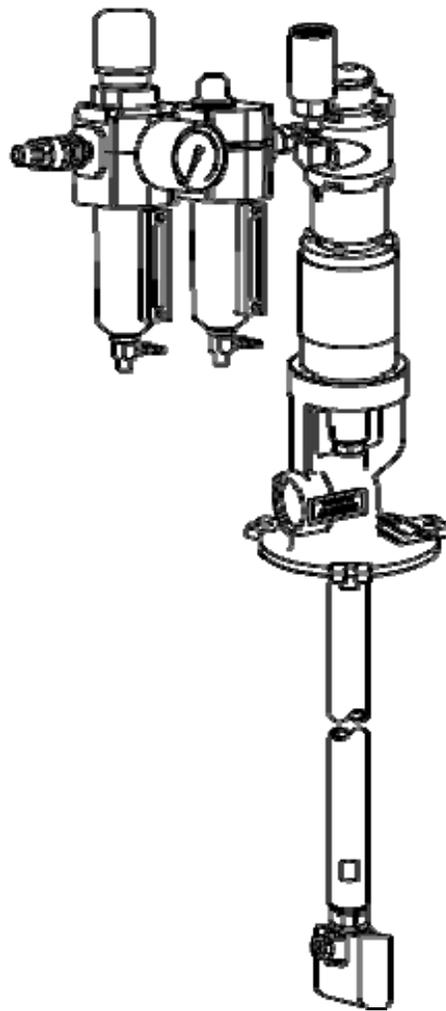


Spraying Systems Co.[®]

Experts in Spray Technology

AA090AG SERIES AIR MOTOR-DRIVEN TANK WASHER



OWNER'S MANUAL

MI-AA090AG

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IMPORTANT: PLEASE READ ALL INSTRUCTIONS BEFORE INSTALLING OR OPERATING UNIT.
SAVE FOR FUTURE REFERENCE

PROPRIETARY NOTICE

THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE EXCLUSIVE PROPERTY OF
SPRAYING SYSTEM CO.

REPRODUCTION IN WHOLE OR PART IS PROHIBITED WITHOUT PRIOR CONSENT OF
SPRAYING SYSTEMS CO.

FORWARD

The equipment and/or parts described in this document were manufactured and assembled with quality and high reliability, which have become synonymous with the name Spraying Systems Co.

The description and specifications contained herein were effective on the revision date of this MI. Spraying Systems Co. reserves the right to alter or modify any unit specification on Spraying Systems Co. product without notice or obligation.

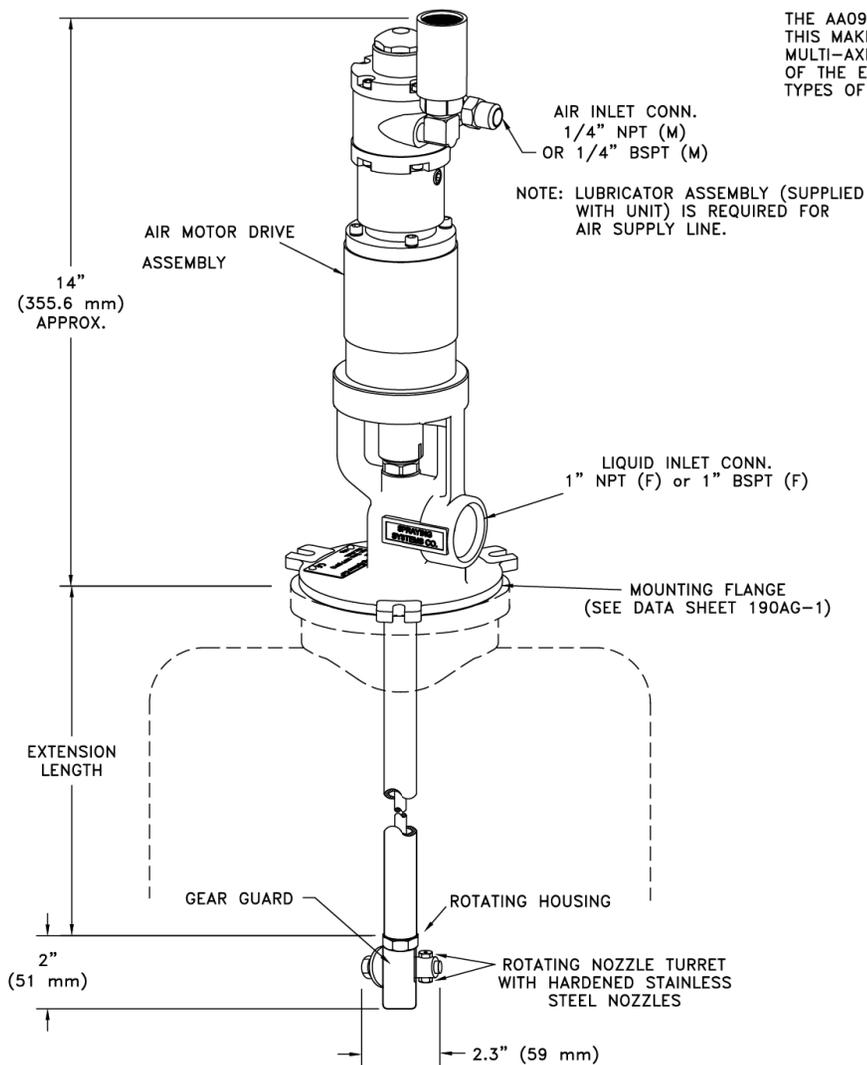
INTRODUCTION

The AA090AG Rotary Tank Washer is designed for high pressure (500 psi/35 bar MAX) washing of tanks up to a recommended maximum diameter of 8 feet (2.4 m) with heated (200°F/93°C MAX) or unheated solutions at flow rates up to 7.3 gallons per minute (28 l/min).

