



SPARTAN TOOL

FOR TOUGH CUSTOMERS. SINCE 1943.



PRODUCT MANUAL

Model 100

Cable Machine

Spartan Tool LLC | 1618 Terminal Road | Niles, MI 49120
order by phone **800.435.3866** order online **SpartanTool.com**



Contents

CONTENTS	2
WARNINGS	4
TECHNICAL INFORMATION	5
SAFETY INSTRUCTIONS	6
MACHINE FEATURES	9
ASSEMBLY INSTRUCTIONS	9
Joining Cables.....	9
Model 100 shown with option Dial-a-cable power cable feed	9
Disassembling.....	10
Loading Cable into machine	10
OPERATING	11
OPERATING THE POWER CABLE FEED	13
Changing motor brushes	14
Caring for cables.....	14
MAINTENANCE INSTRUCTIONS	14
How to install cable into drum	15
machine storage.....	15
MODEL 100 PU WITH 13/32 DRUM 02812201	16
MODEL 100 PU WITH 1/2 DRUM 02812202	17
MODEL 100 PU WITH 5/16 DRUM 02812203	18
MODEL 100 POWER UNIT 02812200	19
MODEL 100 POWER UNIT 02812200	20
BASE ASSEMBLY 02767100	21

TRUNNION ASSEMBLY 04674200	22
FORWARD REVERSE SWITCH 44221500	23
AIR FOOT SWITCH 44225800	23
MODEL 100 DRUM 13/32" 02766401	24
MODEL 100 DRUM 1/2" 02766402	25
MODEL 100 DRUM 5/16" 02766403	26
OUTER DRUM 02766500	27
INNER DRUM 03446900	28
PM MOTOR ASSEMBLY 44295200	29
CLUTCH ASSEMBLY 13/32 04204200	30
CLUTCH ASSEMBLY 1/2 04203200	31
CLUTCH ASSEMBLY 5/16 04204300	32
WIRING DIAGRAM	33
ROLL-AID (OPTIONAL) 44276700	34
WHEEL & SUPPORT ASSEMBLY 44120700	35
MAINTENANCE INSTRUCTIONS	36
MODEL 100 CABLES	37
CABLE ENDS AND ACCESSORIES	38
SERVICE INFORMATION	39
WARRANTY INFORMATION	40



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. Read the engine owners' manual for instructions and safety precautions on engine operation.
- Gasoline is extremely flammable and is explosive under certain conditions.
 - Refuel in a well ventilated area with the engine stopped. Do not smoke or allow flames or sparks in the area where the engine is refueled or where gasoline is stored.
 - Do not overfill the fuel tank (there should be no fuel in the filler neck). After refueling, make sure the tank cap is closed properly and securely.
- 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.
- Carbon monoxide exhaust and/or gasoline fumes from this equipment can create a hazardous atmosphere in confined spaces (which may include, but are not limited to, manholes and septic tanks), closed garages or other areas which may not be properly ventilated. In particular, excess gasoline fumes can create an explosion hazard. Such hazardous atmospheres can cause death or severe injury. Do not operate this equipment with its cart (used to house the engine and gasoline tank) located in any confined space or area with inadequate ventilation. Operate this equipment only when the cart is located outdoors or in an open, well-ventilated area.
- Ensure the jet hose has been placed in the pipe a minimum of 6 feet before engaging the water pressure to prevent the hose from coming out of the pipe prematurely and causing injury.
- Always shut off the water pressure before pulling the hose out of the pipe. Mark the hose a minimum of 6 feet from the end to help ensure the hose is not accidentally pulled out of the pipe while still under pressure. Shut off the water pressure when the hose mark is encountered.
- Never point the wash gun at anyone while operating the unit. Injury may result.
- 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 Spartan Tool at the address shown below.



CAUTION: Portions of the system can still be under pressure even if the unit is not operating.

CONTACT US

Spartan Tool LLC
1618 Terminal Rod
Niles, MI 49120
800.435.3866
SpartanTool.com

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.



GENERAL

- Pipe Sizes: 1 1/4" - 4"
- Dimensions: 18" W x 17" H x 19" D
- Weight: 68 lbs.
- Motor (Volt): 115
- Motor (Amp): 1.4
- Drum Capacity: 75' of 1/2" cable or 100' of 13/32" or 5/16" cable
- Cleaning Capacity: up to 100' for 1-1/4" - 2" 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)
- Drum Speed: 290 RPM with no load
- Cable Feed: Optional Spartan Dial-A-Cable Power Cable Feed
- Frame: Extra strength aluminum magnesium alloy

FEATURES

- Lightweight power for 1-1/4" to 4" lines up to 100'
- 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

SAFETY

- Air-operated foot switch
- Cable guide
- GFCI power cord
- Torque limiting clutch
- Power feed (works with cable guide)



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 adaptor 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 cord 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.

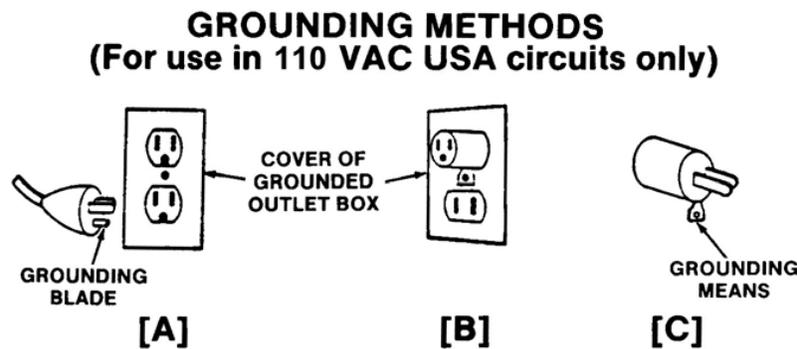


FIG. 1

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.

3. Extension Cords. The GFCI on the machine's power cord does not protect the operator from electrical shock along the extension cord.



DANGER: Improper use of an extension cord will cause death or severe injury.

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.

Safety Instructions

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.



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



CAUTION: Avoid operating the machine in areas of standing water.

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.

Safety Instructions

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.
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.



MODEL 100 SHOWN WITH OPTION DIAL-A-CABLE POWER CABLE FEED



FIG. 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 a portion of the expansion pin in the upright position. Using a hammer, drive the expansion pin down flush with coupling. Assembly is complete, the cable and machine are ready for use.

Assembly Instructions

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 the expansion pin down with a hammer. Note the shoulder on the tip of the punch which acts as a stop. Drive the punch until the 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.

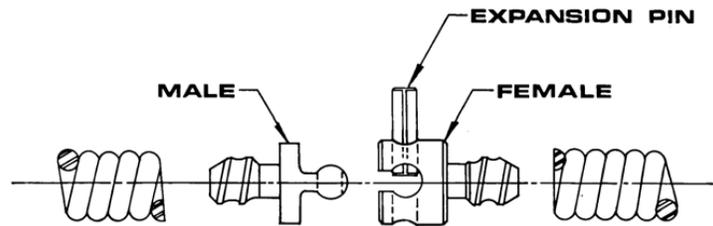


FIG. 3

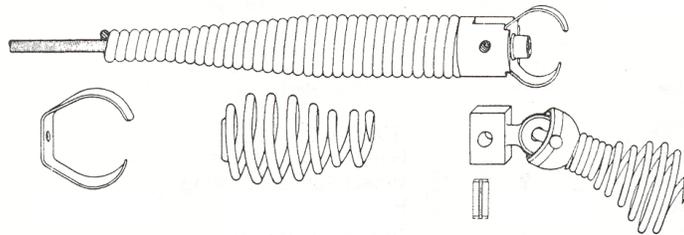


FIG. 4

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.



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 the footswitch making sure that the drum rotates in a 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 the machine on.
Feed the cable into the 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 the cable to keep the cable in line while depressing foot actuator to start the cable rotating.
 - 4a. When using a manual machine, place two hands on the cable equal distance between the outlet of your 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

NOTE: Kinkage and breakage of cable is caused solely by one thing: permitting the working end of the cable to get hung up in an obstruction while still 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 bucking, 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 the cable back in the drum while the drum is standing still - KEEP MACHINE RUNNING in the forward direction.



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

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

8. When the tool is close to the clean out opening, release foot pedal and allow the machine and drum to come to a complete stop.
9. Move toggle switch to the "OFF" position and disconnect the machine from the power source.
10. Pull the remaining cable and tool from the line and hand-feed the 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 the handle to the right. Don't apply too much tension - just enough to keep the cable moving is sufficient.
2. Adjust the knobs on the Power Feed to match the size of the cable installed in the drum for optimal performance.
3. Cable is fed into the line by putting the handle in the forward position. This speed will vary from 0-30 feet per minute depending on the size of the cable and how far forward you push the handle.
4. Cable is brought out of the line by putting the handle in reverse position. You can also vary the speed in reverse.
5. 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.
6. 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.
7. The Cable Safety Guide prevents accidental contact with the rotating cable. **See Page 35 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.

See Power Feed Manual for installation instructions.



