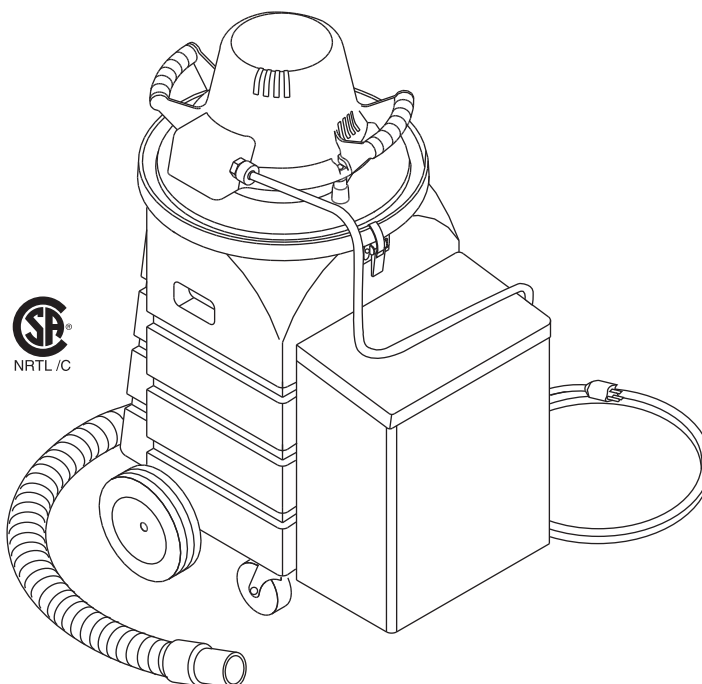


# INSTRUCTION MANUAL



## 690 Power Fishing System

Includes Serial Number AAR 3800 and higher



**Read** and **understand** all of the instructions and safety information in this manual before operating or servicing this tool.

Register this product at [www.greenlee.com](http://www.greenlee.com)

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## Description

The Greenlee 690 Power Fishing System is intended to “fish,” or route, nylon fishing line through 1/2" to 4" conduit. Optional accessories are also available for fishing through 5" and 6" conduit, and for clean-up vacuuming.

This tool is intended for commercial use.

## Safety

Safety is essential in the use and maintenance of Greenlee tools and equipment. This instruction manual and any markings on the tool provide information for avoiding hazards and unsafe practices related to the use of this tool. Observe all of the safety information provided.

## Purpose of this Manual

This manual is intended to familiarize personnel with the safe operation and maintenance procedures for the following Greenlee product:

690 Serial Number AAR 001 and higher

Keep this manual available to all personnel.

Replacement manuals are available upon request at no charge at [www.greenlee.com](http://www.greenlee.com).



**Do not discard this product or throw away!**

For recycling information, go to [www.greenlee.com](http://www.greenlee.com).

All specifications are nominal and may change as design improvements occur. Greenlee Textron Inc. shall not be liable for damages resulting from misapplication or misuse of its products. Mighty Mouse is a registered trademark of Greenlee Textron Inc.

# ***KEEP THIS MANUAL***

## IMPORTANT SAFETY INFORMATION



### SAFETY ALERT SYMBOL

This symbol is used to call your attention to hazards or unsafe practices which could result in an injury or property damage. The signal word, defined below, indicates the severity of the hazard. The message after the signal word provides information for preventing or avoiding the hazard.

#### **DANGER**

Immediate hazards which, if not avoided, **WILL** result in severe injury or death.

#### **WARNING**

Hazards which, if not avoided, **COULD** result in severe injury or death.

#### **CAUTION**

Hazards or unsafe practices which, if not avoided, **MAY** result in injury or property damage.



#### **DANGER**

Read and understand all of the instructions and safety information in this manual before operating or servicing this tool.

Failure to observe this warning will result in severe injury or death.



#### **DANGER**

Do not use this tool in a hazardous environment, or use this tool to vacuum up anything hazardous. Hazards include flammable liquids, gases, or other materials. Such use can result in a fire or explosion.

Failure to observe this warning will result in severe injury or death.

#### **WARNING**

- Do not allow to be used as a toy. Close attention is necessary when used by or near children.
- Use only as described in this manual. Use only manufacturer's recommended attachments.
- Do not put any object into openings. Do not use with any opening blocked; keep free of dust and debris that may reduce air flow.
- Turn power OFF before unplugging.
- Use extra care when cleaning on stairs.
- Keep loose clothing and all parts of the body away from openings and moving parts.

Failure to observe these warnings could result in severe injury or death.

