## **TECHNICAL MANUAL**

## OPERATOR, ORGANIZATIONAL, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL INCLUDING REPAIR PARTS LIST

FOR

SPRAY OUTFIT, PAINT (NSN 4940-00-294-9521) MODEL 50-6525

HEADQUARTERS, DEPARTMENT OF THE ARMY

**OCTOBER 1981** 

Technical Manual

No. 9-4940415-14&P

HEADQUARTERS DEPARTMENT OF THE ARMY Washington, DC, 7 October 1981

#### OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL INCLUDING REPAIR PARTS LIST FOR SPRAY OUTFIT, PAINT MODEL 50-6525 (NSN 4940-00-294-9521)

#### **REPORTING OF ERRORS**

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2, located in the back of this manual direct to: Commander, US Army Armament Materiel Readiness Command, ATTN: DRSAR-MAS, Rock Island, IL 61299. A reply will be furnished directly to you.

#### NOTE

This manual is published for the purpose of identifying an authorized commercial manual for the use of the personnel to whom this equipment is issued.

Manufactured by: Eclipse Systems, Inc. Cork Hill Road P. O. Box E

Franklin, NJ 07416

Procured under Contract No. DAAA09-76-C-6890

This technical manual is an authentication of the manufacturers' commercial literature and does not conform with the format and content specified in AR 310-3, Military Publications. This technical manual does, however, contain available information that is essential to the operation and maintenance of the equipment.

#### INSTRUCTIONS FOR REQUISITIONING PARTS NOT IDENTIFIED BY NSN

When requisitioning parts not identified by National Stock Number, it is mandatory that the following information be furnished the supply officer.

- 1 -- Manufacturer's Federal Supply Code Number 19272
- 2 -- Manufacturer's Part Number exactly as listed herein.
- 3 -- Nomenclature exactly as listed herein, including dimensions, if necessary.
- 4 -- Manufacturer's Model Number 50-6525
- 5 -- Manufacturer's Serial Number (End Item)
- 6 -- Any other information such as Type, Frame Number, and Electrical Characteristics, if applicable.
- 7 -- If DD Form 1348 is used, fill in all blocks except 4, 5, 6, and Remarks field in accordance with AR 725-50.

Complete Form as Follows:

- (a) blocks 4, 5, 6, list manufacturer's Federal Supply Code Number 19272 followed by a colon and manufacturer's Part Number for the repair part.
- (b) Complete Remarks field as follows: Noun: (nomenclature of repair part) For: NSN: 4940-00-294-9521 Manufacturer: Eclipse Systems, Inc., Cork Hill Road, P. O. Box E, Franklin, NJ 07416

Model: 50-6525 Serial: (of end item)

Any other pertinent information such as Frame Number, Type, Dimensions, etc.

ii

#### INSTRUCTIONS FOR OPERATING Low Pressure Spray Equipment ASSEMBLY

Unpack carefully. Guns, hose with connections, and wrenches will be found in the tank.

Screw fluid tube into threaded hole in under side of control head, beneath the word Fluid. Be sure this post is tight, otherwise air will get into point line and cause a chatter or intermittent flow of point at the nozzle.

Connect main line air hose (red) to Air Filter.

Attach one end of paint hose (black) to connection marked Fluid on cover. Attach other end of hose to front connection of gun shown as Fluid Intake in illustration below.

Attach one end of air hose (red) to red connection marked Air on cover. Attach other end of hose to air connection on gun grip, shown as Air Intake in illustration below.

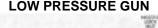
#### Operation

Mix and strain material thoroughly. Paint, varnish, enamel, etc., should be at hand-brushing consistency. Nitro-cellulose and synthetic

lacquers spray at lighter consistency.

Pour material into container. It is not necessary to fill the tank-a small container of material can be placed under the fluid tube. Hand tighten cover until tank is air-tight. DO NOT USE TOOLS.

Close air Shut-Off Valve and Air Release Valve on control head by pushing slide valve forward (toward the Air Regulator-Pressure on Fluid). Note illustration for correct position.





Remove nozzle from gun.