Tanks over 8 feet (2.4 m) in diameter may be cleaned adequately depending on the maximum tank dimension, cleaning solutions being used, temperatures, spray pressures, flow rates and the material being cleaned from the tank. For larger tanks, the 190 and 290 Series Rotary Tank Washers are also suggested.

The AA090AG Rotary Tank Washer may be used with plain water or with a variety of chemicals (compatible with 316SS). However, if chemicals are used, the unit should be flushed with clean water at the end of the cycle and before the unit is stored away. A liquid line strainer before the unit is recommended to remove large particles, which may damage unit.

IMPORTANT: High impact sprays may cause severe injury. The liquid pressure to the tank washer should never be turned on while the unit is outside the tank.



THE AA090AG-- AIR MOTOR-DRIVEN TANK WASHER FITS INTO A 2.3" (59 mm) DIA. OPENING. THIS MAKES IT IDEAL FOR CLEANING DRUMS, TANKS, REACTORS AND OTHER PROCESS VESSELS. MULTI-AXIS ROTATION OF THE SOLID STREAM NOZZLES, PROVIDES COMPLETE INTERNAL COVERAGE OF THE ENTIRE CONTAINER. ITS MATERIALS OF CONSTRUCTION ENABLE IT TO BE USED WITH ALL TYPES OF CLEANING SOLUTIONS AND AGENTS.

AIR INLET CONN.
1/4" NPT (M)
OR 1/4" BSPT (M)

NOTE: LUBRICATOR ASSEMBLY (SUPPLIED WITH UNIT) IS REQUIRED FOR AIR SUPPLY LINE.

LIQUID INLET CONN.
1" NPT (F) or 1" BSPT (F)

MOUNTING FLANGE
(SEE DATA SHEET 190AG-1)

GEAR GUARD ROTATING HOUSING

ROTATING NOZZLE TURRET
WITH HARDENED STAINLESS
STEEL NOZZLES

2.3" (59 mm)

FEATURES:

- FITS THROUGH A 2.3" (59 mm) DIA. OPENING.
- CAN BE PERMANENTLY INSTALLED OR USED AS A PORTABLE UNIT.
- MULTI-AXIS ROTATION PROVIDES FULL COVERAGE OF INTERNAL TANK SURFACES.
- MOTORIZED DRIVE IS MOUNTED OUTSIDE OF THE TANK.
- ROTATIONAL SPEED OF THE NOZZLE TURRET IS INDEPENDENT OF THE CLEANING LIQUID PRESSURE AND FLOW.
- FOR TANK DIAMETERS UP TO APPROXIMATELY 8 FT. (2.4 m).
- FOR SPECIFICATIONS AND ADDITIONAL INFORMATION, SEE DATA SHEET 090AG-1 AND CATALOG 15.
- MAXIMUM PRESSURE 500 PSI (35 bar)

HOW TO ORDER EXAMPLE:

AA090AG-6 + W0005

— SPECIFY NOZZLE SIZE & MATERIAL (SEE D.S. 090AG-1)

— SPECIFY EXTENSION LENGTH

— ADD "B" TO THE PART NO. FOR BSPT CONNECTIONS

DESCRIPTION:

No. AA090AG-- & No. AAB090AG--
AIR MOTOR-DRIVEN
TANK WASHER



Spraying Systems Co.[®]

Spray Nozzles and Accessories
P.O. Box 7900 - Wheaton, IL 60187-7901

Rev. No. 2

Ref.

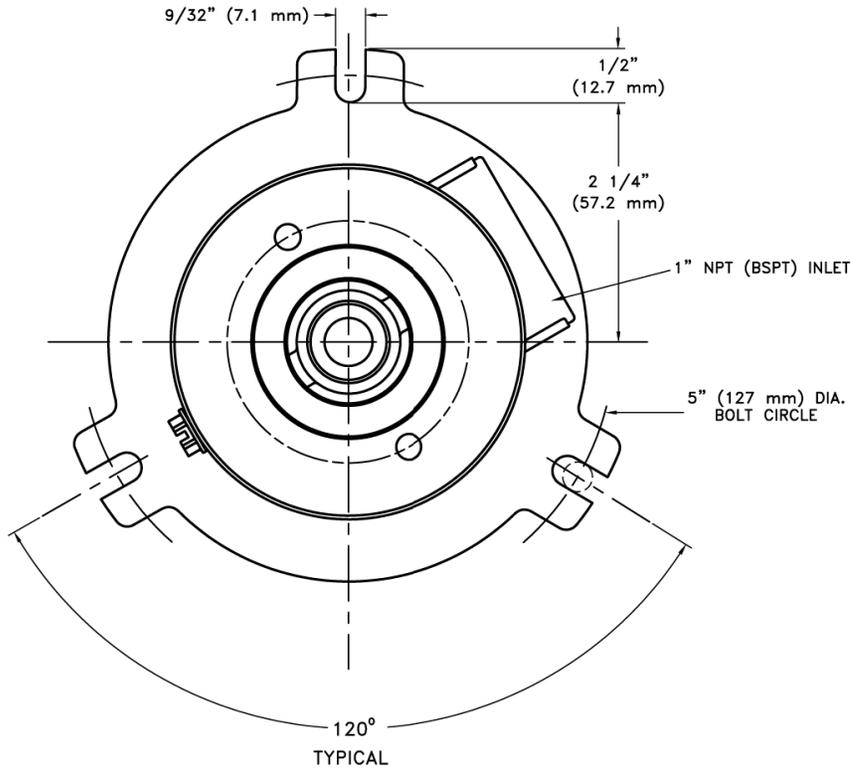
Data Sheet No.