#### **WARNING**


Electric shock hazard:

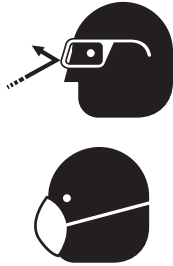
- Do not leave unit unattended when plugged in. Unplug from receptacle when not in use and before servicing.
- Do not expose to rain. Store indoors.
- Do not handle plug or vacuum/blower unit with wet hands.
- Do not use with a damaged cord or plug. If the vacuum/blower is not working as it should, if it has been dropped, damaged, left outdoors or dropped into water, send it to an authorized Greenlee service center.
- Do not pull or carry by cord, use the cord as a handle, close a door on the cord, run over the cord, or pull the cord around sharp edges or corners. Keep the cord away from heated surfaces.
- Do not unplug by pulling on the cord. To unplug, grasp and pull the plug — not the cord.
- Connect to a properly grounded receptacle only. Refer to "Grounding Instructions."
- Disconnect from power before servicing.

Failure to observe these warnings could result in severe injury or death.



## IMPORTANT SAFETY INFORMATION


	<p><b>⚠ WARNING</b></p> <p>Do not vacuum or blow burning or toxic materials such as carcinogens, asbestos, pesticides or heavy metals.</p>
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	<p><b>⚠ WARNING</b></p> <ul style="list-style-type: none"> <li>• Wear eye protection and a dust mask when operating or servicing this tool.</li> <li>• Piston and debris will exit the conduit at high speed. Attach the warning tag at the exit end of the conduit before blowing a piston through the conduit.</li> </ul> <p>Failure to wear eye protection could result in serious eye injury from flying debris.</p>
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<p><b>⚠ CAUTION</b></p> <ul style="list-style-type: none"> <li>• Do not use without a clean filter in place. Using the vacuum/blower with a clogged, damaged or missing filter will cause damage to the motor.</li> <li>• Do not vacuum up anything that is burning or smoking, such as cigarettes, matches or hot ashes.</li> </ul> <p>Failure to observe these warnings may result in severe injury or death.</p>
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*Note: Keep all decals clean and legible, and replace when necessary.*

## Grounding Instructions

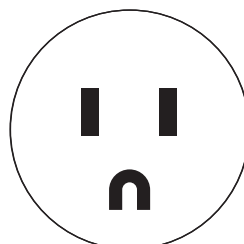
	<p><b>⚠ WARNING</b></p> <p>Electric shock hazard:</p> <ul style="list-style-type: none"> <li>• Do not modify the plug provided with the tool.</li> <li>• Connect this tool to a grounded receptacle on a 15-amp GFCI-protected circuit.</li> </ul> <p>Failure to observe these warnings could result in severe injury or death.</p>
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This tool must be grounded. In the event of a malfunction or breakdown, an electrical ground provides a path of least resistance for the electric current. This path of least resistance is intended to reduce the risk of electric shock.

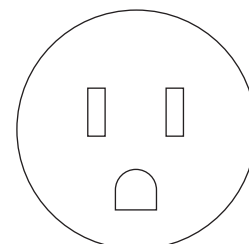
This tool's electric cord has a grounding conductor and a grounding plug as shown. Do not modify the plug. Connect the plug to a corresponding GFCI-protected receptacle that is properly installed and grounded in accordance with all national and local codes and ordinances.

Do not use an adapter.