Adjust right hand regulator (Air Regulator-Pressure on Fluid) to apply pressure to container. This is the first regulation of the flow of paint. With about 10 lbs. in the tank pull the trigger all the way back (the Knurled Nut Fluid Adjustment should be in the full open, clockwise position) until fluid flows steadily from the fluid tip. Release trigger.

Put nozzle back on gun. If different spray widths are required a variable width nozzle should be used (i.e. conefan). Otherwise the nozzle which gives desired width is recommended. External nozzles are sometimes required on quick drying materials. The Fan Width Control for these is shown on the back of the gun. This control should be wide open when standard low pressure internal nozzles are used.

Open air Shut-Off Valves. To determine proper pressures begin by adjusting left hand regulator valve (Air Regulator-Spraying Pressure) to 20 lbs. Now with trigger pulled bring the pressure on fluid (right hand regulator) up until the gun begins to spray. Increase atomizing pressure, then pressure on fluid until satisfactory results ore obtained. Keep the atomizing pressure as low as possible, increasing it only for greater speed or for heavy viscous materials. For final regulation of material flow, use fluid adjustment on back of gun.

When working, hold gun six to eight inches from the object, at right angles to the surface. Point it directly at the work and carry it along at a steady speed. Release trigger at the end of each stroke.

A slight pull on the trigger emits air only, which can be used for dusting. Pull the trigger all the way back when painting.

A little experimenting will determine the correct pressures and speed for 'he work.

#### Cleaning-IMPORTANT

Open Air Release Valve on tank by pushing slide valve back (away from reg.) Wait until Fluid Pressure Air Gage reads zero.

Obstruct nozzle of gun with a rag and pull trigger. The spraying pressure will thus force point out of hose back into the container.

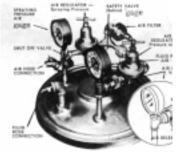
Place a small can of thinner in container under the fluid tube. Tighten cover. Close Air Release Valve. Close Shut-Off Valve (red). Remove nozzle from gun. Pull trigger. Fluid pressure will force thinner through hose and gun, cleaning it satisfactorily. Again obstruct nozzle and pull trigger to blow thinner back in container. Thinner can be saved for use in reducing.

It is not necessary to disconnect gun from hose or container, or to remove fluid tip when cleaning.

DO NOT SOAK GUN IN THINNER, as this dissolves the grease and oil in the trigger action. A drop of oil should be applied occasionally to the back of the gun and trigger action. Difficulty may arise due to improper cleaning.

It is not necessary to take the gun apart to clean it. After the day's work, take the fluid hose off the line and hang it up to drain.

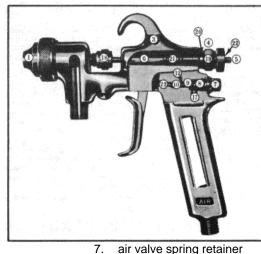
Take up on nut at Packing Gland periodically. If leak does not stop, repack the gland.



#### NOTE

With internal atomization nozzles air and fluid pressures should be about equal. Not high air and low fluid pressures as with external atomization high pressure equipment. With heavier materials or when spraying at a height considerably above the pressure tank (25 ft. - 50 ft.) slightly higher fluid pressure may be required.

CAUTION: If atomizing air pressure is set too high, it will back pressure the fluid and starve the gun. Conversely, too high a fluid pressure may cause paint to back up into air lines and clog the gun.



1. nozzle 2. fluid tip

3.

- 8.
- trigger screw 9.
- 4. fluid tension adjustment 10. air valve pin
- 5. plunger adjusting rod
- 6. plunaer

#### DISASSEMBLY GUNS) (MOST

A small box to hold the parts is recommended.

1. Submerge gun in good strong solvent (not lye or corrosive acid) until all exterior paint and dirt can be easily removed.

2. Take off nozzle and fluid tip, and place in solvent.

3. Unscrew the trigger screw which goes through the hook and pull out the trigger.

4. Unscrew the fluid tension adjustment completely.

5. Take the plunger adjusting rod out of the tension adjustment assembly. Reinsert it into the plunger and twist until it engages the plunger.

