

SPIN-KOTE INTERNAL PIPE COATING TOOLS



Clemco Industries Corp. • One Cable Car Drive • Washington, MO 63090
Phone: (636) 239-4300 • Fax: (800) 726-7559
Email: info@clemcoindustries.com
www.clemcoindustries.com

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No representation is intended or made as to the suitability of the products described herein for any particular purpose of application. No representations are intended or made as to the efficiency, production rate, or the useful life of the products described herein. Any estimate regarding production rates or production finishes are the responsibility of the user and must be derived solely from the user's experience and expertise, and must not be based on information in this material.

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It is the responsibility of the knowledgeable, experienced users of the products mentioned in this material to familiarize themselves with the appropriate laws, regulations and safe practices that apply to these products, equipment that is connected to these products, and materials that may be used with these products.

It is the responsibility of the user to insure that proper training of operators has been performed and a safe work environment is provided.

Our company is proud to provide a variety of products to the abrasive blasting industry, and we have confidence that the professionals in our industry will utilize their knowledge and expertise in the safe efficient use

OWNER'S MANUAL

1.0 INTRODUCTION

1.1 Scope of manual

1.1.1 This manual covers the installation, operation, maintenance, and replacement parts of Spin-Kote internal pipe coating tools. Read this manual and the manuals for all ancillary equipment before operating the tool.

1.1.2 This manual covers only the operation and care of the Spin-Kote. It does not address the operation, care, or maintenance of the airless pump and support equipment. The tool must be used by persons experienced in the use, care, and safety practices associated with airless spray equipment and pumps, and the coating being applied.

1.2 Safety Alerts

1.2.1 Clemco uses safety alert signal words, based on ANSI Z535.4-2011, to alert the user of a potentially hazardous situation that may be encountered while operating this equipment. ANSI's definitions of the signal words are as follows:



This is the safety alert symbol. It is used to alert you to potential physical injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

NOTICE

Notice indicates information that is considered important, but not hazard-related, if not avoided, could result in property damage.

CAUTION

Caution indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

WARNING

Warning indicates a hazardous situation that, if not avoided, could result in death or serious injury.

DANGER

Danger indicates a hazardous situation that, if not avoided, will result in death or serious injury.

1.3 General Description

Refer to Figure 1 for typical set-up

1.3.1 This manual covers the following Spin-Kote models:

- Spin-Kote 25, with 1-1/2" diameter head for carriage set-up refer to Page 3, Section 2.2.1 for replacement parts refer to Page 10, Section 8.3.
- Spin-Kote 512 with 3" diameter head for carriage set-up refer to Page 4, Section 2.2.2 for replacement parts refer to Page 10, Section 8.4.
- Spin-Kote 817 with 4" diameter head for carriage set-up refer to Page 4, Section 2.2.3 for replacement parts refer to Page 11, Section 8.5.
- Spin-Kote 1236 with 6" diameter head for carriage set-up refer to Page 4, Section 2.2.4 for replacement parts refer to Page 11, Section 8.6.
- Spin-Kote 4896 with 16" diameter head for carriage set-up refer to Page 5, Section 2.2.5 for replacement parts refer to Page 12, Section 8.7.

1.3.2 Spin-Kote tools are designed to apply coatings on the interior of pipe or tubing without the need to rotate the pipe.

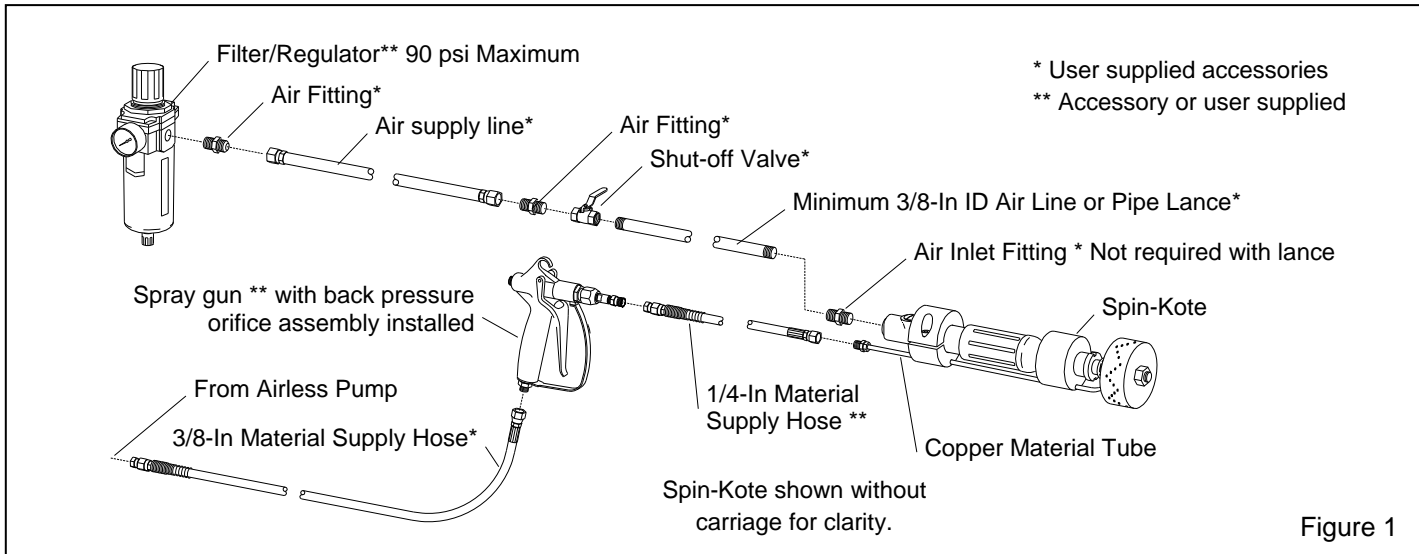
1.3.3 A complete Spin-Kote includes:

- The body with spray head and paint hose fitting
- Metering orifice (.031 is standard and is supplied unless specified otherwise)
- Back pressure assembly
- Centering carriage

1.4 Operating Principles

1.4.1 The tool is centered in the pipe by means of a centering carriage. For carriage assembly refer to the sections noted in paragraph 1.3.1.

Spin-Kote Model	Carriage Stock No.
• Spin-Kote 25	
2"	No carriage
2-3/4" to 5" ID pipe	01124
• Spin-Kote 512, 5" to 12" ID pipe	01131
• Spin-Kote 817, for 8" to 17" ID pipe	03641
• Spin-Kote 1236, for 12" to 36" ID pipe	27146
• Spin-Kote 4896, for 48" to 96" ID pipe	27156



1.4.2 When the Spin-Kote is set-up and connected to an appropriately-sized airless pump and compressed air, it is ready for operation. Compressed air powers an internal air motor which drives the spray head; pressurizing the air line starts the rotation of the head. When the spray gun trigger is squeezed, the paint pump forces the coating through spray gun, orifice and paint hose to the spinning spray head. The coating is applied to the inner surface of the pipe in a 360-degree evenly metered pattern by the centrifugal force of the head.

