

TECHNICAL MANUAL

**OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT
AND GENERAL SUPPORT MAINTENANCE
MANUAL INCLUDING REPAIR PARTS LIST**

FOR

**DEGREASER, VAPOR-SPRAY, STATIONARY
SOLVENT TYPE, ELECTRICALLY HEATED
MODEL DL-625
4940-00-255-8246
DELTA INDUSTRIES**

HEADQUARTERS, DEPARTMENT OF THE ARMY

JULY 1981

Technical Manual

No. 9-4940-540-14&P

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 31 July 1981

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SOLVENT TYPE, ELECTRICALLY HEATED
MODEL DL-625
(NSN 4940-00-255-8246)**

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: Delta Industries
8137 Allport Avenue
Santa Fe Springs, CA 90670

Procured under Contract No. DAAA09-79-C-5221

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.

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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 -- 33415
- 2 -- Manufacturer's Part Number exactly as listed herein.
- 3 -- Nomenclature exactly as listed herein, including dimensions, if necessary.
- 4 -- Manufacturer's Model Number -- DL-625
- 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) In blocks 4, 5, 6, list manufacturer's Federal Supply Code Number -- _____ 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: 4940-00-255-8246

Manufacturer: Delta Industries, 8137 Allport Ave.,
Santa Fe Springs, CA 90670

Model: DL625

Serial: (of end item)

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

INSTRUCTIONS
for
INSTALLATION, OPERATION AND MAINTENANCE
of
DEGREASER, VAPOR-SPRAY, STATIONARY
SOLVENT TYPE, ELECTRICALLY HEATED

Model DL-625
N.S.N. 4940-00-255-8246

GENERAL DESCRIPTION: This is a manually operated, electrically heated vapor-spray degreaser. This degreaser is designed for use with degreaser grade trichlorethylene as the solvent. The spray lance, storage tank, water inlet and water outlet are located at the right side, and the electrical control panel with the pump switch and the heater switch is located at the left side, when the operator is facing the machine. The tank cover slides away from the operator and in its full-open position hooks onto the upper edge of the degreaser. A work basket is provided with the machine. The work basket rests on a work rest when it is fully lowered into the degreaser.

INSTALLATION: After the degreaser is removed from the crate and all the packaging material is removed from the machine, follow the instructions given below:

1. Install the degreaser in a location where it is not subjected to drafts from fans, blowers, and open windows and doors.
2. DO NOT install the degreaser near open flames, paint-baking oven or arc-welding operations.
3. Install the degreaser on a non-combustible floor.
4. If this degreaser is installed in a room smaller than 24,000 cu. ft. consideration should be given to ventilation of either the room or of the degreaser.

PROCURED UNDER CONTRACT NUMBER DAAA09-79-C-5221

INSTRUCTIONS FOR MODEL DL-625: (con't.)

SERVICE CONNECTIONS:

1. WATER: Connect 3/4 inch water supply line to the water inlet of the machine using a globe valve in addition to the one furnished with the machine. Connect a 1¼ inch water drain line to the open-sight flow fitting on the degreaser water outlet.
2. ELECTRICAL: Check the name plate on the machine control panel for the voltage, phase and amp. rating. Provide a disconnect switch of the type and size required by local codes. Wire from the disconnect switch to the terminal block in the control panel.

CAUTION: DO NOT INSTALL ANY VALVES IN THE WATER DRAIN LINE

INITIAL START-UP:

1. Slide away the tank cover and pour the solvent, trichlorethylene degreaser grade, directly into the main tank. (Approx. 75 gals.)
2. Open the solvent return line valve.
3. Open the water inlet valves and check for water flow.
4. Check the settings of the H.T.C. and S.V.L. temperature controls located inside the control panel. (H.T.C.=225°F; S.V.L.=165°F.)
5. Turn the heater switch on. (Red light on panel will be on)
6. The solvent will start to vaporize and boil at 188°F.
7. When the vapor reaches the water jacket area, the vapor level will be maintained by the S.V.L. control and the condenser system. Check the water outlet temp. at the open-sight flow fitting with a suitable thermometer. Adjust, if required, the water inlet valve nearest to the machine such that the water outlet temp. is held at 110°F. Do not disturb the setting of this valve any more. Use the remaining valve in the water inlet line for turning the water on and off during further operations.