090AG

SHEET OF

NOTE: CERTAIN ATMOSPHERES WITHIN THE TANK BEING CLEANED COULD BECOME EXPLOSIVE, SUCH AS DUST PARTICLES IN A FLOUR SILO, OR FUMES IN PAINT MIXING TANKS. FOR THIS REASON, THE FOLLOWING SAFETY PRECAUTIONS SHOULD BE OBSERVED.

DATA SHEETS



MOTOR END VIEW OF INLET BODY MOUNTING FLANGE

SPECIFICATIONS

- WETTED PARTS ARE TEFLON, DELRIN AND TYPE 316 STAINLESS STEEL.
- MAXIMUM PRESSURE – 500 PSI (35 bar).
- MAXIMUM RECOMMENDED FLOW – 7.3 GPM (27.6 l/min).
- MAXIMUM LIQUID TEMPERATURE – 200° F (93° C).
- SPRAY HEAD FITS THROUGH A 2.3" (59 mm) DIA. OPENING.

AIR MOTOR DATA

AIR PRESSURE AT MOTOR	APPROX. SPEED RPM*		AIR CONSUMPTION		1 COMPLETE CYCLE (MIN.)**
	PSI	bar	SCFM	l/sec.	
5	0.34	3.2	1.4	0.7	10
7	0.48	6.0	2.0	0.9	5.5
10	0.68	8.2	3.1	1.5	4.0

* ASSUMING EXHAUST FILTER IS CLEAN.

** 31 REVOLUTIONS ARE REQUIRED FOR 1 COMPLETE CYCLE.

FLOW RATE DATA

U.S. UNITS

NOZZLE SIZE	AVG. TOTAL FLOW OF 2 NOZZLES (EQUAL CAPACITY) GALLONS PER MINUTE				
	INLET PRESSURE (PSI)				
	100	200	300	400	500
W0005	1.5	2.0	2.4	2.8	3.2
W0010	2.7	3.7	4.5	5.1	5.8
W0014	3.5	4.7	5.8	6.6	7.3

METRIC UNITS

NOZZLE SIZE	AVG. TOTAL FLOW OF 2 NOZZLES (EQUAL CAPACITY) LITERS PER MINUTE				
	INLET PRESSURE (bar)				
	7	15	20	30	35
W0005	5.7	7.6	9.1	10.6	12.1
W0010	10.2	14.0	17.0	19.3	22
W0014	13.2	17.8	22	25	28

NOTE: FLOW RATES TABULATED ABOVE INCLUDE EFFECT OF PRESSURE DROP THROUGH UNIT.

DESCRIPTION:

SPECIFICATIONS FOR
No. AA090AG-- & No. AAB090AG--
AIR MOTOR-DRIVEN
TANK WASHER



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Spray Nozzles and Accessories
P.O. Box 7900 - Wheaton, IL 60187-7901

Rev. No. 2

Data Sheet No.

090AG-1

Ref.

SHEET OF

AIR MOTOR
REQUIRES SAE #10
AUTOMOTIVE ENGINE
OIL FOR LUBRICATION
(SEE DS21030)

ø3 41/64"
[92.6 mm]
APPROX

AIR MUFFLER

AIR INLET CONN.
1/4" NPT (M)

GEAR REDUCER
PERMANENTLY LUBRICATED

9 31/64"
[241 mm]
APPROX.

090/190 TANKWASHER
ADAPTER

INLET BODY
FOR 090 OR 190



PARTS LIST
PL46340

APPROX. WEIGHT
6.25 lbs [2.8 kg]

AIR PRESSURE AT MOTOR		AIR CONSUMPTION		APPROX SPEED	APPROX TIME FOR ONE COMPLETE CYCLE IN MINUTES		REVOLUTIONS REQUIRED FOR 1 COMPLETE CYCLE	
PSI	bar	SCFM	l/min	RPM	090	190	090	190
5	0.34	1.4	39.6	3.2	10	11	31	35
7	0.48	2.0	56.6	6.0	5.5	6.0		
10	0.68	3.1	87.7	8.2	4.0	5.0		

SEE DATASHEET 46340-290 FOR PERFORMANCE DATA OF THIS MOTOR ON A 290 TANKWASHER.

DESCRIPTION:

No. 46340- ___ AIR DRIVEN
MOTOR ASSEMBLY
FOR 090 OR 190
AIR MOTOR-DRIVEN
TANK WASHERS



Spraying Systems Co.®

Spray Nozzles and Accessories
P.O. Box 7900 - Wheaton, IL 60187-7901

Rev. No. 5

Ref.

Data Sheet No.

46340

SHEET OF

SAFETY PRECAUTIONS

YOUR SAFETY AND THE SAFETY OF OTHERS IS EXTREMELY IMPORTANT.

WE HAVE PROVIDED IMPORTANT SAFETY MESSAGES IN THIS MANUAL FOR YOUR PRODUCT. ALWAYS READ AND OBEY ALL SAFETY MESSAGES.



THIS IS THE SAFETY ALERT SYMBOL. THIS SYMBOL ALERTS YOU TO HAZARDS THAT CAN KILL OR HARM YOU AS WELL AS OTHERS. THE SAFETY ALERT SYMBOL AND THE WORDS “DANGER” AND “WARNING” WILL PRECEDE ALL SAFETY MESSAGES. READ THE FOLLOWING WORDS AND WHAT THEY SIGNIFY:



DANGER

YOU MAY BE KILLED OR SERIOUSLY INJURED IF YOU DON'T FOLLOW THESE INSTRUCTIONS.