1.4.3 To obtain the best results, use a variable-speed mechanical feed device to pull the tool through the pipe. If one is not available, one person should operate the spray gun while another pulls the tool.

1.5 Metering Orifice: Check the coating specifications for the size of orifice to be used to apply the coating. Orifice sizes used with the Spin-Kote are normally the same or slightly larger than sizes used for hand spraying applications. The orifice sizes suggested in the table are guidelines only, some coatings and pipe diameters may require a different orifice.

For thin to medium viscosity coatings (urethanes, enamels, epoxies)		
Pipe Diameter	Orifice Size	Stock No.
2" to 12"	0.018	27116
10" to 24"	0.031	27117
18" to 48"	0.039	27118

For thick viscosity coatings (coal tar, high solids)		
Pipe Diameter	Orifice Size	Stock No.
2" to 12"	0.031	27117
18" to 48"	0.039	27118

Unless specified otherwise, a 0.031 orifice is supplied with the tool.

1.6 Ancillary Equipment Requirements

1.6.1 Airless Spray Gun: An airless spray gun is required. Remove the spray tip protector and install the back pressure orifice assembly in its place.

1.6.2 Airless Spray Pump: Typically, any airless pump used with an airless spray gun may be used with the Spin-Kote. The size of the pump depends on viscosity of the coating, length of the hoses, and size of the orifice. Refer to the coating MSDS sheet and spec sheet for specific requirements.

⚠ WARNING

High-Pressure Paint Devices: Contact with high-pressure fluids can cause serious injury from skin penetration. This equipment is intended for use only by persons experienced with the use, care and safety practices associated with high-pressure airless pumps. Refer to the airless pump operations manual for operation of the pump and additional safety precautions.

1.6.3 Pressure tank: Under ideal conditions a pressure tank may be used in place of a pump if the paint viscosity is less than 20 seconds through a Zahn #2 cup.

1.6.4 High-Pressure Paint Hose: Two high-pressure paint hoses are required. A 3/8" hose connects the airless pump to the paint hose fitting at the bottom of the spray gun handle. A 1/4" hose connects the spray gun's back pressure orifice assembly to the Spin-Kote.

1.6.5 Compressed Air: The Spin-Kote requires up to 50 cfm @ 90 psi of clean, moisture-free air. Use a minimum of 3/8-inch ID air hose or pipe that is

compatible with the manifold fitting on the back of the Spin-Kote. Refer to Section 2.4. Note: The maximum pressure for the Spin-Kote air motor is 90 psi. Additional air supply is needed for the pump. Use an air supply based on the recommendations of the pump manufacturer to efficiently operate the pump.

NOTICE

Supply between 85 psi and 90 psi to the Spin-Kote. Operating at pressure above 90 psi will damage the air motor.

1.6.6 Surge Chamber: When extremely consistent coverage is required, a surge chamber may be needed to reduce material-pressure fluctuation.

1.7 Coating Compatibility

1.7.1 Generally, any coating that can be sprayed with an airless pump, (or pressure tank, as noted in Paragraph 1.6.3) may be used in the tool. Premixed plural component coatings may be used, but the system must be thoroughly cleaned before the material sets. Very fast-set coatings should be used only by those experienced with the application rate of the coating and cleaning requirements of the equipment. How fast the coating cures will dictate how often to stop and flush the equipment.

1.7.2 Fast setting plural components may be mixed into a static mix tube just prior to the gun assembly. This conversion should only be done by those experienced with plural component equipment, and provide all valves, manifold, and component and solvent plumbing.

1.8 Coating Temperature

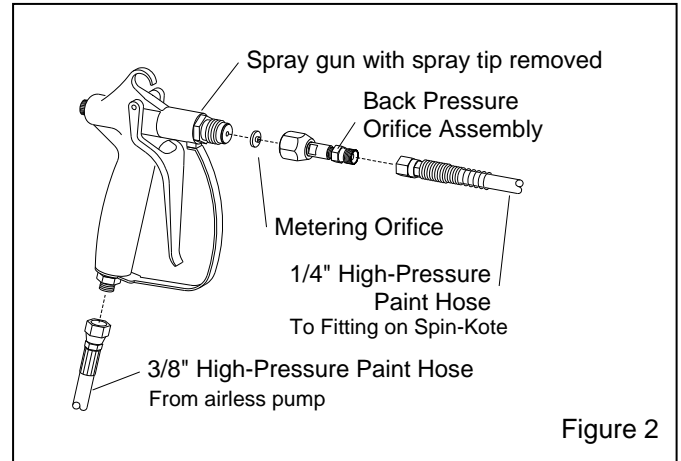
1.8.1 The Spin-Kote will handle coatings heated to a maximum of 150° (F).

2.0 SET-UP

2.1 Convert Airless Spray Gun, refer to Figure 2

2.1.1 Remove the spray tip from the airless gun

2.1.2 Insert the metering orifice into the back pressure orifice assembly, inserting the small protrusion toward the back pressure assembly.



2.2 Carriage Set-up and Adjustment

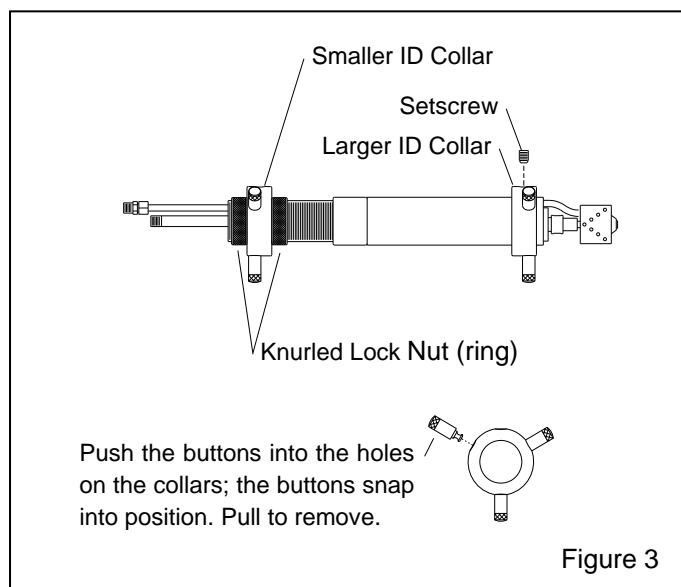
2.2.1 SK-25 with 3" to 5" carriage, refer to Figure 3

2.2.1.1 The set comes with two collars of different size inside diameters and six each buttons of four different lengths. Collars without buttons fit inside 2-3/4" ID pipe, which must be smooth and without seams or other protrusions. Use buttons to center the tool in 3" to 5" pipe. Refer to the following steps for assembly.