DAILY OPERATION:

After the initial start-up is completed, the degreaser operation during its daily use is as follows:

1. Start-up check list;
 - a. Check solvent level in the main tank (2 inches below work rest.)
 - b. Check to see that the solvent return line valve is open.
 - c. Turn the water inlet valve open and check for water flow.
2. Turn the heater switch on and allow the vapor level to reach the water jacket area.
3. Lower the work slowly into the machine (11 FPM max.) vapor zone.
4. The vapor will start to condense on the work. When the solvent stops dripping off the work, vapor-degreasing is complete. During this time, the work may be sprayed with the spray lance, by turning the pump switch on and opening the spray lance valve.

INSTRUCTIONS FOR MODEL DL-625: (con't.)

Spraying should be done only within the vapor-zone. The degreasing is complete when the solvent stops dripping off the work.

5. Withdraw the work slowly (11 FPM max.) from the degreaser.

MAINTENANCE:

When the solvent boiling temp. reaches 195°F., a cleanout operation is recommended and is carried out as follows:

CLEANOUT:

1. Close the solvent return line valve.
2. Open the water inlet valve and check for water flow.
3. Turn the heater switch on.
4. The solvent will start to vaporize and boil. The condenser system will condense the solvent vapor and collect it in the storage tank.
5. When the top surface of the heater elements is almost exposed, turn the heater switch off.
6. Allow the machine to cool.
7. Drain the remaining solvent and sludge from the main tank by opening the drain valve.
8. Close the drain valve after the solvent and sludge is drained.
9. Open the solvent return line valve allowing the distilled solvent to return to the main tank.
10. Add fresh solvent. if necessary to bring the solvent level in the main tank to within approx. 2 inches under the work rest.

NOTE: KEEP THE MAIN TANK COVER CLOSED WHEN THE DEGREASER IS NOT IN USE.

REPLACEMENT PARTS LIST

DEGREASER, VAPOR SPRAY, STATIONARY
SOLVENT TYPE, ELECTRICALLY HEATED

MODEL DL-625
N.S.N. 4940-00-255-8246

<u>QUANTITY</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>PRICE</u>
1	S.S.-1	ASSEMBLY TANK COVER	\$105.00
1	S.S.-1-H	TANK COVER HANDLE	2.00
1	S.S.-2	COVER PLATE, CLEANOUT DOOR	40.00
6	3-017	HEATER ELEMENT	140.80
1	S.S.-3	ASSEMBLY, WATER SEPARATOR	90.00
1	S.S.-4	COVER, STORAGE TANK	30.00
1	1-022	ASSEMBLY, CONDENSER COIL	39.00
1	1-022-S	ASSEMBLY, CONDENSER COIL	50.00
1	1-007-9	HOSE	20.00
1	1-005	SPRAY LANCE HANDLE	6.00
1	S.S.-9-4	VALVE, SPRAY LANCE	7.00
1	1-002	ASSEMBLY, SPRAY LANCE	25.00
1	5-080	VEE-JET, SPRAY LANCE	5.00
1	S.S.-5	DRIP PAN	45.00
1	1-030	GUTTER BOX'ASSEMBLY 24"	18.00
1	5-056	VALVE WATER DRAIN	7.50
2	5-022	SEAL NUT	1.50
1	2-058	H.T.C. CONTROL	85.80
1	3-058	S.V.L. CONTROL	85.80
1	3-057	PUMP SWITCH	12.00
1	3-057	HEATER SWITCH	12.00
1	3-045	PILOT LIGHT	4.00
1	3-073	CONTACTOR	61.00
1	3-023	FUSE BLOCK	15.00
1	3-042	TRANSFORMER 300VA	40.00
1	1492-cal	TERMINAL BLOCK	20.00
1	3-089	ASSEMBLY, CONTROL PANEL	70.00
1	S.S.-6	OPEN-SIGHT DRAIN FITTING	50.00
1	5-020-S	TEMPERATURE GAUGE	70.00
1	5-059-12	SIGHT GAUGE	16.00
1	5-034	SPRAY PUMP	200.00
1	5-007	PENN VALVE	83.00
		"Y" STRAINER	15.00
1	S.S.-7	GASKET, CLEANOUT DOOR	5.00
1	2-020	"C" CLAMP	1.50
1	S.S.-8	WORK REST	25.00
1	5-051	1½" GATE, DRAIN VALVE	18.00
1	5-054	¾" GATE VALVE	10.00

