

S6163-BN-FSE-010

0910-LP-106-0128

**Technical Manual
for
Pot and Pan Washer
Models CA-3, DA-3 and CA-3C**

NORTHROP GRUMMAN SHIP SYSTEMS
CONTRACT NO. N00024-00-C-2217



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0910-LP-106-0128



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15 JUNE 2008



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Philadelphia, PA
19135-2996

Telephone 215-624-4300
800-344-4302
FAX: 215-624-6966
www.insingermachine.com

TECHNICAL MANUAL

FOR

POT & PAN WASHER

MODELS

CA-3

DA-3

CA-3C

**NSF 3-2003 requirements
for detergent and chemical sanitizer dispensers.**

Model: CA-3 & DA-3

This machine must be operated with an automatic detergent dispenser and, if applicable, an automatic chemical sanitizer feeder, including a visual means to verify that detergents and sanitizers are delivered or a visual or audible alarm to signal if detergents and sanitizers are not available for delivery to the respective washing and sanitizing systems.

Please see instructions for electrical and plumbing connections located in this manual and in the feeder equipment manual.

TECHNICAL MANUAL

including Installation, Operation, and Maintenance Instructions

FOR

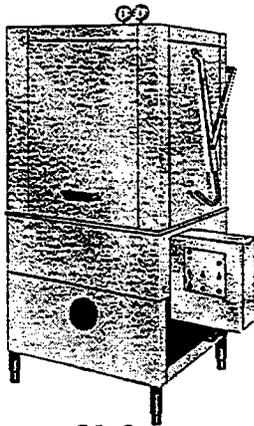
POT & PAN WASHERS

MODELS

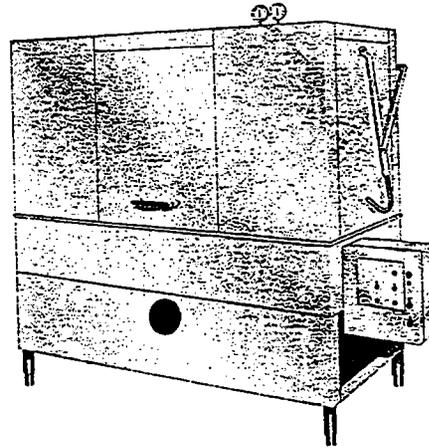
CA-3

CA-3C

DA-3



CA-3
Pot and Pan Washer



DA-3
Pot and Pan Washer

**POT and PAN WASHER
Models: CA-3/CA-3C/DA-3
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- ▶ Final Rinse Piping Assembly
- ▶ Utility Rack



PART 1
TECHNICAL INFORMATION



Thank you for Purchasing this quality Insinger product.

On the space provided please record the Model and Serial Number of this unit:

Model: _____

Serial Number: _____

Start-up Date: _____

When referring to this equipment please have this information available.

Each piece of equipment at Insinger is carefully tested before shipment for proper operation. If the need for service should arise please contact your local Authorized Insinger Service Company. A Service Network Listing is provided within this manual. Check this list for your local authorized servicer.

For proper activation of the *Insinger Limited Warranty* a SureFire™ Start-up should be completed on your machine. Refer to the Introduction section in this manual for an explanation of Insinger's SureFire™ Start-up and Check-out Program.

Please read the Insinger Limited Warranty and all installation and operation instructions carefully before attempting to install or operate your new Insinger product.

To register your machine for warranty by phone, fax, or the internet or for answers to questions concerning installation, operation, or service contact our Technical Services Department:

Toll-Free	800.344.4802
Fax	215.624.6966
Email	service@insingermachine.com
World-Wide Web	http://www.insingermachine.com

Thank you.
Insinger Machine Company

**POT & PAN WASHERS
MODEL: CA-3/CA-3C/DA-3
TECH MANUAL INTRODUCTION
Part 1, Section A**

A. INTRODUCTION

A.1 Purpose

The purpose of this Tech Manual is to provide installation, operation, cleaning and maintenance directions. A section is provided for replacement parts.

A.2 Scope

This manual contains all pertinent information to assist in the proper installation, operation, cleaning, maintenance, and parts ordering for Insinger's Pot & Pan Washers model CA-3, CA-3C & DA-3.

The installation instructions are intended for qualified equipment installers. The operation and cleaning instructions are intended for the daily users of the equipment. The maintenance and parts sections are intended for qualified service and/or maintenance technicians.

Replacement parts may be ordered directly from our factory or from your local Insinger Authorized Service Agency. For the name of your local Insinger Authorized Service Agency please reference the Service Network Listing in Section 1 of this manual. You can also speak to the Insinger Technical Services Department, 800/344-4802, or e-mail us at service@insingermachine.com. When calling for warranty information or replacement parts please provide the model and serial number of your Insinger equipment. These important numbers should be noted in this manual on the spaces provided on the opening page.

A.3 Start-Up Program

Insinger is proud to offer our exclusive Surefire™ Start-up & Check-out Program to our commercial customers. This service is included in the purchase price of your new Insinger dishwasher. We will provide an authorized factory service technician for the initial start-up of your new Insinger dishwasher to ensure it is running correctly. Please call the factory or your local Insinger Sales Representative to schedule this service.

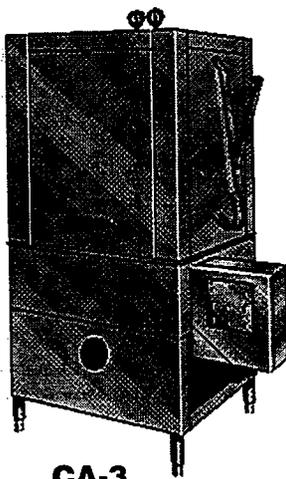
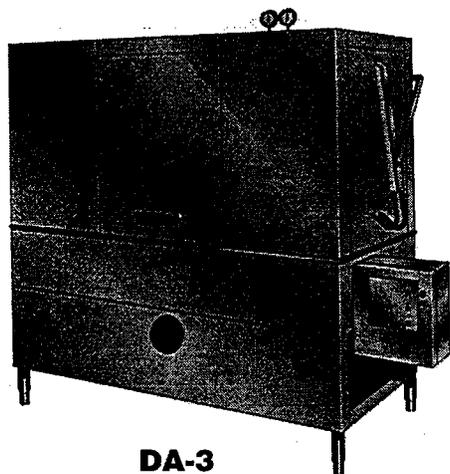
A.4 Definitions

Throughout this guide you will find the following terms: **WARNING**, **CAUTION**, & **NOTE**. When used, these terms will be outlined in a box to draw attention:

WARNING indicates potential physical danger.
CAUTION indicates potential equipment damage.
NOTE indicates helpful operating hints or tips.

CA-3 and DA-3 POT AND PAN WASHERS

CSI - 11400


CA-3

DA-3

DESIGN

Automatic door type utensil washer with a timed wash-and-rinse cycle. Fully automatic operation with power on/off button. CA-3 capacity is 25-24" X 28" racks per hour, or 150 bun pans/hr or 100 steam table (2" thick) pans/hr. DA-3 capacity is 50 - 24" X 28" racks per hour, or 276 bun pans/hr or 184 steam table (2" thick) pans/hr. Cycle starts when doors are closed. Designed for straight through or corner operation.

STANDARD EQUIPMENT

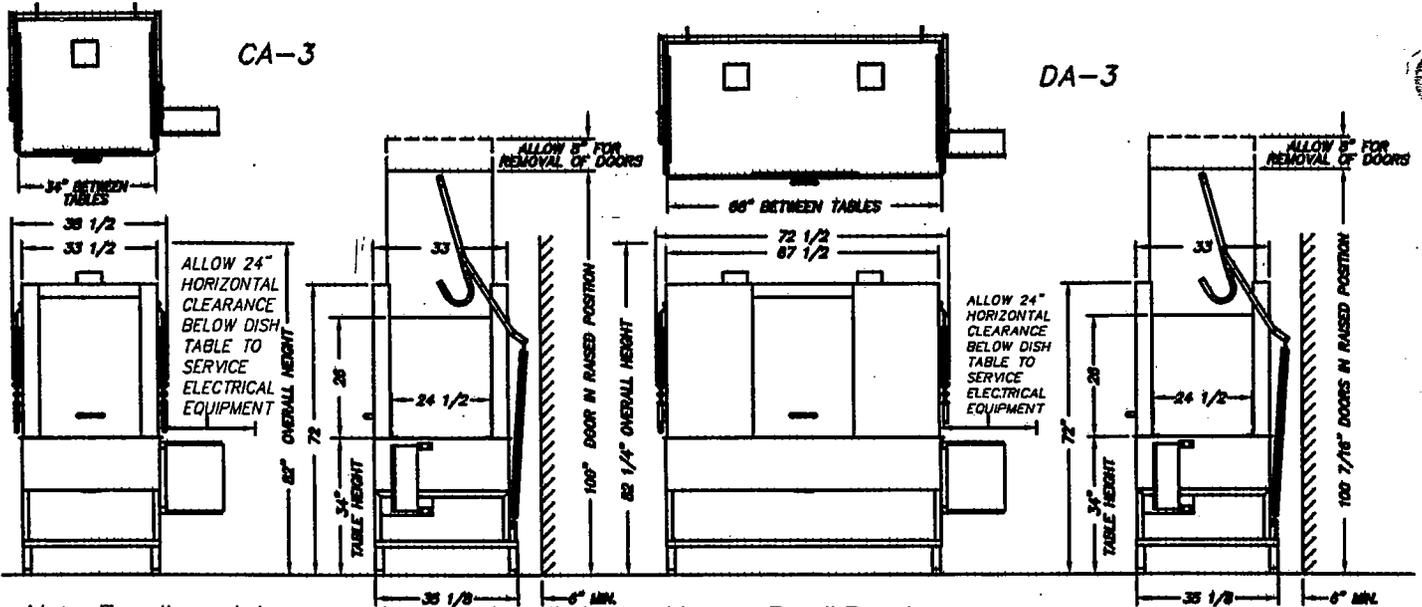
- Tank heat: 5 KW electric immersion heater or steam injector
- Capillary thermometer for wash and final rinse
- Vacuum breaker
- Rack assortment (CA-3: 1 general utility, 1 bake sheet, 1 basket) (DA-3: 2 general utility, 2 bake sheets, 1 basket, 1 counter pan)
- Manifold cleanout brush
- Inspection door
- Vent opening with adjustable damper (1 for CA-3, 2 for DA-3)
- S/S frame, legs and feet
- Automatic tank fill
- Low water protection
- Detergent connection provision
- Hold down grid
- Rollers for track on DA-3
- Fully automatic operation
- Manual bypass selector switch
- Side mounted control panel (NEMA 12)
- Simplified scrap screen design
- Door safety switches
- Interchangeable upper & lower spray arms
- Standard frame drip proof motor

OPTIONAL ACCESSORY EQUIPMENT

- Stainless steel steam coil tank heat
- Pressure reduction valve and line strainer
- Steam booster
- Electric booster
- Security package
- S/S front panel
- Totally enclosed motor



CSI - 11400



Note: For all rough in connections see Installation and Layout Detail Drawing.

SPECIFICATIONS

CONSTRUCTION - Hood and tank constructed of 14 gauge 18-8 type 304 S/S. Hood unit of all welded seamless construction. S/S frame, legs and feet. All internal castings are non-corrosive lead free nickel alloy or bronze.

DOORS - A front inspection/cleanout door and two simultaneously opening operating doors. Operating doors balanced by externally mounted springs. Extra large die formed 18-8 type 304 S/S doors ride in all S/S channels. A triple ply leading edge on the door channels made of S/S.

PUMP - Centrifugal type "packless" pump with a brass petcock drain. Construction includes ceramic and a balanced cast impeller on a precision ground stainless steel shaft. All working parts mounted as an assembly and removable as a unit without disturbing pump housing. CA-3 has one 5 HP motor. DA-3 has two 5 HP motors. Motors are standard frame, horizontal C-faced, drip proof, squirrel-cage, induction run type, 60 cycle, 3600 RPM, internally cooled with ball-bearing construction.

CONTROLS - Side-mounted control cabinet, NEMA 12 rated housing motor controls and overload protection, transformer, contactors and all dishwasher integral controls. All controls safe low voltage 24 VAC.

SPRAY SYSTEM - Wash and rinse spray systems made of 18-8 type 304 S/S pipe threaded into cast hub assemblies. Upper and lower spray assemblies are interchangeable and are removable without the use of tools.

CA-3 Wash - 2 power spinning wash arms above and 2 power spinning wash arms below each designed with 8 high pressure action cleansing holes.

CA-3 Final Rinse - 2 power spinning rinse arms above and 2 power spinning rinse arms below each designed with 3 nozzles.

DA-3 Wash - 4 power spinning wash arms above and 4 power spinning wash arms below each designed with 8 high pressure action cleansing holes.

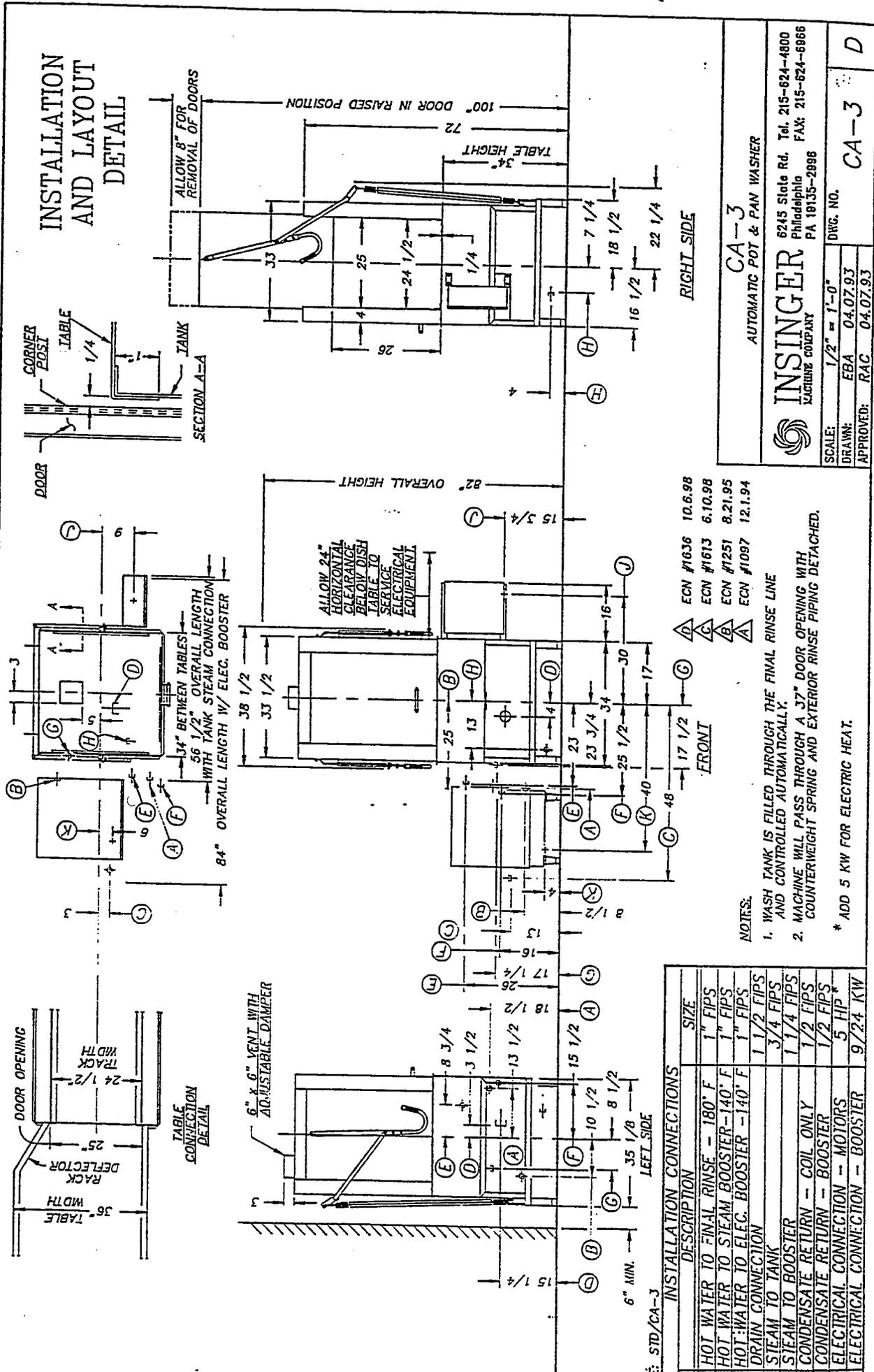
CA-3 Final Rinse - 4 power spinning rinse arms above and 4 power spinning rinse arms below each designed with 3 nozzles.

DRAIN - Drain valve externally controlled. Overflow assembly with skimmer cap is removable without use of tools for drain line inspection. Heater protected by low water level control.

*Note: Exhaust requirements are for duct connections only.

Capacity per hour	Tank capacity	Motor size	Electric usage		Steam consumption at 20 psi min.	Final rinse peak flow at 20 psi min.
			CA3	DA3		
CA3 - 25 racks DA3 - 50 racks	CA3 - 31 gals. DA3 - 62 gals.	CA3 - 5 hp DA3 - (2) 5 hp	5 9 24	5 kw wash tank (2) 9 kw booster 40° rise (2) 24kw booster 70° rise	CA3 - 20lbs./hr. tank DA3 - 20lbs./hr. tank	CA3 - 11.2 gals./min. DA3 - 22.4 gals./min.
Final rinse consumption at 20 psi	Exhaust requirements*	Peak rate drain flow	Shipping weight	Current draw amps	Steam/Gas	Electric w/o booster
CA3 - 2.8 gals./cycle; 70 gals./hr DA3 - 5.6 gals./cycle; 140 gals./hr	CA3 - 300 CFM DA3 - 600 CFM	CA3 - 9 gals./min. DA3 - 16 gals./min.	CA3 - 1050 lbs. DA3 - 1650 lbs.	208/3/60 230/1/60 230/3/60 380/3/50 60/3/60	CA3 DA3 18.....34 n/a.....n/a 16.....31 10.....9 8.....16	CA3 DA3 32.....48 n/a.....n/a 28.....43 17.....27 14.....22

INSTALLATION AND LAYOUT DETAIL



INSINGER
MACHINE COMPANY

CA-3

AUTOMATIC POT & PAN WASHER

6245 State Rd. Tel. 215-624-4800
Philadelphia PA 19135-2998
FAX: 215-624-6866

SCALE: 1/2" = 1'-0"

DWG. NO. CA-3 D

DRAWN: EBA 04.07.93

APPROVED: RAC 04.07.93

FILE: STD/CA-3

TR	DESCRIPTION	SIZE
A	HOT WATER TO FINAL RINSE - 180° F	1" FIPS
B	HOT WATER TO STEAM BOOSTER - 140° F	1" FIPS
C	HOT WATER TO ELEC. BOOSTER - 140° F	1" FIPS
D	DRAIN CONNECTION	1 1/2 FIPS
E	STEAM TO TANK	3/4 FIPS
F	STEAM TO BOOSTER	1 1/4 FIPS
G	CONDENSATE RETURN - COIL ONLY	1/2 FIPS
H	CONDENSATE RETURN - BOOSTER	1/2 FIPS
J	ELECTRICAL CONNECTION - MOTORS	5 HP
K	ELECTRICAL CONNECTION - BOOSTER	9/24 KW

INSTALLATION AND LAYOUT DETAIL

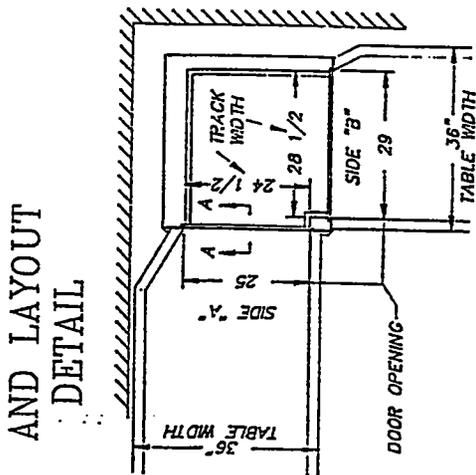
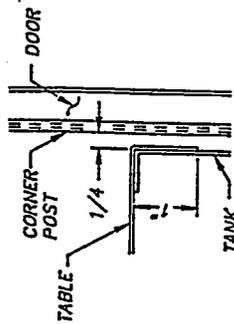


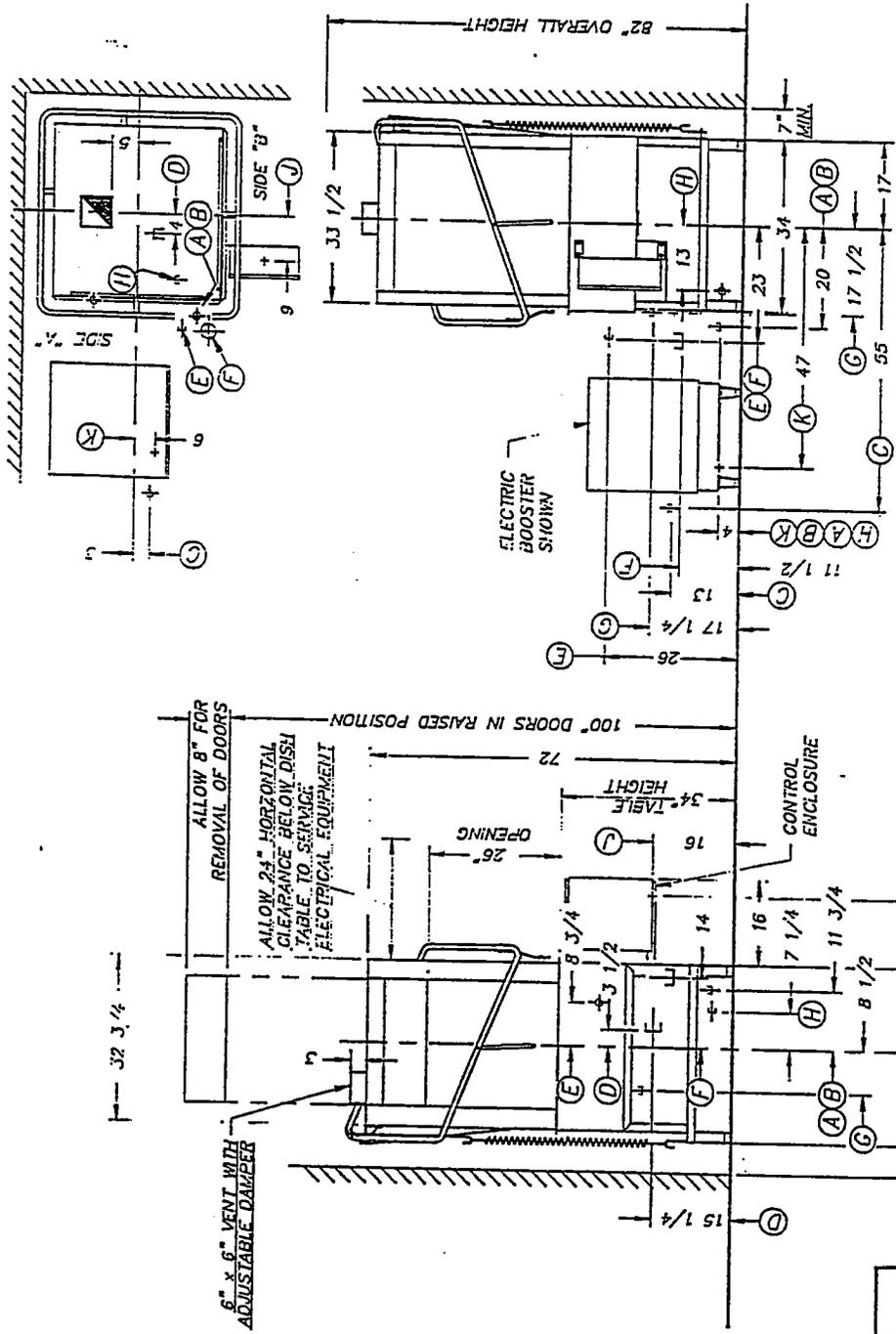
TABLE CONNECTION DETAIL



SECTION A-A (NOT TO SCALE)

FILE: STD\CA-3C

LTR	DESCRIPTION	SIZE
A	HOT WATER TO FINAL RINSE - 180° F	1" FIPS
B	HOT WATER TO STEAM BOOSTER - 140° F	1" FIPS
C	HOT WATER TO ELEC. BOOSTER - 140° F	1" FIPS
D	DRAIN CONNECTION	1 1/2" FIPS
E	STEAM TO WASH TANK	3/4" FIPS
F	STEAM TO STEAM BOOSTER	1 1/4" FIPS
G	CONDENSATE RETURN - WASH COIL ONLY	1/2" FIPS
H	CONDENSATE RETURN - STEAM BOOSTER	1/2" FIPS
J	ELECTRICAL CONNECTION - MOTOR	5 HP*
K	ELECTRICAL CONNECTION - ELEC. BOOSTER	9/24 KW



VIEW LOOKING AT SIDE "A"

VIEW LOOKING AT SIDE "B"

INSINGER MACHINERY COMPANY
 6245 State Rd. Philadelphia PA 19135-2996
 Tel. 215-624-4800 FAX: 215-624-6966

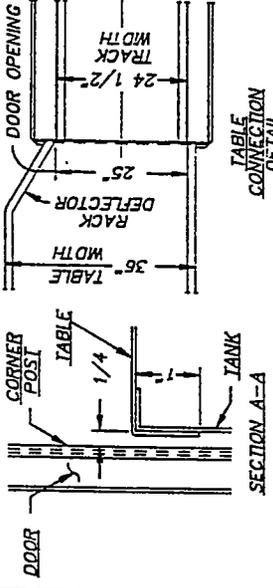
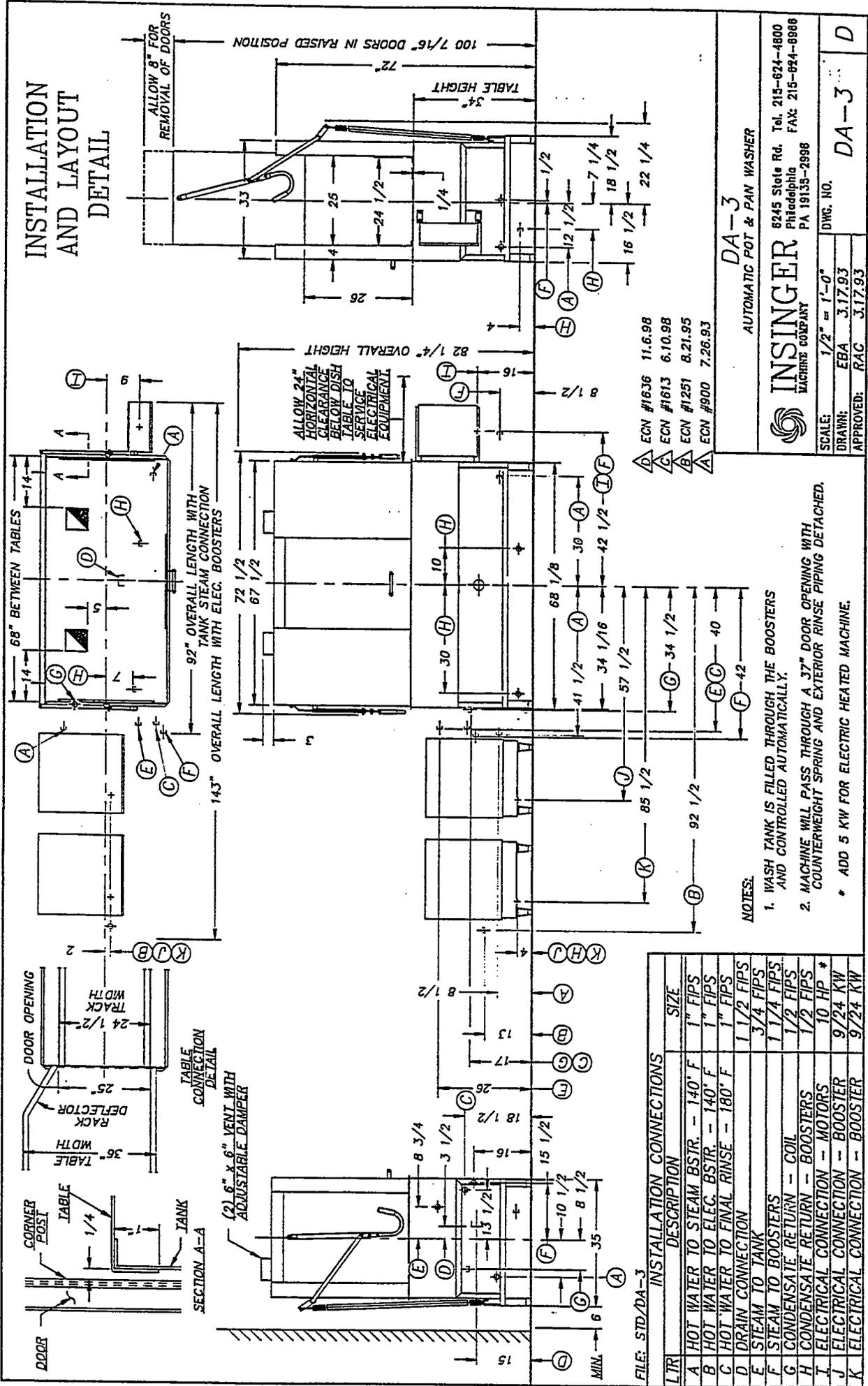
CA-3C
 CORNER AUTOMATIC POT & PAN WASHER

SCALE: 1/2" = 1'-0"
 DRAWN: PG 02.11.94
 APPROVED: RAC 02.11.94

DWG. NO. CA-3C C

- NOTES:
1. WASH TANK IS FILLED THROUGH THE FINAL RINSE LINE AND CONTROLLED AUTOMATICALLY.
 - * ADD 5 KW FOR ELECTRIC TANK HEAT.

