



SPARTAN

MODEL 100

Owner's Manual

Record the Serial Number of your

Model 100

and give the number to the factory
when ordering parts.

Serial

Number



SPARTAN TOOL L.L.C.

800.435.3866

www.spartantool.com



Warnings



- Read the safety and operating instructions before using any Spartan Tool product. Drain and sewer cleaning can be dangerous if proper procedures are not followed and appropriate safety gear is not utilized.
- Before starting unit, be sure to wear personal protective equipment such as safety goggles or face shield and protective clothing such as gloves, coveralls or raincoat, rubber boots with metatarsal guards, and hearing protection.
- Drains and sewer can carry bacteria and other infectious micro-organisms or materials which can cause death or severe illness. Avoid exposing eyes, nose, mouth, ears, hands and cuts and abrasions to waste water or other potentially infectious materials during drain and sewer cleaning operations. To further help protect against exposure to infectious materials, wash hands, arms and other areas of the body, as needed, with hot, soapy water and, if necessary, flush mucous membranes with water. Also, disinfect potentially contaminated equipment by washing such surfaces with a hot soapy wash using a strong detergent.
- For any questions contact the company at the address shown below.
“California Prop. 65: This product may contain an extremely small amount of lead in the coating. Lead is a material known to the State of California to cause cancer or reproductive toxicity.”

SPARTAN TOOL L.L.C.
1618 Terminal Road
Niles, MI 49120
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Introduction



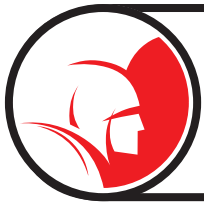
The Spartan Model 100 Electric Drain/Sewer Cleaning Machine has been designed and manufactured with high quality materials and care in workmanship. The instructions in this manual have been prepared to ensure that, when followed, the Spartan Model 100 will provide long and efficient service.



WARNING: It is the responsibility of the operator to read and understand the Operator's Manual and other information provided and use the correct operating procedure. Machines should be operated only by qualified operators. Failure to do so can result in personal injury, death or machine damage.

Read the entire manual before the initial start-up of the machine. It is important to know the correct operating procedures of the machine and all safety precautions to prevent the possibility of property damage and/or personal injury.

NOTE: Information in this manual is current at the time of printing. Spartan Tool reserves the right to make changes and improvements to its products at any time without notice or obligation.



Service Information



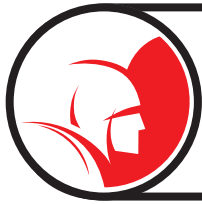
All requests for information, service or parts should include machine serial number. Additional copies of this Owner's Manual can be downloaded free of charge from the Spartan Tool website, www.spartantool.com.

For more information contact: Customer Service, Spartan Tool L.L.C.
161 Terminal Road
Niles, Michigan 49120
Phone (800) 435-3866

Record below and retain product model and serial number.

Model Number: _____

Serial Number: _____



Specifications & Features



Drum Capacity:	75' of 1/2" cable or 100' of 13/32" or 5/16" cable.
Cleaning Cap.	up to 100' for 1-1/4" - 2" diameter line size; up to 75' for 2"-4" diameter line size.
Motor:	Permanent magnet; 115 volt AC (rectified); .75 amps (DC) @ 270-290 rpm (no load); 1.45 amps (DC) @ 185 rpm. (1/12 hp)
Weight:	55 lbs.
Height:	28" to top of handle (retracted) 44" to top of handle (extended)
Width:	22"
Length:	24" with Dial-A-Cable Power Feed
Drum Speed:	290 RPM with no load.
Cable Feed:	Optional Spartan Dial-A-Cable Power Cable Feed.
Frame:	Extra strength aluminum magnesium alloy.

- Heavy duty permanent magnet motor with reverse capability.
- Inner drum rotates independently of outer drum, virtually eliminates cable kinking, buckling and controls torque buildup.
- Outer drum keeps dirt inside, off operator and work area.
- Air foot switch with cord assembly keeps both hands free for safe, easy operation.
- Compact, portable design.
- Extra-strength aluminum magnesium alloy construction.
- Retractable "Sure-Grip" handle.

IMPORTANT

For your own safety

Before assembling and operating this unit, read this operator's manual carefully and completely. Learn the operation, applications and potential hazards peculiar to this unit.



Safety Instructions



Use of any electrical equipment in a wet or damp environment can cause fatal shock if not properly guarded against by the operator.

- 1 Know Your Drain Cleaning Machine. Read this Operator's Manual carefully. Learn the operation, applications and limitations of this machine.
- 2 Grounding Instructions. Before using your Spartan equipment, make sure that a properly grounded, (three hole) electrical outlet is available. If not, as in older homes, use a three-prong adapter and connect the green pigtail or grounding lug to a known ground, such as a (metallic) cold water pipe. This tool should be grounded while in use to protect the operator from electric shock. The tool is equipped with a three-conductor cored and proper grounding type receptacle. The green (or green and yellow) conductor in the cord is the grounding wire. Never connect this wire to a live terminal. If your unit is for use on less than 150 volts, it has a plug that looks like that shown in Fig. 1A. An adapter, (Fig. 1B and 1C), is available for connecting three-prong plugs to two-prong receptacles, (except in Canada). If such an adapter is used, the green colored rigid ear, lug, or the like, extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box.

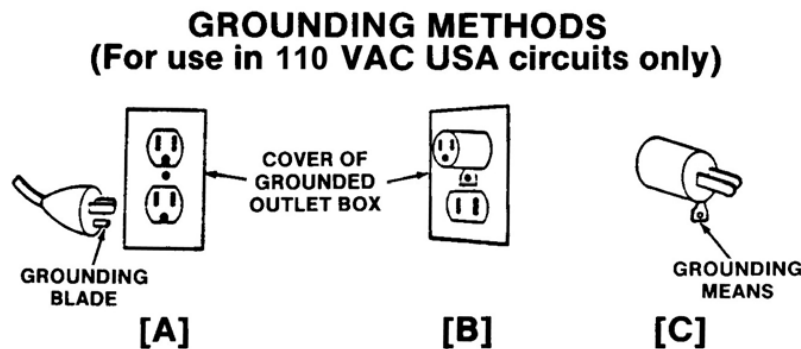


Figure 1

This machine is equipped with a Ground Fault Circuit Interrupter (GFCI), which should always be plugged directly into an inspected, grounded receptacle. Plug the three-pronged plug on the machine power cord with GFCI directly into an inspected grounded outlet and then test and reset the GFCI.

Never cut off the grounding prong on the power cord for use in a two-hole outlet. Doing so cuts off your protection from shock. Replace or repair all damaged power cords and components.



Safety Instructions (cont.)



3. Extension Cords. DANGER- Improper use of an extension cord will cause death or severe injury. The GFCI on the machine's power cord does not protect the operator from electrical shock along the extension cord.

If an extension cord must be used, it must be of an approved, three-wire construction, equipped with a three-pronged plug, and in good condition. Replace or repair damaged cords.

Do not use an undersized extension cord. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Use the following minimum gages depending upon the length of the extension cord:

-16 Ga. –for cords of less than 100 feet in length

-14 Ga. –for cords of 100 feet to 150 feet in length.

If in doubt, use the next heavier gage. (The smaller the gage number, the heavier the cord.) When the machine is used outdoors, use only extension cords intended for use outdoors and so marked. Do not allow an extension cord to be exposed to water.

Don't assume that all three hole outlets are properly installed. Check the outlet and also the adapter, if used, with an outlet testing device which quickly indicates if a ground is connected. Correct a faulty test indication before proceeding.

4. Don't Abuse Cord. Never move or lift tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil and sharp edges.
5. Disconnect Power Cord. When not in use, before servicing, and when changing accessories, such as blades and cutters.
6. Guard Against Electric Shock. Prevent body contact with grounded surfaces such as pipes, radiators, ranges, refrigerator enclosures.
7. Avoid Accidental Starting. Don't move plugged-in tools. Make sure switch is in OFF position before plugging in power cord.
8. Stay Alert. Watch what you are doing. Use common sense. Do not operate tool when you are tired.
9. Keep Work Area Clean. Cluttered areas invite injuries.
10. Consider Work Area Environment. Don't expose power tools to rain. Keep work area well lit.

Do not use tool in presence of flammable liquids or gases.

Avoid operating the machine in areas of standing water.



Safety Instructions (cont.)



11. Dress properly. Do not wear loose clothing or jewelry. They can be caught in moving parts. Wear protective hair covering to contain long hair.

Wear standard equipment. (Spartan riveted gloves). Never grasp a rotating cable with a cloth or loose fitting glove which would get wrapped around cable. Replace gloves if rivets or staples start to pull out.

Wear rubber boots and wear rubber gloves inside your Spartan cable handling gloves to further insulate yourself.

12. Use Safety Glasses. Guard against foreign material that might fly off cable.

13. Don't Overreach. Keep proper footing and balance at all times.

14. Keep Children Away. Do not let visitors contact tool or extension cord.

All visitors should be kept away from work area.

- 15 Use Recommended Equipment and Accessories.

Use of improper equipment may be hazardous.

Don't force small cable with attachment to do the job of heavy-duty cable.

16. Don't Force Tool.

It will do the job better and safer at the rate for which it was intended.

17. Remove Punches and Wrenches. Form a habit of checking to see that punches and adjusting wrenches are removed from tool before turning it on.

18. Keep Guards in Place. Never operate machine with guard removed.

19. Avoid Operating Machine in Reverse. Operating machine in reverse can result in cable damage and is used only to back tool away from an obstruction.

Warning! Continued drum rotation in reverse position will cause cable to "jump" out of drum. Possible operator injury could result.

20. Do Not Over Torque Cables. Excessive and/or continued rotation of the drum once an obstruction has been encountered will over torque the cable. Kinking or breakage of cable may result. A worn cable can be identified as being very limber, kinked or as having flattened coils on the outside of cable. Worn cable should be replaced as soon as possible.



Safety Instructions (cont.)



21. **Maintain Tools with Care.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories.
Never use damaged power cords.
Inspect tool cords periodically and if damaged, repair with proper Spartan replacement parts.
Inspect extension cords periodically and replace if damaged.
Keep handles dry, clean, and free from oil and grease.
22. **Check Damaged Parts.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
Replace defective switches with proper Spartan replacement parts.
Do not use tool if switch does not turn on and off.
23. **Store Idle Tools.** When not in use, tools should be stored in a dry and locked up place, away from children.
24. **Handling Cables.** Be very careful when cleaning drains exposed to cleaning compounds. Wear protective gloves when handling cable, and avoid direct contact of skin and especially the eyes and facial areas as serious burns can result from some drain cleaning compounds.



Machine Features



Model 100 shown with option Dial-A-Cable Power Cable Feed



Figure 2



Assembly Instructions



STUDY THESE INSTRUCTIONS CAREFULLY BEFORE YOU OPERATE YOUR EQUIPMENT

The Model 100 consist of the following components (which are purchased separately):

- | | | |
|---------------|------------------------|---------------------------------------|
| 1. Power Unit | 3: Cable | 5: Dial-A-Cable Power Feed (optional) |
| 2. Drum | 4: Roll Aid (optional) | |

JOINING CABLES

Certain cables and leaders may be coupled together by male and female couplings, and held securely by means of expansion pins as illustrated.

Assembly:

Place coupling in groove on top of stand with portion of expansion pin in upright position. Using hammer, drive expansion pin down flush with coupling. Assembly is complete, cable and machine are ready for use.



Safety Instructions (cont.)



Disassembling:

Position uncoupling stand at convenient distance from machine (2-3 feet.) Place coupling in groove, expansion pin up, on top of stand. Place tip of punch (provided with machine) in expansion pin. Drive expansion pin down with hammer. Note the shoulder on tip of punch, acts as a stop. Drive the punch until shoulder is flush with the coupling. This is sufficient to permit the male and female portions of the coupling to be separated but leaves the expansion pin, held securely in one half of the female coupling, in ready position for reassembly.

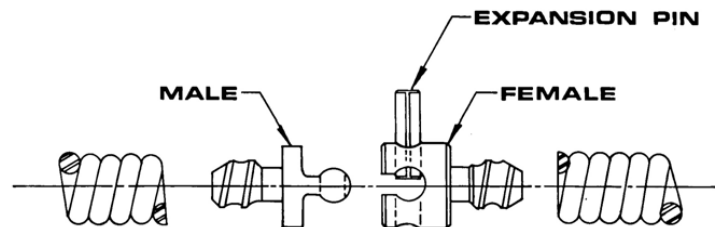


Figure 3

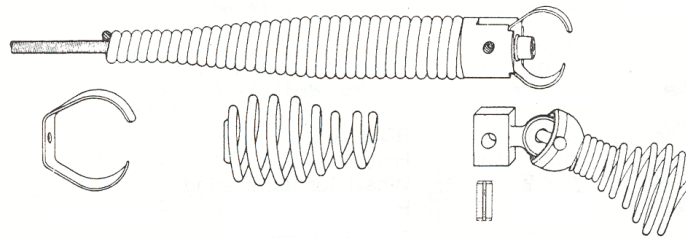


Figure 4

LOADING CABLE INTO MACHINE

Warning: Due to the amount of initial tension wound into your Spartan cable, care must be taken when uncoiling the bundle of cable. The cable will spring apart after the wire ties, which secure the cable, are cut.

After uncoiling the cable and laying out flat, attach the male end of the cable to the female end of the 5' anchor in the drum. With the machine plugged in, depress the foot actuator and check the rotation of the drum. The drum should rotate in a counter-clockwise direction, as you face the front of the machine. If the drum rotates in the wrong direction, reverse the toggle switch located on the outlet box cover and check rotation again. With the drum rotating in the proper direction, start feeding the cable into the drum.

Caution: Always wear your Spartan riveted gloves when handling a rotating cable. If using a Spartan Dial-A-Cable Power Cable Feed, read the section "How to Operate the Power Cable Feed" before you begin to feed cable into the drum. Feed the cable into the drum with the drum rotating. This insures proper distribution of cable inside the drum.



Operating



WARNING: Never wear loose fitting clothing or jewelry when operating this machine. Always wear your Spartan riveted gloves when handling cable.

1. Place your machine as close to the cleanout as possible. Do not allow more than 3 or 4 feet of cable between the machine and the cleanout.

WARNING: Operator should be thoroughly familiar with the Safety Instructions Section before attempting to operate this equipment.

2. Place foot switch, in a comfortable and accessible position in order to have power at all times.
3. Place the switch in the “F” (forward) position. Check by pressing down on footswitch making sure that drum rotates in counter clockwise direction as you face the drum.

- 3a. Hand-feed the tool into the opening of the line and feed about 6” of cable in before turning machine on.

Feed the cable into line slowly, feeling your way as you go.

NOTE: If using a Dial-A-Cable Power Cable Feed, refer to the section “How to Operate the Power Cable Feed” before proceeding.

WARNING: Before starting machine, operator’s gloved hand must be on cable or cable safety guide.

4. Exert sufficient downward pressure on cable to keep cable in line while depressing foot actuator to start cable rotating.
 - 4a. When using a manual machine, place two hands on the cable equal distance between the outlet of you machine and the cleanout, and keep them there at all times in operation. Your two hands, placed in the proper position, will provide a guide for the flexible shaft - preventing any possibility of buckling in your hands.
 - 4b. When using a Dial-A-Cable Power Cable Feed, keep one hand on the Cable Safety Guide halfway between the cleanout and the power feed outlet. Keep your other hand on the power feed control handle.

WARNING: Make sure you guide your cable at all times, since a flexible shaft must be guided otherwise it has a tendency to buckle.

5. When your blade meets an obstruction, it will no doubt fail to rotate. A reduction in RPM will be noticed. If RPM of the motor and drum decrease, quickly pull back on the cable to disengage blade from the root or other obstructions. Thereby releasing torque or tension on your cable preventing buckling or kinking of cable.

WARNING: Do not permit blade end to get hung up in an obstruction for more than 2 to 3 seconds. Your job as an operator of this machine is to keep the cable rotating. Remember do not operate the machine to the point where the cable begins to buckle. This practice is dangerous and could damage the cable.



Operating (cont.)



NOTE: Kinkage and breakage of cable is caused solely by one thing: you permit the working end of the cable to get hung up in an obstruction and you keep on twisting the other end of same with your motor, until something must give. Remember, the only way you can clean an obstruction from a line, or negotiate a bend in a line, is when your blades are rotating. Let us repeat -your job is to keep the blades rotating. The design of your motor is such that as soon as the blade end of your cable gets hung up in an obstruction, your motor RPM reduces. That reduction in speed is notice to the operator to pull the blade away from the obstruction, thereby releasing the tension that has been built up in the coil-spring cable. That release of tension prevents buckling, kinking or breakage of the cable.