DRAWING NUMBER
B-69113-1-2

DRAWING NUMBER
B-69113-3-1

DRAWING NUMBER
B-69113-1-2

By Order of the Secretary of the Army:

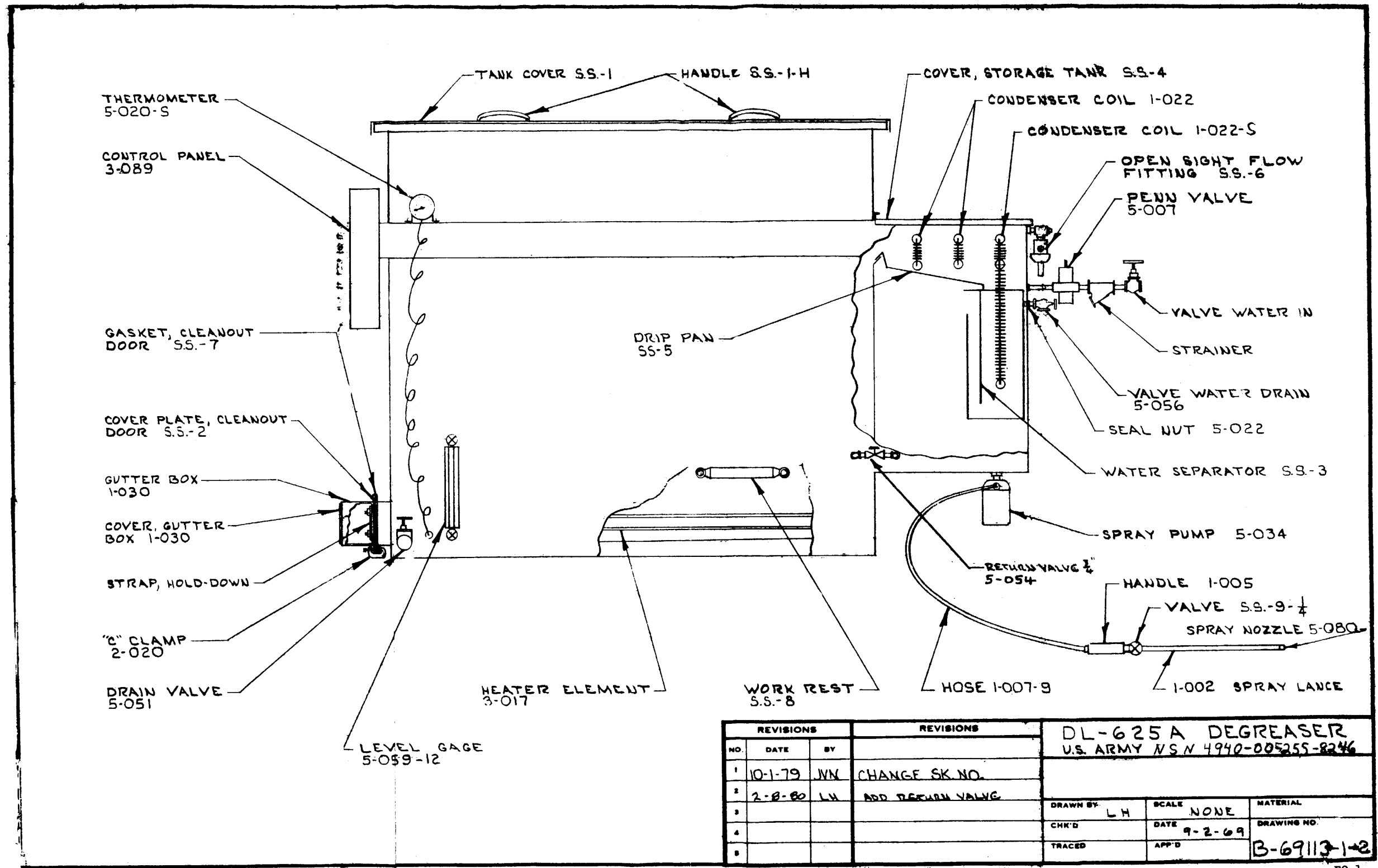
E. C. MEYER
General, United States Army
Chief of Staff