**NEMA 5-15**

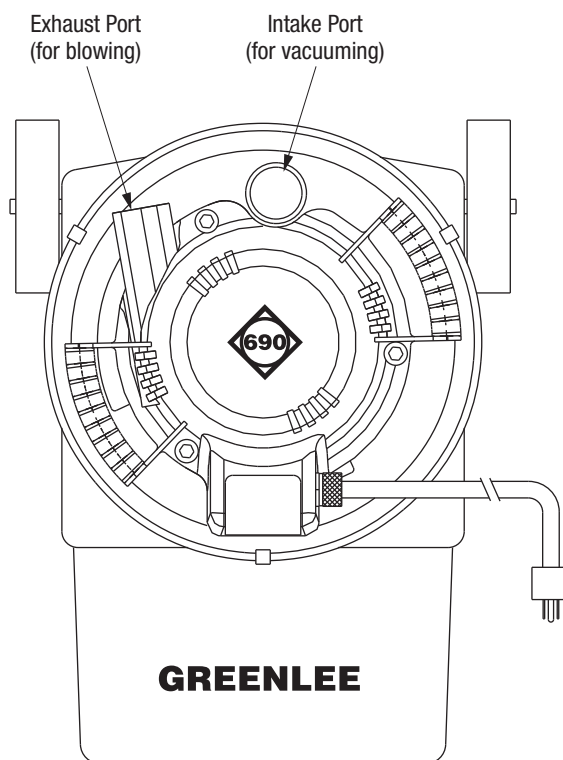


Plug



Receptacle

## Identification



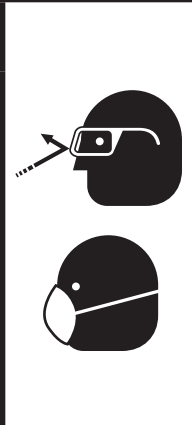
## Specifications

Motor .....	12 amps / 120 VAC / 60 Hz
Pressure	
Blower .....	0.275 bar (4 psi)
Vacuum	
Column of Water .....	2.8 m (110")
Column of Mercury .....	203 mm (8")
Air Flow .....	3.4 m <sup>3</sup> /min (120 ft <sup>3</sup> /min)
Piston Speed in 1/2" Conduit .....	145 m/min (475 ft/min)
Tank Capacity	
Liquid .....	41 L (11 U.S. gal)
Dry .....	30 L (8 U.S. gal)
Mass / Weight .....	22.7 kg (51 lb)

## Setup

1. Unfasten the catches. Remove the motor cover and remove the hose from the tank. Install the cover and latch the catches.
2. Attach the storage box to the tank by positioning the box over the triangular rib on the tank and sliding the box down firmly until it locks into place.

## Operation

	<p><b>⚠ WARNING</b></p> <ul style="list-style-type: none"> <li>• Wear eye protection and a dust mask when operating or servicing this tool.</li> <li>• Piston and debris will exit the conduit at high speed. Attach the warning tag at the exit end of the conduit before blowing a piston through the conduit.</li> </ul> <p>Failure to wear eye protection could result in serious eye injury from flying debris.</p>
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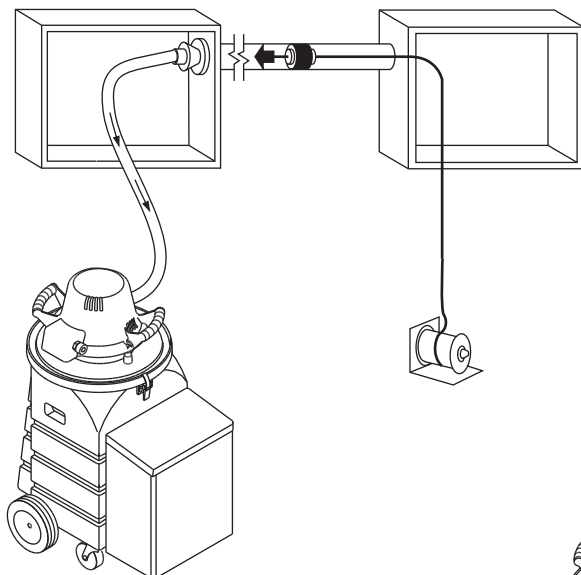
Use the 690 alone, or combine it with a 592 Mighty Mouser® as shown here.

### OPERATING TIPS

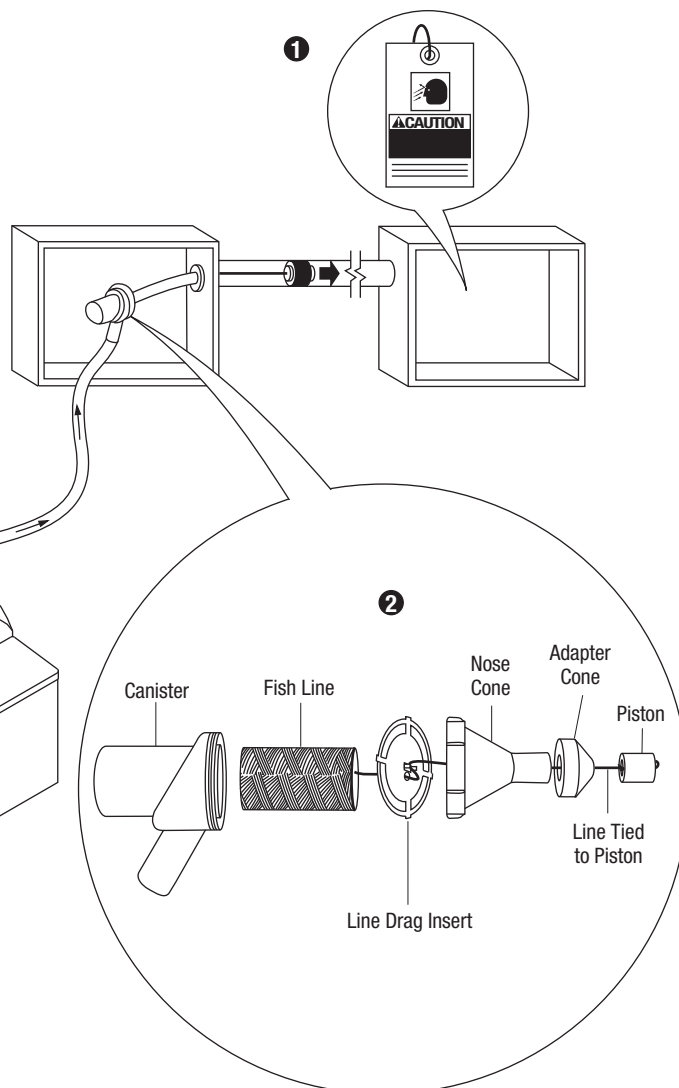
- When fishing through IMC or rigid, blowing is generally more efficient than vacuuming.
- When fishing through EMT, vacuuming is the better method. EMT connections are not airtight, and a piston that is blown through might not reach the exit end of the conduit run.
- Two fishing lines can be vacuumed in at the same time, if desired. Leave one line in the conduit to pull additional wire into the conduit after the initial installation.