Maintenance Instructions



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

CHANGING MOTOR BRUSHES

1. With the motor uncovered, unscrew the 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 the brush. Brush length of 1/4" or less indicates time for replacement.
3. If brush is still good, replace into the holder with marked side up or if not good, replace with new brush. Repeat procedure on other side then assemble the 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.



FIG. 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 the 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 cables reduce the machine efficiency in removing obstructions. New cable reduces chances of downtime and the time it takes to get the job done.

HOW TO INSTALL CABLE INTO DRUM

1. Position external drum in a vertical position so that the 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 the old cable from the 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 on 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 inches 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.

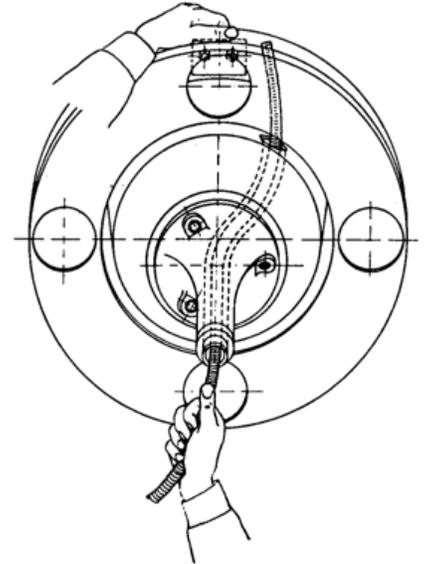


FIG. 6

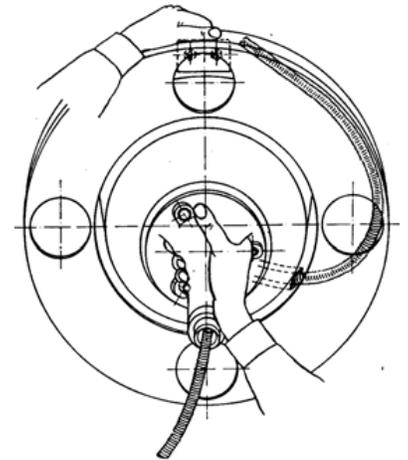


FIG. 7

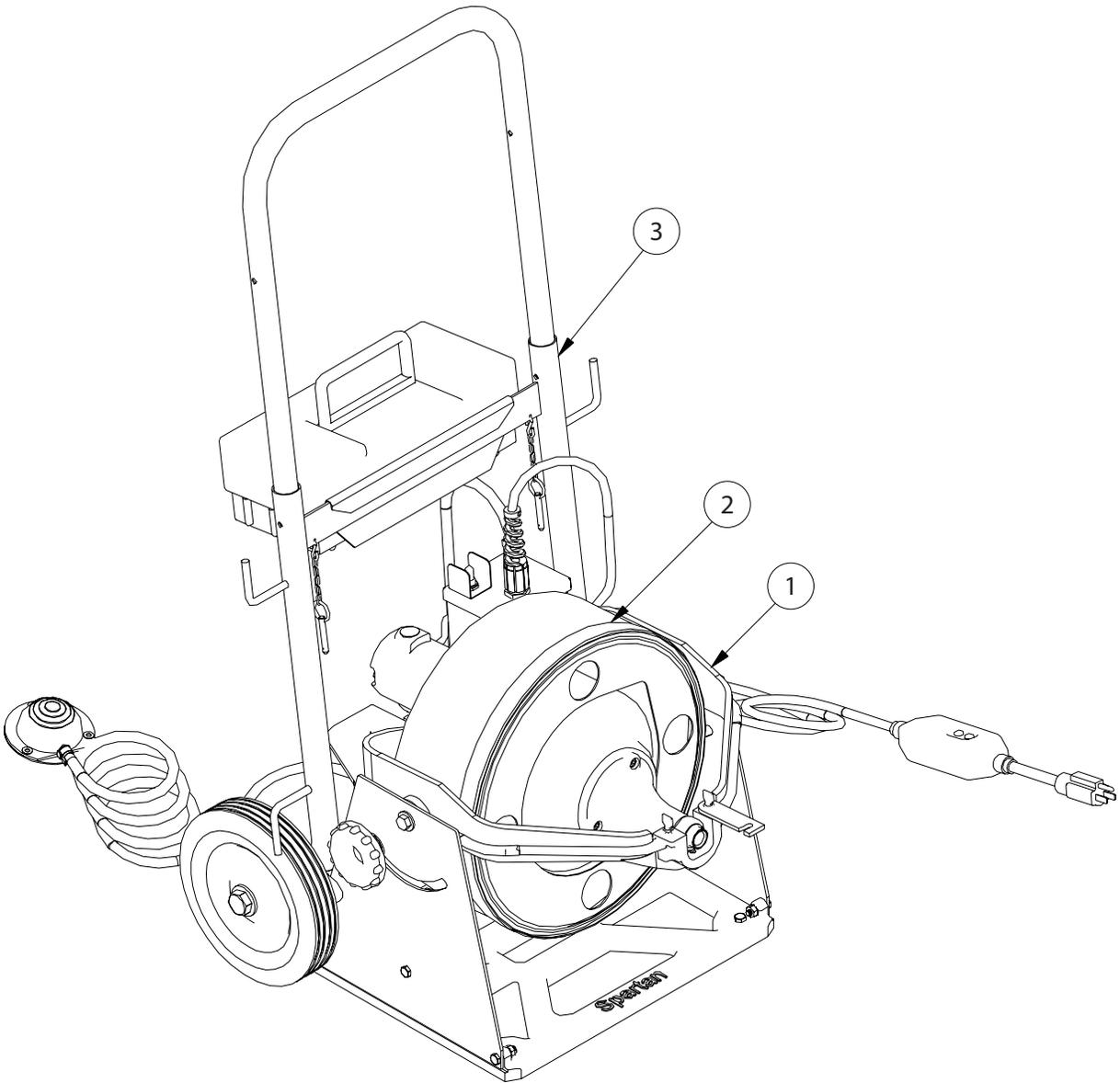
MACHINE STORAGE

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.

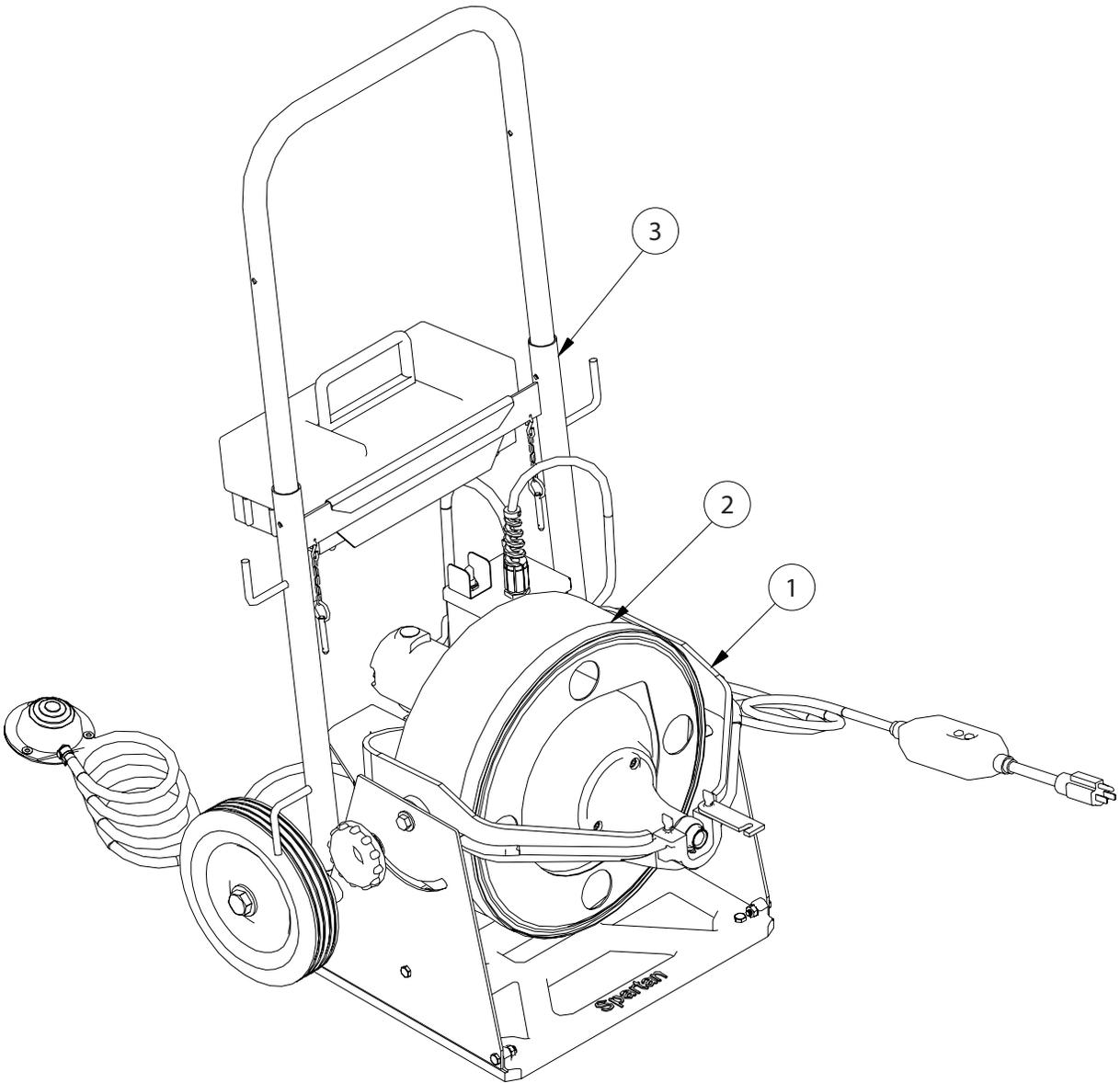


Model 100 PU with 13/32 Drum 02812201



Item	Part Number	Description
1	02812200	Model 100 Power Unit
2	02766401	Model 100 Drum 13/32"
3	44276700	Model 100 Roll-Aid

