
AGMD HIGH PERFORMANCE AUTOMATIC SPRAY GUN



MODELS:

514 CONVENTIONAL AIR ATOMIZATION

515 HVLP ATOMIZATION



IMPORTANT: Before using this equipment, carefully read **SAFETY PRECAUTIONS**, starting on page 1, and all instructions in this manual. Keep this Service Manual for future reference.

Service Manual Price: \$30.00 (U.S.)

NOTE: This manual was published to supercede Service Manual **DV-AGMD-101599.8** to revision **DV-AGMD-101599.9**. Reasons for this change are noted under “Manual Change Summary” inside the back cover of this manual.

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NOTES

SAFETY

SAFETY PRECAUTIONS

Before operating, maintaining or servicing any Finishing system, read and understand all of the technical and safety literature. This manual contains information that is important for you to know and understand. This information relates to **USER SAFETY** and **PREVENTING EQUIPMENT PROBLEMS**. To help you recognize this information, we use the following symbols. Please pay particular attention to these sections.

A WARNING! states information to alert you to a situation that might cause serious injury if instructions are not followed.

A CAUTION! states information that tells how to prevent damage to equipment or how to avoid a situation that might cause minor injury.

A NOTE is information relevant to the procedure in progress.

While this manual lists standard specifications and service procedures, some minor deviations may be found between this literature and your equipment. Differences in local codes and plant requirements, material delivery requirements, etc., make such variations inevitable. Compare this manual with your system installation drawings and appropriate equipment manuals to reconcile such differences.



Careful study and continued use of this manual will provide a better understanding of the equipment and process, resulting in more efficient operation, longer trouble-free service and faster, easier troubleshooting. If you do not have the manuals and safety literature for your Devilbiss system, contact your local Industrial representative or Automotive Finishing Group.



WARNING

- ▶ The user **MUST** read and be familiar with the Safety Section in this manual and the Devilbiss safety literature therein identified.
- ▶ This manual **MUST** be read and thoroughly understood by **ALL** personnel who operate, clean or maintain this equipment! Special care should be taken to ensure that the **WARNINGS** and safety requirements for operating and servicing the equipment are followed. The user should be aware of and adhere to **ALL** local building and fire codes and ordinances as well as **NFPA-33 SAFETY STANDARD** prior to installing, operating, and/or servicing this equipment.

WARNING

- ▶ The hazards shown on the following page may occur during the normal use of this equipment. Please read the hazard chart beginning on page 2.

AREA Tells where hazards may occur.	HAZARD Tells what the hazard is.	SAFEGUARDS Tells how to avoid the hazard.
<p>Spray Area</p> 	<p>Fire Hazard</p> <p>Improper or inadequate operation and maintenance procedures will cause a fire hazard.</p>	<p>Fire extinguishing equipment must be present in the spray area and tested periodically.</p> <p>Spray areas must be kept clean to prevent the accumulation of combustible residues.</p> <p>Smoking must never be allowed in the spray area.</p> <p>When using solvents for cleaning:</p> <p>Those used for equipment flushing should have flash points equal to or higher than those of the coating material.</p> <p>Those used for general cleaning must have flash points above 100°F (37.8°C).</p> <p>Spray booth ventilation must be kept at the rates required by NFPA-33, OSHA, and local codes. In addition, ventilation must be maintained during cleaning operations using flammable or combustible solvents.</p> <p>The paint process and equipment should be set up and operated in accordance with NFPA -33, NEC, and OSHA requirements.</p>
<p>General Use and Maintenance</p> 	<p>Improper operation or maintenance may create a hazard.</p> <p>Personnel must be properly trained in the use of this equipment.</p>	<p>Personnel must be given training in accordance with the requirements of NFPA-33.</p> <p>Instructions and safety precautions must be read and understood prior to using this equipment.</p> <p>Comply with appropriate local, state, and national codes governing ventilation, fire protection, operation maintenance, and housekeeping. Reference OSHA, NFPA-33, and your insurance company requirements.</p>

AREA Tells where hazards may occur.	HAZARD Tells what the hazard is.	SAFEGUARDS Tells how to avoid the hazard.
<p>Explosion Hazard/ Incompatible Materials</p> 	<p>Halogenated hydrocarbon solvents for example: methylene chloride and 1,1,1-Trichloroethane are not chemically compatible with the aluminum that might be used in many system components. The chemical reaction caused by these solvents reacting with aluminum can become violent and lead to an equipment explosion.</p>	<p>Aluminum is widely used in other spray application equipment - such as material pumps, regulators, triggering valves, etc. Halogenated hydrocarbon solvents must never be used with aluminum equipment during spraying, flushing, or cleaning. Read the label or data sheet for the material you intend to spray. If in doubt as to whether or not a coating or cleaning material is compatible, contact your material supplier. Any other type of solvent may be used with aluminum equipment.</p>
<p>Toxic Substances</p> 	<p>Certain material may be harmful if inhaled, or if there is contact with the skin.</p>	<p>Follow the requirements of the Material Safety Data Sheet supplied by coating material manufacturer.</p> <p>Adequate exhaust must be provided to keep the air free of accumulations of toxic materials.</p> <p>Use a mask or respirator whenever there is a chance of inhaling sprayed materials. The mask must be compatible with the material being sprayed and its concentration. Equipment must be as prescribed by an industrial hygienist or safety expert, and be NIOSH approved.</p>

NOTES

INTRODUCTION

GENERAL DESCRIPTION

The **AGMD High Performance Automatic Spray Gun** is suitable for use with solvent base and waterborne materials.

When using this gun with highly corrosive or highly abrasive materials it must be expected that the necessity for replacement of parts will be increased. If there is any doubt about the suitability of the gun for a particular material ask the paint manufacturer.

The AGMD automatic spray gun will be mounted to the gun mover by means of an intermediate plate and an adapter. The patented locking device on the intermediate plate provides a simple and quick change without tools (example: for servicing purposes). The installation with the quick locking device provides precise repositioning.

The air cap can be installed with indexing of 90°.

MODELS

AGMD-514: Automatic gun for conventional air atomization, including air cap indexing.

AGMD-515: Automatic gun for "HVLP" and "LVMP" atomization, including air cap indexing.

Specify air cap and fluid tip combinations when ordering (see "Table 1a and 1b" in the "Parts Identification" section).

SPECIFICATIONS

Mechanical / Physical

Weight:	1.33 lbs. (603 g)
Dimensions:	(See Figure 1)
Max. Pressure:	130 psi (9 bar) (Atomizing Air (ATOM) & Fan Air (FAN)) 200 psi (14 bar) (Material (MAT)) 100 psi (7 bar) (Cylinder Air (CYL))
Spray Head:	300 Grade Stainless Steel
Fluid Tip: <i>(Standard)</i>	300 Grade Stainless Steel
Fluid Needle: <i>(Standard)</i>	300 Grade Stainless Steel
Material Contacting	
Seals:	
<i>(Standard):</i>	Viton (Waterborne Materials)
<i>(Optional):</i>	Kalrez (Solvent Base Materials)