## Operation (cont'd)

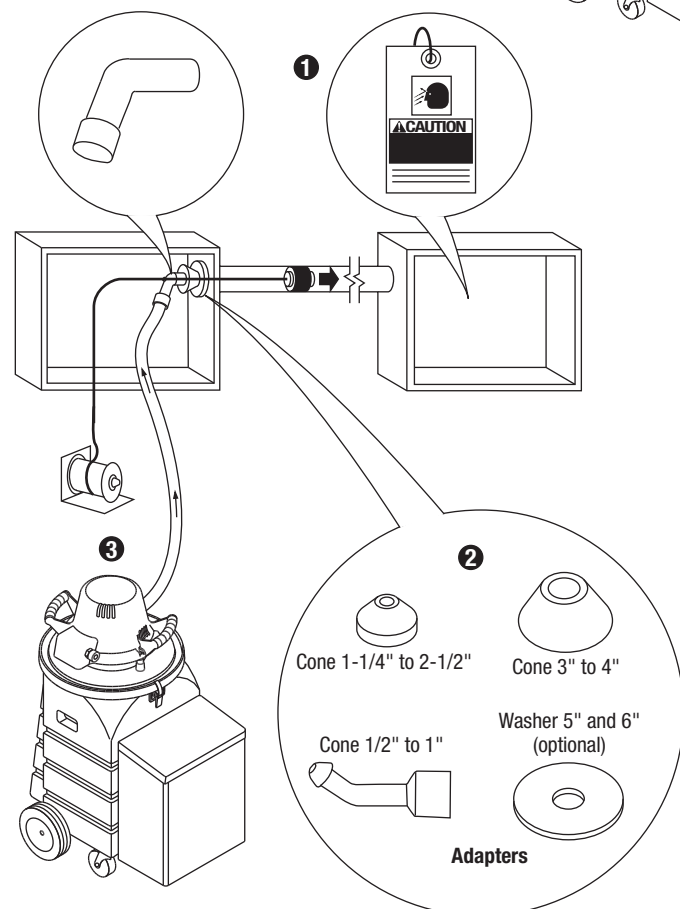
### VACUUMING



### BLOWING WITH OPTIONAL 592 MIGHTY MOUSER®




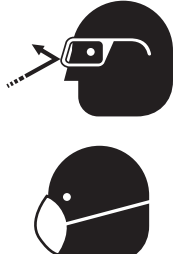
### BLOWING



## Operation (cont'd)

### CLEAN-UP VACUUMING

	<p><b>⚠ WARNING</b></p> <p>Do not vacuum or blow burning or toxic materials such as carcinogens, asbestos, pesticides or heavy metals.</p>
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	<p><b>⚠ WARNING</b></p> <p>Wear eye protection and a dust mask when operating or servicing this tool.</p> <p>Failure to wear eye protection could result in serious eye injury from flying debris.</p>
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<p><b>⚠ WARNING</b></p> <p>Use extra care when cleaning on stairs.</p> <p>Failure to observe this warning could result in severe injury or death.</p>
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<p><b>⚠ CAUTION</b></p> <ul style="list-style-type: none"> <li>Do not use without a clean filter in place. Using the vacuum/blower with a clogged, damaged or missing filter will cause damage to the motor.</li> <li>Do not vacuum up anything that is burning or smoking, such as cigarettes, matches or hot ashes.</li> </ul> <p>Failure to observe these warnings may result in severe injury or death.</p>
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### Wet Pickup

This unit is equipped with a shut-off float valve. When the unit is used for wet pickup, the rising fluid lifts the float valve until it seals against the motor intake. When this happens, the sound of the motor changes to a higher pitch. Unplug the unit, empty the tank, and replace the cover.