6. A good rule to follow for releasing tension on a cable is this: when your blade gets hung up in the obstruction and fails to rotate, an RPM reduction will be noticeable which indicates it is time to pull the blade away from the obstruction. As you pull it away, all tension in the cable will be released immediately and your blades will turn at a high speed. As soon as the blade is free, push it back into the obstruction quickly so as to utilize the built-up power which enables you to clean the line more quickly and efficiently.

WARNING: Do not allow a tool to get hung up in an obstruction. If a tool gets hung up in an obstruction, a reverse feature is provided on this machine for just this purpose. In the event your blade gets hung up on an obstruction and you are unable to release it in the normal manner, move the toggle switch to the "OFF" position, and permit your machine and drum to come to a dead stop. Then, move the toggle switch in the "R" (reverse) position. Now start your machine slowly. See if you can remove the blade from the root or other obstruction by this reverse action. When the blade is released, let your machine come to a dead stop again. Then place the toggle switch in the "F" (forward) position. Make sure that the cable/blade rotates counter clockwise, when standing in front of the machine, except when reversing it to free cutting tool from obstruction.

WARNING: Do not reverse machine until motor and drum come to a dead stop.

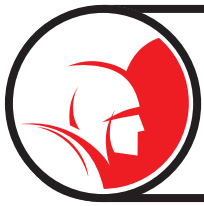
Avoid operating this machine in reverse for any other purpose.

7. When the job is complete, feed the cable back into drum, making sure that your machine is running, so that the distributor arm can feed and distribute cable in the drum properly. Do not push cable back in drum while drum is standing still - KEEP MACHINE RUNNING in the forward direction.

WARNING: Never retract tool from sewer inlet while cable is rotating.

NOTE: It is recommended that a continuous flush of water be used to clean cable and tool as they are retrieved.

8. When tool is close to the clean out opening, release foot pedal and allow machine and drum to come to a complete stop.
9. Move toggle switch to the "OFF" position and disconnect machine from power source.
10. Pull remaining cable and tool from the line and hand-feed cable back into the drum.



Operating the Power Cable Feed



1. The adjusting knob on the top controls the tension on the cable. It should be set so that the cable feeds freely in-and-out of the drum. Tension can be increased by turning handle to the right. Don't apply too much tension - just enough to keep the cable moving is sufficient.
2. Cable is fed into the line by putting the handle in forward position. This speed will vary from 0-30 feet per minute depending on size of the cable and how far forward you push the handle.
3. Cable is brought out of the line by putting the handle in reverse position. You can also vary the speed in reverse.
4. When the handle is straight up, the drive is in neutral position. There is no lateral movement of cable at this point. This enables the operator to position the blade against the stoppage and chew it away if necessary.
5. Another feature of the Dial-A-Cable Power Cable Feed is its ability to change from FORWARD to REVERSE by simply moving the handle. The feed reacts immediately.
6. The Cable Safety Guide prevents accidental contact with the rotating cable. **See Page 36 for instructions on connecting the Cable Safety Guide.**

WARNING: (1) Never try to force the cable in to the line. Choose a proper feeding speed that gives a smooth cutting action. (2) Refer to operating and maintenance instructions for proper maintenance.



Maintenance Instructions



WARNING: Make sure machine is unplugged from the electrical system before making any adjustment.

CHANGING MOTOR BRUSHES:

WARNING: Make sure machine is unplugged from electrical system.

1. With the motor uncovered, unscrew brush cap.
2. Remove brush, mark the top of the brush. Note the condition of brush end and brush length. If brush end is chipped or damaged in any way, replace brush. Brush length of 1/4" or less indicates time for replacement.
3. If brush is still good, replace into holder with marked side up or if not good, replace with new brush. Repeat procedure on other side then assemble cover and your machine is ready to run.

NOTE: If new brushes are used, run the machine for about 5 minutes before operating. Check brushes every 300 hours of operation and replace motor brushes every 5 years.

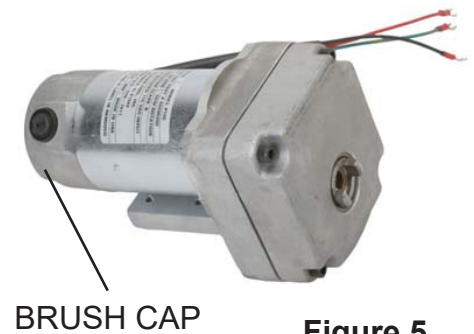


Figure 5

CARING FOR CABLES:

Spartan cables are of such design that no special care is required. At the end of each day of use, cables and the inside of drum should be rinsed thoroughly with water to prevent damaging effects of drain cleaning compounds, acids and other organic compounds that eat away the cable's strength.

Cables should be replaced when they become severely corroded or worn. A "worn cable" can be identified when outside coils of cable become flattened and/or the cable becomes limber. A light weight rust inhibiting oil is recommended for use on cables when not in use. Exposure to acid will severely limit cable life.

NOTE: Worn or corroded cable reduce the machine efficiency in removing obstructions. New cable reduces chances of downtime and the time it takes to get the job done.



Maintenance Instructions (cont.)



How To Install Cable Into Drum

1. Position external drum in a vertical position so that cable can be inserted into the drum horizontally through the distributor arm.
2. Rotate the external drum until the heads of the cable clamp screws on the back of the drum indicate that the clamp is at the top of the drum. Unscrew the cable clamp screws to loosen the cable clamp inside the drum; DO NOT loosen these screws too much, as the cable clamp may become unfastened. (If this should occur, refer to the instructions for removing the inner drum in order to retrieve the cable clamp.) Remove old cable from drum.
3. Face the machine from the front. Place your left hand on top of the external drum; press the heads of the cable clamp screws forward with two fingers of your left hand, steadying the external drum with the palm of your left hand. Sight through the cut-out in the cover of the external drum and rotate the inner drum with your right hand; position the inner drum so that the distributor arm is aligned slightly to the right of the cable clamp. See Figure 6.
4. Allow the inner drum to rotate freely in a clockwise direction as you feed sufficient cable through the distributor arm into the external drum to position the cable within the external drum as illustrated in Figure 7.
5. Maintain the position of your left hand on the clamp screws and the top of the external drum as previously indicated above. Grasp the inner drum firmly with your right hand and rotate it counter-clockwise to the left with a snappy movement. This snappy motion will thread the non-working end of the cable into the correction position under the cable clamp. Allow only 2 inch of cable to pass through the clamp. (Too much cable fed under the clamp will not allow remainder of cable to lay properly in the drum.) Tighten the cable clamp screws securely.

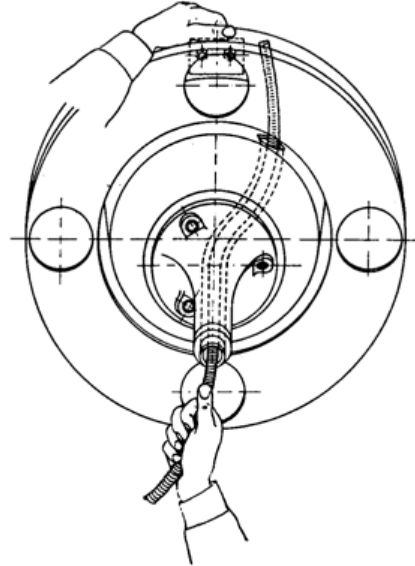


Figure 6

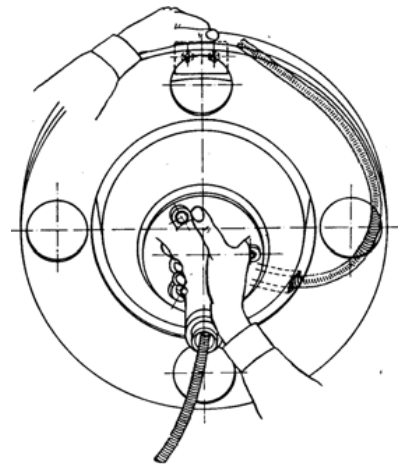


Figure 7

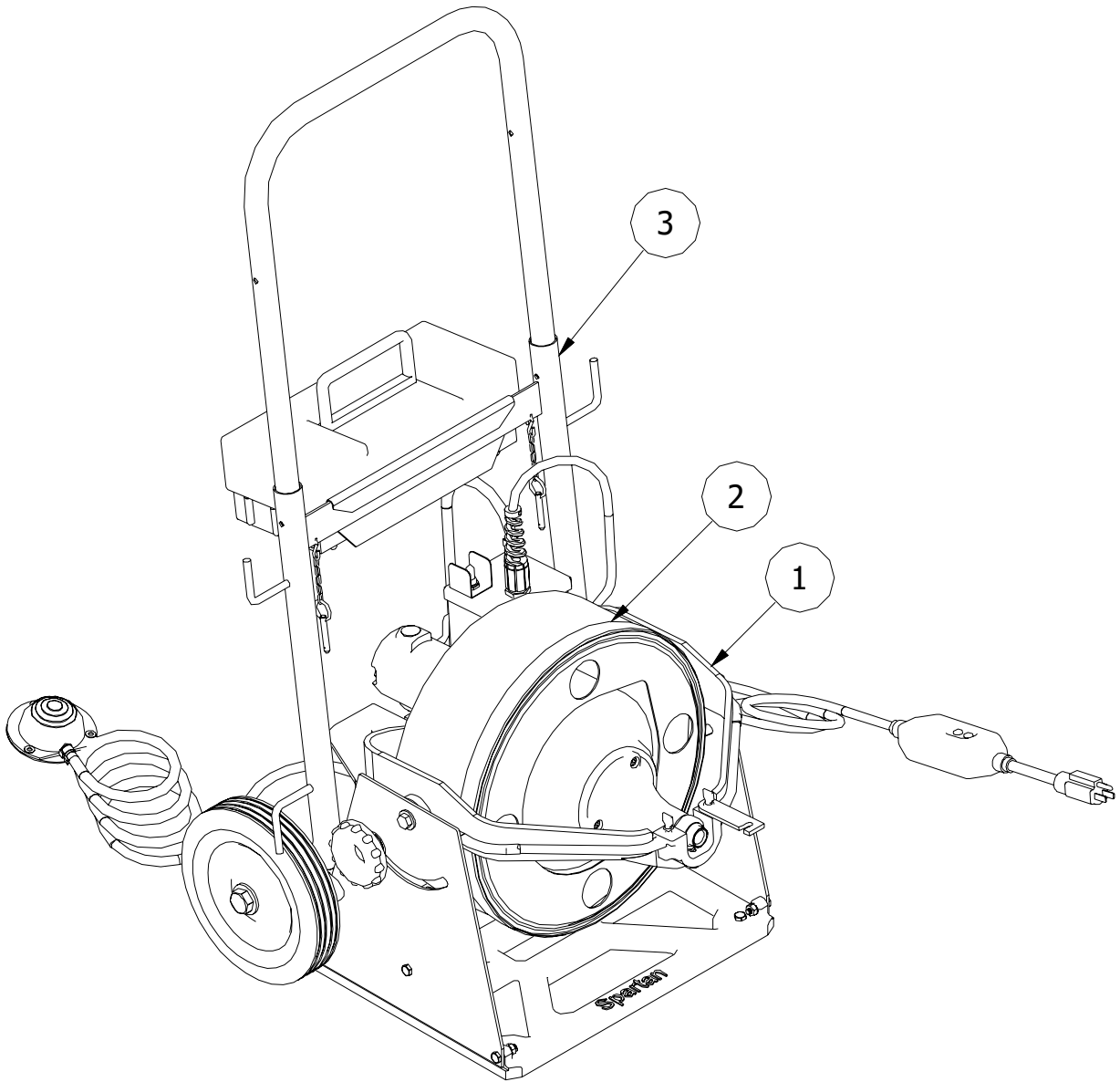
MACHINE STORAGE:

Electric motor driven equipment must be kept indoors or well covered in rainy weather.

NOTE: After every job rotate drum so that the drain hole in the drum is on the bottom to allow for drainage before storage.



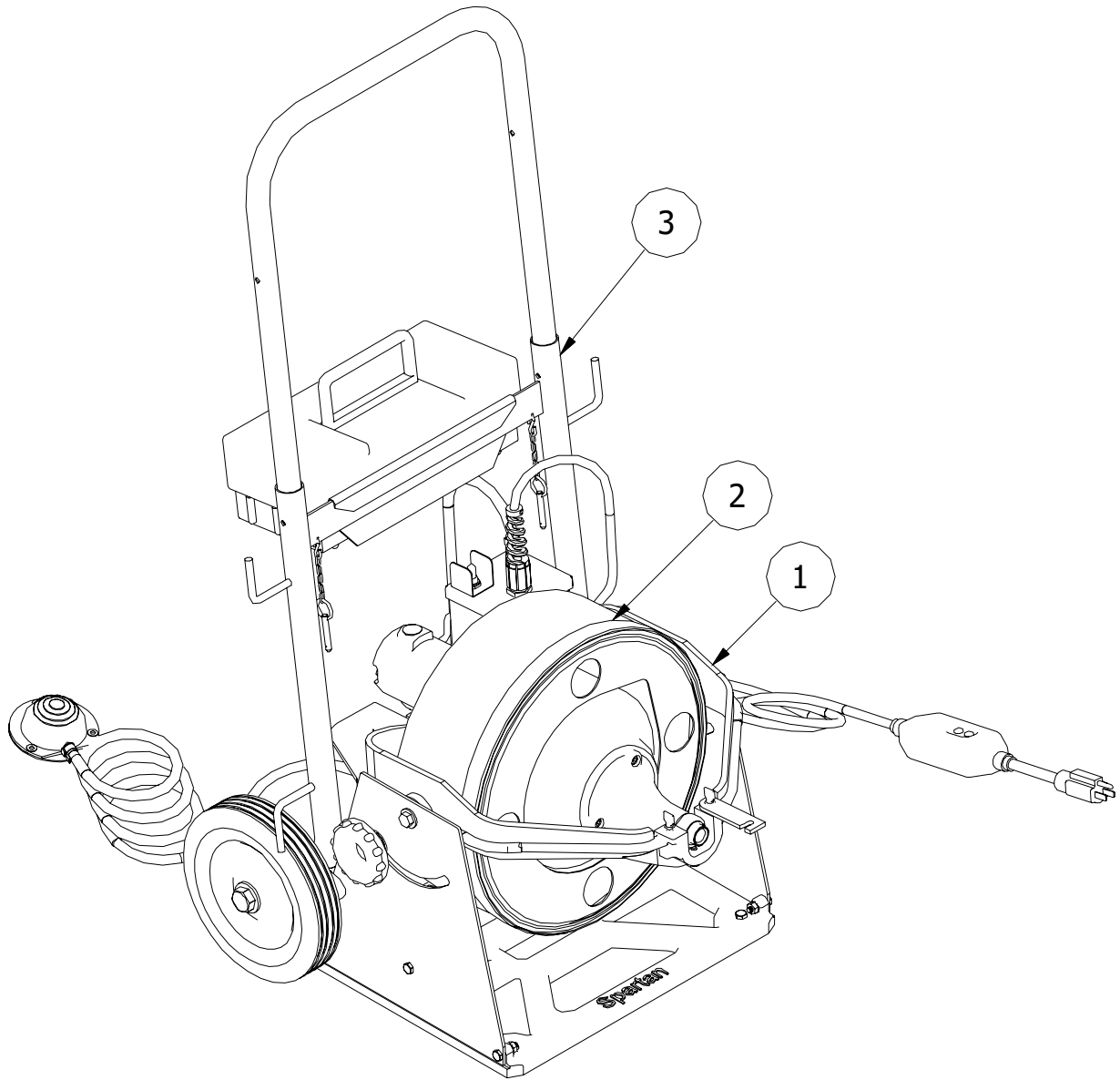
Model 100 PU with 13/32 Drum 02812201



ITEM	PARTNUMBER	DESCRIPTION
1	02812200	Model 100 Power Unit
2	02766401	Model 100 Drum 13/32"
3	44276700	Model 100 Roll-Aid