2.2.1.2 Make sure the coupling locking the threaded sleeve to the extension sleeve is tight.

2.2.1.3 Slide the collar with the larger inside diameter over the solid extension sleeve just back from the front of the tool as shown in Figure 3. Tighten the setscrew to secure the collar.

2.2.1.4 Screw one of the knurled lock nuts (ring) about 2-1/2" onto the threaded extension.



2.2.1.5 Slide the collar with the smaller inside diameter over the threaded sleeve and place it next to the lock nut. Screw the second lock nut onto the sleeve and tighten it next to the collar. Do not tighten the setscrew as it will damage the threads on the sleeve. The rear collar should be sandwiched between the two knurled lock nuts, with the lock nuts tight.

2.2.1.6 Determine which set of buttons centers the tool best and install them into the collars as shown. In some cases the tool may be too tight in the pipe with all buttons of the same length. In those cases place a shorter button at the top.

2.2.2 SK-512 with 5" to 12" carriage, ref. Figure 4

2.2.2.1 The fully adjustable scissor carriage comes with a hex key, knurled lock nut and threaded sleeve. Use the hex key to remove the nut and threaded sleeve from the collar as they are not needed (you may retain the lock nut for future use).

2.2.2.2 Remove one knurled lock nut from the tool's threaded extension sleeve.

2.2.2.3 Slide the back of the tool through the collar, as shown in Figure 4.

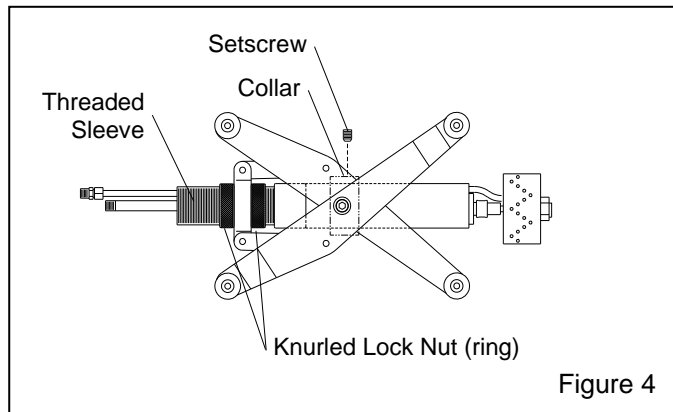


Figure 4

2.2.2.4 Thread the second lock nut onto the sleeve and adjust both lock nuts and, slide the tool in the collar to expand the carriage to the fit inside the pipe. Make sure the rotating head extends well past the front of the carriage.

2.2.2.5 When the carriage is adjusted to fit the pipe, snug the setscrew to prevent the tool from sliding in the collar. Do not over-tighten the setscrew; excessive pressure may damage the extension sleeve.

2.2.3 SK-817 with 8" to 17" carriage, ref. Figure 5

2.2.3.1 Expand the carriage to the approximate ID of the pipe, and then insert the tool through the carriage collars, as shown in Figure 5. Align the tool's centering collars with the carriage collars. Make sure the end of the tool extends past the front tool collar. If the set screws miss the tool collars, move the tool collars(s) as needed.

2.2.3.2 Snug the setscrews on the front collar and adjust the carriage to the pipe, repositioning the collars may be required. When adjusted to the correct size, snug all setscrews.

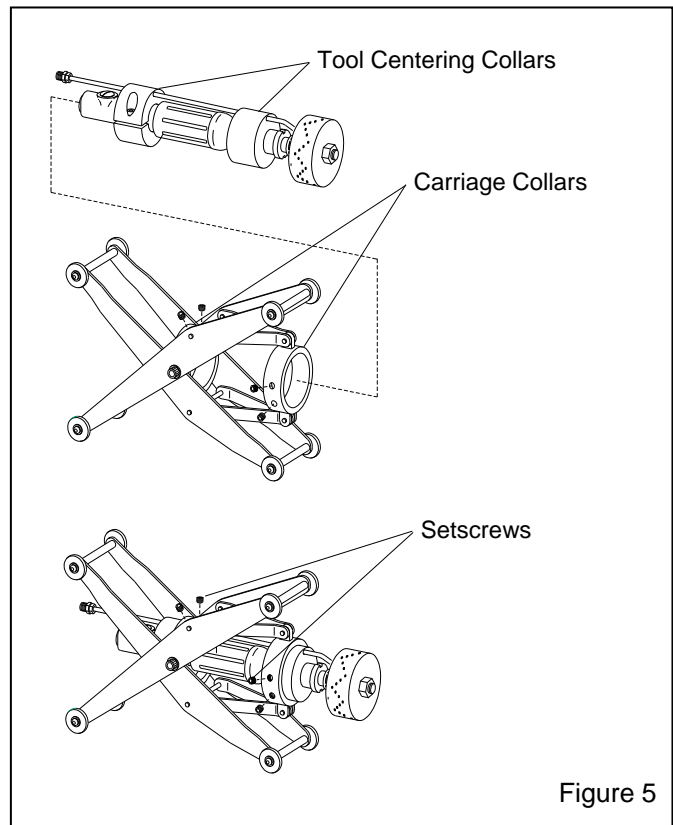


Figure 5

2.2.4 SK-1236 with 12" to 36" carriage, refer to Figure 6

NOTICE

The tool is shipped assembled in the carriage. When installing or removing the tool from the carriage, take care not to kink or otherwise damage the copper material (paint) tube. For stability, assemble the tool to the collars before removing or installing the legs.

2.2.4.1 Insert the tool into the carriage, as shown in Figure 6; align the material tube's compression nut with

the compatible fitting on the tool. Make sure the front tool collar extends past the end of the front carriage collar. Tighten the material tube nut, and then tighten the cap screws to secure the carriage collars to the tool.

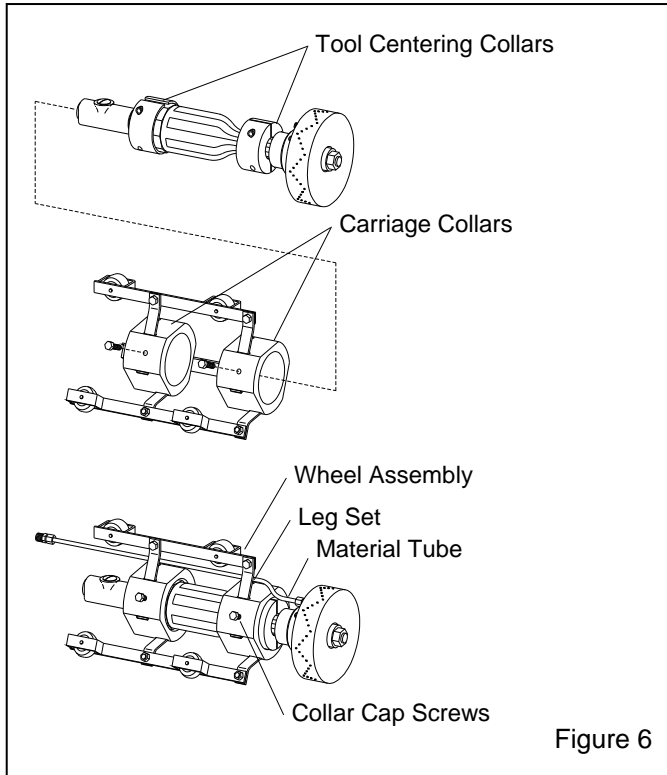


Figure 6

2.2.4.2 The carriage includes three sets of legs (six of each length). Select the leg set that is long enough to center the tool in the pipe. The smallest legs are bent at the wheel ends, longer legs are straight.