### Dry Pickup

For optional dry pickup accessories, refer to the "Optional Equipment" at the end of the "Parts List—690."

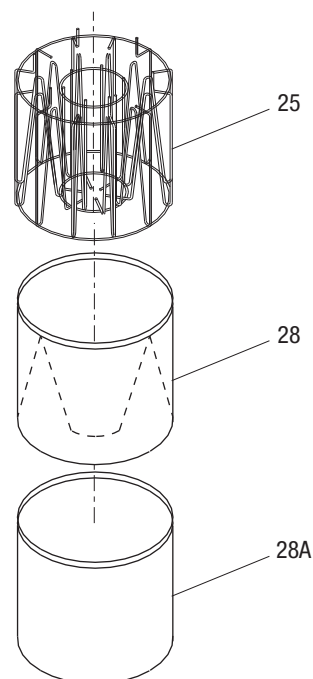
## Maintenance

	<p><b>⚠ WARNING</b></p> <p>Electric shock hazard:</p> <p>Disconnect from power before servicing.</p> <p>Failure to observe this warning could result in severe injury or death.</p>
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*Note: Keep filters clean. Efficiency of this vacuum is largely dependent on the cleanliness of the filters. A clogged filter can cause overheating and damage to the motor. Filters should be removed and cleaned periodically to ensure proper operation. After cleaning, allow filters to dry thoroughly to prevent deterioration.*

### Filters and Gaskets

1. Unplug the unit.
2. Remove the tank cover (21).
3. Carefully remove the filters (28, 28A) from the filter basket (25). Refer to the illustration.



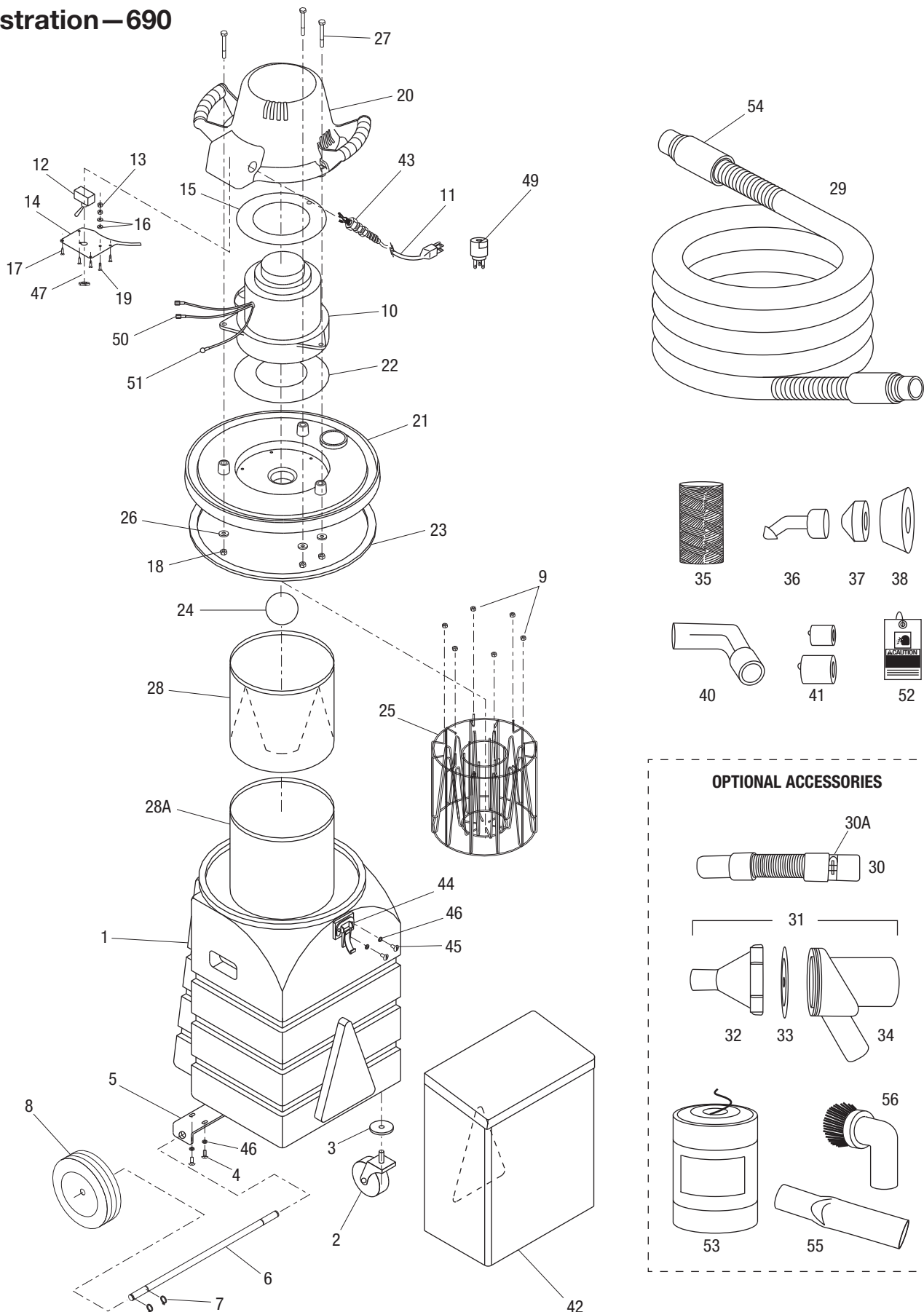
4. Clean the filters with a mild detergent and warm water. Allow them to dry thoroughly.
5. Inspect the gaskets (22, 23). Replace if necessary.
6. Install the filters. Install the tank cover and secure with the catches.



