

3376-K

# INSTRUCTIONS – PARTS LIST

## INSTRUCTIONS!

This manual contains important warnings  
and information.  
**READ AND KEEP FOR REFERENCE.**



**Autoquip, Inc.**

## Solvent Scrubber

*3376-AQSS-000*



**AUTOQUIP, INC. N57 W13430 Reichert Ave. Menomonee Falls, WI 53051**

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3.53TO

## Symbols

### Warning Symbol



This symbol alerts you to the possibility of serious injury or death if you do not follow the instructions.

### Caution Symbol



This symbol alerts you to the possibility of damage to or destruction of equipment if you do not follow the instructions.

### WARNING

#### **EQUIPMENT MISUSE HAZARD**

Equipment misuse can cause the equipment to rupture or malfunction and result in serious injury.

- This equipment is for professional use only.
- Read all instruction manuals, tags, and labels before operating the equipment.
- Use the equipment only for its intended purpose. If you are not sure, call your Autoquip distributor.
- Do not alter or modify this equipment. Use only genuine Autoquip parts.
- Check equipment daily. Repair or replace worn or damaged parts immediately.
- Use fluids and solvents that are compatible with the equipment wetted parts. Refer to the **Technical Data** section of all equipment manuals. Read the fluid and solvent manufacturer's warnings.
- Always wear protective eyewear, gloves, clothing, and respirator as recommended by the fluid and solvent manufacturer.
- Comply with all applicable local, state, and national fire, electrical, and safety regulations.

 **WARNING****FIRE AND EXPLOSION HAZARD**

Improper grounding, poor ventilation, open flames, or sparks can cause a hazardous condition and result in a fire or explosion and serious injury.

- Ground the equipment and the object being sprayed. Refer to **Grounding** on page 5.
- If there is any static sparking or you feel an electric shock while using the equipment, **stop spraying immediately**. Do not use the equipment until you identify and correct the problem.
- Do not use 1,1,1-trichloroethane, methylene chloride, other Halogenated hydrocarbon solvents, or fluids containing such solvents in aluminum components. Such use could result in a serious chemical reaction, with the possibility of explosion.
- Do not use kerosene or other flammable solvents or combustible gases to flush the unit.
- Provide fresh ventilation to avoid the buildup of flammable fumes from solvents or the fluid being sprayed.
- Keep the spray area free of debris, including solvent, rags, and gasoline.
- Before operating this equipment, electrically disconnect all equipment in the spray area.
- Before operating this equipment, extinguish all open flames or pilot lights in the spray area.
- Do not smoke in the spray area.
- Do not turn on or off any light switch in the spray area while spraying or while there any fumes in the air.
- Do not operate a gasoline engine in the spray area.

**INJECTION HAZARD**

Spray from the gun, hose leaks, or ruptured components can inject fluid into your body and cause extreme serious injury, including the need for amputation. Splashing fluid in the eyes or on the skin can cause serious injury.

- Fluid ejected into the skin might look like just a cut, but it is a serious injury. **Get immediate medical attention.**
- Do not point the spray gun at anyone or at any part of the body.
- Do not put hand or fingers over the spray tip.
- Do not stop or deflect fluid leaks with your hand, body, glove, or rag.
- Tighten all fluid connections before operating the equipment.
- Check the hoses, tubes, and couplings daily. Replace worn, damaged, or loose parts immediately. Permanently coupled hoses cannot be repaired; replace the entire hose.