INSTALLATION AND LAYOUT DETAIL



(2) 6" x 6" VENT WITH ADJUSTABLE DAMPER

ALLOW 24" HORIZONTAL CLEARANCE BELOW DISH SERVICE TO ELECTRICAL EQUIPMENT

82 1/4" OVERALL HEIGHT

100 7/16" DOORS IN RAISED POSITION

- △ ECN #1636 11.6.98
- △ ECN #1613 6.10.98
- △ ECN #1251 8.21.95
- △ ECN #900 7.26.93

DA-3

AUTOMATIC POT & PAN WASHER



INSINGER
MACHINE COMPANY
8245 State Rd. Tel. 215-624-4800
Philadelphia PA 19135-2998
FAX: 215-624-8888

SCALE: 1/2" = 1'-0"
DRAWN: EBA 3.17.93
APPROVED: RAC 3.17.93

DA-3

D

FILE: STD/DA-3

LETTER	INSTALLATION CONNECTIONS DESCRIPTION	SIZE
A	HOT WATER TO STEAM BSTR. - 140° F	1" FIPS
B	HOT WATER TO ELEC. BSTR. - 140° F	1" FIPS
C	HOT WATER TO FINAL RINSE - 180° F	1" FIPS
D	DRAIN CONNECTION	1 1/2 FIPS
E	STEAM TO TANK	3/4 FIPS
F	STEAM TO BOOSTERS	1 1/4 FIPS
G	CONDENSATE RETURN - COIL	1/2 FIPS
H	CONDENSATE RETURN - BOOSTERS	1/2 FIPS
I	ELECTRICAL CONNECTION - MOTORS	10 HP *
J	ELECTRICAL CONNECTION - BOOSTER	9/24 KW
K	ELECTRICAL CONNECTION - BOOSTER	9/24 KW

NOTES:

1. WASH TANK IS FILLED THROUGH THE BOOSTERS AND CONTROLLED AUTOMATICALLY.
 2. MACHINE WILL PASS THROUGH A 37" DOOR OPENING WITH COUNTERWEIGHT SPRING AND EXTERIOR RINSE PIPING DETACHED.
- * ADD 5 KW FOR ELECTRIC HEATED MACHINE.

SERVICE NETWORK LISTING 3/8/2004

ALABAMA

Total Equipment Service Co.

2302 3rd St.
Attala, AL 37954
256.538-0261
Service Mgr.:
Email:

Jones-McLeod Appliance Service

1616 7th Avenue, North
Birmingham, AL 35203
205.251-0159
205.322-1440 (fax)
800.821-1150
www.jones-mcleod.com
Service Mgr.: Glenn
McCauley
Email:
glenn@jonesmcleod.com

Greene's Service Company

3515 Spann St.
Harvest, AL 35810
256.859-1816
Service Mgr.: Richard
Greene
Email:

ALASKA

J & J Service

5001 Eagle St.
Anchorage, AK 99503
907.561-1060
Service Mgr.:
Email:

ARIZONA

Commercial Food Equipment

2010 E. University Drive
#23
Tempe, AZ 85281
480.927-9262
480.927-9266 (fax)
Service Mgr.:
Email:

ARKANSAS

Bromley Parts and Service, Inc.

10th & Ringo.
Little Rock, AR 72201
501.374-0281
501-374-8352 (fax)
800-482-9249
www.bromleyparts.com
Service Mgr.:
Email:

Scott Service Co., Inc.

7123 I-30, Suite 51
Little Rock, AR 72209
501.562-1863
501.562-2308 (fax)
Service Mgr.:
Email:

SERVICE NETWORK LISTING 3/8/2004

CALIFORNIA

Ridge Electric Motor Company
1235 G St.
Fresno, CA 93706
209.268-5031
Service Mgr.:
Email:

P & D Appliance
100 S. Linden Ave.
South San Francisco, CA 94080
800-424-1414
650-635-1900
650-635-1919 (fax)
Service Mgr.:
Email:
www.pndappliance.com

Sterling Service
664 W. Hawthorne St.
Glendale, CA 91204-1002
818.243-1234
818.243-4021 (fax)
800.396-0010
www.sterlingsrv.com
Service Mgr.:
Email:
service@sterlingsrv.com

P & D Appliance
4220 "C" Roseville Rd
North Highlands, CA 95660
800-824-7219
916-974-2774 (fax)
Service Mgr.:
Email:
www.pndappliance.com

Commercial Appliance
165 Commerce Circle, Suite B
Sacramento, CA 95815
916.567-0203
916.567-0324 (fax)
800.464-2222
www.commercialappliance.com
Service Mgr.: Jim Mucher
Email:
jim@commercialappliance.com

Magna Mechanical³
724 Ave. B, Suite A
National City, CA 91950
619 239-8008
Service Mgr.:
Email:

Chapman Appliance Service
1784 San Diego Ave.
San Diego, CA 92110
619.298-7106
619.298-7591 (fax)
Service Mgr.: Douglas R. Paton
Email: cas1@att.net

SERVICE NETWORK LISTING 3/8/2004

COLORADO

Sammons Refrigeration

2938 Janitell Rd.
Colorado Spring, CO
80906
719.538-9165
719.538-9170 (fax)
Service Mgr.:
Email:

Metro Appliance Service

1640 S. Broadway
Denver, CO 80210
303.778-1126
303.778-0268 (fax)
800.525-3532
www.metroapplianceservice.com
Service Mgr.: Robert Merrill
Email: metroappls@aol.com

General Parts

4910 Fox Street, Unit F
Denver, CO 80239
303-373-2724 (fax)
Service Mgr.:
Email:

General Parts

Colorado Springs, CO
80901
Service Mgr.:
Email:

General Parts

Fort Collins, CO 80535
Service Mgr.:
Email:

All-Temp

Grand Junction, CO
970-757-7184

CONNECTICUT

A-Tech Service

161 San Rico Dr.
Manchester, CT 06045
860.649-6627
860.649-7882 (fax)
800.832-8324
Service Mgr.:
Email:

DELAWARE

**Insinger Machine
Company¹**

6245 State Road
Philadelphia, PA 19135
215.624-4800
215.624-6966 (fax)
800.344-4802
www.insingermachine.com
Service Mgr.:
Email:

SERVICE NETWORK LISTING 3/8/2004

D.C., WASHINGTON

**Equipment Engineering
Co, Inc.**

7573 Gary Road
Manassas, VA 22110
703.631-1575
703.369-2082 (fax)
Service Mgr.:
Email:

**Electric Motor Repair
Co.**

5316 Sunyside Ave.
Beltsville, MD 20705
301-931-7000
301-931-3060 (fax)
800-348-2365
Service Mgr.: Rick Lee
Email:

FLORIDA

**Commercial Appliance
Service**

8416 Laurel Fair Circle
Building 6, Suite 114
Tampa, FL 33610
813.663-0313
813.663-0212 (fax)
800.282-4718
www.comapp.com
Service Mgr.:
Email:

BGSI, Inc

3121 NW 16th Terrace
Pompano Beach, FL
33064
954.971-0456
954.973-1825 (fax)
800.253-0200
www.bgsiflorida.com
Service Mgr.:
Email:
service@bgsiflorida.com

Whaley FoodService Repairs

8421 Atlantic Blvd.
Jacksonville, FL 32211-8737
904.725-7800
904.725-7828 (fax)
800.824-5843
www.whaleyfoodservice.com
Service Mgr.: Jeff Quattlebaum
Email:
jeff.quattlebaum@whaleyfoodservice.com

JS Equipment

19881 Date Palm Drive
Sugarloaf Key, FL 33042
305.745-3289
Service Mgr.:
Email:

Specialty Marine Supply

2057 Mayport Rd.
Atlantic Beach, FL 32233
904.247-3303
904.247-6403 (fax)
Service Mgr.:
Email:

A.L.T. Service Company

5621 Crawfordville Rd.
Tallahassee, FL 32310
850.878-5343
850.656-6810 (fax)
Service Mgr.:
Email:

**Commercial Appliance
Repair**

9507 Sandpiper St.
Pensacola, FL 32514
850.478-5533
850.478-7062 (fax)
Service Mgr.:
Email:

BGSI, Inc

3311 Bartlett Ave.
Orlando, FL 32811
407.316-8010
407.316-0279 (fax)
888.399-2474
www.bgsiflorida.com
Service Mgr.:
Email:

Washtex Professional

8241 SW 204th Street
305-254-9274
305-254-0031 (fax)
Service Mgr.:
Email:

SERVICE NETWORK LISTING 3/8/2004

GEORGIA

Total Service of Albany

835 Flint Ave.
Albany, GA 31701
912.888-2302
912.883-1548 (fax)
800.648-8321
Service Mgr.:
Email:

**Food Equipment
Technology**

4786 Lakepark Court
Lilvern, GA 30247
770.638-8600
770.275-6585 (fax)
770.377-5382 (cell)
Service Mgr.:
Email:

SRS (Atlanta)

2200 Norcross Parkway
Suite 210
Norcross, GA 30071
800-235-6516
770-446-6177
770-446-3157 (fax)
Service Mgr.:
Email:

**Whaley FoodService
Repairs**

109-A Owens Industrial
Drive
Savannah, GA 31405
912.447-0827
912.447-0826 (fax)
www.whaleyfoodservice.com
Service Mgr.:
Email:

**TWC Services (formerly
Adcox)**

5368 N Pkwy
Lake City, GA 30260
404-361-8010
Service Mgr.: Glen Adcox
Email:

Frothingham Commercial Services

PO Box 320
Evans, GA 30809-0320
706.863-8609
Service Mgr.:
Email:

HAWAII

**Food Equipment Service
Company**

300 Puuhale Rd.
Honolulu, HI 96819
808.847-4871
808.842-1560 (fax)
Service Mgr.:
Email:

IDAHO

Ron's Service

703 E. 44th St., Suite 10
Boise, ID 83714
208.375-4073
208.375-4402 (fax)
Service Mgr.: Lonnie
Robinson
Email:
lrobinson@ronsservice.com
www.ronsservice.com

SERVICE NETWORK LISTING 3/8/2004

ILLINOIS

Eichenauer Services

1066 McClure
Peria, IL 61604
217.359-4200
217.398-2960 (fax)
www.esquality.com
Service Mgr.: Vern Clifton
Email:
vern4esi@esquality.com

**Major Appliance Service
(Chicago)**

4330 Prescott Ave.
Lyons, IL 60534
708.447-4100
708.447-4157 (fax)
Service Mgr.:
Email:

Cone's Repair Service

2408 40th Ave.
Moline, IL 61265
309.797-5323
309.797-3631 (fax)
800.716-7070
www.cones.com
Service Mgr.:
Email: service@cones.com

Eichenauer Services

130 S. Oakland
Decatur, IL 62522
217.429-4229
217.429-0226 (fax)
www.esquality.com
Service Mgr.:
Email:

General Parts

248 James Street
Bensenville, IL 60106
630-595-3300
630-595-0003 (fax)
Service Mgr.:
Email:

INDIANA

**Commercial Parts &
Service**

5310 E. 25th St.
Indianapolis, IN 46218
317.251-9255
317.549-6282 (fax)
800.727-8710
www.commercialparts.com
Service Mgr.:
Email:

General Parts

Indianapolis, IN
800-880-3604
800-880-5027 (fax)
Service Mgr.:
Email:

IOWA

Cones Repair Service, Inc.

1056 27th Ave., SW
Cedar Rapids, IA 52404
319.365-3325
800.716-7070
Service Mgr.:
Email:

**Goodwin Service Co.,
Inc.**

2900 Delaware Ave.
Des Moines, IA 50317
515.262-9308
515.262-2936 (fax)
800.372-6066
www.goodwintucker.com
Service Mgr.:
Email:

SERVICE NETWORK LISTING 3/8/2004

KANSAS

General Parts

Topeka, KS 66614
816-421-5400
Service Mgr.:
Email:

General Parts

Northrock Business Park
8200 E 34th Street Circle
North
Bldg #1800, Suite 1803
Wichita, KS 67201
Service Mgr.:
Email:

Sunflower Rest.

1647 Sunflower Lane
Salina, KS 67402
785-823-6394
Service Mgr.:
Email:
www.sunflower.net.com

KENTUCKY

Quality Kitchen Service

2221 Buechell Ave.
Louisville, KY 40218
502.499-5850
502.499-5852 (fax)
800.999-5850
Service Mgr.:
Email:

Certified Service

127 Dishman Lane
Bowling Green, KY
42101
270-783-0012
800-907-0012
270-783-0058 (fax)
Service Mgr.:
Email:

Certified Service

4283 Produce Road
Louisville, KY 40218
502-964-7007
800-637-6350
502-964-7202 (fax)
Service Mgr.: Don Roenigk
Email: droenigk@certifiedsc.com

Certified Service

1051 Goodwin Drive
Lexington, KY 40505
859-254-8854
800-432-9269
859-231-7781 (fax)
Service Mgr.: Cassie Walker
Email:
cwalker@certifiedsc.com

SERVICE NETWORK LISTING 3/8/2004

LOUISIANA

Chandler's Parts & Service

11656 Darryl Drive
Baton Rouge, LA 70815
225.272-6620
225.272-7168 (fax)
800.569-9905
www.chandlerparts&service.com
Service Mgr.:
Email:

AM Services

5901 Catina St.
New Orleans, LA 70124
504.482-2302
504.488-7268 (fax)
504.830-9044 (pgr)
Service Mgr.:
Email:

Bana Commercial Kitchen Parts

4028 Greenwood Rd.
Shreveport, LA 71109
318.631-6550
318.636-5675 (fax)
800.832-6550
Service Mgr.:
Email:

Reliance Commercial Service

5515A Pepsi St.
Harahan, LA 70123
504.734-8864
504.733-2559 (fax)
800.499-2351
Service Mgr.:
Email:

Trademasters. Inc.

430 31st Street
Suite 801
Kenner, LA 70065
504-467-8028
504-468-6046
Service Mgr.:
Email:
trademasters@bellsouth.net

Rabalais Service

2357 Robelies Drive
Maurice, LA 70535
337.984-5788
337.298-1356 (cell)
Service Mgr.:
Email:

LeBlanc Associates

248 Thompson Rd
Houma, LA 70363
504.876-7982
504.876-7989 (fax)
800.294-2653
Service Mgr.:
Email:

MAINE

MRES

101 John Roberts Rd.
Unit #12
South Portland, ME 04106
207.772-1152
207.772-1445 (fax)
Service Mgr.:
Email:

SERVICE NETWORK LISTING 3/8/2004

MASSACHUSETTS

Ace Service
95 Hampton Ave.
Needham, MA 02194
781.449-4220
781.444-4789 (fax)
800.225-4510
www.aceserviceco.com
Service Mgr.:
Email:
service@aceserviceco.com

MRES
34 South St.
Somerville, MA 02143
617.868-1930
617.868-5331 (fax)
800.338-6737
Service Mgr.:
Email:

MARYLAND

Electric Motor Repair Co.
700 E. 25th Street
Baltimore, MD 21218
410.467-8080
410.467-4191 (fax)
800.879-4994
www.emrco.com
Service Mgr.: Bob Schmid
Email: cfsales@emrco.com

Electric Motor Repair Co.
106 Williamsport Circle
Salisbury, MD 21801
410.543-8080
410.548-4038 (fax)
877-753-8080
www.emrco.com
Service Mgr.: Don Chesser
Email: cfsales@emrco.com

Electric Motor Repair Co.
5316 Sunyside Ave.
Beltsville, MD 20705
301-931-7000
301-931-3060 (fax)
800-348-2365
Service Mgr.: Rick Lee
Email:

**Electric Motor Repair Co.
(Northeast MD)**
104 E. Scotland Drive
Bear, DE 19701
302-994-3887
302-834-5596 (fax)
888-687-8080
Service Mgr.: Jay Driver
Email: cfsales@emrco.com

SERVICE NETWORK LISTING 3/8/2004

MICHIGAN

A&R Repairs Baker's Kneads
24551 Ryan Rd.
Warren, MI 48091 (near Detroit)
810.758-4440
810.758-0740 (fax)
800.852-2261
Service Mgr.:
Email:

**Midwest Food Equipment
Service**
3055 Dixie Ave.
Grandville, MI 49418
616.261-2000
616.261-2020 (fax)
800.288-7050
Service Mgr.:
Email:
www.mfeservice.com

MINNESOTA

Metro Appliance Service
2857 Louisiana Ave., North
New Hope, MN 55427
612.546-4221
612.546-4286
800.345-4221
Service Mgr.:
Email:

General Parts
11311 Hampshire Ave.
South
Bloomington, MN 55438
952-944-5800
952-944-7101 (fax)
Service Mgr.:
Email:

MISSISSIPPI

Camp Service & Parts, Inc.
328-B Oakdale St.
Jackson, MS 39202
601.353-9700
601.354-2940 (fax)
800.748-8793
Service Mgr.:
Email:

CRESCO, Inc.
651 35th St.
Gulfport, MS 39506
228.864-3950
228.864-5134 (fax)
Service Mgr.:
Email:

KenJeter Store Equipment
5124 Cliff Gooken Blvd.
Tupelo, MS 38801
601-844-1192
601-844-1310 (fax)
Service Mgr.:
Email:

SERVICE NETWORK LISTING 3/8/2004

MISSOURI

Kaemmerlen Parts & Service

1539 S King's Highway

St. Louis, MO 63110

314.535-2222

314.535-6205 (fax)

www.kps-stl.com

Service Mgr.: Don Bickell

Email: service@kps-stl.com

Service One

5812 Goves Lane

Jefferson City, MO 65101

573.659-7508

573.635-5835 (fax)

Service Mgr.:

Email:

General Parts

1101 E 13th Street

Kansas City, MO 64106

816-421-5400

816-421-1270 (fax)

Service Mgr.:

Email:

General Parts

Springfield, MO 65801

816-421-5400

Service Mgr.:

Email:

General Parts

St. Joseph, MO 64501

816-421-5400

Service Mgr.:

Email:

MONTANA

Appliance & Equipment

Repair

4705 Mallard Way

Missoula, MT 59808

406.549-7122

Service Mgr.:

Email:

NEBRASKA

Goodwin-Tucker Service

Group

815 N. 19th Street

Omaha, NE 68102

402.345-7403

402.346-6145 (fax)

800.228-0342

www.goodwintucker.com

Service Mgr.:

Email:

NEVADA

Burney's Commercial Service

4480 Alderbaran Ave.

Las Vegas, NV 89109

702.736-0006

702.798-7531 (fax)

Service Mgr.:

Email:

**Hi Tech Commercial
Service**

PO Box 364419

N Las Vegas, NV 89036

702-649-4616

702-798-7531 (fax)

Service Mgr.:

SERVICE NETWORK LISTING 3/8/2004

NEW HAMPSHIRE

MRES

34 South St.
Somerville, MA 02143
617.868-1930
617.868-5331 (fax)
800.338-6737
Service Mgr.:
Email:

NEW JERSEY

Insinger Machine Company ¹

6245 State Road
Philadelphia, PA 19135
215.624-4800
215.624-6966 (fax)
800.344-4802
www.insingermachine.com
Service Mgr.:
Email:

Service Plus

178 Route 206 North
Flanders, NJ 07836
973-691-6300
973-691-2070 (fax)
800-339-6302
Service Mgr.:
Email:

NEW MEXICO

R&B Comm'l Service Inc.

PO Box 36378
Albuquerque, NM 87176
505-889-4090
505-889-3845 (fax)
www.rbcommercialservice.com
Service Mgr.: Bill Krum
Email: bill@rbcommserv.com

SERVICE NETWORK LISTING 3/8/2004

NEW YORK

B.E.S.T.

2133 Genesee Street
Buffalo, NY 14211
716.893-6464
716.893-6466 (fax)
800.338-5011
Service Mgr.:
Email:

Duffy's Restaurant Service

3138 Oneida Street
Sauquoit, NY 13456
315.737-9401
315.737-7132 (fax)
800.836-1014
www.duffysequipmentservice.com
Service Mgr.:
Email:

Summit Restaurant Repair

272 Elmont Rd.
Elmont, NY 11003
516.326-7900
516.326-8021 (fax)
800.675-7560
Service Mgr.:
Email:

Pro Teck (Metro NY)

349 W John Street
Hicksville, NY 11801
866-773-7717
516-681-3134
Service Mgr.:
Email: proteckny@aol.com

Action Service

45 S. Fagan Ave.
Schenectady, NY 12304
518.377-0911
518.377-1704 (fax)
Service Mgr.:
Email:

Quality Restaurant Repair

134 N. Montgomery St.
Walden, NY 12586
845-778-3554
845-778-1221 (fax)
Service Mgr.:
Email:

Northern Parts and Service

171 S. Catherine Street
Plattsburgh, NY 12901
518.563-3200
800.782-5424 (fax)
800.634-5005
www.northernparts.com
Service Mgr.: Dale
Email:
dale@northernparts.com

All Pro (Metro NY)

718-386-2515
718-417-6380 (fax)

SERVICE NETWORK LISTING 3/8/2004

NORTH CAROLINA

Whaley FoodService Repairs

8334-K Arrowridge Blvd.

Charlotte, NC 28273

704.529-6242

704.529-1558 (fax)

800.877-3599

www.whaleyfoodservice.com

Service Mgr.:

Email:

Whaley FoodService Repairs

203-D Creek Ridge Rd.

Greensboro, NC 27406

336.333-2333

336.333-2533 (fax)

800.800-0807

www.whaleyfoodservice.com

Service Mgr.:

Email:

Whaley FoodService Repairs

335-105 Sherwee Dr.

Raleigh, NC 27603

919.779-2266

919.779-2224

800.849-6011

www.whaleyfoodservice.com

Service Mgr.:

Email:

Whaley FoodService Repairs

6418-101 Amsterdam Way

Wilmington, NC 28405

910.791-0000

910.791-6020

800.758-2314

www.whaleyfoodservice.com

Service Mgr.:

Email:

Authorized Comm. Equip. Svc.

800 N. Person Street

Raleigh, NC 27604

919-834-3476

919-834-3477 (fax)

Service Mgr.: Lewis Dickerson

Email:

ldickerson@authorizedinc.com

Authorized Comm. Equip. Svc.

904 South Marshall Street

Winston-Salem, NC 27101

336-725-5396

336-721-1289 (fax)

Service Mgr.: Debbie Manring

Email:

dmanring@authorizedinc.com

Authorized Comm. Equip. Svc.

109 Hinton Ave., Suite 4

Wilmington, NC 28403

910-313-1250

910-313-6130 (fax)

Service Mgr.: Ed Allery

Email:

eallery@authorizedinc.com

SERVICE NETWORK LISTING 3/8/2004

NORTH DAKOTA

Dakota Food Equipment Service
P.O. Box 2925
1802 1st Avenue, S.
Fargo, ND 58108
701.232-4428
800.437-4076
Service Mgr.:
Email:

General Parts
10 South 18th Street
Fargo, ND 58103
701-235-4161
701-235-0539 (fax)
Service Mgr.:
Email:

OHIO

Electrical Appliance Repair
5805 Valley Belt Rd.
Cleveland, OH 44131
216.459-8700
216.459-8707 (fax)
800.621-8259
Service Mgr.:
Email:

Certified Service
171J-K N. Hamilton Road
Columbus, OH 43213
614-751-3768
614-751-5792 (fax)
866-862-1252
Service Mgr.: Jim Atkins
Email:
jatkins@certifiedsc.com

DMO Food Equipment Services
8400 Sweet Valley Dr.
Cleveland, OH 44125
216.328-0600
216.328-0604 (fax)
800.837-0605
www.dmoservice.com
Service Mgr.:
Email:

Certified Service
6025 N. Dixie Drive
Dayton, OH 45414
937-898-4040
800-257-2611
937-898-4177 (fax)
Service Mgr.: Dumeta Harvey
Email:
dharvey@certifiedsc.com

Certified Service
890 Redna Terrace
Cincinnati, OH 45215
513-772-6600
800-543-2060
513-612-6600 (fax)
Service Mgr.: Jon Colegrove x6620
Email:
jcolegrove@certifiedsc.com
Parts Manager: Joe Bruce x6105
Email:
jbruce@certifiedsc.com

Certified Service
890 Redna Terrace
Cincinnati, OH 45215
513-772-6600
800-543-2060
513-612-6600 (fax)
Service Mgr.: Jon Colegrove x6620
Email:
jcolegrove@certifiedsc.com
Parts Manager: Joe Bruce x6105
Email:
jbruce@certifiedsc.com

The Wichman Company
1720 Arlington Ave.
Toledo, OH 43537
419.385-9121
Service Mgr.:
Email:

Commercial Parts & Service
204 Linden Avenue
Dayton, OH 45403
513.259-0091
513.259-0753 (fax)
800.589-5251
Service Mgr.: Rob
Email:

Commercial Parts & Service
Cincinnati, OH
800-837-2828
513-984-2111 (fax)
Service Mgr.: Rick
Email:

SERVICE NETWORK LISTING 3/8/2004

OKLAHOMA

Krueger Electric Service
100 NE 24th Street
Oklahoma City, OK 73105
405.528-8883
405.528-5405 (fax)
Service Mgr.:
Email:
Tulsa office:
918-438-3455

Robbins Restaurant Repair
PO Box 851155
1000 W Main
Yukon, OK 73085
405-239-7777
405-980-7356 (pager)
405-350-0980(fax)
Service Mgr.:
Email:

OREGON

Arent Machinery Company
(NAVY)
15815 SE 135th Ave.
Clackamas, OR 97015
503.657-3000
503.657-7792 (fax)
800.547-2527
Service Mgr.:
Email:

Ron's Service
16364 SW 72nd Ave.
Portland, OR 97224-7750
503.624-0890
503.684-6107 (fax)
800.851-4118
www.ronsservice.com
Service Mgr.:
Email:

PENNSYLVANIA

Commercial Kitchen Service
223 Church St.
Carrolltown, PA 15722
814.344-8100
Service Mgr.:
Email:

**Insinger Machine
Company**
6245 State Road
Philadelphia, PA 19135
215.624-4800
215.624-6966
National 800.344-4802
www.insingermachine.com
Service Mgr.:
Email:

K&D Service Company
1833-41 N. Cameron St.
Harrisburg, PA 17103
717.236-9039
717.238-4367 (fax)
800.932-0503
Service Mgr.:
Email:
www.kdfactoryservice.com

**Joseph T. Berrena
Mechanicals**
RR 2 Box 253
Petersburg, PA 16669-9314
814-667-4466
814-667-2902 (fax)
Service Mgr.:
Email: jtberrena@aol.com

Koonse
5510 Brownsville Road
Pittsburgh, PA 15236
412-653-1359
412-653-0334 (fax)
800-310-3848
Service Mgr.:
Email:
www.koonse.com

SERVICE NETWORK LISTING 3/8/2004

RHODE ISLAND

Food Equipment Service

200 Broad St.
Providence, RI 02903
401.331-1163
401.521-5560
Service Mgr.:
Email:

MRES

170 Amaral Street
East Providence, RI 02914
Service Mgr.:
Email:

SOUTH CAROLINA

Whaley FoodService Repair

748 Congaree Rd.
Greenville, SC 29607
864.234-7011
864.234-6662 (fax)
800.494-2539
www.whaleyfoodservice.com
Service Mgr.:
Email:

Whaley FoodService Repair

4740-A Franchise St.
N. Charleston, SC 29419
843.760-2110
843.760-2255 (fax)
www.whaleyfoodservice.com
Service Mgr.:
Email:

Whaley FoodService Repair

P.O. Box 4023
West Columbia, SC 29171
803.791-4420
803.794-4630 (fax)
800.877-2662
www.whaleyfoodservice.com
Service Mgr.:
Email:

Whaley FoodService Repair

1406-C Commerce Place
Myrtle Beach, SC 29577
843.626-1866
843.626-2632 (fax)
www.whaleyfoodservice.com
Service Mgr.:
Email:

Authorized Comm. Equip. Svc.

1811 Taylor St.
Columbia, SC 29201
803-254-8414
803-254-5146 (fax)
Service Mgr.: Jim Glickman
Email:
jglickman@authorizedinc.com

Authorized Comm. Equip. Svc.

2249 Augusta St.
Greenville, SC 29605
864-235-9616
864-235-9623 (fax)
Service Mgr.: Darrell Darnell
Email:
ddarnell@authorizedinc.com

SOUTH DAKOTA

Hogg Restaurant Service

821 Railroad Ave.
Aberdeen, SD 57401
605.225-1845
605.225-0569 (fax)
800.456-1469
Service Mgr.:
Email:

SERVICE NETWORK LISTING 3/8/2004

TENNESSEE

Food Equipment Service Co.

1209 S. Watkins Street
Chattanooga, TN 37403

615.624-3383 (fax)
800.727-8447

www.fesco-tenn.com

Service Mgr.: Vicki

Email:

ATECH, Inc.

900 East Hills Ave.,
Suite 135

Knoxville, TN 37915
865.522-0777

865.522-4060 (fax)

800.492-0777

Service Mgr.:

Email:

ATECH, Inc.

424 6th Ave., South
Nashville, TN 37203

615.255-2002

615.255-2698 (fax)

800.700-9192

Service Mgr.:

Email:

EverQuip

1687 Shelby Oaks Drive North
Suite 6

Memphis, TN 38134

901.379-0900

901.379-0935

Service Mgr.:

Email:

TEXAS

Allan's Tri-State Service

404 S. Hayden
Amarillo, TX 79101

806.376-8345

806.416-6912 (fax)

800.227-9022

www.allentri.com

Service Mgr.:

Email:

Stove Parts

2120 Solana St.

P.O. Box 14009

Ft. Worth, TX 76117

817.831-0381

817.834-7754 (fax)

800.433-1804

www.stoveparts.com

Service Mgr.:

Email:

Thermal Control, Inc.