Official:

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

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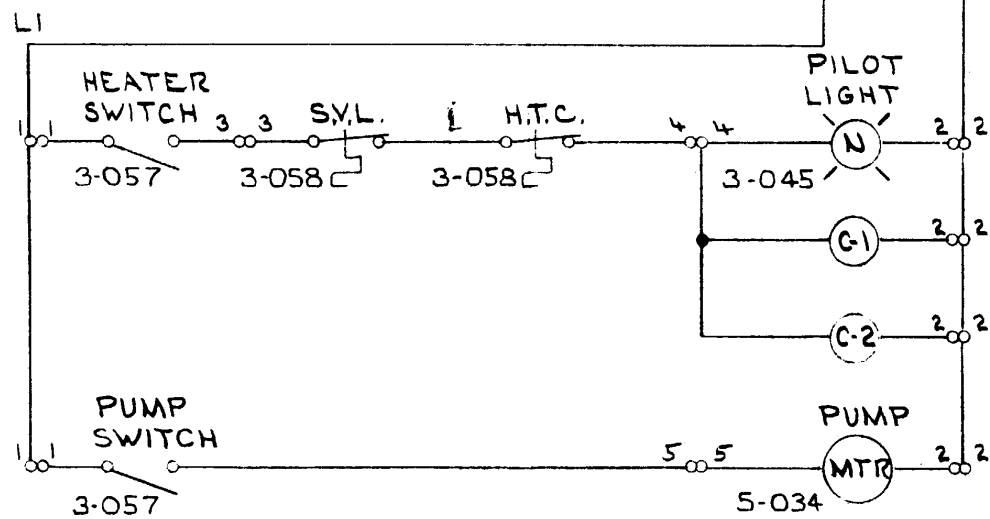
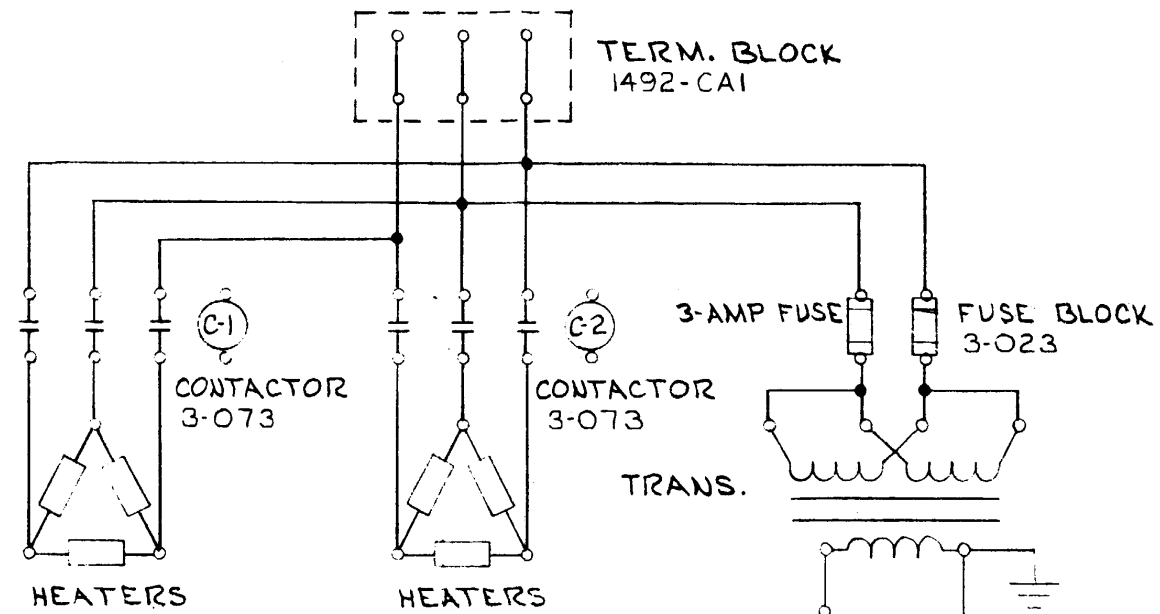
To be distributed in accordance with Special List.



