operate tool if under the influence of alcohol or drugs.** Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not operate the tool.
 15. **Risk of entanglement!** Keep hands and body away from Fairlead (cable intake slot) when operating.
 16. **Secure vehicle in position before using winch.** Block the vehicle's tires prior to use. **Do not move vehicle with cable attached to a load to pull the load;** the cable could snap.
 17. **Be certain winch is properly bolted to a structure (or vehicle) that can hold the winch load.**
 18. **Always use proper couplings when connecting winch cable hook to load.** Do not use inappropriate attachments to extend the length of the winch cable.
 19. **Do not lift items vertically.** The winch was designed for horizontal use only.
 20. **Never lift people or hoist loads over people.**
 21. **Never come in between the winch and the load when operating.**
 22. **Never fully extend cable while under load.** Do not apply load to winch when cable is fully extended. Keep at least **5 full turns** of cable on the drum.
 23. **When loading a boat into a trailer without keel or side hull rollers, make sure the trailer is submerged in the water when the boat is loaded by the winch.** Attempting to drag the boat on to the trailer while on land can cause winch failure and possible injury.
 24. **Never operate winch if cable shows any signs of weakening, is knotted or kinked.**
 25. **Winch does not have a locking mechanism.** Secure load after moving. Do not rely on the winch to hold it for an extended period.
 26. **Re-spool cable properly.**
 27. **Make certain that the hook's safety clasp is shut and the hooks is securely attached to the item to be moved before use.**
 28. **People with pacemakers should consult their physician(s) before use. Electro-magnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure.**

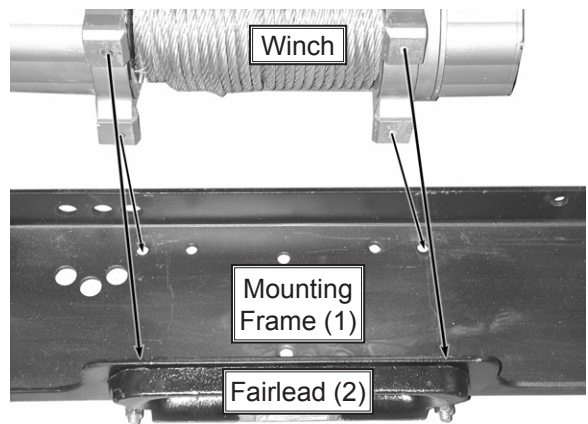
29. **The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur.** It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

Unpacking

When unpacking, check to make sure all parts are included. Refer to the Assembly Diagrams and Parts Lists at the end of this manual. If any parts are missing or broken, please call Harbor Freight Tools at the number on the cover of this manual as soon as possible.

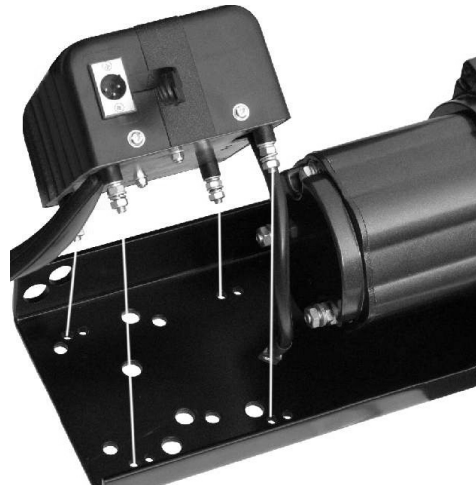
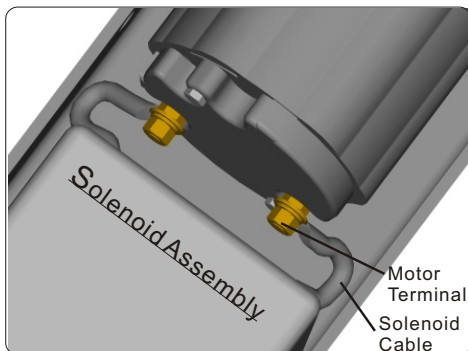
Installation