3509 Duranzo

El Paso, TX 79905

915.544-6634

915.533-6973 (fax)

Service Mgr.:

Email:

Armstrong Repair Center

1700 S. Lamar Blvd., #327

Austin, TX 78704

512.416-1101

512.416-6912 (fax)

800.392-5322

Service Mgr.:

Email:

Stove Parts

5110 Glenmont Drive

Houston, TX 77081

713.666-7100

713.665-5542 (fax)

800.392-5325

Service Mgr.:

Email:

GCS

10850 Sanden Drive

Dallas, TX 75238

214.340-2228

214.340-2363 (fax)

800.536-2228

Service Mgr.:

Email:

Dowell Commercial Service

3736 W.O.W Ave.

Corpus Christi, TX 78413

540.855-0633

540.854-7028 (fax)

800.242-5928

Service Mgr.:

www.dowellcommercialservice.com

Commercial Kitchen Repair

1377 N. Brazos

San Antonio, TX 78207

210.735-2811

210.735-7421 (fax)

800.292-2120

www.commercialkitchen.com

Trejo

7010 Industrial Ave.

El Paso, TX 79915

915-771-8206

915-771-8440 (fax)

Service Mgr.:

Email:

SERVICE NETWORK LISTING 3/8/2004

TEXAS (cont'd)

Denton Rest. Equip. Svc.

1427 Noble Street
Denton, TX 76209
940-465-4195

UTAH

GCS

1370 S. 400 West
Salt Lake City, UT 84115
801.487-3653
801.487-2253 (fax)
800.955-9201
Service Mgr.:
Email:

VIRGINIA

D.W. Boyd Company³

4003 Colley Ave.
Norfolk, VA 23508
757.423-2268
757.423-1868 (fax)
www.dwboyd.com
Service Mgr.:
Email:

Electric Motor Repair Co.

5875 Barclay Drive
Alexandria, VA 22315
703-922-3887
703-922-3889 (fax)
800-394-3887
Service Mgr.: Jack Lawrence
Email:

Daubers, Inc.

5255 Henneman Drive
Norfolk, VA 23513
757-855-4097
757-855-1795 (fax)
Service Mgr.: Randy Bryant
Email: randy@daubers.com

Daubers, Inc.

2407 Ownby Lane
Richmond, VA 23220
804-359-9065
804-359-4331 (fax)
800-273-9593
Service Mgr.: Jim Wolfe
Email: jim@daubers.com

Daubers, Inc.

7645 Dynatech Court
Springfield, VA 22153
703-866-3600
800-554-7788 (fax)
703-866-4071
Service Mgr.: Wayne Clark
www.daubers.com
Email: wayne@daubers.com

**Equipment Engineering
Co, Inc.**

7573 Gary Road
Manassas, VA 22110
703.631-1575
703.369-2082 (fax)
Service Mgr.:
Email:

WASHINGTON STATE

ARHA Total Service, Inc

313 S. 4th St.
Pasco, WA 99301
509.547-3799
509.547-6355 (fax)
Service Mgr.:
Email:

**Restaurant Appliance
Service**

7219 Roosevelt Way, NE
Seattle, WA 98115
206.524-8200
206.525-2890 (fax)
Service Mgr.:
Email:

SERVICE NETWORK LISTING 3/8/2004

WEST VIRGINIA

Statewide Service

603 Main Ave.
Nitro, WV 25143
304.755-1811
304.755-4001 (fax)
800.441-9739
Service Mgr.:
Email:

WISCONSIN

Appliance Service Center

2439 Atwood Ave.
Madison, WI 53704
608.246-3160
608.246-2721 (fax)
800.236-7440
Service Mgr.:
Email:

General Parts

6633 West National
Milwaukee, WI 53214
414-257-4008
800-279-9978 (fax)
800-279-9976
www.generalparts.com
Service Mgr.:
Email:

General Parts

W 223 N 735 Saratoga
Drive
Waukesha, WI 53186
262-650-6666
262-650-6660 (fax)
Service Mgr.:
Email:

General Parts

Madison, WI 53716
800-279-9976
Service Mgr.:
Email:

General Parts

Green Bay, WI 54303
800-279-9976
Service Mgr.:
Email:

General Parts

Eagle River, WI 54521
800-279-9976
Service Mgr.:
Email:

General Parts

Sheboygan, WI 53083
800-279-9976
Service Mgr.:
Email:

WYOMING

**Ericksons Commercial
Service**

721 Terry Ranch Road
Cheyenne, WY 82007
307.637-4424
Service Mgr.:
Email:

SERVICE NETWORK LISTING 3/8/2004

CANADA

VAS Restuarant Equip Service
3105 Unity Drive
Mississauga, Ontario
Canada L5L 4L2
905.828-5808
905.828-7505 (Fax)
Service Mgr.:
Email:

Sure-Fix Food Equipment Service
188 Queenston Street
St. Catherines, Ontario
Canada L2R 2Z7
905.544-4664
905.685-1156 (fax)
Service Mgr.:
Email:

HRD Kitchen Services
4475 Rouen St.
Montreal, Que
Canada H1V 1H1
514.254-9956
514.251-2562 (fax)
Service Mgr.:
Email:

GUAM

Cabuhat Technical Sales
PO Box 20207
G.M.F, GUAM 96921
671.653-7307
671.653-7307 (fax)
Service Mgr.:
Email:

PUERTO RICO

Leodi International
Maestro Cordero
Haeto Rey, Puerto Rico
809.751-3412
Service Mgr.:
Email:

BERMUDA

D.E. Mortimer & Co. LTD.
#2 Harvey Rd.
Paget, Bermuda HMAX
809.236-8848
809.236-1350 (fax)
Service Mgr.:
Email:

JAMAICA

Econergy Engineering Services
PO Box 352
Main St.
Ocho Rio, Jamaica
809.974-2981
809.974-5064 (fax)
Service Mgr.:
Email:

Insinger provides this SERVICE NETWORK LISTING to its customers as an aid to the efficient servicing of their Insinger equipment.

The following Codes give specific details about off-hour service the service agency's provide: Codes

- 1 24 hour service
- 2 24 hour service guaranteed within 4 hours
- 3 Marine Service Agency

When contacting the service agency's or the factory for service please have the machine model and serial number available.

Insinger reserves the right to change these companies as necessary. For an updated listing, or to check on these companies, please contact our Technical Services Deartment, 800.344-4802.

Thank You.

Insinger Machine Company



PART 2
INSTALLATION and OPERATION
INSTRUCTIONS



**POT and PAN WASHER
 MODEL: CA-3/CA-3C/DA-3
 INSTALLATION INSTRUCTIONS
 Part 2, Section A**

2.A.1 PLACEMENT

- 2.A.1.1 Carefully uncrate machine. Take caution to not damage components which may be mounted on the top or sides of the machine.
- 2.A.1.2 Set unit in place and adjust the feet to level the machine.
- 2.A.1.3 Fasten the tables to the load and unload side of the machine. Most installations require fastening the turn-down lip of the dish tables to the side of the machine with flathead counter-sunk screws. The table design should provide horizontal clearance of 30" for servicing.

2.A.2 ELECTRICAL CONNECTIONS

2.A.2.1 Connect electrical lines sized for the correct voltage, current and phase of the machine. These should agree with machine requirements indicated on the nameplate and labels in control panel. This Fuse Sizing Chart should be used as a guide for proper line protection:

Caution

Connections must be made to a circuit breaker or fused disconnect as provided by the end-user and required by local codes. A laminated wiring diagram is inside the control panel

Fuse Sizing Chart

Model	208VAC/3Ø	230VAC/3Ø	380VAC/3Ø	460VAC/3Ø
CA-3(C) steam heat	25A	20A	15A	10A
CA-3(C) electric heat	35A	35A	20A	20A
CA-3(C) gas heat	25A	20A	15A	10A
DA-3 steam heat	40A	35A	25A	20A
DA-3 electric heat	60A	50A	30A	25A

POT and PAN WASHER
MODEL: CA-3/CA-3C/DA-3
INSTALLATION INSTRUCTIONS
Part 2, Section A

- 2.A.2.2 On machines not provided with a single-point connection there is an electrical connection required for the, 1. Pumps and control circuit, and Wash tank heater.
- 2.A.2.3 If an electrical booster is provided connect the power directly to the booster.

Caution

As with any 3 phase system, an electrician must check all motors for proper phasing, i.e., Pump motors must be running in direction indicated by arrow on housing.

2.A.3 MECHANICAL CONNECTIONS

- 2.A.3.1 Connect 140°F water lines for tank fills/booster as tagged and noted on the installation drawings.
- 2.A.3.2 If machine is provided with steam heat connect the steam lines and steam condensate lines as tagged and noted on installation drawings.
- 2.A.3.3 Connect the drain line.

Caution

Drain lines must be as specified on installation drawings. Drain line should be properly vented and should have fall of not less than $\frac{1}{4}$ " to the foot of proper flow. Some area plumbing codes require drains to flow into an open gap with an opening twice the diameter of the pipe. Check with your local plumbing codes for the type of drain connection required.

Caution

All lines must be flushed prior to use to remove debris.

Caution

Do not reduce the size of lines as specified in installation drawings. All lines are sized to facilitate necessary flows, pressures, etc.



**POT and PAN WASHER
MODEL: CA-3/CA-3C/DA-3
INSTALLATION INSTRUCTIONS
Part 2, Section A**

2.A.4 HVAC

2.A.4.1 Ventilation system should be sized to provide adequate ventilation per machine specs. Refer to spec sheet.

2.A.5 CHEMICALS

2.A.5.1 Upon completed installation of the dishwasher contact a local detergent/chemical supplier for the correct chemicals for your area.

2.A.5.2 Electrical connection points for the detergent dispenser and rinse injector are located inside the control panel. Refer to the wiring diagram for this machine for the proper connection points. Dispensers may be connected on either the primary voltage side of the machine or the 24VAC control voltage side.

Caution

When connecting on the 24VAC control voltage side of the transformer, total VA must not exceed 50VA.

2.A.5.3 The detergent density probe should be installed in the hole provided & labelled in the wash tank.

2.A.5.4 The switch on the control panel labelled "Manual" and the switch labelled "Wash" may be used when de-liming the machine. When activated, these switches keep the machine in an indefinite wash cycle. This feature can also be used to wash heavily soiled ware.

2.A.6 Tabling

2.A.6.1 Load and unload tables should be pitched towards the machine to return excess water into the machine.



**POT and PAN WASHER
MODEL: CA-3/CA-3C/DA-3
OPERATION & CLEANING INSTRUCTIONS
Part 2, Section B**

Insinger dishmachines are user-friendly, making them the easiest dishwashers to operate and maintain.

By following the operation procedure and general cleaning procedures your Insinger dishwasher will give you years of trouble free service.

2.B.1 Operation Instructions

- 2.B.1.1 Ensure drain overflow tube is in place. Close the tank drain valve.
- 2.B.1.2 Check for proper installation and cleanliness of all internal, removable components such as suction strainers, scrap screens, and rotating spray pipes.
- 2.B.1.3 Ensure all water, and steam, lines are open. Ensure electrical circuits are on.
- 2.B.1.4 Close machine doors.
- 2.B.1.5 Move the power toggle switch to the "ON" position. The machine will fill the tank, run through a complete wash/rinse cycle and shut-off.
- 2.B.1.6 When the tank is full the tank heat will operate automatically. Proper tank heat is 150°F.

Caution

To ensure proper operation of the auto tank fill feature and the tank heaters, level float(s) located in each tank **MUST** be cleaned daily

- 2.B.1.7 Open doors.
- 2.B.1.8 Insert a rack of soiled dishware in machine (two racks for the DA-3) and lower doors. Machine will wash and rinse automatically. When the rinse indicator light goes off the cycle is complete.

Note

Overloading racks will minimize the proper cleaning of ware.

Warning

Do not open the doors during the wash/rinse cycle as hot water is being sprayed. An interlock is provided to stop the wash/rinse cycle if the doors are opened but the momentum of the spinning hubs will cause hot water to be sprayed.

POT and PAN WASHER
MODEL: CA-3/CA-3C/DA-3
OPERATION & CLEANING INSTRUCTIONS
Part 2, Section B

- 2.B.1.9 Raise doors and remove rack of clean ware. For continuous operation repeat steps B.1.9 and B.1.10.
- 2.B.1.10 Upon completion of ware cleaning move the power toggle switch to the "OFF" position.
- 2.B.1.11 Refer to the cleaning procedures for proper clean-up of the dishmachine.
- 2.B.1.12 Report any unusual occurrences to qualified service personnel.

The following cleaning procedures should be done daily, at the end of the shift.

2.B.2 Cleaning Procedures, Daily

- 2.B.2.1 Remove all internal removeable parts including rotating spray pipes, scrap screens, drain overflow tubes, suction strainers and curtains.
- 2.B.2.2 Remove the end caps from the spray manifolds and clean with the brush provided. Flush the manifolds.

Note

Do not remove wash and rinse spray arms from the hubs as these are factory set. Cleaning should be done by removing the endcap on each arm.

- 2.B.2.3 Flush scrap screens.
- 2.B.2.4 Clean drain overflow tube.

Note

V-cup seal on the drain overflow tube may become gummed and not allow the overflow tube to seat properly. This will cause the drain to leak water. Remove any build-up on the v-seal. When the seal becomes worn, replace.

- 2.B.2.5 Clean suction strainers of build-up.

Note

Improper cleaning of suction strainers will cause the pumps to cavitate. This will cause poor washing results.



PART 3
MAINTENANCE and REPAIR
PROCEDURES



**POT and PAN WASHER
MODEL: CA-3/CA-3C/DA-3
MAINTENANCE & REPAIR PROCEDURES
Part 3, Section A**

Following is a basic guide for the repair and replacement of common dishwasher parts. Refer to the Basic Service Guide for troubleshooting tips.

3.A.1 MAINTENANCE

3.A.1.1 Daily - Refer to the operation and cleaning instructions provided in this manual for daily cleaning procedures.

3.A.1.2 Weekly

3.A.1.2.1 The entire machine should be wiped down using an industrial grade stainless steel cleaner.

3.A.1.2.2 Under the supervision of your detergent supplier the machine interior must be properly de-limed.

Note

The water quality in some areas requires de-liming to be done more frequently. Contact your detergent supplier for recommended de-liming frequency.

3.A.1.3 Quarterly

3.A.1.3.1 Remove and clean the strainer screens on water and steam lines. If the screens cannot be cleaned, replace.

3.A.1.3.2 Inspect condition of solenoid valve seats and diaphragms. Replace where necessary.

3.A.1.3.3 Inspect drain O-Rings for leakage. Replace where necessary.

3.A.1.3.4 Check door spring tension and adjust where necessary.

3.A.1.3.5 Check wash and rinse hub bushing/bearing and replace where necessary.

3.A.2 MAINTENANCE PROCEDURES

3.A.2.1 Solenoid Valve Disassembly

3.A.2.1.1 Disconnect power supply to machine. Turn off Water supply.

3.A.2.1.2 Remove cap on top of coil. Remove coil.

3.A.2.1.3 Remove 4 hex bolts and lift bonnet from valve body. Note positioning of spring and plunger.

3.A.2.1.4 Remove main piston.

3.A.2.1.5 Inspect for dirt, wear or lime build-up. Clean or replace as required.

3.A.2.1.6 Reassemble in reverse of disassembly.

POT and PAN WASHER
MODEL: CA-3/CA-3C/DA-3
MAINTENANCE & REPAIR PROCEDURES
Part 3, Section A

3.A.2.2 Line Strainer Disassembly

3.A.2.2.1 Shut off water or steam supply.

3.A.2.2.2 Remove large hex nut on bottom of strainer body.

3.A.2.2.3 Remove strainer screen. Inspect and clean or replace as necessary.

3.A.2.2.4 Reassemble in reverse of disassembly. Water flow must be same direction as arrow on line strainer body. Use new gaskets to insure a tight seal.

3.A.2.3 Pump Disassembly

3.A.2.3.1 Before disassembling pump ensure there are no obstructions in the pump intake. Remove and clean the suction strainer (inside tank).

Note

It is not necessary to remove the pump housing from the machine to disassemble the pump.

3.A.2.3.2 Remove the pump motor and impeller adaptor by removing the 4 hex bolts attaching them to the pump housing.

3.A.2.3.3 Repair or replace the pump parts as required.

3.A.2.3.4 Reassemble in reverse of disassembly.

3.A.2.4 Immersion Heater Replacement

Note

Immersion heaters **MUST** be completely submerged at all times. Running the heaters in air will cause the heater to prematurely fail.

3.A.2.4.1 Remove the housing covering the wiring terminations. Disconnect the immersion heater wires.

3.A.2.4.2 Remove the immersion heater by loosening and removing the large hex nut.



POT and PAN WASHER
MODEL: CA-3/CA-3C/DA-3
MAINTENANCE & REPAIR PROCEDURES
Part 3, Section A

3.A.2.4.3 Install in reverse of removal.

Note

To reduce the possibility of leaking, use plumbers putty on the immersion heater nuts.

3.A.2.5 Wash Tank Temperature Adjustment

3.A.2.5.1 A temperature control board is provided in the control panel for easy adjustment of tank temperature. Though tank temperature is adjusted during the machines factory test it is sometimes necessary to re-adjust the temperature.

3.A.2.5.2 Locate the temperature control board (P/N DE9-96). Use the control panel layout drawing located in Part 4, Electrical Schematic and Replacement Parts.

3.A.2.5.3 Adjust the tank temperature to the desired temperature by turning the potentiometer located on the temperature control board. An arrow on the potentiometer indicates increase.

3.A.2.5.4 If the temperature does not change refer to section A.2.6, Troubleshooting Tank Temperatures.

3.A.2.6 Troubleshooting Tank Temperatures

3.A.2.6.1 Electric Heat

3.A.2.6.1.1 If temperature cannot be adjusted per section A.2.5 check the temperature control board P/N DE9-96 proper operation. If the temperature control board is faulty, replace.

3.A.2.6.1.2 Verify tank heat contactor is working correctly. If not, replace.

3.A.2.6.1.3 Verify all immersion heaters are working properly and not limed. If not, replace.

3.A.2.6.2 Steam Heat

3.A.2.6.2.1 See Section A.2.6.1.1.

3.A.2.6.2.2 Verify steam pressure per machine specifications.

3.A.2.6.2.3 Verify steam trap is not clogged. IF so, clean or replace.

3.A.2.6.2.4 Verify proper operation of steam solenoid. If not, replace.

3.A.2.6.3 Gas Heat

3.A.2.6.3.1 See Section A.2.6.1.1.

3.A.2.6.3.2 Verify gas supply.

3.A.2.6.3.3 Verify pilot is lit. If not, light. If pilot does not stay lit, replace.

3.A.2.6.3.4 Verify gas solenoid is working correctly. If not, replace.

POT and PAN WASHER
MODEL: CA-3/CA-3C/DA-3
MAINTENANCE & REPAIR PROCEDURES
Part 3, Section A

3.A.2.7 Motor Overloads

3.A.2.7.1 All motors used on Insinger Machines are provided with motor overloads. Motor overloads are adjusted when the machines are factory tested. Should it be necessary to adjust the motor overloads first verify the motor current draw for the voltage the machine is using.

3.A.2.7.2 Using the Control Panel Component Layout Drawing located in Section 4 to identify the overload, adjust by turning the dial to the appropriate current draw.

3.A.2.8 Level System

3.A.2.8.1 The level control system consists of one timer (P/N DE7-31) and two level floats (P/N DE5-60) per tank.

3.A.2.8.2 The level timer will not allow the tank heat to energize without water in the tank.

3.A.2.8.3 Should the tank heat energize with out water in the tank troubleshoot the system to find the problem.

Caution

Dirty level floats may cause the tank heat to energize with no water in the tanks.

LEVEL FLOATS MUST BE CLEANED DAILY.

3.A.2.9 Wash and Rinse Cycle

3.A.2.9.1 The timing sequence consists of two timers. The CA-3, CA-3C, and DA-3 use 1, five minute timer adjusted to 120 seconds for the wash cycle (P/N DE7-28) and 1, one minute timer adjusted to 15 seconds (P/N DE7-27). Should either of these become defective, replace.

BASIC SERVICE GUIDE

SYMPTOM	POSSIBLE CAUSE	Solution
1. Machine will not operate	a. No Power b. Blown fuse or tripped breaker c. Motor overloads tripped	a. Check power supply b. Replace fuse; reset breaker c. Reset overload
2. Tank will not hold water	a. Drain not closed b. Drain overflow not seated or installed c. Pump petcock opened	a. Close drain b. Reseat or install drain overflow c. Replace V-seal
3. Tank fills beyond overflow	a. Obstruction in overflow tube or drain line	a. Remove obstruction
4. Water leaks around door	a. Doors not seating b. Clogged spray pipe	a. Reseat doors b. Clean spray pipe with brush provided
5. Weak or ineffective spray	a. Clogged spray pipe b. Manifolds not installed properly c. Obstruction in pump d. Pump rotation reversed e. Suction strainer clogged	a. Clean spray pipe with brush pipe b. Ensure proper placement of upper and lower pipes c. Clear obstruction through pump inspection plate d. Arrow on pump housing indicates direction, correct electrically e. Clean suction strainer

BASIC SERVICE GUIDE

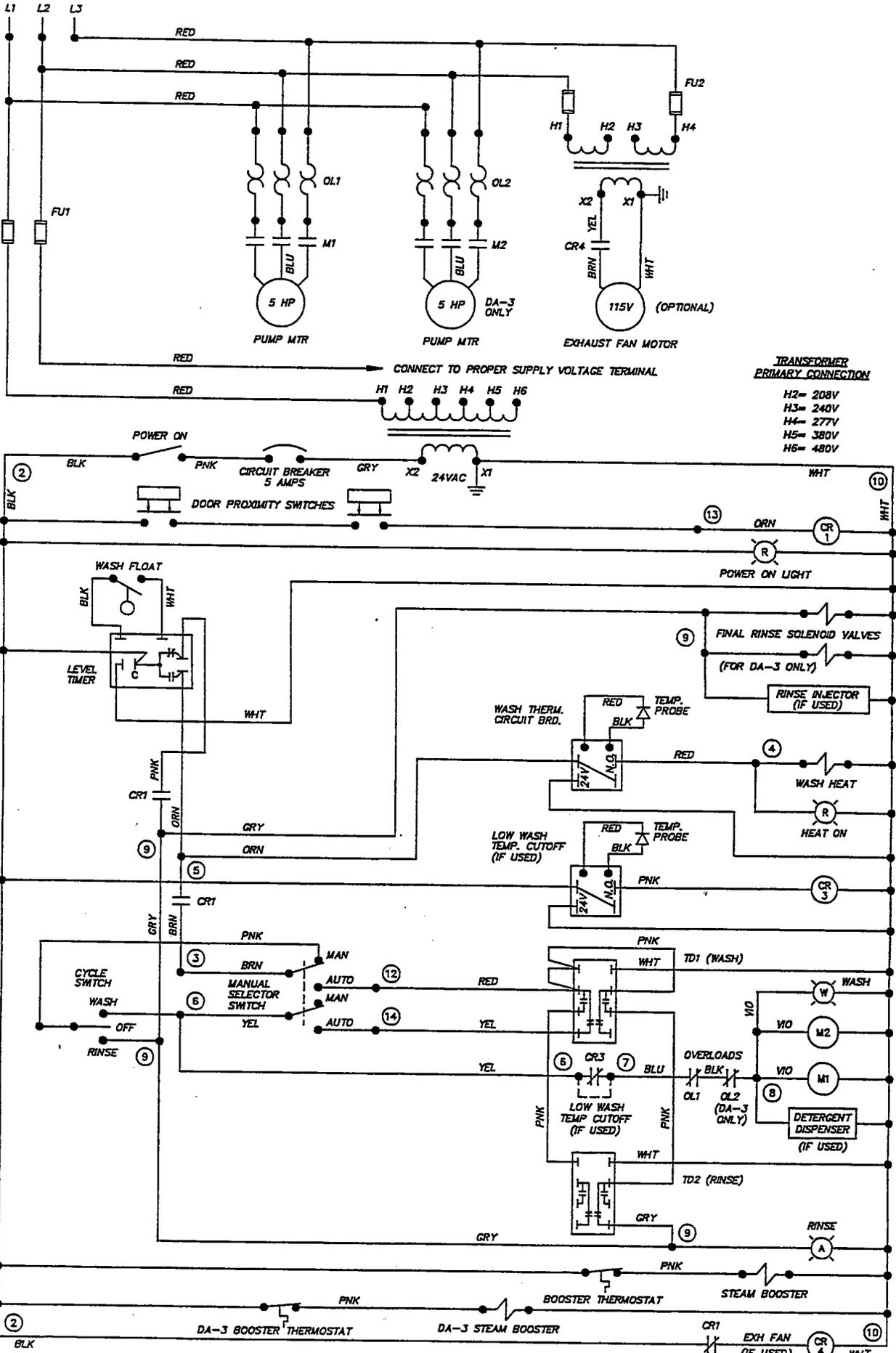
SYMPTOM	POSSIBLE CAUSE	Solution
6. Weak or ineffective final rinse spray	<ul style="list-style-type: none"> a. Lime deposits in spray nozzles b. Low water pressure c. Clogged line strainer d. Closed water supply valve 	<ul style="list-style-type: none"> a. Clean or replace nozzles b. Adjust to 20PSI c. Remove line strainer and clean d. Open ball valve
7. Water hammer	<ul style="list-style-type: none"> a. Excessive water line pressure 	<ul style="list-style-type: none"> a. Install water hammer limiting device
8. Machine vibrates or is noisy	<ul style="list-style-type: none"> a. Pump rotation reversed b. Pump bearings worn 	<ul style="list-style-type: none"> a. Arrow on pump housing indicates direction, correct electrically b. Replace pump bearings
9. Final rinse will not shut off	<ul style="list-style-type: none"> a. Final rinse solenoid valve clogged b. Diaphragm worn c. Solenoid valve still powered-up 	<ul style="list-style-type: none"> a. Disassemble valve and clean internal parts of scale or replace b. Replace with solenoid valve repair kit c. Check final rinse actuating circuit for proper operation

BASIC SERVICE GUIDE

SYMPTOM	POSSIBLE CAUSE	Solution
10. Tank not filling/tank heat coming on with no water in tank	a. Level float dirty b. Level control system not working	a. Clean level float with Scotch-Brite or equivalent - two floats per tank b. Troubleshoot level control circuit
11. Tank temperature too low/high	a. Thermostat not adjusted b. Heat circuitry not working c. Electric heat, power turned off d. Electric heat, immersion heaters limed e. Steam heat, steam turned off f. Steam heat, not enough steam g. Steam heat, condensate traps clogged h. Gas heat, gas turned off i. Gas heat, pilot not lit	a. Adjust thermostat located in control panel b. Troubleshoot circuitry c. Turn power on d. De-lime machine e. Turn steam on f. Adjust steam pressure per machine spec's g. Clean or replace condensate traps h. Turn on gas i. Re-light pilot

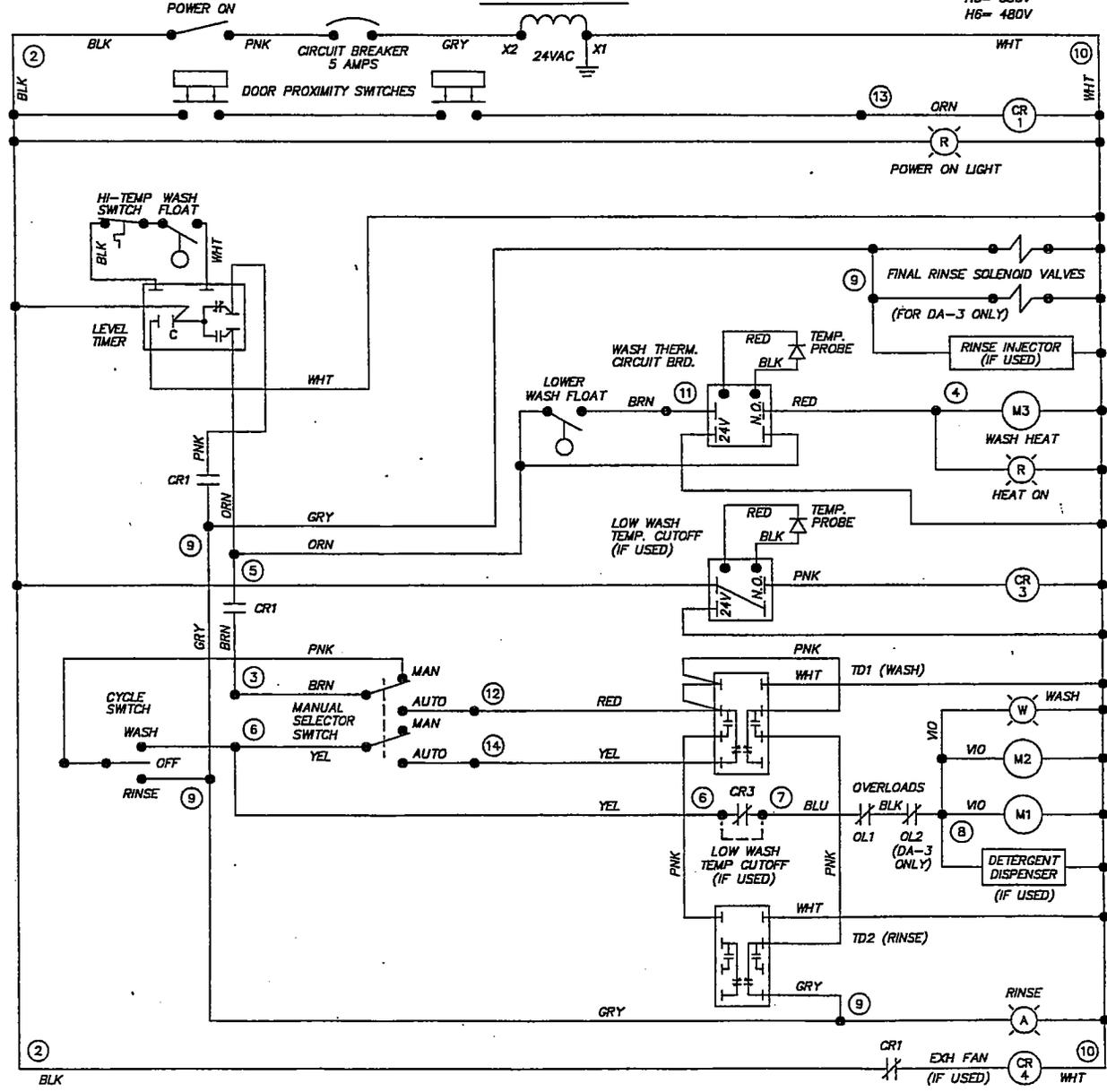
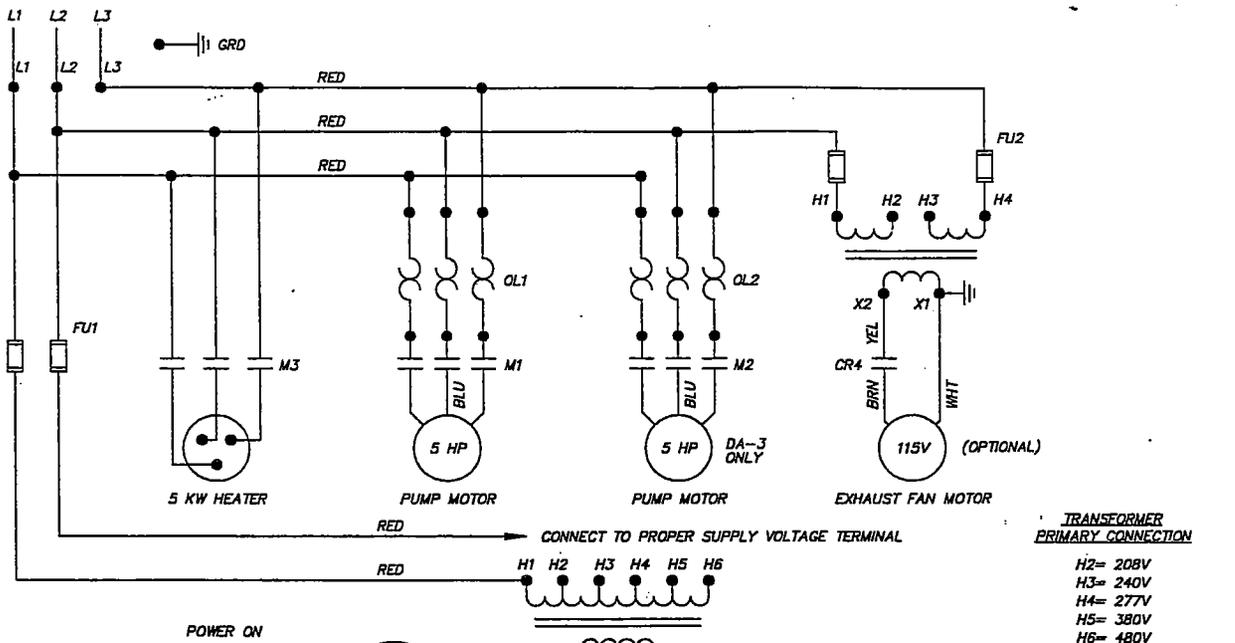


PART 4
ELECTRICAL SCHEMATICS and
ELECTRICAL REPLACEMENT PARTS



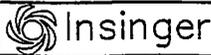
NOTES:
 1. IF NO LOW TEMP CUTOFF IS SPECIFIED, A JUMPER IS PROVIDED BETWEEN TERMINALS 6 & 7.