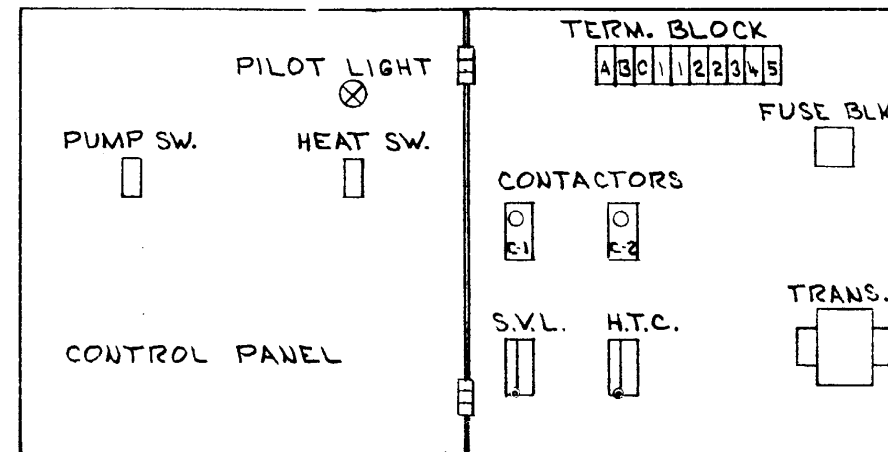
THERMOMETER 5-020-S
 CONTROL PANEL 3-089
 TANK COVER S.S.-1
 HANDLE S.S.-1-H
 COVER, STORAGE TANK S.S.-4
 CONDENSER COIL 1-022
 CONDENSER COIL 1-022-S
 OPEN SIGHT FLOW FITTING S.S.-6
 PENN VALVE 5-007
 VALVE WATER IN
 STRAINER
 VALVE WATER DRAIN 5-056
 SEAL NUT 5-022
 WATER SEPARATOR S.S.-3
 SPRAY PUMP 5-034
 RETURN VALVE 1/4" 5-054
 HANDLE 1-005
 VALVE S.S.-9-1/4
 SPRAY NOZZLE 5-080
 1-002 SPRAY LANCE
 HOSE 1-007-9
 WORK REST S.S.-8
 HEATER ELEMENT 3-017
 DRAIN VALVE 5-051
 "C" CLAMP 2-020
 STRAP, HOLD-DOWN
 COVER, GUTTER BOX 1-030
 GUTTER BOX 1-030
 COVER PLATE, CLEANOUT DOOR S.S.-2
 GASKET, CLEANOUT DOOR S.S.-7
 LEVEL GAGE 5-059-12
 DRIP PAN S.S.-5