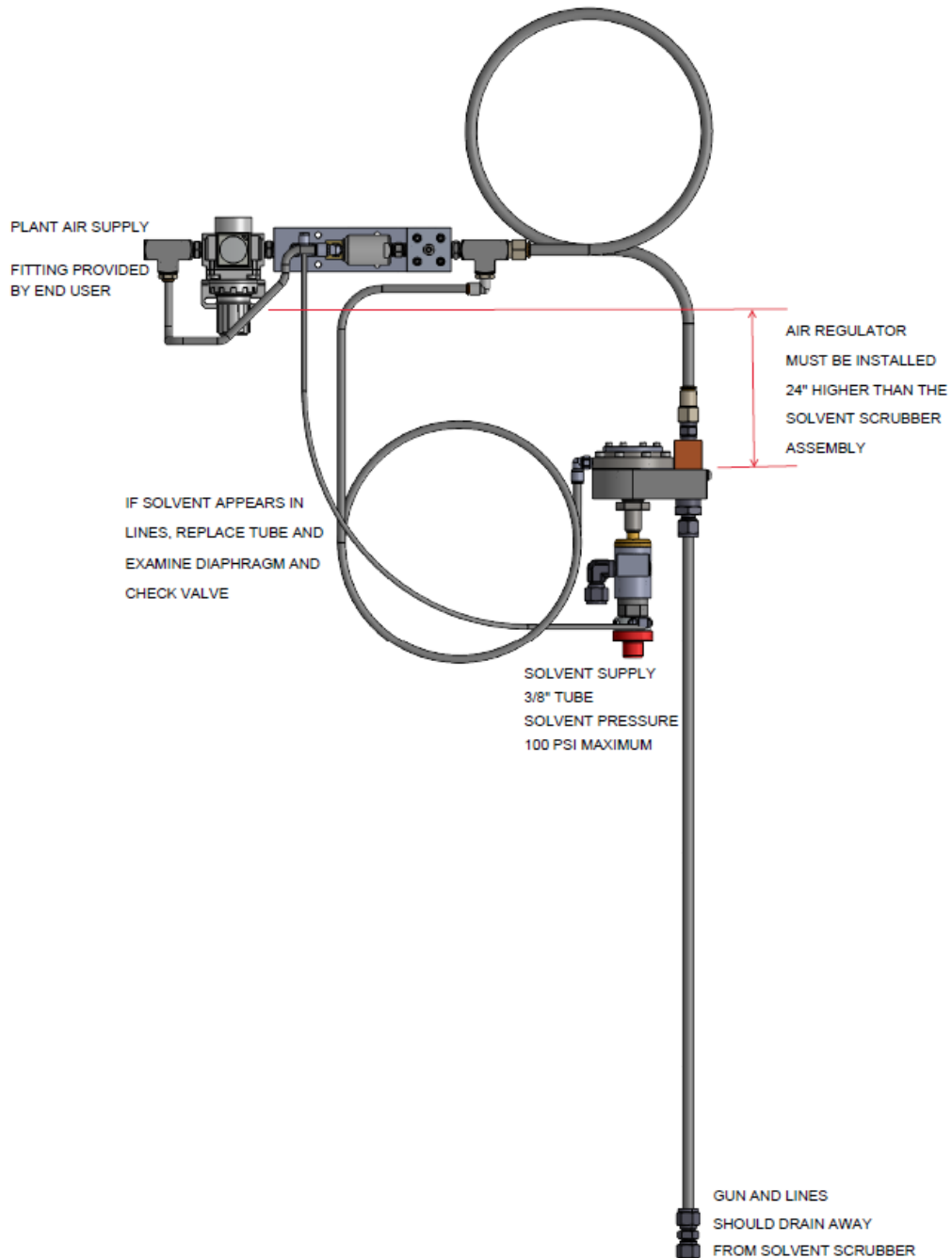
**HAZARDOUS VAPORS**

Hazardous fluids or toxic fumes can cause serious injury or death if splashed in the eyes or on the skin, swallowed, or inhaled. When flushing the air motor, keep your face away from the exhaust port.

United States Government safety standards have been adopted under the Occupational Safety and Health Act. You should consult these standards – particularly the General Standards, Part 1910, and the Construction Standards, Part 1926.

# Installation

Be sure to mount the Solvent Scrubber at a location that is higher than lines being treated. Failure to do so would cause excess solvent to drain into the solvent scrubber and damage the diaphragm. Check valves will fail if not mounted correctly.



# Operation

## Preparing the Fluid

Prepare the fluid according to the manufacturer's instructions. Strain the fluid to remove large particles that could clog the spray gun.

## Activating the Valves

1. Set the air pressure regulator to desired flush pressure (**Set air pressure no higher than the solvent pressure.**)
2. Open the spray gun

## Controlling the Mixture

The solvent scrubber mixture is controlled by changing the air orifice 3376-11-10 (A-F)

A	0.0400
B	0.0420
C	0.0465 (Standard)
D	0.0550
E	0.0595
F	0.0700

A will provide the richest mixture (most solvent) F will provide the leanest mixture (least solvent).



## WARNING

Air pressure **must be maintained** to Solvent Scrubber at all times that unit is receiving solvent pressure.