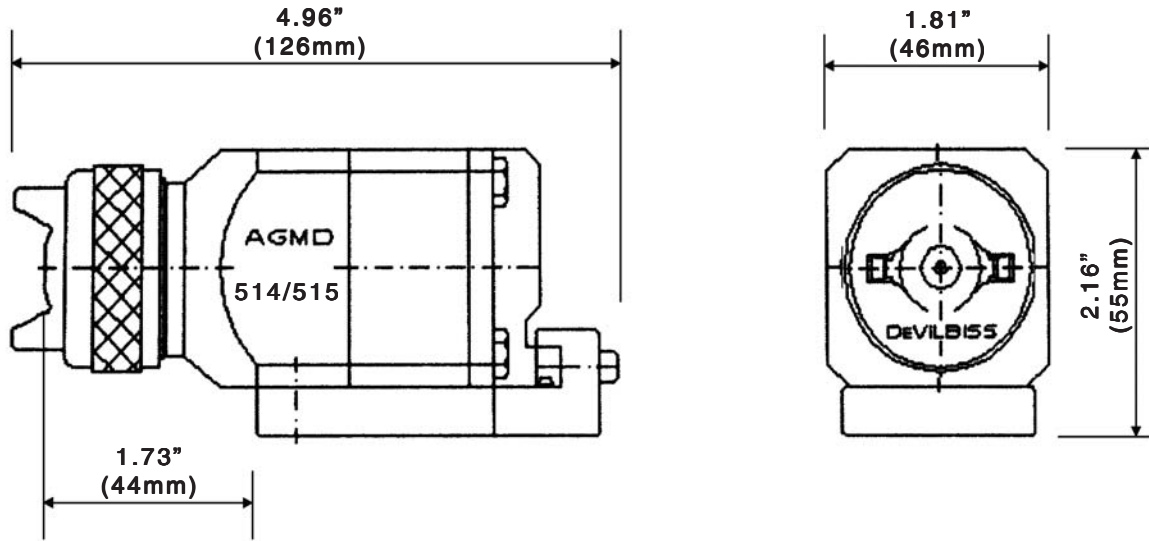
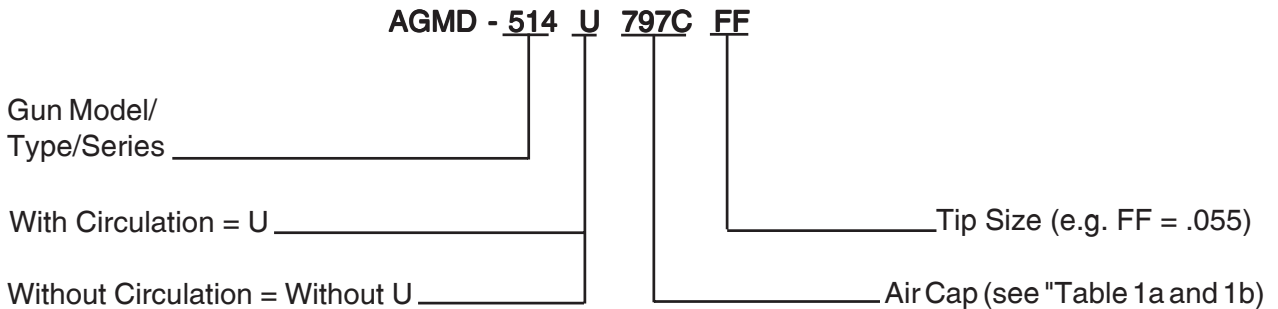


Figure 1: AGMD-514/515 Dimensions (With AGMD-245-1 Intermediate Plate)

AGMD HIGH PERFORMANCE AUTOMATIC SPRAY GUN MODEL IDENTIFICATION *

When ordering, use AGMD-514 U, FF, or 797C as indicated. Three digits must follow the basic part number, for example:



INSTALLATION

1. Firmly screw intermediate plate to adapter and screw adapter to gun mover (robot / reciprocator).
2. Connect compressed air hose and fluid hose machined adapter.

CYL Air:	1/8" ID (3.2mm) min. 75 psi min.
FAN Air: <i>(Conventional & HVLP)</i> <i>Hose lengths up to 15' (457m)</i>	1/4" ID (6.3mm) min. .
ATOM Air: <i>(Conventional & HVLP)</i> <i>Hose lengths up to 15' (457m)</i>	1/4" ID min.
Fluid:	1/8" ID (3.2mm) min.

NOTES

OPERATION

Connect compressed air and fluid supply to suitable pressure regulator. For consistent operation the air pressure should be regulated and be free from oil mist and water condensate. When securing the gun to the intermediate plate care must be taken that all o-rings are in place. Lightly apply a small amount of petroleum jelly to the o-ring surfaces.

AIR CAP INSTALLATION (Refer to Figure 2)

1. The air cap positioning depends upon the baffle position. Fit the baffle first on the gun body as shown in Figure 2.



► Position 1: Horizontal Pattern

► Position 2: Vertical Pattern

2. Tighten the tip to maintain the baffle in position.

3. Place the air cap by using the two indexes on the baffle.

4. Fix the air cap by screwing the retaining ring.

AGMD-515 HVLP AND LVMP ONLY

All models are designed to provide maximum transfer efficiency by limiting air cap pressure to 10 psi (0.7 bar) (in the U.S., this complies with rules issued by SCAQMD and other air quality authorities). Air cap pressure can be measured with an optional air cap test kit. (See "Spare Parts" in the "Parts Identification" section.)

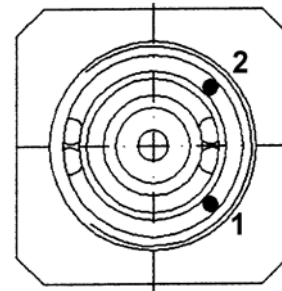


Figure 2: Indexing Pin Locations

NOTE

► For HVLP operation (max. 10 psi, -0.7 bar cap pressure), **DO NOT** exceed the air inlet pressure given as follows:

PSI (bar)	CAP #
25 (1.7)	46C
25 (1.7)	83C
22 (1.5)	122C

BACK PRESSURE - 46C AND 83C

Due to the unique cone shape of the MP fluid tips (nozzle), a slight back pressure is created against the fluid column. This will reduce the amount of fluid output. To compensate, increase the fluid regulator pressure slightly if necessary. With 10 psi (0.7 bar) cap pressure, back pressures are approximately 3.5 psi (0.24 bar) with the 46C.

NOTES

MAINTENANCE

GUN REMOVAL AND INSTALLATION

1. Relieve system pressure.
2. Press unlocking pin, turn gun by 45° and lift it off the intermediate plate.
3. When installing gun, check o-rings and replace if necessary. Check for clean surface and holes. Lubricate o-rings and AGMD-245-1 intermediate plate with food grade petroleum jelly before installation.