REVISIONS			REVISIONS			DL-625A DEGREASER U.S. ARMY NSN 4940-005355-8246		
NO.	DATE	BY				DRAWN BY	SCALE	MATERIAL
1	10-1-79	JVN	CHANGE SK. NO.			LH	NONE	
2	2-8-80	LW	ADD RETURN VALVE					
3						CHK'D	DATE	DRAWING NO.
4							9-2-69	
5						TRACED	APP'D	B-69113-1-2

230 V.A.C. 3 PH. 60 CY.

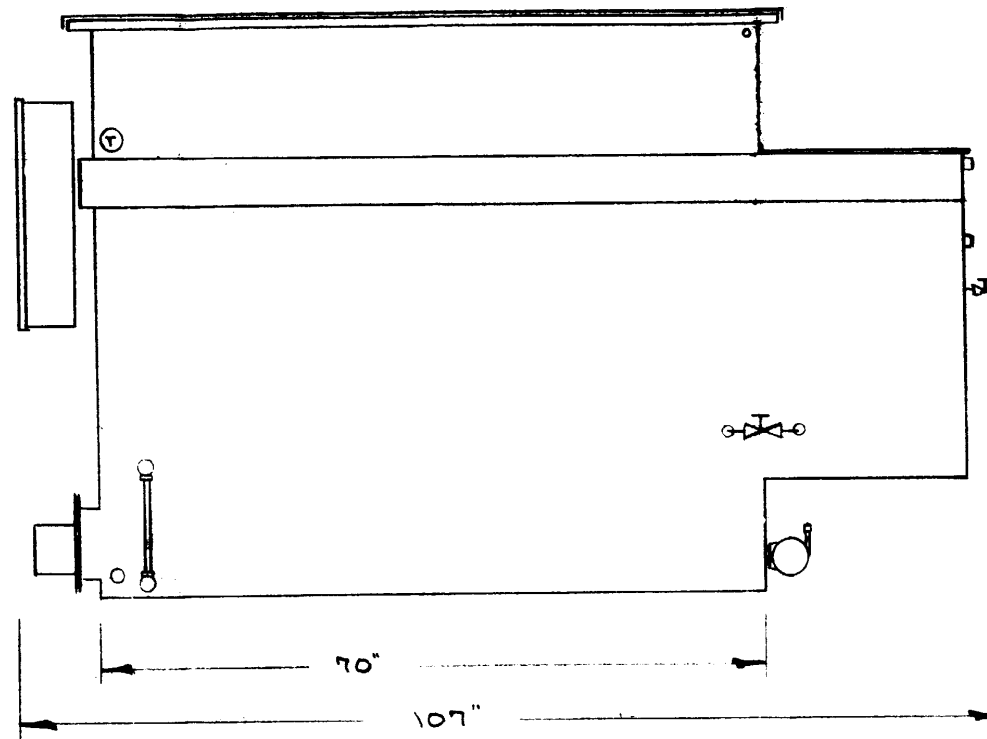
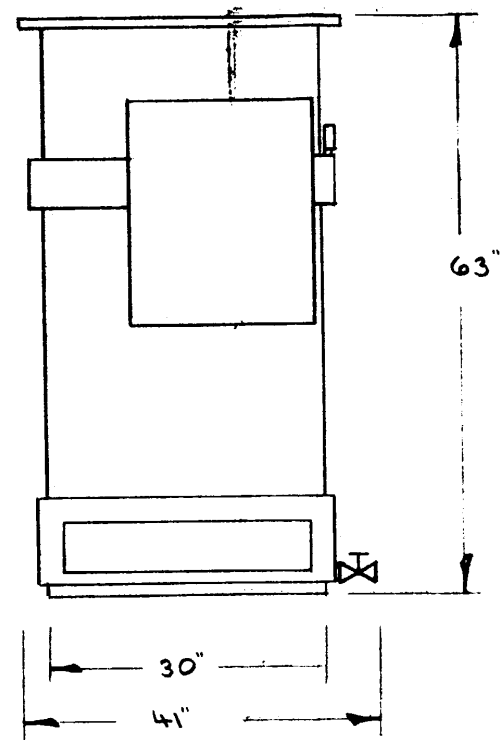