# Maintenance

## TOOLS REQUIRED

- 5/16" socket with ratchet
- 5/16", 7/8" and 15/16" Open End Wrenches
- 1/16", 3/32", 5/32", and 7/64" Allen Head Wrench
- Adjustable Wrench
- Screwdriver
- Repair Kit 3286-50-00A
- AQ Fluid Regulator Pin Tool 3286-50-01A

## PRELIMINARY PROCEDURES

Prior to removing the regulator for service or repair, perform the following:

1. If possible, flush the regulator with a suitable cleaning solvent.
2. Turn the fluid and air "OFF" to the regulator. Disconnect and depressurize the air and fluid lines from the regulator.
3. Remove the regulator for service.

### NOTE

Proper preventative maintenance is required for consistent operation of the Autoquip regulator. Proper preventative maintenance will vary with each application.

## Disassembly Procedures

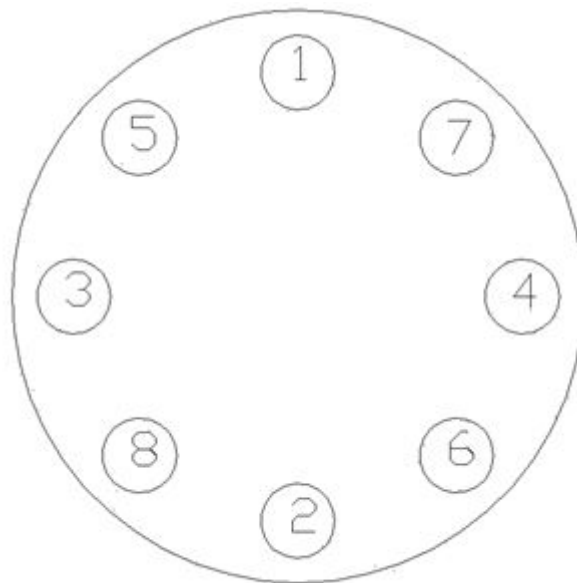
1. Unscrew part 14 (Fluid Fitting) using adjustable wrench
2. Loosen parts 7.4 (#4-40 x 1/4" BHCS) using 1/16" Allen head wrench
3. Remove part 10 (Air Housing Cap)
4. Unscrew part 9 (Spring Plunger) with Autoquip repair tool
5. Remove parts 9 and 8 (Spring Plunger and Disc Spring)
6. Loosen parts 12 (#10-32 x 3/4" SHCS) with 5/32" Allen head wrench **IMPORTANT: Do NOT** loosen in circular pattern, use proper cross pattern pictured below.
7. Remove part 7.1 (Air Side Housing)
8. Using 5/16" socket and ratchet, loosen part 2 (Needle Seat) to remove part 3 (Air Side Plate) and part 5 (Diaphragm)
9. Unscrew and remove part 21 (Fluid side plate) and part 2 (Needle Seat)
10. Remove part 2 (Fluid Seat) from part 1 (Fluid Housing)
11. Remove parts 23 (#10-32 x 1" SHCS) from part 21 (Fluid Outlet) and remove part 21 (Fluid Outlet) revealing part 20 (Fluid Outlet O-Ring)

### NOTE

All steps may not be needed for specific service.