1. Mount the Fairlead (2) to the Mounting Frame (1) using supplied bolts, nuts, and washers.
2. Mount Electric Winch to the Mounting Frame (1) using Bolt (3) and Nut (6). See illustration to the right.
3. Connect the Solenoid Output Power Lines (short-black) (17s, 24s) to either terminal of the Electric Winch as shown below, left. Securely tighten nuts.
4. There are two options for mounting the solenoid:



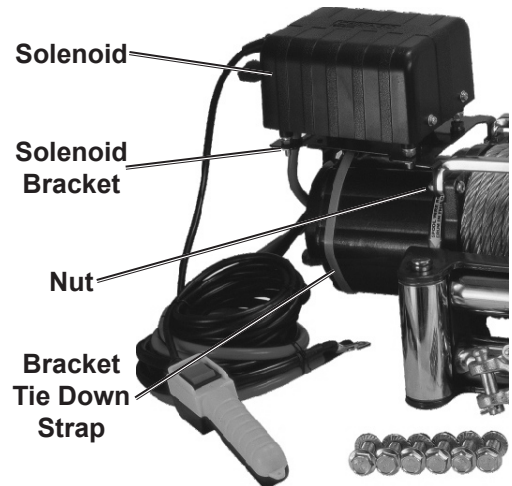
Mounting Option 1: Mounting the Solenoid to the Mounting Frame (1)

Mount the Solenoid Assembly (34) to the Mounting Frame (1) using the three Flat Washers (20s), three Spring Washers (21s), and three Nuts (22s) as shown below, right. Securely tighten nuts.



Mounting Option 2: Mounting the Solenoid to the Solenoid Bracket (40)

Remove both Bolts (12) and Nuts (13) from the Motor End Bearing Ass'y (33). Then align the Solenoid Bracket (40) with the 2 mounting holes. Attach the Solenoid bracket to the Motor End Bearing Ass'y (33) by reattaching the Tie Bars (10) with the Bolts (12) and Nuts (13) that were previously removed. Tighten. Secure the Solenoid Bracket (40) to the Motor End Bearing Ass'y (33) by attaching the Bracket Tie Down Strap (41) around both the Solenoid Bracket and the Motor End Bearing Ass'y. Pull Strap until secure. Attach the Solenoid to the bracket using the Flat Washers (20s), Spring Washers (21s), and Nuts (22s).



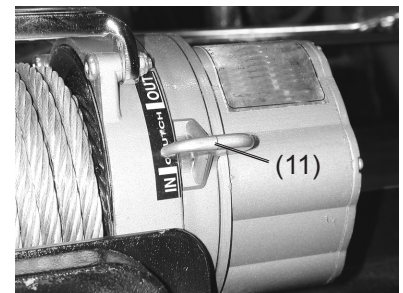
5. Place the completed Electric Winch assembly at the location where it will be mounted. Use the remaining holes in the Mounting Frame as a template to mark and drill holes for mounting. **ALWAYS check for electrical wires or cables in the drilling path before starting to drill.**

If the provided hardware does not accommodate the installation, use SAE grade 5 bolts or higher with torque to 35 ft-lb. It should be aligned and secured to a solid part of the vehicle (front or rear) where the full rated load will be evenly distributed. Also remember that the Electric Winch is designed for horizontal pull, not vertical.

6. Connect the Solenoid Assembly red (positive) Battery Cable (13s) to the closest screw-down positive (+) terminal to the 12 volt battery. The battery should be of at least 650 CCA capacity.

Caution: Battery cables should not be drawn taut. Leave slack for some cable movement.

7. Connect the black (negative) Battery Cable (16s) from the Solenoid Assembly (34) to the closest screw-down negative (-) terminal to the 12 volt battery.
8. Disengage the clutch by moving the Cam Ring (11) to the **OUT** position.
9. Pull the Cable (36) through the Fairlead and connect the Hook and safety pin.
10. Test Electric Winch for proper operation. Refer to the Operation section, next page.