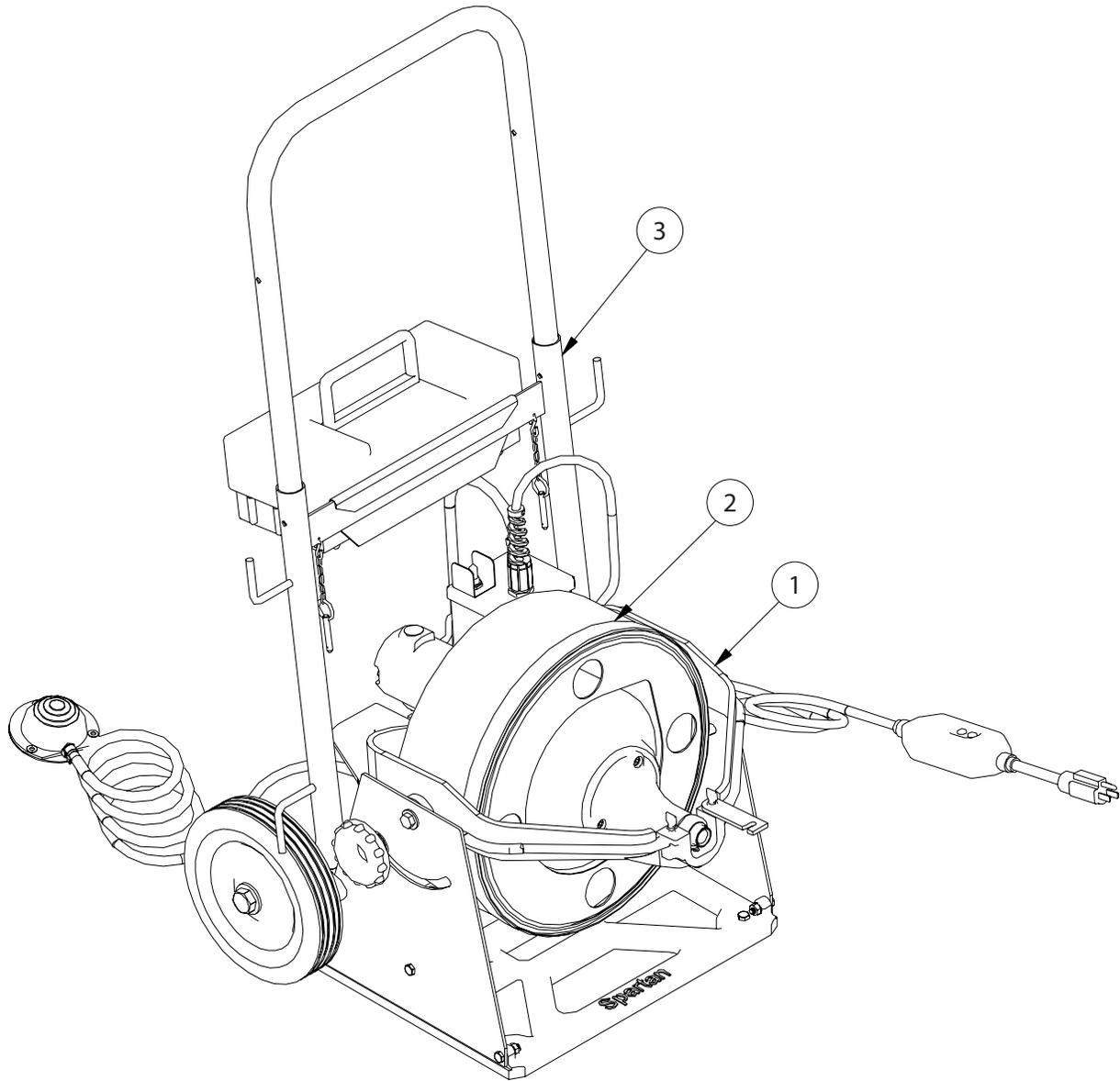
Model 100 PU with 1/2 Drum 02812202



Item	Part Number	Description
1	02812200	Model 100 Power Unit
2	02766402	Model 100 Drum 1/2"
3	44276700	Model 100 Roll-Aid

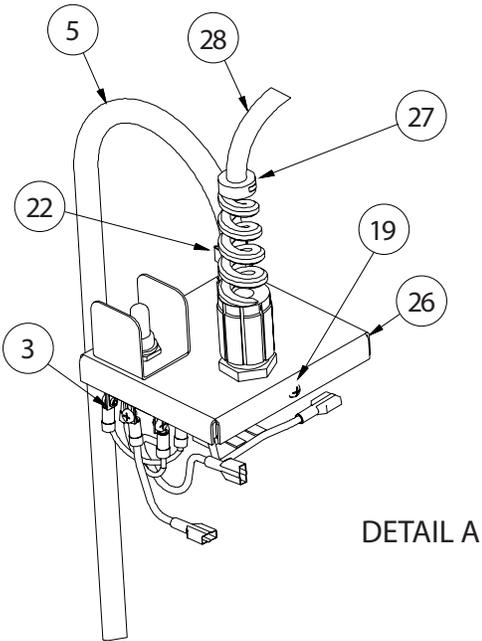


Model 100 PU with 5/16 Drum 02812203

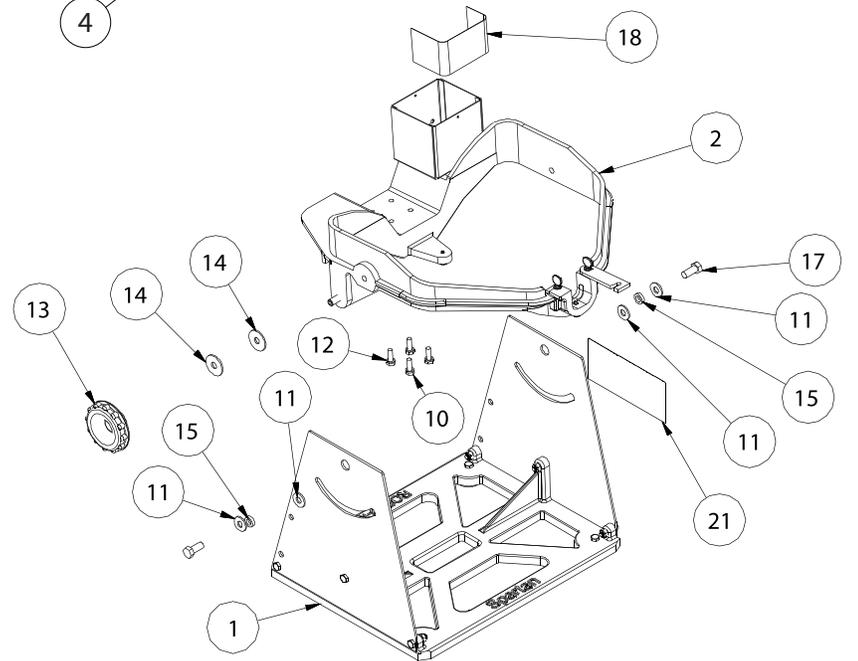
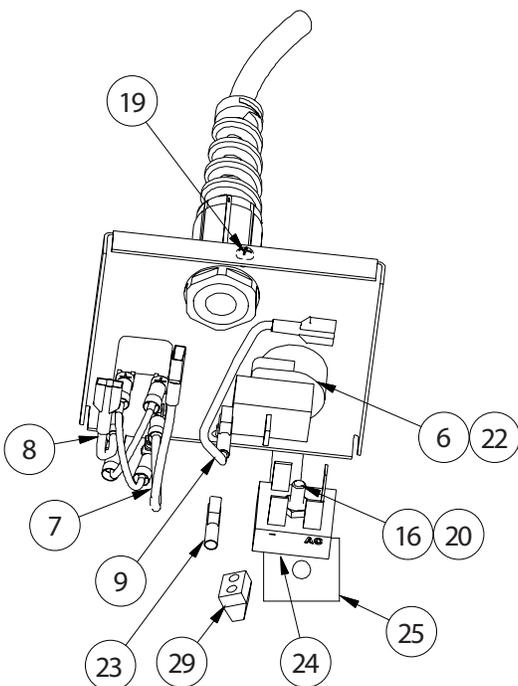
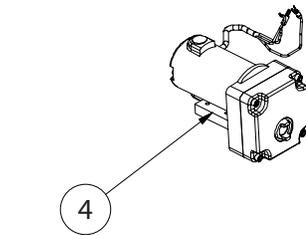
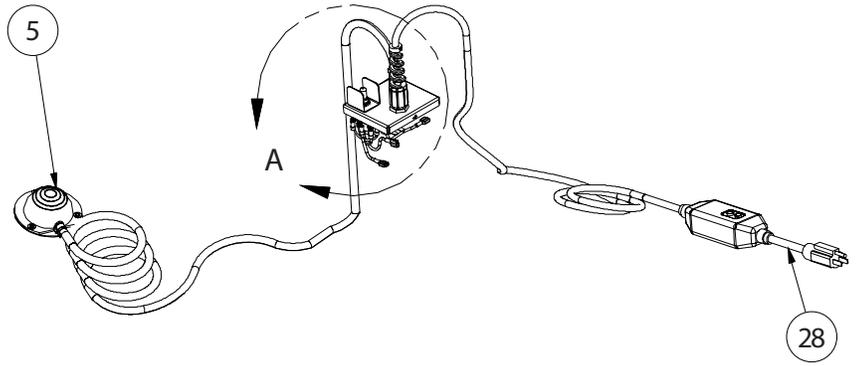


