



FLORIDA DEPARTMENT OF Environmental Protection

Northeast District
8800 Baymeadows Way West, Suite 100
Jacksonville, Florida 32256

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary

MEMORANDUM FOR FILE

March 15, 2022

Subj: North Florida Shipyards, Inc.
Long Form Consent Order, Case #19-0119
Final Pollution Prevention (P2) Project Report
EPA/DEP ID: FLD093598548
Duval County – Hazardous Waste

This Memorandum For File serves to document that the attached Final Pollution Prevention (P2) Project Report (Final Report) is a compilation of several versions of the Final Report that were submitted to the Department between October 9, 2020 and January 19, 2021. This compilation was made by the undersigned for clarity purposes only and did not modify or revise the original data submitted to the Department by, or on behalf of, North Florida Shipyards, Inc. (NFSY). This compilation includes the following formatting changes and technical clarifications:

- 1) Inserted a Table of Contents for the Final Report after the NFSY Transmittal Cover Letter.
- 2) Reorganized previous Final Report submittal enclosures for Cost Data, purchased equipment pictures, and purchased equipment manuals behind the new Enclosures (2), (2a), (3) and (4). All attempts were made to maintain the original enclosure order of each submittal, but some enclosures may reflect a different enclosure number in the headers/footers.
- 3) Inserted a text comment regarding a calculation error on the 4th page of the Project Labor table in Enclosure (3).
- 4) Inserted the United States version of the SDS for the PPG T-10 Thinner as Enclosure (5) in lieu of the Mexico version that was submitted to the Department.

The data included in this compilation is the original data submitted by NFSY, except as noted above, and will serve as the Final P2 Project Report that has been approved by the Department.

Respectfully,

A handwritten signature in blue ink, appearing to read "Cheryl L. Mitchell".

Cheryl L. Mitchell
Engineering Specialist IV



NORTH FLORIDA SHIPYARDS, INC.

2060 E. Adams St.
(904) 354-3278

Jacksonville, FL 32202
www.northfloridashipyards.com

January 19, 2021

Florida Department of Environmental Protection
Attn: Ms. Cheryl L. Mitchell
Hazardous Waste Subject Matter Expert
Northeast District Office
8800 Baymeadows Way West
Suite 100
Jacksonville, Florida 32256

Subject: Pollution Prevention (P2) Project Final Report in Accordance with Consent Order
Dated July 18, 2019 for Facility ID Number (FLR 093 598 548)/OGC Number (19-0119)

Dear Ms. Mitchell:

North Florida Shipyard, Incorporated (NFSY) has implemented the Pollution Prevention (P2) Project Plan as proposed for the facility. The P2 project has been successfully completed. The electrical wiring of the first distillation unit proved to be the most difficult item to complete. The P2 Final Report is provided by Enclosure (1). The items in paragraphs 1-3 in your email dated January 5, 2021 have been addressed in the P2 Final Report dated January 19, 2021.

The requested purchase order and invoices with product description are provided as Enclosure (2) for your request in paragraph 4. The second unit cost more because additional repair parts were purchased with the unit and one (1) item for the first unit was bought with the second unit. The second purchase included two (2) anti-foam rings one for the first unit and one for the second unit. The anti-foam rings cost \$331.50 each have part number 84022 and are shown as "FOAM BREAKER GRILL FOR 6 GAL RECYCLER" on the invoice.

The paragraph 5 discharge status of the industrial waste water from the rags recycling washing machine is being managed by pretreatment in the JEA permitted North Florida Shipyard Industrial Pretreatment Facility. The rag wash water is collected in a tote and is transported to the permitted pretreatment facility for treatment and discharge under the existing permit. The discharge is not being made directly from the washing machine to the sanitary sewer at this time.

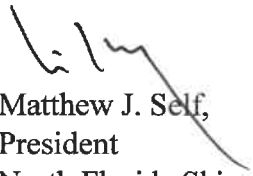
I can be reached at (904) 354-3278, extension 105, or via email at mself@nfsy.net, should you have any questions or need additional information. You may also work with Matt Brandt, NFSY Facilities Manager and Yard Superintendent, His contact information is as follows:

Direct Line: (904) 337-4296 extension 169

or via email at MBrandt@nfsy.net.

Your assistance with this matter is greatly appreciated.

Sincerely,



Matthew J. Self,
President
North Florida Shipyards, Inc.

cc: Matt Brandt, Facilities Manager and Yard Superintendent, NFSY
Eddie Avery, Safety Director NFSY
Timothy W. Rudolph, P.E., ENVIRONEERING, Incorporated

North Florida Shipyards, Inc.