2.2.4.3 The wheels are located at different places on the wheel bracket to compensate for the slot variance in the carriage collars. Change one leg set at a time to avoid confusion when reattaching the leg sets to the collars.

2.2.4.4 Once all leg assemblies are installed on the carriage, slide the legs as needed to center the tool in the pipe.

2.2.5 SK-4896 with 48" to 96" carriage, refer to Figure 7

2.2.5.1 The carriage includes a set of six legs and casters with bell reducers. Attach a caster to the end of each leg, and tighten securely.

2.2.5.2 Insert the tool into the carriage body, as shown in Figure 7; align the material tube's compression nut with the compatible fitting on the tool, making sure the front of the tool collar extends past the body. Tighten the material tube nut, and then tighten the cap screws to secure the carriage to the tool.

2.2.5.3 Slide the legs into the stand-offs on the carriage body and adjust as needed to center the tool in the pipe and tighten the cap screws to secure.

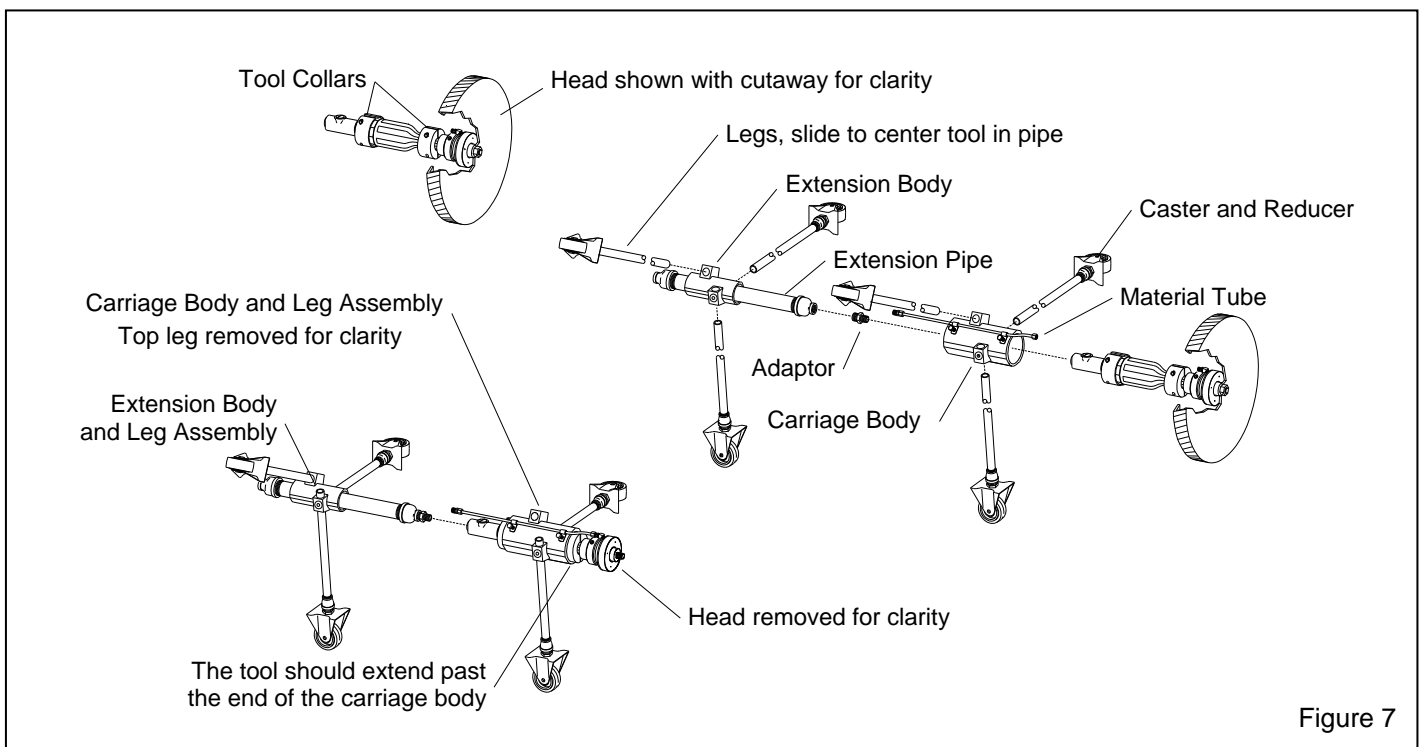


Figure 7

2.2.5.4 Slide the extension pipe into the extension body (remove and reinstall the bell reducer as needed) and attach the extension to the tool using the adaptor provided.

2.2.5.5 Carefully, while supporting the tool and the extension pipe, insert the tool into the pipe to be coated. Do not lift the tool or extension without supporting the other; the adaptor could snap.

2.2.5.6 Slide the legs into the stand-offs on the extension body, adjust the legs to length, and secure with cap screws. Secure the extension body to the extension pipe.

2.3 Connect High-Pressure Paint Hoses Refer to Figure 1

2.3.1 Connect a 3/8" high-pressure paint hose from the airless pump to paint hose fitting at the bottom of the spray gun. Some applications using low viscosity coatings may permit the use of a smaller diameter hose. Follow airless pump manufacturer's instructions for set up and operation of the pump.

2.3.2 Connect 1/4" high-pressure paint hose to the back pressure orifice assembly, now installed on the gun.

2.3.3 Connect the other end of the 1/4" paint hose to the Spin-Kote fitting on the copper material (paint) tube. Use adaptors when needed, to adapt to the paint hose swivel connector. Use paint hose unions to connect lengths together to obtain required overall length. Note: the hose can be attached at any time during set-up; but to avoid interference, it is easier to install the centering carriage and air fitting before attaching the hose.

2.3.4 Tighten all high-pressure paint hose fittings with a wrench.

2.4 Air Hose Connection

If line pressure is above 90 psi, install a pressure regulator in the air supply line and reduce pressure to 90 psi. Install a shutoff valve in the compressed air supply and locate it near the spray gun. Doing so gives the operator an easily accessible means to control the spinning of the spray head.