**Example:** To replace the diaphragm, the technician would only need to complete step 8.

### Proper cross pattern for tightening Housing Screws Torque = 30 in. lb.



## Assembly Procedures

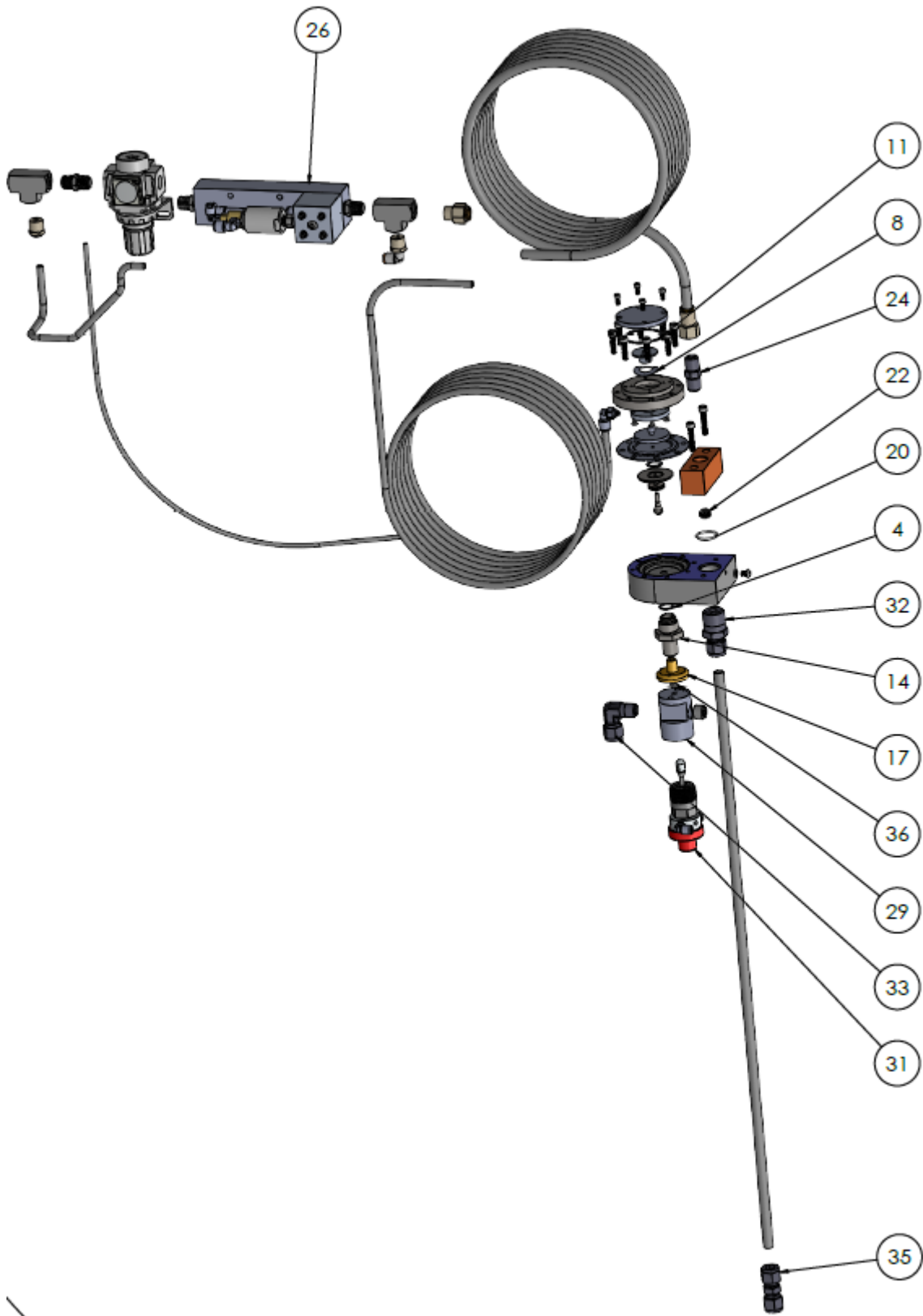
1. Place Part 20 (Fluid Outlet O-Ring) in the fluid outlet O-ring groove on Part 1, secure O-ring in place with part 21 (Fluid Outlet) and parts 23 (#10-32 x 1" SHCS). Tighten screws until part 21 (Fluid Outlet) is flush with part 1 (Fluid Housing).
2. Install part 4 (Teflon<sup>®</sup> Encapsulated O-Ring) in the outside groove on part 2 (Fluid Seat)  
AVOID DAMAGE TO THE TEFLON<sup>®</sup> COATING
3. Place part 2 (Fluid Seat) into part 1 (Fluid Housing) and press into place keeping seat parallel to bottom surface
4. Install part 11 (Teflon<sup>®</sup> Encapsulated O-Ring) in groove on back side of part 21 (Fluid Side Plate). AVOID DAMAGE TO THE TEFLON<sup>®</sup> COATING.
5. Apply Teflon<sup>®</sup> based thread sealant to the threads on part 2 (Needle Seat) and screw into part 21 (Fluid Side Plate), wiping away excess thread sealant. Unscrew part 2 (Needle Seat) and place through part 1 (Fluid Housing) and tighten part 21 (Fluid Side Plate) to desired specifications with a 5/16" socket
6. Place part 5 (Diaphragm) with the blue (Teflon<sup>®</sup> coated) side towards the fluid housing.  
AVOID DAMAGE TO THE TEFLON<sup>®</sup> COATING
7. Install part 3 (Air Side Plate) and tighten with a 5/16" socket
8. Place part 7.1 (Air Side Housing) on part 5 (Diaphragm), lay part 8 (Disc Spring) in place in part 7.1 (Air Side Housing) and screw in part 9 (Spring Plunger) just flush with part 7.1 (Air Side Housing) so as to allow free rotation of part 5 (Diaphragm) and Part 7.1 (Air Side Housing).
9. Rotate part 7.1 (Air Side Housing) to place fitting in desired orientation and to line up the holes of part 1 (Fluid Housing) part 5 (Diaphragm) and part 7.1 (Air Side Housing)
10. Place all 8 of parts 12 (#10-32 x 3/4" SHCS) in the holes and then proceed to tighten in a cross pattern with 5/32" Allen head wrench. IMPORTANT: Do **NOT** tighten in circular pattern, use only proper cross pattern pictured on previous page. Max torque for part 17 is 15 in. lb.
11. Tighten part 9 (AQ Fluid Regulator Pin Tool 3286-50-01A) with Autoquip repair tool until it bottoms out
12. Replace part 10 (Air Side Cap) and parts 7.4 (#4-40 x 1/4" BHCS) and tighten using 1/16" Allen head wrench
13. Install part 11 (Teflon<sup>®</sup> Encapsulated O-Ring) Screw in part 14 (Fluid Fitting) groove into part 1 (Fluid Housing) and tighten