## Troubleshooting

Problem	Probable Cause	Probable Remedy
Unit does not run.	Faulty cord.	Replace cord.
	Faulty switch.	Replace switch.
	Faulty motor.	Replace motor.
Unit does not develop adequate vacuuming or blowing pressure.	Filters are dirty.	Clean the filters. Refer to the "Maintenance" section of this manual.
	Gaskets do not seal well.	Replace gaskets. Refer to the "Maintenance" section of this manual.
	Tank is full.	Empty the tank.
Piston does not travel through the conduit.	Wrong piston size.	Select the correct piston size.
	Conduit run is obstructed.	Clear the conduit run. Check for flattened bends.
	EMT couplings are loose.	Tighten the couplings.

## Illustration—690



**Parts List—690**

Key	Cat. No.	Part No.	Description	Qty
	690		Fish tape system.....	1
		50343920	Tank assembly (includes items 1–8, 44–46).....	1
1		50340263	Tank unit without wheels.....	1
2		90527380	Swivel caster.....	2
3			Washer, flat, 5/8".....	2
4			Screw, round head machine, #12-24 x 5/8".....	4
5		50340301	Axle bracket.....	1
6		50340310	Axle.....	1
7		90513533	1/2" retaining ring.....	4
8		90527372	Rubber wheel.....	2
9		90548116	Nut, push-on.....	6
		50005014	Vacuum unit assembly (includes items 10–28A, 43, and 47–51)	
10		50313258	Vacuum motor & blower.....	1
11		50386107	Power cord.....	1
12		91868114	Power switch with nut.....	1
13			Nut, hex, #8-32.....	2
14		50004239	Switch plate.....	1
15		50004220	Air baffle.....	1
16			Washer, internal tooth lock, #8.....	2
17			Screw, pan head, #8-18 x 3/8".....	4
18			Nut, Nylock hex, 1/4-20.....	3
19			Screw, round head machine, #8-32 x 1/2".....	1
20		50022628	Rainhat and decals.....	1
		50321188	Tank cover & motor mount (includes items 9, 21–28A).....	1
21		50313568	Tank cover.....	1
22		50388142	Gasket, blower.....	1
23		50166670	Gasket, tank.....	1
24		50166697	Ball valve.....	1
25		50005049	Filter basket.....	1
26			Washer, flat, 1/4".....	3
27			Bolt, hex head, 1/4-20 x 2.50".....	3
28		50313142	Filter bag, inner.....	1
28A		50313150	Filter bag, outer.....	1
29		50386247	Flexible hose, 1-1/2" dia. x 10 ft. ....	1
30		50321043	Flexible hose, 1-1/2" x 1 ft. ....	1
30A			Hose clamp, 2-1/4" (optional).....	1
31	691		Mighty Mouser™ Blow Gun (optional) (consists of items 32, 33 and 34).....	1
32		50320963	Handle canister (optional).....	1
33		50320980	Line drag insert (optional).....	1
34		50320971	Nose cone (optional).....	1
35	595		85 lb. tensile-strength nylon line (length of 2150 ft.).....	1
36		50256467	Adapter cone, 1/2 through 1".....	1
37		50256440	Adapter cone, 1-1/4 through 2-1/2".....	1
38		50256459	Adapter cone, 3" through 4".....	1
40		50233602	Handle, gun.....	1