WIRING DIAGRAM



GENERAL COMPONENTS ARRANGEMENT

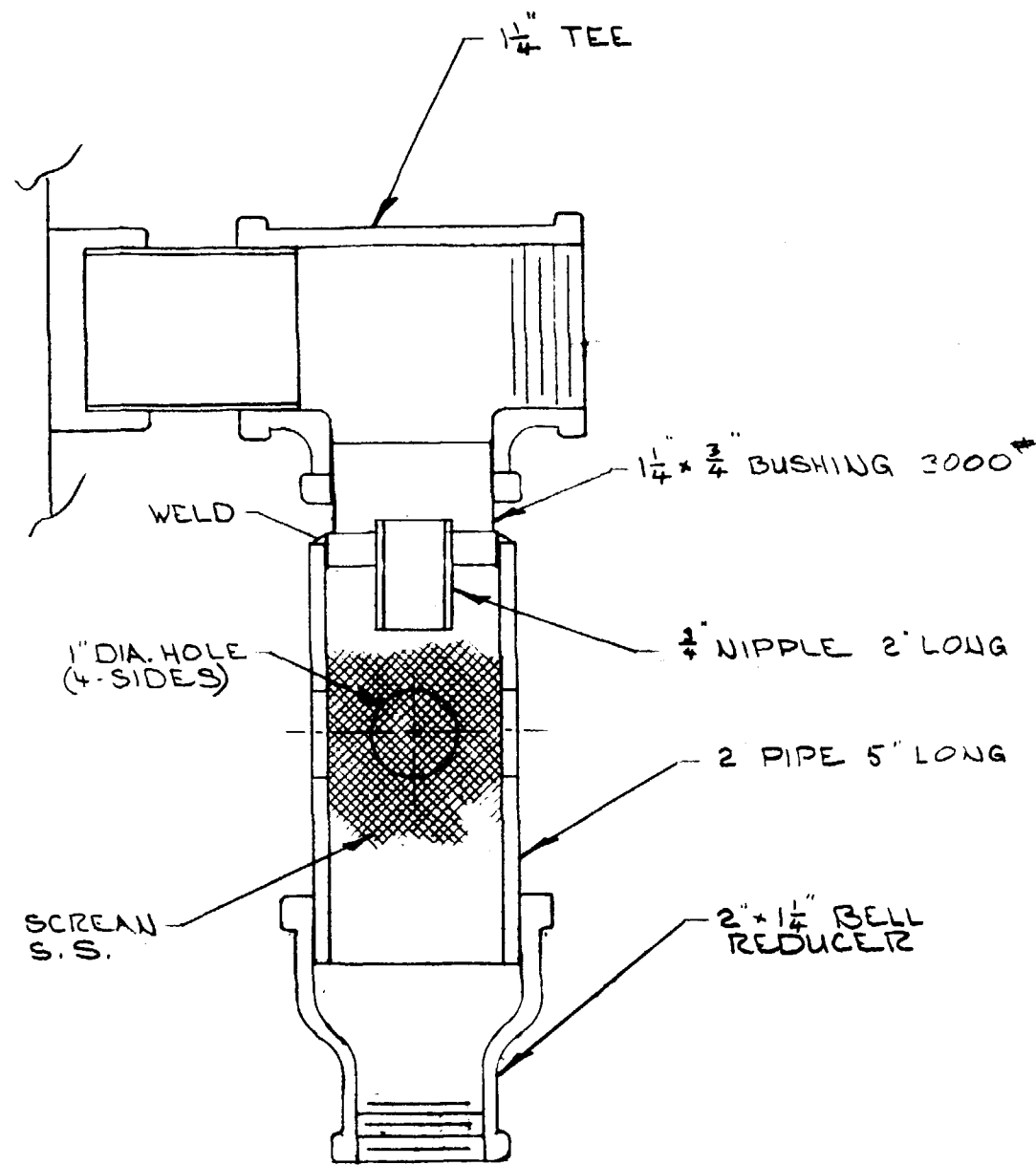
REVISIONS			REVISIONS		
NO.	DATE	BY	DL-625A DEGREASER U.S. ARMY M.S.N. 4940-255-8246		
1	10-1-79	JVN	CHANGE SK NO.		
2					
3			DRAWN BY	SCALE	MATERIAL
4			CHK'D	DATE	DRAWING NO.
5			TRACED	APP'D	B-69113-3-1