Item	Part Number	Description
1	02812200	Model 100 Power Unit
2	02766403	Model 100 Drum 5/16"
3	44276700	Model 100 Roll-Aid

Model 100 Power Unit 02812200



DETAIL A

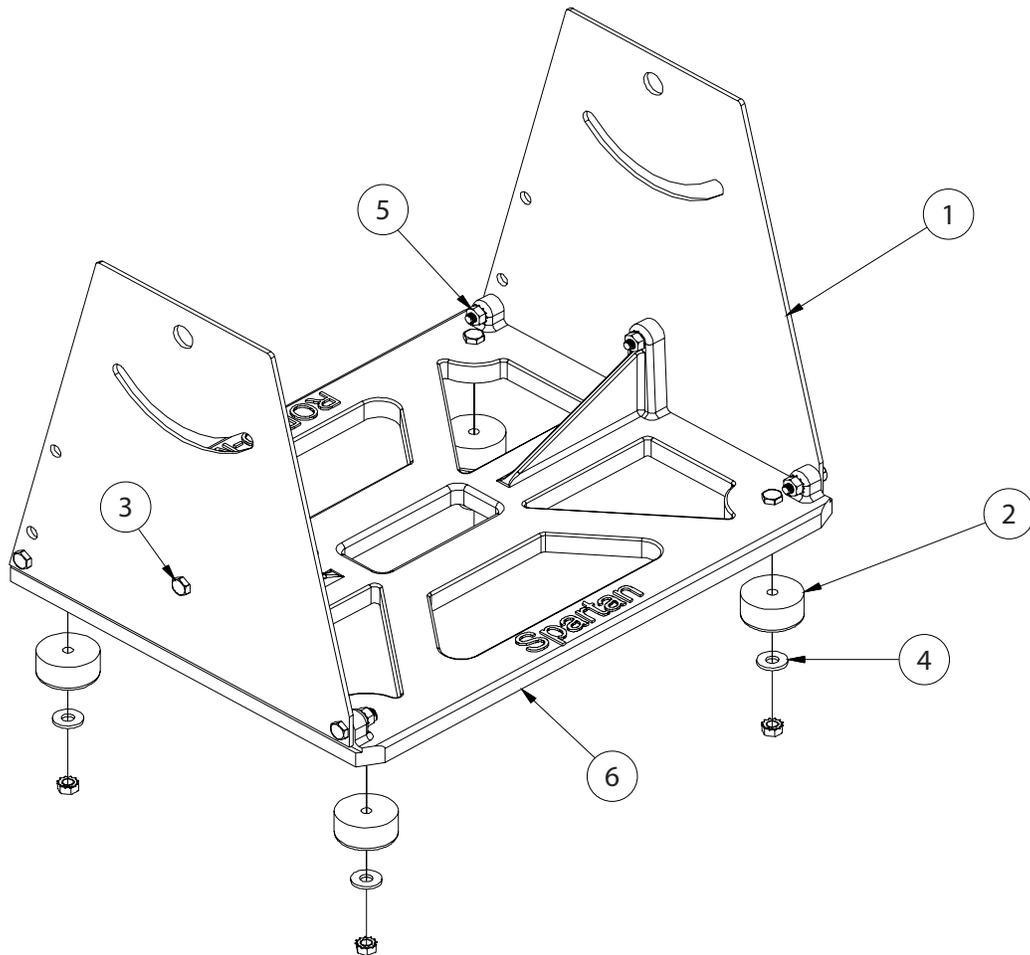




Model 100 Power Unit 02812200

Item	Part Number	Description	Qty.
1	02767100	Base Assembly Mod 100	1
2	04674200	100 Trunnion Assy	1
3	44221500	Forward Reverse Switch	1
4	44295200	Model 100 PM Motor w/Gearbox	1
5	44225800	Air Bulb & Hose Assembly	1
6	44002600	Pressure Switch	1
7	44290700	Jumper Wire, 5in Brown	1
8	44290800	Jumper Wire, 5in Yellow	1
9	44292200	Jumper Wire, 4in Black	1
10	00113700	Screw, Hex Head 1/4-20 x 3/4	4
11	00162600	Washer, Flat 5/16	4
12	00165400	Washer, Lock Split Medium 1/4	4
13	02762000	Knob 3/8-24 x 1/2 FI 204	1
14	02762100	Fiber Washer	2
15	02762200	Spacer	2
16	02823900	Screw, Machine 10-32 x 1	1
17	02826700	Screw, Hex Head 3/8-24 x 7/8	2
18	02890100	Insulation Paper	1
19	03394400	Screw, Sheet Metal #6 x 1/4	2
20	03850100	Nut, Hex Kep 10-32	1
21	04220200	Decal, Warning	1
22	04652700	Clamp, Stepless Ear 1/2"	1
23	44216100	Disconnect .250 Female 16-14	2
24	44290500	Bridge Rectifier PM Motor	1
25	44290501	Pad, Thermo Conductive	1
26	44302700	Weldment Outlet Box Cover	1
27	50205400	Strain Relief-Power Cord	1
28	71103300	Power Cord 25' w/GFI	1
29	79925700	Connector Push-On 2 Wire	1

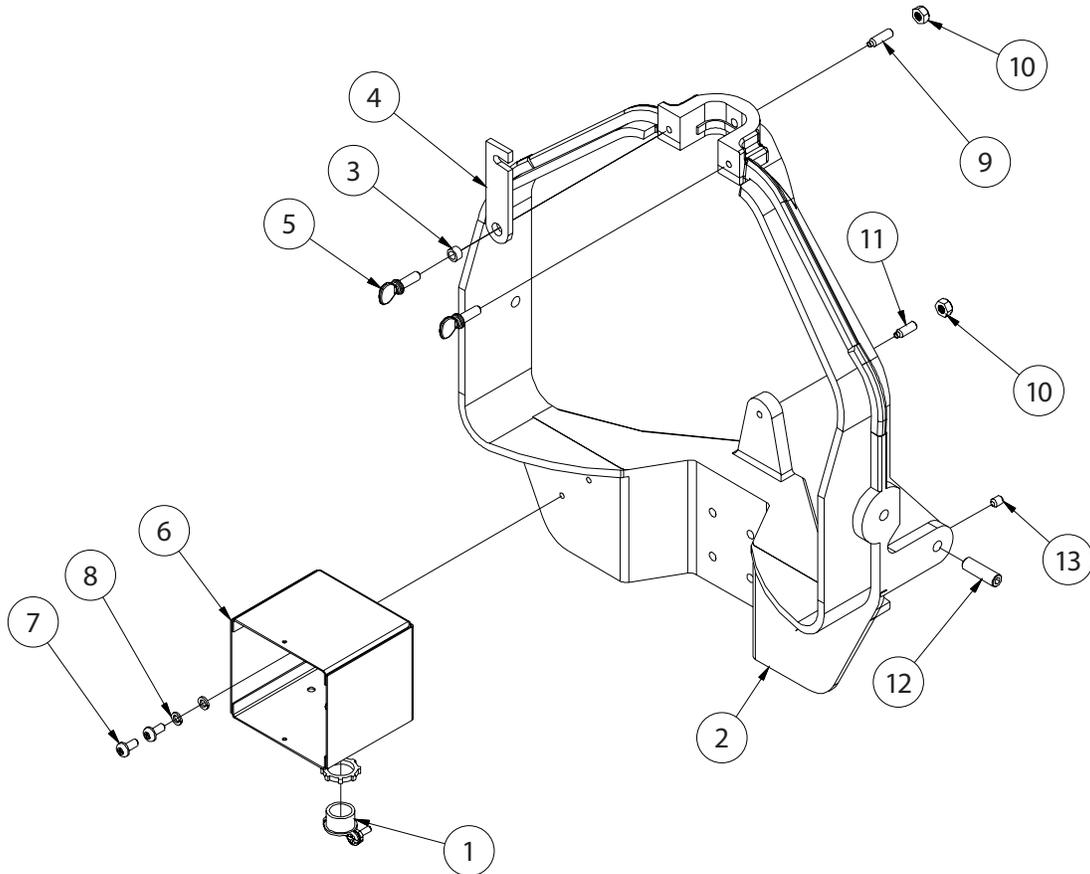
Base Assembly 02767100



Item	Part Number	Description	Qty.
1	02761100	Base Side Plate	2
2	03443600	Bumper Assembly	4
3	00113901	Screw, Hex Head 1/4-20 x 1	6
4	02825100	Washer, Flat 1/4	4
5	01950800	Nut, Hex Kep 1/4-20	10
6	02767300	Base Casting	1