NOTES

NOTES

PARTS IDENTIFICATION

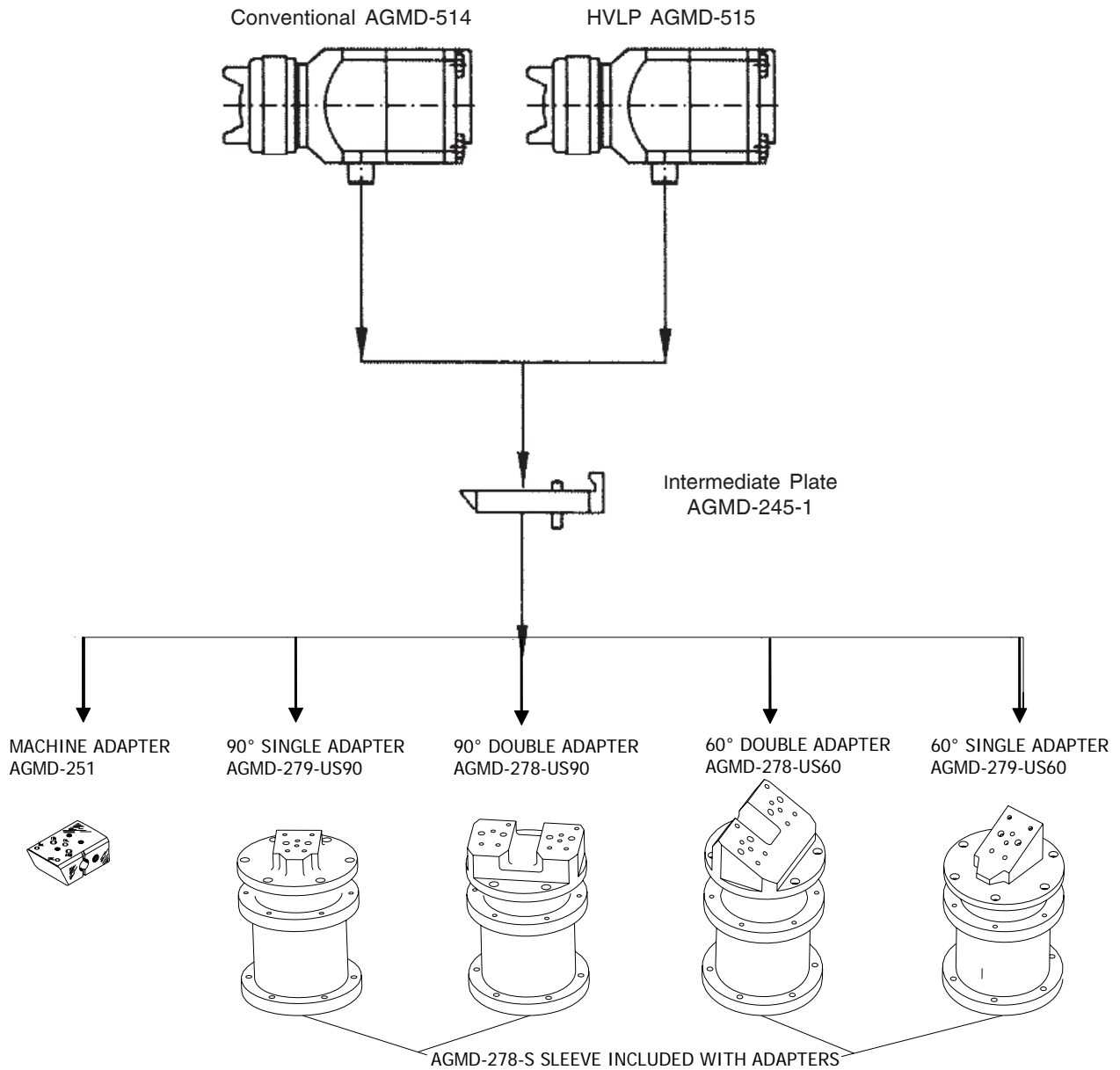


Figure 3: AGMD Parts Identification Overview

NOTES

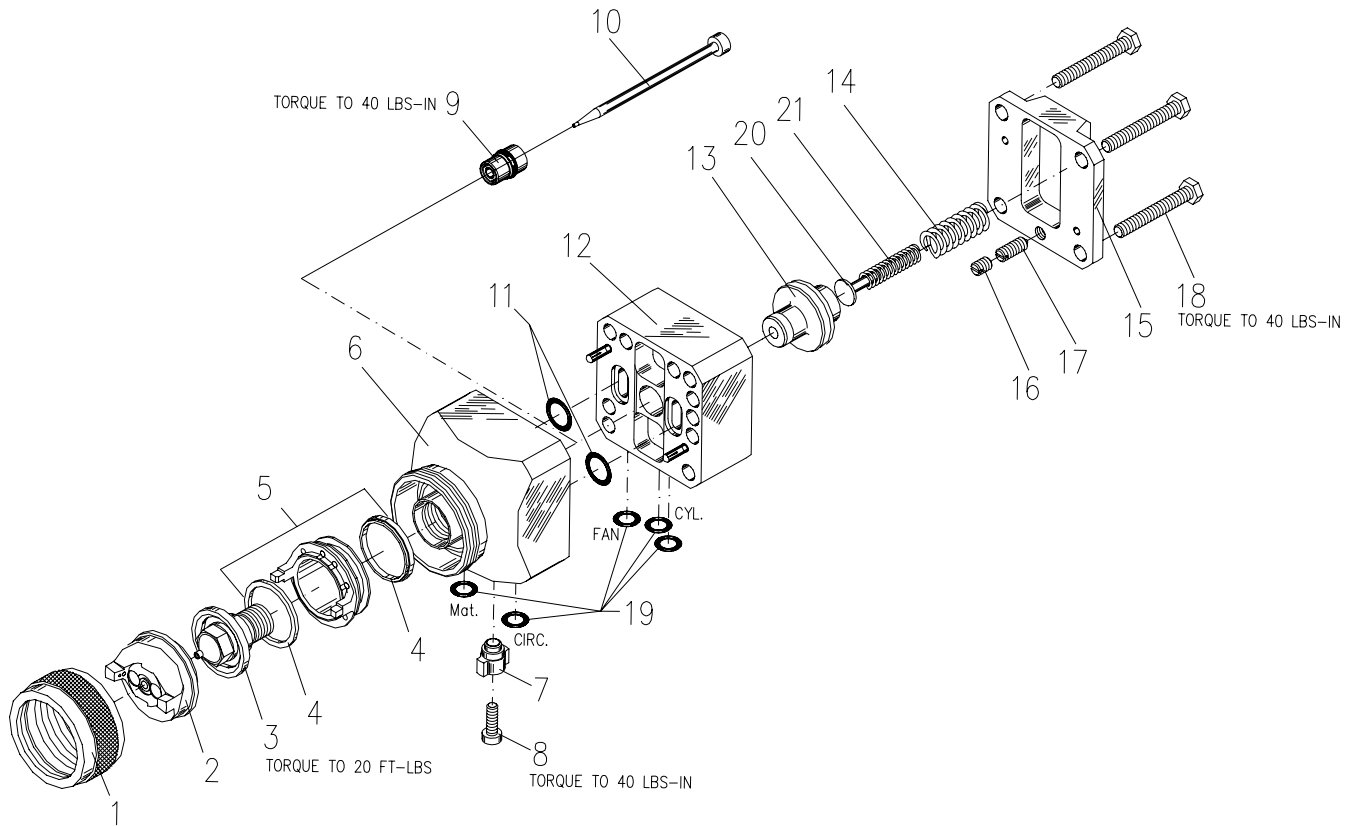


Figure 4: AGMD-514 Conventional Atomization Spray Gun Parts Identification

**AGMD-514 CONVENTIONAL ATOMIZATION SPRAY GUN
PARTS LIST - (Figure 4)**

Item #	Description	Part #
1	Retaining Ring	MBC-368
2	Air Cap	See Table 1a
3	Fluid Tip (1/2" Hex)	See Table 1a
4	Gasket (2 Required)	AGMD-65-1
5	Baffle Assembly (Includes two (2) AGMD-65-1 Gaskets)	AGMD-33
6	Spray Head	AGMD-195
7	Locking Device	AGMD-244-1
8	Screw, Socket Head Cap (4mm Hex)	AGMD-130
9	Needle Packing Assembly (6mm Hex)	AGMD-405-1
10	Fluid Needle	See Table 1a
11	O-Ring (Two (2) Required)	7554-09
12	Gun Body	AGMD-217
13	Piston	AGMD-243-1
14	Spring	AGMD-111
15	Plate, Rear	AGMD-242
16	Screw, Set with Slot	AGMD-116
17	Screw, Spring Plunger	AGMD-115
18	Screw (4 Required), Hex Head Machined (5mm Hex)	AGMD-131
19	O-Ring (5 Required), Standard Waterborne Materials	AGMD-119
	O-Ring (5 Required), Optional, Solventborne Materials	79001-27
20	Pad, Spring	AGMD-219
21	Pressure Spring	AGMD-110