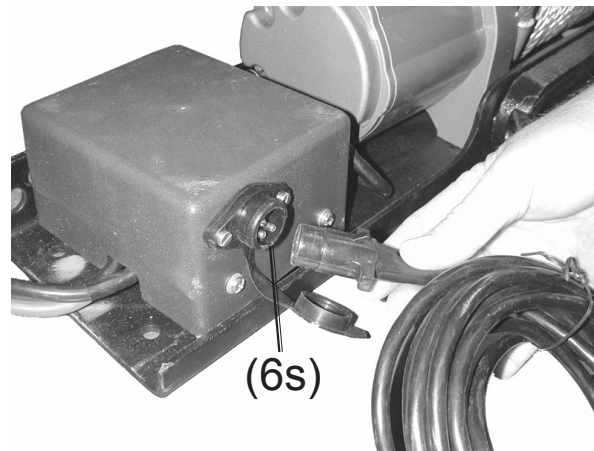


Operation

1. Disengage the clutch by moving the Cam Ring (11) to the **OUT** position.
2. Grab the Cable Assembly (36) hook and pull the cable to the desired length, then attach to item being pulled. Make certain that the hooks safety clasp is fully closed.



WARNING!: You **MUST** leave at least five full turns of cable on the drum at all times. Review Winch Safety Warnings and Precautions starting on page 3 before continuing. **STOP THE WINCH IMMEDIATELY** and release cable with the switch if the cable begins to get entangled on the drum.



3. Reengage the clutch by moving the Cam Ring to the **IN** position.
4. Lift the Socket Cover (2s) exposing the electrical switch connector.
5. Insert the Switch Ass'y (35) connector into the Socket (6s).
6. While standing aside of the pull path, press (and hold) the Red switch on the Switch Ass'y (35) forward.

Press (and hold) the switch backward to reverse directions. Wait until the motor stops before reversing directions.

The power out function will puts stress on the winch's automatic braking system. IMPORTANT: Do not use the power out function of the winch for more than 10 seconds at a time; it may cause damage to the winch's brake system.

7. When the pulling is complete, remove the Switch Assembly from the Socket (6s) and replace the Socket Cover (2s).

CAUTION: The Electric Winch is designed for intermittent use only, and should not be used in a constant duty application. The duration of the pulling job should be kept as short as possible. If the Winch motor becomes very hot to the touch, stop the Winch and let it cool down for several minutes. Never pull for more than one minute at or near the rated load. Do not maintain power to the Winch if the motor stalls.

Maintenance

Lubrication

1. All moving parts within the Electric Winch have been lubricated using high temperature lithium grease at the factory. No internal lubrication is required.
2. Lubricate the cable portion of the Cable Assembly (36) periodically using a light penetrating oil.

Cable Assembly Replacement

1. Move Cam Ring (11) to the **OUT** position.
2. Extend Cable Assembly (36) 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.
Caution: Do not replace with inferior cable. Always use the approved replacement part from Harbor Freight Tools.
4. Retract Cable Assembly onto cable drum being careful not to allow kinking.
5. Cover the Cable Assembly and Electric Winch when not in use.

Troubleshooting

**This chart is included as a reference tool for qualified technicians only.
Only a qualified technician should attempt to repair this unit.**

SYMPTOM	POSSIBLE CAUSE	SUGGESTED ACTION
Motor does not turn On	<ol style="list-style-type: none"> 1. Switch Assy not connected properly 2. Loose battery cable connections 3. Solenoid malfunctioning 4. Defective Switch Assy 5. Defective motor 6. Water has entered motor 	<ol style="list-style-type: none"> 1. Insert Switch Assy all the way into connector 2. Tighten nuts on all cable connections 3. Tap solenoid to loosen contacts. Apply 12 volts to coil terminals directly. A clicking indicates proper activation 4. Replace Switch Assy 5. Check for voltage at armature port with Switch pressed. If voltage is present, replace motor. 6. Allow to drain and dry. Run in short bursts without load until completely dry
Motor runs but cable drum does not turn	Cam Ring (clutch) not engaged	Move the Cam Ring to the In position. If problem persists, a qualified technician needs to check and repair
Motor runs slowly or without normal power	<ol style="list-style-type: none"> 1. Insufficient current or voltage 2. Loose or corroded battery cable connections. 	<ol style="list-style-type: none"> 1. Battery weak, recharge. Run winch with vehicle motor running 2. Clean, tighten, or replace
Motor overheating	Winch running time too long	Allow winch to cool down periodically
Motor runs in one direction only	<ol style="list-style-type: none"> 1. Defective or stuck solenoid 2. Defective Switch Assy 	<ol style="list-style-type: none"> 1. Tap solenoid to loosen contacts. Repair or replace solenoid 2. Replace Switch Assy