6. Pull out the plunger with the adjusting rod.

7. Unscrew air valve spring retainer and remove air valve spring, air valve and air valve pin.

8. Remove clean-out plugs, air line screws, and fan adjustment if there is one.

Neither the nozzle adapter nor the lock screw at the top of the head should be touched except at the factory.

#### CLEANING

Clean out all air passages 1. in the gun with a twist drill held in the hand (1/8" on GAT and 5/32" on G-6). The main air inlet may also be cleaned 1/4" with а drill. lf no

- air valve spring retainer
- air valve spring
- air valve
- - 11. clean out plug(s)
  - 12. air line screws
- 13. fan adjustment
- 14. nozzle adapter
- 15. nozzle adapter lock screw 21. fluid spring
- 16. air line passages 17. air inlet passage
- 18. packing gland
- drills are available, a piece of tempered wire will help. (Soft wire will break and clog hole.) Don't miss the two air lines leading into the nozzle adapter. They are more likely to clog than the rest.

2. A good soaking in thinner will loosen most of the paint residue in the fluid passage. This is easily done by supporting the gun upside down and filling the fluid hose connection with solvent. The hole behind the fluid hose connection ought to look moderately clean inside.

3. The parts should be free from paint, rust and dirt. A wire wheel is the easiest for cleaning them, but steel wool or very fine emery cloth will do in the field.

#### PARTS REPLACEMENT

1. Nozzle-if slot has begun to wear into a round hole in the center. Fan pattern will soon begin to distort if vou don't.

2. Fluid tip-with deep chamfer at the back or a distorted front neck. It's a good idea always to replace tips when overhauling.

3. Plunger-with deep groove around conical point.

4. Always repack the packing gland with preformed packing.

5. Trigger- if badly pitted on the back of the shank where it engages the air valve pin.

6. Plunger adjustment screw if bent or threads are worn.

7. Bent air valve pin.

- 19. small fluid spring
- 20. fluid spring washer
- 22. fluid adjustment knurled nut bushing
- 23. air valve pin bushing

8. Pitted or distorted air valve.

9. All worn or tired springs they'll break when you need them if vou don't.

#### **RE-ASSEMBLY**

Follow the some general order as in disassembly, but in reverse.

1. Grease all springs well with heavy cup grease.

2. When installing plunger be sure slot is in line with trigger so that the trigger may slide through. Adjustment screw may be left in plunger after insertion.

3. Be sure fluid spring tension assembly goes back together right. From back to front:

fluid tension adjustment assembly, small spring, brass washer, large spring.

4. If the fluid adjustment knurled nut doesn't turn the adjustment screw, it is often possible to re-engage the nut by placing a large pointed center punch on the bushing at the back and hitting it with a hammer.

5. Oil plunger at packing gland and where it passes into casting.

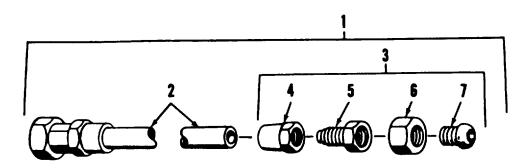
6. New packing should be used and the packing nut tightened until the plunger will no longer return to its foremost seated position when the trigger is pulled. Then back off the nut a turn or two until the plunger slides freely.

7. Oil air valve pin through trigger slot.



#### AIR HOSE

### PART NO. 7-116-125



1	Hose Assembly	7-116-125
2	Hose	7-102-1
3	Connector Assembly	50-4360-1
4	Sleeve	20-4590
5	Stem	20-4586
6	Nut	20-4325
7	Seat	20-4585

#### CAUTION

#### Do not immerse hoses in solvent.

INSPECTION: Flex hose sideways while checking for cracks. Check hoses for leaks under air pressure of 125 p.s.i.

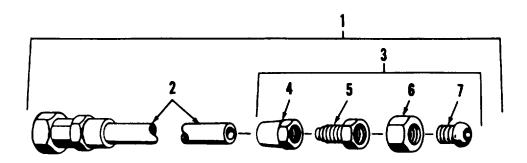
REPAIR: Any hose which is split at the end can be cut back as far as necessary with a sharp knife and the hose connector attached to the new end.

#### REASSEMBLY:

- 1. Slide sleeves (4) on ends of hoses (2).
- 2. Screw stem (5) into sleeve (4).

