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# ELECTRIC HOIST

## 220/440LB



**WARNING:**

Read carefully and understand all **ASSEMBLY AND OPERATION INSTRUCTIONS** before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

**STF-2244EH**

Thank you very much for choosing a Shop Tuff product. For future reference, please complete the owner's record below:

Model: STF-2244EH Purchase Date: \_\_\_\_\_

Save the receipt, warranty and these instructions. It is important that you read the entire manual to become familiar with this product before you begin using it.

This product is designed for certain applications only. The distributor cannot be responsible for issues arising from modification. We strongly recommend this product not be modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, DO NOT use the product until you have first contacted the distributor to determine if it can or should be performed on the product.

For technical questions please call **218-943-6290**.

## TECHNICAL SPECIFICATIONS

Model	STF-2244EH	
	Standard version	With pulley Hook
Load capacity	220lb	440lb
Lifting height	36ft	18ft
Lifting speed	33ft/min	16.5ft/min
Cable length	39ft	
Cable diameter	1/8" anti-twist	
Cable capacity	maximum 880lb	
Duty cycle	S3 20%-10min	
Voltage	110V/60Hz	
Motor size	3/4 HP	

## GENERAL SAFETY RULES



**WARNING:** Read and understand all instructions. Failure to follow all instructions listed below may result in serious injury.



**CAUTION:** Do not allow persons to operate or assemble this hoist until they have read this manual and have developed a thorough understanding of how the hoist works.



**WARNING:** The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions or situations that could 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.

## SAVE THESE INSTRUCTIONS

## WORK AREA

- **Keep work area clean**, free of clutter and well lit. Cluttered and dark work areas can cause accidents.
- **Keep children and bystanders** away while using the hoist. Distractions can cause you to lose control, so visitors should remain at a safe distance from the work area.
- **Be aware of all power lines, electrical circuits**, water pipes and other mechanical hazards in your work area, particularly those hazards below the work surface hidden from the operator's view that may be unintentionally contacted and may cause personal harm or property damage.
- **Be alert of your surroundings.**

## PERSONAL SAFETY

- **Stay alert**, watch what you are doing and use common sense when using the hoist. Do not use the hoist while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while using the hoist may result in serious personal injury.
- **Dress properly.** Do not wear loose clothing, dangling objects, or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.
- **Use safety apparel and equipment.** Use safety goggles or safety glasses with side shields which comply with current national standards, or when needed, a face shield. Also use non-skid safety shoes, hardhat, and gloves when appropriate.

## ELECTRIC HOIST USE AND CARE

- **Do not modify the hoist in any way.** Unauthorized modification may impair the function and/or safety and could affect the life of the equipment. There are specific applications for which the hoist was designed.
- **Always check for damaged or worn out parts before using the hoist.** Broken parts will affect the hoist operation. Replace or repair damaged or worn parts immediately.
- **Do not exceed the hoist load capacity.**
- **Store electric hoist.** When the hoist is not in use, store it in a secure place out of the reach of children. Inspect it for good working condition prior to storage and before re-use.
- **DO NOT EXCEED THE MANUFACTURER'S RECOMMENDED PRODUCT WEIGHT CAPACITY.** Doing so can result in personal injury and/or damage to the product.

**Warning:** 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.

## PERSONAL SAFETY

- **Avoid accidental starting. Be sure the Power Switch is off before plugging in.** Plugging in electric hoists with the Power Switch on, invites accidents.
- **Remove adjusting keys or wrenches before turning the electric hoist on.** A wrench or a key that is left attached to a rotating part of the electric hoist may result in personal injury.
- **Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the electric hoist in unexpected situations.
- **Use safety equipment. Always wear eye protection.** Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.
- **Do not force the hoist. Use the correct hoist for your application.** The correct hoist will do the job better and safer at the rate for which it is designed.
- **Do not use the electric hoist if the Power Switch does not turn it on or off.** Any hoist that cannot be controlled with the Power Switch is dangerous and must be replaced.
- **Disconnect the Power Cord Plug from the power source before making any adjustments, changing accessories, or storing the hoist.** Such preventive safety measures reduce the risk of starting the hoist accidentally.
- **Store when not in use hoists out of reach of children and other untrained persons.** Hoists are dangerous in the hands of untrained users.
- **Maintain hoists and check for frayed cable before each use. Keep hoists clean.** Properly maintained hoists are less likely to bind and are easier to control. Do not use a damaged hoist. Tag damaged hoists "Do not use" until repaired.
- **Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the hoist's operation. If damaged, have the hoist serviced before using.** Many accidents are caused by poorly maintained hoists.