P2 Project Final Report

Table of Contents

Enclosure (1) – P2 Project Final Report, Sections A – D including Project Tables

Enclosure (1a) – Supporting Data for Project Tables and Costs

Enclosure (2) – Cost Data for Distillation Units

Enclosure (2a) – Pictures of Distillation Units and Washer/Dryer, and Distillation Units' Installation Letter

Enclosure (3) – Cost Data for Washer/Dryer, P2 Project Installation Materials, and Project Labor

Enclosure (4) – Equipment Manuals for Distillation Units and Washer/Dryer

Enclosure (5) - SDS for Solvent

P2 FINAL REPORT
North Florida Shipyard, Inc
2060 East Adams Street
Jacksonville, Florida 32202

ENCLOSURE (1)

P2 FINAL REPORT

P2 Final Report

North Florida Shipyard, Incorporated
2060 East Adams Street
Jacksonville, Florida 32202
(904) 354-3278

Prepared by:

Timothy W. Rudolph, P.E., Environmental Engineer
Environeering, Incorporated.
(904) 665-0100

A. Project Description:

North Florida Shipyard, Incorporated (NFSY) has implemented the Pollution Prevention (P2) Project Plan as proposed for the facility, with the exception that the lighting portion of the project was terminated. The solvent recovery and rag recycling portions of the project were implemented as intended with minor modifications. The P2 project has been successfully completed. The electrical wiring of the first distillation unit proved to be the most difficult item to complete. The grounding of the unit required significant input from the factory, the electrical department and an independent engineer. The rag and solvent recycling systems have been installed and are operational. A washer and dryer with supporting facility infrastructure, water, electric and sanitary have been installed. The industrial waste water from the washer unit is pretreated and then is discharged to the sanitary sewer system. The industrial waste water from the rags recycling washing machine is being managed by pretreatment in the JEA permitted North Florida Shipyard Industrial Pretreatment Facility. The rag wash water is collected in a tote and is transported to the permitted pretreatment facility for treatment and discharge under the existing permit. The discharge is not being made directly from the washing machine to the sanitary sewer at this time. The need to add anti foam rings to the distillation units became very apparent during the initial test runs when the batch tank boiled over into the condenser contaminating the collection tank. The second purchase included two anti foam rings one for the first unit and one for the second unit. The anti foam rings have part number 84022 and are shown as "FOAM BREAKER GRILL FOR 6 GAL RECYCLER" on the invoice. The solvent recycling and the rag recycling portions of the project were completed and the lighting portion of the project was terminated.

B. Environmental and Economic Benefits:

The natures and types of resources and wastes predicted to be effected in the original Plan were good estimates based upon historical production rates, however the actual production rate of the shipyard was lower than anticipated at the time the measurements were obtained. The tables have been updated for the actual production rates measured.

C. Project Cost:

The allowed P2 Project offset amount listed in the original LFCO executed on 7/18/19, paragraph 14(e)(2), is \$32,086. Based on NFSY P2 Project cost data for the NFSY P2 Project is \$36,561.22 broken out as follows:

Equipment: \$32,510.43 for washer and dryer at \$535 total, and two solvent distillation units at \$14,413.85 and \$17,561.58 each;
Labor: \$3,892.50 for 173 hours @ \$22.50/hour;
Materials: \$158.29 for electrical parts and ductwork.

The total project cost of \$36,561.22 will meet the LFCO offset requirement along with the required P2 Project Final Report.

The payback period for the rag recycling facility was 0.0965 years. The payback period for the distillation facility was 3.6 years. The combined projects had a payback period of 2.35 years. Data tables are at the back of this report.

D. Project Reporting:

The project was started on August 15, 2019 and was completed on October 9, 2020. The information in Section A-C of the Plan is unchanged or has been updated accordingly. The solvent recycling project and the rag recycling project were successfully implemented and the light project was terminated. The electrical wiring of the first distillation unit was difficult because two wires were reversed at the factory. The distillation units needed to have antifoam rings installed to operate properly based upon the initial test runs completed. The project cost documentation has been submitted previously. Updated cost information for the distillation units was included in this submittal as requested.

Timothy W. Rudolph, P.E., L.A.C.
President, Enviroengineering, Incorporated
Licensed Professional Engineer 39617 - Florida
Licensed Asbestos Consultant EA 0000074
Asbestos Consultant License AX58
Asbestos Business License ZA0000243
<NFSY-ENVIRONEERING-6895-P2 PLAN-LETTER-08-15-2019-A.doc >

1/19/2021



NORTH FLORIDA SHIPYARD POLLUTION PREVENTION P2 PLAN - RAG RECYCLING

RAG RECYCLING - 1/19/2021

Annual Resource Consumption Comparison

ITEM B=BASE	Quantity Used (Gallons/Year) (Pound/Year)			Purchase Cost (\$/Pound) - Materials or Cost of \$0.00814/Gallon for Water			Percent (%) Reduction
	Before	After	Reduction	Before	After	Reduction	
Water	B	B + 5400	-5,400	B	B + \$43.95	(\$43.95)	N/A
Chemicals	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Materials	20,750 lb	18,950 lb	1,800	\$10,879.23	\$9,935.49	\$943.75	8.70%
Energy	B	B +\$180.00	(\$180.00)	B	B +\$180.00	(\$180.00)	N/A