3. Insert setscrew (7) through nut (6) and screw seat (7) into sleeves (4).

FLUID HOSE PART NO. 7-118-225



1	Hose Assembly	7-116-125
2	Hose	7-103-2
3	Connector Assembly	50-4360-7
4	Sleeve	20-4590
5	Stem	20-4586
6	Nut	20-4325
7	Seat	20-4585

### CAUTION

#### Do not immerse hoses in solvent.

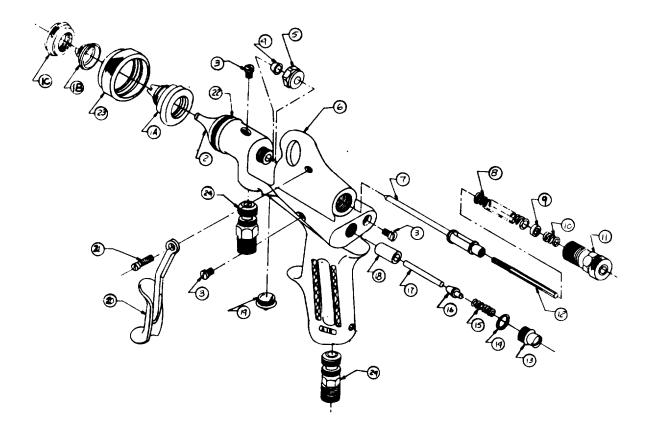
INSPECTION: Flex hose sideways while checking for cracks. Check hoses for leaks under air pressure of 125 p.s.i.

REPAIR: Any hose which is split at the end can be cut back as far as necessary with a sharp knife and the hose connector attached to the new end.

#### **REASSEMBLY**:

- 1. Slide sleeves (4) on ends of hoses (2).
- 2. Screw stem (5) into sleeve (4).

3. Insert setscrew (7) through nut (6) and screw seat (7) into sleeves (4).



# G-6 GUN 504600

Item	Part	Qua	n-
No.	No.	Description tity	1
1#	41-1-5-3	Cone fan nozzle, complete (Items Ia, Ib, c1	
1a	40-1-4-3	Cone fan nozzle body ONLY	
1b	41-1-16-3	Cone fan nozzle adjusting cap ONLY	
1c	20-5545	Cone fan nozzle adjusting cap locknut	
2*	43-1-44-2	Fluid tip, brass1	
3	20-4361	Air line screw	
4	4-4309-4	Nylon plunger packing1	
5	20-4347	Fluid packing nut1	
6	50-4605	Headpiece assembly consists of body, items 3, 18, 19, 221	
7	20-4676-1	Stainless steel fluid plunger	
8	3-4315	Fluid spring	
9	1-20-22-2	Fluid spring washer1	
10	3-4316	Fluid tension spring1	
11	50-4611	Combination tension & fluid adjustment1	
12	20-4673	Plunger adjusting rod1	
13	20-4664	Air valve spring retainer1	
14	4-4318	Fiber washer for air valve1	
15	3-4314	Air valve spring1	
16	20-4663	Air valve	

# Supplied as standard. See reverse side for other nozzles.\* Supplied as standard. See reverse side for other sizes.

ltem	Part		Quan-
No.	No.	Description	tity
17	20-4662	Air valve pin, stainless steel	1
18	20-4661	Air valve bearing	1
19	20-4543	Cleanout plug.	
20	50-4609	Trigger assembly 2 finger:	
	50-4609-1	Trigger assembly 4 finger	
21	20-4667	Trigger screw	
22	20-4660	Nozzle adapter (Return gun to factory for replacement)	
23	20-4674	Nozzle locknut	
-	8-4300-1	Double end wrench	
	8-00-08	Hex Key Wrench	
24	20-5570	Fitting w/Locking Groove 1/4 NPS x 3/8 NPS	1
	20-5571	Fitting w/Locking Groove 1/4 NPS x 5/8-18	1
	20-5572	Fitting w/Locking Groove 1/4 NPS x 1/4 NPS	