- **Use only accessories that are recommended by the manufacturer for your model.** Accessories that may be suitable for one hoist may become hazardous when used on another hoist.
- **Never stand below a raised load. Keep all children, pets, etc. away from work area while in use.**

## SERVICE

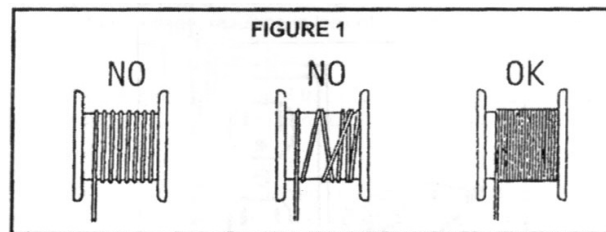
- **Hoist service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified personnel could result in a risk of injury.
- **When servicing a hoist, use only oem replacement parts. Follow instructions in the “*Inspection, Maintenance, And Cleaning*” section of this manual.** Use of unauthorized parts or failure to follow maintenance instructions may create a risk of electric shock or injury.

## SPECIFIC SAFETY RULES

- **Maintain labels and nameplates on the Hoist.** These carry important information. If unreadable or missing, contact the distributor for a replacement.
- **Always wear safety impact eye goggles, heavy work gloves, and steel toe boots when using the Hoist.** Using personal safety devices reduce the risk for injury.
- **Maintain a safe working environment.** Keep the work area well lit. Make sure there is adequate surrounding workspace. Always keep the work area free of obstructions, grease, oil, trash, and other debris. Do not use an electric hoist in areas near flammable chemicals, dusts, and vapors. Do not use this product in a damp or wet location.
- **Always secure hoist permanently before each use.**
- **Always keep the extension cord away from moving parts on the hoist.**
- **Avoid unintentional starting.** Make sure you are prepared to begin work before turning on the Hoist.
- **Do not force the Hoist.** This hoist will do the work better and safer at the speed and capacity for which it was designed.
- **Never use the Hoist to lift people or animals.**
- **Always leave a minimum of 4 wraps of cable on the drum.** The cable fastener on this wire rope Hoist is not rated for the maximum capacity of the Hoist.

## Additional Specific Safety Rules

- **Do not exceed the maximum lift capacity.** The application, size and type of load, the attachments to be used and the period of use must be taken into account.
- **Do not stand under raised loads.**
- **Do not operate the Hoist in wet conditions. Do not allow the Hoist to freeze.**
- **If pushing the lift button continually does not have any affect, do not continue.** This could be a sign that the load exceeds the maximum capacity.
- **Never adjust the cable or work on the Hoist when it is plugged into an electrical outlet.**
- **Always inspect the cable and hook prior to each use.** If the cable is damaged in any way, do not use it. Hooks that are bent, worn or whose openings are enlarged beyond normal throat opening should not be used.
- **If the Hoist is stopped during the lowering of a load, it is normal for the load to drop a few inches more due to inertia.**
- **The Hoist motor does not have an overload cut-out.** If you are unable to hoist a load and the load is under the maximum lift capacity, stop the Hoist and allow the motor to cool down before trying again.
- **Make sure the cable is correctly wound around the wheel.** See **FIGURE 1** below.
- **Do not support a load over or around people or animals.**
- **Do not leave load suspended in the air unattended.**
- **Do not allow a load to touch the hook latch.** Allowing a load to wear against the hook latch can result in loss of load.
- **Do not allow load to swing or twist while hoisting.**
- **Do not use cable as a sling or wrap cable around a load.**



**⚠ WARNING!**

People with pacemakers should consult their physician(s) before using this product. Operation of electrical equipment in close proximity to a heart pacemaker could cause interference or failure of the pacemaker.