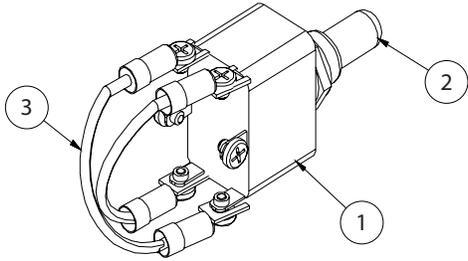


Trunnion Assembly 04674200



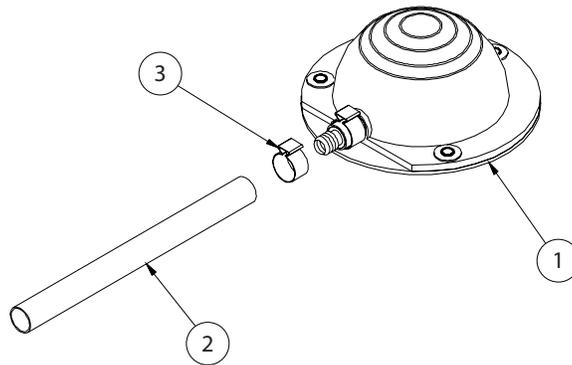
Item	Part Number	Description	Qty.
1	02829300	Box Connector	1
2	02765100	100 Trunnion Only	1
3	02761800	Pawl Bearing	1
4	02761900	Latch	1
5	02825500	Thumb Screw, 1/4-20 x 3/4	2
6	04645000	100 Switch Box	1
7	02825600	Scr, Bndg 12 x 1/2 Type B	2
8	02829500	Washer, Lock Split #12 Zinc	2
9	04103100	Set Screw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

Forward Reverse Switch 44221500



Item	Part Number	Description	Qty.
1	03433200	Toggle, ON/OFF/On Switch	1
2	44110500	Rubber Boot	1
3	44038900	Assy Jumper Wire-UL 2-1/2"	1

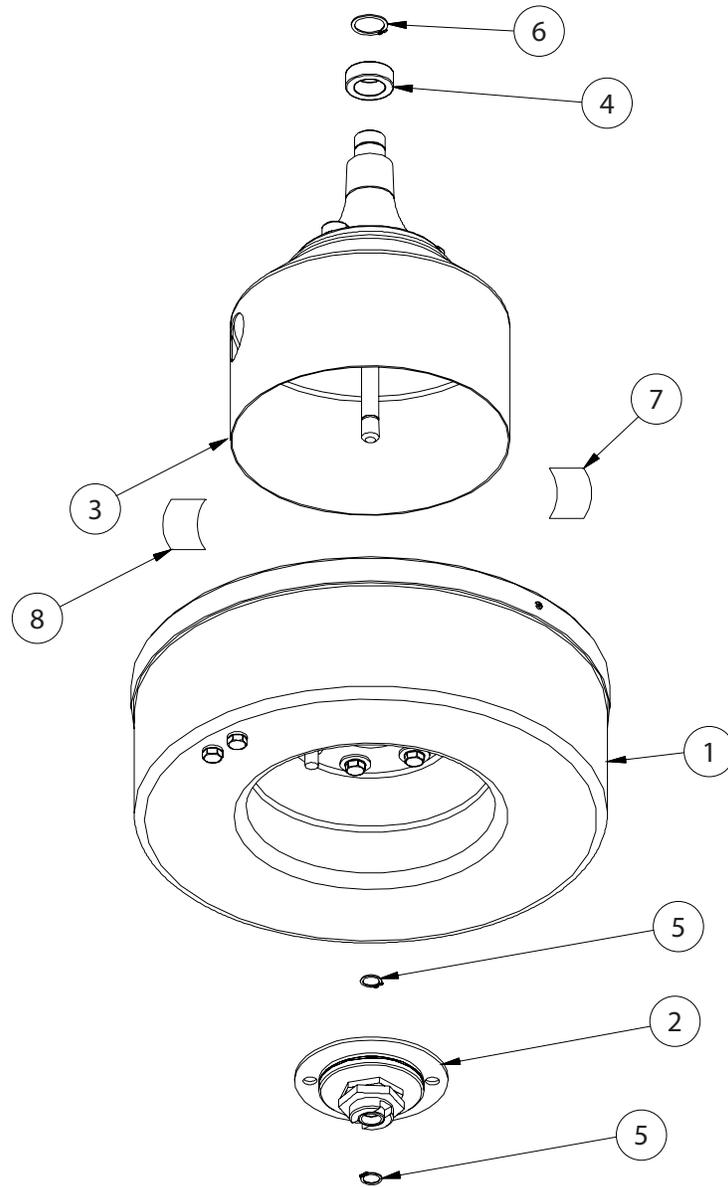
Air Foot Switch 44225800



Item	Part Number	Description	Qty.
1	04576900	Pressure Transmitter	1
2	04577100	Neoprene Air Hose 8' Lg x 7/16	1
3	04652700	Clamp, Stepless Ear 1/2"	1

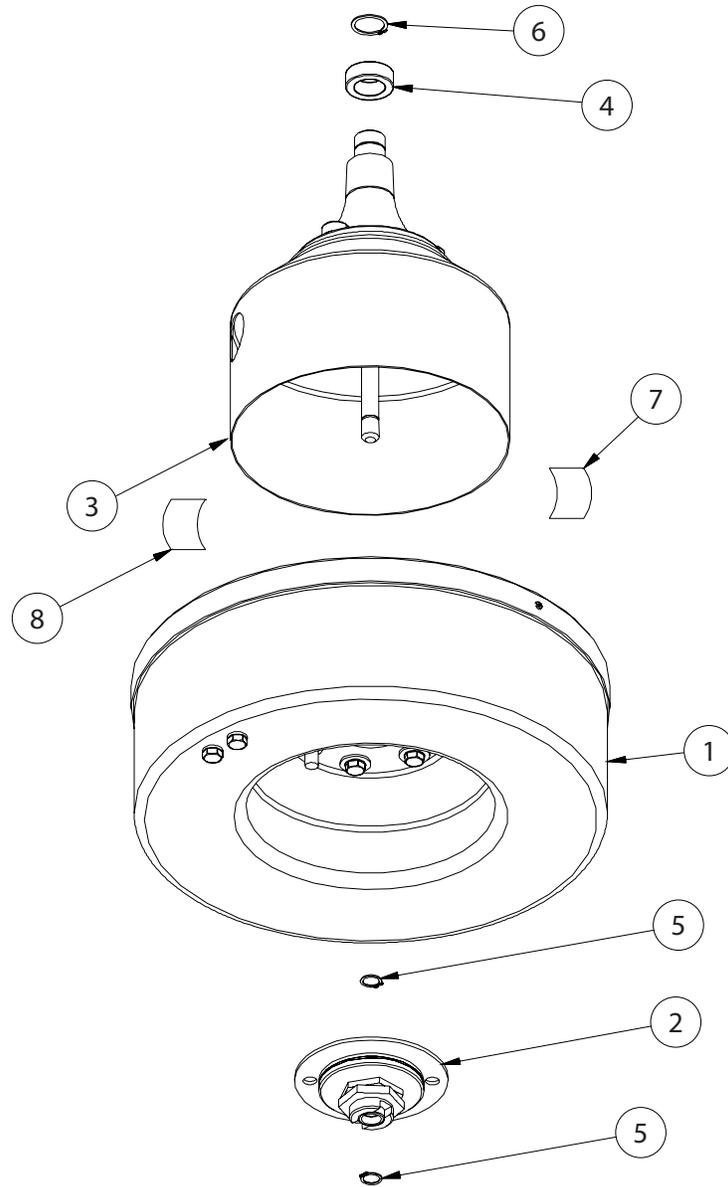


Model 100 Drum 13/32" 02766401



Item	Part Number	Description	Qty.
1	03449500	Outer Drum & Cover M-100	1
2	04204200	Clutch Assembly - 13/32	1
3	03446900	Inner Drum Assembly (100)	1
4	02759800	Bearing	1
5	02822500	Retaining Ring - Small	2
6	02822700	Retaining Ring - Large	1
7	02761300	Decal, Drum Model 100, 13/32	1
8	44159900	Decal, Drum Model 100	1