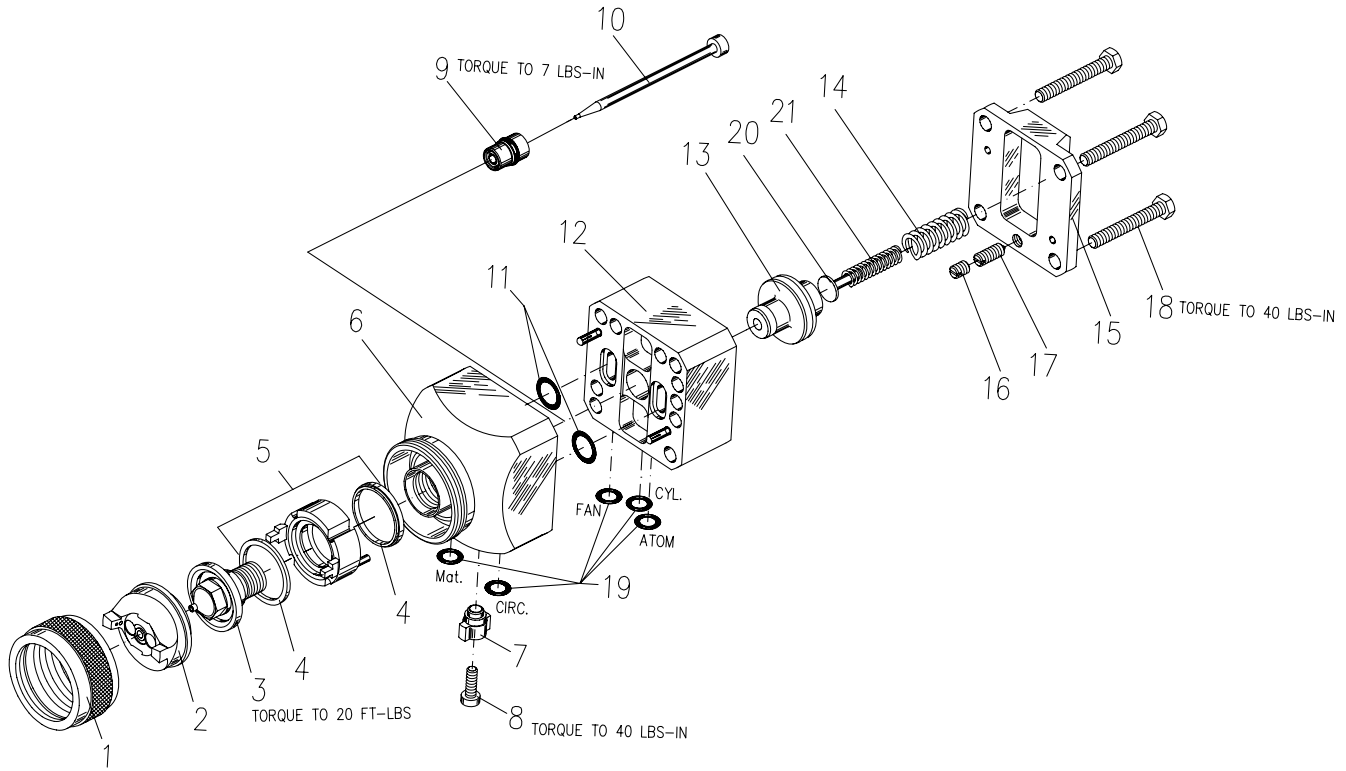


Figure 5: AGMD-515 HVLP & LVMP Atomization Spray Gun Parts Identification

AGMD-515 HVLP AND LVMP ATOMIZATION SPRAY GUN PARTS LIST - (Figure 5)		
Item #	Description	Part #
1	Retaining Ring	MBC-368
2	Air Cap	See Table 1b
3	Fluid Tip (1/2" Hex)	See Table 1b
4	Gasket (2 Required)	AGMD-65-1
5	Baffle Assembly (Includes two (2) AGMD-65-1 Gaskets)	AGMD-34
6	Spray Head	AGMD-195
7	Locking Device	AGMD-244-1
8	Screw, Socket Head Cap (4mm Hex)	AGMD-130
9	Needle Packing Assembly (6mm Hex)	AGMD-405-1
10	Fluid Needle	See Table 1b
11	O-Ring (2 Required)	7554-09
12	Gun Body	AGMD-217
13	Piston	AGMD-243-1
14	Spring	AGMD-111
15	Plate, Rear	AGMD-242
16	Screw, Set with Slot	AGMD-116
17	Screw, Spring Plunger	AGMD-115
18	Screw (4 Required), Hex Head Machined (5mm Hex)	AGMD-131
19	O-Ring (5 Required), Standard Waterborne Materials	AGMD-119
	O-Ring (5 Required), Optional, Solventborne Materials	79001-27
20	Pad, Spring	AGMD-219
21	Pressure Spring	AGMD-110

AGMD-514 CONVENTIONAL AUTOMATIC GUN - Fluid Tip and Needle Combinations, Air Cap Selection, and Air Flow

Air Cap		Fluid Tip & Needle [‡] AGMD-4000-XX ø in.	Viscosity ZAHN #2 (seconds)	Flow Rate CC/min.	Fan Width Inch @ 10" Target
Part # [†]	Air Flow CFM @ psi Inlet Pressure				
AV-1239-765C	22 @ 80	FX / .042	Up to 26	Up to 600	15"
AV-1239-765C	22 @ 80	FX / .055	Up to 28	Up to 900	15"
AV-1239-765C	22 @ 80	E / .070	28+	Up to 1000	15"
AV-1239-797C	21 @ 70	FX / .042	Up to 26	Up to 600	17"
AV-1239-797C	21 @ 70	FF / .055	Up to 28	Up to 900	17"
AV-1239-797C	21 @ 70	E / .070	28+	Up to 1000	17"

† Certified air caps marked with "C"

‡ Made of High Grade 303 Stainless Steel

Table 1a: AGMD-514 Conventional Automatic Gun Fluid Tip and Needle Combinations

AGMD-515 HVLP AND LVMP AUTOMATIC GUN - Fluid Tip and Needle Combinations, Air Cap Selection, and Air Flow

Air Cap		Fluid Tip & Needle [‡] AGMD-4600-XX ø in.	Viscosity ZAHN #2 (seconds)	Flow Rate CC/min.	Fan Width Inch @ 10" Target
Part # [†]	Air Flow CFM @ psi Inlet Pressure				
† AGMD-46C	26.5 @ 70	FX / .042	Up to 26	Up to 200	11"
† AGMD-46C	26.5 @ 70	FX / .055	Up to 30	Up to 300	11"
† AGMD-122C	9.5 @ 22	FX / .042	Up to 26	Up to 200	10"
† AGMD-122C	9.5 @ 22	FF / .055	Up to 30	Up to 300	10"
AGMD-83	28.5 @ 70	E / .070	Up to 34	Up to 450	12"

† Certified air caps marked with "C"