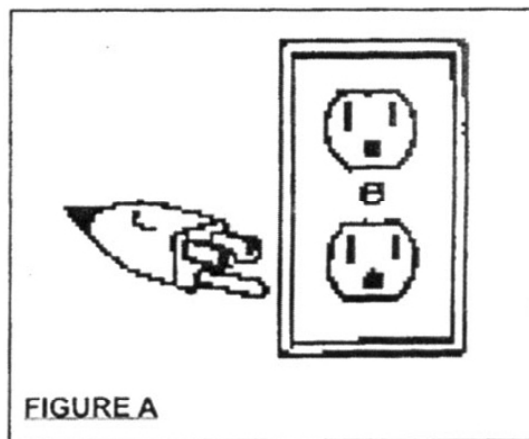
## GROUNDING

**⚠ WARNING!**

Improperly connecting the grounding wire can result in the risk of electric shock. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. Do not modify the power cord plug provided with the hoist. Never remove the grounding prong from the plug. Do not use the hoist if the power cord or plug is damaged. If damaged, have it repaired by a service facility before use. If the plug will not fit the outlet, have a proper outlet installed by a qualified electrician.

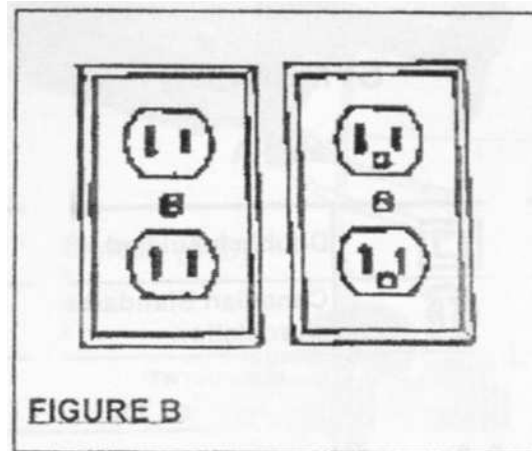
## GROUNDING HOISTS: HOISTS WITH 3-PRONG PLUGS

- Hoists marked with “Grounding Required” have a 3-wire cord and 3-prong grounding plug. The plug must be connected to a properly grounded outlet. If the hoist should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user, reducing the risk of electric shock. **(See Figure A.)**
- The grounding prong in the plug is connected through the green wire inside the cord to the grounding system in the tool. The green wire in the cord must be the only wire connected to the tool’s grounding system and must never be attached to an electrically “live” terminal.
- Your hoist must be plugged into an appropriate outlet, properly installed and grounded in accordance with all codes and ordinances. The plug and outlet should look like those in the following illustration. **(See Figure A.)**



## DOUBLE INSULATED HOISTS: HOISTS WITH TWO PRONG PLUGS

- Hoists marked “Double Insulated” do not require grounding. They have a special double insulation system which satisfies OSHA requirements and complies with the applicable standards of Underwriters Laboratories, Inc., the Canadian Standard Association, and the National Electrical Code.
- Double insulated hoists may be used in either of the 120 volt outlets shown in the following illustration. (See Figure B.)



## EXTENSION CORDS




- **Grounded** hoists require a 3-wire extension cord. **Double Insulated** hoists can use either a 2- or 3-wire extension cord.
- As the distance from the supply outlet increases, you must use a heavier gauge extension cord. Using extension cords with inadequately sized wire causes a serious drop in voltage, resulting in loss of power and possible tool damage.
- The smaller the gauge number of the wire, the greater the capacity of the cord. For example, a 14- gauge cord can carry a higher current than a 16- gauge cord.
- When using more than one extension cord to make up the total length, make sure each cord contains at least the minimum wire size required.
- If you are using one extension cord for more than one hoist, add the nameplate amperes and use the sum to determine the required minimum cord size.



- If you are using an extension cord outdoors, make sure it is marked with the suffix “W-A” (“W” in Canada) to indicate it is acceptable for outdoor use.
- Make sure your extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified electrician before using it.
- Protect your extension cords from sharp objects, excessive heat, and damp or wet areas.