Total Annual Cost Savings \$719.80

Annual Waste Generation Comparison

ITEM	Quantity Generated (lb)			Disposal Cost (\$)			Percent (%) Reduction
	Before	After	Reduction	Before	After	Reduction	
Hazardous Waste	B	B-990 G	990 G	B	B - \$5,256.90	\$5,256.90	N/A
Industrial Wastewater	B	B + 5400	-5,400	B	B + \$432.00	(\$432.00)	N/A
Solid Waste	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Air Emissions	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Total Annual Cost Savings = \$4,824.90

Total Annual Avoided Cost Savings = \$5,544.70

PAY BACK PERIOD (\$535/\$5,544.70= 0.0965 Years or 1.16 Months)

JON # 6895

Prepared by:

ENVIRONEERING, INC.

109 Azalea Point Drive South

Ponte Vedra Beach, FL 32082

NORTH FLORIDA SHIPYARD POLLUTION PREVENTION P2 PLAN - DISTILLATION UNITS

DISTILLATION UNITS - 1/19/2021							
Annual Resource Consumption Comparison							
ITEM B=BASE	Quantity Used (Gallons/Year) (Pound/Year)			Purchase Cost (\$21.00/gallon) - Materials Solvent Paint Thinner			Percent (%) Reduction
	Before	After	Reduction	Before	After	Reduction	
Water	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chemicals	B	B-403.2 G	403.2 G	B	B-403.2 G	\$8,467.20	N/A
Materials	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Energy	B	B+\$600.00	(\$600.00)	B	B+\$600.00	(\$600.00)	N/A
Total Annual Cost Savings \$7,867.20							
Annual Waste Generation Comparison							
ITEM	Quantity Generated (lb)			Disposal Cost (\$)			Percent (%) Reduction
	Before	After	Reduction	Before	After	Reduction	
Hazardous Waste - Liquid	B	B-403.2 G	403.2 G	B	B-\$2,141.00	\$2,141.00	N/A
Industrial Wastewater	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Solid Waste	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Air Emissions	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Annual Cost Savings = \$2,141.00							
Total Annual Avoided Cost Savings = \$10,008.20							
PAY BACK PERIOD (\$36,026.22/\$10,008.20 = 3.6 Years)							

JON # 6895

Prepared by:

ENVIRONEERING, INC.

109 Azalea Point Drive South

Ponte Vedra Beach, FL 32082

NORTH FLORIDA SHIPYARD POLLUTION PREVENTION P2 PLAN - RAG RECYCLING

SOLVENR & RAG RECYCLING - 1/19/2021 (BOTH)

Annual Resource Consumption Comparison

ITEM B=BASE	Quantity Used (Gallons/Year) (Pound/Year)			Purchase Cost (\$/Pound) - Materials or Cost of \$0.00814/Gallon for Water			Percent (%) Reduction
	Before	After	Reduction	Before	After	Reduction	
Water	B	B + 5400	-5,400	B	B + \$43.95	(\$43.95)	N/A
Chemicals	B	B-403.2 G	403.2 G	B	B-403.2 G	\$8,467.20	N/A
Materials	20,750 lb	18,950 lb	1,800	\$10,879.23	\$9,935.49	\$943.75	8.70%
Energy	B	B +\$780.00	(\$780.00)	B	B +\$780.00	(\$780.00)	N/A

Total Annual Cost Savings \$8,587.00

Annual Waste Generation Comparison

ITEM	Quantity Generated (lb)			Disposal Cost (\$)			Percent (%) Reduction
	Before	After	Reduction	Before	After	Reduction	
Hazardous Waste - Liquid	B	B-403.2 G	403.2 G	B	B-\$2,141.00	\$2,141.00	N/A
Hazardous Waste - Solid	B	B-990 G	990 G	B	B - \$5,256.90	\$5,256.90	N/A
Industrial Wastewater	B	B + 5400	-5,400	B	B + \$432.00	(\$432.00)	N/A
Solid Waste	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Air Emissions	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Total Annual Cost Savings = \$6,965.9

Total Annual Avoided Cost Savings = \$15,552.90

PAY BACK PERIOD (\$36,561.22/\$15,552.90= 2.35 Years)

JON # 6895
Prepared by:

ENVIRONEERING, INC.