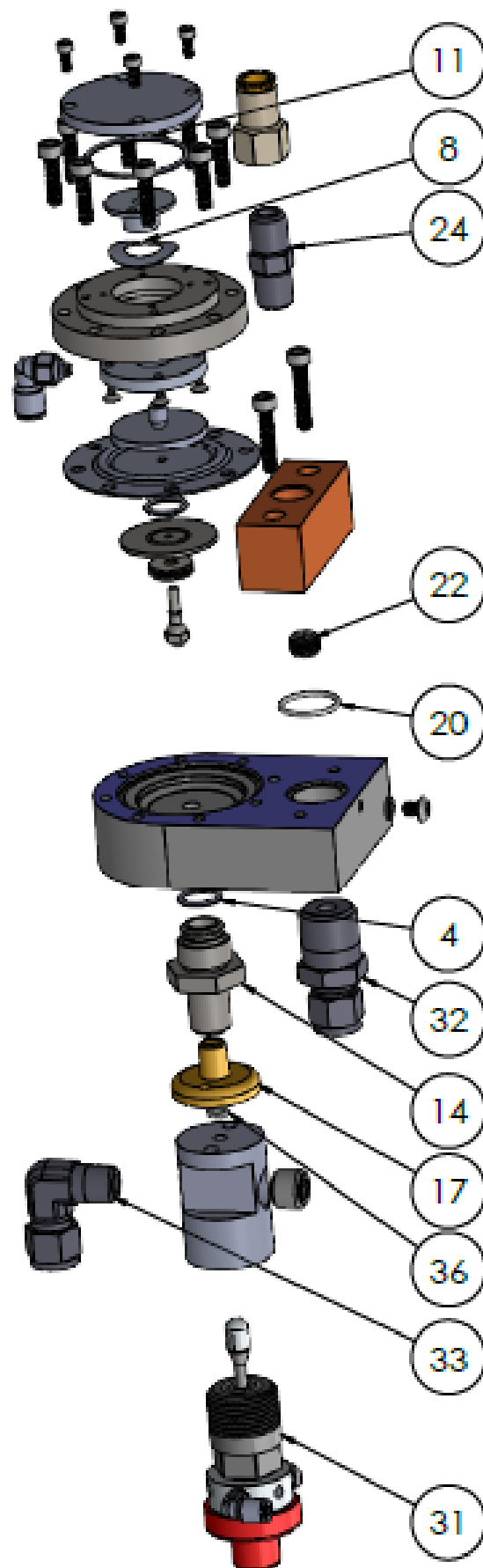
### NOTE

See pages 12-13 for exploded view and parts list



# Parts Layout





# Parts List

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1		AQ SOLVENT SCRUBBER II FLUID SIDE	1
2*		NEEDLE AND SEAT ASSEMBLY	1
3		AQ FLUID SIDE PLATE	1
4*	014 O-RING	FEP ENCAPSULATED O-RING	2
5*		AQ FLUID REGULATOR DIAPHRAGM - PI-5116	1
6		AQ AIR SIDE PLATE	1
7		ASSEMBLY COMPONENTS BELOW	1
7.1		AQ FLUID REGULATOR AIR SIDE	1
7.2		10-32 - 1/4" PTL 90 DEG	1
7.3		AQ AIR SIDE PLATE RETAINER	1
7.4		4-40 FLATHEAD SCS	4
8*	3286-23-16A	CURVED DISC SPRING	1
9		AQ FLUID REGULATOR RETRACT BLOCK	1
10		AQ AIR SIDE CAP	1
11*	028 O-RING*	FEP ENCAPSULATED O-RING	1
12		10-32 X .75" SS SHCS	8
13*		6-32 X .3125" SS SHCS	4
14	3286-35-20A	AQ FLUID REGULATOR FLUID FITTING	1
15		SMC AIR REGULATOR	1
16		SMC STRAIGHT 3/8 PTL TO 1/4NPT	1
17	3066-DF04-02	AQ DUMP VALVE FITTING 1/8"NPT(M)	1
18		10-32# PLASTIC WASHER	1
19*		10-32 X 1/4" BHCS	1
20*	3100-TO-018	PTFE -018 O-RING	1
21		AQ SOLVENT SCRUBBER II AIR INLET	1
22	3376-11-10 (A-F)	AIR ORIFICE	1
23		10-32 X 1" SS SHCS	2
24	A00101-01	INLET CHECK VALVE 2LB	1
25		SMC 3/8 FEMALE NPT TO 3/8 PTL	1
26	3376-AQSS-100	AQ SOLVENT SCRUBBER AIR FLOW SWITCH	1
27		1/4" BRASS TEE	2
28		SMC 90 DEG 3/8 NPT TO 1/4 PTL	1
29	3066-DV04-01B	AQ HIGH PRESSURE FLUID BODY	1
30		HEX SOCKET PLUG	1
31	3066-41-00A	AQ POPPET COLOR VALVE	1
32	ISSD6MC8	1/2" NPT X 3/8" TUBE	1
33	ISSD6ME4	1/4"NPT X 3/8 TUBE 90° ELBOW	1
34		3/8 X .049 WALL SS TUBE	1
35	ISSD6U	3/8" TUBE UNION	1
36	3100-TO-008	PTFE -008 O-RING	1
37		3/8" POLY TUBE	1
38		1/4" POLY TUBE	1
39		5/32" POLY TUBE	1
40		1/4" NPT STRAIGHT HEX	1
41		1/4PTL X 1/4NPT MALE	1
42		1/4 POLY TUBE	1

**\*PARTS FOUND IN REBUILD KIT PART #3376-II-50A  
REGULATOR REPAIR KIT #3286-50-01H  
NEEDLE AND SEAT SET #3286-440-01**

# Accessories

<u>DESCRIPTION</u>	<u>PART NUMBER</u>
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Mounting Bracket	3376-II-51A
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Air Orifice (Change Air Orifice to control the mixture)	3376-II-10(A-F)
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A	0.0400
B	0.0420
C	0.0465 (Standard)
D	0.0550
E	0.0595
F	0.0700

# Troubleshooting Guide

General Problem	Cause	Solution