DL-625A DEGREASER
 US ARMY NSN 4940-00-255-8246

REVISIONS			REVISIONS		
NO	DATE	BY			
1					
2					
3					
4					
5					

DRAWN BY LH	SCALE 3/4" = 1'-0"	MATERIAL
CHK'D	DATE 2-8-80	DRAWING NO.
TRACED	APP'D	B-79132-11-0



REVISIONS			REVISIONS			FLOW SIGHT DEVICE		
NO.	DATE	BY						
1								
2								
3						DRAWN BY	SCALE	MATERIAL
4						LH	1/2" = 1"	
5						CHK'D	DATE	DRAWING NO.
							10-21-71	A-69113-5-0
						TRACED	APP'D	

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS



THEN...JOT DOWN THE
DOPE ABOUT IT ON THIS FORM.
CAREFULLY TEAR IT OUT, FOLD IT
AND DROP IT IN THE MAIL.

SOMETHING WRONG WITH PUBLICATION

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

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PUBLICATION DATE

PUBLICATION TITLE

BE EXACT PIN-POINT WHERE IT IS

PAGE
NO.

PARA-
GRAPH

FIGURE
NO.

TABLE
NO.

IN THIS SPACE, TELL WHAT IS WRONG
AND WHAT SHOULD BE DONE ABOUT IT.

PRINTED NAME, GRADE OR TITLE AND TELEPHONE NUMBER

SIGN HERE

The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
 1 decimeter = 10 centimeters = 3.94 inches
 1 meter = 10 decimeters = 39.37 inches
 1 dekameter = 10 meters = 32.8 feet
 1 hectometer = 10 dekameters = 328.08 feet
 1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
 1 decigram = 10 centigrams = 1.54 grains
 1 gram = 10 decigram = .035 ounce
 1 dekagram = 10 grams = .35 ounce
 1 hectogram = 10 dekagrams = 3.52 ounces
 1 kilogram = 10 hectograms = 2.2 pounds
 1 quintal = 100 kilograms = 220.46 pounds
 1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

1 centiliter = 10 milliliters = .34 fl. ounce
 1 deciliter = 10 centiliters = 3.38 fl. ounces
 1 liter = 10 deciliters = 33.81 fl. ounces
 1 dekaliter = 10 liters = 2.64 gallons
 1 hectoliter = 10 dekaliters = 26.42 gallons
 1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
 1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
 1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
 1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
 1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres
 1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
 1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
 1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

<i>To change</i>	<i>To</i>	<i>Multiply by</i>	<i>To change</i>	<i>To</i>	<i>Multiply by</i>
inches	centimeters	2.540	ounce-inches	newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29.573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-foot	newton-meters	1.365	metric tons	short tons	1.102
pound-inches	newton-meters	.11375			

Temperature (Exact)

° F	Fahrenheit	5/9 (after	Celsius	° C
	temperature	subtracting 32)	temperature	