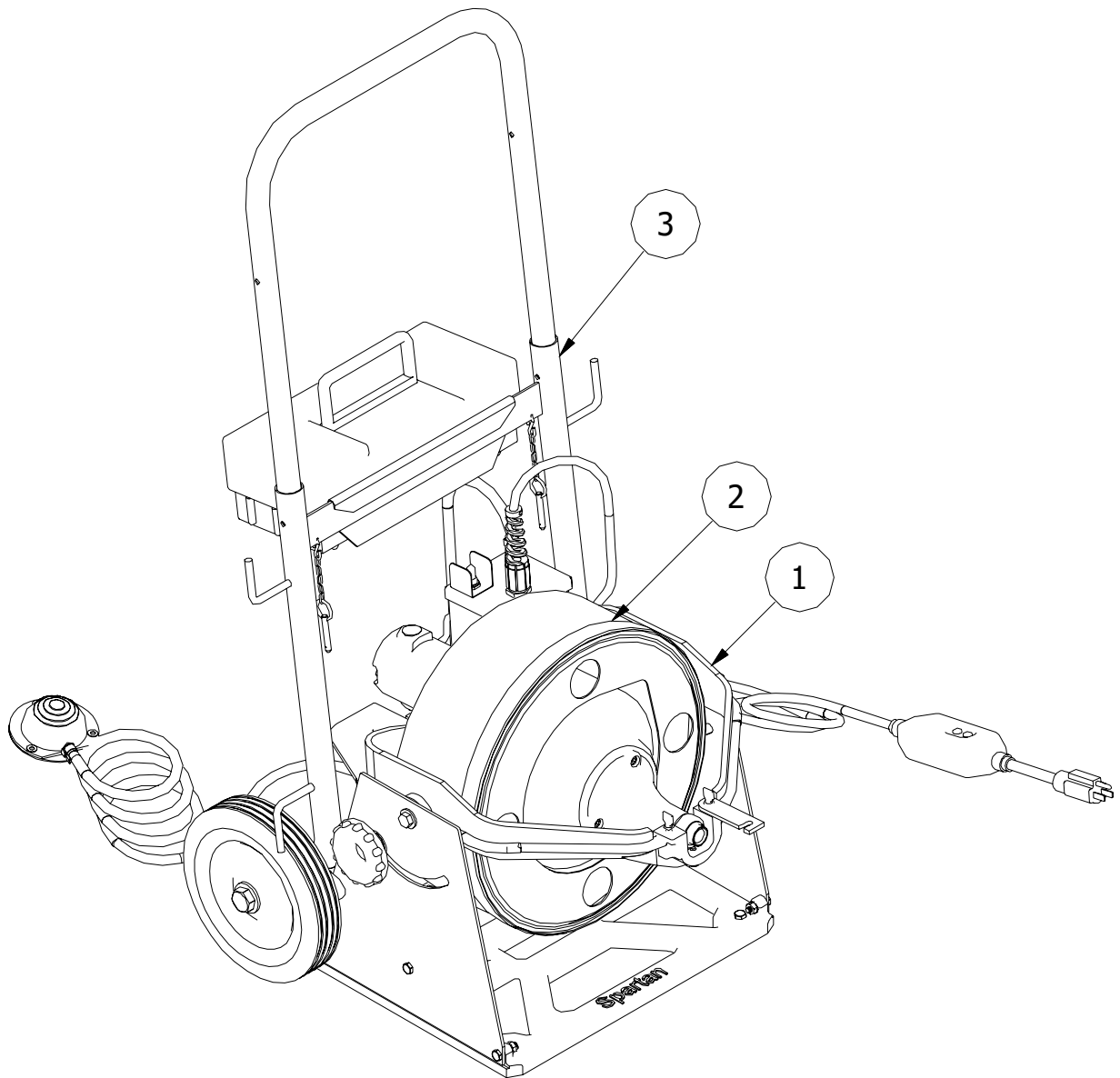
Model 100 PU with 1/2 Drum 02812202



ITEM	PART NUMBER	DESCRIPTION
1	02812200	Model 100 Power Unit
2	02766402	Model 100 Drum 1/2"
3	44276700	Model 100 Roll-Aid



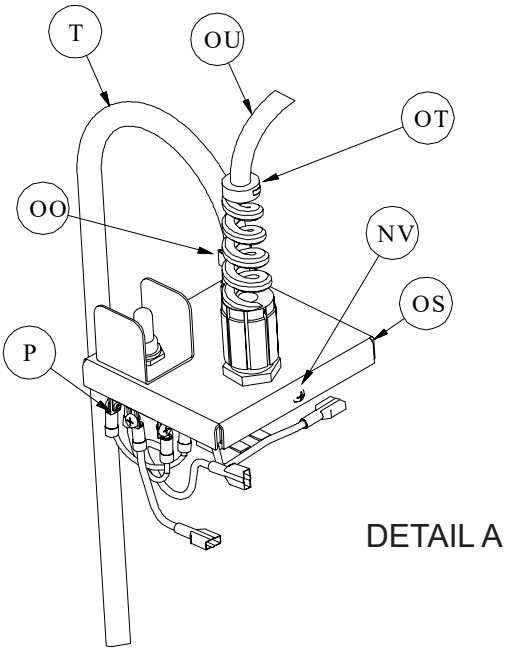
Model 100 PU with 5/16 Drum 02812203



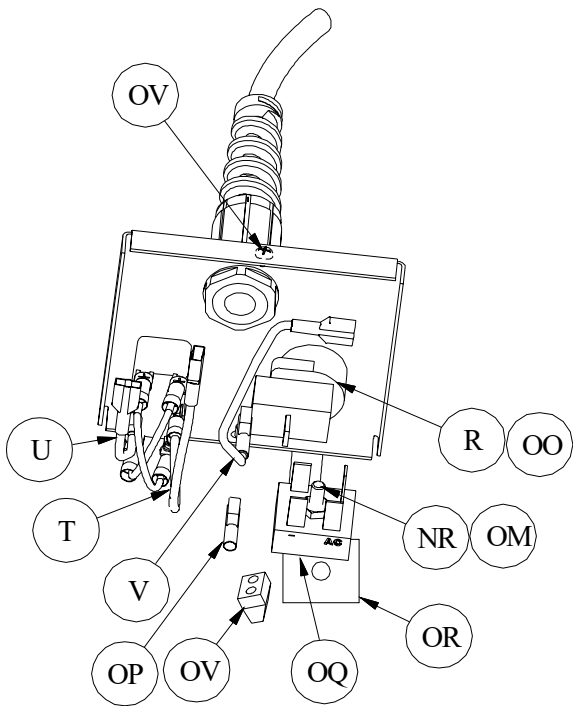
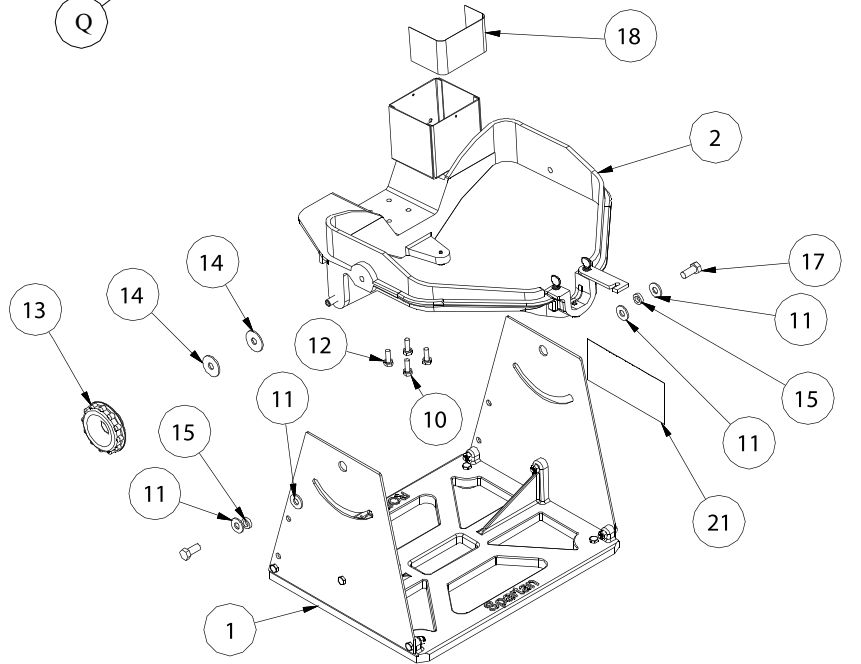
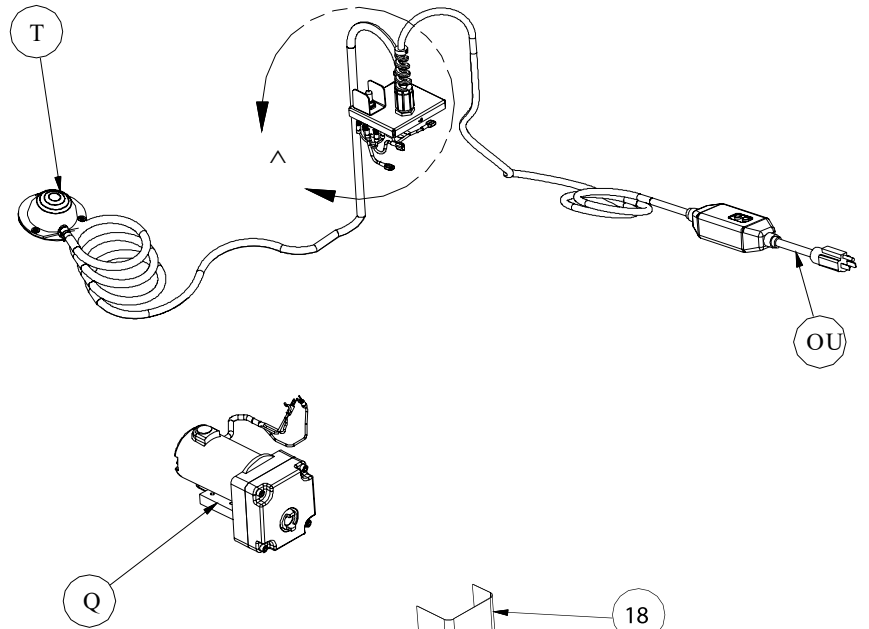
ITEM	PART NUMBER	DESCRIPTION
1	02812200	Model 100 Power Unit
2	02766403	Model 100 Drum 5/16"
3	44276700	Model 100 Roll-Aid



Model 100 Power Unit 02812200



DETAIL A





Model 100 Power Unit

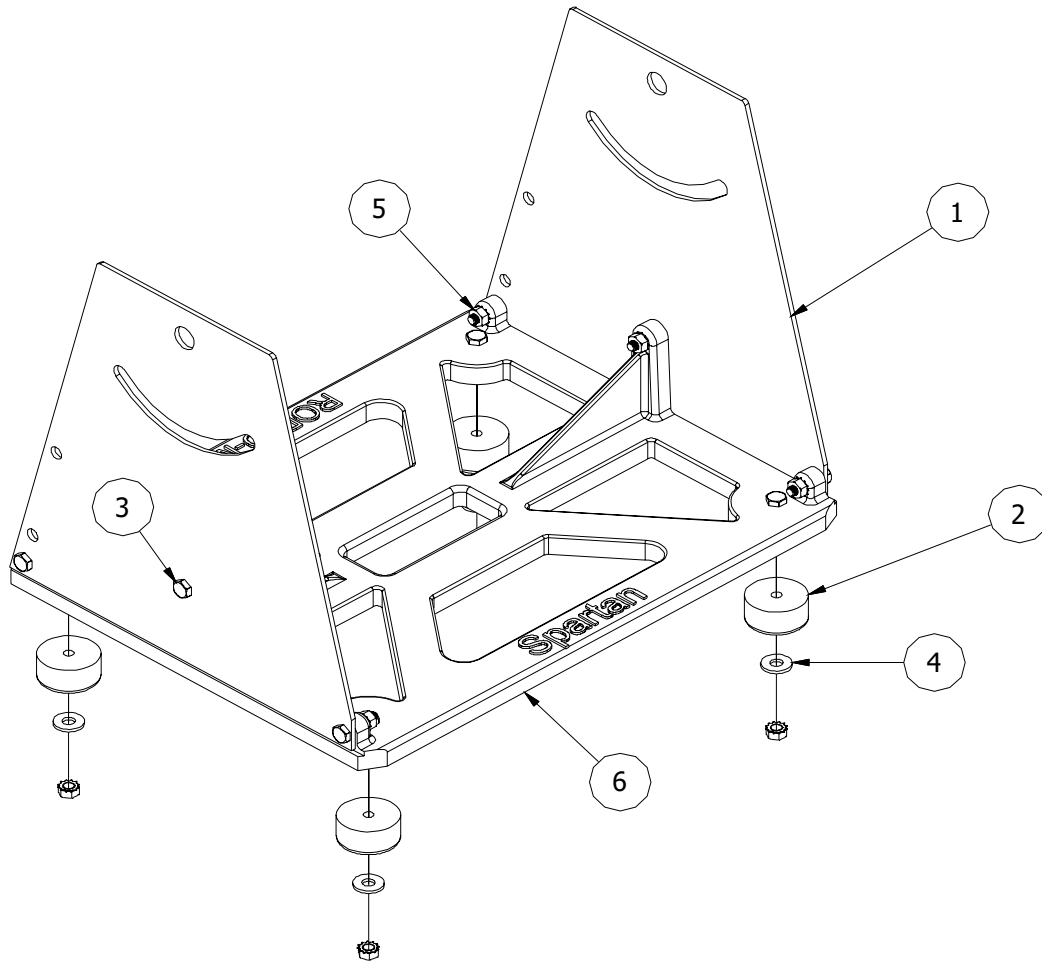
02812200



ITEM	QTY	PARTNUMBER	DESCRIPTION
1	1	02767100	Base Assembly Mod 100
2	1	04674200	100 Trunnion Assy
3	1	44225100	Forward Reverse Switch
4	1	44295200	Model 100 PM Motor w/ Gearbox
5	1	44225800	Air Bulb & Hose Assembly
6	1	44002600	Pressure Switch
7	1	44290700	Jumper Wire, 5in Brown
8	1	44290800	Jumper Wire, 5in Yellow
9	1	44292200	Jumper Wire, 4in Black
10	4	00113700	Screw, Hex Head 1/4-20 x 3/4
11	4	00162600	Washer, Flat 5/16
12	4	00165400	Washer, Lock Split Medium 1/4
13	1	02762000	Knob 3/8-24 x 1/2 FI 204
14	2	02762100	Fibre Washer
15	2	02762200	Spacer
16	1	02823900	Screw, Machine 10-32 x 1
17	2	02826700	Screw, Hex Head 3/8-24 x 7/8
18	1	02890100	Insulation Paper
19	2	03394400	Screw, Sheet Metal #6 x 1/4
20	1	03850100	Nut, Hex Kep 10-32
21	1	04220200	Decal, Warning
22	1	04652700	Clamp, Stepless Ear 1/2"
23	2	44216100	Disconnect .250 Female 16-14
24	1	44290500	Bridge Rectifier PM Motor
25	1	44290501	Pad, Thermo Conductive
26	1	44302700	Weldment Outlet Box Cover
27	1	50205400	Strain Relief-Power Cord
28	1	71103300	Power Cord 25' w/GFI
29	1	79925700	Connector Push-On 2 Wire



Base Assembly 02767100

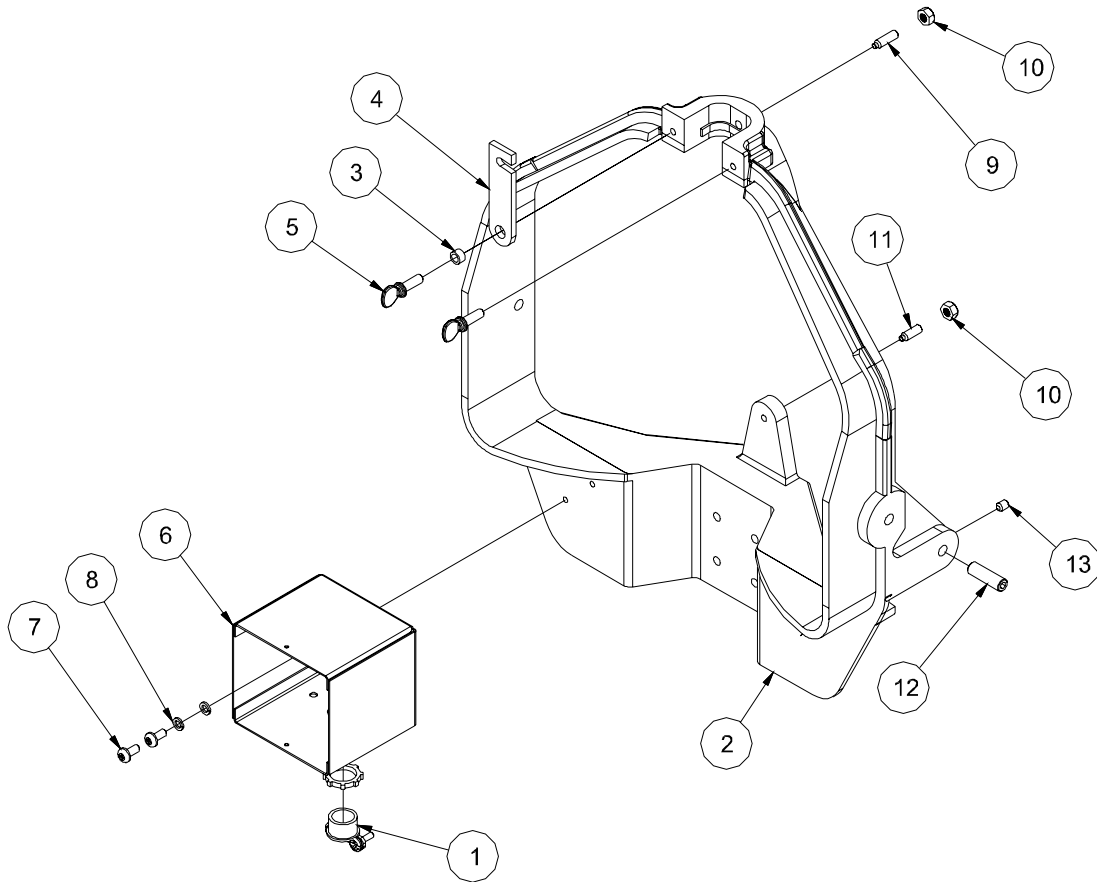


ITEM	QTY	PARTNUMBER	DESCRIPTION
1	2	02761100	Base Side Plate
2	4	03443600	Bumper Assembly
3	6	00113901	Screw, Hex Head 1/4-20 x 1
4	4	02825100	Washer, Flat 1/4
5	10	01950800	Nut, Hex Kep 1/4-20
6	1	02767300	Base Casting