WARNING

YOU MAY BE SERIOUSLY INJURED IF YOU DON'T FOLLOW THESE INSTRUCTIONS.

ALL SAFETY MESSAGES WILL IDENTIFY THE HAZARD, TELL YOU HOW TO REDUCE THE CHANCE OF INJURY AND TELL YOU WHAT CAN HAPPEN IF THE SAFETY INSTRUCTIONS ARE NOT FOLLOWED.

INSTALLATION

Qualified personnel must perform all work required to assemble, install, operate, maintain and repair this equipment. Improper installation and operation can result in severe personal injury and/or damage to property. Correct installation is your responsibility.



WARNING

Install proper guards as needed. Follow basic lifting guides when transporting or handling this product. Failure to follow this instruction can result in back injury, burns or other serious injury.

CONNECTIONS

Please refer to datasheet 090AG during installation. Connect the air muffler (shipped loose) to the air motor exhaust connection. The exhaust connection is the threaded connection on the left as you face the motor openings. Connect the lubricator sub-assembly to the air inlet connection of the air motor. The inlet connection is the threaded connection on the right as you face the motor openings. Attach a compressed air line to the quick connect fitting of the pressure regulator and verify that the nozzle hub rotates clockwise when viewed from the nozzle hub end by applying air pressure to the motor. Connect the liquid line to the inlet connection of the liquid inlet body.

MOUNTING

Bolt or clamp the unit to the tank to be cleaned as dictated by the mounting flange provided. Adjustable flanges allow easy positioning of the tank wash unit to various spray depths for maximum cleaning effectiveness.

LIQUID INLET CONNECTION

Proper installation requires liquid supply line (pipe, hose, etc.) meet or exceed maximum working pressure. Use of PTFE Pipe Tape or other appropriate sealant compatible with your process fluids is highly recommended for leak free connections.



DANGER

Failure to install the tank washer with insufficient connections could result in leaks and/or explosion. If you do not follow these instructions, you may be killed or seriously injured.

MECHANICAL CLEARANCES

Proper installation requires that sufficient clearance be maintained between the rotary housing and nozzles of the tank wash unit and any internal baffles or the walls of the tank being cleaned.



DANGER

It is your responsibility to ensure that there is no possibility of the moving parts coming in contact with fixed objects. Failure to install the tank washer with sufficient clearances could result in the generation of sparks with a resultant explosion or fire. If you do not follow these instructions, you may be killed or seriously injured.

GROUNDING

A ground screw is provided on the Liquid Inlet Body marked with a ground symbol. A ground wire should be clamped under the screw head and connected to earth ground via an approved grounding method. Likewise, a ground wire should be affixed to the tank and terminated at an earth ground.



DANGER

It is not sufficient to ground only the tank washer or the tank itself because the electrical continuity between the tank wash unit and tank cannot be guaranteed. A separate ground connection from both the tank wash unit and the tank itself should be made. Failure to follow this instruction can result in buildup of static charge between the tank and the tank washer parts which could cause a sudden discharge of current with a resultant explosion or fire.

YOU MAY BE KILLED OR SERIOUSLY INJURED IF YOU DO NOT FOLLOW THESE INSTRUCTIONS.

HIGH IMPACT SPRAYS

This tank washer may be equipped with solid stream nozzles which concentrate the flow energy into a small area for maximum impact and cleaning efficiency. Operation at high pressure increases their effectiveness but also creates a hazard if the proper precautions are not followed.



WARNING

INJURY HAZARD FROM HIGH IMPACT SPRAYS.

High impact sprays can cause severe injury. The liquid pressure to the tank washer should never be turned on while the unit is outside the tank. ***Failure to follow this instruction can result in fluid penetration through clothing and into the human skin causing severe injury, possibly resulting in amputation or death.*** If any part of the body comes in contact with the spray stream, immediately consult a physician.

AIR MOTOR LUBRICATION

Use DETERGENT SAE #10 automotive engine oil. Consult with your local supplier of lubricants or contact your local Spraying Systems Co. sales office.

AUTOMATIC LUBRICATION

Inline air lubricator should be adjusted to feed 1 drop of oil per minute. Do not over-feed oil as contamination of exhaust air may result.

NOTE: THE AIR SOURCE MUST BE WATER-FREE AND PROPERLY LUBRICATED TO PREVENT RUST AND EXCESSIVE FRICTION FROM WEARING OUT THE MOTOR PREMATURELY. IF THE AIR MOTOR IS TAKEN CARE OF PROPERLY IT SHOULD LAST MANY CLEANING CYCLES BEFORE REPAIR OR REPLACEMENT IS NECESSARY.

OPERATION

IT IS YOUR RESPONSIBLY TO OPERATE THIS PRODUCT AT RECOMMENDED SPEEDS, LOADS AND TEMPERATURES.

Run the unit within the specified pressures and flow rates for the liquid and air motor to ensure safety. To maintain proper operations do not run the unit dry, always keep liquid flow on before stopping the air motor.



WARNING

Do not use combustible gases to drive the air motor. Sound level from motor may exceed 85db(A). Check compatibility of service fluid with materials used to construct this product. Use a pressure gauge to monitor liquid pressure (see 090AG-1 for flow rate data). Ensure that the pumping system has monitor controls and emergency shut off system in case of pressure spike which can cause harm to this product. Failure to follow this instruction can result in burns, eye injury or other serious injury.



DANGER

Spraying Systems Co. strongly recommends the use of appropriate safety equipment when working with potentially hazardous chemicals. See your chemical's MSDS sheet for all safety measures relating to your chemical.