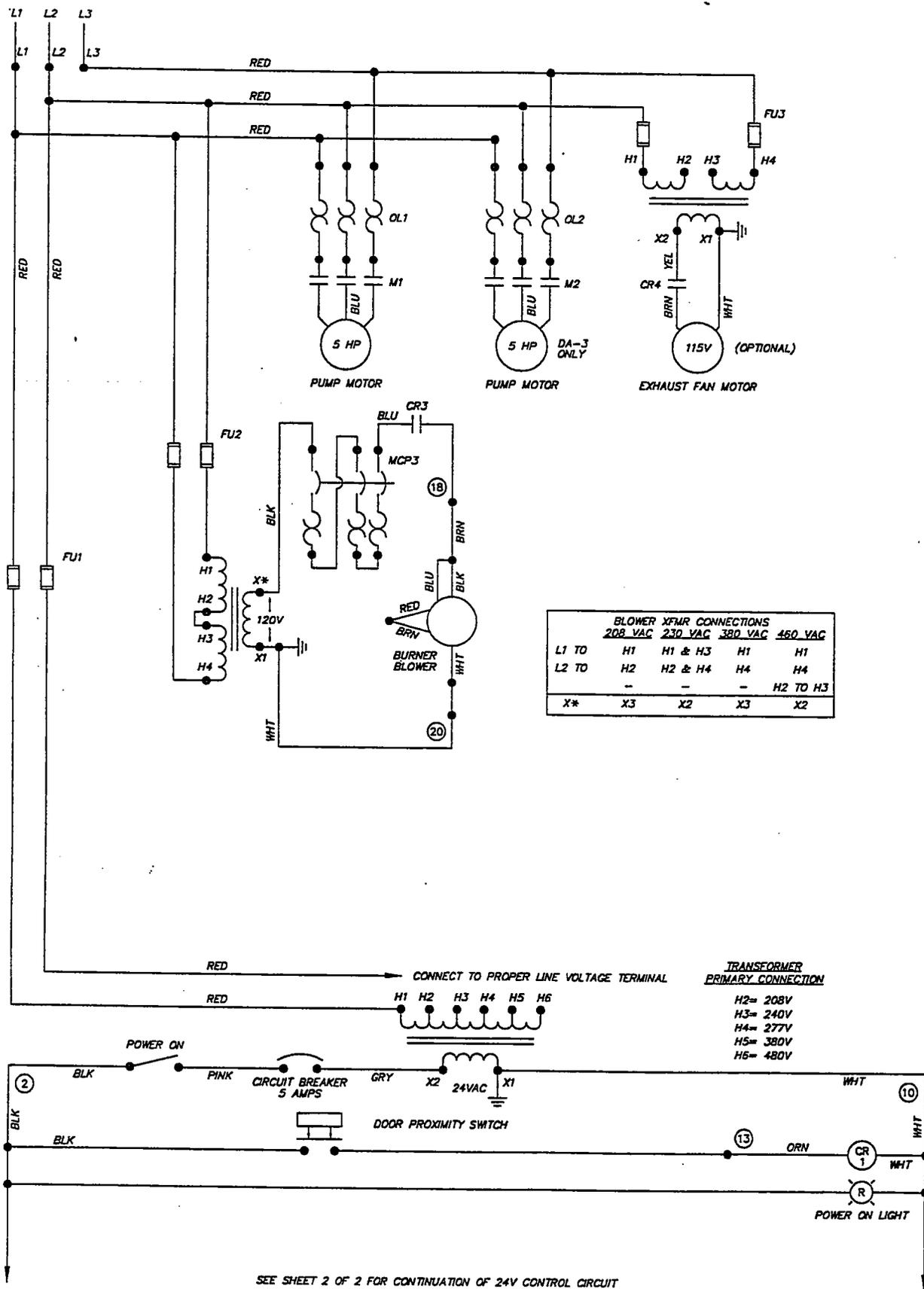
TITLE			CA-3, DA-3	DWG. NO.	WPW010
REV			ECN NO	DATE	DRWN/DATE
FILE: WIRE WPW010			Philadelphia, PA 19135 (215) 624-4800		RAF



NOTES:
 1. IF NO LOW TEMP CUTOFF IS SPECIFIED, A JUMPER IS PROVIDED BETWEEN TERMINALS 6 & 7.

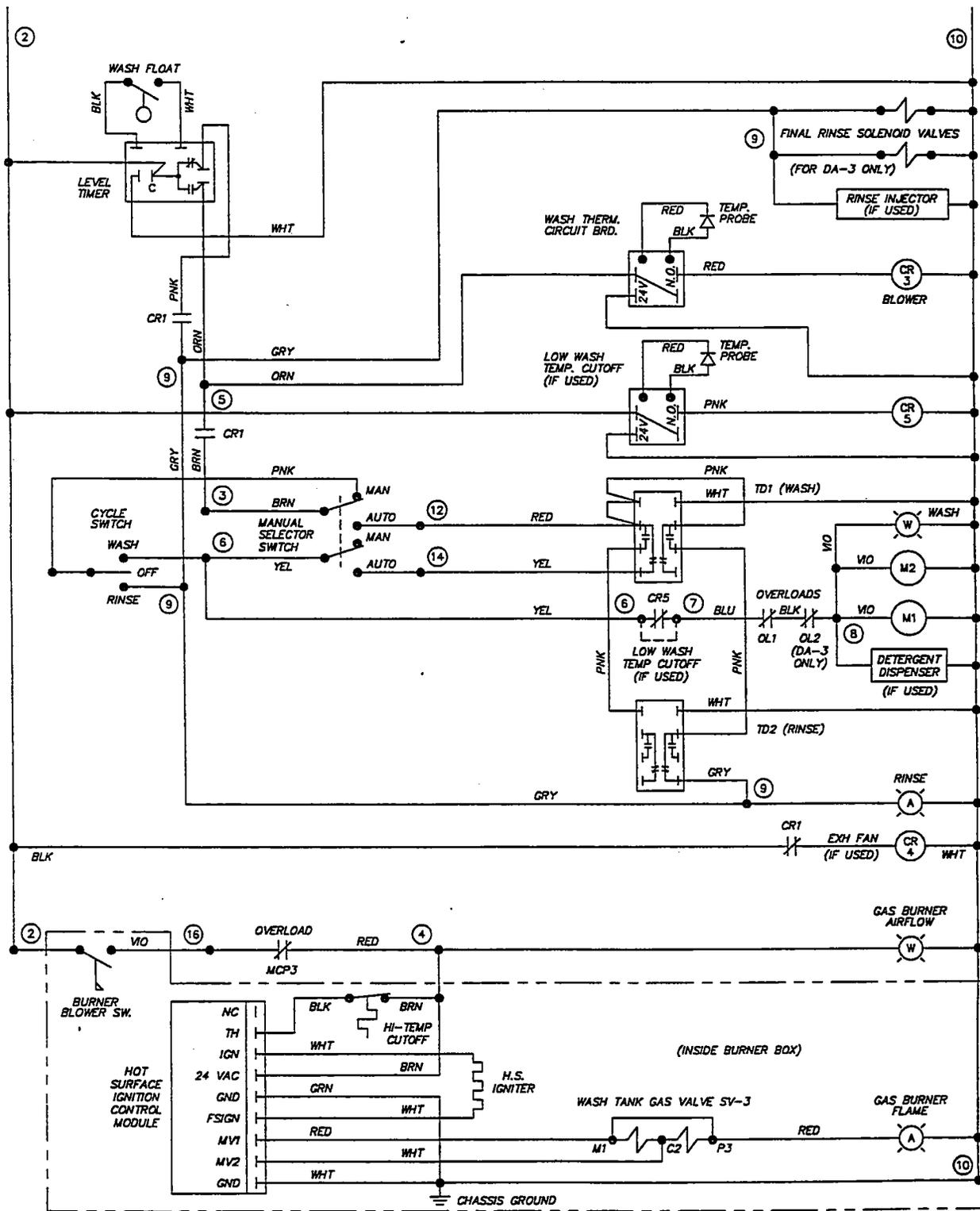
REV	ECN NO	DATE	TITLE	DWG. NO.
R	1988	7.7.03	CA-3, DA-3 ELECTRIC HEAT	WPW020
Q	1824	11.13.00		
REV	ECN NO	DATE	Philadelphia, PA 19135 (215) 624-4800	DRWN/DATE RAF
FILE: WRE\WPW020			FAX (215) 624-6966	06.23.95





SEE SHEET 2 OF 2 FOR CONTINUATION OF 24V CONTROL CIRCUIT

			TITLE	CA-3, DA-3 GAS HEAT	DWG. NO.	WPW070
REV	ECN NO	DATE			Philadelphia, PA 19135	DRWN/DATE
FILE: WRE\WPW070					(215) 624-4800	MFJ
					FAX (215) 624-6966	



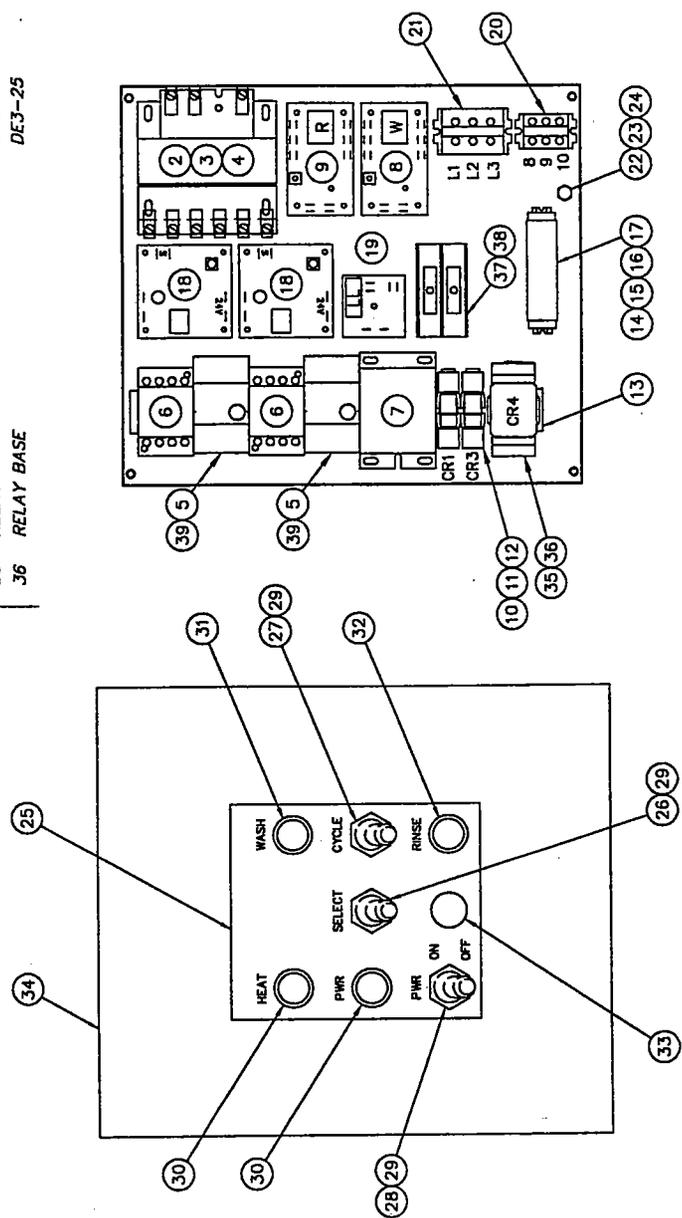
SHT 2 OF 2

NOTES:

- IF NO LOW TEMP CUTOFF IS SPECIFIED, A JUMPER IS PROVIDED BETWEEN TERMINALS 6 & 7.

TITLE		CA-3, DA-3 GAS HEAT	DWG. NO. WPW070
REV	ECN NO	DATE	DRWN/DATE
FILE: WIRE \WPW070			MFJ 10.1.96
		Philadelphia, PA 19135 (215) 624-4800 FAX (215) 624-6966	

ITEM	DESCRIPTION	PART NO.	QTY	ITEM	DESCRIPTION	PART NO.	QTY	ITEM	DESCRIPTION	PART NO.	QTY
37	FUSE BLOCK (100 VA FAN XFMR)	DE9-185	1	26	SELECTOR SWITCH	DE5-11	1	1	COMPONENT MOUNTING PLATE	SK-3825	1
38	FUSE (100 VA TRANSFORMER PRIMARY)	DE9-166	2	27	CYCLE SWITCH	DE5-16	1	2	TRANSFORMER (150 VA, 24 VAC)	DE6-9	1
		DE9-168		28	SWITCH, DPDT (POWER ON)	DE5-11	1	3	FUSE BLOCK KIT (150 VA XFMR)	DE9-164	1
		DE9-200		29	BOOT	DE9-13	3	4	FUSE (150 VA TRANSFORMER PRIMARY)		2
		DE2-60		30	PILOT LIGHT (HEAT & PMR ON)	DE9-107	1		460 V	FNQ-R-1	
39	OVERLOAD BASE		AR	31	PILOT LIGHT (WASH)	DE9-108	1		380 V	FNQ-R-1.25	
				32	PILOT LIGHT (RINSE)	DE9-109	1		220 - 230 V	FNQ-R-2	
				33	CIRCUIT BREAKER (5A)	DE9-43	1		208 V	FNQ-R-2.25	
				34	CONTROL BOX	979-23	1	5	OVERLOAD RELAY (PUMPS)		AR
				35	RELAY	DE2-12	1		460/3/60	5.5-8 A	
				36	RELAY BASE	DE3-25	1		380/3/50	7-10 A	
									230/3/60	12-18 A	
									220/3/50	12-18 A	
									208/3/60	12-18 A	
6	CONTACTOR (PUMPS) SP4		AR	6	CONTACTOR (PUMPS) SP4		AR	6	CONTACTOR (PUMPS) SP4		AR
7	CONTACTOR (ELECT TANK HEAT)		1	7	CONTACTOR (ELECT TANK HEAT)		1	7	CONTACTOR (ELECT TANK HEAT)		1
									30 A RES		
8	TIME DELAY BOARD (WASH)	DE1-109	1	8	TIME DELAY BOARD (WASH)		1	8	TIME DELAY BOARD (WASH)		1
9	TIME DELAY BOARD (RINSE)	DE7-28	1	9	TIME DELAY BOARD (RINSE)		1	9	TIME DELAY BOARD (RINSE)		1
10	RELAY BASE	DE7-27	1	10	RELAY BASE		1	10	RELAY BASE		1
11	RELAY	DE2-37	AR	11	RELAY		AR	11	RELAY		AR
12	RELAY HOLD DOWN SPRING	DE2-38	AR	12	RELAY HOLD DOWN SPRING		AR	12	RELAY HOLD DOWN SPRING		AR
13	DIN RAIL (35 mm)	DE3-43	1	13	DIN RAIL (35 mm)		1	13	DIN RAIL (35 mm)		1
14	DIN RAIL (15 mm)	DE9-84	1	14	DIN RAIL (15 mm)		1	14	DIN RAIL (15 mm)		1
15	TERMINAL SECTION	DE3-42	16	15	TERMINAL SECTION		16	15	TERMINAL SECTION		16
16	TERMINAL END COVER PLATE	DE3-39	1	16	TERMINAL END COVER PLATE		1	16	TERMINAL END COVER PLATE		1
17	TERMINAL END CLAMP	DE3-40	2	17	TERMINAL END CLAMP		2	17	TERMINAL END CLAMP		2
18	TEMPERATURE CONTROL BOARD	DE3-41	AR	18	TEMPERATURE CONTROL BOARD		AR	18	TEMPERATURE CONTROL BOARD		AR
19	TIMER (LIQUID LEVEL)	DE9-251	1	19	TIMER (LIQUID LEVEL)		1	19	TIMER (LIQUID LEVEL)		1
20	TERMINAL BLOCK ASSY	DE7-35	1	20	TERMINAL BLOCK ASSY		1	20	TERMINAL BLOCK ASSY		1
21	TERMINAL BLOCK ASSY	DE3-9	1	21	TERMINAL BLOCK ASSY		1	21	TERMINAL BLOCK ASSY		1
22	GROUNDING STUD, 1/4-20	DE3-3	1	22	GROUNDING STUD, 1/4-20		1	22	GROUNDING STUD, 1/4-20		1
23	LOCKWASHER, 1/4	D309C-GC-4G	1	23	LOCKWASHER, 1/4		1	23	LOCKWASHER, 1/4		1
24	HEX NUT, 1/4-20	D313C-G5	1	24	HEX NUT, 1/4-20		1	24	HEX NUT, 1/4-20		1
25	LEGEND DECAL	D312C-GC-2	1	25	LEGEND DECAL		1	25	LEGEND DECAL		1
		SK-2622									



TITLE		CONTROL PANEL LAYOUT	
CA3 / DA3		1	
Insigner		Philadelphia, PA 19135	
(215) 624-4800		M/FJ	
FAX (215) 624-8966		11.1.95	
FILE: SKETCH/SK-3241		SCALE	
N	1857	2.15.01	1
M	1608	5.11.98	1
L	1583	12.1.97	1
REV	ECN NO	DATE	
	1-4		SK-3241

NOT SHOWN

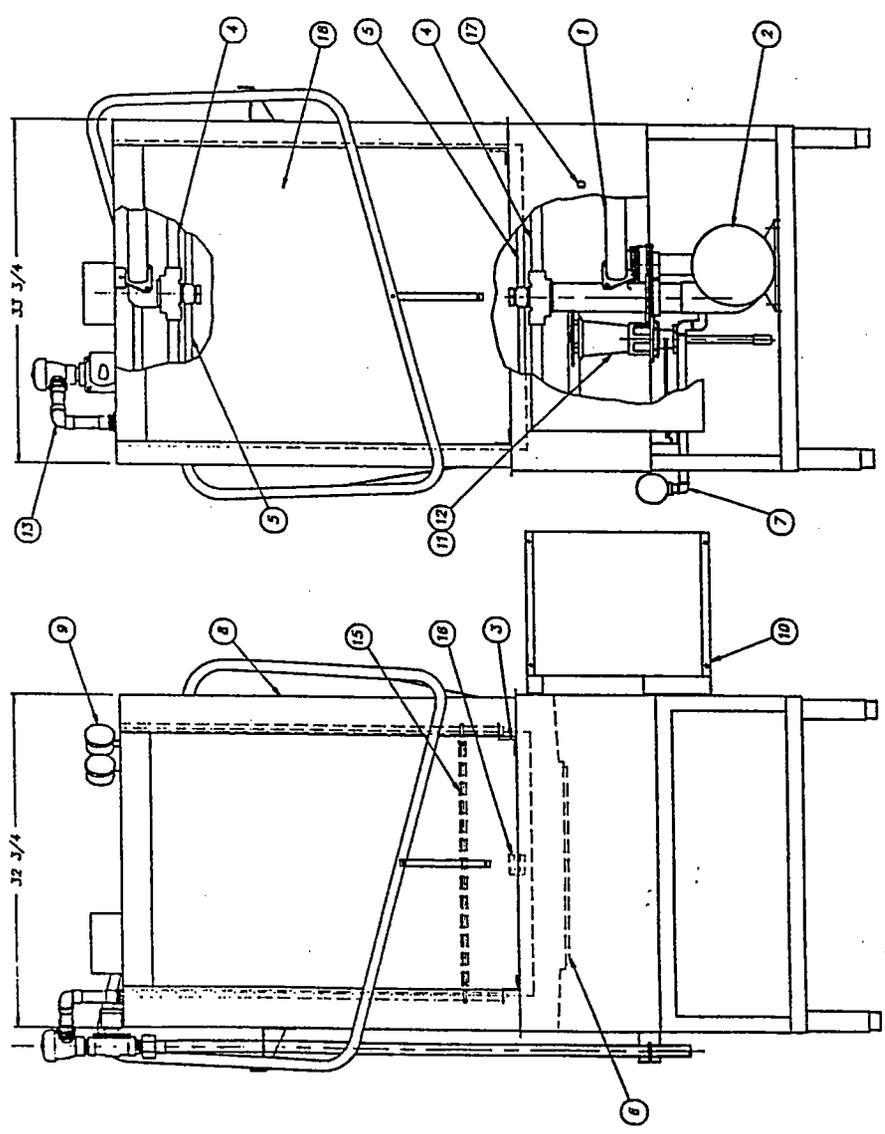
ELECTRIC IMMERSION HEATER (5 KW)
 440-480 V, 3 PH
 380 V, 3 PH
 220-240 V, 3 PH
 208V, 3PH
 DRY XFMR (100 VA FOR FAN)
 TEMPERATURE SENSOR

DE13-SD73
 DE13-SD53
 DE13-SD43
 DE13-SD23
 DE6-34
 DE9-252



PART 5
REPLACEMENT PARTS

ITEM	PART NO.	SIZE	DESCRIPTION	QTY.
1	1172-11	B	DISCHARGE LINE ASSEMBLY	1
2	1172-9	B	PUMP & MOTOR INSTALLATION	1
3	1414-13	B	TRACK ARRANGEMENT	1
4	1172-17	A	SPRAY NOZZLE ASS'Y - WASH	2
5	1172-20	A	SPRAY NOZZLE ASS'Y - RINSE	2
6	1414-28	B	SCRAP SCREEN ARRANGEMENT	1
7	1414-48	A	PRESSURE GAGE INSTALLATION	1
8	1414-2	B	SHELL ASSEMBLY	1
9	925-25	A	THERMOMETER LOCATION	1
10	1414-19	A	CONTROL BOX LOCATION	1
11	954-1A	A	DRAIN ASSEMBLY	1
12	925-52	A	DRAIN HANDLE	1
13	1172-28	B	FINAL RINSE PIPING W/ ST. BOOSTER	1
14	1414-27	B	FINAL RINSE PIPING W/ ELEC. BOOSTER	1
15	1172-47	B	STEAM PIPING (INJECTOR)	1
16	1414-20	B	GRID INSTALLATION	1
17	D2626	A	PROXIMITY SWITCH LOCATION	1
18	1414-34	A	ELEC. HEATER, LIQ. LEVEL PROBE LOC.	1
19	1414-45	B	DOOR ASSEMBLY	1

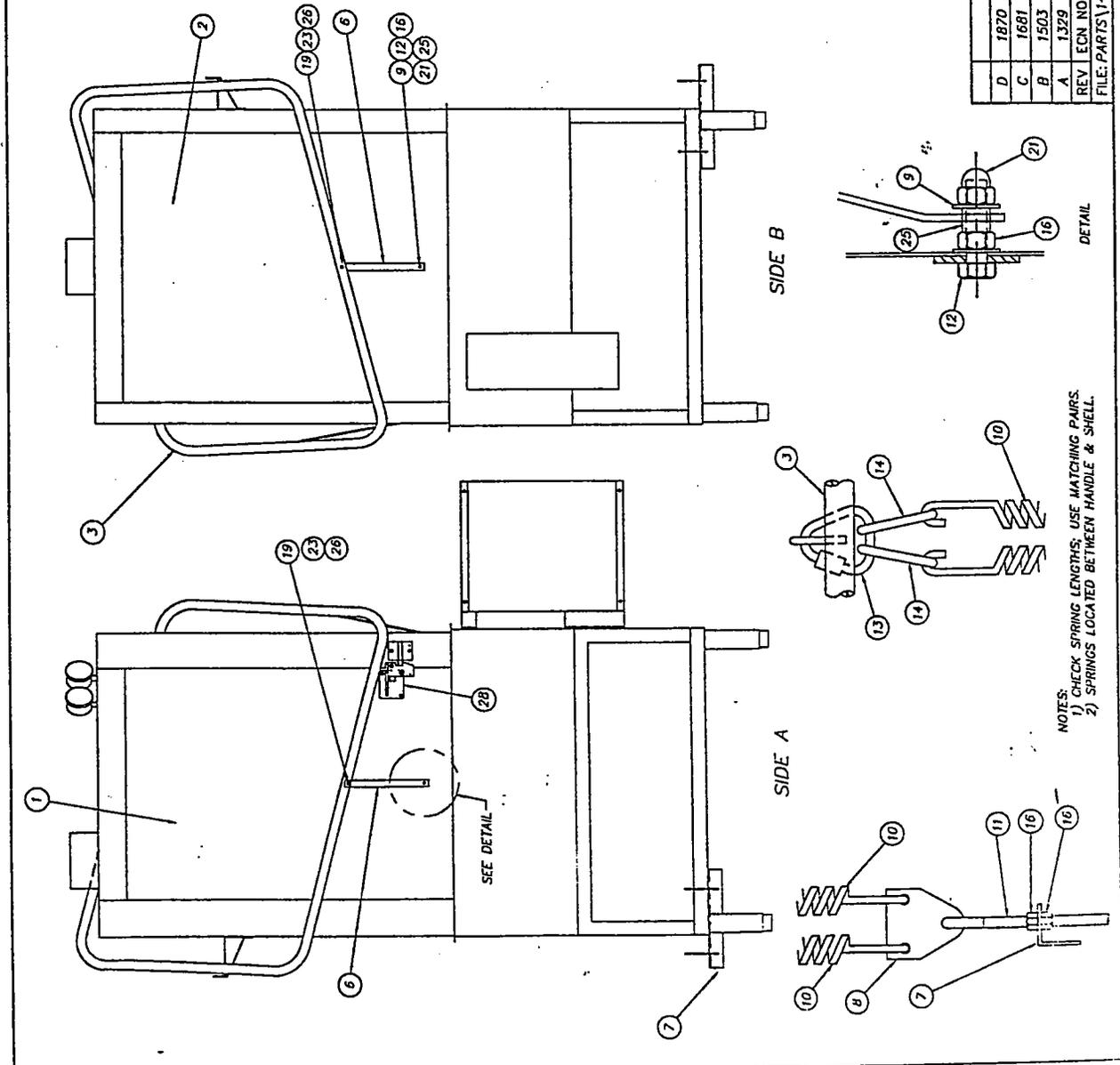


SIDE B

SIDE A

TOLERANCES	TITLE	GENERAL ASSEMBLY	NEXT ASST'DWG. NO.
FRACTIONS ±1/64	CA-JC	NOTED	REQD 1 1414-1
DECIMALS	WATL	SCALE 1=12	USED ON CA-JC
XXX ± .005			
XX ± .01			
ANGLES ±1/2°			
UNLESS OTHERWISE SPECIFIED			
REV. ECN NO. DATE	Insinger Machine Company Philadelphia, PA 19135 (215) 624-4800 FAX (215) 624-6868		
FILE: PARTS 1414-1	DRWN/DATE PC 1.28.94		