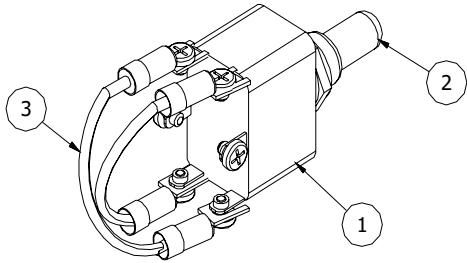
Trunnion Assembly

04674200



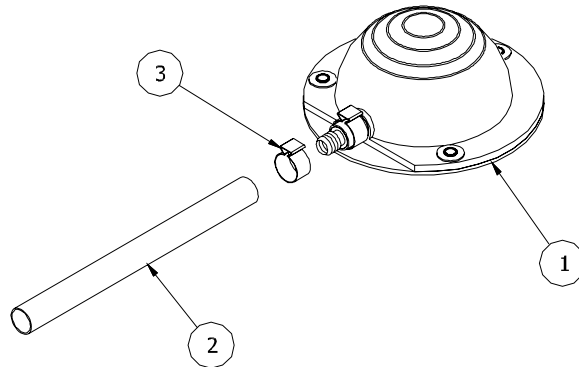
Item	QTY	PART NUMBER	Description
1	1	02829300	Box Connector
2	1	02765100	100 Trunnion Only
3	1	02761800	Pawl Bearing
4	1	02761900	Latch
5	2	02825500	Thumb Screw, 1/4-20 x 3/4
6	1	04645000	100 Switch Box
7	2	02825600	Scr,Bndg 12x1/2 Type B
8	2	02829500	Washer, Lock Split #12 Zinc
9	1	04103100	Set Screw
10	2	02821200	Nut, Nylon Jam 1/4-20
11	1	02820200	Screw, Sckt Hd Set 1/4-20 x 1
12	1	02820600	Knob Screw
13	1	02820400	Scr, Sckt Hd Set 1/4-20 x 5/16

Outlet Box Cover Assembly 44101600



ITEM	QTY	PARTNUMBER	DESCRIPTION
1	1	03433200	Switch Toggle
2	1	44110500	Rubber Boot
3	1	44038900	Assy Jumper Wire-UL 2-1/2"

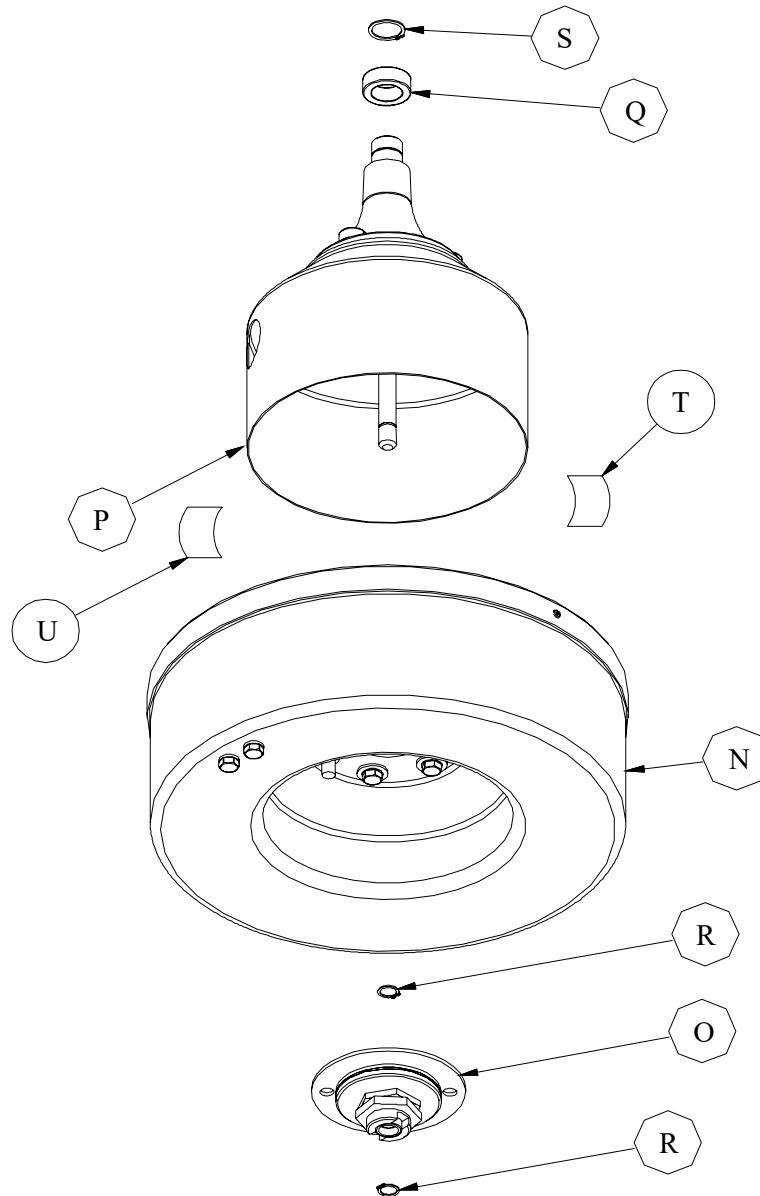
Air Foot Switch 44225800



ITEM	QTY	PARTNUMBER	DESCRIPTION
1	1	04576900	Pressure Transmitter
2	1	04577100	Neoprene Air Hose 8' Lg x 7/16
3	1	04652700	Clamp, Stepless Ear 1/2"



Model 100 Drum 13/32” 02766401

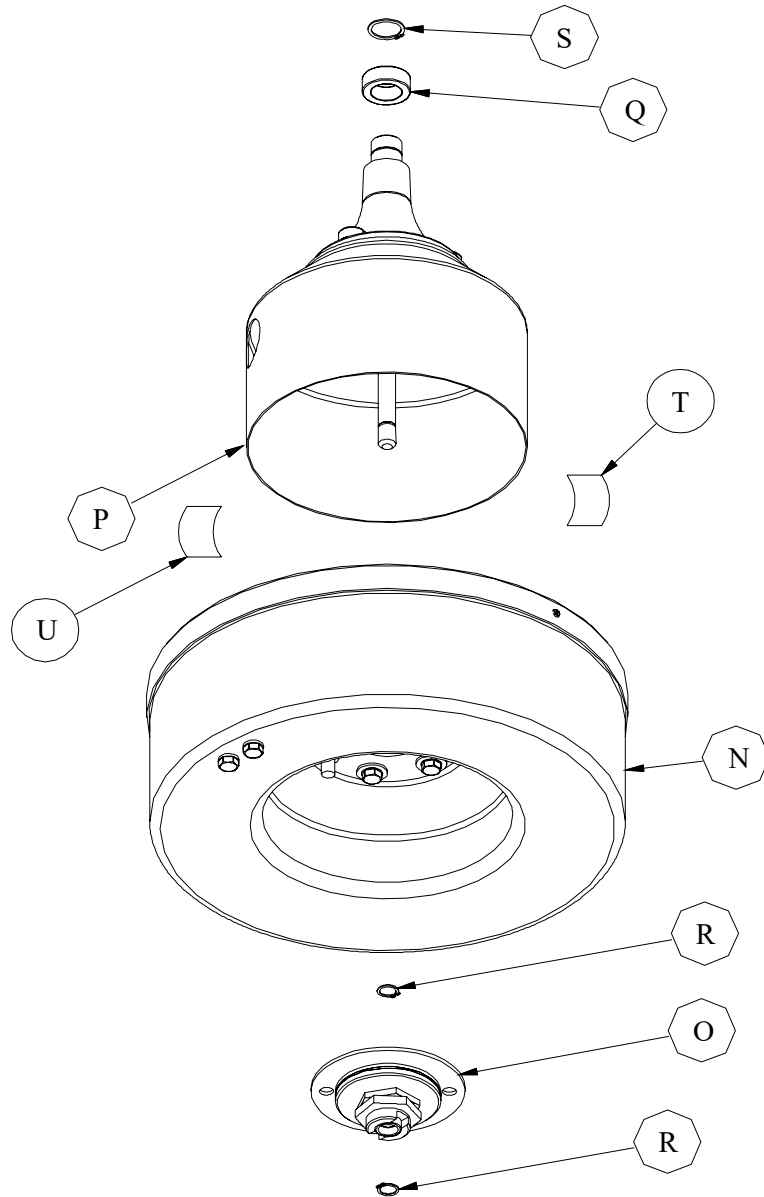


ITEM	QTY	PARTNUMBER	DESCRIPTION
1	1	03449500	Outer Drum & Cover M-100
2	1	04204200	Clutch Assembly - 13/32
3	1	03446900	Inner Drum Assembly (100)
4	1	02759800	Bearing
5	2	02822500	Retaining Ring - Small
6	1	02822700	Retaining Ring - Large
7	1	02761300	Decal, Drum Model 100, 13/32
8	1	44159900	Decal, Drum Model 100



Model 100 Drum 1/2"

02766402

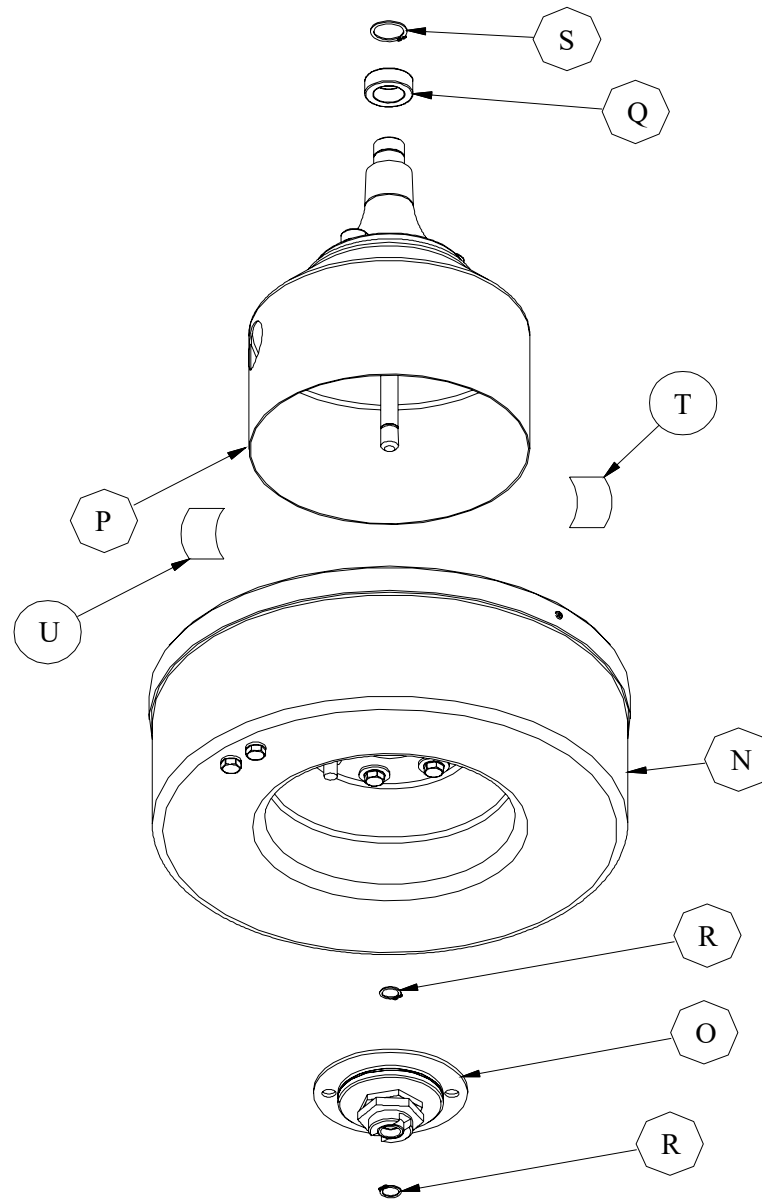


ITEM	QTY	PARTNUMBER	DESCRIPTION
1	1	03449500	Outer Drum & Cover M-100
2	1	04204200	Clutch Assembly - 1/2
3	1	03446900	Inner Drum Assembly (100)
4	1	02759800	Bearing
5	2	02822500	Retaining Ring - Small
6	1	02822700	Retaining Ring - Large
7	1	02761300	Decal, Drum Model 100, 13/32
8	1	44159900	Decal, Drum Model 100



Model 100 Drum 5/16"

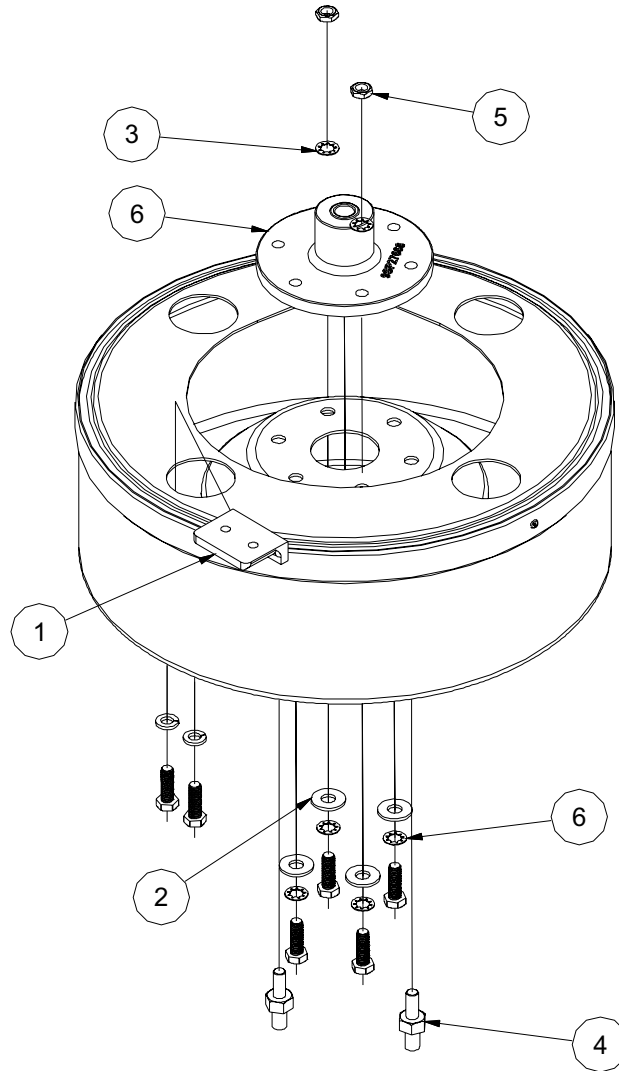
02766403



ITEM	QTY	PARTNUMBER	DESCRIPTION
1	1	03449500	Outer Drum & Cover M-100
2	1	04204200	Clutch Assembly - 5/16
3	1	03446900	Inner Drum Assembly (100)
4	1	02759800	Bearing
5	2	02822500	Retaining Ring - Small
6	1	02822700	Retaining Ring - Large
7	1	02761300	Decal, Drum Model 100, 13/32
8	1	44159900	Decal, Drum Model 100