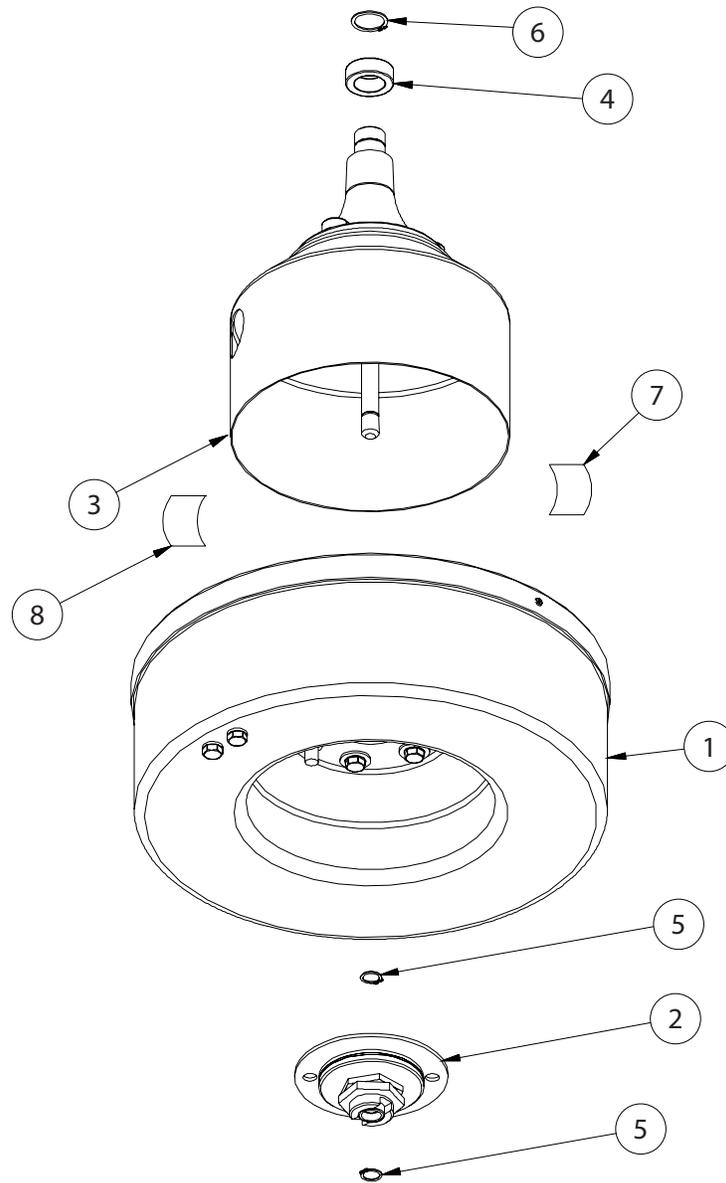
Model 100 Drum 1/2" 02766402



Item	Part Number	Description	Qty.
1	03449500	Outer Drum & Cover M-100	1
2	04204200	Clutch Assembly - 1/2	1
3	03446900	Inner Drum Assembly (100)	1
4	02759800	Bearing	1
5	02822500	Retaining Ring - Small	2
6	02822700	Retaining Ring - Large	1
7	02761300	Decal, Drum Model 100, 13/32	1
8	44159900	Decal, Drum Model 100	1

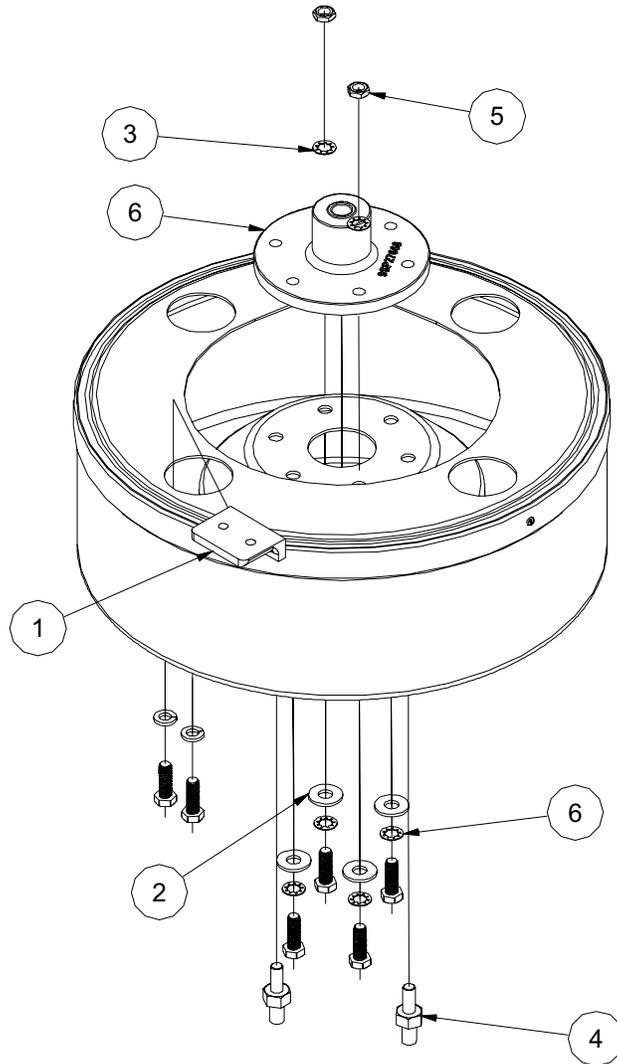


Model 100 Drum 5/16" 02766403



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

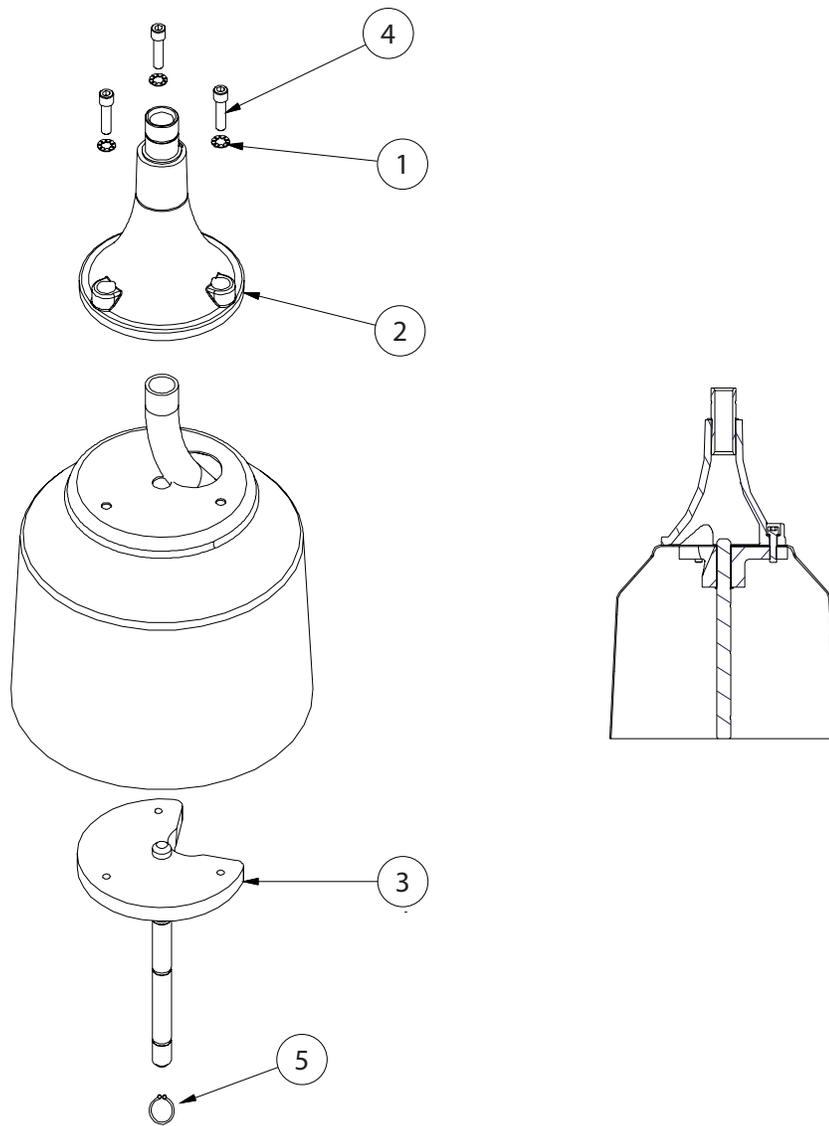
Outer Drum 02766500



Item	Part Number	Description	Qty.
1	03414600	Cable Clamp	1
2	00162600	Washer, Flat 5/16" USS Zinc	4
3	00167100	Internal Tooth Lockwasher	5
4	02765600	Drive Stud	2
5	02820700	Nut, Heavy Hex Jam 5/16-18	2
6	02765700	Drum Hub Assembly (100)	1