ITEM	PART NO.	SIZE	DESCRIPTION	QTY.
1	1414-38	B	DOOR, SIDE "A" (29")	1
2	1414-6	B	DOOR, SIDE "B" (29")	1
3	1414-35	B	DOOR HANDLE	1
4	1414-39	B	DOOR PIVOT BRKT	2
5	1414-40	A	SUPPORT BRKT-DOOR ARM	2
6	1414-42	A	DOOR LINK	2
7	1414-43	A	SPRING MOUNTING BAR	1
8	1414-44	A	TWIN SPRING MTG PLATE	2
9	D313C-J1	-	FLATWASHER 3/8	4
10	SK-2290A	A	SPRING	4
11	925-44	A	THREADED ADJ ROD	2
12	D309C-JC-12AT	-	HHCS 3/8-16 UNC X 1 1/2 LG (ALLTHD)	2
13	D2844	A	1/4 THREADED DELTA CHAIN CONN.	2
14	D2782	A	5/16 S-HOOK	4
15	D2783	-	1" DIA BRASS BALL	2
16	D312C-JC-2	-	3/8-16 UNC HEX NUT	8
17	D309C-GC-5C	-	FIMS 1/4-20 UNC X 5/8 LG	2
18	D309C-HC-12A	-	HHCS 5/16-18 UNC X 1 1/2 LG	2
19	D309C-GC-14A	-	HHCS 1/4-20 UNC X 1 3/4 LG	2
20	D312C-GC-6	-	1/4-20 UNC ACORN NUT	2
21	D312C-JC-6	-	3/8-16 UNC ACORN NUT	2
22	D309C-GC-5A	-	HHCS 1/4-20 UNC X 5/8 LG	6
23	D312C-GC-5	-	1/4-20 UNC SEAL NUT	8
24	D313C-H2	-	LOCKWASHER 5/16	2
25	1414-49-1	A	DOOR LINK SLEEVE 3/8 ID X 7/16 LG	2
26	1414-49-2	A	DOOR LINK SLEEVE 1/4 ID X 7/16 LG	2
27	-	-	-	-
28	1414-59	B	EXTERNAL DOOR LATCH ASSEMBLY	1



D 1870		4.25.01	FRACTIONS ±1/64	TOLERANCES	FILE: PARTS\1414-45
C 1681		6.1.99	DECIMALS	UNLESS OTHERWISE SPECIFIED	
B 1503		12.2.96	XXX ± .005		
A 1329		12.1.95	XX ± .01		
REV		DATE	ANGLES ±1/2°		
A					

TITLE	DOOR ASSEMBLY	CA-3C
SCALE	NOTED	
WAT'L		

NEXT ASSY Dwg. NO.	1414-45
RECD	1
SCALE	1-12
USED ON	CA-3C

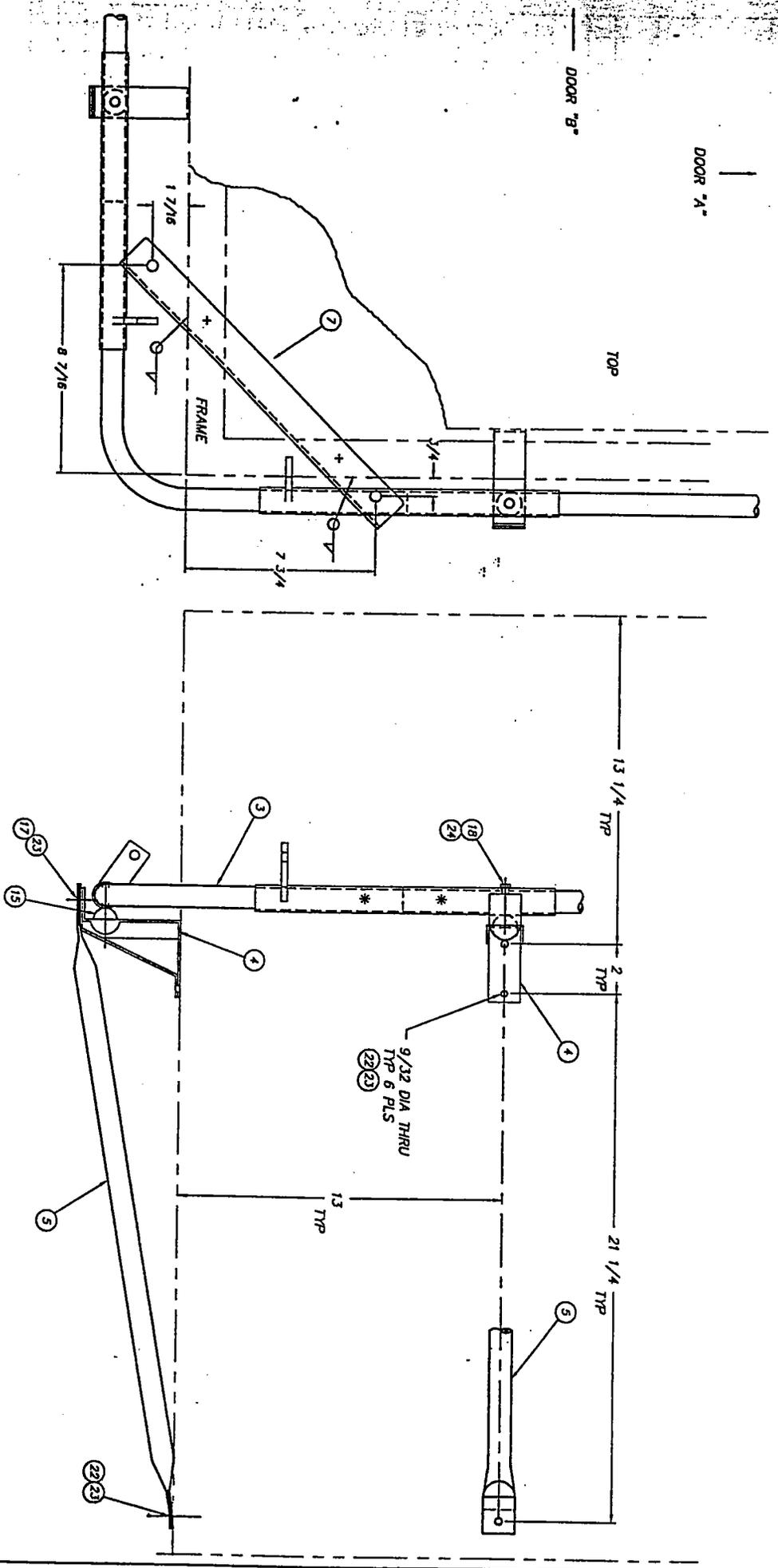
Philadelphia, PA 19135
 (215) 624-4800
 FAX (215) 624-6866

Insigner

DRWN/DATE
 CES 5.23.94

SHEET 1 OF 2

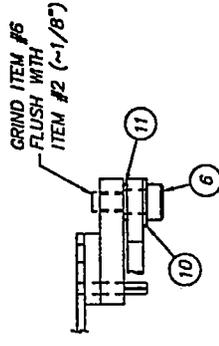
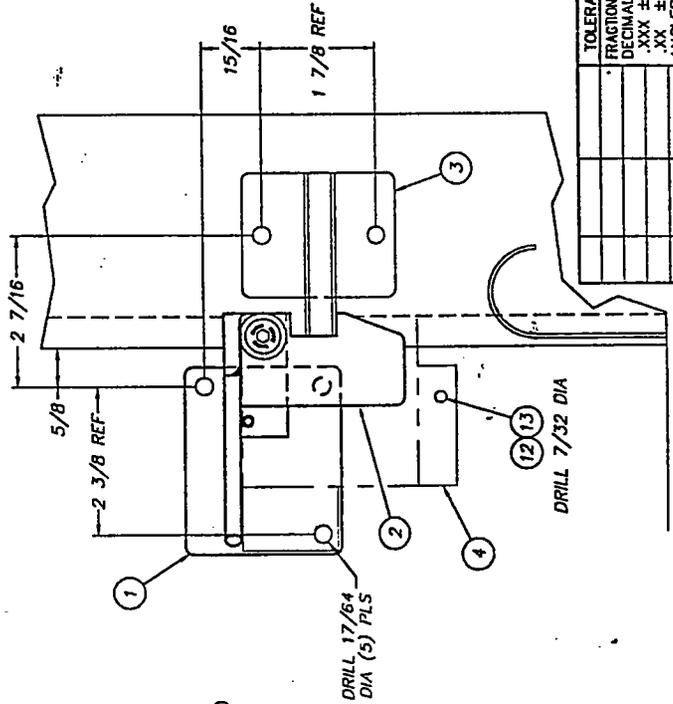
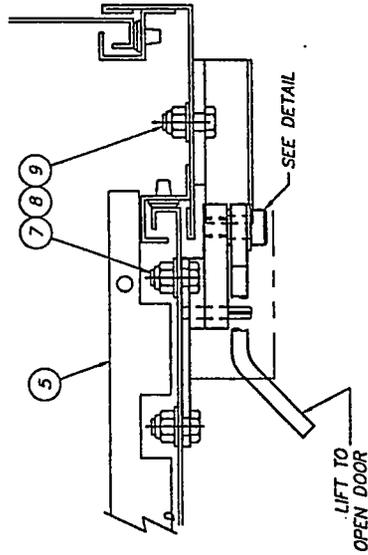
NOTE: USE PLUMBERS PUTTY TO SEAL THRU HOLES



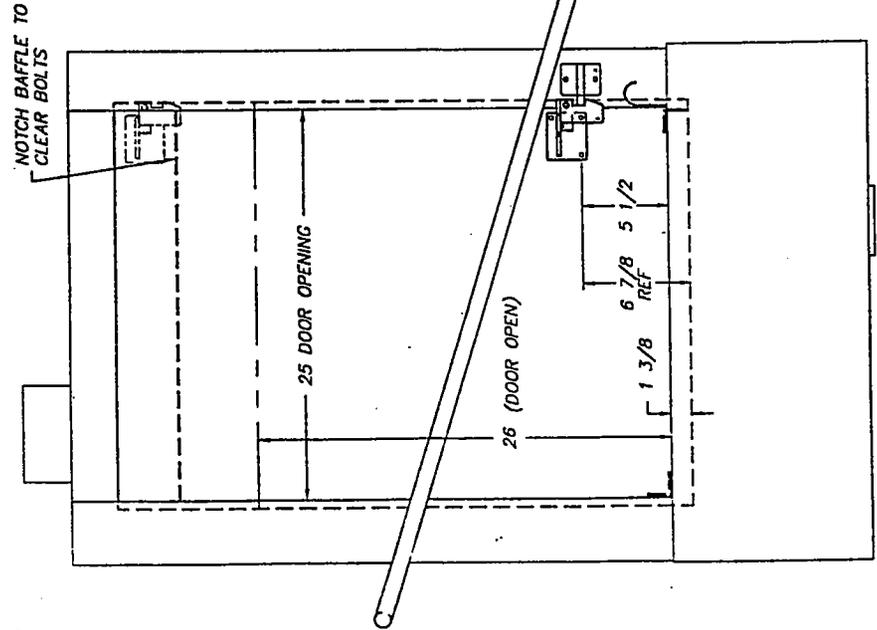
REV	ECON NO.	DATE	TOLERANCES	TITLE	NEXT ASSY	DRWG. NO.
D	1870	4.25.01	FRACTIONS ±1/64	DOOR ASSEMBLY	1414-1	1414-45
C	1681	6.1.99	DECIMALS	CA-3C	1	
B	1503	12.2.96	.XXX ± .005	NOTED	1=12	
A	1329	12.1.95	.XX ± .01			
			ANGLES ±1/2°			
			UNLESS OTHERWISE SPECIFIED			

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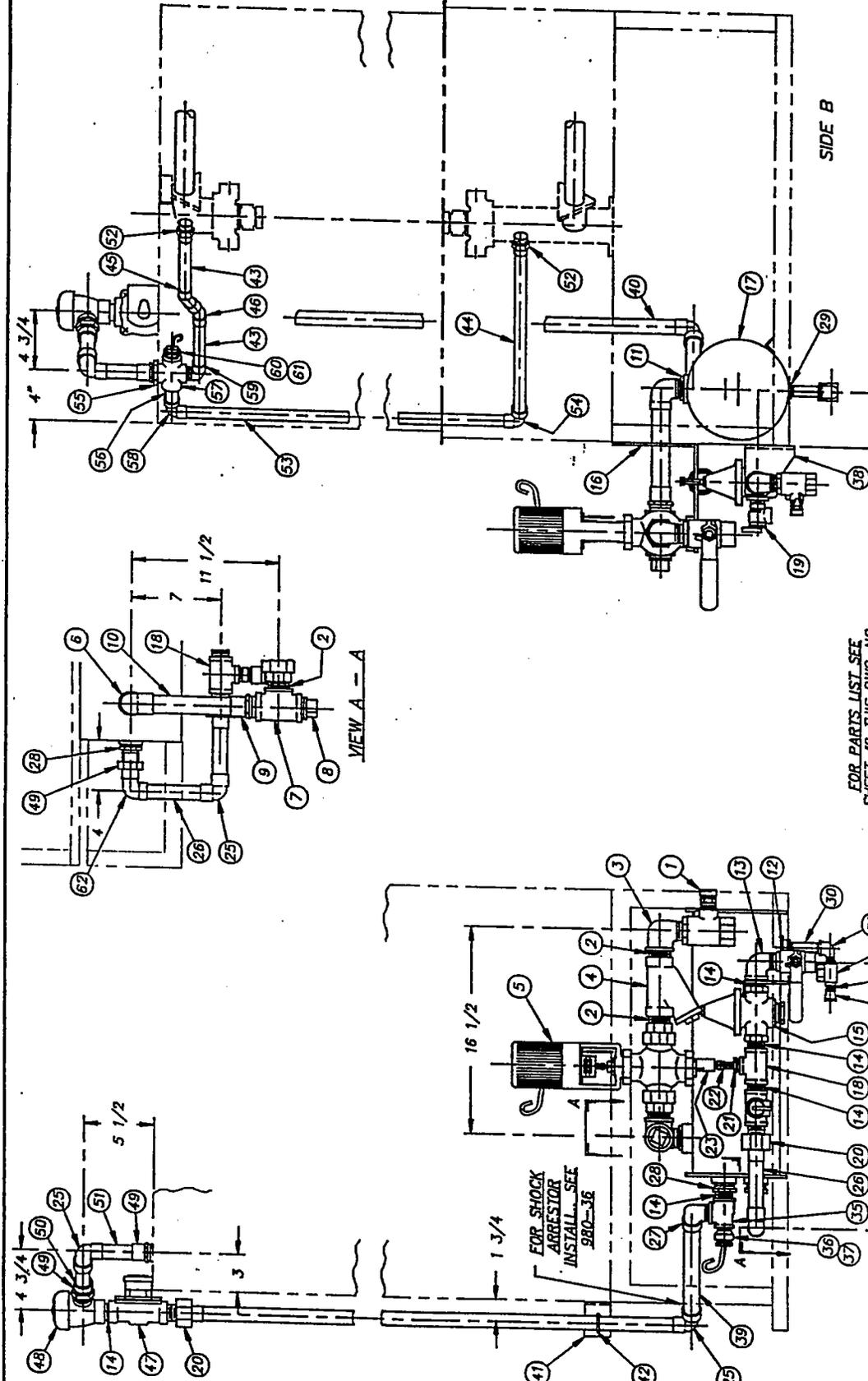
ITEM	PART NO.	SIZE	DESCRIPTION	QTY.
1	1414-60	B	PIVOT PLATE	1
2	1414-61	A	LATCH	1
3	1414-62	A	KEEPER	1
4	1414-63	B	COVER	1
5	1414-64	A	SPLASH BAFFLE W/NOTCHES	1
6	D2879	-	SHOULDER BOLT 3/8 DIA X 3/8	1
7	D309C-GC-5A	-	HHCS 1/4-20 X 5/8 LG	5
8	D312C-GC-5	-	SEAL NUT 1/4-20	5
9	D313C-G1	-	FLAT WASHER 1/4	5
10	D313C-J1	-	FLAT WASHER 3/8	1
11	D313A-J1	-	COPPER WASHER 3/8	1
12	D309C-EF-4B	-	RD HD MACH SCREW #10-32 X 1/2 LG	1
13	D312C-EF-5	-	SEAL NUT #10-32	1



- NOTES:
- 1) LOCATE ITEM #1 ON DOOR PER DIMENSIONS.
 - 2) LOCATE ITEM #3 ON HOOD WITH ~1/16" GAP BETWEEN ITEM #2 & #3.
 - 3) REMOVE ALL PREVIOUS DOOR LOCKS



TOLERANCES:	TITLE	NEXT ASSY DWG. NO.
FRACTIONS ±1/64	LATCH ASSEMBLY	1414-59
DECIMALS .XXX ± .005	EXTERNAL DOOR LOCK	RECD 1
.XX ± .01	MATL	SCALE USED ON
ANGLES ±1/2°	NOTED	1-B CA-3C
UNLESS OTHERWISE SPECIFIED		DRWN/DATE
		INSINGER Machine Company Philadelphia, PA 19135 (215) 624-4800 CES 12.8.99
REV	LEGN NO	DATE
	FILE: PARTS\1414-59	



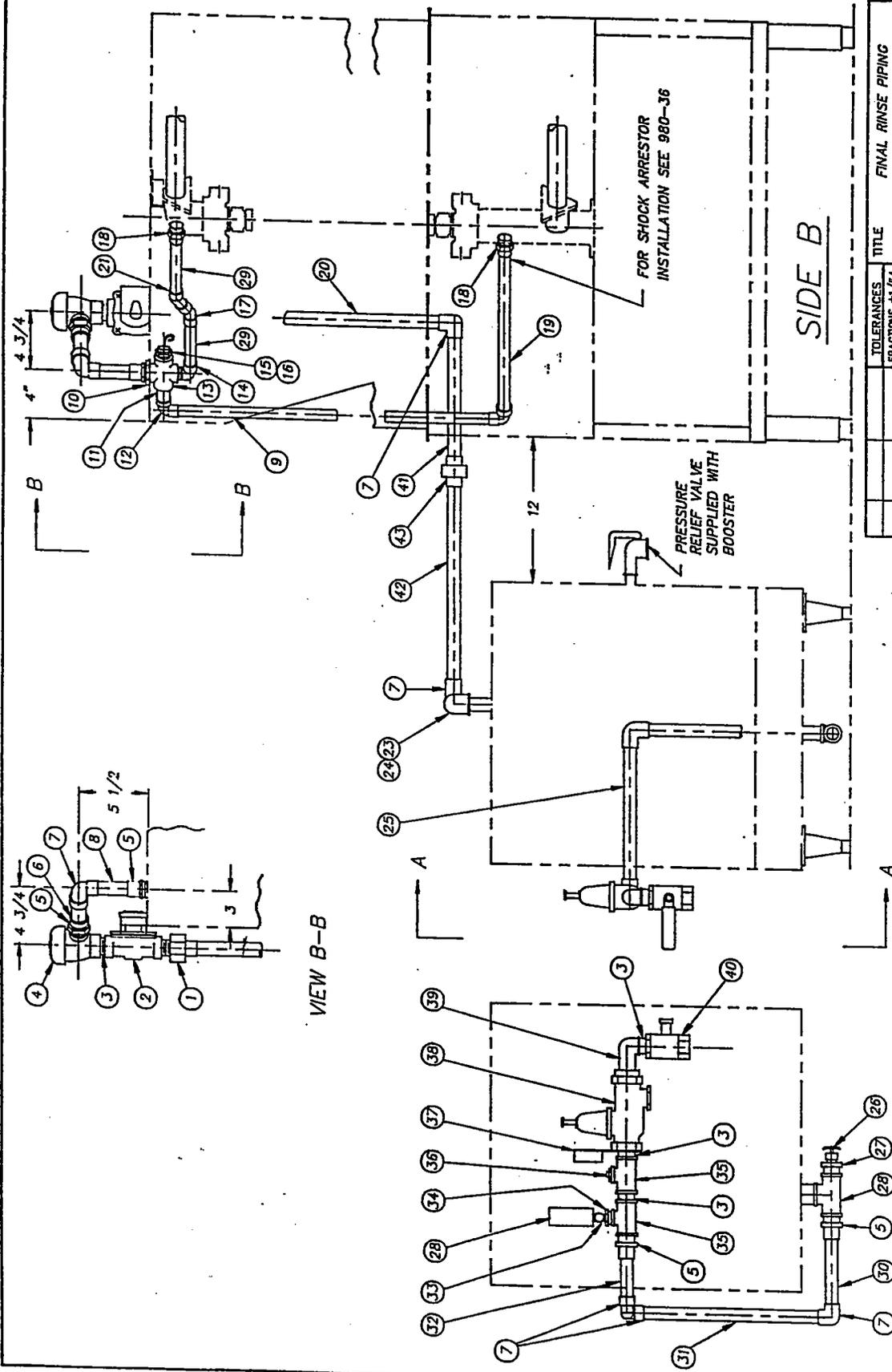
FOR PARTS LIST SEE SHEET #2 THIS DWG. NO.

TOLERANCES		TITLE		NEW ASSISTING NO.	
FRACTIONS	±1/64	FINAL RINSE PIPING	WITH 1-3 BOOSTER	RECD	1
DECIMALS	.005	SEE PG. 2 OF 2		SCALE	FULL
XXX	±.01			USED ON	CA-3C
XX	±1/2°			DRWN/DATE	PC 3.14.84
UNLESS OTHERWISE SPECIFIED		INTEGRAL		INGINGER Machine Company	
REV	ECN NO.	DATE	Philadelphia, PA 19135 (215) 624-4800 (215) 624-8888 FAX (215) 624-8888		
FILE: PARTS 1414-28					

SHEET 1 OF 2
1414-26

SIDE B

SIDE A



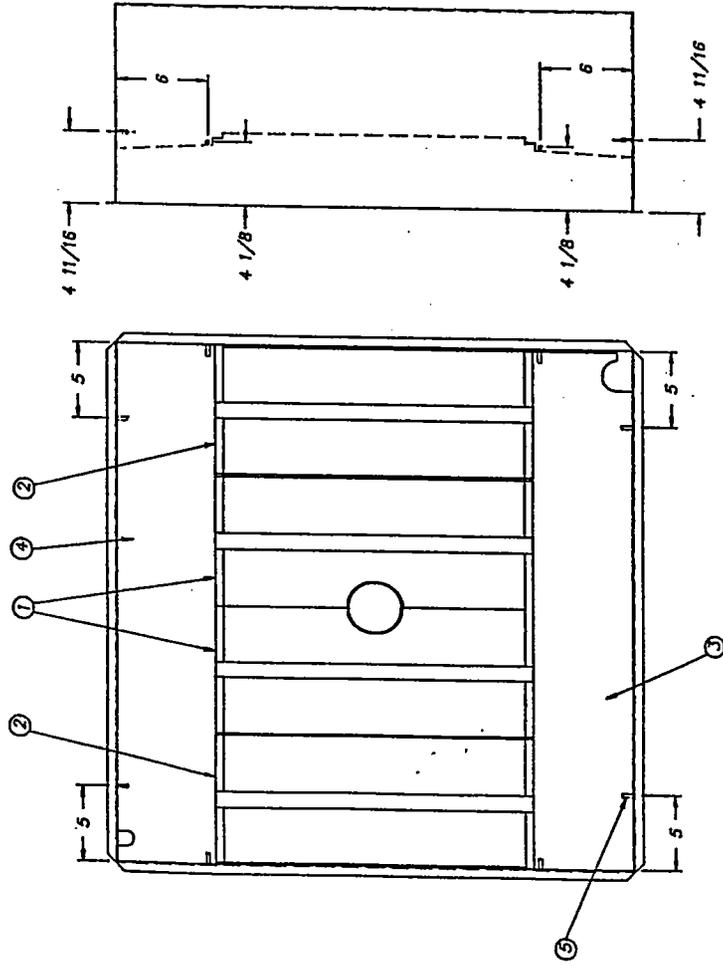
VIEW B-B

VIEW A-A

SHEET 1 OF 2		NEXT ASSY DWG. NO. 1414-1		1414-27	
TITLE FINAL RINSE PIPING WITH ELECTRIC BOOSTER		SCALE 1=8		USED ON CA-JC	
MATERIAL SEE PG. 2 OF 2		DRAWN/DATE 18135		PC	
TOLERANCES FRACTIONS ±1/64 DECIMALS ±.005 .XX ±.01 ANGLES ±1/2° OTHERWISE SPECIFIED		Insinger Machine Company Philadelphia, PA 19135 (215) 824-4800 FAX (215) 824-8986			
REV	ECN NO	DATE	FILE: PARTS\1414-27		

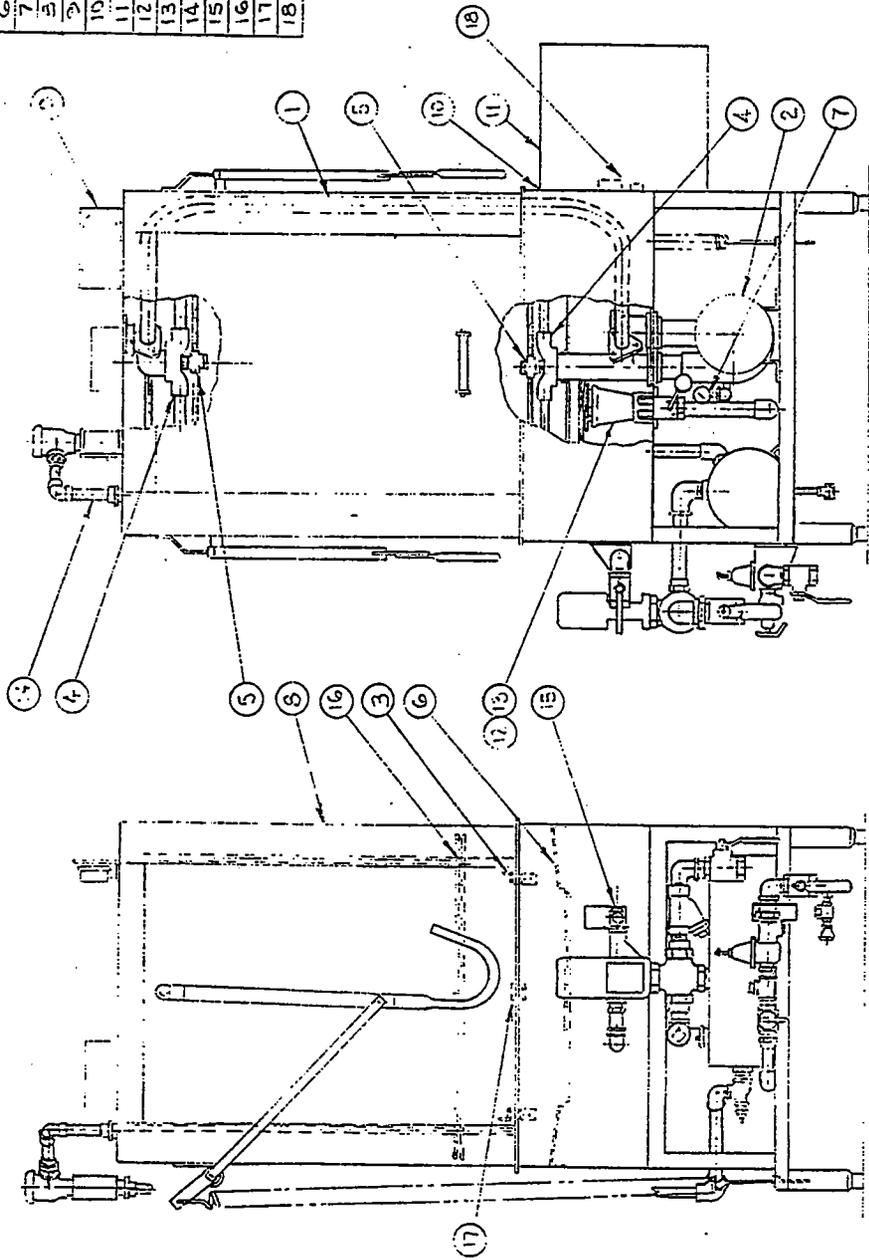
FOR PARTS LIST SEE
SHEET #2 THIS DWG. NO.