Outer Drum 02766500

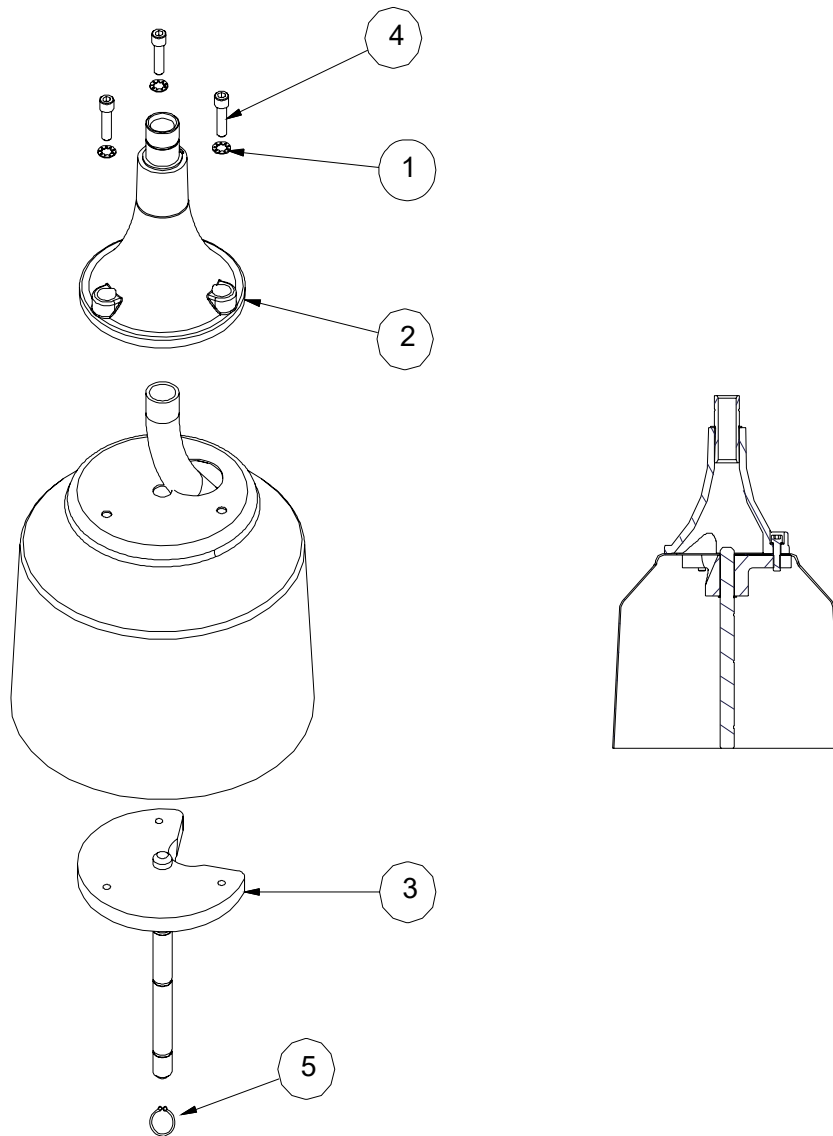


ITEM	QTY	PARTNUMBER	DESCRIPTION
1	1	03414600	Cable Clamp
2	4	00162600	Washer, Flat 5/16" USS Zinc
3	6	00167100	Internal Tooth Lockwasher
4	2	02765600	Drive Stud
5	2	02820700	Nut, Heavy Hex Jam 5/16-18
6	1	02765700	Drum Hub Assembly (100)

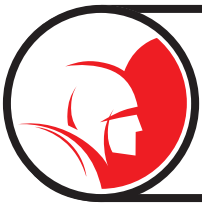


Inner Drum

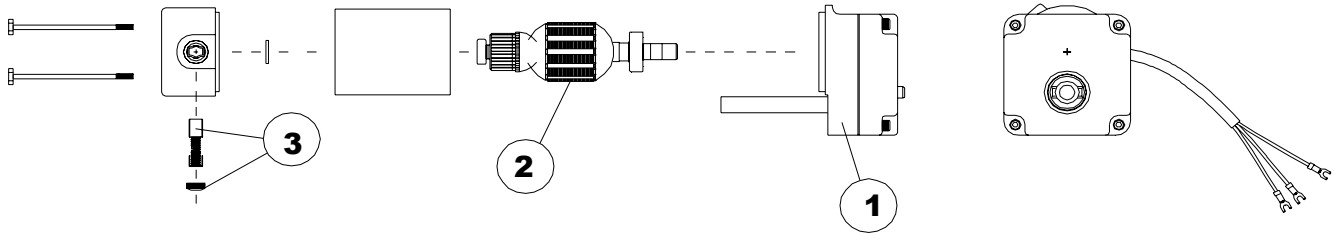
03446900



ITEM	QTY	PARTNUMBER	DESCRIPTION
1	3	00167000	Washer, Lock - Internal Tooth
2	1	02759900	End Bracket Assembly (100)
3	1	02760100	Mainshaft Assembly (100)
4	3	02827200	Screw, Cap 1/4-20 x 7/8
5	1	02822500	Retaining Ring



PM Motor Assembly 44295200

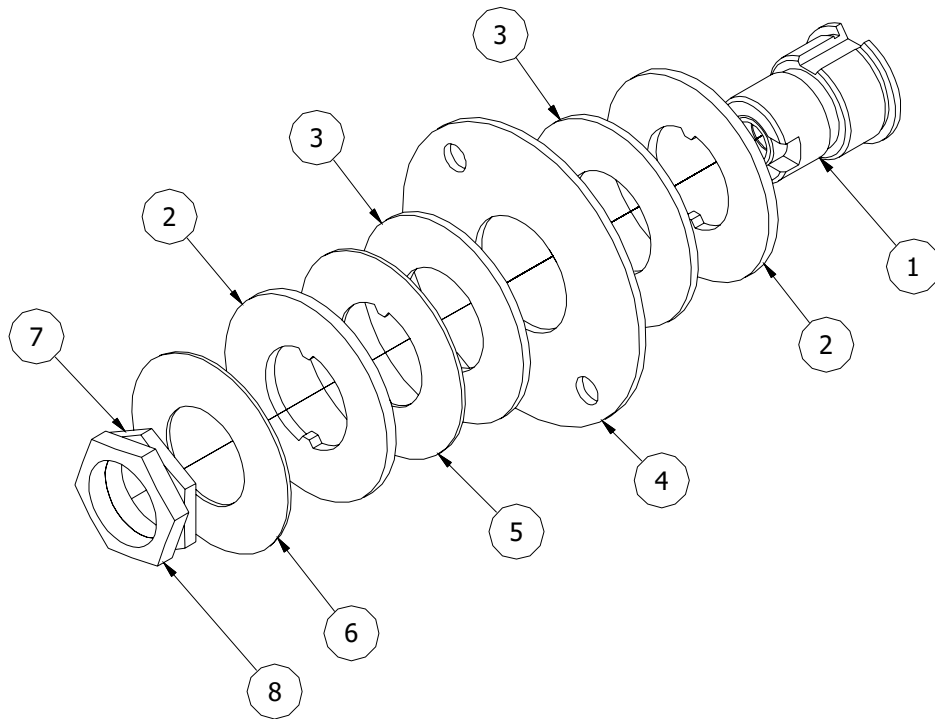


ITEM	QTY	PARTNUMBER	DESCRIPTION
1	1	44304100	Gearcase Complete 100 PM Motor
2	1	44304120	Armature 100 PM 110V
3	1	44304000	Brush Kit, 100-300-1065-2001



Clutch Assembly 13/32

04204200

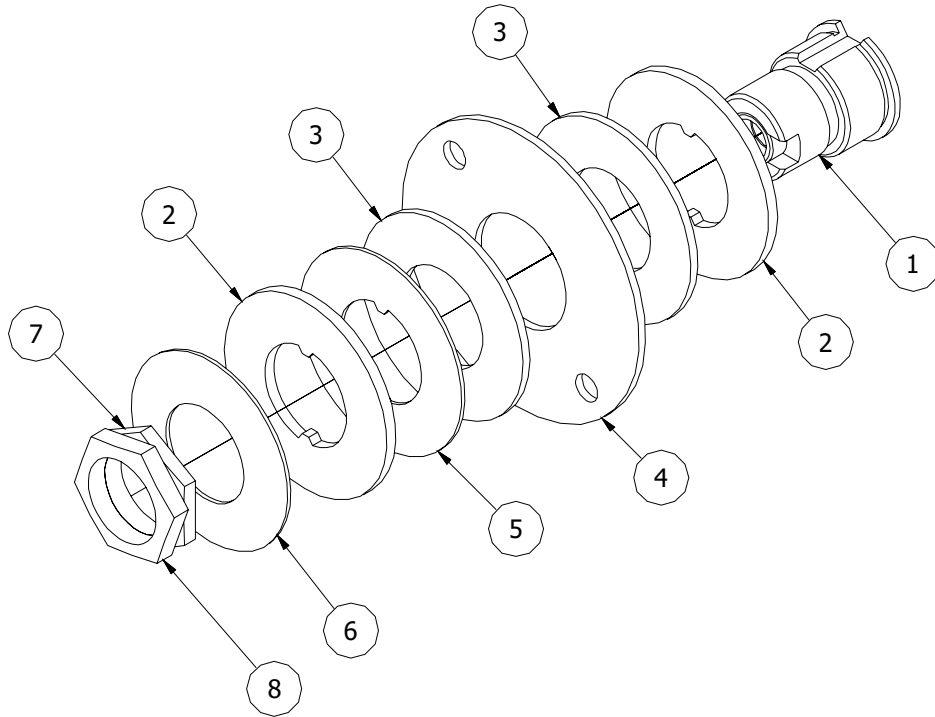


ITEM	QTY	PARTNUMBER	DESCRIPTION
1	1	03414200	Clutch Hub & Bearing Assy
2	2	02760300	Plate Drive Mod 100
3	2	02760400	Clutch Facing, Scan-Pac
4	1	02760800	Plate, Friction
5	1	04237000	Spacer 1.50 x 3.00 16 GA
6	1	02760500	Spring Clutch
7	1	02866300	Shouldered Adjusting Nut
8	1	02760700	Nut Adjusting



Clutch Assembly 1/2

04203200

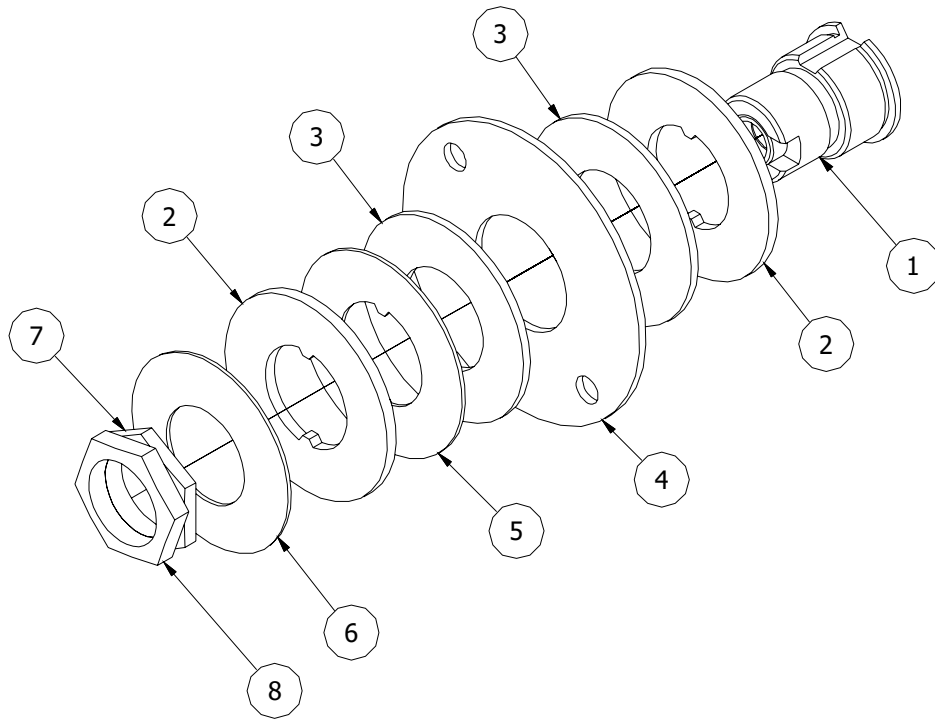


ITEM	QTY	PARTNUMBER	DESCRIPTION
1	1	03414200	Clutch Hub & Bearing Assy
2	2	02760300	Plate Drive Mod 100
3	2	02760400	Clutch Facing, Scan-Pac
4	1	02760800	Plate, Friction
5	1	04237000	Spacer 1.50 x 3.00 16 GA
6	1	02760500	Spring Clutch
7	1	02866300	Shouldered Adjusting Nut
8	1	02760700	Nut Adjusting



Clutch Assembly 5/16

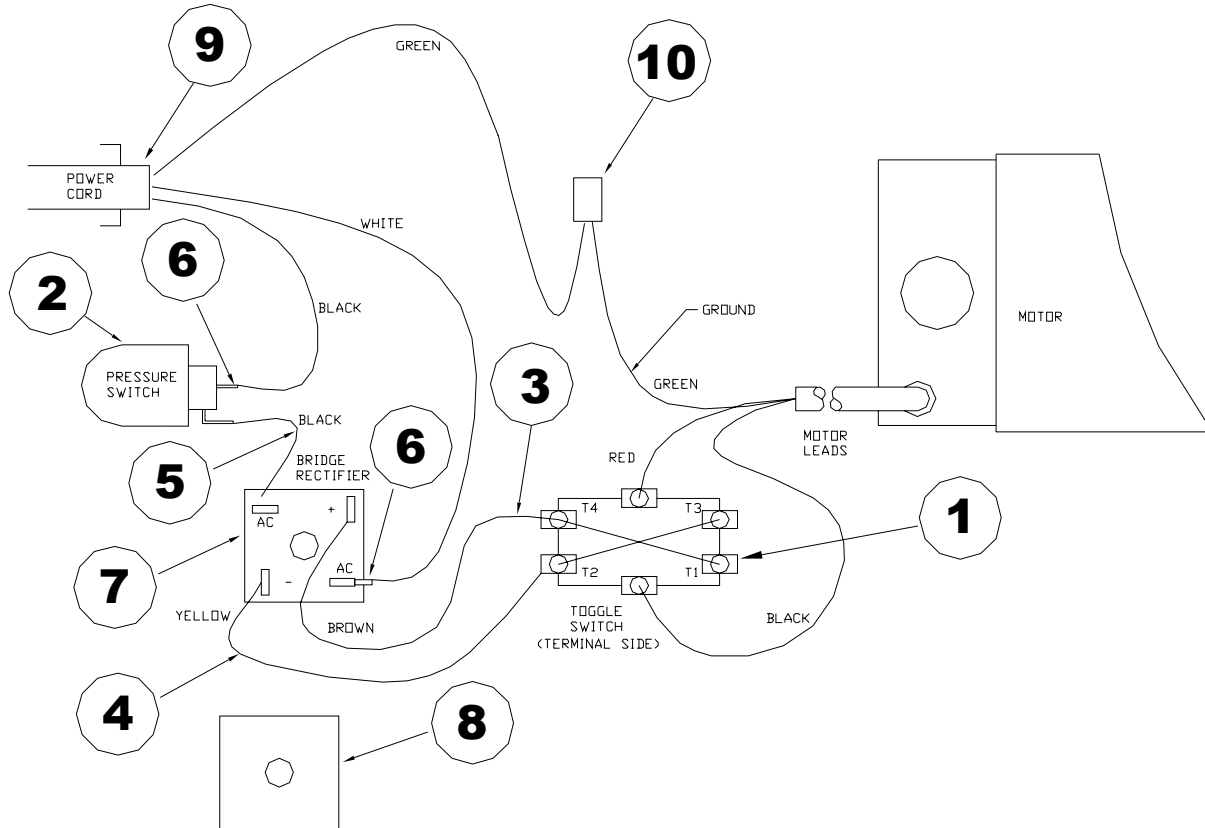
04204300



ITEM	QTY	PARTNUMBER	DESCRIPTION
1	1	03414200	Clutch Hub & Bearing Assy
2	2	02760300	Plate Drive Mod 100
3	2	02760400	Clutch Facing, Scan-Pac
4	1	02760800	Plate, Friction
5	1	04237000	Spacer 1.50 x 3.00 16 GA
6	1	02760500	Spring Clutch
7	1	02866300	Shouldered Adjusting Nut
8	1	02760700	Nut Adjusting