109 Azalea Point Drive South
Ponte Vedra Beach, FL 32082

ENCLOSURE (1a)

FIND PAYBACK TIME FOR RAG FACILITY

GIVEN:

30 LOADS OF RAGS RECYCLED (7/7/20-8/31/20)
16 lb PER LOAD
RAGS COST 0.49/lb
RAG DISPOSAL COST IS \$292.22/55g DRUM
900 g OF INDUSTRIAL WASTEWATER (IWW) 2-MO
DISPOSAL PRICE OF IWW IS \$0.08/GALLON
100lb RAGS/55g DRUM

VALUE OF RAGS RECYCLED

$V_R = W \cdot U_p = 150 \text{ lb/month} \cdot \$0.49/\text{lb}$
 $V = \$73.50 \leftarrow$

COST OF IWW TREATMENT

$C_{IWW} = V \cdot U_p = \frac{450 \text{ g}}{\text{MON}} \cdot \$0.08/\text{gal}$
 $C_{IWW} = \$36.00/\text{MONTH} \leftarrow$

VALUE OF HAZARDOUS WASTE PRICE SAVED

$V_{HW} = V \cdot U_{pHW} = \frac{82.5 \text{ gal}}{\text{MON}} \cdot \frac{\$292.22}{55 \text{ gal}}$
 $V_{HW} = \$438.22/\text{MONTH} \leftarrow$

NET SAVINGS PER MONTH

$S_{NET} = V + V_{HW} - C_{IWW}$
 $S_{NET} = \$73.50 + \$438.22 - \$36.00$
 $S_{NET} = \$475.72/\text{MONTH} \leftarrow$

PAYBACK PERIOD

$P_p = C/S = \$535.00 / \$475.72/\text{MON}$
 $P_p = 1.1 \text{ MONTH} \leftarrow$

ENCLOSURE (4)
North Florida Shipyard, Inc. Ltr Dtd 10/9/2020

TWRUDOLPH

FIND PAYBACK TIME FOR SOLVENT FACILITYGIVEN:

- NEW SOLVENT COST = \$21.00/GALLON
- HAZARDOUS WASTE DISPOSAL = \$5.31/GALLON
- 67.2 GALLON SOLVENT RECOVERED IN 2 MONTHS
(JUNE - JULY 2020) 33.6 GAL/MON
- DISTILLATION UNITS COST \$31,975.43

NEW SOLVENT SAVINGS

$$V_s = V U_p$$

$$V_s = \frac{33.6 \text{ gal}}{\text{MONTH}} \cdot \frac{\$21.00}{\text{GALLON}} = \$705.60$$

$$\underline{V_s = \$705.60} \leftarrow$$

VALUE OF HAZARDOUS WASTE PRICE SAVED

$$V_{HW} = V U_{pHW}$$

$$V_{HW} = \frac{33.6 \text{ gal}}{\text{MONTH}} \cdot \frac{\$5.31}{\text{GALLON}} = \$178.42$$

$$\underline{V_{HW} = \$178.42} \leftarrow$$

NET SAVINGS PER MONTH

$$S_{NET1} = V_s + V_{HW}$$

$$S_{NET1} = \$705.60 + \$178.42 = \$884.02$$

$$\underline{S_{NET1} = \$884.02} \leftarrow \text{PER MONTH}$$

PAYBACK PERIOD

$$P_{Pi} = C / S_{NET1} = (\$31,975.43 / \$884.02/\text{MON}) = \frac{\text{YEAR}}{12 \text{ MONTHS}}$$

$$P_{Pi} = 3.0 \text{ YEARS}$$

TWRUDOLPH

(Complete the first tables for each Project *individually*. Add or average corresponding figures from each Project table to complete the Plan table below for *multiple Projects*.)

B-BASE

RAGS

Summary of All P2 Projects							
Annual Resource Consumption Comparison							
Item	Quantity Used (gal/lb/kwh-specify)			Purchasing Cost (\$)			Percent (%) Reduction
	Before	After	Reduction	Before	After	Reduction	
Water	B	B+5400g	+5400g	-	-	-	
Chemicals							
Materials	B	B+1800lb	+1,800 lb	0.49/lb	0.49/lb	\$1,882.00	
Energy							
Total Annual Cost Savings =						\$1,882.00	
Annual Waste Generation Comparison							
Item	Quantity Generated (gal/lb/tons-specify)			Disposal Cost (\$)			Percent (%) Reduction
	Before	After	Reduction	Before	After	Reduction	
Hazardous Waste	B	B-990g	-990g	\$5.31/g	\$5.31/g	\$5,256.90	
Industrial Wastewater							
Solid Waste							
Air Emissions							
Total Annual Cost Savings =						\$5,256.90	
Total Annual Avoided Cost Savings =						\$7,138.90	

C. Project Cost: (Include per Project the itemized, subtotal and Project total costs. A projected payback period in months or years needs to be included. Provide a grand total cost for all Projects and an averaged projected payback period, for multiple Projects. Use list or table format for all.)