2.4.1 A 3/8-inch minimum ID air line attaches to the back of the tool. A length of pipe used as a lance gives better control than air hose when pulling the Spin-Kote through the pipe. In order to use a pipe lance as the air supply and to avoid interruptions in the coating process, there must be enough room at the exit end of the pipe being coated to remove the lance.

2.4.2 Connect an air fitting that is compatible with the air hose or pipe (3/8-inch ID Minimum) to the Spin Kote. Hose for the Spin-Kote 25 and 512 connects to the 1/8 NPT nipple at the back of the tool. All others connect to the 3/8 female port on the body.

2.4.3 An in-line oiler is recommended in the air supply. If there is no in-line oiler, before each start-up and after each use, place a few drops of Turbine Oil ISOVG32 or equivalent into the air hose fitting at the back of the tool. Refer to Section 6.3.3.

2.4.4 Place the unit in the pipe; it is now ready for the initial test.

3.0 Initial Test

CAUTION

Before applying compressed air to the Spin-Kote, turn on the air compressor and check pressure in the supply line. Do not exceed 90 psig (6 bar).

3.1 Place a few drops of Turbine Oil ISOVG32 or equivalent into the air hose fitting at the back of the tool.

3.2 Before starting actual painting, operate without paint in order to test the operation of the tool and to become familiar with the handling of the unit.

3.3 Open the air supply valve to check the spin of the head.

4.0 OPERATION

WARNING

High-Pressure Paint Device: Contact with high-pressure fluids can cause serious injury from skin penetration. Before making any adjustments, repairs, etc., shut-off the airless pump and air supply. Release fluid pressure from all lines. If the gun is disassembled from system, never point it at any person. High-pressure fluids are dangerous. Always engage the spray gun safety lever when gun is not in use. Refer to the airless pump operations manual for operation of the pump and additional safety precautions.

Before operating the system, be sure to check all fittings and connections for tightness. Immediately replace any damaged or worn parts. Use only high-pressure hose and fittings designed for use with the high-pressure coatings and the airless pump used with the Spin-Kote. Never exceed the rated pressure of any of the components used with the Spin-Kote.

WARNING

In compliance with Federal and State Occupational Safety and Health Regulations, prior to using the Spin-Kote, it is the responsibility of the employer and operator to determine the proper personal protection equipment required by performing a Job Hazard Analysis, for the operation in which the Spin-Kote will be used. Failure to properly determine all hazards can lead to serious harm and injury.

4.1 Set-up

NOTICE

If the air supply has no in-line oiler, before and after each use place a few drops of Turbine Oil ISOVG32 or equivalent in the compressed air fitting. Failure to properly lubricate the air motor will cause premature wear.

4.1.1 Connect the air supply and high-pressure hoses. Check all connections and the airless pump for tight fittings and proper pressure settings.

4.1.2 Before inserting the Spin-Kote into the pipe, position head inside a container and squeeze spray gun trigger to purge solvents. When satisfied with paint flow, put the tool inside a test pipe or open drum to make sure paint flow is even when the head is rotating.

4.1.3 Entry and exit ends of pipe

4.1.3.1 Some prefer to have an entry and exit section of pipe, shroud or other means to contain overspray and extend the ends of pipe. This allows full operation of the Spin-Kote until the tool is completely clear from the pipe and allows the ends of pipe to be coated with the tool. Others prefer to stop painting before the arms clear the pipe ends, and then use an airless gun to coat the ends.

4.1.3.2 Use extreme care when inserting or removing the tool from end of pipe.

- Be sure no one is near the rotating head. **Always maintain a safe distance from the rotating head while paint or solvent are flowing.**
- Be careful when handling the tool outside the pipe. Always support the tool and lance to avoid damaging extensions or connector fittings.

4.2 Operation

4.2.1 Insert the tool and push it through the pipe until the head is flush with the pipe edge on the opposite end. Check carriage leg tension to be sure carriage can be pulled at a smooth and steady rate. Always pull the Spin-Kote through the pipe. Avoid pushing the tool backward as carriage wheels will damage wet coatings.

4.2.2 Open the air supply valve to initiate spinning of the rotating head.

4.2.3 Squeeze the spray gun trigger to begin paint flow. Use the air hoses or lance to pull the tool through the pipe. It is critical to pull the tool through the pipe at a steady rate to assure uniform paint thickness. Release the trigger immediately if carriage movement is interrupted. Speed of tool movement varies with pipe diameters. The smaller the diameter the faster the coating will be applied. If two or more coats are needed, allow each coat to dry sufficiently prior to applying the next coat. Refer to the coating specifications for accurate drying time.

4.2.4 To stop painting, release the trigger, and after a short time, close the air motor supply valve to stop the head from rotating.

4.2.5 Clean the tool per Section 5.0, turn off the air compressor, and relieve all fluid pressure from the system including the airless pump.

5.0 CLEANING

⚠ WARNING

When cleaning the Spin-Kote, use all applicable personal protection equipment required and identified by the Job Hazard Analysis for the operation in which the Spin-Kote is being used. Failure to determine all the hazards can lead to serious harm and injury.

5.1 When painting is finished, promptly clean the material lines and Spin-Kote tool. Do not allow paint to dry in any of the hoses, spray gun, or Spin-Kote parts. Use only cleaning solvents recommended by the paint manufacturer.

5.2 Set-up the airless pump as recommended by the pump manufacturer, and use only an approved solvent.

5.3 Remove the head and place it in a container of solvent. **DO NOT PLACE THE SPIN-KOTE IN SOLVENT.**

NOTICE

Submerging the tool in solvent will damage the gaskets, air motor, and seals, and will void warranty.

5.4 Place the spray end of the tool in a container and run solvent through to flush spray gun, paint hose, spray tip and paint tube. When clear solvent is evident on the material tube, tool has been cleaned sufficiently.

5.5 Remove the back pressure assembly and clean the assembly and metering orifice with clean solvent. Reassemble making sure the small protrusion on the metering orifice is toward the back pressure assembly

5.6 Thoroughly clean the rotating head and internal cavity and openings with solvent. Any build up of paint will have an adverse effect on uniform paint flow.

5.7 Wipe down external surfaces with a clean solvent rag.

5.8 Place a few drops of Turbine Oil ISOVG32 or equivalent into the air hose fitting at the back of the tool and run air through for a short time to lubricate the air motor. Reassemble the tool and store in a clean dry area.

6.0 MAINTENANCE

6.1 Preventive Maintenance

6.1.1 Avoid contaminating the tool with moist air. Take all necessary precautions to remove moisture originating in the compressor. Exposing the tool to moisture air, will cause it to lose power and eventually cease to function due to internal rusting and fouling.

6.1.2 Do not operate the tool unless the head is free to rotate; do not rotate the head if the tool is laying on the ground or workbench.