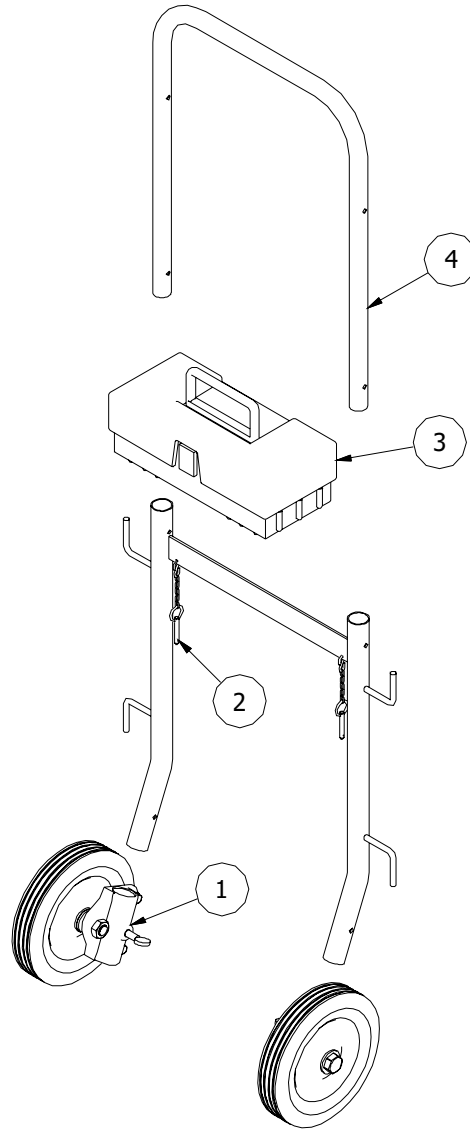
Wiring Diagram



ITEM	QTY	PARTNUMBER	DESCRIPTION
1	1	44221500	Forward Reverse Switch
2	1	44002600	Pressure Switch
3	1	44290700	Assy. Jumper Wire 5" Brown
4	1	44290800	Assy. Jumper Wire 5" Yellow
5	1	04647800	Assy. Jumper Wire 5" Black
6	2	44216100	Disconnect, .250 Female 16-14
7	1	44290500	Bridge Rectifier PM Motor
8	1	44290501	Pad, Thermo - Conductive
9	1	71103300	Power Cord 25' W/G.F.I.
10	1	79925700	Connector-Push-On 2 Wire



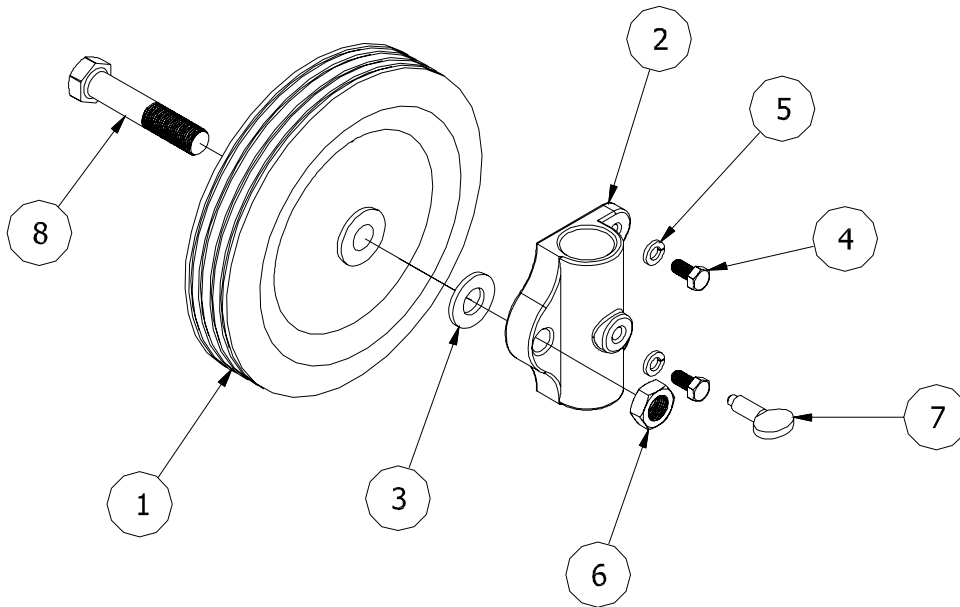
Roll-Aid (Optional) 44276700



ITEM	QTY	PARTNUMBER	DESCRIPTION
1	2	44120700	Asy, Roll Aid Whl&Supprt
2	2	44276800	Assy, Locking Pin-Model 100
3	1	44287200	Assy, Toolbox Model 100
4	1	44276100	Handle-Model 100



Wheel & Support Assembly 44120700



ITEM	QTY	PARTNUMBER	DESCRIPTION
1	1	02811900	Wheel
2	1	02829700	Casting, Machined
3	1	00760400	Washer, Flat 5/8
4	2	00114800	Screw, Hex Head 5/16-18 x 5/8
5	2	00165600	Washer, Lock
6	1	02820800	Nut, Hex Jam 5/8-18
7	1	03818400	Thumb Screw
8	1	02826300	Screw, Hex Head 5/8-18 x 3-1/4



Maintenance Instructions



5/16" diameter Inner-Core Cable

PART NUMBER	DESCRIPTION
03449002	5/16 inch diameter x 25 feet
03449003	5/16 inch diameter x 30 feet
03449004	5/16 inch diameter x 35 feet
03449005	5/16 inch diameter x 50 feet
03449006	5/16 inch diameter x 75 feet
03449007	5/16 inch diameter x 100 feet

Parts for 5/16" Inner-Core Cable

PART NUMBER	DESCRIPTION
02867200	Blade, 3/4" Wide
02867300	Blade, 1" Wide
02781100	Drop-Head Assembly
02882200	Expansion Pin 1/4" x 5/8"
02827700	Allen Key for Blades
02827400	Socket Set Screw for Blades
02814700	Bag of Parts for 5/16 Drop Head
02885200	Repair Bulb for Drop Head Cable

13/32" diameter Inner-Core Cables # 8 end

PART NUMBER	DESCRIPTION
03448802	13/32 inch diameter x 25 feet
03448803	13/32 inch diameter x 35 feet
03448804	13/32 inch diameter x 50 feet
03448805	13/32 inch diameter x 75 feet
03448806	13/32 inch diameter x 100 feet

Parts for 13/32" Inner-Core Cable # 8 end

PART NUMBER	DESCRIPTION
02867400	Blade, 1" Wide
02867500	Blade, 1-1/4" Wide
02868000	Hook
02781300	Drop-Head Assembly for IC-0408 only
02821800	Expansion Pin 1/4" x 3/4"
02827700	Allen Key for Blades and Hooks
02827400	Socket Head Cap Screw for Blades
00165300	Split Lockwasher
02814900	Bag of Parts for 13/32" with Drop Head
02789300	Repair Bulb for Drop Head Cable

13/32" diameter Inner-Core Cables # 6 end

PART NUMBER	DESCRIPTION
03449102	13/32 inch diameter x 25 feet
03449103	13/32 inch diameter x 35 feet
03449104	13/32 inch diameter x 50 feet
03449105	13/32 inch diameter x 75 feet
03449106	13/32 inch diameter x 100 feet

Parts for 13/32" Inner-Core Cable # 6 end

PART NUMBER	DESCRIPTION
02867400	Blade, 1" Wide
02867500	Blade, 1-1/4" Wide
02868000	Hook
02827700	Allen Key for Blades and Hooks
02826800	Socket Head Cap Screw
00165300	Split Lockwasher
02814800	Bag of Parts for 13/32" without Drop Head
02789200	Repair Bulb with Standard Plug

1/2" diameter Inner-Core Cable # 6 end

PART NUMBER	DESCRIPTION
03448701	1/2 inch diameter x 25 feet
03448703	1/2 inch diameter x 50 feet
03448704	1/2 inch diameter x 75 feet

Parts for 1/2" Inner-Core Cable # 6 end

PART NUMBER	DESCRIPTION
02867600	Blade, 1" Wide
02867700	Blade, 1-1/4" Wide
02867800	Blade, 2" Wide
02867900	Blade, 3" Wide
02868100	Hook
02827700	Allen Key for Blades and Hooks
02826800	Socket Head Cap Screw for Blades
00165300	Split Lockwasher
02815000	Bag of Parts for 13/32" without Drop Head
02789500	Repair Bulb with Standard Plug



Model 100 Cables



5/16" Multi-Purpose Inner-Core Cable. Designed for rodding 1 1/4" to 1 1/2" lavatory, sink line waste and for light duty in 2" lines. Includes: Blade, 3/4" Wide, Blade, 1" Wide, Drop-Head Assembly.



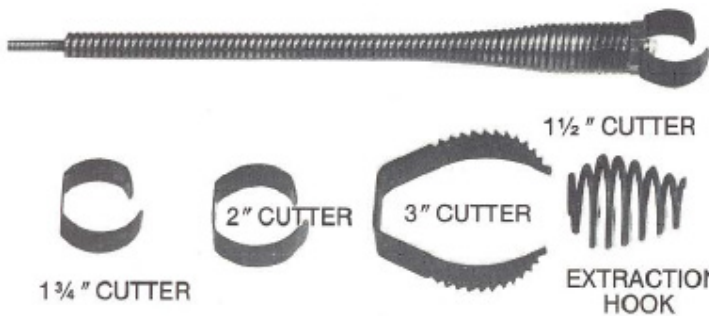
13/32" Inner Core Cable. With Interchangeable Cutters and Hooks for rodding 1 1/2" to 2" sink lines. Includes: Blade, 1" Wide, Blade, 1 1/4" Wide, Hook.



13/32" Multi-Purpose Inner Core Cable. Designed for rodding 1 1/2" to 2" sink lines. Includes: Blade, 1" Wide, Blade, 1 1/4" Wide, Hook, Drop-Head Assembly.



1/2" Anchor Cable. For use with 1/2" Cable with couplings. Replace with each new cable installation. Order Item Number C1005.



1/2" Inner-Core Cable Interchangeable Cutters and Hook, for rodding overhead sink lines, floor drains, stacks, etc., 2", 3" and 4" diameters. Includes: Blade, 1 1/2" Wide, Blade, 1 3/4" Wide, Blade, 2" Wide, Blade, 3" Wide, Hook.



1/2" Trap Leader. 1/2" x 15" Inner-Core No Tension. Order Item Number C-1004. (Comes complete with bag of parts)

Couplings:



1/2" Female Coupling.



1/2" Male Coupling.



1/2" Splicer.



1/2" Expansion Pin.



13/32" Splicer



Cable Ends and Accessories



04220300
1/2" male Coupling



02878100
5/8" male Coupling



44113000
.55" male Coupling



44120600
.66" male Coupling



0279500
3/4" Male Coupling



04220400
1/2" Female Coupling



02878000
5/8" Female Coupling



44113100
.55" Female Coupling



44120500
.66" Female Coupling



02788300
3/4" Female coupling



02892100
1/2" Splicer



02878200
5/8" Ling Male



4411400
.55" Long Male Coupling



44120400
.66" Long male Coupling



02797100
3/4" Long Male Coupling



04126500 1/2" Exp. Pin



02878300 5/8" Splicer



44114500 .55" Splicer



44053400 .66" Splicer



02790600 3/4" Splicer



50871011 13/32" Splicer



04204100
3/4" - 5/8" Double Male



44114200
.55" Double Male



44054800
.66" Double Male



44103700
1/4" Drop Head



02819100 5/16" - 13/32" - 3/4" Pin Punch



02821800 3/4" Exp. Pin



44053300 .66" Exp. Pin



44054900 .55" - .66" Pin Punch



02789700 1/4" Repair Hook



02882200 5/8" Exp. Pin



44117400 .55" Exp. Pin



02781100 5/16" Drop Head



02789800 5/16" Repair Hook



02867200
3/4" BL For 5/16" Cable



02867300
1" BL For 5/16" Cable



02781300 13/32" Drop Head



02885200 5/16" Repair Bulb



02867400
1" BL For 13/32" Cable



02867500
1 1/4" BL For 13/32" Cable



02868000 13/32" Extraction Hook



02789300 13/32" Repair Bulb #8



02867600
1 1/2" Blade for 1/2" Cable



02867700
1 3/4" Blade For 1/2" Cable



02868100 1/2" Extraction Hook



02789200 13/32" Repair Bulb #6



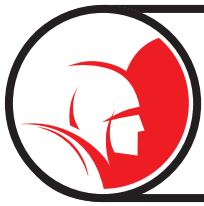
02867800 2" BL For 1/2" Cable



2867900 3" BL for 1/2" Cable



02789500 1/2" Repair Bulb #6



Model 75 Power Cable Feed



Operating & Maintenance Instructions





Power Cable Feed Table of Contents



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Introduction



The Spartan Tool Model 75 Power Cable Feed with “dial-a-cable” reflects the latest improvements in the marketplace. The operation, repair and maintenance of the Model 75 are simple to accomplish. These features allow a quick change for cable size and provide easy maintenance. The Model 75, which weighs just over 10 pounds, will feed and retrieve a cable up to 30 feet per minute.

A universal mounting plate allows adaptation to current Spartan Model 1065’s, 200’s, 300’s, and 100’s. (The Model 2001 does not need a mounting plate.) The power cable feed can be used on cable size from 5/16” through 3/4”.

Spartan Tool, L.L.C. strongly recommends the use of a Spartan Cable Safety Guide (44225300) with the Model 75 Power Cable Feed unit. (See Fig. 1) The Cable Safety Guide attaches to the front of the Model 75 unit, and is intended to help protect the operator from possible cable buckling and other hazards associated with handling rotating cable. Contact Spartan Tool, L.L.C. (800 435 3866) or www.spartantool.com with questions regarding the Cable Safety Guide.



Attaching the Cable Safety Guide To The Power Cable Feed



Disconnect the cable machine from its power source to avoid accidental starting. Pick up the Cable Safety Guide and place the spring against the hub on the Power Cable Feed and turn it counterclockwise until the spring rests against the plate behind the hub.

Reconnect the power by plugging in the machine. Insure the electrical switch on the machine is in the forward position. Insure the adjusting knob on the feed has been tightened until it makes contact with the cable. Place the lever (actuator assembly) midway between the "N" (Neutral) and "F" (Forward) position to allow the cable to enter the Cable Safety Guide slowly. Depress the foot pedal to engage the machine and allow the end of the cable to exit the Cable Safety Guide. Release the footpedal.

Disconnect the machine from its power source, and attach the selected tool to the cable. Move the machine as close to the entry point of the pipe as possible. The end of the Cable Safety Guide and attachment should be within inches of the pipe. Reconnect the power.



Warning: Unexpected machine start up can cause death or severe injury.

Disconnect the machine from its power source before installing, servicing or removing the Power Cable Feed, Cable Safety Guide, cable tools and cutters, or other machine components.