## SYMBOLGY

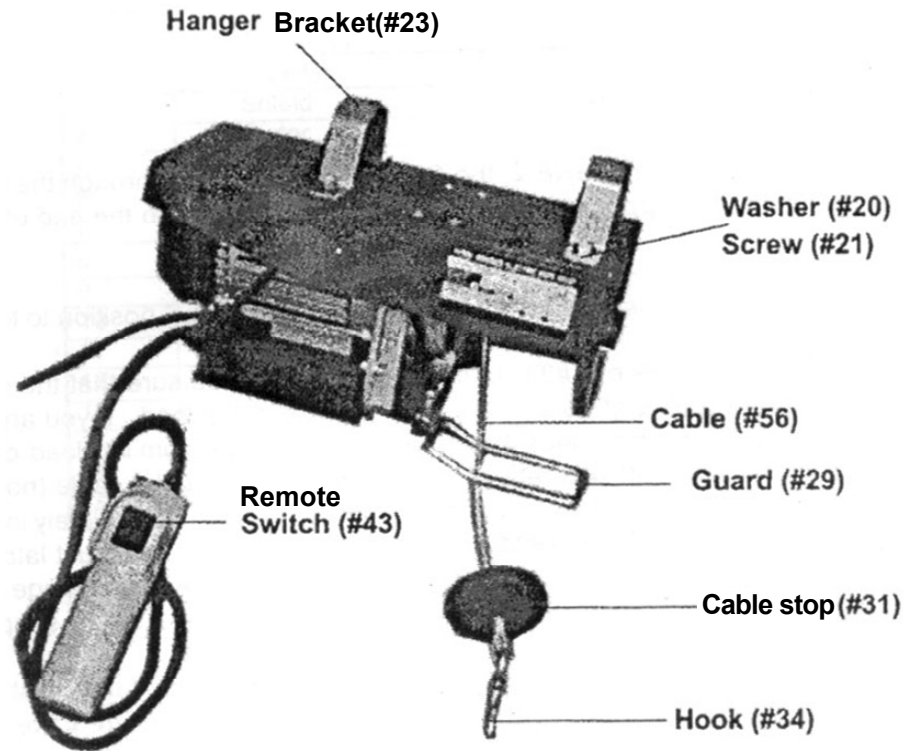
Table A

	Double Insulated
	Canadian Standards Association
	Underwriters Laboratories, Inc.
V ~	Volts Alternating Current
A	Amperes
$n_o$ xxxx/min.	No Load Revolutions per Minute (RPM)

## UNPACKING

When unpacking, check to make sure all the parts shown on the Parts Breakdown are included.

**FIGURE 2**



## **ASSEMBLY AND OPERATING INSTRUCTIONS**

### **Hoist Set-up**

**⚠ WARNING!** Unplug the Hoist before set-up.

- This Hoist is designed to be attached to a beam or steel pipe and the base securely held in place by both of the **Hanger brackets(#23)**. See **FIGURE 2**.

**Note:** The beam or steel pipe must be capable of carrying four times the weight of the Hoist capacity. If in doubt, consult a registered engineer and the building code.

**Note:** Make sure the area underneath or around the Hoist is clear of obstructions. Do not Hoist loads over people or animals.


- After determining the location of the Hoist, make sure the beam or pipe is the proper size to fit inside of the **Hanger brackets(#23)**. Have a second person hold the hoist flush against the beam or pipe. Line up the holes on each **Hanger bracket(#23)** with the holes on the top of the Hoist. Thread in two **Screws (#21)** and **Washers (#20)** per **Hanger bracket(#23)** to secure the Hoist to the Beam or Steel Pipe. Check that it is secure. Before each use, check that the **Hangers brackets(#23)** are securely fastened to the Hoist.

- Ideally, the Hoist needs to be set-up within a reachable distance to a 3-prong power outlet without the need of an extension cord. However, extension cords are safe and acceptable when properly used.