This equipment includes but is not limited to:

- ❖ Protective hat
- ❖ Safety glasses or face shield
- ❖ Chemical-resistant gloves and apron
- ❖ Long sleeve shirt and long pants

Always remember to carefully read the chemical manufacturer's label and follow all directions.

MAINTENANCE INFORMATION

IMPORTANT: IT IS YOUR RESPONSIBILITY TO REGULARLY INSPECT AND MAKE NECESSARY REPAIRS TO THIS PRODUCT IN ORDER TO MAINTAIN PROPER OPERATION. IT IS RECOMMENDED THAT THE BUSHINGS AND SEALS BE INSPECTED EVERY 1000 HOURS OF OPERATION OR SOONER IF EXCESSIVE LEAKAGE OF THE SEALS OCCURS.

REMOVAL AND REPLACEMENT OF SPRAY NOZZLES (ITEM 19 ON PARTS LIST DRAWING PL 090AG)

Make sure the unit is completely disconnected from the air source before attempting to service nozzles.

1. Unscrew spray nozzles (19) from pinion shaft (18) and inspect for plugging and wear.
2. If a nozzle is plugged or partially plugged, clean out the orifice and inlet area with a wooden toothpick or other relatively soft probe. Screwdrivers, wire or other hard metal items should not be used since they may scratch and severely damage the orifice.
 - A. If the nozzles need replacement, obtain new nozzles.
3. Replace spray nozzles (19) in pinion shaft (18) by tightly screwing them in.

REMOVAL AND REPLACEMENT OF NOZZLE PINION BUSHINGS (ITEM 16 ON PARTS LIST PL 090AG)

1. Remove guard (21) by removing hex head cap screw (23) and shake-proof washer (22).
2. Unscrew pinion guard (14) and slide pinion gear (15) off of woodruff key (17). Remove woodruff key (17).
3. Carefully remove pinion shaft (18). A slight twist motion will help in removal.
4. Push out the old pinion bushings (16) and clean, and inspect yoke (13) seating surfaces.
5. Install new pinion bushings (16) until they seat fully against the yoke (13).
6. Clean and inspect the pinion shaft (18) and slide through the pinion bushings (16). A suitable lubricant on the leading edge will help in installation.
7. Install the woodruff key (17) and pinion gear (15). The pinion shaft (18) may need to be rotated slightly to allow proper meshing of pinion gear (15) and gear (12).
8. Seat pinion gear (15) fully against pinion bushing (16) and thread pinion guard (14) onto pinion shaft (18), tighten to 17 ft/lbs.
9. Re-install guard (21) and tighten hex head cap screw (23) and shake-proof washer (22).

REMOVAL OF #46340 AIR MOTOR DRIVE (SEE PARTS LIST DRAWING PL 46340)

1. First make sure the unit is completely disconnected from the air source.
2. Using a 4 mm Allen Wrench, unscrew and remove both 5 mm socket head cap screws (1) and respective spring washers (2).
3. You should now be able to lift the air motor drive completely off the 190 inlet body casting.

REMOVAL/REPLACEMENT OF AIR MOTOR DRIVE COUPLING (ITEM 8 ON PARTS LIST PL 46340)

1. If it is necessary to remove the coupling (5) from the gear motor sub-assembly (11) shaft, tap the coupling with a rubber or plastic mallet until it releases from the shaft.
2. To reassemble, align the keyway on the coupling (5) with the key (6) on the gear motor sub-assembly (11) shaft and lightly tap the coupling (5) until it bottoms on the shaft.

NOTE: The coupling (5) on the gear motor sub-assembly (11) shaft has a press fit so the coupling (5) does not inadvertently come apart during removal or installation of the gear motor sub-assembly.

DISASSEMBLY OF THE UNIT (SEE PARTS LIST PL 090AG)(REPAIR KIT #AB090-KIT)

1. If it has not already been done, the air motor sub-assembly should be removed as described in the removal of #46340 air motor drive section above.
2. Next, tap out the groove pin (5) and inspect hole in shaft (6). Remove any burrs and sharp edges.
3. Unscrew the upper shaft seal body sub-assembly (3) and slide off the shaft (6).
4. Inspect the o-ring and bushing inside the upper shaft seal body sub-assembly (3). If damaged or worn, replace with new sub-assemblies.
5. Using a 15/16" using a 15/16" open-end wrench across the flats of the gear (12), loosen the entire assembly from the extension tube (7). Be careful not to damage gear teeth.
6. Remove shaft (6) by loosening shaft nut (8) and unscrewing the shaft (6) from the yoke (13). These are left hand threads.
7. Do not move shaft nut (8) more than necessary as this serves as an indicator during reassembly.
8. When shaft (6) is removed, loosen yoke nut (9) by holding collar (10). Remove yoke nut (9) and collar (10). This will allow replacement of thrust washer (11).
9. Replace collar (10) until it contacts thrust washer (11). Do not over-tighten.
10. Hold collar (10) and tighten yoke nut (9) against collar (10) torque to 20 ft/lbs. Thread shaft (6) back into yoke (13) until shaft nut (8) contacts top of yoke (13).