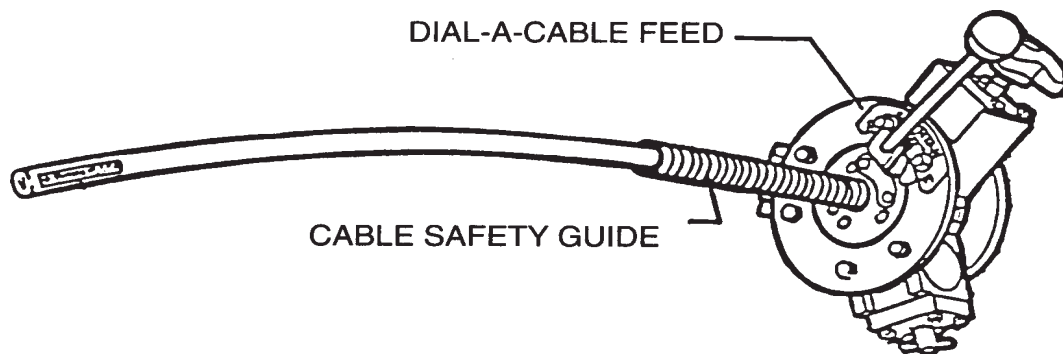


Fig. 1



Setting Your Spartan Power Cable Feed for Cable Size



(Refer to Fig. 2 for details)

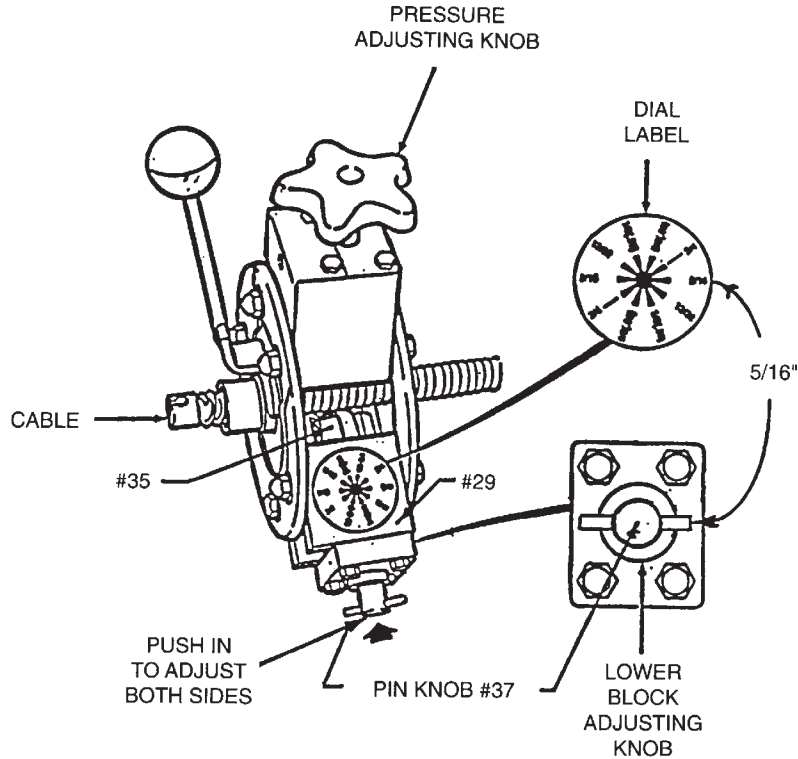


Fig. 2

To adjust for cable size, push in on the pin knob (#37) located on the bottom of the bearing blocks (#29) to unlock from setting. Turn pin knob right/clockwise and pull out. As each cable setting is reached the knob can be felt locking in. The body assembly (#35) will move in for smaller cable diameters and out for the larger diameter. As a starting point, push in and turn the pin knob so the pin in the knob is horizontal (in line with the cable). This setting should match the dial label for 5/16" cable setting. (The figure in the center of the dial label indicates pin knob setting if viewed from the block end.) The body

assembly should be in to it's farthest point. Now, by pushing in and turning the pin knob right/clockwise

pulling out at the next step should lock into the 13/32" setting, the next 1/2", etc. The body assembly will

become longer with each rotational movement until returned to the 5/16" setting (horizontal). Rotating your Dial-A-Cable through the various settings and matching the dial label will make it easy to adjust cable size by feel.

Follow the chart (Fig. 3) to set your Dial-A-Cable for the cable size you have selected. Make sure both right and left block settings are the same.

CABLE DIAMETER (INCHES)	SET POWER CABLE FEED
5/16"	5/16"
3/8" or 13/32"	13/32"
1/2" or .55"	1/2"
5/8" or .66"	5/8"
3/4"	3/4"

Fig. 3



Model 75 Universal Power Feed

04221000



(Universal Unit Fits 100-200-300-1065 Machines)

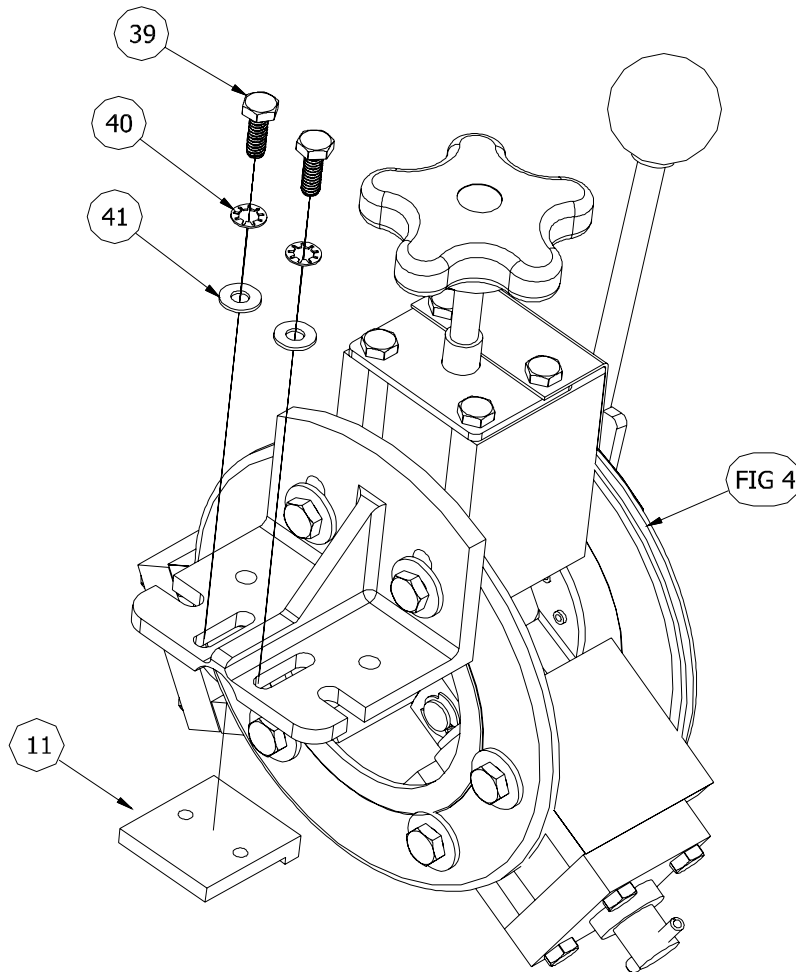


Fig. 14

ITEM	QTY	PARTNUMBER	DESCRIPTION
11	1	03409000	Bushing Lock
39	2	00113600	Screw, Hex Hd 1/4-20 x 3/4
40	2	00162400	Washer, Flat 3/16 USS
41	2	00167000	Lockwasher, Internal Tooth
FIG4	1	04217500	Power Feed Model 75

Power Feed Assembly

04217500

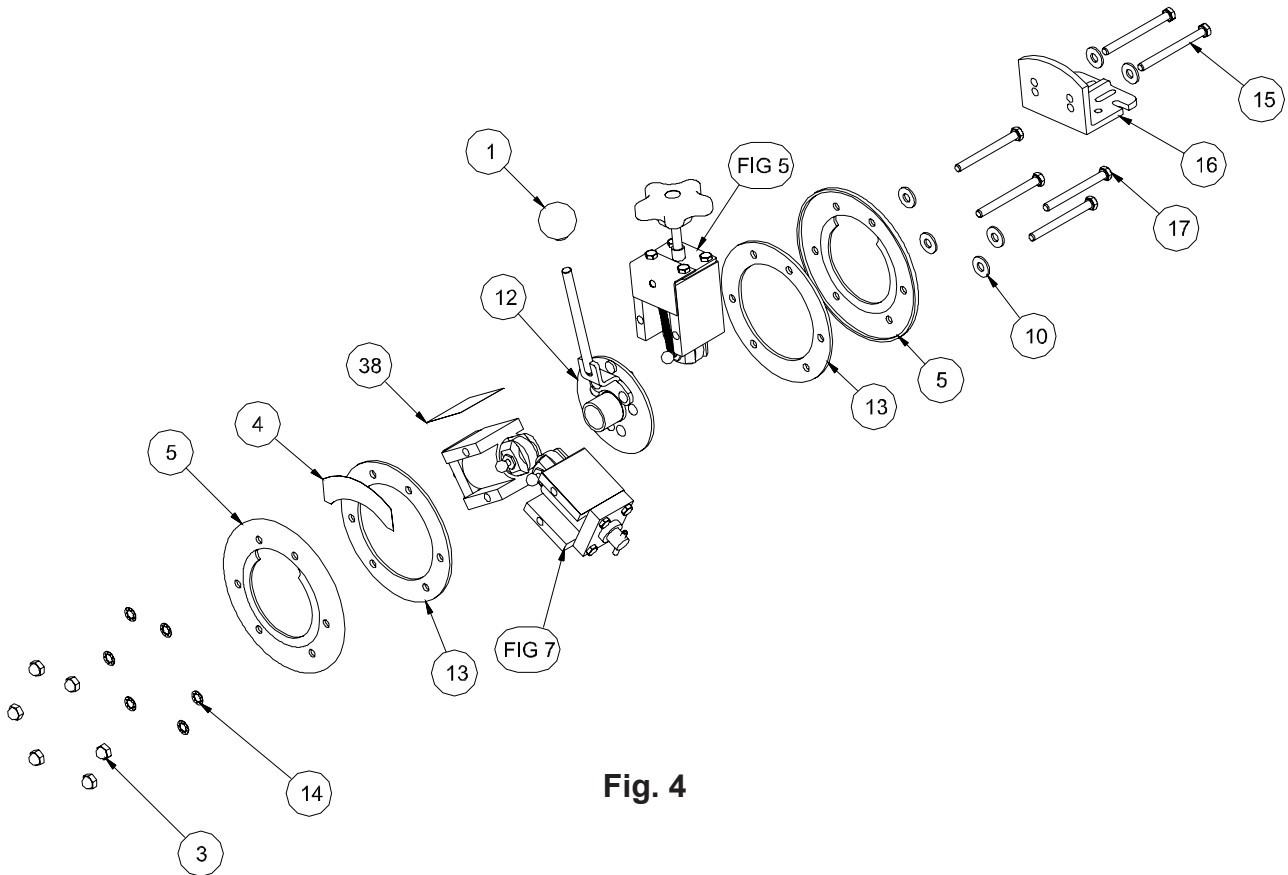


Fig. 4

ITEM	QTY	PARTNUMBER	DESCRIPTION
1	1	02856900	KNOB
3	6	04134900	NUT ACORN CAP 5/16-18
4	1	04220000	DECAL BRG PLATE MOD 75 FEED
5	2	04218600	PLATE BRG MOD 75 FEED
10	6	00162600	WASHER, FLAT 5/16 USS
12	1	44223900	2001 ACTURATOR ASSY
13	2	04218300	PLATE STATIONARY 75 FEED
14	6	00167100	INTERNAL TOOTH LOCKWASHER
15	2	00169500	SCREW, HEX HD CAP 5/16-18x3-1/2
16	1	44249900	UNIVERSAL MOUNTING PLATE
17	4	00480300	SCREW, HEX HD CAP 5/16-18x3-1/4
38	2	44220100	DIAL A CABLE LABEL
FIG 5	1	04224000	BEARING BLOCK ASSY - LONG
FIG 7	2	44219900	BEARING BLOCK ASSY - SHORT



Model 75 Universal Power Feed

04221000

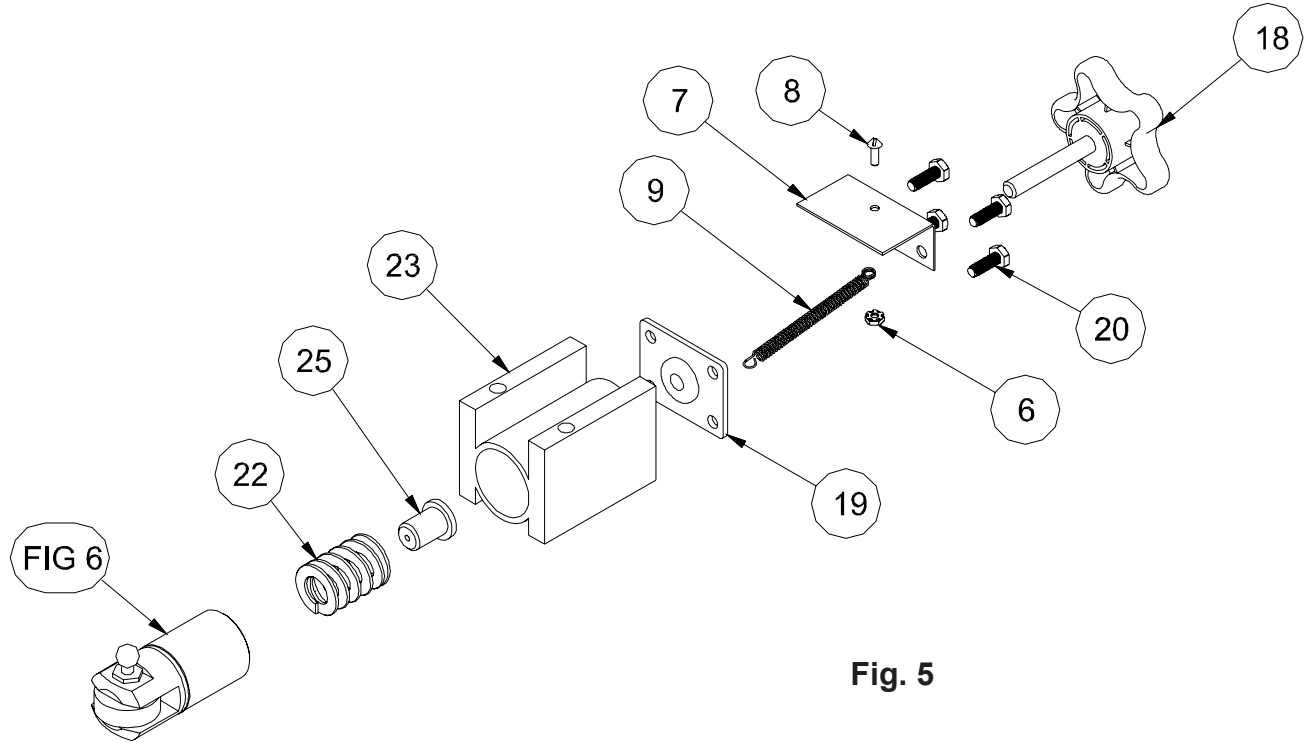
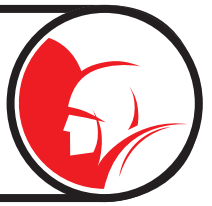


Fig. 5

ITEM	QTY	PARTNUMBER	DESCRIPTION
6	1	03312001	Nut Kep #8-32 Zinc Plated
7	1	44221900	2001 Cover Spring
8	1	01921801	Screw, Mach Rd Hd SI 8-32 x 1/2
9	1	44230100	2001 Spring Feed Ext
18	1	03415800	Knob and Screw Assy
19	1	04219000	Cap End Weld Assy 75
20	4	00113700	Screw, Hex Hd 1/4-20 X 3/4
22	1	04220100	Spring Hvy Duty Mod 75 Feed
23	1	04217900	Block Bearing Long Mod 75 Feed
25	1	03415700	Bushing & Ball Assembly
FIG6	1	44119600	Wheel Carrier Body Comp (Long)



Bearing Block Assy (Short) 44219900

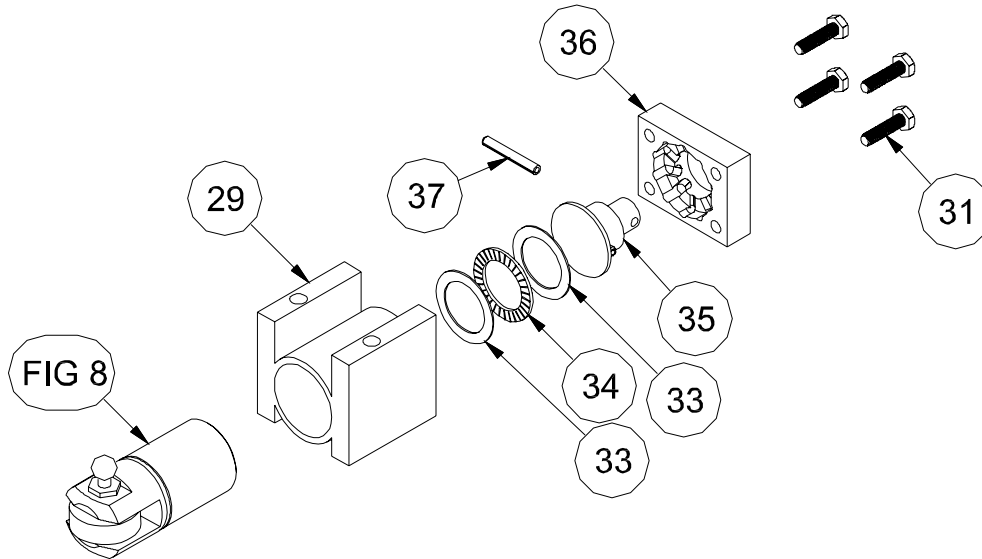


Fig. 7

ITEM	QTY	PARTNUMBER	DESCRIPTION
29	1	04217800	Block Bearing Short Mod 75 Feed
31	4	00113901	Screw, Hex Hd 1/4-20 x 1
33	2	04219600	Thrust Race
34		04219500	Thrust Bearing
35	1	44222100	2001 Knob
36	1	44213800	Dial A Cable Block
37	1	44222200	Roll Pin 2001
FIG 8	1	44119700	Wheel Carrier Body Comp (Short)



44119600

Wheel Carrier Body Comp (Long)