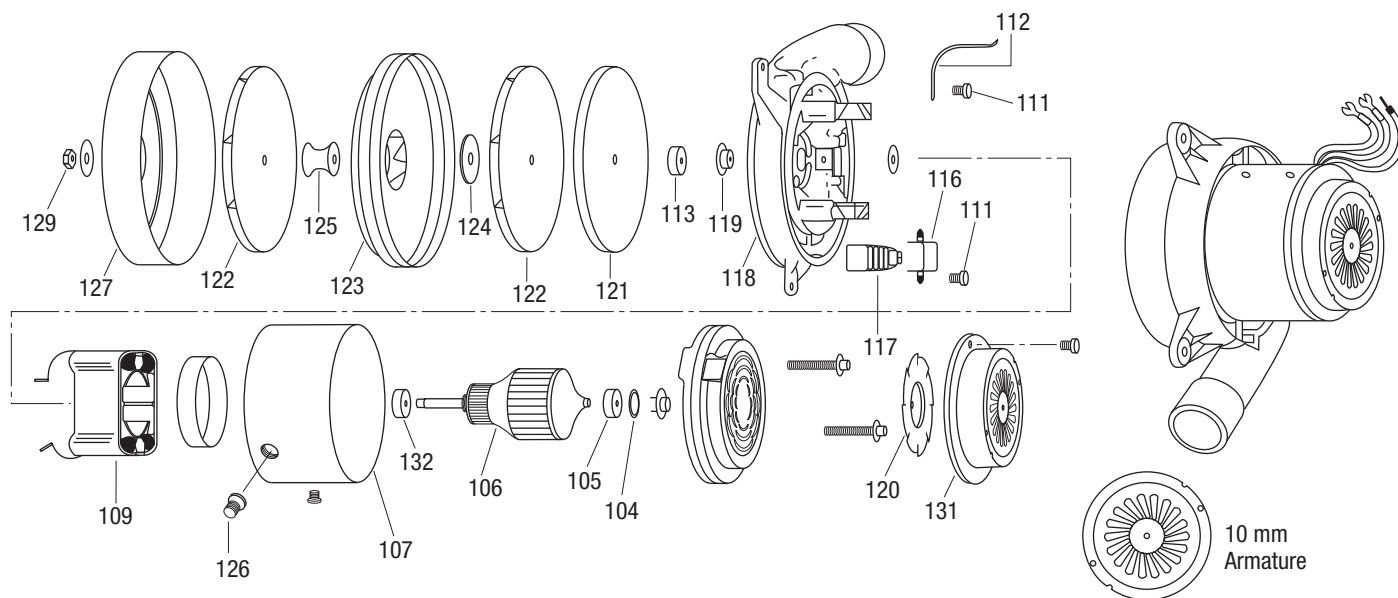
**Parts List—690 (cont'd)**

Key	Cat. No.	Part No.	Description	Qty
41	690		Fish tape system.....	1
	608		Piston for 1/2" conduit, foam type.....	1
	609		Piston for 3/4" conduit, foam type.....	1
	610		Piston for 1" conduit, foam type.....	1
	611		Piston, 1-1/4" conduit, foam type.....	1
	612		Piston for 1-1/2" conduit, foam type .....	1
	613		Piston for 2" conduit, foam type.....	1
	614		Piston for 2-1/2" conduit, foam type .....	1
	615		Piston for 3" conduit, foam type .....	1
	616		Piston, for 3-1/2" conduit, foam type .....	1
	617		Piston for 4" conduit, foam type.....	1
	621		Piston for 2-1/2" EMT .....	1
	646		Piston for 3-1/2" EMT .....	1
	622		Piston for 3" EMT.....	1
	623		Piston for 4" EMT.....	1
42		50340271	Storage box for accessories .....	1
43		91867983	Strain, relief .....	1
44		90533712	Catch.....	3
45			Screw, fillister head machine, #12-24 x 5/8" .....	6
46			Washer, #12 spring lock.....	10
47		90533860	Spring, lockwasher .....	1
50		91861047	Terminal, push-on .....	4
51		91860490	Terminal, ring.....	2
52		50341189	Warning card.....	1
54		90536304	Cuff.....	2
		50004670	Decal, Warning (not shown) .....	1
<b>OPTIONAL EQUIPMENT</b>				
41	618		Piston for 5" conduit	
41	619		Piston for 6" conduit	
		50172174	1-1/2" x 3" Repair coupler (not illustrated)	
53	604		85 lb Nylon fish line (2400 ft)	
55		50188771	Vacuum crevice tool	
56		50188798	Vacuum dust brush	

**Note:**

1. Old motor cover (50338226) and motor will work on new plastic (50309060) tank cover.
2. New motor cover (50009079) will not work on old aluminum (50309060) tank cover.