ITEM	PART NO.	SIZE	DESCRIPTION	QTY.
1	1414-31	A	SCRAP SCREEN ASSEMBLY	2
2	1414-32	A	SCRAP SCREEN ASSEMBLY	2
3	1172-10	A	TRAY SPACER - FRONT	1
4	1172-40	A	TRAY SPACER - REAR	1
5	D309C-GP-6C	-	WELDSTUD 1/4 X 3/4 LG	8



TOLERANCES	TITLE	NEXT ASSY DWG. NO.
FRACTIONS ±1/64	SCRAP SCREEN	1414-28
DECIMALS	ARRANGEMENT	REQD 1
.XXX ± .005	NOTED	SCALE 1=6
.XX ± .01		USED ON
ANGLES ±1/2°		C4-3C
UNLESS OTHERWISE SPECIFIED		
REV	ECN NO.	DATE
FILE: PARTS 1414-28		
 Philadelphia, PA 19135 (215) 824-4800 FAX (215) 824-8866 PG 3.76.94		

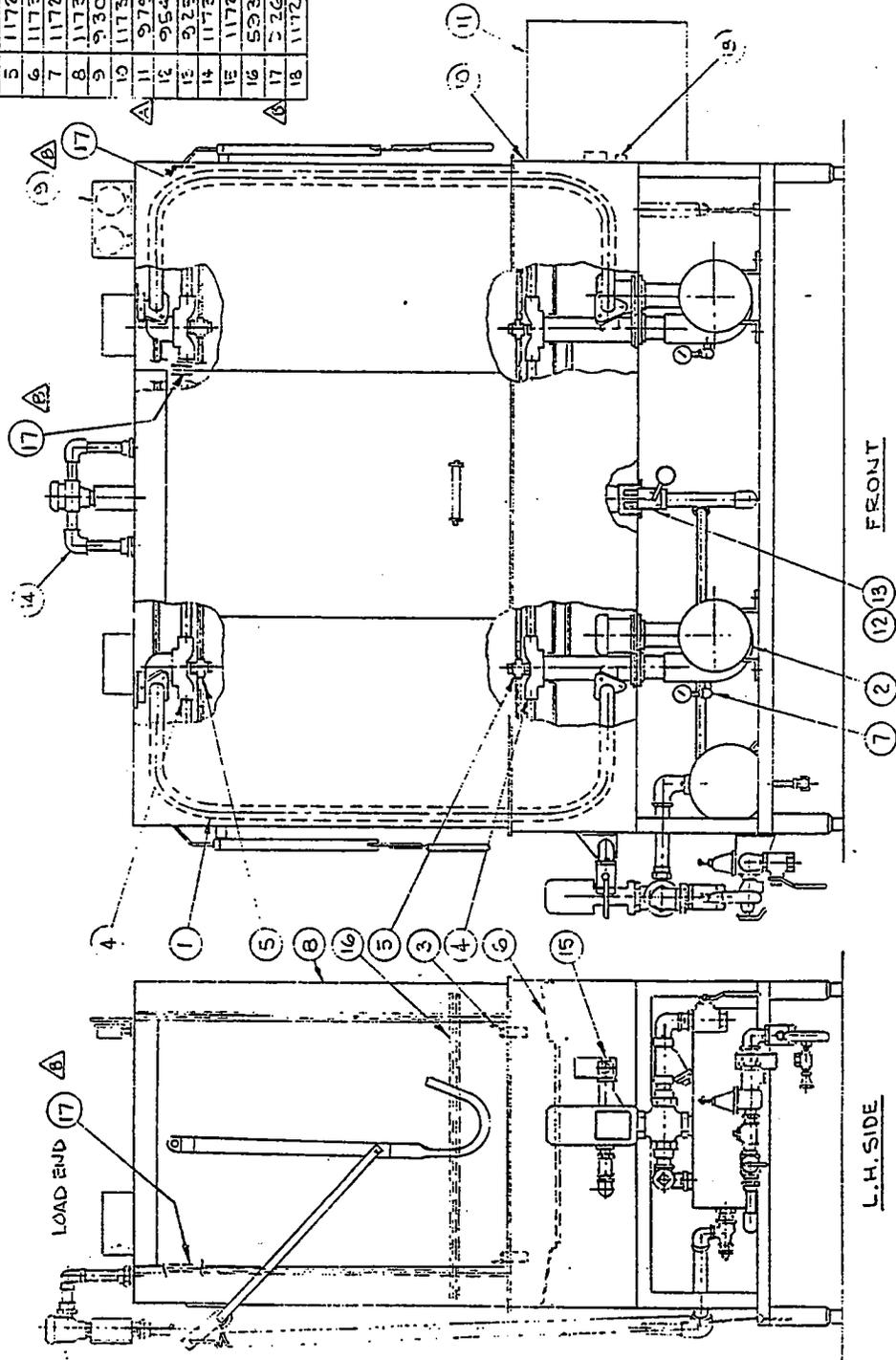
ITEM	PART NO.	DESCRIPTION	QTY
1	1172-11	DISCHARGE LINE ASSEMBLY	1
2	1172-2	PUMP & MOTOR INSTALL.	1
3	979-37	TRACK & TRACK BECK LOCATION	1
4	1172-17	SPRAY NOZZLE ASSY - WASH	2
5	1172-20	SPRAY NOZZLE ASSY - RINSE	2
6	1172-3	SCRAP SCREEN APPLIC.	1
7	1172-42	PRESSURE GAUGE INSTALLATION	1
8	1172-33	SHELL ASSEMBLY	1
9	925-25	THERMOMETER LOCATION	1
10	925-50	CONTROL BOX LOCATION	1
11	979-23	CONTROL BOX	1
12	954-1A	DRAIN ASSEMBLY	1
13	925-5C	DRAIN HANDLE	1
14	1172-28	FINAL RINSE PIPING W/ BOOSTER	1
15	1172-47	STEAM PIPING (INJECTOR)	1
16	562-157	GRID INSTALLATION ASSY	1
17	D2626	PROXIMITY SWITCH LOCATION	1
18	1172-51	ELEC. TEMP. REG., DQ. LEVEL PROBE LOC.	1



TOLERANCES	TITLE	PATT. NO.	DWG. NO.
FRACTIONS ± 1/64	GENERAL ASSEMBLY	REQ. —	1172-1
DECIMAL ± .005	MATL	SCALE	USED ON
ANGULAR ± 1/2°		1/12	CA-3
UNLESS OTHERWISE SPECIFIED	INSINGER MACHINE CO.		PG.
	PHILA., PA. 19135 (215) 624-4800		12-23-87

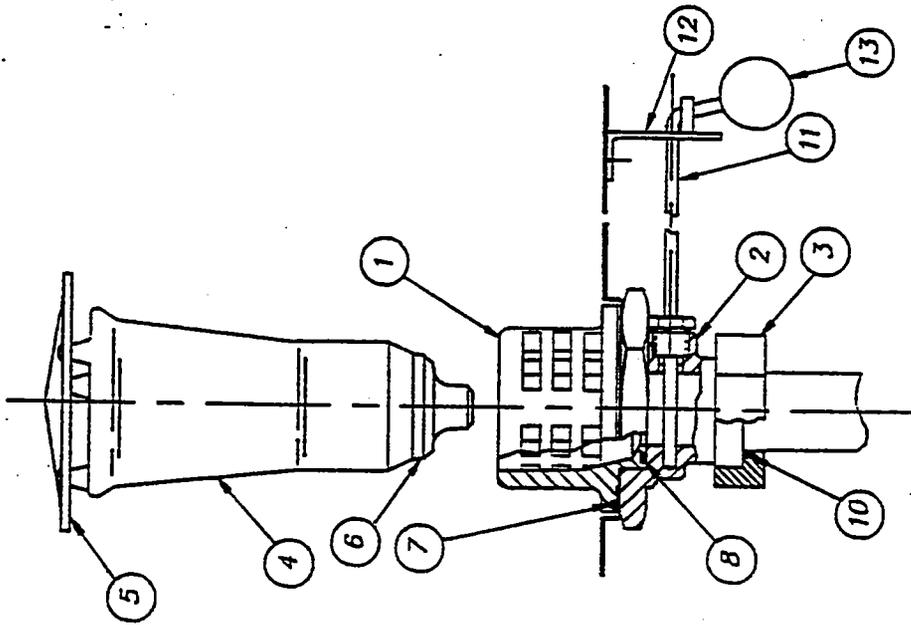
1172-11 1172-11 1172-11 1172-11

ITEM	PART NO.	DESCRIPTION	QTY.
1	1173-11	DISCHARGE LINE ASSEMBLY	1
2	1173-9	PUMP & MOTOR INSTALLATION	1
3	930-15	TRACK ASSY.	-
4	1172-17	SPRAY NOZZLE ASSY - W/SEN	-
5	1172-20	SPRAY NOZZLE ASSY - RINSE	4
6	1173-3	SCRAP SCREEN ASSEMBLY	1
7	1172-42	PRESSURE GAUGE INSTALLATION	1
8	1173-12	SHELL ASSEMBLY	1
9	930-18	THERMOMETER LOCATION	1
10	1173-10	CONTROL BOX LOCATION	1
11	975-23	CONTROL BOX	1
12	954-14	DRAIN ASSEMBLY	1
13	923-32	DRAIN HANDLE	1
14	1173-13	FINAL RINSE PIPING W/BUFFER	1
15	1172-47	STEAM PIPING (INJECTOR)	1
16	533-41	HOLD DOWN GRID ASSEMBLY	1
17	52626	PROXIMITY SWITCH LOCATION	1
18	1172-51	ELEC. TEMP. REG. U.S. LEVEL FRAME	1



TOLERANCES	TITLE	PATT. NO.	DWG. NO.
FRACTIONS ± 1/64	GENERAL ASSEMBLY	REQ. -	1173-1
DECIMAL ± .005	MATL.	SCALE	USED ON
ANGULAR ± 1/2°		1/16"	DA-3
UNLESS OTHERWISE SPECIFIED	INSINGER MACHINE CO.	PHILA., PA. 19135 (215) 624-4800	PG. 1-28-88

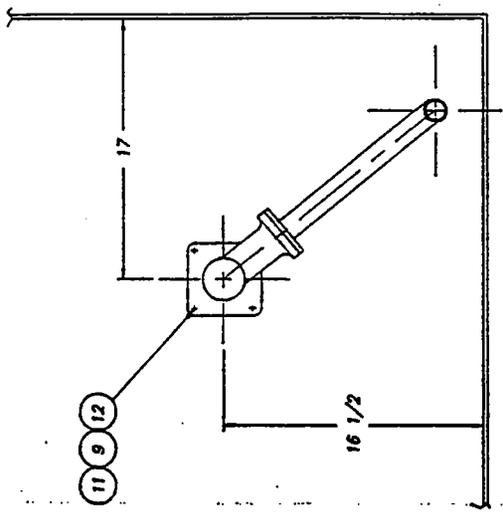
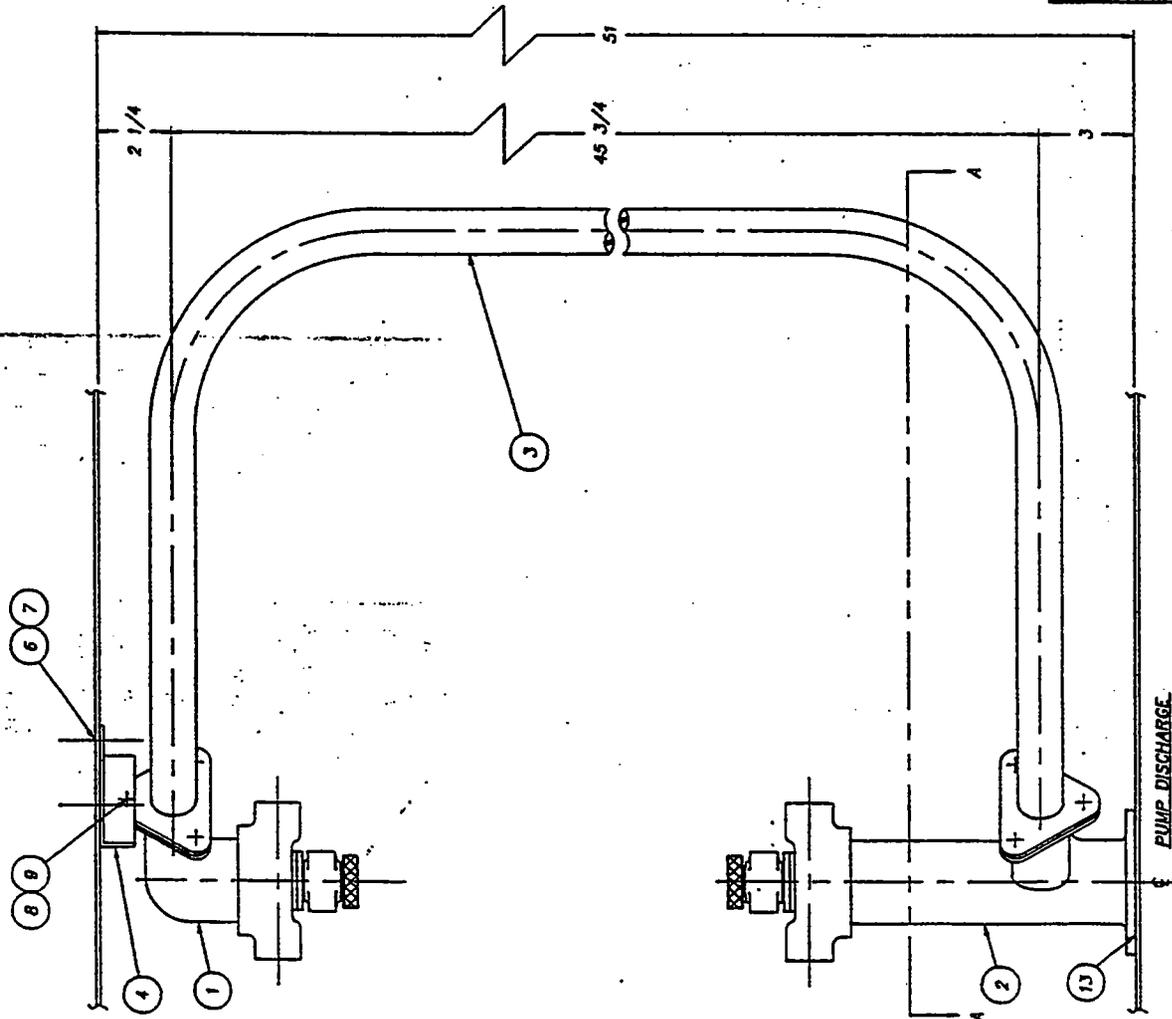
ECN# 219 MAU 3-15-89



ITEM	PART NO.	DESCRIPTION	QTY.
	954-50	DRAIN ASS'Y (COMP)	-
1	954-50A	UPPER BODY	1
2	954-50B	LOWER BODY	1
3	954-50C	NUT	1
4	954-50D	OVERFLOW TUBE	1
5	D-193	OVERFLOW TUBE SKIMMER CAP	1
6	D2-557	"V" SEAL-DRAIN SEAT	1
7	D2-548	"O" RING	1
8	D2-549	"O" RING	1
9	D-305	DRAIN JAM NUT	1
10	D2-550	"O" RING	1
11	954-55	DRAIN HANDLE ASS'Y	1
12	954-8	BRACKET	1
13	D-2407	BALL	1

TOLERANCES		NEXT ASSY DWG. NO.	
FRACTIONS ±1/64	DECIMALS	REQ'D	SK-2519A
.XXX ± .005	.XX ± .01	SCALE	USED ON
ANGLES ±1/2°	UNLESS OTHERWISE SPECIFIED	1=4	
REV	ECN NO	DATE	DRWN/DATE
FILE: SKETCH	SK-2519A		RAF
TITLE		DRAIN ASSEMBLY	
MATERIAL		NOTED	
INSINGER Machine Company		Philadelphia, PA 19135	
		(215) 624-4800	
		FAX (215) 624-6966	
		B.30.82	

ITEM	PART NO.	DESCRIPTION	QTY.
1	1172-57	UPPER MANIFOLD ASSEMBLY	1
2	1172-56	LOWER MANIFOLD ASSEMBLY	1
3	1172-12	DISCHARGE LINE TUBE ASSEMBLY	1
4	1172-50	FLANGE SUPPORT	1
5	D2620	CUPSEAL-PARKER 8406-0150-4180	2
6	D309C-CJ-5A	SCREW HEX HD. 5/16-18 x 5/8 S.S.	2
7	D312C-HC-5	LOCKNUT 5/16-18	2
8	D309C-CJ-10A	SCREW HEX HD. 3/8-16 x 1 1/4 S.S.	1
9	D312C-JC-5	LOCKNUT 3/8-16	10
10	D309C-CJ-9A	SCREW HEX HD. 3/8-16 x 1 1/8 S.S.	5
11	D309C-CJ-11A	SCREW HEX HD. 3/8-16 x 1 3/8 S.S.	4
12	D313A-1J	WASHER 3/8 COPPER	4
13		PLUMBER'S PUTTY	AR



FRONT
SECTION A-A
SCALE: 1=8

TYP. TUBE
CONNECTION

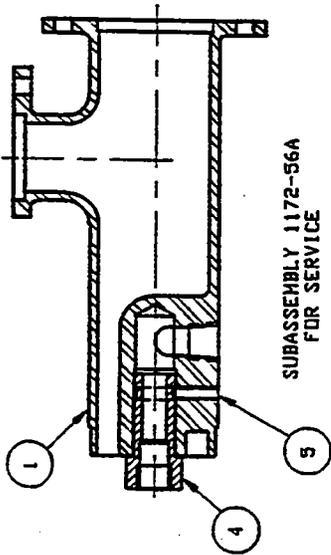
TOLERANCES	TITLE	DISCHARGE LINE ASSEMBLY	NEXT ASSY DWG. NO.
FRACTIONS ±1/64	REQD	1	1172-11
DECIMALS XX ± .005	SCALE	1=4	USED ON
XX ± .01	DATE		CA-3, DA-3
XX ± .01	NOTED		DRWN/DATE
ANGLES ±1/2°			EJM 7.15.94
UNLESS OTHERWISE SPECIFIED			

PUMP DISCHARGE

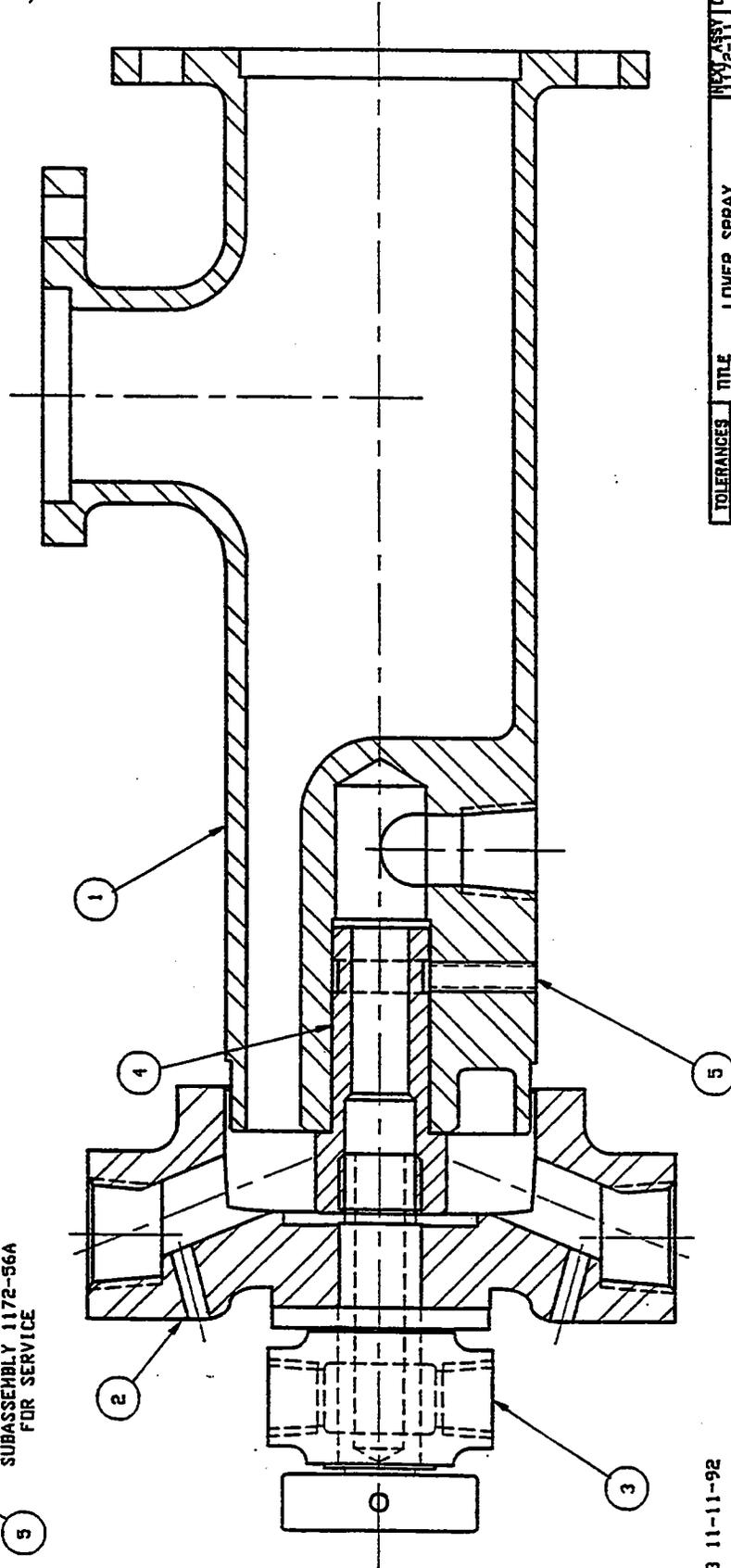


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FAX (215) 624-8866

ITEM	PART NO.	DESCRIPTION	QTY.
1	1172-58	LOWER DISCHARGE MANIFOLD	1
2	1172-70	WASH ARM HUB W/BEARING	1
3	1172-73	RINSE ASSY	1
4	1172-62	WASH ARM SHAFT	1
5	0309C-EF-SK	SET SCREW M10-32 x 5/8 LG.	1



SUBASSEMBLY 1172-56A
FOR SERVICE



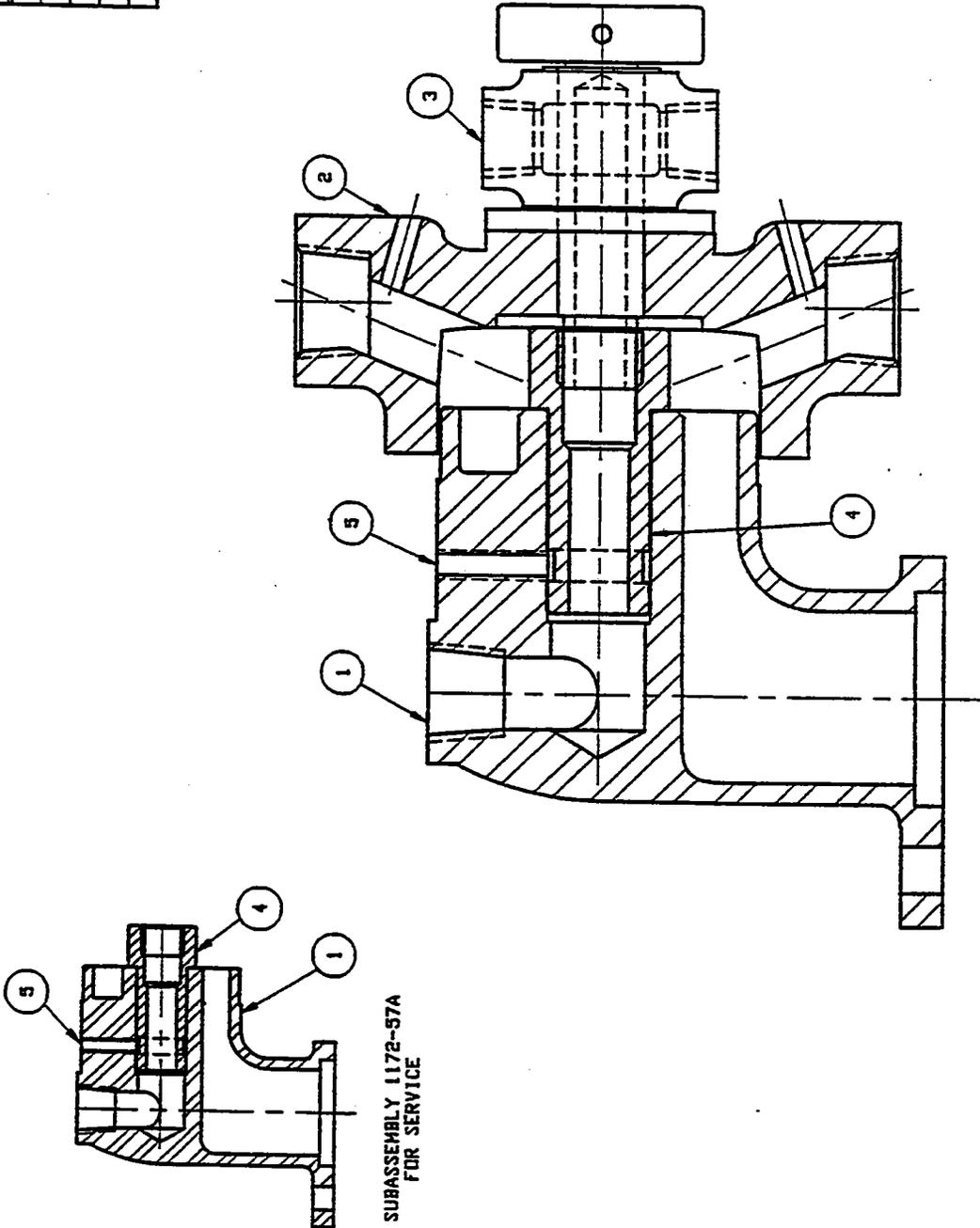
- ▲ ECN #773 11-11-92
- ▲ ECN #590 11-12-91
- ▲ ECN #586 NEW BEARING CONFIGURATION
- ▲ ECN #542 REDRAWN ON CAD

FILE: PARTS\1172-56

TOLERANCES
FRACTIONS 1/64
DECIMALS
.XX ± .005
.XX ± .01
ANGULAR 1/2
UNLESS
OTHERWISE
SPECIFIED

TITLE LOWER SPRAY ASSEMBLY
MATERIAL NOTED
SCALE 1=1
DWG. NO. 1172-56
REV. 1
USED ON 1172-56
PHILADELPHIA, PA 19135
J.R.S.
824-4800
624-6866
FAX (215) 624-6866
Insinger Machine Company

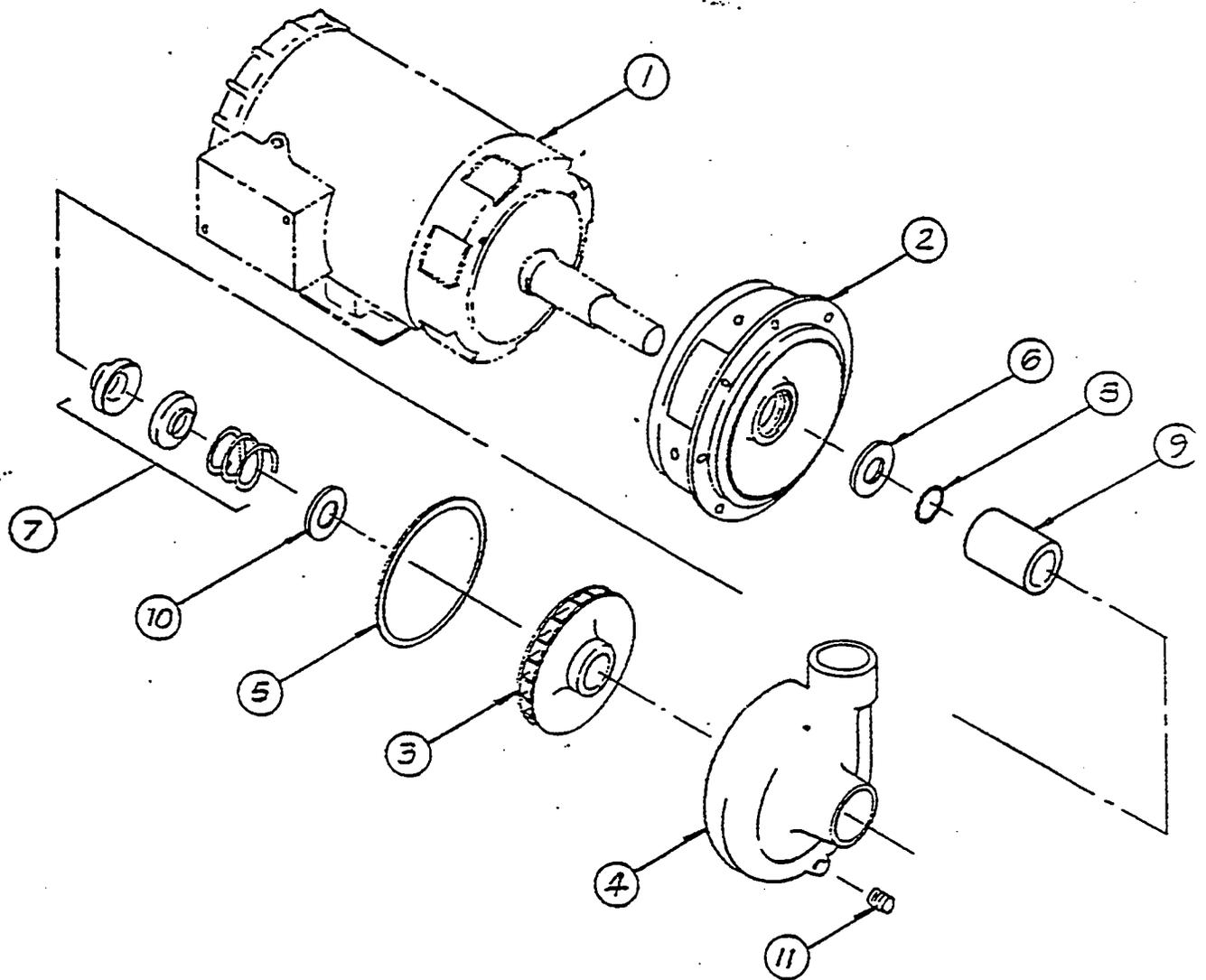
ITEM	PART NO.	DESCRIPTION	QTY.
1	1172-59	UPPER DISCHARGE MANIFOLD	1
2	1172-70	WASH ARM HUB W/BEARING	1
3	1172-73	RINSE ASSY	1
4	1172-62	WASH ARM SHAFT	1
5	D309C-EF-SK	SET SCREW #10-32 x 3/8 LG.	1



SUBASSEMBLY 1172-57A
FOR SERVICE

TOLERANCES FRACTIONS 3/64 DECIMALS .XXX ± .005 .XX ± .01 ANGULAR ± 1/2	UNLESS OTHERWISE SPECIFIED	TITLE UPPER MANIFOLD ASSEMBLY	NEXT ASSY QWQ. NO. 1172-11 1172-57
MATL NOTED	SCALE 1"=1"	USED ON 11-3, 12-3, 12-3	J.R.S.
 Philadelphia, PA 19135 (215) 824-4800 (215) 824-8888		FILE: PARTS\1172-57	

▲ ECN #773 11-11-92
 ▲ ECN #590 11-12-91
 ▲ ECN #586 NEW BEARING CONFIGURATION
 ▲ ECN #542 REDRAWN ON CAD
 FILE: PARTS\1172-57



PARTS LIST - 5 HP MOTOR & PUMP ASS'Y.