‡ Made of High Grade 303 Stainless Steel

Table 1b: AGMD-515 HVLP & LVMP Fluid Tip and Needle Combinations

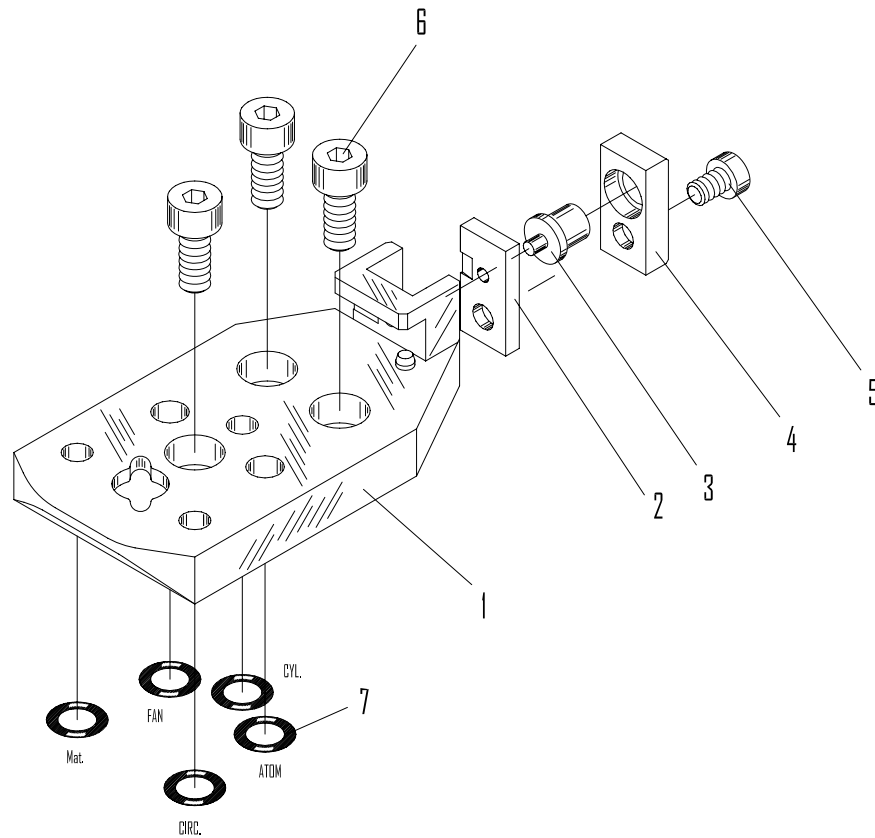


Figure 7: AGMD-245-1 Intermediate Plate Assembly Parts Identification

AGMD-245-1 INTERMEDIATE PLATE ASSEMBLY PARTS LIST - (Figure 7)		
Item #	Description	Part #
1	Intermediate Plate	AGMD-147-1
2	Wear Plate	AGMD-346
3	Pressure Piece	AGMD-247
4	Plate	AGMD-246
5	Screw, Socket Pan Head Machined	AGMD-130
6	Screw, (3 Required), Socket Head Cap	AGMD-142
7	O-Ring, (5 Required), Waterborne	AGMD-119
	O-Ring, (5 Required), Solventborne Materials	79001-27

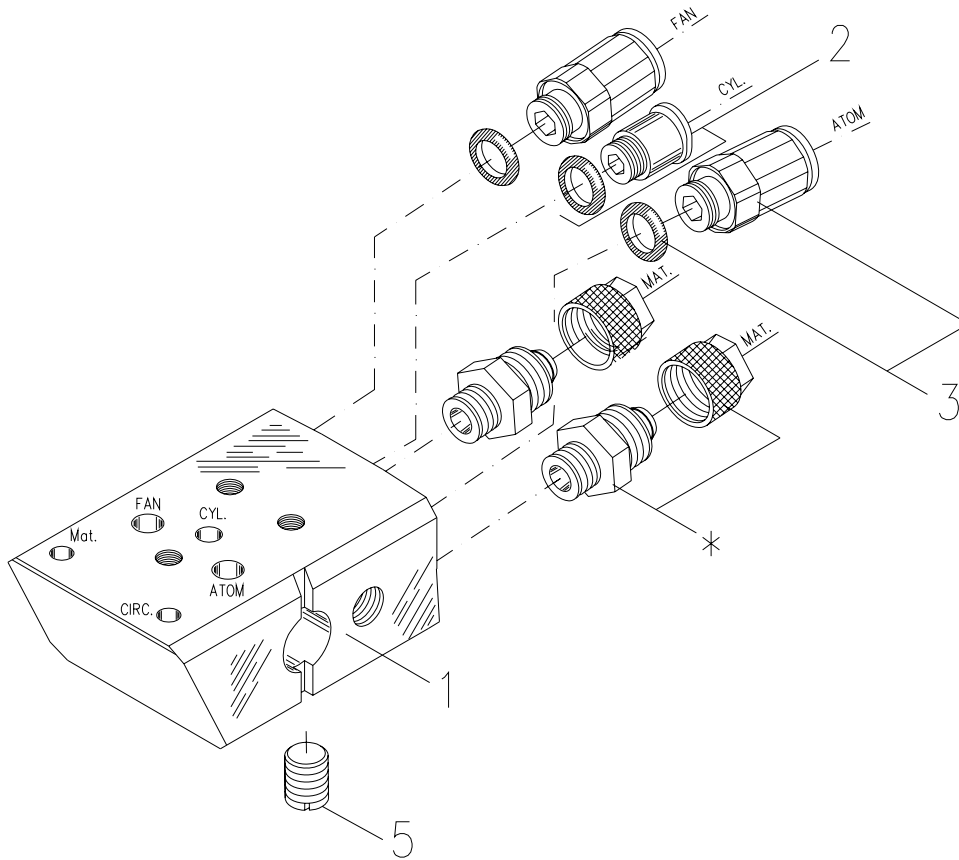


Figure 8: AGMD-251 Machine Adapter Assembly Parts Identification

AGMD-251 MACHINE ADAPTER ASSEMBLY PARTS LIST - (Figure 8)			
Item #	Description	Part #	Qty.
1	Adapter	AGMD-151a	1
2	Connector Assembly, Push-In Tubing, 6mm OD	AGMD-126	1
3	Connector Assembly, Push-In Tubing, 5/16" OD	AGMD-127	2
5	Screw, Set	AGMD-117	1

* ZZ-2663 - Fluid Connector Assembly, Push-In Tubing, 5/16" OD X .040 Wall (2) are not included with kit. May be purchased separately. Contact your Finishing representative or customer service.

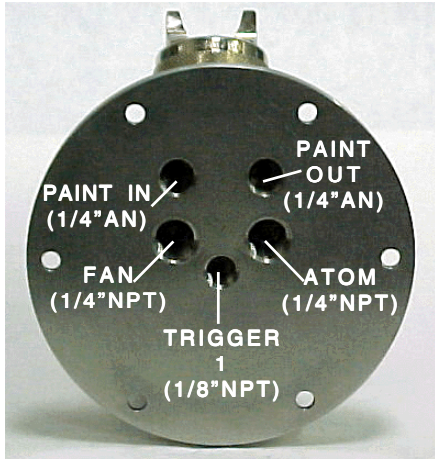


Figure 9a: Single Head Adapter Robot (Bottom View)

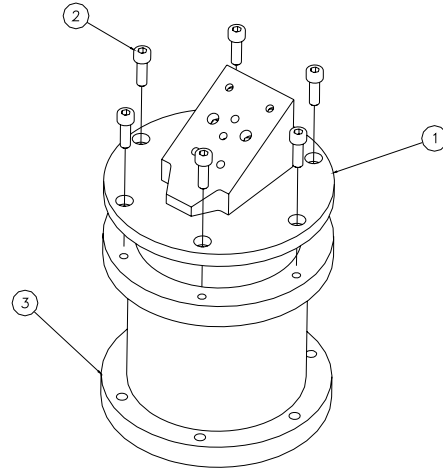


Figure 9b: AGMD-279-US60 Single Head Adapter Parts Identification (Top View)

AGMD-279-US60 SINGLE HEAD ADAPTER FOR ROBOT PARTS LIST - (Figures 9a & 9b)

Item #	Description	Part #
1	Adapter - 60° Face Angle	AGMD-279-US60
2	Screw, (6 Required), Socket Head Cap	AGMD-142
3	Sleeve (Included with adapter)	AGMD-278-S

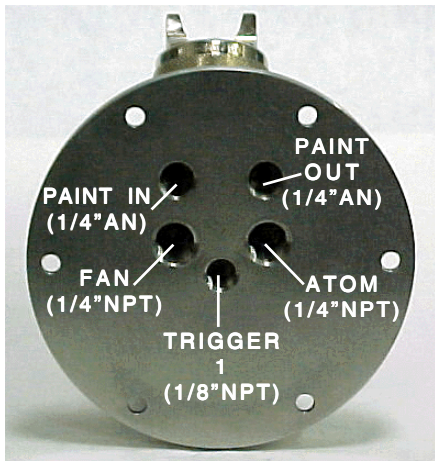


Figure 10a: Single Head Robot Adapter (Bottom View)