6.2 Air Hose and Air Connection

6.2.1 Take all necessary precautions to prevent contaminating the inside of air hose and entry connection. Cover the hose ends and air connections when the hose and tool are not in use to prevent ingress of foreign material.

NOTICE

Allowing contaminants into the air line will damage the air motor, and void the warranty.

6.3 Lubrication

6.3.1 Lubricating the air motor is extremely important. To avoid the risk of oil contamination to the pipe, oil should be applied at the end of the work day and whenever the tool is cleaned. After thorough cleaning, inject a few drops Turbine Oil ISOVG32 or equivalent through the air inlet fitting at the back of the assembly. When a lance is used, remove the lance from the tool to inject oil directly into the tool's body, not the lance. Run the tool for a short while to remove the oil from the motor; it only requires a few drops to lubricate the motor. Wipe the body to remove residual oil.

6.3.2 During periods of heavy usage, at least every three hours of operation apply a few drops of oil and run the tool outside of the pipe until the oil has been blown out of the motor. Wipe the body to remove residual oil before inserting the tool into the pipe

6.3.3 Follow the manufacturer's instructions to lubricate the spray gun and airless pump.

7.0 TROUBLESHOOTING

7.1 Head Does not Spin or Spins too Slowly When Air is Applied

- 7.1.1** Check line pressure. It should be set between 85 and 90 psi.
- 7.1.2** Inspect the air control hose for damage. Replace if necessary.
- 7.1.3** Inspect the air control hose connections for leaks. Correct as needed.
- 7.1.4** Air motor malfunctioning. Lubricate the air motor and turn the head by hand.

7.2 Rotating Head Does Not Spin By Hand

- 7.2.1** Air motor has seized due to wear, foreign material or lack of lubrication. Replace body.

7.3 No Paint Flow from Rotating Head

- 7.3.1** Check for blockage in the paint tube, spray tip, high-pressure paint hose, and spray gun. If paint has been allowed to dry on interior parts, disassemble, clean/replace and reassemble.
- 7.3.2** Make sure the airless pump is operating correctly. Follow manufacturer's instructions.

7.4 Insufficient Paint Flow from Rotating Head

- 7.4.1** Pressure ratio/volume output of airless pump too low. Adjust pressure input to the pump and use correctly sized pump. Refer to Section 1.6.2.
- 7.4.2** Partial blockage in rotating head ports or metering orifice. Disassemble, clean, and reassemble.
- 7.4.3** Metering orifice may be too small for coating. Refer to Section 1.5.

7.5 Insufficient Paint Deposit in Pipe

- 7.5.1** Pull-speed through pipe too fast. Reduce pull-speed.
- 7.5.2** Spray tip size too small for type of coating used.
- 7.5.3** Pressure setting on airless pump too low. Increase air input pressure to pump to increase paint output pressure.

7.6 Excess Paint Deposit in Pipe, Resulting In Paint Running to Bottom of Pipe

- 7.6.1** Pull-speed through pipe too slow. Increase pull-speed.
- 7.6.2** Spray tip size too large for coating used.
- 7.6.3** Spray tip worn. Replace as needed.
- 7.6.4** Airless pump air pressure too high. Reduce air input pressure to pump to reduce paint output pressure.

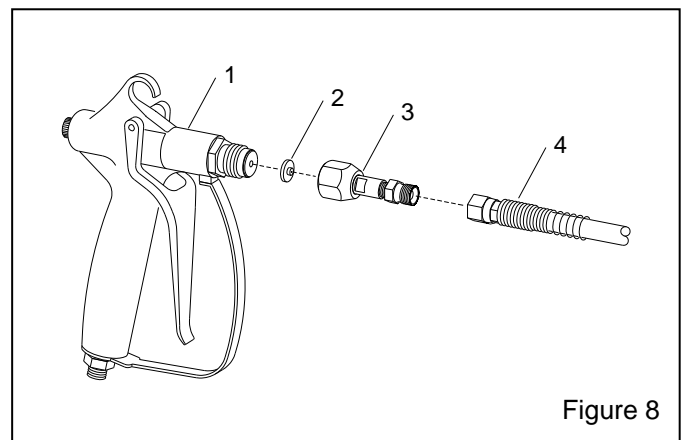
8.0 ACCESSORIES AND REPLACEMENT PARTS

8.1 Accessories

Description	Stock No.
Filter/Regulator, 1/2" NPT	05530

8.2 Spray Gun Assembly and Accessories, Figure 8

Item	Description	Stock No.
1.	Spray gun, airless (gun only) does not include Items 2, 3, or 4	27030
2.	Metering Orifice .018 orifice	27116
	.031 orifice, standard	27117
	.039 orifice	27118
3.	Back pressure assembly	27115
4.	Hose, paint 1/4-in x 3300 psi	
	25-ft. long	27469
	50-ft. long	27031



8.3 Spin-Kote 25 with 1-1/2" Head, Figure 9

Item	Description	Stock No.
(-)	Spin-Kote-25 w/ centering carriage, back pressure assy. and .031 orifice	27020
1.	Spray head, 1-1/2"	27119
2.	Arbor extension	27120
3.	Nut, retaining, air motor	27122
4.	Sleeve, extension	27123
5.	Manifold, material tube	27124
6.	Motor, air	27125
7.	Coupling	01095
8.	Extension, threaded	27126
9.	Nut, knurled lock, each	01092
10.	Fitting, manifold tube 1/4-NPT x 3/16" compression nut	27127
11.	Pipe, 1/8-NPT x 12-inch (air motor)	27721
12.	Collar, material tube manifold	28930
13.	Centering collar and button set	01124
14.	Collar, 1-11/16" nominal ID	01125
15.	Collar, 1-7/8" nominal ID	01126
16.	Button set, incl. items 16, 17, 18, & 19	01158
17.	Buttons, 5/16", set of 6, for 3-1/2" pipe	01154
18.	Buttons, 9/16", set of 6, for 4" pipe	01155
19.	Buttons, 13/16", set of 6, for 4-1/2" pipe	01156
20.	Buttons, 1-1/16", set of 6, for 5" pipe	01157
21.	Screw, set, 3/8-NC cup point	03271
22.	Key, 3/16" hex	01139