REASSEMBLY OF THE UNIT (SEE PARTS LIST PL 090AG)

1. Tighten the shaft (6) against yoke (13). Remember these are left hand threads.
 2. Apply lubricant oil* to the end of the shaft (6) and insert into the extension tube (7).
 3. Align shaft (6) and start it into upper bushing retainer sub-assembly (3).
 4. Thread gear (12) into extension tube (7). This will push assembly through upper bushing retainer sub-assembly (3). Tighten gear (12) into extension tube (7) to 20 ft/lbs.
 5. Replace groove pin (5) and air motor assembly (1). Refer to the previous section titled replacement of #46340 air motor drive.
 6. Be sure to align slot in air motor assembly with groove pin (5). If groove pin (5) is not contacting slot or motor cannot be seated properly due to interference, then the shaft is either threaded into the yoke (13) too far or not enough. This is why, during disassembly, care should be taken when loosening the shaft nut (8).
- **USE APPROPRIATE LUBRICANT IF UNIT IS USED IN FOOD OR PHARMACEUTICAL APPLICATIONS.**

REPLACEMENT OF #46340 AIR MOTOR DRIVE (SEE PARTS LIST DRAWING PL 46340)

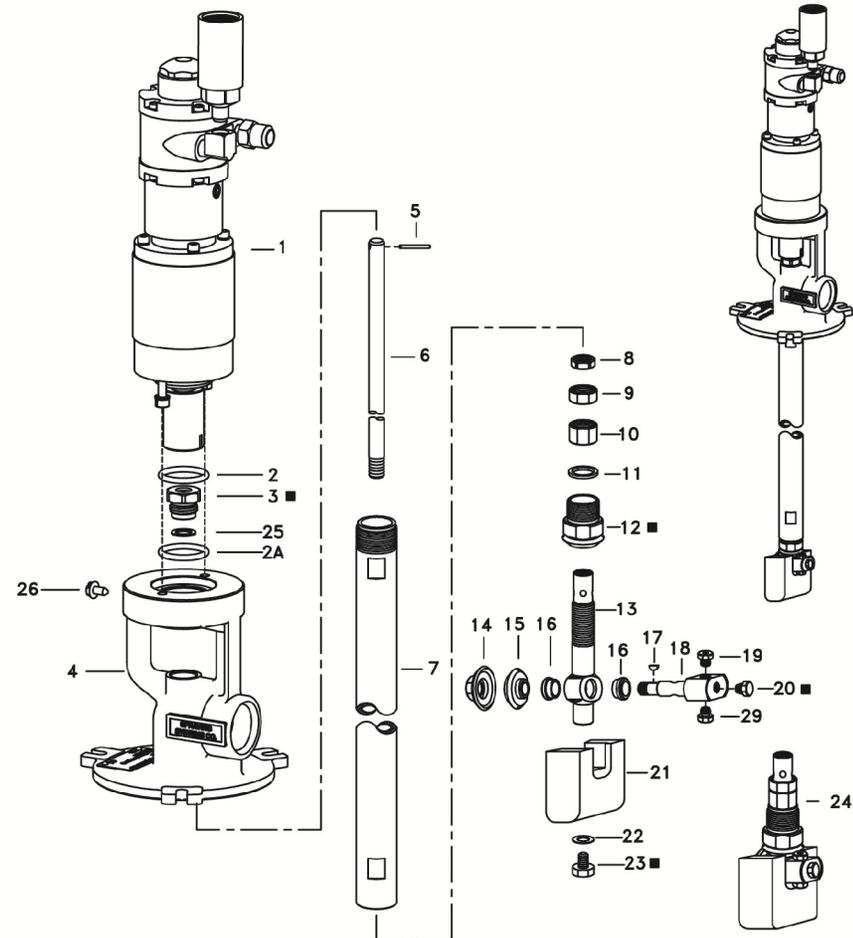
1. If it is not already attached, align the keyway on the coupling (5) with the key (6) on the gear motor sub-assembly (11) shaft and lightly tap the coupling (5) until it bottoms on the shaft.
2. Insert the coupling (5) through the hole in the top of the 190 inlet casting.
3. The slot on the coupling (5) should be aligned and indexed over the groove pin and drive shaft on the 190 assembly.
4. The air motor drive assembly can now be rotated until the through holes on the inlet casting align with the m5 female threaded inlet holes on the air motor drive assembly.
5. Using a 4 mm hex Allen Wrench, secure the gear motor sub-assembly (11) to the inlet casting using two m5 bolts (1) and spring lock washers(2). Before re-installing in a tank, connect an air line to the air motor drive to make sure the unit works properly.

ITEM	PART NO.	DESCRIPTION
1	46340-090	Air Motor Drive Assembly
★ 3	18330-316EPR	Upper Shaft Seal Body Sub-Assembly, Stainless Steel, Type 316 & Ethylene Propylene Rubber
★ 2	CP7717-2-124-VI	O-Ring, Viton®
★ 2A	CP7717-2-214-VI	O-Ring, Viton®
4	38845-316SS	Liquid Inlet Body-Mounting Plate Sub-Assembly, Type 316 Stainless Steel (1" N.P.T. Conn.)
	B38845-316SS	Liquid Inlet Body-Mounting Plate Sub-Assembly, Type 316 Stainless Steel (1" B.S.P.T. Conn.)
★ 5	CP19109-SS	Groove Pin, Stainless Steel
6	CP38827-__-316SS	Shaft, Type 316 Stain. Steel (For AA090AG-__, AAB090AG-__)
7	CP19098-__-316SS	Extension Tube, Type 316 Stain. Steel (For AA090AG-__, AAB090AG-__)
8	CP38828-316SS	Shaft Nut, Type 316 Stainless Steel
9	CP38830-316SS	Yoke Nut, Type 316 Stainless Steel
10	CP38831-316SS	Collar, Type 316 Stainless Steel
★ 11	C38832-DEL	Thrust Washer, Delrin
12	38846	Gear & Yoke Bushing Sub-Assembly
13	CP38829-316SS	Yoke, Type 316 Stainless Steel
14	CP38835-316SS	Pinion Guard, Type 316 Stainless Steel
15	CP38837-316SS	Pinion Gear, Type 316 Stainless Steel
★ 16	CP38841-CGRTEF	Pinion Bushing, Carbon Graphite Filled TEFLON (2 Req'd)
★ 17	CP38836-303SS	Woodruff Key, Type 303 Stainless Steel
18	CP38840-316SS	Pinion Shaft, Type 316 Stainless Steel
19	W**	Nozzle, Type 416 Hardened Stainless Steel (2 Req'd)
20	CP38838-316SS	Plug, Type 316 Stainless Steel
21	CP38842-316SS	Guard, Type 316 Stainless Steel
22	CP13993-302SS	Shakeproof Washer, Type 302 Stainless Steel
23	CP19278-1-SS	Hex. Head Cap Screw, Stainless Steel
24	CP38826-316SS	Sub-Assembly (Includes Items 12 Thru 26)
25	CP58326-NY	Gasket, Nylon
26	CP55000-3-1ZP	Grounding Screw, Steel, Zinc Plated
No. AA090AG-__+**, Air Motor-Driven Tank Washer (with Shaft & Extension Length)		
No. AAB090AG-__+**, Air Motor-Driven Tank Washer (with Shaft & Extension Length)		