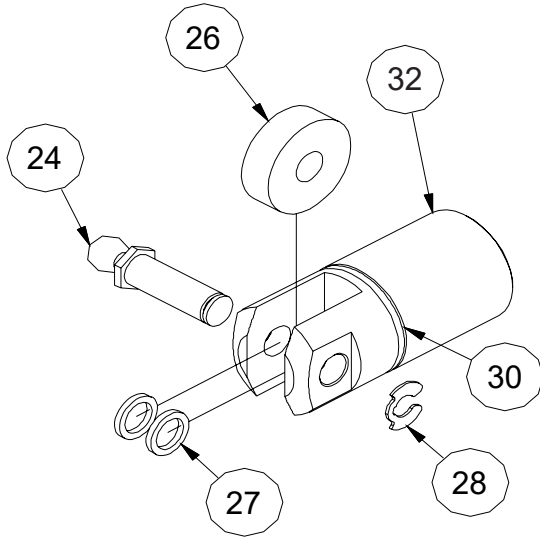


Fig. 6

ITEM	QTY	PART NUMBER	DESCRIPTION
24	1	04217700	Pin Drive Mod 75 Feed
26	1	04219700	Bearing Drive Mod 75 Feed
27	2	04219800	Washer 75 Feed Stainless
28	1	04219900	Ring Retaining-External
30	1	44250200	O-Ring Seal, Wheel Carrier
32	1	04218400	Body Wheel Carrier w/ Hole Long (Includes item 30)



44119700

Wheel Carrier Body Comp (Short)

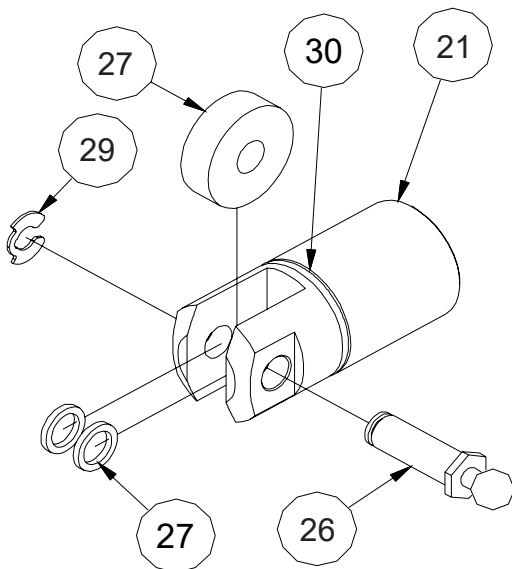


Fig. 8

ITEM	QTY	PART NUMBER	DESCRIPTION
21	1	04218500	Body Wheel Carrier w/ Hole Long (includes item 30)
26	1	04217700	Pin Drive Mod 75 Feed
27	1	04219700	Bearing Drive Mod 75 Feed
28	2	04219800	Washer 75 Feed Stainless
29	1	04219900	Ring Retaining-External
30	1	44250200	O-Ring Seal, Wheel Carrier



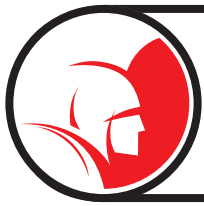
Installation Instructions For Model 100



(See: Fig. 4 and Fig. 5)

The following instructions are for manual machines, delete step 1 through 3 when replacing older power feed units.

1. Remove mounting plate (#16) from Dial-A-Cable power feed and reposition bolts in upper holes in (#16) plate.
2. Remove thumb screws and latch assembly from trunnion on machine.
3. Position drum into place on power drive unit.
4. Set Dial-A-Cable adjusters for 3/4" cable size (full open) and turn knob (#18) counter clockwise (left) to raise upper wheel carrier. Place actuator handle (#12) to "N" neutral position.
5. Slide Dial-A-Cable power feed unit over cable end. Position mounting plate on trunnion using the two (2) round holes and locking in place with the two (2) thumb screws removed in step 2. Tighten securely.
6. Position the cable forward to the point where the smallest diameter of cable will come in contact with the drive bearings, adjust your Dial-A-Cable for your cable size. Turn knob (#18) clockwise (right) until contact is made with drive bearing.
7. Installation is complete. Refer to operating instructions for safe operation.



Operating Instructions For Model 75 Dial-A-Cable Power Feed



(See: Fig. 4, Fig. 5, Fig. 7 & Fig. 8)

Warning!



Follow all safety instructions as outlined in your operator's manual supplied with your machine. If a new operator manual is required, contact Spartan Tool (800-435-3866) or download it at www.spartantool.com.

The following instructions refer to the use of the Spartan cable safety guide (44225300) (Fig. 1) which we recommend for safer operation. Always wear Spartan riveted gloves when operating machines.

Upon completion of installation instructions for your machine and before actual sewer cleaning, it is recommended you become familiar with your power feed operation. By moving the actuator assembly (#12) by use of the knob (#1) you will note the wheel carrier blocks (#21) and (#32) will turn. When the drum and cable are rotating the movement will feed the cable in and out by the slanting of the drive bearings (#26). The decal (#4) on the front bearing plate (#5) is marked from left to right "R"(reverse), "N" (neutral), and "F" (forward).

1. Place the actuator handle to the midway point between "N" and "F" on the name plate.
2. No cutter should be attached to the cable at this time.
3. The forward/reverse electrical switch should be placed in the forward "F" with the machine plugged in to a power supply. Note: If drum rotation is reversed, feed of cable will be reversed.
4. Momentarily step on foot switch and check machine rotation. Drum and cable should rotate left or counter clockwise from cable end of machine.

Warning!



Use care when performing the next operation as cable will be fed out and if allowed to feed too long may whip. Do not feed cable out more than 12 inches from feed unit.

5. With left hand on actuator assembly knob and right hand on adjusting knob #18, step on footswitch and slowly tighten (turn clockwise) knob #18. When cable is driving steadily forward, stop turning knob. Move actuator assembly knob to "R" position on name plate and cable should now retrieve. Cable movement will stop feeding in or out when actuator assembly knob is placed in the "N" position. You will note the farther the actuator assembly knob is moved to the forward or reverse position, the faster the cable will move out or in.



Cleaning Operation



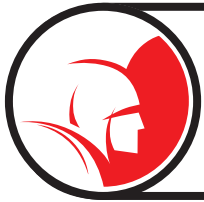
Warning!



Make sure to keep downward pressure on the cable safety guide at all times since flexible cable is subject to buckling under high torque conditions.

If cable slips or whenever a stoppage is encountered, knob #18 may be tightened down until cable is moving steadily. Caution! Do not tighten knob anymore than is necessary to cause cable to move in a steady motion in or out. Excessive tightening may damage cable or feed unit or overload motor. If at any time when cable is feeding into sewer line and torque build-up occurs, immediately move actuator control handle to the “R” (reverse) position to pull cable back. As soon as torque is relieved, move handle again to the “F” (forward) position. Repeat until stoppage is cleared.

Note: The electrical switch is to be placed in the reverse position for a few seconds only to release an entangled blade or to negotiate a difficult turn or trap. Never continue operating the machine in the reverse position. The cable may exit the drum prematurely causing injury.



How To Disassemble and Reassemble Model 75 Power Feed Unit



1. Remove top two (2) acorn nuts #3 from screws #15 that holds feed unit to mounting plate #16. (On 2001 unit, remove two (2) #15 screws at bottom that holds feed unit to upper front casting).
2. Remove feed unit from mounting screw #15 by pulling forward.
3. Lay unit flat on back.
4. Remove remaining acorn nuts #3.
5. Remove bearing plate #5 (with decal).
6. Remove handle assembly #12.
7. Remove stationary plate #13.
8. Remove the two (2) short bearing blocks #29 as assemblies.
9. Remove the long bearing block #23 as an assembly.
10. Remove bottom stationary plate #13.
11. Remove back bearing plate #35 (without decal).



Disassembly of Short Bearing Blocks



(See: Fig.10 and Fig. 11)

1. Pull wheel carrier bodies #21 from blocks #29.
2. Remove the two (2) thrust races #33 and one (1) thrust bearing #34 from each unit.
3. Remove four screws #31 holding Dial-A-Cable assembly #35, 36, and 37 to bearing block #29. (Do not disassemble unit)
4. Remove retaining rings #28 from drive pins #24 and pull pins from carrier bodies #21. This will release the drive roller #26 and two (2) spacers #27. Remove "O" ring #30 from carrier body grooves, use care not to damage same.

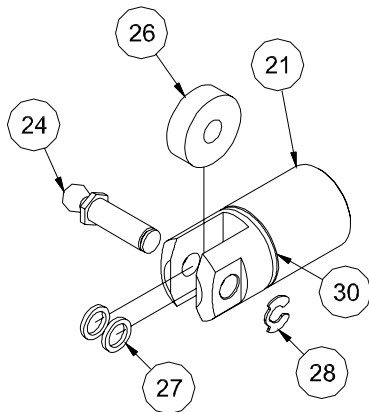


Fig. 10

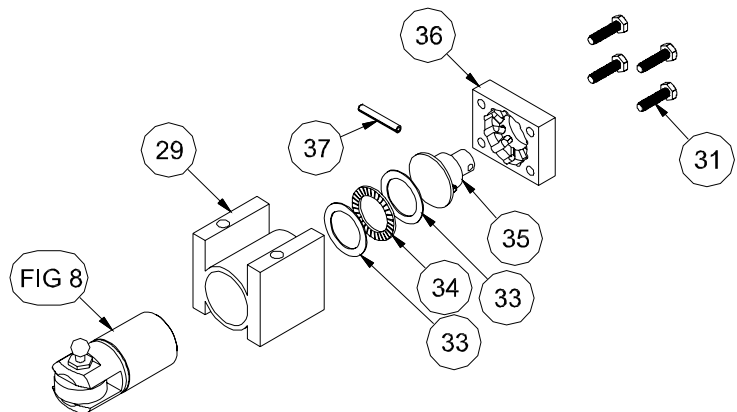
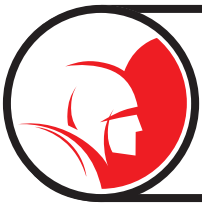


Fig. 11



Disassembly of Long Bearing Blocks



(See: Fig.12 and Fig. 13)

1. Remove the two (2) screws #20 holding spring cover #7 to top of long bearing block #23. Leave remaining two (2) screws.
2. Pull wheel carrier body #32 from block #23 with cove #7 and spring #9 attached.
3. Remove spring #22 and ball and bushing assembly #25 from long wheel carrier body.
4. Remove retaining ring #28 from drive pin #24 and pull pin from carrier body with feed spring and cover attached. This will release the drive roller #26 and two (2) spacers #27. Remove "O" ring #30 from carrier body groove, use care not to damage same.
5. Unscrew knob #18 and remove two (2) remaining screws #20 from end cap #19.

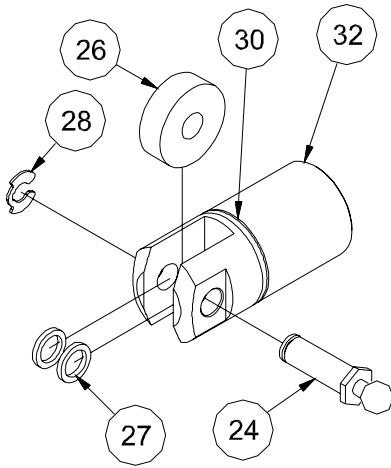


Fig. 12

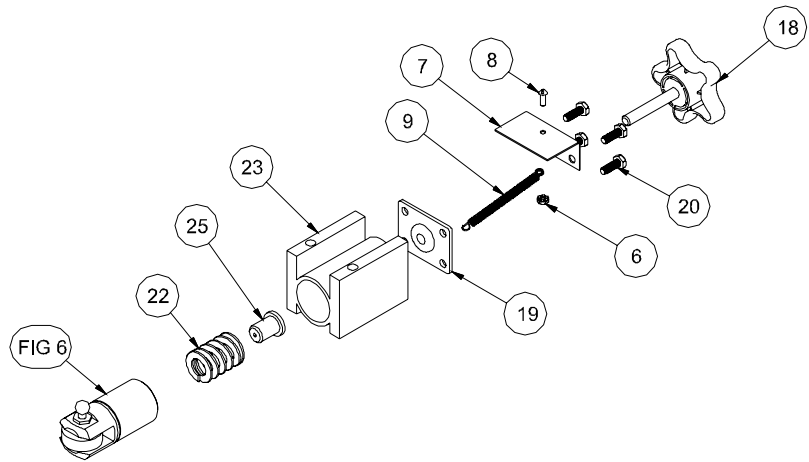


Fig. 13



Cleaning and Lubricating Instructions

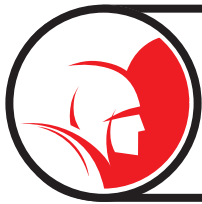


Warning!

The cleaning of parts in this instruction section recommends the use of kerosene for parts cleaning which is combustible and care should be used. Always work in a well ventilated area away from fire or open flame. When parts cleaning, always wear eye protection, rubber gloves and plastic or rubber apron. When cleaning of parts is complete dispose of all cleaning rags and waste cleaner in proper manner. NEVER USE GASOLINE OR ANY OTHER HIGHLY COMBUSTIBLE SUBSTANCE FOR CLEANING PARTS.

After unit disassembly, all parts with the exception of the drive rollers #26 and “O” rings #20 should be soaked and cleaned in kerosene to remove grease and grime. Wipe parts and allow to dry completely before lubricating in assembly. Drive rollers #26 and “O” rings #30 should be wiped clean only and not placed in cleaner. Rollers are prelubricated and sealed if drive bearings are rough turning or frozen and don't turn, replace with new parts. We recommend the purchase of three (3) extra drive bearings #26 and three (3) extra “O” rings for replacement when necessary.

Lubrication of drive parts should be done as parts are reassembled. We recommend using a multipurpose lithium grease NLGI #2 which is water resistant and is available in tubes and aerosol cans.



Re-Assembly of Short Bearing Blocks



1. Replace “O” rings #30 into groove in short wheel carrier block #21. (Spring bottom on block)
2. Place drive wheels #26 in short blocks. BE SURE SPACERS #27 ARE ON EACH SIDE OF WHEEL. Slip drive pin #24 through hole and replace retaining ring #28.
3. Lubricate inside cylindrical section of short bearing blocks #29, covering inside wall with thin film of grease.
4. Lubricate “O” rings and lower section of wheel carrier blocks #21 and slide wheel carrier assembly into blank untreated end of short bearing blocks until drive wheel cut-out is flush with top of bearing block allowing room for thrust bearing.
5. Turn assembly over and place one (1) race #33 on bottom. Lubricate thrust bearing #34 and place on top of race. Place second race on top of thrust bearing.
6. Place Dial-A-Cable block assembly #36 on bottom of short bearing block. Insert four (4) long hex screws #31 through holes and screw into block, tighten hex screws securely. Assembly is complete.



Re-Assembly - Long Bearing Blocks



1. Replace “O” rings #30 into groove in long wheel carrier block #32. (Spring hole in bottom)
2. Lubricate inside cylindrical section of long bearing block #23. Install end cap #19 on end of long bearing block with two (2) short screws #20. Place these screws in the short rib side of the bearing block.
3. Lubricate “O” ring #30 and lower section of wheel carrier block #32. Install spring #22 into spring hole and install bushing and ball assembly #25 into spring. Slide wheel carrier unit into bottom of long bearing block.
4. Lay bearing block on bench with short rib side down. Place drive wheel #26 into end of wheel carrier block. BE SURE SPACERS #27 ARE ON EACH SIDE OF WHEEL.
5. Place drive Pin #24 (which has spring and cover attached) through hole and replace retaining ring #28.
6. Drive pin #24 should now be centered between the two (2) long ribs on the bearing block to allow spring #9 to lay between ribs.
7. Pull cover #7 up and place over end cap #19 attach with remaining two (2) short screws. Tighten all screws securely.
8. Replace knob #18 in end cap #19.



ONE YEAR WARRANTY



Spartan Tool warrants its equipment to be free from defects in material and workmanship for one year from the date of purchase. To obtain warranty service, a purchaser should notify Spartan Tool in writing, at the address provided below, within the warranty period, and Spartan Tool will direct where to take or send the equipment for service. If the defect is covered by the warranty, Spartan Tool will repair or replace, at its option, the defective equipment, without charge for labor or materials. (Freight and insurance are the purchaser's responsibility.)

This warranty is limited to the original retail purchaser and is not transferable. Spartan Tool assumes no responsibility for damage due to accident, neglect, abuse, tampering or misuse, nor damage from repairs or alterations by others. This warranty does not cover damage to the equipment resulting from the use of replacement parts other than Spartan Tool parts.

Spartan Tool's sole obligation and the original retail purchaser's exclusive remedy under this warranty shall be for repair or replacement as described above. ALL OTHER WARRANTIES, WHETHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL SPARTAN TOOL BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

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