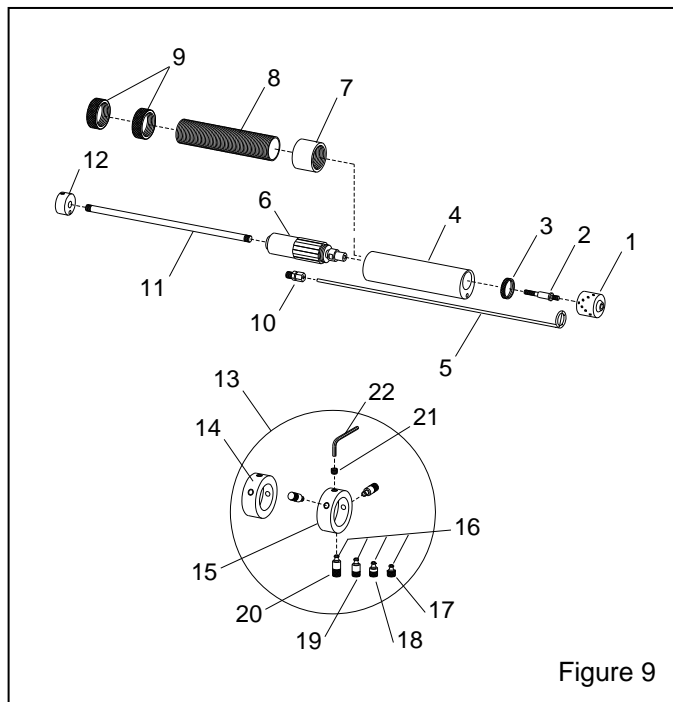


Figure 9

8.4 Spin-Kote 512 with 3-Inch Head, Figure 10

Item	Description	Stock No.
(-)	Spin-Kote-512 w/ centering carriage, back pressure assy. and .031 orifice	27021
1.	Spray head, 3"	27128
2.	Arbor extension	27129
3.	Nut, retaining, air motor	27122
4.	Sleeve, extension	27123
5.	Manifold, material tube	27124
6.	Motor, air	27125
7.	Coupling	01095
8.	Extension, threaded	27126
9.	Nut, knurled lock, each	01092
10.	Fitting, manifold tube 1/4-NPT x 3/16" compression nut	27127
11.	Nut, spray head lock	27121
12.	Pipe, 1/8-NPT x 12-inch (air motor)	27721
13.	Collar, material tube manifold	28930
14.	Carriage, adjustable centering	01131
15.	Kit, wheel bushing, includes: washers, bushing, and screw	03706
16.	Wheel, each	01153
17.	Axle spacer, each	01166
18.	Arm pin, 1-1/8"	01142
19.	Retaining ring	01143
20.	Screw, 3/8-NC x 3/4" socket head	03319
21.	Washer, 3/8 flat	03317
22.	Screw, 3/8-NC cup point set	03271
23.	Key, 3/16" hex	01139

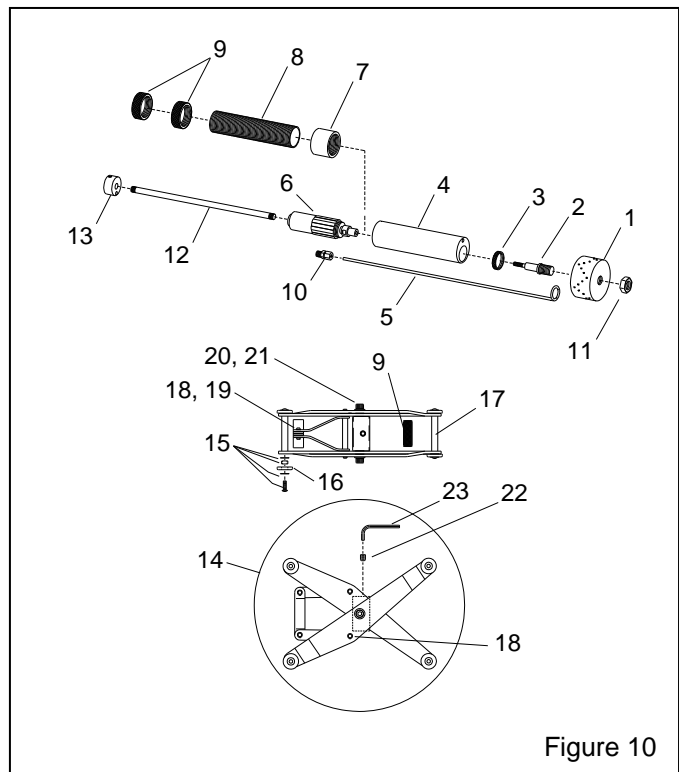


Figure 10

8.5 Spin-Kote 817 with 4" Head, Figure 11

Item	Description	Stock No.
(-)	Spin-Kote-817 w/ centering carriage, back pressure assy. and .031 orifice	27022
1.	Spray head, 4"	27131
2.	Arbor extension	27134
3.	Manifold, material tube	27133
4.	Motor, air (body assembly)	27136
5.	Fitting, manifold tube entry 1/4-NPT x 1/4" compression nut	27135
6.	Nut, spray head lock	27130
7.	Collars, centering (set of 2)	27132
8.	Carriage, adjustable centering	03641
9.	Kit, wheel bushing, includes: washers, bushing, and screw	03706
10.	Wheel, each	03636
11.	Axle spacer, each	03626
12.	Arm pin, 1-1/8"	01142
13.	Retaining ring	01143
14.	Screw, 3/8-NC x 3/4" soc. head	03319
15.	Washer, 3/8 flat	03317
16.	Screw, 3/8-NC cup point set	03271
17.	Key, 3/16" hex	01139

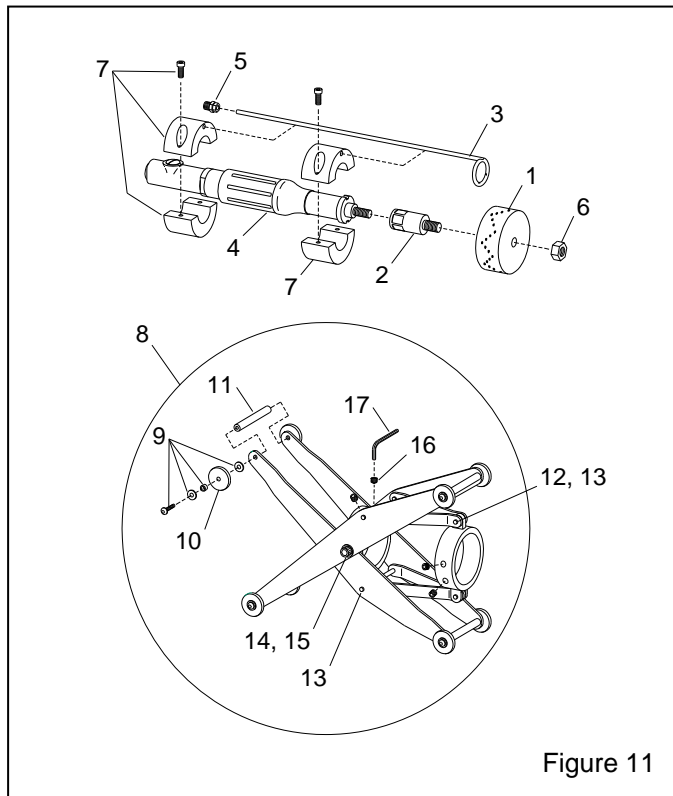


Figure 11

8.6 Spin-Kote 1236 with 6" Head, Figure 12

Item	Description	Stock No.
(-)	Spin-Kote-1236 w/ centering carriage, back pressure assy. and .031 orifice	27023
1.	Spray head, 6"	27138
2.	Arbor extension	27139
3.	Material tube, 1/4" x 20" copper	27143
4.	Motor, air (body assembly)	27140
5.	Fitting, manifold tube entry 1/4-NPT x 1/4" compression nut	27135
6.	Nut, spray head lock	27130
7.	Collars, centering (set of 2)	27145
8.	Fitting assembly, manifold tubing, front	27144
9.	Manifold, material (2-piece)	27141
10.	O-rings, material manifold (2-piece)	27142
11.	Carriage, adjustable centering	27146