Parts Lists and Diagrams

Winch Parts List

IMPORTANT!

When ordering parts, reference the appropriate number as follows:

Sku 40764 - 8,000 lb.= 87495

Sku 93752 - 9,000 lb.= 87478

Sku 91905 - 10,000 lb.= 87496

Item	Description	Q'ty
1	Mounting Frame (Box B)	1
2	Fairlead (Single Piece Hawse for Sku 40764; Roller Fairlead Assembly for Skus 93752 & 91905 – see Roller Fairlead parts list)	1
3	Screw M10x34	6
6	Nut M10	6
7	End Bearing	1
8	Spring	6
9	Locking Ring	1
10	Tie Bar	2
11	Cam Ring	1
12	Bolt M8 x 30	4
13	Nut M8	4
14	Ring Gear	1
15	Gear Ring Retainer	1
16	Brake Shoe	2
17	Screw M6x20	6
18	Gear Out-sun	1
19	Shaft Bushing	1
20	Roll Pin Ø3x10	1
21	Cable Anchor	1

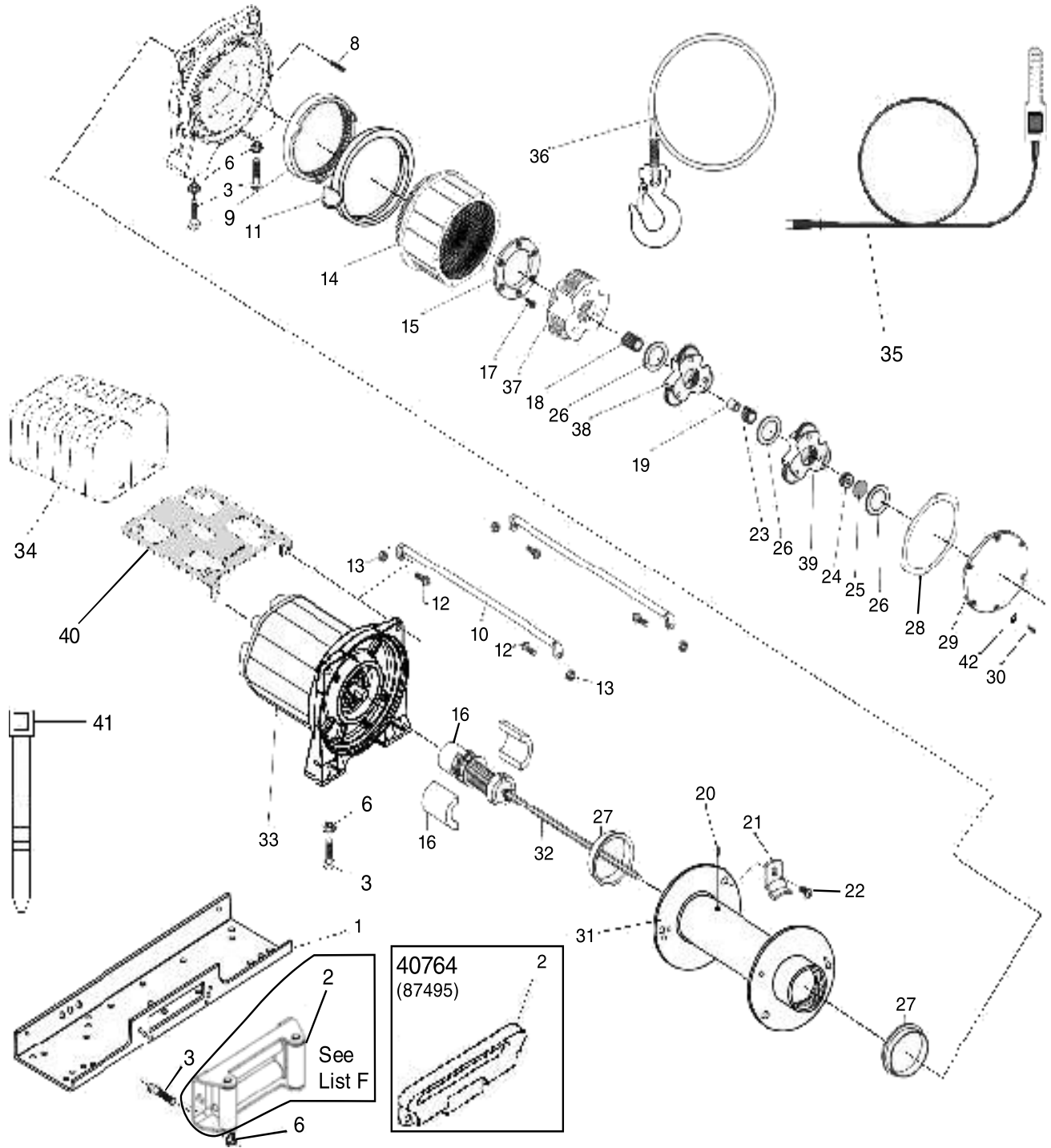
Item	Description	Q'ty
22	Cap Screw M6x12	1
23	Gear, intermediate-sun	1
24	Gear, input-sun	1
25	Thrust Disc	1
26	Thrust Washer	3
27	Bushing	2
28	Gasket	1
29	Gear Housing Cover	1
30	Screw M5x12	6
31	Drum	1
32	Brake/shaft assy	1
33	Motor End Bearing Assy	1
34	Solenoid Assy (see parts list S)	1
35	Switch Assy	1
36	Cable Assy Ø3/8" x100'	1
37	Gear Carrier Assy, output	1
38	Gear Carrier Assy, intermediate	1
39	Gear Carrier Assy, input	1
40	Solenoid Bracket	1
41	Bracket Tie-down Strap	1
42	Spring Washer Ø5	1

NOTE: Some parts are listed and shown for illustration purposes only and are not available individually as replacement parts.

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER NOR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