D. Implementation Schedule: (Provide a brief discussion of the steps necessary to implement the Projects and expected time frames for completion. A table or list format is preferred. The schedule shall include a list of milestones with dates, or timeframes based on Plan approval date, including Progress and Final Report submittals. Provide a description of any anticipated problems and options. *The implementation should take no longer than six (6) months to complete.*)

E. Project Reporting:

1. Within 90 days of approval of the Project Plan, the Respondent shall submit a P2 Project Progress Report to the Department that describes the Respondent's progress in implementing the P2 Project and meeting the requirements in the Plan, and includes a list of equipment ordered, purchased, and/or installed.
2. Within 180 days of approval of the Plan, the Respondent shall submit to the Department a P2 Project Final Report that includes the following:
 - a. A confirmation that the information presented in Sections A-C of the Summary is unchanged, or an updated version with the sections changed appropriately. A statement that the Project(s) was/were implemented successfully. An explanation of any problems encountered and corrections applied; and
 - b. Attached expense reports, receipts, purchasing instruments and other documents itemizing costs expended on preparing and implementing the Project.

(Complete the first tables for each Project *individually*. Add or average corresponding figures from each Project table to complete the Plan table below for *multiple* Projects.)

B - BASE

SOLVENT

Summary of All P2 Projects							
Annual Resource Consumption Comparison							
Item	Quantity Used (gal/lb/kwh-specify)			Purchasing Cost (\$)			Percent (%) Reduction
	Before	After	Reduction	Before	After	Reduction	
Water							
Chemicals	B	B-4032g	- 403.2g	\$21.00/g	\$21.00/g	\$ 8,467.20	
Materials							
Energy							
Total Annual Cost Savings =				\$ 8,467.20			
Annual Waste Generation Comparison							
Item	Quantity Generated (gal/lb/tons-specify)			Disposal Cost (\$)			Percent (%) Reduction
	Before	After	Reduction	Before	After	Reduction	
Hazardous Waste	B	B-4032g	- 403.2g	\$5.31/g	\$5.31/g	\$ 2,144.00	
Industrial Wastewater							
Solid Waste							
Air Emissions							
Total Annual Cost Savings =				\$ 2,144.0			
Total Annual Avoided Cost Savings =				\$ 10,611.20			

C. Project Cost: (Include per Project the itemized, subtotal and Project total costs. A projected payback period in months or years needs to be included. Provide a grand total cost for all Projects and an averaged projected payback period, for multiple Projects. Use list or table format for all.)

D. Implementation Schedule: (Provide a brief discussion of the steps necessary to implement the Projects and expected time frames for completion. A table or list format is preferred. The schedule shall include a list of milestones with dates, or timeframes based on Plan approval date, including Progress and Final Report submittals. Provide a description of any anticipated problems and options. *The implementation should take no longer than six (6) months to complete.*)

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 - a. A confirmation that the information presented in Sections A-C of the Summary is unchanged, or an updated version with the sections changed appropriately. A statement that the Project(s) was/were implemented successfully. An explanation of any problems encountered and corrections applied; and
 - b. Attached expense reports, receipts, purchasing instruments and other documents itemizing costs expended on preparing and implementing the Project.



Timothy Rudolph <envroneeringinc@gmail.com>

Rags & thinner costs - NFSY

3 messages

Fran A. Estes <FEstes@nfsy.net>

Thu, Sep 3, 2020 at 1:23 PM

To: "envroneeringinc@gmail.com" <envroneeringinc@gmail.com>

Hi Tim

Thinner:

We purchase thinner (Formula 130) in 5 gallon cans @ \$21.00 per gallon/\$105.00 per 5 GL can.

Rags:

50lb box @ \$0.49 per lb

Last purchase: 8/7/2020 1000lbs @ \$0.49 per lb.

Box dimensions: 18"wide x 15"deep x 24" high

Let me know if you need any additional information.

Thanks & take care,

Fran

Fran Estes

Purchasing Manager

North Florida Shipyards, Inc.

2060 E Adams St.

Jacksonville, FL 32202

Phone: (904) 580-3306



[Quoted text hidden]

2 attachments

 **RAGS 2019 to 2020.xlsx**
14K

 **RAGS 2101 June01 to July31 2020.docx**
9K

ENVIRONEERING, INC.

109 AZALEA POINT DRIVE SOUTH
 PONTE VERDRA BEACH, FL 32082
 ENVIRONEERINGINC@GMAIL.COM

Invoice

DATE	INVOICE #
11/5/19	17143



BILL TO	SHIP TO
North Florida Shipyards, Inc. Mr. Matthew P. Brandt 2060 East Adams Street P.O. Box 3255 Jacksonville, FL 32202	North Florida Shipyards, Inc. Mr. Coleman L. Harwell 2060 East Adams Street P.O. Box 3255 Jacksonville, FL 32202

Our Job #		P.O. NO.	TERMS	
6895 - Hazardous Waste Project		1820005-00001	Net 30	
QTY	DESCRIPTION	RATE	AMOUNT	
9	HAZARDOUS WASTE DISPOSAL - NINE DRUMS SOLID PAINT WASTE GIANT RESOURCES JON# 6895 - Hazardous Waste Project 2060 East Adams Street, Jacksonville, FL 32202	292.2225	2,630.00	
Thank you for your business! 904.665.0100 904.665.0101 FAX 904.612.1456 MOBILE - Tim Rudolph		Sales Tax (7.0%)		\$0.00
		Total		\$2,630.00
Phone #	Fax #	E-mail	Web Site	
(904) 665.0100	(904) 665.0101	ENVIRONEERINGINC@GMAIL.COM	environeering.net	

P2 FINAL REPORT - ADDITIONAL INFORMATION SUBMITTAL
North Florida Shipyard, Inc
2060 East Adams Street
Jacksonville, Florida 32202

ENCLOSURE (2)

DISTILLATION UNITS PURCHASE ORDERS AND INVOICES

ENVIRONEERING, INC.