ITEM	PART NO.	DESCRIPTION	REQ'D.
1		Motor 5 HP	1
2	D-439	Adapter	1
3	D-440	Impeller	1
4	D-441	Casing	1
5	D2-566	Gasket, Casing	1
6	D2-568	Flinger, Shaft	1
7	D-2494	Seal Assembly	1
8	D2-567	"O" Ring, Shaft	1
9	D3-818	Sleeve, Shaft	1
10	D3-819	Retainer, Seal Spring	1
11		Drain Plug - 1/2 IPS	1

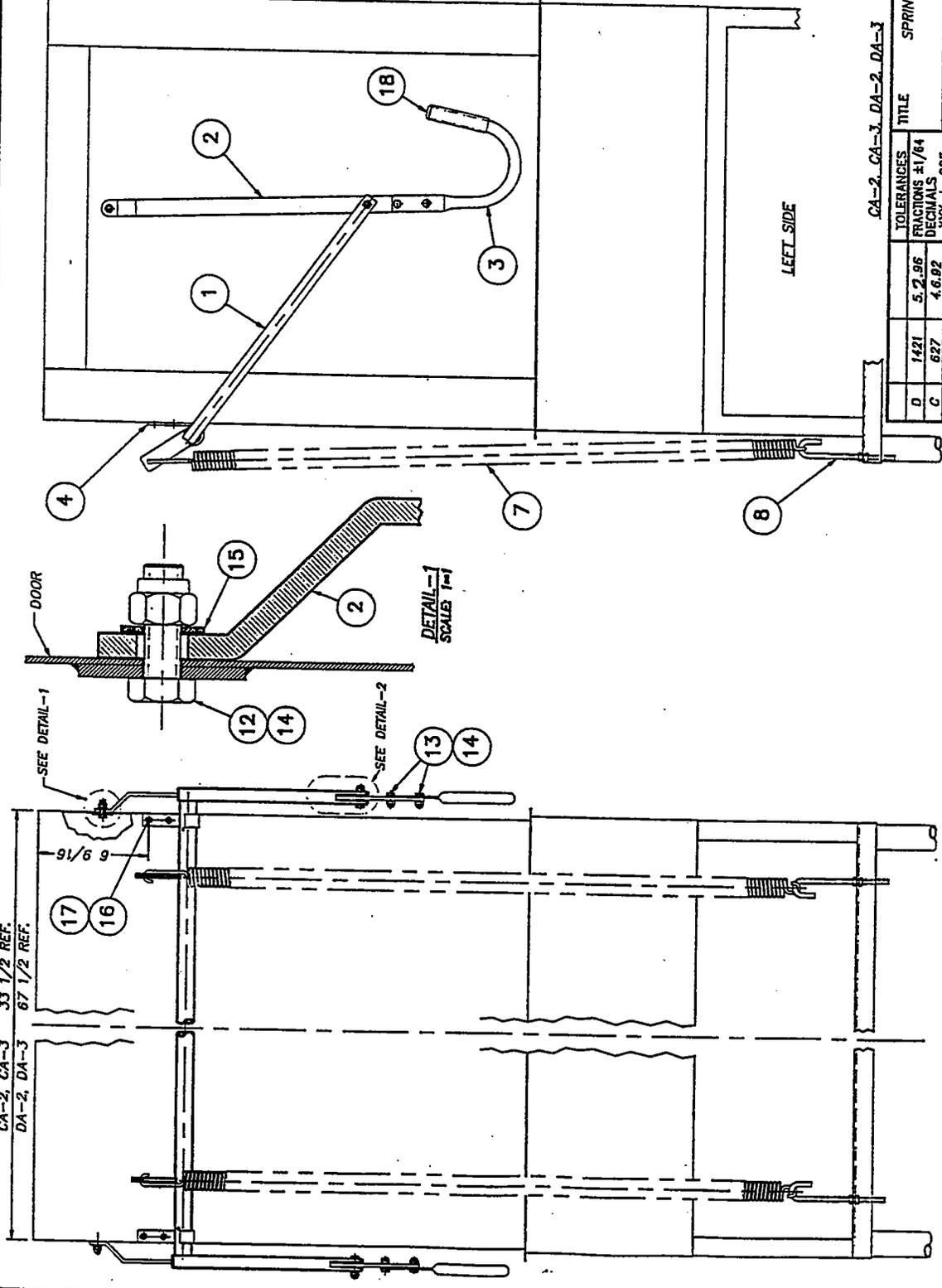
SK-2525

INSINGER MACHINE CO.
PHILA. PA. 19135

RAF 7-21-32

CA-2, CA-3 33 1/2 REF.
DA-2, DA-3 67 1/2 REF.

PART NO.	DESCRIPTION	QTY.
1	DOOR ARM WELDMENT, CA-2A	1
2	DOOR ARM WELDMENT, DA-2A	2
3	DOOR HANDLE	2
4	BRACKET DOOR ARM	2
5	SPRING	2
6	SPRING EXTENSION ROD	2
7	SPACER COUNTERDRIFT ARM	2
8	WASHER	4
9	HEX. HD. SCREW 5/8 x 1-1/2 Lg.	2
10	HEX. HD. SCREW 5/8 x 1-7/8 Lg.	2
11	HEX. HD. SCREW 5/8 x 7/8 Lg.	4
12	LOCKWIT SEAL 5/8 x 7/8-18	2
13	3/8 FLAT WASHER 5/8	2
14	SEAL HD. SCREW 5/8 x 1-1/4-20x3/4 Lg.	4
15	LOCKWIT SEAL 5/8 x 1-1/4-20	4
16	PLASTIC HANDLE COVER	2



TOLERANCES	FRACTIONS ±1/64	DECIMALS
D	5.2.96	.XXX ± .005
C	4.6.92	.XX ± .01
B	1.12.88	ANGLES ±1/2°
A	11.15.82	UNLESS OTHERWISE SPECIFIED

REV	ECN NO.	DATE
1		
2		
3		
4		

FILE: PARTS	925-40
1421	5.2.96
627	4.6.92
	1.12.88
	11.15.82

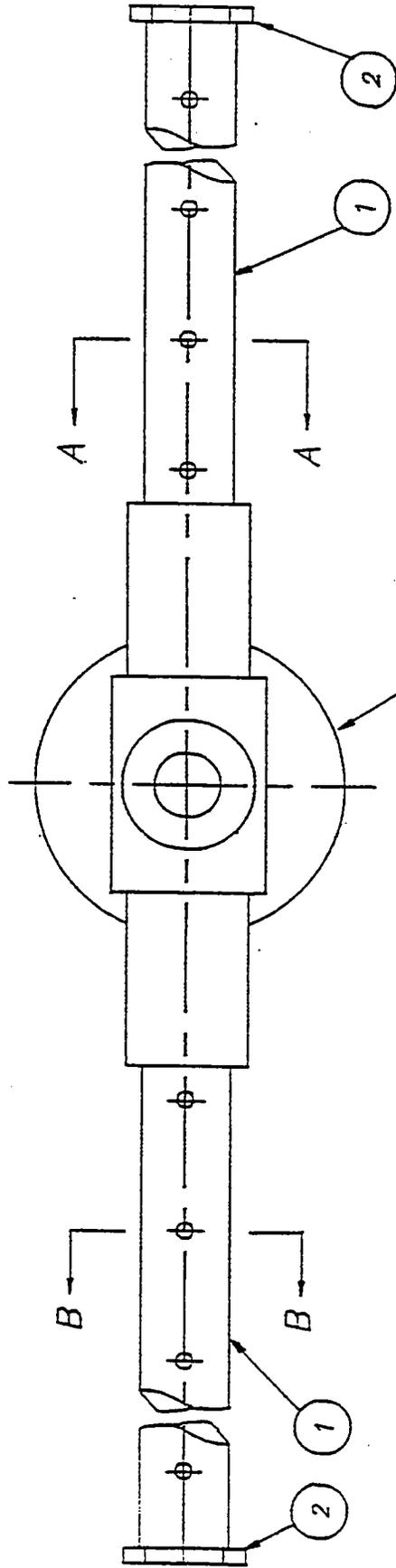
TITLE	SPRING CWT ASS'Y
SCALE	1-8
USED ON	925-40

NEXT ASSY DWG. NO.	REQ'D
	1

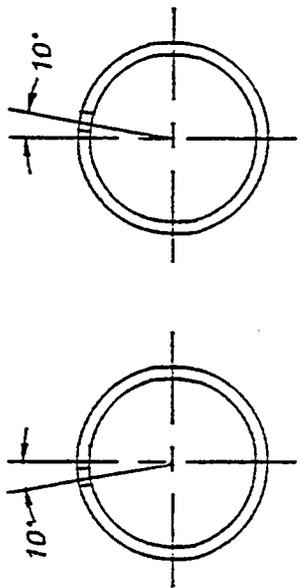
BACK

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Philadelphia, PA 19135
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FAX (215) 624-6886
B.F. 6.22.77

ITEM	PART NO.	DESCRIPTION	QTY.
1	979-33	SPRAY PIPE	2
2	D2-554-3	PLUG 7/8-9 UNC-2A	2



WASH ARM HUB 1172-60 REF
SEE DWG'S 1172-56 & 1172-57

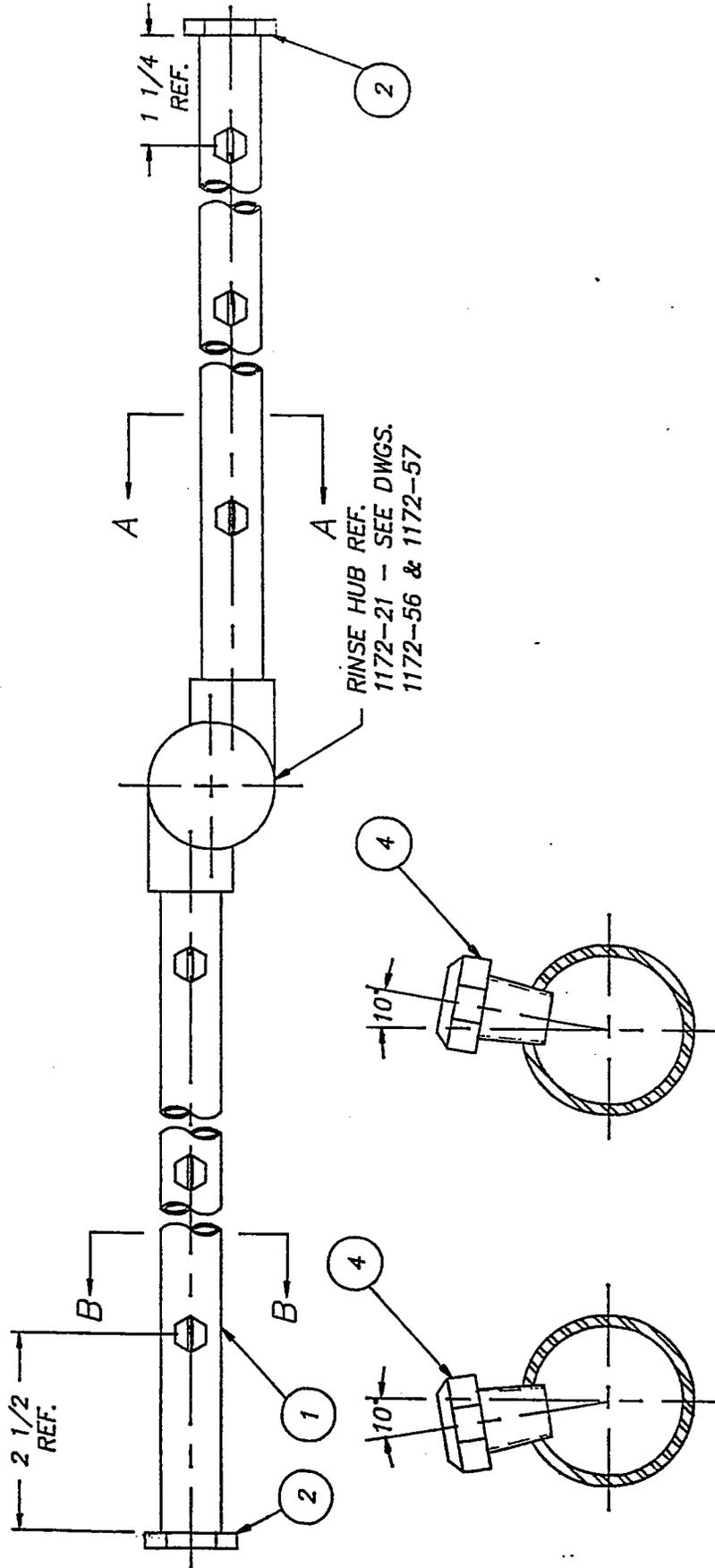


SECTION B-B SECTION A-A

TOLERANCES		TITLE	NEXT ASSY	DWG. NO.	
FRACTIONS	±1/64				SPRAY NOZZLE ASS'Y
DECIMALS	.XXX ± .005	WASH	SCALE	1=2	USED ON
.XX	± .01	AS NOTED			CA-3, DA-3
ANGLES	±1/2°				DRWN/DATE
	UNLESS OTHERWISE				PC
	OTHERWISE				
C	794				
B	590				
REV	ECN NO				
	DATE				

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ITEM	PART NO.	DESCRIPTION	QTY.
1	1172-34	SPRAY PIPE	1
2	1172-35	SPRAY PIPE	1
3	D2-554-1	PLUG 9/16-12 UNC-2A	2
4	D2828	NOZZLE H1/8U-5015	6



SECTION B-B

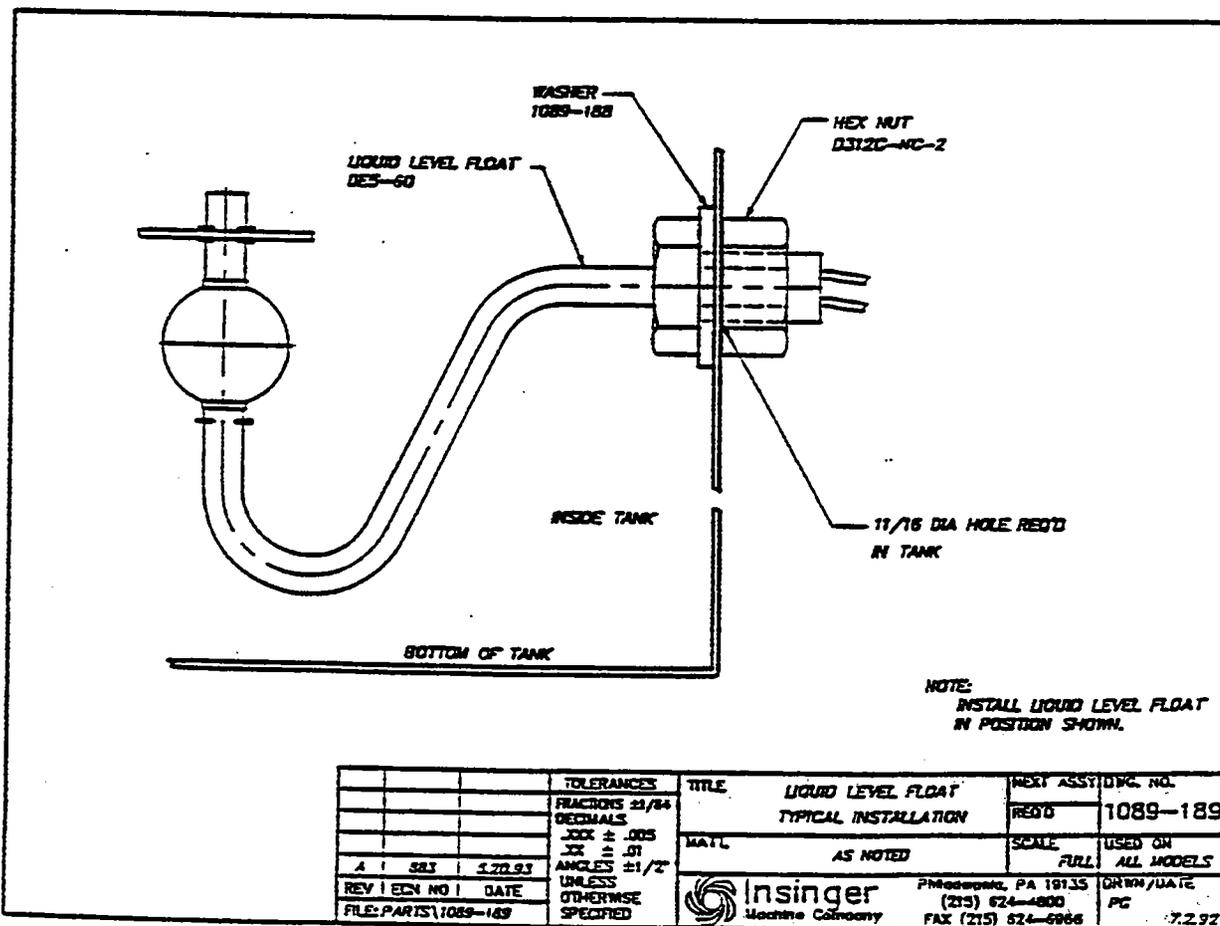
SECTION A-A

TOLERANCES		TITLE		NEXT ASSY DWG. NO.	
FRACTIONS	±1/64	SPRAY NOZZLE ASS'Y		REQ'D	1
DECIMALS	.XXX ± .005	RINSE		SCALE	1=2
.XX ± .01	AS NOTED	MATL		USED ON	CA-3,0A-J
ANGLES	±1/2°	AS NOTED		DRWN/DATE	MAM 12.22.94
UNLESS OTHERWISE SPECIFIED		Insigner Machine Company		FAX (215) 624-6966	
REV	ECN NO	Philadelphia, PA 19135			
B	1103	(215) 624-4800			
	12.21.94	MAM			
	DATE				
	FILE: PARTS\1172-20				

In order to insure the proper operation of your INSINGER dishwasher, it is necessary that the LIQUID LEVEL FLOAT be wiped free of any residue and/or moisture at each cleaning. This should be done, preferably, after each use of the machine, or, at a minimum, once each day.

The LIQUID LEVEL FLOAT is located below the scrap screens in those tanks which contain water heating devices (coils, steam injectors, or electric immersion heaters) and pump inlet strainers. They are usually located, in rackless and rack conveyor style machines, on the inside tank wall, at approximately water level, opposite and parallel to the inspection doors. In the door, stationary rack, type machines, the LIQUID LEVEL FLOAT may be found beneath the scrap screen.

Below is a depiction of the LIQUID LEVEL FLOAT and the surfaces which must be wiped clean.



ITEM	PART NO.	DESCRIPTION	QTY.
1	D2363	BALL VALVE 1 1/4 IPS	1
2	D314F-GC-00	CLOSE NIPPLE 1 1/4 IPS	3
3	D316F-G1-G2	90° ST. ELL 1 1/4 FIPS x 1 1/4 MIPS	1
4	D2447	"Y" STRAINER 1 1/4 IPS	1
5	D2267	STEAM TEMPERATURE REGULATOR 1 1/4 IPS	1
6	D319A-G3-G2	90° UNION ELL 1 1/4 C x 1 1/4 MIPS	1
7	D320F-G1G1C1	TEE 1 1/4 IPS	1
8	D328F-G2A	SQUARE PLUG 1 1/4 IPS	1
9	D317A-G3-G2	ADAPTER 1 1/4 C x 1 1/4 MIPS	1
10	D207A-B10-33	COPPER TUBING 1 1/4 CTS x 8 1/4 LG.	1
11	D322F-H2-G1	HEX REDUCER 1 1/2 MIPS x 1 1/4 FIPS	1
12	D2379	BALL VALVE 1" IPS	1
13	D316F-F1-F2	90° ST. ELL 1" FIPS x 1" MIPS	2
14	D314F-FC-00	CLOSE NIPPLE 1" IPS	8
15	D2286	PRESS. REGULATOR & STRAINER 1" IPS	1
16	979-24	BRACKET	1
17	D2443	I-J BOOSTER (21")	1
18	D320F-F1F1E1	TEE 1" FIPS x 1" FIPS x 3/4 FIPS	4
19	D2507	PRESSURE RELIEF VALVE 3/4 IPS	1
20	D317A-F3-F2	ADAPTER 1 C x 1 MIPS	5
21	D322F-E2-A1	HEX REDUCER 3/4 MIPS X 1/8 FIPS	2
22	D2497	PETCOCK 1/4 IPS	1
23	SK-1433	PRESSURE GAUGE 1/4 IPS	1
24	D318F-F1-F1	ST. UNION 1" FIPS x 1" FIPS	1
25	D316A-F3-F3	90° ELL 1" C	3
26	D207A-B8-40	COPPER TUBING 1" CTS x 10" LG	1
27	D319A-F3-F2	90° UNION ELL 1" C x 1" MIPS	1
28	D322F-G2-F1	HEX REDUCER 1 1/4 MIPS x 1" FIPS	2
29	D322F-E2-D1	HEX REDUCER 3/4 MIPS x 1/2 FIPS	1
30	D314F-DS-24	NIPPLE 1/2 IPS x 3" LG.	1
31	D316F-D1-D2	90° STREET ELL 1/2 FIPS x 1/2 MIPS	1

ITEM	PART NO.	DESCRIPTION	QTY.
32	D2102A	STEAM TRAP 1/2 IPS	1
33	D328F-A2A	PIPE PLUG 1/8"	2
34	D322F-E2-B1	HEX REDUCER 3/4 MIPS x 1/4 FIPS	1
35	D320F-F1E1F1	TEE 1" FIPS x 3/4 FIPS x 1" FIPS	1
36	-	-	-
37	-	-	-
38	925-48	BRACKET	1
39	D207A-B8-44	COPPER TUBING 1" CTS x 11" LG.	1
40	D207A-B8-224	COPPER TUBING 1" CTS x 56" LG.	1
41	925-49	BRACKET	1
42	D72A	PIPE CLAMP	1
43	979-42	S.S. UPPER RINSE PIPE	1
44	D207C-L7-73	S.S. TUBING 7/8" O.D. x 18 1/4" LG.	1
45	D207A-B8-10	COPPER TUBING 1" CTS x 2 1/2" LG.	1
46	D207A-B8-18	COPPER TUBING 1" CTS x 4 1/2" LG.	1
47	D2607	SOLENOID VALVE 1" IPS	1
48	D2249	VACUUM BREAKER 1" IPS	1
49	D318A-F3-F2	ST UNION 1 C x 1 MIPS	1
50	D207A-B8-16	COPPER TUBING 1" CTS X 4" LG	1
51	D2390SP	SPLIT JAM NUT	1
52	D318E-E3-E2	ST. UNION 3/4 MIPS X 3/4 C	2
53	D207C-L7-168	S.S. TUBING 7/8 O.D. X 42" LG.	1
54	D318E-E3-E3	90° ELL 3/4 C	1
55	D326F-F1	LOCK NUT 1" IPS	1
56	D314C-ES-16	NIPPLE 3/4 IPS X 2" LG. S/S	1
57	593-24	CROSS 1" X 3/4" X 3/4" X 1/2" FIPS	1
58	D316E-E3-E1	90° ELL 3/4 C X 3/4 FIPS	1
59	D316E-E3-E2	90° ELL 3/4 C X 3/4 MIPS	1
60	D2390SP-1	BRASS UNION	1
61	-	-	-
62	D319A-F3-F3	90° UNION ELL 1" C X 1" C	1

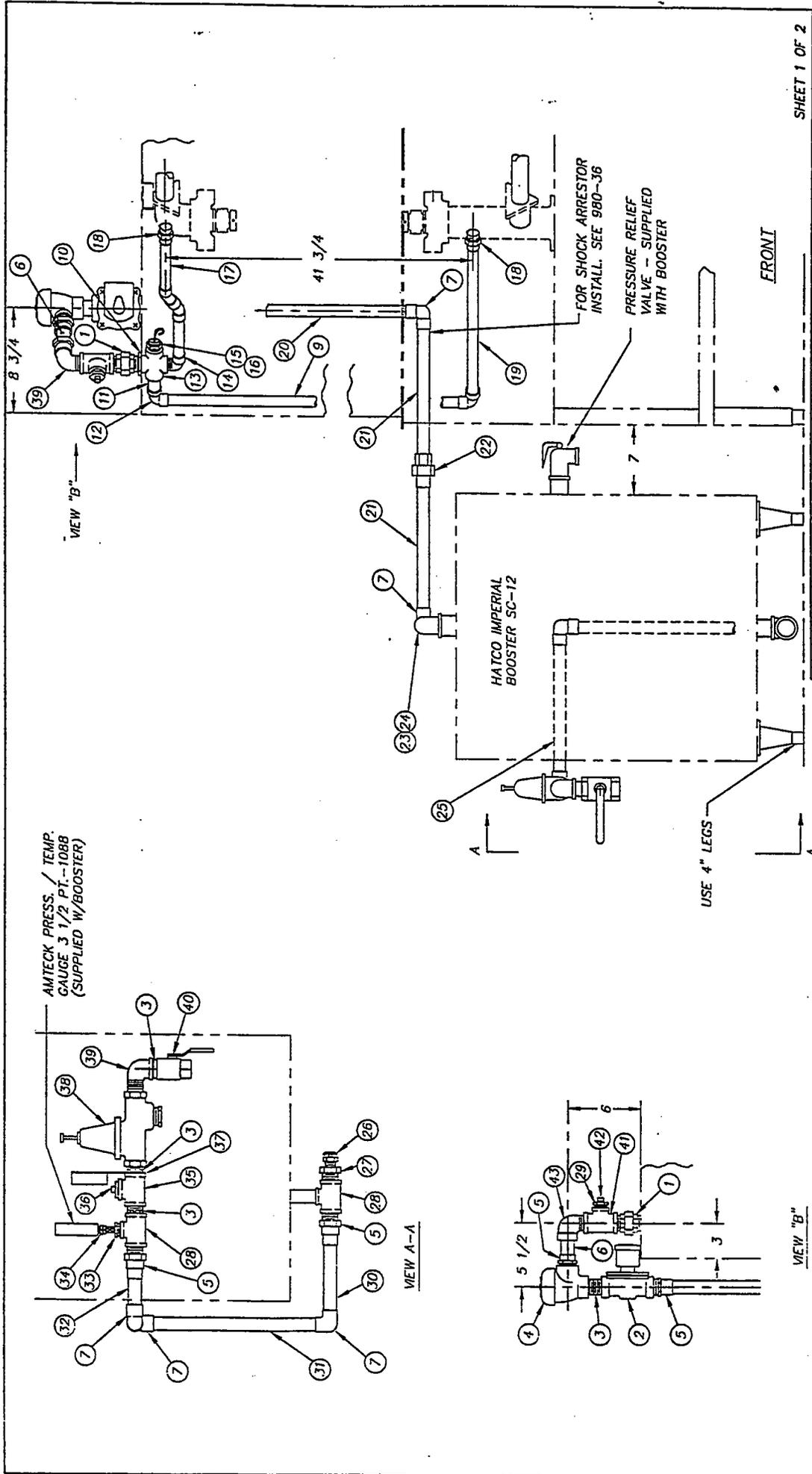
* * * = NICKEL PLATED COPPER OR BRASS

SHEET 2 OF 2

NOTE:
PRESSURE REGULATOR/STRAINER (ITEM 15)
TO BE FURNISHED BY OTHERS UNLESS SPECIFIED
ON PRODUCTION CARD - USE D2447 "Y"
STRAINER AS STANDARD.

TOLERANCES	TITLE	FINAL RINSE PIPING	NEXT ASSY DWG. NO.
FRAGMENTS #1/64	WITH I-J BOOSTER	SCALE	1172-28
DECIMALS	MATL	NOTED	USED ON
.XXX ± .005			CA-J
.XX ± .01			1-8
ANGLES ± 1/2°			DRWN/DATE
UNLESS OTHERWISE SPECIFIED			AFN 3.22.92

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SHEET 1 OF 2	
TOLERANCES	±1/64
FRACTIONS	±1/64
DECIMALS	±.005
XXX ±	.01
ANGLES	±1/2°
UNLESS OTHERWISE SPECIFIED	
REV	E
E	1597
D	1002
REV EGN NO	DATE
FILE: PARTS\172271	
TITLE	FINAL RINSE PIPING WITH ELECTRIC BOOSTER
MAT'L	AS NOTED
SCALE	1=B CA-3
REQ'D	1 1172-27
NEXT ASSY DWG. NO.	USED ON

FOR PARTS LIST SEE SHEET #2 THIS DWG. NO.