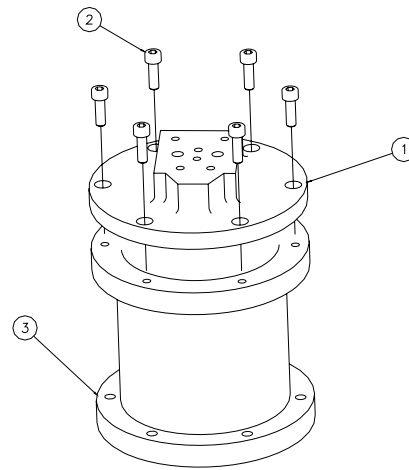


Figure 10b: AGMD-279-US90 Single Head Adapter Parts Identification (Top View)

AGMD-279-US90 SINGLE HEAD ADAPTER FOR ROBOT PARTS LIST - (Figures 10a & 10b)

Item #	Description	Part #
1	Adapter - 90° Face Angle	AGMD-279-US90
2	Screw, (6 Required), Socket Head Cap	AGMD-142
3	Sleeve (Included with adapter)	AGMD-278-S



Figure 11a: Dual Head Adapter Robot (Bottom View)

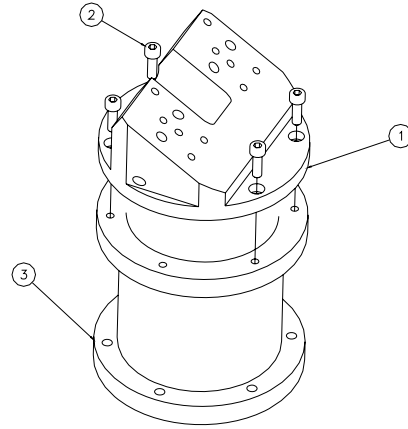


Figure 11b: AGMD-278-US60 Dual Head Adapter Parts Identification (Top View)

AGMD-278-US60 DUAL HEAD ADAPTER FOR ROBOT PARTS LIST - (Figures 11a & 11b)

Item #	Description	Part #
1	Adapter - 60° Face Angle	AGMD-278-US60
2	Screw (4 Required), Socket Head Cap	AGMD-142
3	Sleeve (Included with adapter)	AGMD-278-S

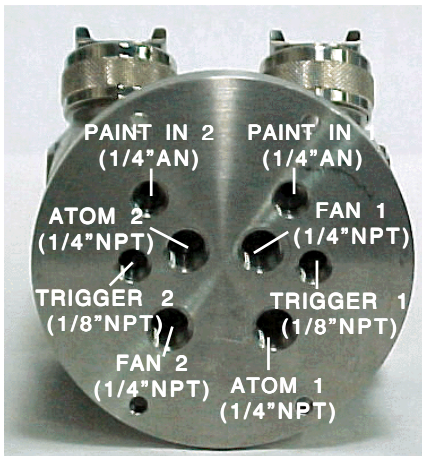


Figure 12a: Dual Head Adapter Robot (Bottom View)

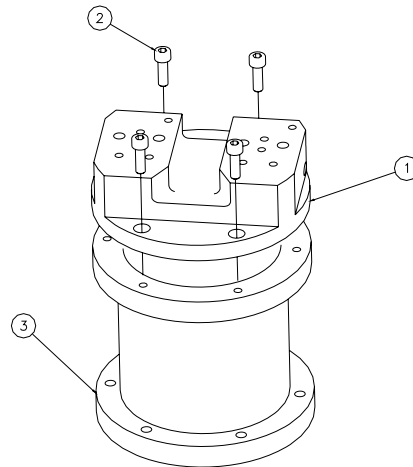


Figure 12b: AGMD-278-US90 Dual Head Adapter Parts Identification (Top View)

AGMD-278-US90 DUAL HEAD ADAPTER FOR ROBOT PARTS LIST - (Figures 12a & 12b)

Item #	Description	Part #
1	Adapter - 90° Face Angle	AGMD-278-US90
2	Screw (4 Required), Socket Head Cap	AGMD-142
3	Sleeve (Included with adapter)	AGMD-278-S

AGMD-514 AND AGMD-515 RECOMMENDED SPARE PARTS

Part #	Description	Number of Guns				Notes
		1-5	5-10	10-15	15+	
AGMD-110	Pressure Spring	1	1	2	3	
AGMD-111	Pressure Spring	1	1	2	3	
AGMD-65-1	Fluid Tip Gasket	4	6	8	10	
AGMD-244-1	Locking Device	1	2	3	4	
AGMD-130	Cap Screw	1	2	3	4	
AGMD-405-1	Needle Packing	2	3	4	5	
7554-09	O-Ring	1	2	3	4	
AGMD-243-1	Piston Assembly	1	2	3	4	
79001-27	O-Ring, Solvent Proof, Kalrez (Optional)	5	10	15	20	For use with solventborne materials.
AGMD-119	O-Ring, Viton (Standard)	5	10	15	20	For use with waterborne paints.
MBC-368	Retaining Ring	1	2	3	4	

AGMD-514 RECOMMENDED SPARE PARTS

Part #	Description	Number of Guns				Notes
		1-5	5-10	10-15	15+	
AGMD-33	Baffle Assembly	1	1	2	2	
AGMD-4000-XX	Fluid Tip & Needle Combination	2	3	4	4	Replace XX with FX for .042, FF for .055, or E for .070
AV-1239-XXXC	Air Cap	2	3	4	5	Replace XXX with 765 or 797.

AGMD-515 RECOMMENDED SPARE PARTS

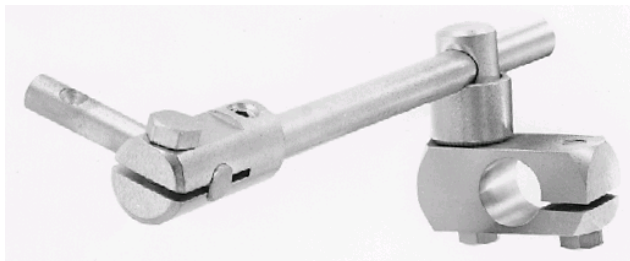
Part #	Description	Number of Guns				Notes
		1-5	5-10	10-15	15+	
AGMD-34	Baffle Assembly	1	1	2	2	
AGMD-4600-XX	Fluid Tip & Needle Combination	2	3	4	5	Replace XX with FX for .042; FF for .055 and E for .070.
AGMD-XXXX	Air Cap	2	3	4	5	Replace XXX with 46, 122 or 83.

AGMD-514 AND 515 AIR CAP TEST KITS (OPTIONAL)

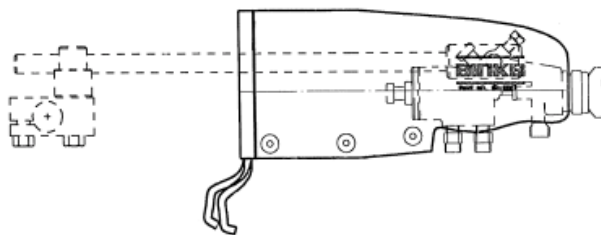
Part #	Description	Number of Guns				Notes
		1-5	5-10	10-15	15+	
78293-01	Air Cap Test Kit	1	1	1	1	For 46C Cap
74035-18	Air Cap Calibrator Kit	1	1	1	1	For 765C Cap
74035-19	Air Cap Calibrator Kit	1	1	1	1	For 797C Cap
74035-20	Air Cap Calibrator Kit	1	1	1	1	For 122C Cap
78293-02	Air Cap Test Kit	1	1	1	1	For 83 Cap

ACCESSORIES (INDUSTRIAL)

Part #	Description
54-380	Gun Mounting Bar Bracket. (For reciprocator or fixed rod mounting) (Binks)
54-3691	Gun Cover (Package of 20)



Gun Mounting Bar Bracket



Gun Cover

NOTES

WARRANTY POLICIES

LIMITED ONE (1) YEAR WARRANTY FOR COATING EQUIPMENT PRODUCTS

All merchandise manufactured by DeVilbiss is warranted to be free of defects in workmanship and material. The terms of the warranty, except as hereinafter provided, extend for a period of one (1) year from date of first purchase at retail by user excluding equipment failures which are the result of misapplication, misuse, incorrect maintenance, or normal wear. If after inspection by us, defect is confirmed, we will at our option repair, replace, or issue credit, minus allowance for usage received.