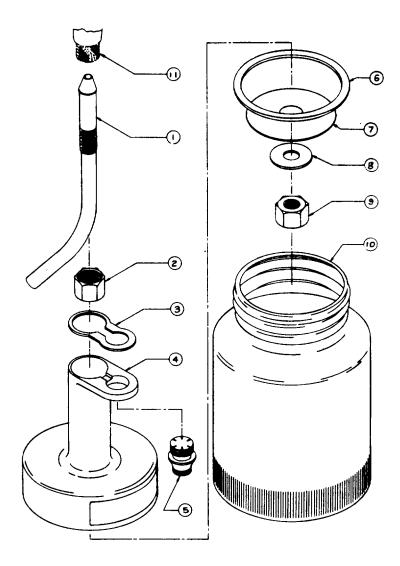
## G-6 NOZZLES

Nozzle	Fan					Part No. Material	
No.	Size	Remarks	Brass	C.R.S.	С.Т.	S.S.	Carbide
Cone fan	14"	Adjustable spot to 14' Avg. Mtl.		41-1-5-3	41-1-5-4		
# 1	6"	Narrow fan, light mtl.		41-1-1-3	41-1-1-4		
# 2	7"	Medium body mtl.		41-1-2-3	41-1-2-4	41-1-2-5	
# 3	9"	Medium body mtl.		41-1-3-3	41-1-3-4	41-1-3-5	41-1-3-7
# 6	10"	Heavy material		41-1-6-3	41-1-6-4		
# 7	7"	45° Angle fan		41-1-13-3			
# 4	7"	External atomization for quick					
		drying mtls.	41-1-4-2				
Cone		Circular spot			41-1-14-4		
Cone		External	41-1-15-2				

	PART NO. MATERIAL			
SIZE	BRASS	STAINLESS STEEL		
1/8"	43-1-18-2	43-1-18-5		
40	43-1-40-2	43-1-40-5		
44	43-1-A442	43-1-44-5		
48	43-1-48-2	43-1-48-5		
52	43-1-52-2	43-1-52-5		
60	43-1-60-2	43-1-60-5		

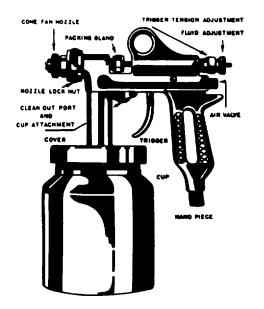
G6 FLUID TIPS

6



## PRESSURE CUP ASSEMBLY FOR G-6 GUN

ITEM		
<u>NO.</u>	<u>PART NO.</u>	DESCRIPTION
1	50-4140-3 50-4223	COMPLETE CUP ASSEMBLY
2	20-4588-1	Compression nut
3	4-4146	Gasket, fiber
4	20-4233	Cover
5	20-4543-2	Cleanout plug, slotted
6	4-4147	Gasket, cup (Thiokol)
7	4-4148	Diaphragm
8	1-20-29.2	Washer
9	1-10-25-2	Jam nut
10	20-4223	Cup, one quart
11	20-5570	Fitting



#### PRESSURE CUP ASSEMBLY FOR G-6 GUN

#### ASSEMBLY

Attach fluid post (1) to fluid intake (11) with lack nut (2). Unscrew clean-out port, slip cover attachment into place with fibre gasket (3) between cover and gun. Fasten with clean-out plug screw (5). Place diaphragm (7) and washer (8) under cover and tighten with lock nut (9). After cup is filled, screw cup (10) into cover using large rubber gasket (6). Be sure that all parts are screwed tightly. Attach air hose to air intake in hand piece.

An air regulating set should be used with pressure feed cup guns. Adjust the regulating valve to the lowest workable pressure, increasing only for higher speed or for the application of heavy, viscous materials. Once adjusted, the air regulator can remain set.

#### OPERATION

Mix and strain material thoroughly, so that it is free from lumps, skins, and foreign matter before pouring it into the cup. Paint, enamel, varnish, etc., should be at hand-brushing consistency. Nitro-cellulose and synthetic lacquers can be heavier, due to the Low Pressure Principle. Final adjustments are made on the gun. Set nozzle for the spray desired. Volume of material is regulated by the fluid control nut at the back of the gun. Trigger tension is controlled by the hex-nut as shown.