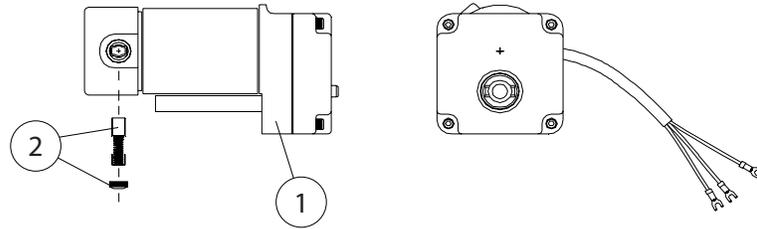


Inner Drum 03446900



Item	Part Number	Description	Qty.
1	00167000	Washer, Lock - Internal Tooth	3
2	02759900	End Bracket Assembly (100)	1
3	02760100	Mainshaft Assembly (100)	1
4	02827200	Screw, Cap 1/4-20 x 7/8	3
5	02822500	Retaining Ring	1

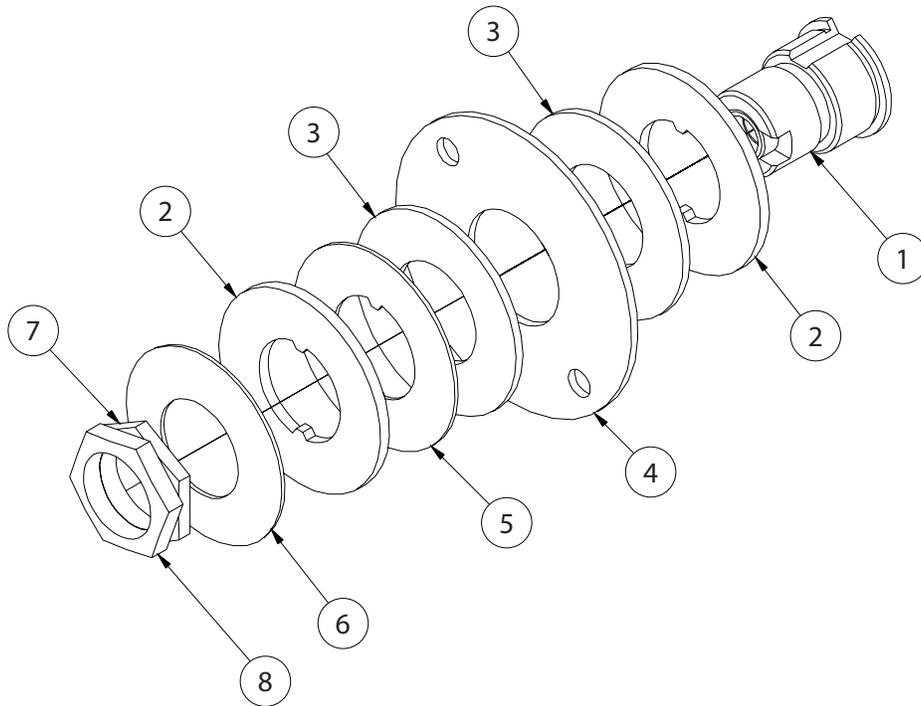
PM Motor Assembly 44295200



Item	Part Number	Description	Qty.
1	44295200	PM Motor M100	1
2	04231300	Brush Kit, 100-300-1065-2001	1