## Illustration and Parts List—Blower and Vacuum Motor

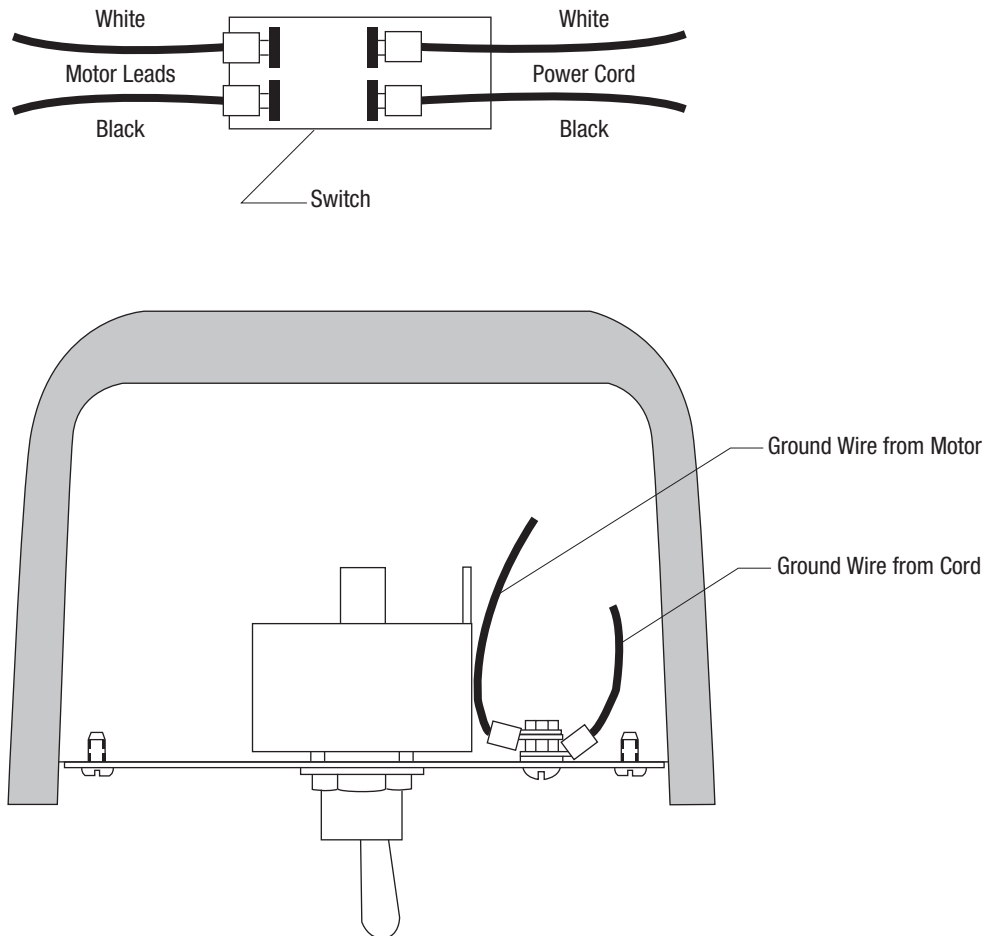


Key	Serial No. AAR	Description	Qty
	50313258	Vacuum motor and blower .....	1
104		Disc .....	1
105		Ball bearing .....	2
106		Armature.....	1
107		Band.....	1
109		Field.....	1
111		Screw, #8 x 32 UNC x 21/64 hex head mach.....	5
112		Lead and terminal .....	1
113		Slinger .....	2
116		Clamp.....	2
117	91861268	Brush mechanism .....	2
118		Bracket.....	1

Key	Serial No. AAR	Description	Qty
119		Spacer .....	1
120		Fan, ventilating .....	1
121		Fan .....	1
122		Rotating fan.....	2
123		Stationary fan .....	1
124		Washer .....	1
125		Spacer .....	1
126		Bushing, snap .....	1
127		Fan shell .....	1
129		Nut, 5/16-24 UNF hex jam.....	1
131		Cover.....	1
132		Bearing .....	1

*Note: Some parts shown are not available for individual sale.*

## Wiring Diagram

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A Textron Company

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	815-397-7070	Fax: 815-397-1865
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