For best results, hold gun six to eight inches from the object to be sprayed, at right angles to its surface. Point directly at the work and carry along at a steady speed. A slight pull of the trigger emits air only, which may be used for dusting. Pull trigger all the way back for painting.

A little experimenting will determine correct pressure for the job.

Select the proper nozzle and fluid tip for each job to insure best results. For general' use, a cone-fan adjustable nozzle is recommended. When spraying quick drying materials and low boiling lacquers, the No. 4 nozzle and tip for external atomization will be most suitable. There is a nozzle and tip combination for every need.

#### **CLEANING**

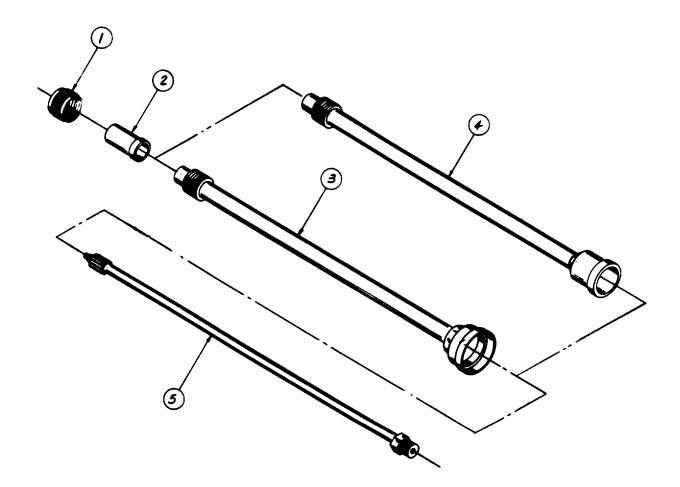
DO NOT TAKE GUN APART.

Use thinner for cleanings.

Remove nozzle, place thinner in cup, and spray through fluid tip until all passages are clean. The nozzle should be taken apart and washed clean with thinner. Material so used can be utilized for reducing.

Never soak the gun. This destroys the oil in the trigger action and allows dirty solvent to get into air passages. Difficulties may arise due to improper cleaning.

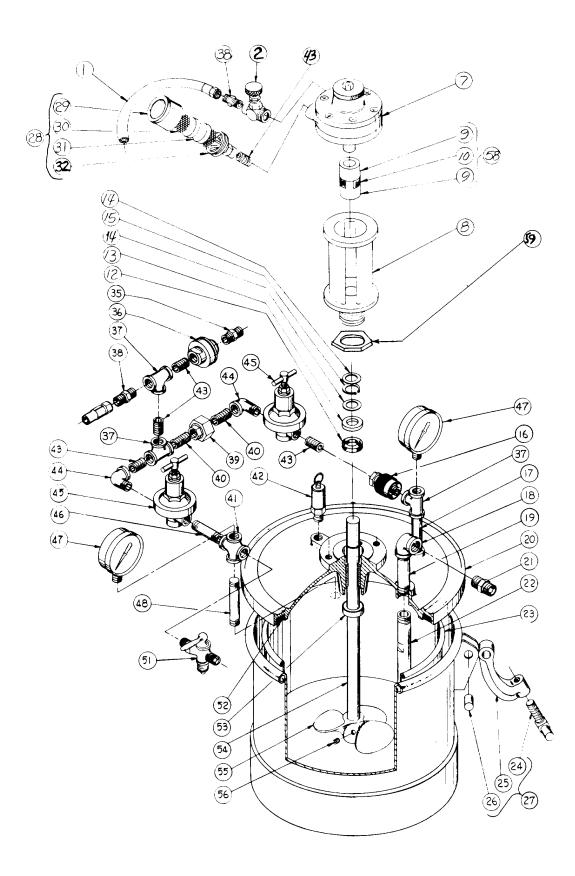
A drop of oil should be applied occasionally to the trigger action.