## OPERATION


### Using the Hoist

Refer to **FIGURE 2**

 **WARNING!** As illustrated in **FIGURE 2**, the **Cable (#56)** must flow through the cable **Guard (#29)**, and the **Cable Stop(#31)** must be securely attached to the end of the **Cable (#56)**.

- Plug in the unit and press the **Remote Switch (#43)** toward the “down” position to lower the **Hook (#34)** to the load.
- When connecting the **Hook (#34)** to the load, you must be sure that the connection point on the load is capable of holding the weight of the entire load. If you are not sure, use a separate cable (not included) that is rated above the weight capacity of the load, to surround the load and safely secure. The load should be centered directly under the hook/hoist for safety. The safety tab on the hook must be latched over the connection point or cable or the load may fall causing serious damage and injury.
- Make sure no people or animals are near the immediate area. Never support a load over people or animals.
- Standing clear, push the **Remote Switch (#43)** toward the “lift” position. Slowly raise the load only enough to clear the floor and check to be sure the load is securely fastened. Proceed only after you are sure the load is secure and free of all obstructions. If the Hoist refuses to lift the load you might have exceeded maximum lift capacity. If you are under the maximum capacity and the Hoist stops on its own, release the lift switch and stay clear while the motor has sufficient time to cool down. Then, resume the process.
- When you are ready to lower the load, press the **Remote Switch (#43)** toward the “down” position.
- When the load is completely on the ground, keeping clear of it, shake or move the load to make sure it is sitting firmly on the ground. Then, remove the **Hook (#34)** from the load.
- Push the **Switch (#43)** toward the “lift” position and bring the **Cable Stop (#31)** up to within a few inches of the **Guard (#29)**.
- When finished, unplug the unit.

## INSPECTION, MAINTENANCE, AND CLEANING

 **WARNING!** Before each use, inspect the general condition of the hoist. Check for loose screws, misalignment or binding of moving parts, cracked or broken parts, damaged electrical wiring, and any other condition that may affect its safe operation. If abnormal noise or vibration occurs, have the problem corrected before further use. **Do not use damaged equipment.**

- Wipe the Hoist down with a lint free cloth.
- Check the cable for tears, excessive wearing, damage or frays. If you find any, Do not use the Hoist until the cable is replaced by a qualified technician. Only use genuine replacement cable (**Cable (#56)**). Do not substitute rope or any other type of cable.
- Periodically lubricate the cable with a light oil.