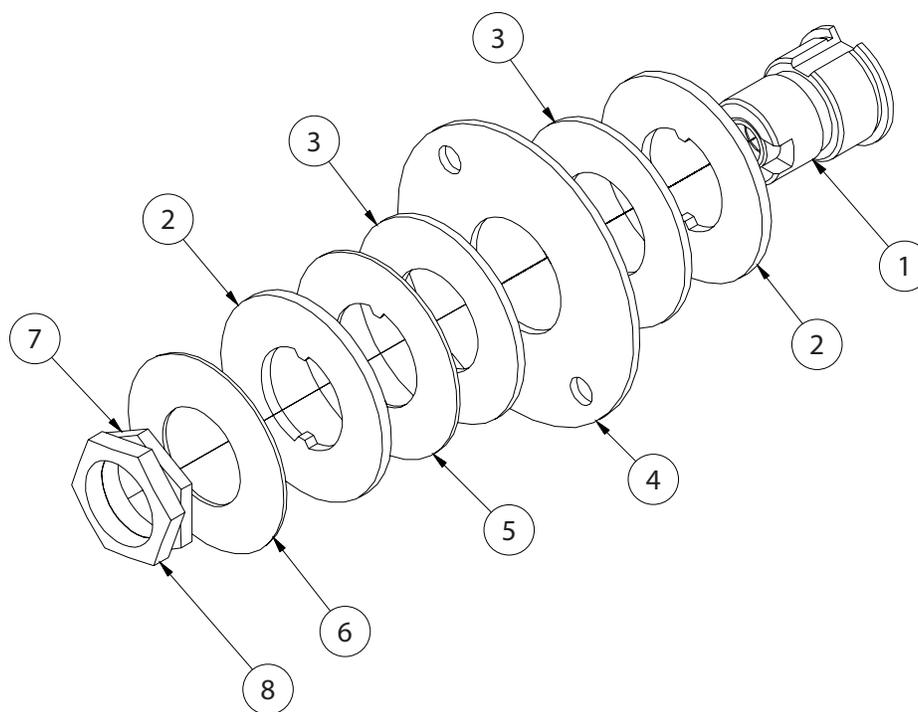


Clutch Assembly 13/32 04204200



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

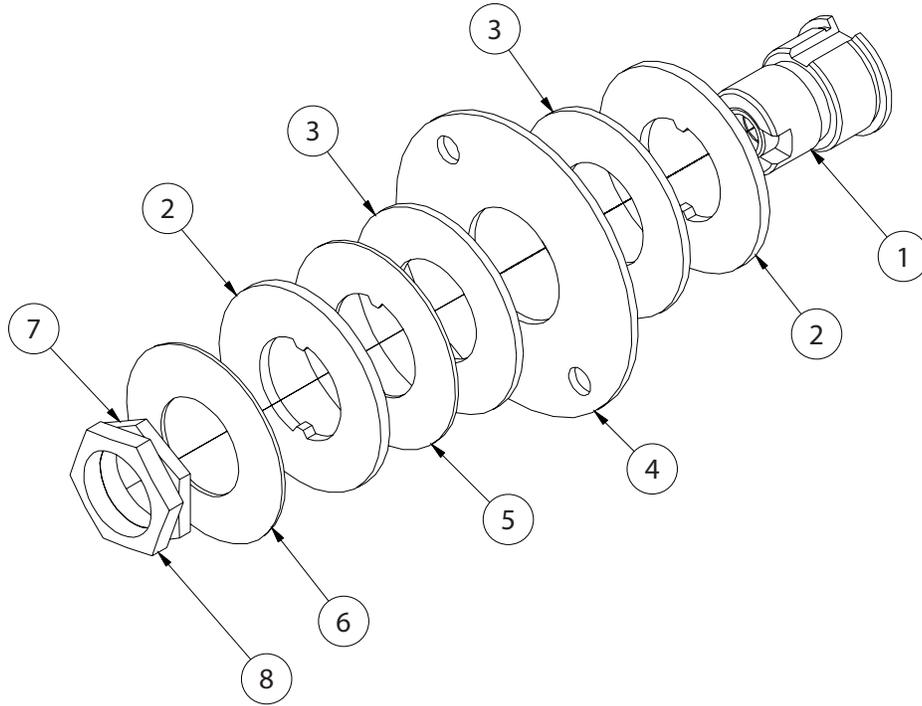
Clutch Assembly 1/2 04203200



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

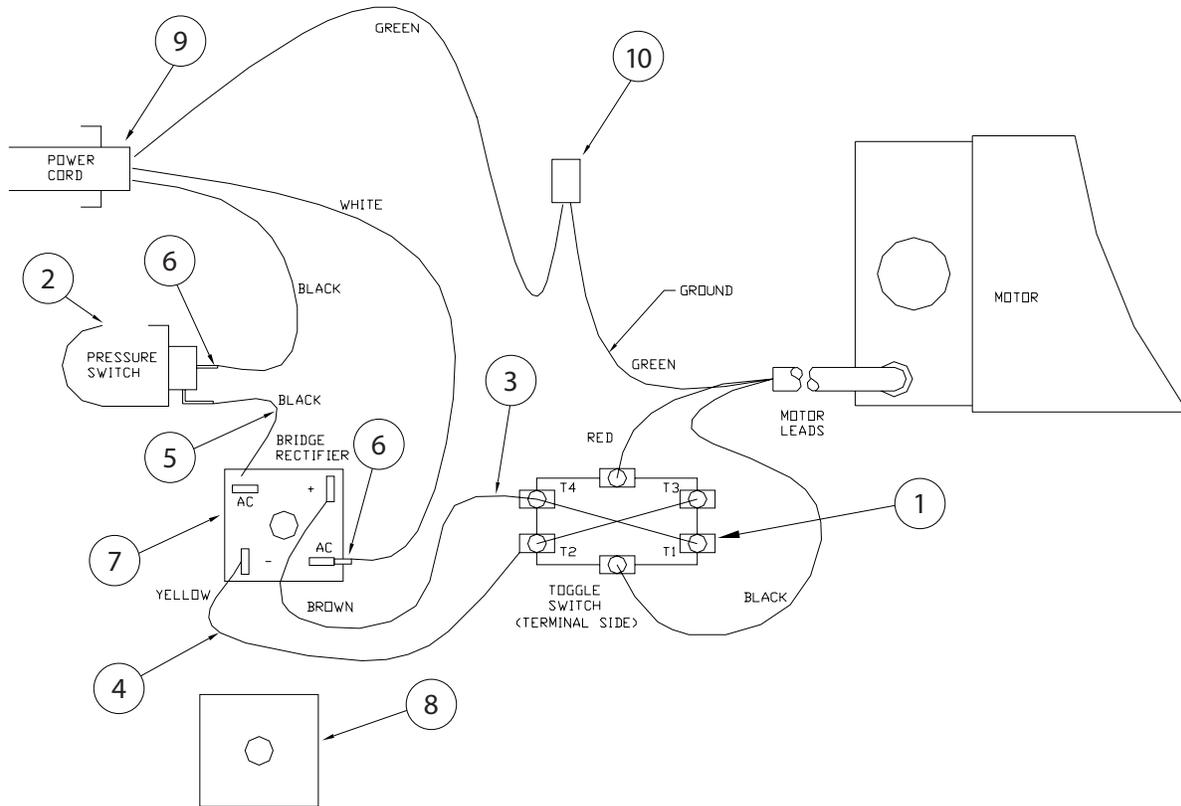


Clutch Assembly 5/16 04204300



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

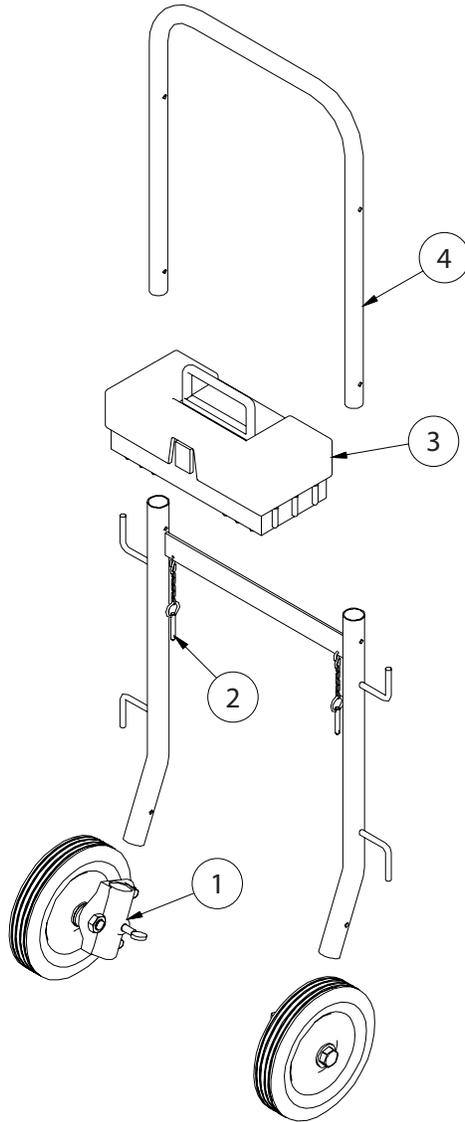
Wiring Diagram



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

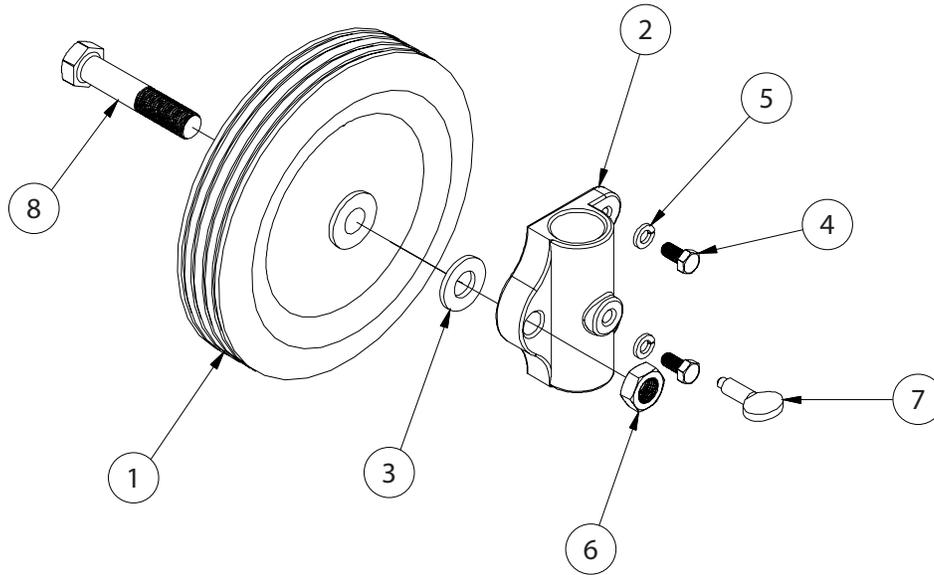


Roll-Aid (Optional) 44276700



Item	Part Number	Description	Qty.
1	44120700	Assy, Roll-Aid Wheel & Support	2
2	44276800	Assy, Locking Pin-Model 100	2
3	44287200	Assy, Toolbox Model 100	1
4	44276100	Handle-Model 100	1

Wheel & Support Assembly 44120700



Item	Part Number	Description	Qty.
1	02811900	Wheel	1
2	02829700	Casting, Machined	1
3	00760400	Washer, Flat 5/8	1
4	00114800	Screw, Hex Head 5/16-18 x 5/8	2
5	00165600	Washer, Lock	2
6	02820800	Nut, Hex Jam 5/8-18	1
7	03818400	Thumb Screw	1
8	02826300	Screw, Hex Head 5/8-18 x 3-1/4	1



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" diameter 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

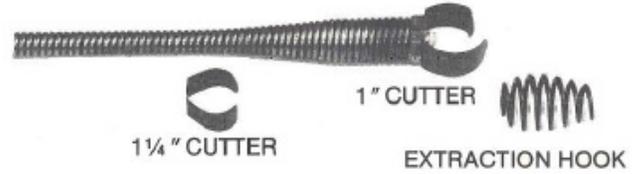
13/32" diameter Inner-Core Cables #6 end	
Part Number	Description
03449102	13/32 inch diameter x 25 feet
03449103	13/32 inch diameter x 35 feet
03449104	13/32 inch diameter x 50 feet
03449105	13/32 inch diameter x 75 feet
03449106	13/32 inch diameter x 100 feet

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
03448801	1/2 inch diameter x 25 feet
03448803	1/2 inch diameter x 50 feet
03448804	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.



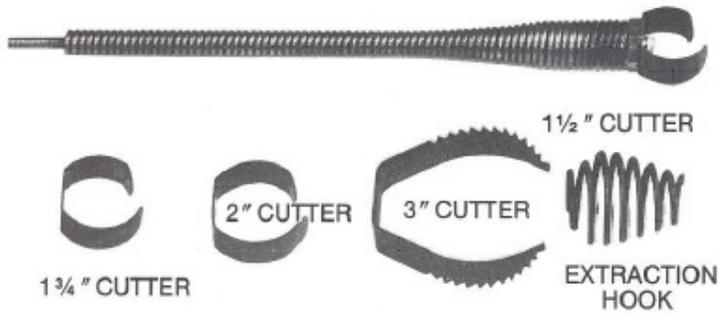
Couplings:



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" Female Coupling.

1/2" Male Coupling.



1/2" Splicer.

1/2" Expansion Pin.

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.



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



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.
1618 Terminal Road
Niles, Michigan 49120
Phone (800) 435-3866

Record below and retain product model and serial number.

Model Number: _____

Serial Number: _____



Warranty Information

For our terms and conditions, including warranty, please visit <https://spartantool.com/pages/terms-and-conditions>. For warranty assistance, please contact us at (800) 435-3866 or customerservice@spartantool.com.

CONTACT US

Spartan Tool LLC
1618 Terminal Road
Niles, MI 49120
800.435.3866
SpartanTool.com



SPARTAN TOOL

FOR TOUGH CUSTOMERS. SINCE 1943.

CONTACT US

Spartan Tool LLC
1618 Terminal Road
Niles, MI 49120
800.435.3866
SpartanTool.com