## STRAIGHT EXTENSION

Item No.	Part No.	Description	Quantity
	50-4340 50-4341	Extension Complete GAT (Items 1, 2, 3, & 5) Extension Complete G-6 (Items 1, 2, 4, & 5)	1 1
1 2 3 4 5*	20-4616 41-7-4-3 50-4382 50-4384 50-4342	Lock Nut Nozzle - Straight Slot Air Tube Assembly GAT (Length as required) Air Tube Assembly G-6 (Length as required) Fluid Tube Assembly - GAT or G-6 (length as required for GAT or G-6) 1	1 1 1 1

 $^{\ast}$  When ordering fluid tube assembly only be sure to specify for GAT or G-6.



## 5-GALLON DUAL-REG. DIRECT DRIVE TANK # 50-6523:

ITEM NO.	PART NO.	DESCRIPTION	<u>QTY.</u>
1 2 7 8 9 10 12 13 14 15 16 17 18 19 20	50-5053 6-4300 9-4300-1 20-5994 11-5544 11-5545 4-4301-1 20-5991 11-4422 1-5100-50 50-4581 5-002-228-8 5-01-33-8 5-00-324-8 50-6424	AIR TUBE ASSY. NEEDLE VALVE AIR MOTOR MOTOR SUPPORT COUPLING HUB RUBBER INSERT PACKING PACKING WASHER WASHER RETAINING RING SLIDE VALVE ASSY. NIPPLE ELBOW NIPPLE COVER & BUSHING ASSY.	1 1 1 2 1 1 1 1 1 1 1 1 1
21 22	20-40019 50-5005	FITTING FLUID POST	1
23	11-4351-1	INSERT PAIL, GALV.	1
24 25 26 27 28 29 30 31 32 35 36 37 38 39 40 41 42 43 44 45 46 47 48	$\begin{array}{c} 11-5489\\ 11-5490\\ 11-5491\\ 50-5004\\ 50-4491\\ 20-4439-1\\ 20-4438-1\\ 20-4435-1\\ 20-4435-1\\ 20-4440\\ 20-4400-1\\ 11-5529\\ 5-03-222-8\\ 20-4400-4\\ 5-05-22-8\\ 5-06-2222-8\\ 5-06-2222-8\\ 6-4315-100\\ 5-00-207-8\\ 5-02-22-8\\ 6-4420\\ 5-00-220-8\\ 6-4327-160\\ 5-001-228-8\\ \end{array}$	CLAMP SCREW "C" CLAMP PIN TANK ONLY MUFFLER ASSY. CAP SCREEN FELT BASE FITTING 1/4 NPT x 5/8-18 AIR MUFFLER ASSY. TEE 1/4 NPT FITTING 1/4 NPT x1/4 NPS UNION 1/4 NPT NIPPLE 1/4 NPT x 1 1/2 CROSS 1/4 NPT SAFETY VALVE NIPPLE 1/4 NPT x 7/8 STREET ELL 1/4 NPT PRESSURE REGULATOR NIPPLE 1/4 NPT x 2 1/2 PRESSURE GAGE NIPPLE 1/4 NPT x 3 1/2	6 6 1 1 2 2 1 1 2 1 1 5 2 2 1 2 1 2 1 2 1
51 52 53 54 55 56 58 59	5-10-4 4-4330 4-4303-1 20-5993 20-5082 1-05-1004-5 50-4475 1-1028-3	SHUT-OFF COCK 1/4NPT x 1/4 NPS GASKET BUSHING PROPELLER SHAFT PROPELLER SETSCREW FLEXIBLE COUPLING NUT 1 1/4"- 12 (Model 50-6525 only)	1 1 1 1 1 1 1

## 11 (12 blank)

By Order of the Secretary of the Army:

Official:

E. C. MEYER General, United States Army Chief of Staff

ROBERT M. JOYCE Brigadier General, United States Army The Adjutant General

\* U.S. GOVERNMENT PRINTING OFFICE: 1997 - 418292 (66213)

PIN: 049829-00

		DOPE AB	OT DOWN OUT IT ON IREFULLY	THE THIS		WITH THIS PUBLICATION?
X			D IT AND	DROP IT	SENT	
UBLICATION	INUMBER		PU	BLICATION DATE	PUBLICATION TI	πe
PAGE P	PIN-POINT WHE	TABLE NO.		PACE TELL WHAT I SHOULD BE DO		
ł						