Merchandise of a size suitable for shipping will be sent to a point designated by DeVilbiss at purchaser's expense; larger or fixed merchandise will be inspected at the site. If claimed defect is reported to DeVilbiss within the 1 year from date of purchase, and if the merchandise is actually defective, DeVilbiss will provide all necessary replacement parts.

There is no other express warranty. Implied warranties, including those of merchantability and fitness for a particular purpose, are limited to one year from purchase and to the extent permitted by law and all implied warranties are excluded. This is the exclusive remedy and liability for consequential damages under any and all warranties are excluded to the extent exclusion is permitted by law. Some states do not allow limitations on how long an implied warranty lasts, or the limitation or exclusion of consequential or incidental damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

This Warranty Does **NOT** Cover:

- A. Merchandise that has become inoperative because of ordinary wear, misuse, negligence, accident, or improper and unauthorized repair or alteration.
- B. Costs occasioned by removal, replacement, or repair of merchandise (other than by DeVilbiss), without **previous** written authorization.
- C. Merchandise sold by us which has been manufactured by and identified as the product of another company.
- D. Repair costs of merchandise determined not to be defective.

Warranty Instructions

In the event of malfunction, first ensure that the equipment is the correct equipment to do the job required, is properly installed and adjusted, and is correctly maintained and operated. Then, if a claim is made that DeVilbiss equipment or a part there of does not operate properly, contact (1) Your DeVilbiss Authorized Sales Outlet through which the equipment was purchased, or (2) consult your local directory for the phone number of the DeVilbiss distributor nearest to you.

General

All decisions of DeVilbiss with regard to this policy shall be final. DeVilbiss will not be responsible for any material returned claimed defective other than in accord with this statement of policy.

APPENDIX

PAINT AND SOLVENT SPECIFICATIONS

	REA™ VECTOR™ EFM™ Evolver™	REM™ / M90™	NO. 2 HAND GUN	TURBODISK™	AEROBELL® II*** AEROBELL® AEROBELL® 33 RMA-101™
RECOMMENDED VISCOSITY USING A ZAHN NO. 2	18 TO 30 SEC	18 TO 30 SEC	20 TO 60 SEC	20 TO 60 SEC	20 TO 60 SEC
PAINT ELECTRICAL RESISTANCE**	.1 MΩ TO ∞	.1 MΩ TO ∞	.1 TO 1 MΩ	.1 MΩ TO ∞	.1 MΩ TO ∞
RECOMMENDED DELIVERY (UP TO)	1000 cc/min	1500 cc/min	180 cc/min	1000 cc/min	500 cc/min

GUIDE TO USABLE SOLVENT SELECTION

Chemical Name	Common Name	Category	Flash Point†† (TCC)	*CAS Number	Evap. Rate†	Elec. Res.**
DICHLOROMETHANE	Methylene Chloride	Chlorinated Solvents		75-09-2	14.5	HIGH
VM & P NAPHTHA	Naptha	Aliphatic Hydrocarbons	65°F	8030-30-6	10	HIGH
ACETONE		Ketones	-18°F	67-64-1	5.6	LOW
METHYL ACETATE		Esters	90°F	79-20-9	5.3	LOW
BENZENE		Aromatic Hydrocarbons	12°F	71-43-2	5.1	HIGH
ETHYL ACETATE		Esters	24°F	141-78-6	3.9	MEDIUM
2-BUTANONE	MEK	Ketones	16°F	78-93-3	3.8	MEDIUM
ISO-PROPYL ACETATE		Esters	35°F	108-21-4	3.4	LOW
ISOPROPYL ALCOHOL	IPA	Alcohols	53°F	67-63-0	2.5	LOW
2-PENTANONE	MPK	Ketones	104°F	107-87-9	2.5	MEDIUM
METHANOL	Methyl Alcohol	Alcohols	50°F	67-56-1	2.1	LOW
PROPYL ACETATE	n-Propyl Acetate	Esters	55°F	109-60-4	2.1	LOW
TOLUOL	Toluene	Aromatic Hydrocarbons	48°F	108-88-3	1.9	HIGH
METHYL ISOBUTYL KETONE	MIBK	Ketones	60°F	108-10-1	1.6	MEDIUM
ISOBUTYLACETATE		Esters	69°F	110-19-0	1.5	LOW
ETHANOL	Ethyl Alcohol	Alcohols		64-17-5	1.4	LOW
BUTYL ACETATE		Esters	78°F	123-86-4	1.0	LOW
ETHYLBENZENE		Aromatic Hydrocarbons	64°F	100-41-4	.89	HIGH
1-PROPANOL	n-Propyl Alcohol	Alcohols	74°F	71-23-8	.86	LOW
2-BUTANOL	sec.-Butyl Alcohol	Alcohols	72°F	78-92-2	.81	LOW
XYLOL	Xylene	Aromatic Hydrocarbons	79°F	1330-02-07	.80	HIGH
AMYLACETATE		Esters	106°F	628-63-7	.67	MEDIUM
2-METHYLPROPANOL	iso-Butyl Alcohol	Alcohols	82°F	78-83-1	.62	LOW
METHYL AMYL ACETATE		Esters	96°F	108-84-9	.50	LOW
5-METHYL-2-HEXANONE	MIAK	Ketones	96°F	110-12-3	.50	MEDIUM
1-BUTANOL	n-Butyl Alcohol	Alcohols	95°F	71-36-3	.43	LOW
2-ETHOXYETHANOL		Glycol Ethers	164°F	110-80-5	.38	LOW
2-HEPTANONE	MAK	Ketones	102°F	110-43-0	.40	MEDIUM
CYCLOHEXANONE		Ketones	111°F	108-94-1	.29	MEDIUM
AROMATIC-100	SC#100	Aromatic Hydrocarbons	111°F		.20	HIGH
DIISOBUTYL KETONE	DIBK	Ketones	120°F	108-83-8	.19	MEDIUM
1-PENTANOL	Amyl Alcohol	Alcohols		71-41-0	.15	LOW
DIACETONE ALCOHOL		Ketones	133°F	123-42-2	.12	LOW
2-BUTOXYETHANOL	Butyl Cellosolve	Glycol Ethers	154°F	111-76-2	.07	LOW
CYCLOHEXANOL		Alcohols	111°F	108-93-0	.05	LOW
AROMATIC-150	SC#150	Aromatic Hydrocarbons	149°F		.004	HIGH
AROMATIC-200		Aromatic Hydrocarbons	203°F		.003	HIGH

* CAS Number: Chemical Abstract Service Number.

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** Electrical Resistance using the Ransburg Meter.

*** Solvent Base Configuration Only.

† Information Obtained From: <http://solvdb.ncms.org>

†† The lowest temperature at which a volatile fluid will ignite.

Evaporation Rate is Based Upon Butyl Acetate Having a Rate of 1.0

NOTE: Chart provides resistance and control information that we feel is necessary when using

Automotive Finishing equipment.