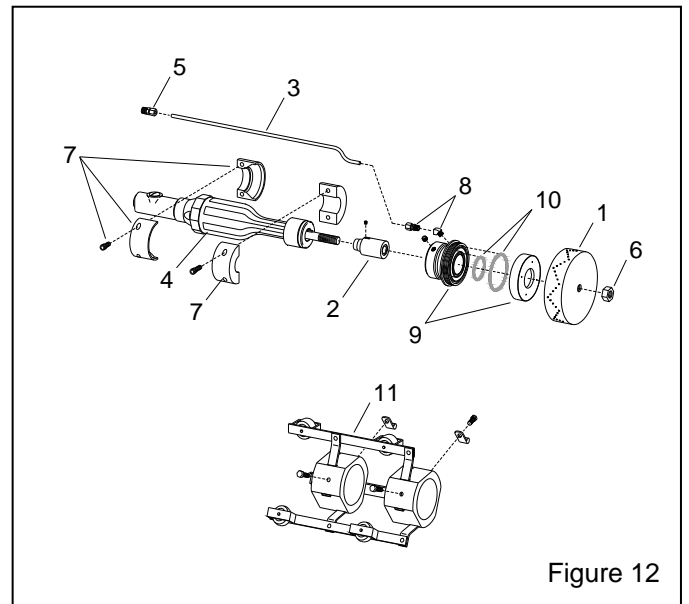


Figure 12

8.7 Spin-Kote 4896 with 16" Head, Figure 13

Item	Description	Stock No.
(-)	Spin-Kote-4896 w/ centering carriage, back pressure assy. and .031 orifice	27024
1.	Spray head, 16"	27148
2.	Arbor extension	27139
3.	Material tube, 1/4" x 20" copper	27143
4.	Motor, air (body assembly)	27140

5.	Fitting, manifold tube entry 1/4-NPT x 1/4" compression nut	27135
6.	Nut, spray head lock	27130
7.	Collars, centering (set of 2)	27145
8.	Fittings assembly, manifold tubing, front	27144
9.	Manifold, material (2-piece)	27141
10.	O-rings, material manifold (2-piece)	27142
11.	Nipple, 1/2-NPT x 3/8-NPT hex	27722
12.	Extension, 1-1/4 x 20	27152
13.	Carriage, adjustable centering	27156

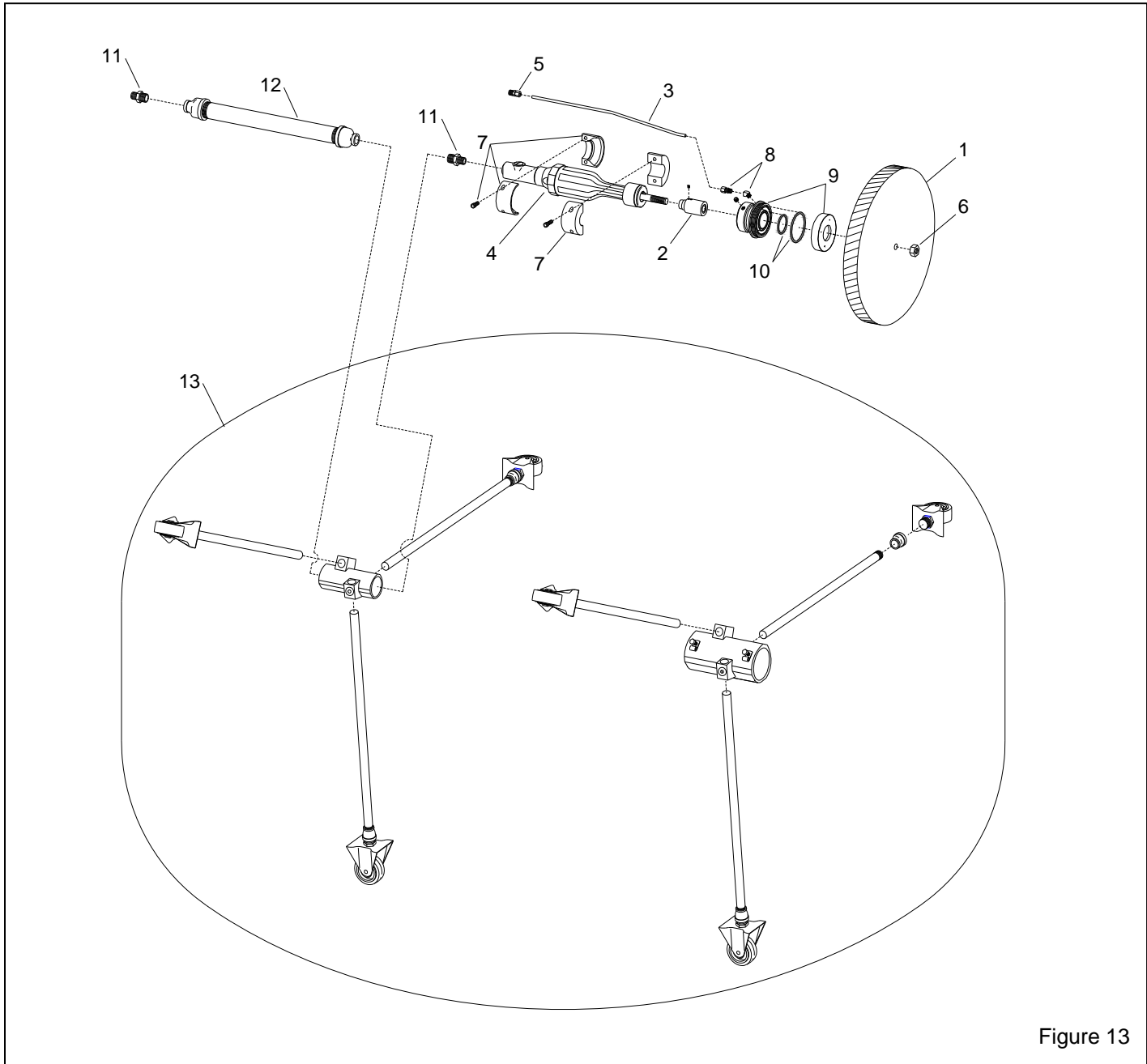


Figure 13