109 AZALEA POINT DRIVE SOUTH
 PONTE VERDRA BEACH, FL 32082
 ENVIRONEERINGINC@GMAIL.COM

Invoice

DATE	INVOICE #
5/26/20	17423

BILL TO
North Florida Shipyards, Inc. Mr. Matthew P. Brandt 2060 East Adams Street P.O. Box 3255 Jacksonville, FL 32202

SHIP TO
North Florida Shipyards, Inc. Mr. Matthew P. Brandt 2060 East Adams Street P.O. Box 3255 Jacksonville, FL 32202

Our Job #		P.O. NO.	TERMS	
6895 - Hazardous Waste Project		1820010 - 000...	Net 30	
QTY	DESCRIPTION	RATE	AMOUNT	
1	SUPPLIES - SOLVENT DISTILLATION UNIT FOR P2 PROJECT HIGH CAPACITY RECYCLE - 6 GALLON S/N - SERIAL NUMBER(S): 042020-1	13,192.85	13,192.85T	
1	Shipping JON # 6895 - Hazardous Waste Project 2060 East Adams Street, Jacksonville, FL 32202 NFSY PO # - 1820010 - 00000004	297.50	297.50	
Thank you for your business! 904.665.0100 904.665.0101 FAX 904.612.1456 MOBILE - Tim Rudolph		Sales Tax (7.0%)		\$923.50
		Total		\$14,413.85
Phone #	Fax #	E-mail	Web Site	
(904) 665.0100	(904) 665.0101	ENVIRONEERINGINC@GMAIL.COM	environeering.net	

North Florida Shipyards, Inc.
 2060 E. Adams St
 Jacksonville FL 32202

Purchase Order



Phone: 904 354 3278
 Fax:

Purchase Order: 1820010 - 00000004
 Revision: Original

Vendor Environeering, INC 109 Azalea Point Drive South Ponte Vedra FL 32082		Shipping Address North Florida Shipyards, Inc. 2060 E Adams St. Jacksonville FL 32202	
Order Date	Required Date	Payment Terms	FOB
3/5/2020	3/13/2020	Net 30	

Item and Description	Quantity	UOM	Unit Cost	Extended Cost
High capacity recycler - 6 gal	1.0000	EA	6,366.5000	6,366.50
item#831004aphc - option becca protect film applied to SC/HC recycler	1.0000	EA	204.0000	204.00
item#805003 - stainless steel condenser	1.0000	EA	2,681.7500	2,681.75
item#825156k - option vacuum assist and pump transfer kit - recycler to drum	1.0000	EA	2,699.6000	2,699.60
item#660006-100, 100pack 6gallon recycler bags	4.0000	PK	310.2500	1,241.00
			Total:	13,192.85

ENVIRONEERING, INC.

109 AZALEA POINT DRIVE SOUTH
 PONTE VERDRA BEACH, FL 32082
 ENVIRONEERINGINC@GMAIL.COM

Invoice

DATE	INVOICE #
8/10/20	17507

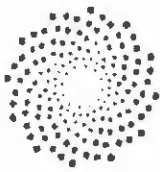
BILL TO
North Florida Shipyards, Inc. Mr. Matthew P. Brandt 2060 East Adams Street P.O. Box 3255 Jacksonville, FL 32202

SHIP TO
North Florida Shipyards, Inc. Mr. Matthew P. Brandt 2060 East Adams Street P.O. Box 3255 Jacksonville, FL 32202

Our Job #		P.O. NO.	TERMS	
6895 - Hazardous Waste Project			Net 30	
QTY	DESCRIPTION	RATE	AMOUNT	
1	EQUIPMENT BECCA HIGH CAPACITY RECYCLER - 6 GALLON WITH SPARE PARTS	16,041.20	16,041.20T	
1	SHIPPING/FREIGHT	397.50	397.50	
JON # 6895 - Hazardous Waste Project 2060 East Adams Street, Jacksonville, FL 32202 NFSY - P.O. 09150216 & 1820010-00000007				

Thank you for your business! 904.665.0100 904.665.0101 FAX 904.612.1456 MOBILE - Tim Rudolph	Sales Tax (7.0%)	\$1,122.88
	Total	\$17,561.58

Phone #	Fax #	E-mail	Web Site
(904) 665.0100	(904) 665.0101	ENVIRONEERINGINC@GMAIL.COM	environeering.net