** Specify Spray Nozzle Size Required. (SEE D.S. 090AG-1)

■ NOTE: SEE TORQUE REQUIREMENTS

ITEM NO.	TORQUE REQUIREMENTS		LOCTITE ADHESIVE	
	FT LB TORQUE ±10%	IN LB TORQUE ±10%	TYPE	USED
3	50 FT-LBS	600 IN-LBS	242	
12	50 FT-LBS	600 IN-LBS	-	
20	10 FT-LBS	120 IN-LBS	-	
23	5 FT-LBS	60 IN-LBS	-	



★ SOLD IN KITS ONLY - AB090 - KIT-
SPARE PARTS KIT (Includes All Items Marked With "★")

DESCRIPTION:

No. AA090AG-- & No. AAB090AG--
AIR MOTOR-DRIVEN TANK WASHER



Spraying Systems Co.®

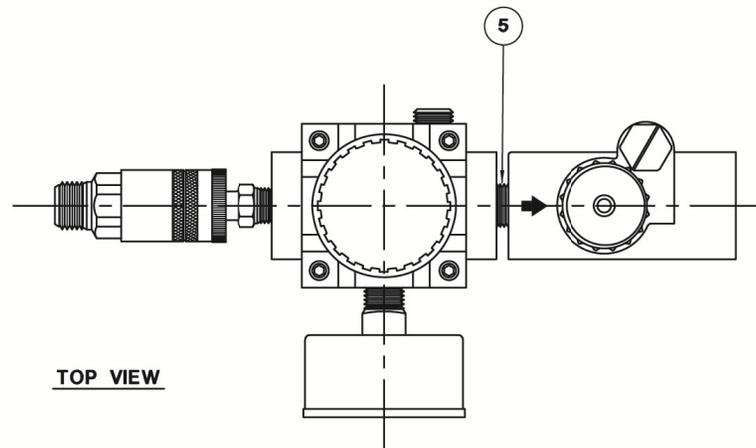
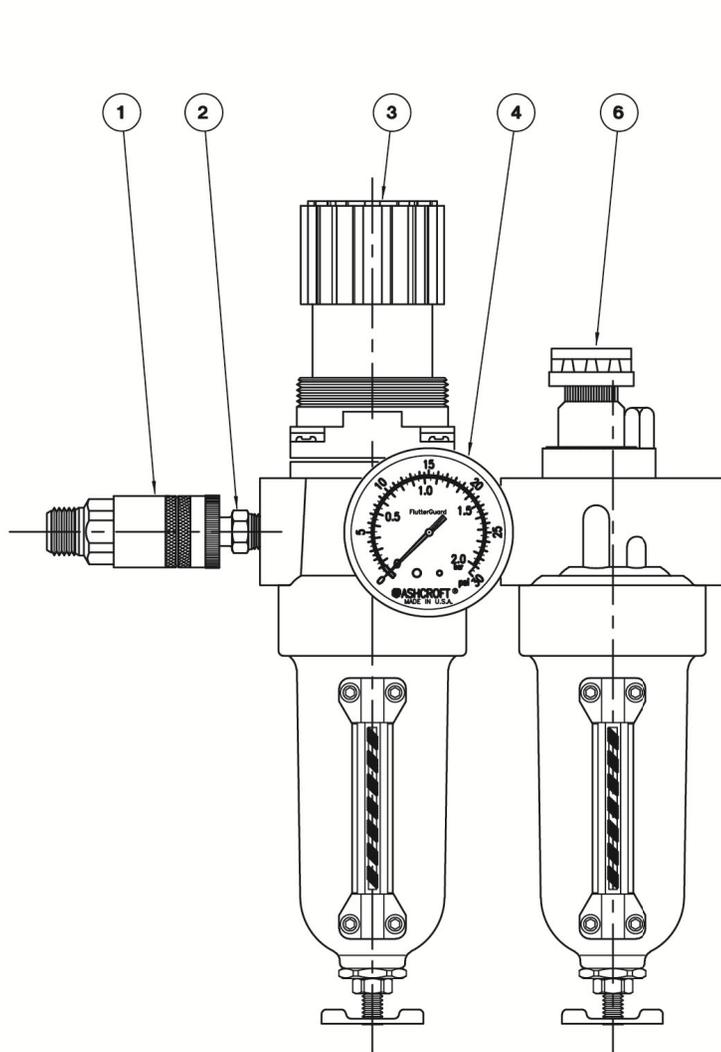
Spray Nozzles and Accessories
P.O. Box 7900 - Wheaton, IL 60187-7901

Rev. No. 4

Ref.