No Flow	<ol style="list-style-type: none"> <li>1. Plugged inlet</li> <li>2. Item 2 (needle and seat) stuck</li> <li>3. No pilot air</li> </ol>	<ol style="list-style-type: none"> <li>1. Flush clean</li> <li>2. Remove and clean or replace</li> <li>3. Check air pilot</li> </ol>
Will Not Shut Off	<ol style="list-style-type: none"> <li>1. Item 2 (needle and seat) dirty</li> <li>2. Pilot air not shut off</li> </ol>	<ol style="list-style-type: none"> <li>1. Remove and clean or replace</li> <li>2. Check air supply</li> </ol>
Paint Leakage	<ol style="list-style-type: none"> <li>1. Item 12 (screws) loose</li> <li>2. Ruptured Diaphragm</li> <li>3. Loose fluid fittings</li> <li>4. Pinched item 5 (center diaphragm)</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten</li> <li>2. Rebuild regulator</li> <li>3. Tighten</li> <li>4. Replace</li> </ol>
Air Leakage	<ol style="list-style-type: none"> <li>1. Loose air fitting</li> <li>2. Item 12 (screws) loose</li> <li>3. Ruptured item 5 (center diaphragm)</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten</li> <li>2. Tight per "Assembly Procedure"</li> <li>3. Rebuild regulator</li> </ol>
Inconsistent Flow	<ol style="list-style-type: none"> <li>1. Diaphragm stretched from excessive air pressure</li> <li>2. Inconsistent air pilot supply</li> <li>3. Low inlet fluid pressure</li> </ol>	<ol style="list-style-type: none"> <li>1. Rebuild regulator</li> <li>2. Check air source</li> <li>3. Air inlet pressure must be at least 10 psi above outlet pressure, 60 psi minimum.</li> <li>4. For thin materials install new air orifice. See Accessories.</li> </ol>
Air, but NO solvent in mix	<ol style="list-style-type: none"> <li>1. Solvent pressure must be higher than the air pressure.</li> <li>2. Orifice too large</li> </ol>	<ol style="list-style-type: none"> <li>1. Check solvent pressure.</li> <li>2. Change to a smaller air orifice. 3376-II-10C is standard. (A-F) Optional</li> </ol>
Solvent, but no air in the mix	<ol style="list-style-type: none"> <li>1. Needle and seat not sealing</li> <li>2. Orifice too small</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace fluid seat 3286-440-01</li> <li>2. Change to a larger air orifice. 3376-II-10C is standard. (A-F) Optional</li> </ol>
Air backs up in the solvent line	<ol style="list-style-type: none"> <li>1. Make sure the solvent pressure is greater than the Solvent Scrubber pressure at all times.</li> </ol>	