## PARTS BREAKDOWN

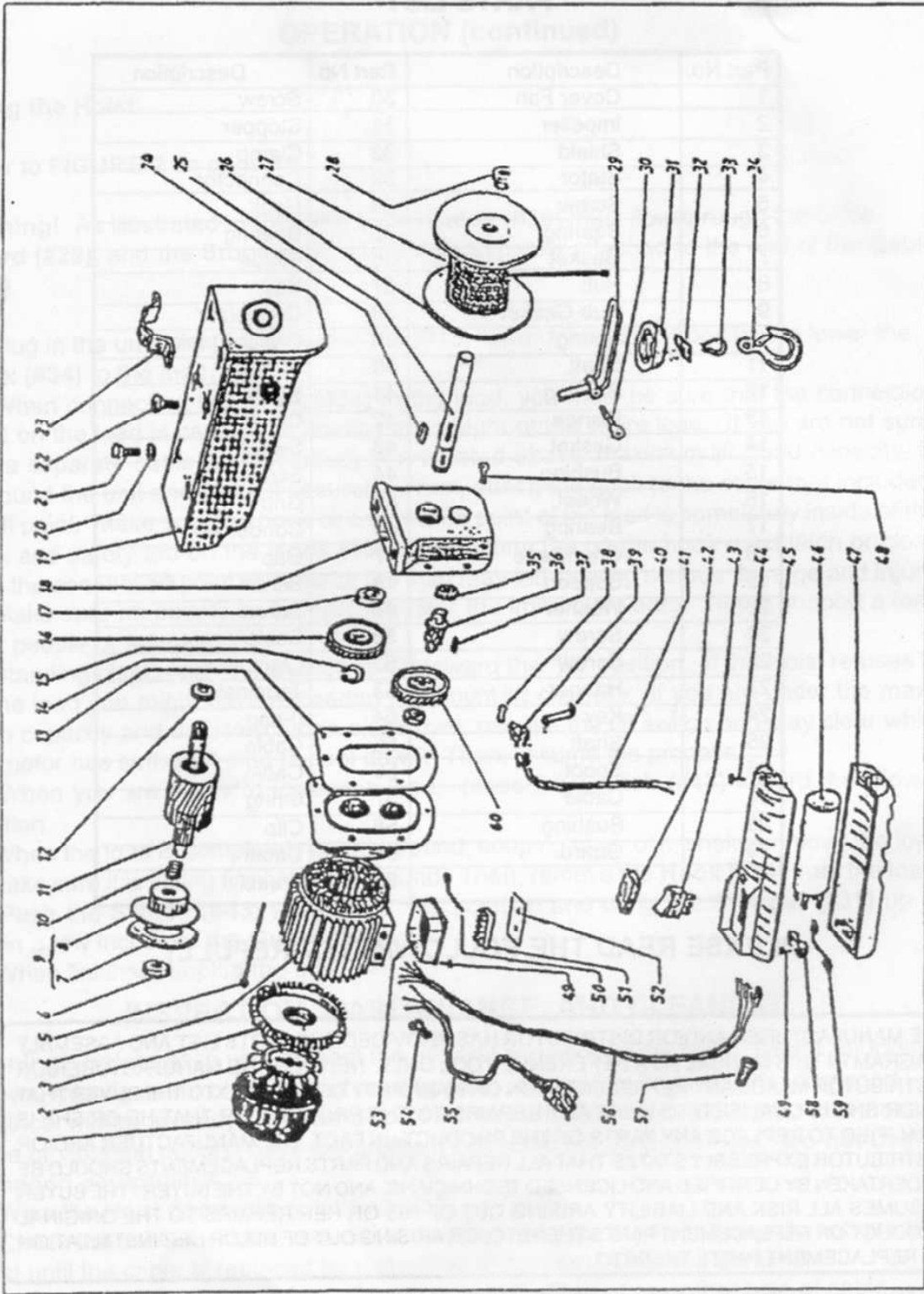
Part No.	Qty	Description	Part No.	Qty	Description
1	1	Cover Fan	31	1	Cable Stop
2	1	Impeller	32	2	Clamp
3	1	Shield	33	1	Connector
4	1	Stator	34	1	Hook
5	4	Screw	35	1	Bearing
6	1	Bearing	36	1	Pinion
7	1	Basket	37	1	Key
8	1	Hub	38	1	Connector
9	1	Hub Gasket	39	1	Switch/Cable
10	1	Spring	40	1	Spring
11	1	Shaft	41	3	Screw
12	1	Bearing	42	1	Cover
13	1	Flange	43	1	Remote Switch
14	1	Gasket	44	1	Screw
15	1	Bushing	45	1	Grip
16	1	Wheel	46	1	Condenser
17	1	Bearing	47	1	Grip
18	1	Crankcase	48	6	Screw
19	1	Support	49	4	Screw
20	4	Washer	50	1	Cable
21	2	Screw	51	1	Clamp
22	4	Screw	53	1	Terminal
23	2	Hanger Bracket	54	1	O-Ring
24	1	Key	55	1	Cable
25	1	Shaft	56	1	Cable
26	1	Spool	57	1	O-Ring
27	1	Cable	58	1	Clip
28	1	Bushing	59	1	Cable
29	1	Guard	60	1	Wheel
30	1	Screw			

### PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR 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.

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


# PARTS DIAGRAM



For replacement parts and technical questions, please call **218-943-6290**

## **WARRANTY**

### **One-year limited parts warranty**

 **WARNING:** BAC Industries, Inc and Shop Tuff will not be held liable for any damages, losses, or injury due to the misapplication or misuse of this product, or for any other reason. ALWAYS wear ANSI approved safety glasses, protective clothing, and proper hand and foot protection at all times. Keep all people, pets or animals clear from any work area.



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