Insinger
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Philadelphia, PA 19135
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FAX (215) 624-6866
PC 2.1.88

ITEM	PART NO.	SIZE	DESCRIPTION	QTY.
1	D318F-F1-F1	-	UNION 1" FPS x 1" FPS	1
2	D2607	-	SOLENOID 1" IPS	1
3	D314F-FC-00	-	NIPPLE CLOSE 1" IPS	4
4	D-2249	-	VACUUM BREAKER 1" IPS	1
5	D317A-F3-F2	-	ADAPTER 1" C x 1" MIPS	3
6	D207A-B8-12	-	COPPER TUBING 1" CTS x 3" LG.	1
7	D316A-F3-F3	-	90° ELBOW 1" C	5
8	D207A-B8-16	-	COPPER TUBING 1" CTS x 4" LG.	1
9	979-41	A	S/S VERTICAL RINSE PIPE ASSY	1
10	D326A-F1	-	LOCKNUT 1" IPS	1
11	D314J-ES-16	-	NIPPLE 3/4" IPS x 2" LG.	1
12	D316E-E3-E1	-	90° ELBOW 3/4" C x 3/4" FPS	1
13	593-24	A	CROSS 1" X 3/4" x 3/4" x 1/2" IPS	1
14	D316E-E3-E2	-	90° ELBOW 3/4" C x 3/4" MIPS	1
15	FURNISH WITH	-	REDUCER 3/4" IPS	1
16	THERMOMETER	-	TEMP. BULB RETAINER	1
17	979-42	A	S.S. UPPER RINSE PIPE	1
18	D318E-E3-E2	-	UNION 3/4" C x 3/4" MIPS	2
19	D207C-L7-73	-	S.S. TUBING 7/8" O.D. x 18 1/4" LG.	1
20	D207A-B8-153	-	COPPER TUBING 1" CTS x 38 1/4" LG.	1
21	D207A-B8-50	-	COPPER TUBING 1" CTS x 12 3/8" LG.	2
22	D318A-F3-F3	-	UNION 1" C	1
23	D316A-F3-F1	-	90° ELBOW 1" C x 1" FPS	1
24	D207A-B8-66	-	COPPER TUBING 1" CTS x 16 1/2" LG.	1
25	D207A-B8-48	-	COPPER TUBING 1" CTS x 12" LG.	1
26	D329-5	-	DRAIN COCK 1/4" IPS	1
27	D322F-F2-B1	-	REDUCER 1" MIPS x 1/4" FPS	1
28	D320F-F1F1F1	-	TEE 1" IPS	2
29	D322F-E2-41	-	HEX REDUCER 3/4" MIPS x 1/8" FPS	1
30	D207A-B8-38	-	COPPER TUBING 1" CTS x 9 1/2" LG.	1
31	D207A-B8-64	-	COPPER TUBING 1" CTS x 16" LG.	1
32	D207A-B8-18	-	COPPER TUBING 1" CTS x 4 1/2" LG.	1
33	D323F-F2-E1	-	REDUCER 1" MIPS x 3/4" FPS	1

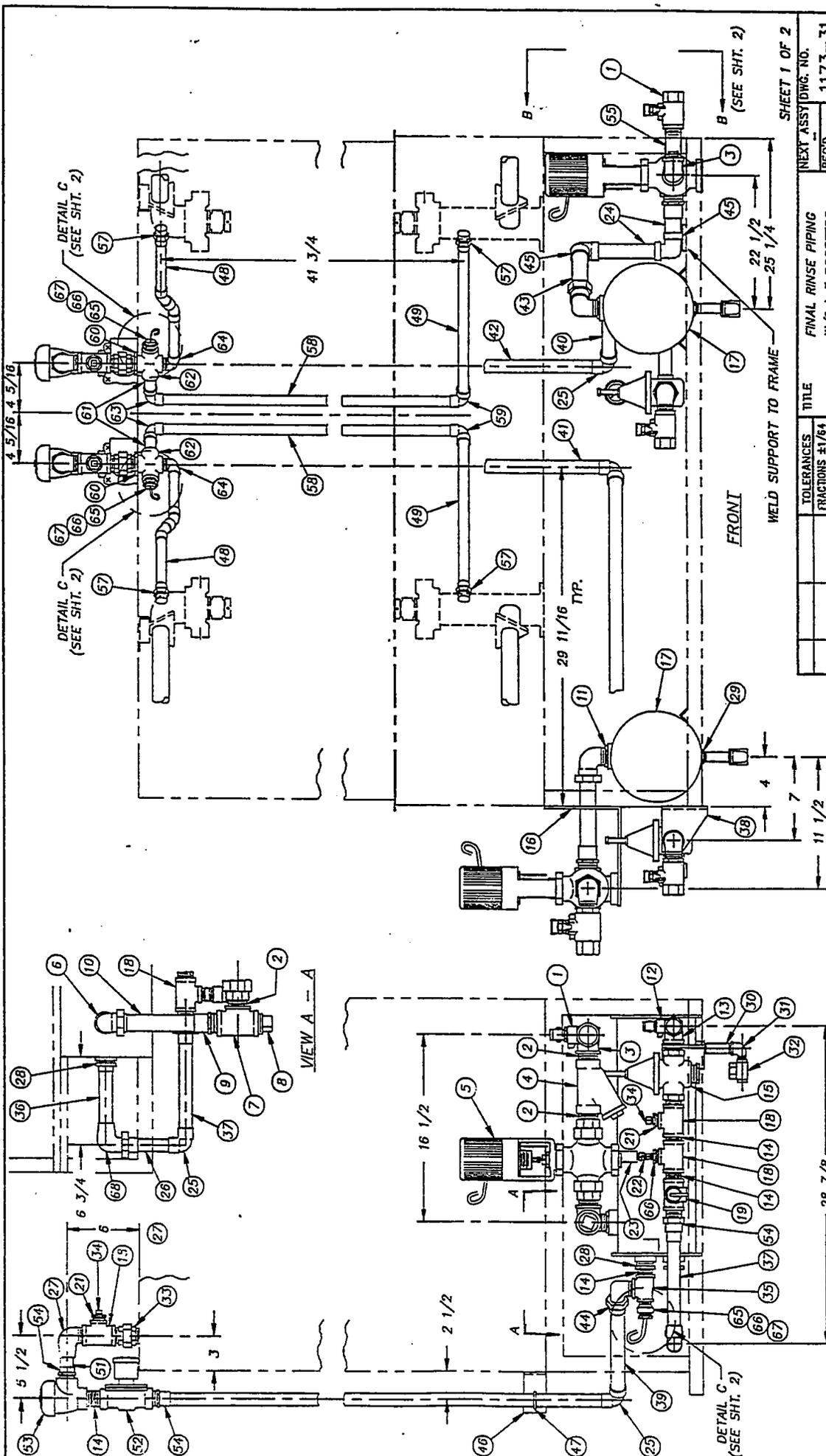
ITEM	PART NO.	SIZE	DESCRIPTION	QTY.
34	D322F-E2-D1	-	REDUCER 3/4" MIPS x 1/2" FPS	1
35	D320F-F1F1E1	-	TEE 1" x 1" x 3/4" IPS	1
36	D328F-E2A	-	PIPE PLUG 3/4" IPS	1
37	925-48	A	SUPPORT BRACKET	1
38	D-2266	-	PRESS. REG. & STRAINER 1" IPS	1
39	D316F-F1-F2	-	90° STREET ELL 1" IPS	1
40	D-2379	-	BALL VALVE 1" IPS	1
41	D320F-F1F1F1	-	TEE 1 1/4" IPS	1
42	D328F-A2A	-	PIPE PLUG 1/8" IPS	1
43	D316A-F3-F2	-	90° STREET ELL 1" C x 1" MIPS	1

* CHROME PLATED BRASS OR BRONZE
** 24 V. UNLESS OTHERWISE NOTED.

NOTE:
PRESSURE REGULATOR / STRAINER (ITEM 38)
TO BE FURNISHED BY OTHERS UNLESS SPECIFIED
ON PRODUCTION CARD - USE D-2448 1/2" STRAINER
AS STANDARD.

SHEET 2 OF 2

TOLERANCES	±1/64	FRACTIONS	±.005	DECIMALS	±.01	XX	±.01	ANGLES	±1/2°	UNLESS OTHERWISE SPECIFIED
REV	1	ECN NO	1002	DATE	4.18.94	FILE	PARTS\1172272			
TITLE	FINAL RINSE PIPING WITH ELECTRIC BOOSTER		MATL	NOTED		SCALE	1	1172-27	USED ON	CA-3
Machine Company	Insinger		Philadelphia, PA 19135		(215) 624-4800		PC		12.30.87	
FAX		(215) 624-6966								



FOR PARTS LIST SEE SHEET #2 THIS DWG. NO.

TOLERANCES	FRACIONS ±1/64	DECIMALS .XXX ± .005	.XX ± .01	ANGLES ±1/2°	UNLESS OTHERWISE SPECIFIED
J	1576	10.6.97			
H	1225	7.5.95			
REV	EDN NO.	DATE			
FILE	PARTS	1173-317			
TITLE	FINAL RINSE PIPING	W/2 1-3 BOOSTERS	MATL	AS NOTED	
RECD	1	1173-31	SCALE	1=8	USED ON DA-3
NEXT ASSY DWG. NO.	1173-31				

WELD SUPPORT TO FRAME

FRONT

29 11/16 TIP.

41 3/4

41

25 1/4

22 1/2

11 1/2

7

4

41 3/4

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DETAIL C (SEE SHT. 2)

DETAIL C (SEE SHT. 2)

VIEW A - A

5 1/2

6 3/4

6

3

16 1/2

2 1/2

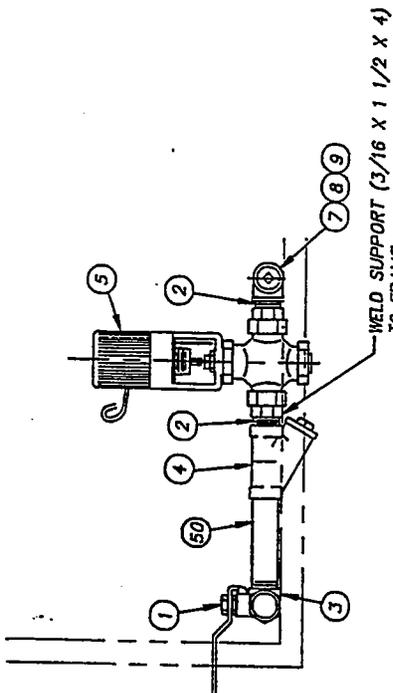
28 7/8

SHEET 1 OF 2

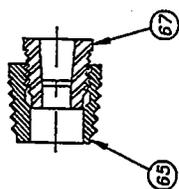
INSINGER Machine Company Philadelphia, PA 19135 (215) 624-4800 FAX (215) 624-6966

DA-3

3.06.02



VIEW B-B



DETAIL C

ITEM	PART NO.	DESCRIPTION	QTY.
1	D2363	BALL VALVE 1/4 IPS	2
2	D314F-G0-00	CLOSE NIPPLE 1/4 IPS	5
3	D318F-G1-G2	90° ST. ELL 1/4 IPS	2
4	D2447	Y STRAINER 1/4 IPS	1
5	D2287	STEAM TEMPERATURE REGULATOR 1/4 P.	2
6	D318A-G3-G2	90° UNION ELL 1/4 C x 1/4 MIPS	1
7	D320F-G1C1C1	TEE 1/4 IPS	1
8	D320F-G2A	SQUARE PLUG 1/4 IPS	2
9	D317A-G3-G2	ADAPTER 1/4 MIPS x 1/4 C	2
10	D207A-B10-J3	COPPER TUBING 1/4 CTS x 8 1/4" LG.	1
11	D322F-H2-G1	HEX REDUCER 1/2 MIPS x 1/4 FPS	2
12	D2379	BALL VALVE 1" IPS	2
13	D318F-F1-F2	90° ST. ELL 1" IPS	4
14	D314F-F0-00	CLOSE NIPPLE 1" IPS	15
15	D2288	PRESS. REGULATOR & STRAINER 1" IPS	2
16	B78-24	BRACKET	1
17	D2443	I-J BOOSTER (21)	2
18	D320F-F1F1E1	TEE 1" FPS x 1" FPS x 3/4 FPS	7
19	D2607	PRESSURE RELIEF VALVE 3/4 IPS	2
20	D318A-F3-F2	ST. UNION 1" C x 1" MIPS	4
21	D322F-E2-A1	HEX REDUCER 3/4 MIPS x 1/8" FPS	4
22	D2487	PETCOCK 1/4 IPS	2
23	SK-143J	PRESSURE GAUGE 1/4 IPS	2
24	D207A-B12-22	COPPER TUBING 1/4 CTS x 5" LG.	2
25	D316A-F3-F3	90° ELL 1" C	6
26	D207A-B8-20	COPPER TUBING 1" CTS x 1" LG.	3
27	D316A-F3-F2	90° ELL 1" C x 1" MIPS	2
28	D322F-G2-F1	HEX REDUCER 1/4 MIPS x 1" FPS	4
29	D322F-E2-D1	HEX REDUCER 3/4 MIPS x 1/2 FPS	2
30	D314F-G5-24	NIPPLE 1/2 IPS x 3" LG.	2
31	D318F-D1-D2	90° ST. ELL 1/2 FPS x 1/2 MIPS	2
32	D2102A	STEAM TRAP 1/2IPS	2
33	D318F-F1-F1	ST. UNION 1" FPS x 1" FPS	2
34	D320F-A2A	SQUARE PLUG 1/8" FPS	4
35	D320F-F1E1F1	TEE 1" FPS x 3/4 FPS x 1" FPS	2
36	D207A-G8	COPPER TUBING 1" CTS x 4 1/2" LG.	2
37	D30.4.09	COPPER TUBING 1" CTS x 10 5/8" LG.	2
38	925-48	BRACKET	1
39	F1-07A-98-108	COPPER TUBING 1" CTS x 37" LG.	1
40	D207A-B8-44	COPPER TUBING 1" CTS x 11" LG.	1
41	D207A-B8-222	COPPER TUBING 1" CTS x 55 1/2" LG.	1
42	D207A-B8-218	COPPER TUBING 1" CTS x 54 1/2" LG.	1
43	D318A-F3-F2	UNION ELL 1" C x 1" MIPS	2
44	D318A-G3-G3	90° ELL 1/4 C	2
45	925-49	BRACKET	2
46	D72A	PIPE CLAMP	2
47	978-42	S.S. UPPER RINSE PIPE	2
48	D207C-L7-J3	S.S. TUBING 7/8 O.D. x 18 1/4" LG.	2
49	D314F-G5-48	NIPPLE 1/4 IPS x 6" LG.	1
50	D207A-B8-10	COPPER TUBING 1" CTS x 2 1/2" LG.	2
51	D2807	SOLENOID VALVE 1" IPS	2
52	D2249	VACUUM BREAKER 1" IPS	2
53	D317A-F3-F2	ADAPTER 1" C x 1" MIPS	2
54	D314F-G4-20	NIPPLE 1/4 IPS x 2 1/2" LG.	1
55	D207A-B8-16	COPPER TUBING 1" CTS x 3" LG.	2
56	D207C-L7-168	S.S. TUBING 7/8 O.D. x 42" LG.	2
57	D316E-E3-E3	90° ELL 3/4 C	2
58	D326F-F1	LOCK NUT 1" IPS	2
59	D314J-E3-18	NIPPLE 3/4 IPS x 2" LG. S/S	2
60	683-24	CROSS 1" x 3/4 C x 3/4 FPS	2
61	D316E-E3-E1	90° ELL 3/4 C x 3/4 FPS	2
62	D316E-E3-E2	90° ELL 3/4 C x 3/4 MIPS	2
63	D318F-E3-E1	BRASS UNION	4
64	D322F-E2-B1	HEX REDUCER 3/4 MIPS x 1/4" FPS	2
65	D2300SP	SPLIT JAM NUT	4
66	D318A-F3-F3	UNION ELL 1" C x 1" C	2

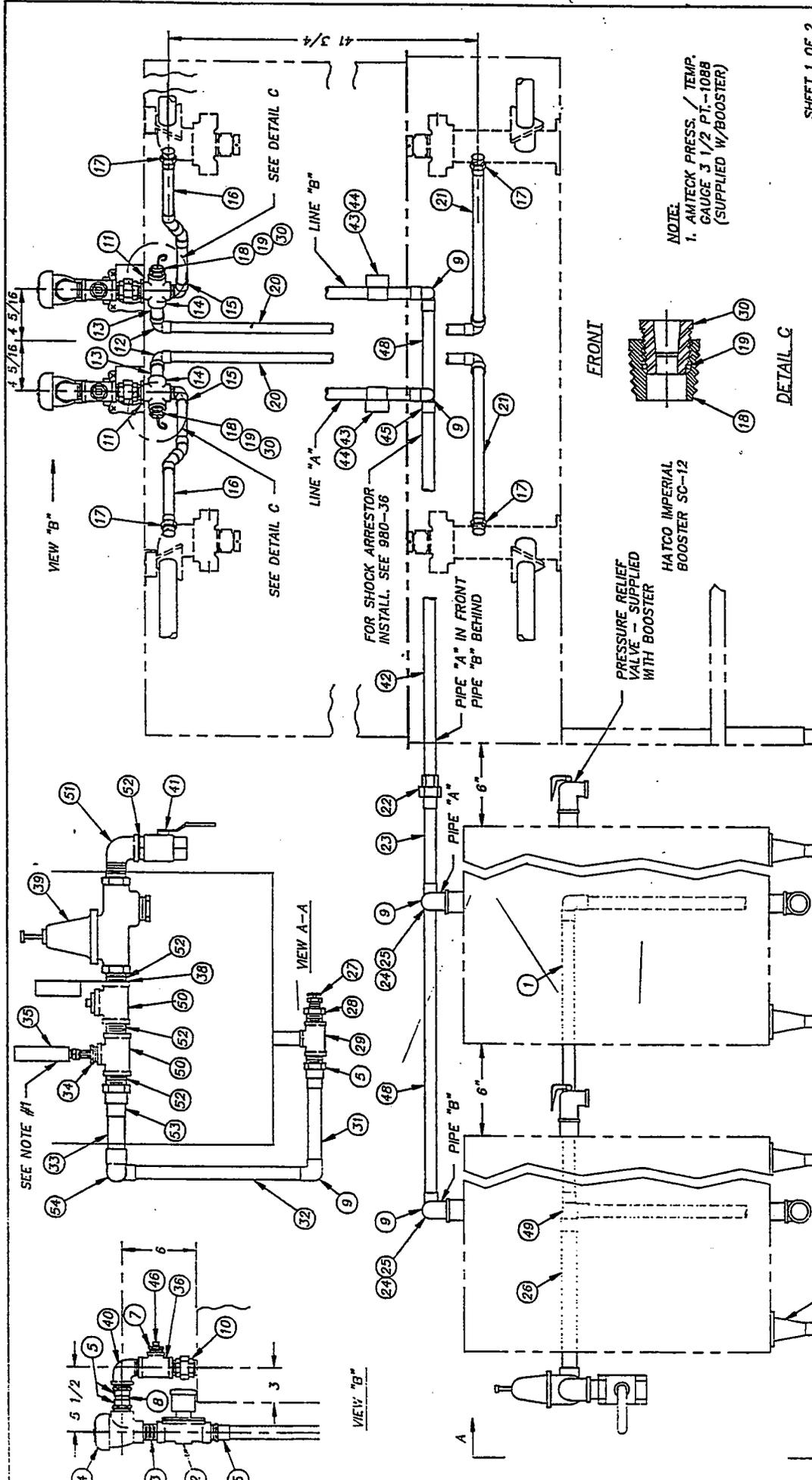
* * * = NICKEL PLATED COPPER OR BRASS

NOTE:
PRESSURE REGULATOR/STRAINER (ITEM 15)
TO BE FURNISHED BY OTHERS UNLESS SPECIFIED
ON PRODUCTION CARD - USE D2447 "Y"
STRAINER AS STANDARD.

TOLERANCES	REV	ECN NO	DATE	FILE: PARTS
FRACTIONS ±1/64	J	1576	10.6.97	1173-312
DECIMALS .XXX ±.005	H	1225	7.5.95	1173-312
.XX ±.01				
ANGLES ±1/2°				
UNLESS OTHERWISE SPECIFIED				

TITLE	FINAL RINSE PIPING	W/2 I-J BOOSTERS
AS NOTED <td></td> <td></td>		
SCALE	1" = 8'	
REQD	1	1173-31
NEXT ASSY DWG. NO.		

insinger	Philadelphia, PA 19135
Machine Company	(215) 824-4800
	FAX (215) 824-9888



NOTE:
 1. AMTECK PRESS. / TEMP.
 GAUGE 3 1/2 PT.-1088
 (SUPPLIED W/BOOSTER)

SHEET 1 OF 2	
TOLERANCES	FINAL FINISH PIPING
D 1494	WITH ELECTRIC BOOSTER
C 1225	SCALE 1"=8'
B 1005	AS NOTED
A 1002	USED ON DA-3
REV	ECN NO. DATE
FILE: PARTS/1173141	DRWN/DATE PG
	Philadelphia, PA 19135
	(215) 624-4800
	FAX (215) 624-6888
	21.88

FOR PARTS LIST SEE SHEET #2 THIS DWG. NO.

InSinger
 Machine Company

ITEM	PART NO.	SIZE	DESCRIPTION	QTY.
1	D207A-B8-80	-	COPPER TUBING 1" CTS X 20" LG.	1
2	D2607	-	SOLENOID 1" IPS	2
3	D314F-FC-00	-	NIPPLE CLOSE 1" IPS	5
4	D-2249	-	VACUUM BREAKER 1" IPS	2
5	D317A-F3-F2	-	ADAPTER 1" C X 1" MIFS	7
6	D207A-B8-5	-	COPPER TUBING 1" CTS X 1 1/4 LG.	1
7	D322F-E2-A1	-	HEX. REDUCER 3/4" MIFS X 1/8" FIPS	2
8	D207A-B8-10	-	COPPER TUBING 1" CTS X 2 1/2 LG.	2
9	D316A-F3-F3	-	90° ELBOW 1" C	7
10	D318F-F1-F1	-	ST. UNION 1" FIPS X 1" FIPS	2
11	D326F-F1	-	LOCKNUT 1" IPS	2
12	D316E-E3-E1	-	90° ELBOW 3/4 C X 3/4 FIPS	2
13	D314J-ES-16	-	NIPPLE 3/4 IPS X 2 LG.	2
14	583-24	A	CROSS 1" X 3/4 X 3/4 X 1/2 IPS	2
15	D316E-E3-E2	-	90° ELBOW 3/4 C X 3/4 MIFS	2
16	879-42	A	S.S. UPPER RINSE PIPE	2
17	D318E-E3-E2	-	UNION 3/4 C X 3/4 MIFS	4
18	D2390SP-1	-	BRASS UNION	2
19	D3-545	-	O-RING	2
20	979-41	A	S/S VERTICAL RINSE PIPE ASS'Y	2
21	D207C-C7-73	-	S/S TUBING 7/8 O.D. X 18 1/4 LG.	2
22	D318A-F3-F3	-	UNION 1" C	2
23	D207A-B8-50	-	COPPER TUBING 1" CTS X 12 3/8 LG.	2
24	D316A-F3-F1	-	90° ELBOW 1" C X 1" FIPS	2
25	D207A-B8-51	-	COPPER TUBING 1" CTS X 12 3/4 LG.	2
26	D207A-	-	COPPER TUBING 1 1/4" CTS X 12 LG.	1
27	D329-5	-	DRAIN COCK 1/4 IPS	2
28	D322F-F2-B1	-	REDUCER 1" MIFS X 1/4 FIPS	2
29	D320F-F1F1F1	-	TEE 1" IPS	2
30	D2390SP	-	SPLIT JAM NUT	2
31	D207A-B8-38	-	COPPER TUBING 1" CTS X 9 1/2 LG.	2
32	D207A-B8-64	-	COPPER TUBING 1" CTS X 16 LG.	2
33	D207A-	-	COPPER TUBING 1 1/4" CTS X 4 1/2 LG.	1

* CHROME PLATED BRASS OR BRONZE
 ** 24 V. UNLESS OTHERWISE NOTED.

NOTE:
 PRESSURE REGULATOR / STRAINER (ITEM# 39)
 TO BE FURNISHED BY OTHERS UNLESS SPECIFIED
 ON PRODUCTION CARD - USE D-2448 "Y" STRAINER
 AS STANDARD.

TOLERANCES		TITLE		NEXT ASSY DWG. NO.	
D	1494	10.30.96	FINAL RINSE PIPING	REQ'D	1173-14
C	1225	7.5.95	WITH ELECTRIC BOOSTER	SCALE	1=8
B	1005	.XX ± .005	MAT'L	USED ON	D4-3
A	1002	5.8.94	NOTED	1=8	
REV.	ECN NO.	DATE			
FILE PARTS 1173142					

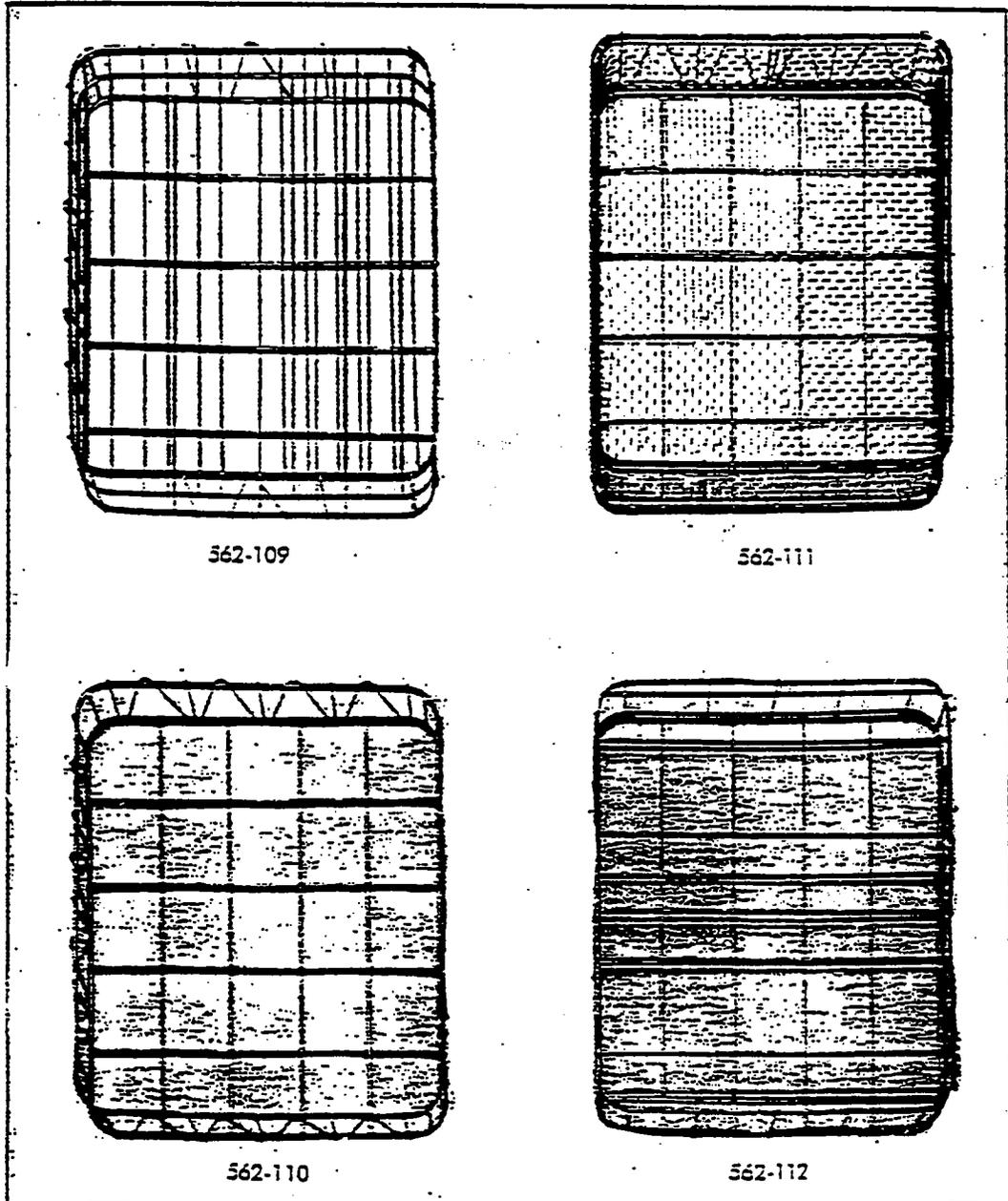
InSinger
 Machine Company
 Philadelphia, PA 19135
 (215) 824-4800
 FAX (215) 824-6868
 DRWN/DATE
 PC 2.1.88



INSINGER POT, PAN & UTENSIL RACKS

Model CA & DA

INSINGER UTENSIL WASHING MACHINES



LIST OF PARTS

Part No.	Name
562-109	Bake Sheet Rack
562-110	General Utility Rack
562-111	Basket Rack
562-112	Counter Pan Rack

INSTRUCTIONS FOR ORDERING PARTS

When ordering parts specify SERIAL NUMBER AND MODEL NUMBER of machine.

NAVSEA/SPAWAR TECHNICAL MANUAL DEFICIENCY/EVALUATION REPORT (TMDER)

INSTRUCTIONS: Continue on 8 1/2" x 11" page if additional space is needed.

1. Use this report to indicate deficiencies, problems and recommendations relating to publications.
2. For CLASSIFIED TMDERs see OPNAVINST 5510H for mailing requirements.
3. For TMDERs that affect more than one publication, submit a separate TMDER for each.
4. Submit TMDERs at web site <https://nsdsa2.phdnswc.navy.mil> or mail to: **COMMANDER, CODE 310 TMDER BLDG 1389, NAVSURFWARCENDIV NSDSA, 4363 MISSILE WAY, PORT HUENEME CA 93043-4307**

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5. TITLE OF PUBLICATION	6. REPORT CONTROL NUMBER (6 digit UIC-YY-any four: xxxxxx-03-xxxx)
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7. RECOMMEND CHANGES TO PUBLICATION

7a. Page #	7b. Para #	7c. RECOMMENDED CHANGES AND REASONS

8. ORIGINATOR'S NAME AND WORK CENTER	9. DATE	10. ORIGINATOR'S E-MAIL ADDRESS	11. TMA of Manual (NSDSA will complete)
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