# Technical Data

## **Standard air consumption:**

- \* 15 CFM (.99 m<sup>3</sup>/min) at 100 PSI (6.9 bar) (MAX)
- \* 60 PSI minimum required air plant supply
- \* 40 PSI minimum required pressure to activate flow switch
- \* 90 PSI or greater solvent supply pressure
- \* 300 PSI maximum solvent supply pressure

Air inlet size: ¼" NPT (F)

Fluid outlet size: 3/8" tube (F)

Fluid inlet size: 3/8" tube (F)

## **Wetted parts:**

- \* 304 & 316 stainless steel
- \* 6061 T6 aluminum
- \* Teflon®

*Loctite® is a registered trademark of the Loctite Corporation.*

*Teflon® is a registered trademark of the Dupont Company.*

# Autoquip Standard Warranty

Autoquip Inc. warrants all equipment manufactured by Autoquip Inc. and bearing its name to be free from defects in material and workmanship on the date of sale by an authorized Autoquip Inc. distributor to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Autoquip Inc., Autoquip Inc. will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Autoquip Inc. to be defective. This warranty is only applicable when the equipment is installed, operated, and maintained in accordance with Autoquip Inc.'s written recommendations.

This warranty does not cover, and Autoquip Inc. shall not be liable for general wear and tear, or any malfunction, damage, or wear and tear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Autoquip Inc. component parts. Nor shall Autoquip Inc. be liable for malfunction, damage or wear caused by the incompatibility of Autoquip Inc. equipment with structures, accessories, equipment or materials not supplied by Autoquip Inc., or the improper design, manufacture, installation, operation or maintenance of structure, accessories, equipment or materials not supplied by Autoquip Inc.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Autoquip Inc. distributor for verification of the claimed defect. If the claimed defect is verified, Autoquip Inc. will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

**THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.**

Autoquip Inc.'s sole obligation and buyer's sole remedy for any breach of warranty shall be set forth above. The buyer agrees that no other remedy (including, but not limited to incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

Autoquip Inc. makes no warranty, and disclaims all implied warranties of merchantability and fitness for a particular purpose in connection with accessories, equipment, material or components sold but not manufactured by Autoquip Inc. These items sold, but not manufactured by Autoquip Inc. (such as electric motors, switches, hose, etc.) are subject to the warranty, if any, from their manufacturer. Autoquip Inc. will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Autoquip Inc. be liable for indirect, incidental, special or consequential damage resulting from Autoquip Inc. supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to breach of contract, breach of warranty, the negligence of Autoquip Inc., or otherwise.

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The parties acknowledge that they require the present document, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be drawn up in English. Les parties reconnaissent avoir convenu que la rédaction du présent document sera en Anglais, ainsi que tous documents, avis et procédures judiciaires exécutés, donnés ou intentés à la suite de ou en rapport, directement ou indirectement, avec les procédures concernées.

## Autoquip Phone Numbers

**TO PLACE AN ORDER**, contact your Autoquip distributor, or call this number to identify the distributor closest to you:  
(262) 781-6133 Fax (262) 781-6188

*All written and visual data contained in this document reflects the latest product information available at the time of publication.  
Autoquip reserves the right to make changes at any time without notice.*

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