Parts List No.
PL 090AG

SHEET OF



TOP VIEW

ITEM	PART NO.	DESCRIPTION
1	CP22023	Coupler, Brass
2	CP22024-1	Coupler Nipple, Steel
3	CP22025	Filter / Regulator
4	26383-1/4-30	Pressure Gauge
5	CP7998-7/8	Close Nipple, Brass
6	CP22027	Lubricator
No. 21030 Lubricator Assembly		

DESCRIPTION:
 - PARTS LIST -
 No. 21030 LUBRICATOR
 ASSEMBLY



Spraying Systems Co.[®]
 Spray Nozzles and Accessories
 P.O. Box 7900 - Wheaton, IL 60187-7901

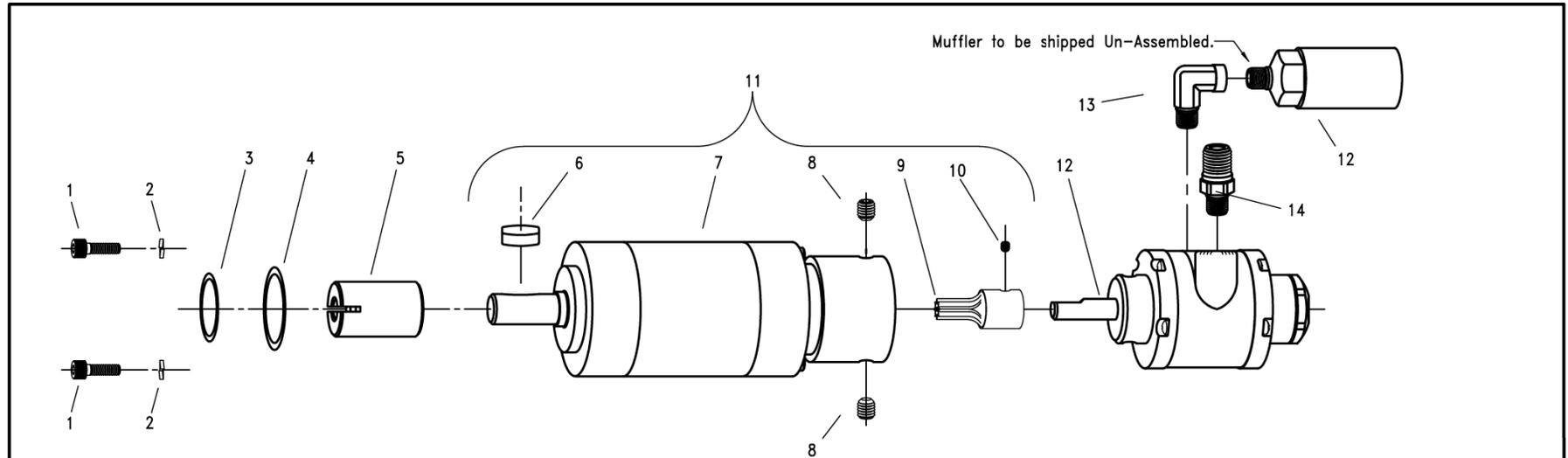
Rev. No. 1

Ref.

Parts List No.

PL 21030

SHEET OF



ITEM	PART NO.	DESCRIPTION
1	CP46766-20-316SS	Metric Socket Head Cap Screw, M5 x 0.8 x 20 mm LG. Type 316 Stainless Steel (2 REQ'D)
2	CP46352-5-316SS	Metric Spring Washer, 5 mm, Stainless Steel Type 316 (2 REQ'D)
3	CP7717-2-214-VI	O-Ring, VITON®
4	CP7717-2-124-VI	O-Ring, VITON®
5	CP46343-316SS	Coupling, 316 Stainless Steel (For Model #AA090AG-- OR AA190AG--)
6	CP46349-4-IBO	Metric Key, 5 mm Thick, Steel
7	CP46342	Gear Motor
8	CP46344-8-IBO	Metric Set Screw, Cup Point, M8 x 1.25 x 8 mm LG. Alloy Steel, Black Oxide Coating (2 REQ'D)
9	CP46347-1	Motor Pinion, Steel
10	CP46346-4-IBO	Metric Set Screw, Cup Point, M4 x .7 x 4 mm LG. Alloy Steel, Black Oxide Coating
11	46351	Gear Motor Sub-Assembly (Consists Of The Following Items 6, 7, 8, 9 & 10)
12	46350	Air Motor, Gast 1UP-NRV-10 & Air Motor Muffer, Gast AF350, CE Certified
13	CP38674-7	90° Street Elbow, 1/8 NPT (M) x 1/8 NPT (F), Brass
14	CP26396-1	Hex Pipe Nipple, 1/4 NPT (M) x 1/8 NPT (M), Brass
No. 46340-190 Air Motor Assembly (For Model #AA090AG-- or AA190AG--)		

INCLUDED TOOLS:

3/16" Hex Allen Wrench For Item 5 (1/4-20 Socket Head Cap Screw)
 2 mm Hex Allen Wrench For Item 13 (M4 Set Screw)
 4 mm Hex Allen Wrench For Item 1 (M5 Socket Head Cap Screw) & Item 11 (M8 Set Screw).

DESCRIPTION:

No. 46340-190
 Air Motor-Driven Assembly

For 090 & 190
 Tank Washers



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Rev. No. 4

Ref.

Parts List No.

PL 46340-190

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