VISCOSITY CONVERSION CHART																		
Poise	Centipoise	DuPont Parlin 7	DuPont Parlin 10	Fisher 1	Fisher 2	Ford Cup 3	Ford Cup 4	Gardner - Holdt Bubble	Gardner - Lithographic	Krebs Unit KU	Saybolt Universal SSU	Zahn 1	Zahn 2	Zahn 3	Zahn 4	Zahn 5	Sears Craftsman Cup	Din Cup 4
.1	10	27	11	20			5	A-4			60	30	16					10
.15	15	30	12	25			8	A-3			80	34	17					11
.2	20	32	13	30	15	12	10				100	37	18					12
.25	25	37	14	35	17	15	12	A-2			130	41	19					13
.3	30	43	15	39	18	19	14	A-1			160	44	20					14
.4	40	50	16	50	21	25	18	A			210	52	22				19	15
.5	50	57	17		24	29	22			30	260	60	24				20	16
.6	60	64	18		29	33	25	B		33	320	68	27				21	18
.7	70		20		33	36	28			35	370		30				23	21
.8	80		22		39	41	31	C		37	430		34				24	23
.9	90		23		44	45	32			38	480		37	10			26	25
1.0	100		25		50	50	34	D		40	530		41	12	10		27	27
1.2	120		30		62	58	41	E		43	580		49	14	11		31	31
1.4	140		32			66	45	F		46	690		58	16	13		34	34
1.6	160		37				50	G		48	790		66	18	14		38	38
1.8	180		41				54		000	50	900		74	20	16		40	43
2.0	200		45				58	H		52	1000		82	23	17	10	44	46
2.2	220						62	I		54	1100			25	18	11		51
2.4	240						65	J		56	1200			27	20	12		55
2.6	260						68			58	1280			30	21	13		58
2.8	280						70	K		59	1380			32	22	14		63
3.0	300						74	L		60	1475			34	24	15		68
3.2	320							M			1530			36	25	16		72
3.4	340							N			1630			39	26	17		76
3.6	360							O		62	1730			41	28	18		82
3.8	380										1850			43	29	19		86
4.0	400							P		64	1950			46	30	20		90
4.2	420										2050			48	32	21		95
4.4	440							Q			2160			50	33	22		100
4.6	460							R		66	2270			52	34	23		104
4.8	480								00	67	2380			54	36	24		109
5.0	500							S		68	2480			57	37	25		112
5.5	550							T		69	2660			63	40	27		124
6.0	600							U		71	2900			68	44	30		135
7.0	700									74	3375				51	35		160
8.0	800								0	77	3380				58	40		172
9.0	900							V		81	4300				64	45		195
10.0	1000							W		85	4600					49		218
11.0	1100									88	5200					55		
12.0	1200									92	5620					59		

VISCOSITY CONVERSION CHART (Continued)																		
Poise	Centipoise	DuPont Parlin 7	DuPont Parlin 10	Fisher 1	Fisher 2	Ford Cup 3	Ford Cup 4	Gardner - Holdt Bubble	Gardner - Lithographic	Krebs Unit KU	Saybolt Universal SSU	Zahn 1	Zahn 2	Zahn 3	Zahn 4	Zahn 5	Sears Craftsman Cup	Din Cup 4
13.0	1300							X		95	6100					64		
14.0	1400								1	96	6480							
15.0	1500									98	7000							
16.0	1600									100	7500							
17.0	1700									101	8000							
18.0	1800							Y			8500							
19.0	1900										9000							
20.0	2000									103	9400							
21.0	2100										9850							
22.0	2200										10300							
23.0	2300							Z	2	105	10750							
24.0	2400									109	11200							
25.0	2500							Z-1		114	11600							
30.0	3000									121	14500							
35.0	3500							Z-2	3	129	16500							
40.0	4000									133	18500							
45.0	4500							Z-3		136	21000							
50.0	5000										23500							
55.0	5500										26000							
60.0	6000							Z-4	4		2800							
65.0	6500										30000							
70.0	7000										32500							
75.0	7500										35000							
80.0	8000										37000							
85.0	8500										39500							
90.0	9000										41000							
95.0	9500										43000							
100.0	10000							Z-5	5		46500							
110.0	11000										51000							
120.0	12000										55005							
130.0	13000										60000							
140.0	14000										65000							
150.0	15000							Z-6			67500							
160.0	16000										74000							
170.0	17000										83500							
180.0	18000										83500							
190.0	19000										88000							
200.0	20000										93000							
300.0	30000										140000							

Note: All viscosity comparisons are as accurate as possible with existing information. Comparisons are made with a material having a specific gravity of 1.0.

VOLUMETRIC CONTENT OF HOSE OR TUBE (English Units)							
I.D. (inches)	cc/ft.	Cross Section (sq. in.)	Length				
			5ft. (60")	10ft. (120")	15ft. (180")	25ft. (300")	50ft. (600")
1/8	2.4	.012	.003 gal. .4 fl. oz.	.006 gal. .8 fl. oz.	.010 gal. 1.2 fl. oz.	.016 gal. 2.0 fl. oz.	.032 gal. 4.1 fl. oz.
3/16	5.4	.028	.007 gal. .9 fl. oz.	.014 gal. 1.8 fl. oz.	.022 gal. 2.8 fl. oz.	.036 gal. 4.6 fl. oz.	.072 gal. 9.2 fl. oz.
1/4	9.7	.049	.013 gal. 1.6 fl. oz.	.025 gal. 3.3 fl. oz.	.038 gal. 4.9 fl. oz.	.064 gal. 8.2 fl. oz.	.127 gal. 16.3 fl. oz.
5/16	15.1	.077	.020 gal. 2.5 fl. oz.	.040 gal. 5.1 fl. oz.	.060 gal. 7.6 fl. oz.	.100 gal. 12.7 fl. oz.	.199 gal. 25.5 fl. oz.
3/8	21.7	.110	.029 gal. 3.7 fl. oz.	.057 gal. 7.3 fl. oz.	.086 gal. 11.0 fl. oz.	.143 gal. 18.4 fl. oz.	.287 gal. 36.7 fl. oz.
1/2	38.6	.196	.051 gal. 6.5 fl. oz.	.102 gal. 13.1 fl. oz.	.153 gal. 19.6 fl. oz.	.255 gal. 32.6 fl. oz.	.510 gal. 65.3 fl. oz.

VOLUMETRIC CONTENT OF HOSE OR TUBE (Metric Units)							
I.D. (mm)	cc/m	Cross Section (mm²)	Length				
			1.5m	3.0m	4.5m	6.0m	7.5m
3.6	10.2	10.2	15.3 cc	30.5 cc	45.8 cc	61.1 cc	76.3 cc
5.6	24.6	24.6	36.9 cc	73.9 cc	110.8 cc	147.8 cc	184.7 cc
6.8	36.3	36.3	54.5 cc	109.0 cc	163.4 cc	217.9 cc	272.4 cc
8.8	60.8	60.8	91.2 cc	182.5 cc	273.7 cc	364.9 cc	456.2 cc

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MANUAL CHANGE SUMMARY

This manual was published to supercede Service Manual **DV-AGMD-101599.8**, **AGMD Automatic Spray Gun**, to make the following changes:

1. Revised "Safety" section - removed sections not pertaining to the AGMD High Performance Automatic Spray Gun.
2. Revised "Specifications" in the "Introduction" section - removed Baffle, Air Cap, and Air Cap Retaining Ring specifications.
3. Revised "AGMD High Performance Automatic Spray Gun Model Identification (AGMD-514-U-797C-FF)" in the "Introduction" section.
4. Revised "AGMD-245-1 Intermediate Plate Assembly Parts List" in the "Parts Identification" section - Item 7 description.
5. Added "Accessories and Figures" in the "Parts Identification" section.
6. Added "Warranty Policies" for Industrial Finishing.
7. Added "Contact Information" on the "Back Cover" for Industrial Finishing and Automotive Refinishing.

DeVilbiss Worldwide Sales and Service Listing - www.devilbiss.com

Technical/Service Assistance

Automotive Finishing	Telephone: 800/ 626-3565	Fax: 419/ 470-2040
Automotive Refinishing	Telephone: 800/445-3988	Fax: 800/445-6643
Industrial Finishing	Telephone: 800/ 992-4657	Fax: 800/ 246-5732
Ransburg	Telephone: 800/ 233-3366	Fax: 419/ 470-2071

Technical Support Representative will direct you to the appropriate telephone number for ordering Spare Parts.