Winch Diagram



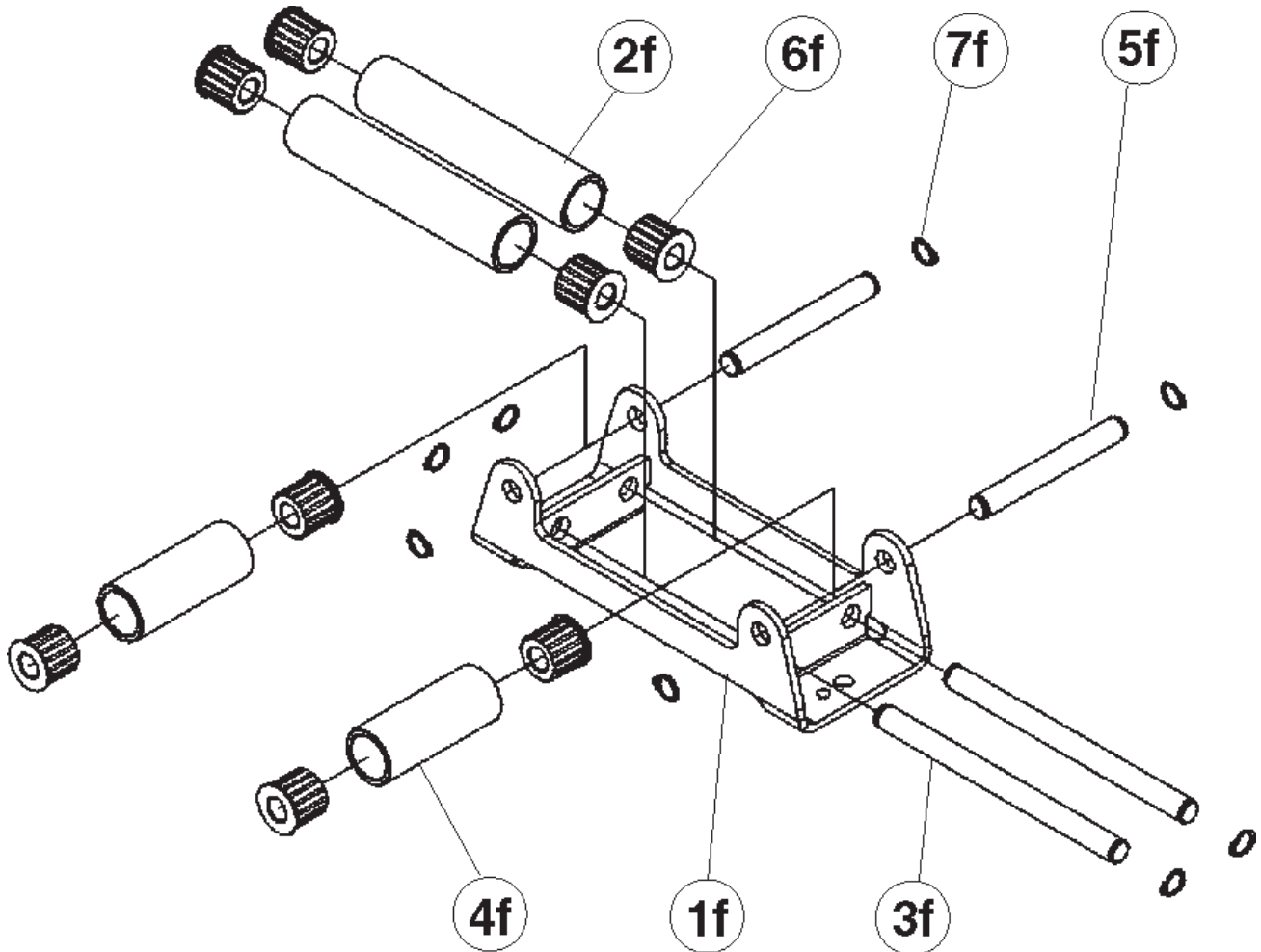
Roller Fairlead Parts List

IMPORTANT!
 When ordering parts, reference the appropriate number as follows:
 Sku 40764 uses a single piece hawse fairlead instead, don't order from this list.
 Sku 93752 - 9,000 lb.= 87478
 Sku 91905 - 10,000 lb.= 87496

Part	Description	Q'ty
1f	Frame	1
2f	Long Roller	2
3f	Long Shaft	2
4f	Short Roller	2

Part	Description	Q'ty
5f	Short Shaft	2
6f	Bushing	8
7f	C-clip	8

Roller Fairlead Diagram



Solenoid Parts List

IMPORTANT!

When ordering parts, reference the appropriate number as follows:

Sku 40764 - 8,000 lb.= 87495

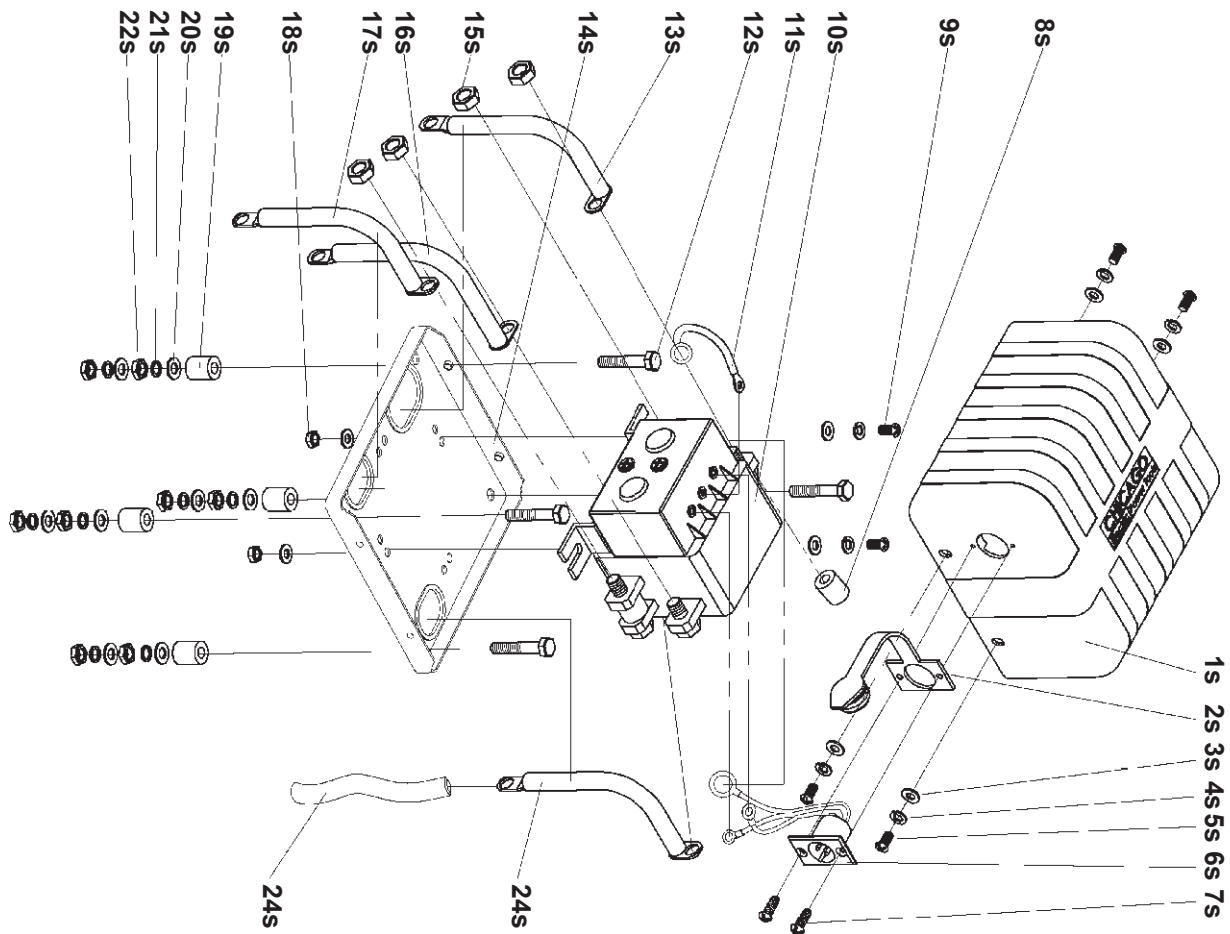
Sku 93752 - 9,000 lb.= 87478

Sku 91905 - 10,000 lb.= 87496

Item	Description	Q'ty
1s	Plastic Housing	1
2s	Socket Cover	1
3s	Flat Washer	6
4s	Spring Washer	4
5s	Combination-head Screw M5x10	4
6s	Socket	1
7s	Self-tapping Screw F 3x12	2
8s	Copper Spacer	1
9s	Combination-head Screw M5x12	2
10s	Solenoid	1
11s	Ground Cable	1
12s	Screw M6x30	4

Item	Description	Q'ty
13s	+ Battery Cable (Red)	1
14s	Base Plate	1
15s	Nut M8	4
16s	- Battery Cable (Black)	1
17s	- Output Cable (Black)	1
18s	Nut M5	2
19s	Spacer	4
20s	Flat Washer	8
21s	Spring Washer	8
22s	Nut M6	8
23s	Fiberglass Sleeve	1
24s	+ Output Cable (Red)	1

Solenoid Diagram



LIMITED 90 DAY WARRANTY

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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