BECCA[®]

2010 Cobb International Blvd
Suite H Account # 408998719
Kennesaw, GA 30152
V: (800)655-5649 F: (800)655-5684

For Paying by ACH:
JP Morgan Chase Bank, NA
Branch #120039 770-421-0513
Routing # 061092387
Account # 408998719
Swift Code: CHASUS33
Remit email: sales@beccainc.com

Invoice

Invoice Number
21104

Invoice Date
Jul 29, 2020

Date Due
Jul 29, 2020

Page: 1

Sold to: **Environeering Inc.**
109 Azalea Point Drive South
Ponte Verda Beach, FL 32082

Ship to: **North Florida Shipyards Inc**
2060 E. Adams St
Jacksonville, FL 32202

Cust Fax # 904-665-0101

Customer Account #
15-19-171
Sales Order #
695254

Customer PO
6895
Shipping Method
Freight Liner

Payment Terms
Prepaid
Ship Date
7/29/20
Due Date
7/29/20

Qty	Item	Description	Unit Price	Extension
1	HC	HIGH CAPACITY RECYCLER - 6 GALLON	6,366.50	6,366.50
1	831004APHC	Option Becca Protect Film Applied to SC/HC Recycler	204.00	204.00
1	805003	Stainless Steel Condenser	2,681.75	2,681.75
1	825156K	Option Vacuum Assist and Pump Transfer Kit "Recycler to Drum"	2,699.60	2,699.60
4	660006-100	6 Gal Recycler Bags 24 x 24 100 PACK	310.25	1,241.00
2	824022	FOAM BREAKER GRILL FOR 6 GAL RECYCLER	331.50	663.00
8	630066	THERMIC OIL 3.785 liters / 1 gallon	88.40	707.20
2	804018	SEAL ORANGE 1/2 FOR 9725 (Model D-E-F...Present)""	195.50	391.00
1	811021	DIAPHRAGM PUMP	368.90	368.90
1	807002K	Power Supply Board Kit for 9711 & 9725	655.35	655.35
1	800012	RETAINING RING 6-GALLON RECYCLER	62.90	62.90
1	SN	SERIAL NUMBER(S): 070720-1		
1	PRO#	PRO NUMBER: 63780843-6		
		\$ 16,041.20 UNIT & PARTS		
		\$ 397.50 SALES TAX		
		\$ 397.50 SHIPPING		
		\$ 17,561.58 TOTAL		

Discounts only apply to the Subtotal... Subtotal **16,041.20**
Sales Tax
Freight & Handling **397.50**
Total Invoice Amount **16,438.70**
Payment/Credit Applied **8,219.35**
TOTAL 8,219.35*

Check/Credit Memo No: Visa 7/29/20

Past Due Invoices are subject to Finance Charge.

*Customer agrees to all costs of collection, including collection agency fees, court cost, attorney and legal fees incurred pursuing a delinquent balance.

Account # must appear on payment

ENVIRONEERING, INC.

1735 Emerson Street, Suite 3
Jacksonville, Florida 32207
(904) 665-0100

Purchase Order No. 6895

PURCHASE ORDER

Vendor

Name BECCA
Address 2010 Cobb International Blvd. Suite 11
City Kennesaw GA ZIP 30152
Phone 770.419.5913

Ordered By:

Name Environeering, Inc.
Address 1735 Emerson Street, Suite 3
City Jacksonville SI FL ZIP 32207
Phone 904.665.0100

Qty	Units	Description	Unit Price	TOTAL
1		VACUUM DISTILLATION UNIT WITH FREIGHT See Enclosure (1) unit pices & scope attached.	\$14,153.35	\$14,153.35
1		SPARE PARTS FOR VACUUM DISTILLATION UNIT See Enclosure (2) unit prices & scope attached. <PURCHASEORDER-6866>	\$2,285.35	\$2,285.35

Enclosure (1) & Enclosure (2) unit prices apply to purchase orde
<PURCHASEORDER-6895>

Ship to:

North Florida Shipyards, Inc.
2060 East Adams Street
Jacksonville, FL 32202
(904) 354-3278
FIXED PRICE PURCHASE ORDER - NTE - \$16,438.70
NTE - Not To Exceed

Payment Details

- Check
- Cash
- Account No.
- Credit Card

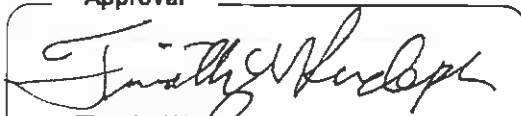
Name
CC #

Exp Date

SubTotal	\$16,438.70
Shipping & Handling	
Taxes State	
TOTAL	\$16,438.70

Shipping Date

Approval


Timothy W. Rudolph

Date 7/13/2020
Order No
Sales Rep
Ship Via

Notes/Remarks

Purchase Order



Phone: 904 354 3278
 Fax:

Purchase Order: 09150216
 Revision: Original

Vendor Environeering, Inc. 109 Azalea Point Drive S. Ponte Vedra FL 32082		Shipping Address North Florida Shipyards, Inc. 2060 E. Adams St Jacksonville FL 32202	
Order Date	Required Date	Payment Terms	FOB
6/17/2020	7/3/2020	Net 30	

Item and Description	Quantity UOM	Unit Cost	Extended Cost
High capacity recycler - 6 gal	1.0000 EA	6,366.5000	6,366.50
item#831004aphc - option becca protect film applied to SC/HC recycler	1.0000 EA	204.0000	204.00
Item#805003 - stainless steel condenser	1.0000 EA	2,681.7500	2,681.75
Item#825156k - option vacuum assist and pump transfer kit - recycler to drum	1.0000 EA	2,699.6000	2,699.60
Item#660006-100, 100pack 6gallon recycler bags	1.0000 EA	310.2500	310.25
		Total:	12,262.10

ITEM# 660006-100, 100PACK 6 gallon Recycler bags

3ea \$ 310.25 = \$ 930.75

Σ = \$13,192.8
 SUBTOTAL

ITEM 824022

2ea \$331.50 = \$663.00

FORM BAKERY GRILL
 FOR 6 GAL RECYCLER

Σ = \$13855.85
 SUBTOTAL

FREIGHT \$ \$ 297.50

➔ \$ 14,153.35



2010 Cobb International Blvd
 Suite H
 Kennesaw, GA 30152
 Voice: 770-419-5913
 Fax: 770-419-9438
 Email-Fax Stores

For Paying by ACH

JP Morgan Chase Bank, NA
 2772 Cobb Parkway NW
 Kennesaw, GA 30152
 Branch 120039 770-421-0513
 Account # 408998719
 Routing # 061092387
 Swift Code: CHASUS33

QUOTATION

Quote Number:
 062420-1
 Quote Date:
 Jun 24, 2020

Account # must appear on all Paperwork

Quoted To:

Enviroengineering Inc.
 109 Azalea Point Drive South
 Ponte Verda Beach, FL 32082

Ship To:

Enviroengineering Inc.
 109 Azalea Point Drive South
 Ponte Verda Beach, FL 32082

Customer ID	Good Thru	Payment Terms	Sales Rep
15-19-171	7/24/20	50% Down & Balance Net 30	None

Quantity	Item	Description	Unit Price	Amount
1.00	HC	HIGH CAPACITY RECYCLER - 6 GALLON	6,366.50	6,366.50
1.00	831004APHC	Option Becca Protect Film Applied to SC/HC Recycler	204.00	204.00
1.00	805003	Stainless Steel Condenser	2,681.75	2,681.75
1.00	825156K	Option Vacuum Asslst and Pump Transfer Kit "Recycler to Drum"	2,699.60	2,699.60
2.00	824022	FOAM BREAKER GRILL FOR 6 GAL RECYCLER	331.50	663.00

Subtotal	12,614.85
Sales Tax	
Freight	297.50
TOTAL	12,912.35

North Florida Shipyards, Inc.
2060 E. Adams St
Jacksonville FL 32202

Purchase Order



Phone: 904 354 3278
Fax:

Purchase Order: 1820010 - 00000007
Revision: Original

Vendor Environeering, Inc. 109 Azalea Point Drive S. Ponte Vedra FL 32082		Shipping Address North Florida Shipyards, Inc. 2060 E Adams St. Jacksonville FL 32202	
Order Date	Required Date	Payment Terms	FOB
6/26/2020	6/26/2020	Net 30	

Item and Description	Quantity	UOM	Unit Cost	Extended Cost
Thermic oil (1 gal) item#630066	8.0000	EA	88.4000	707.20
Seal orange 1/2 for 9725 item#804018	2.0000	EA	195.5000	391.00
Diaphragm pump item#811021	1.0000	EA	368.9000	368.90
Power supply board kit for 9711 & 9725 item#807002k	1.0000	EA	655.3500	655.35
Retaining rig for 6 gallon recycler item #800012	1.0000	EA	62.9000	62.90
			Total:	2,185.35

FREIGHT

\$ 100.00



\$2,285.35



2010 Cobb International Blvd
 Suite H
 Kennesaw, GA 30152
 Voice: 770-419-5913
 Fax: 770-419-9438
 Email-Fax Stores

For Paying by ACH

JP Morgan Chase Bank, NA
 2772 Cobb Parkway NW
 Kennesaw, GA 30152
 Branch 120059 770-421-0513
 Account # 408998719
 Routing # 061092387
 Swift Code: CHASUS33

QUOTATION

Quote Number:
 062420-2
 Quote Date:
 Jun 24, 2020

Account # must appear on all Paperwork

Quoted To:

Enviroengineering Inc.
 109 Azalea Point Drive South
 Ponte Verda Beach, FL 32082

Ship To:

Enviroengineering Inc.
 109 Azalea Point Drive South
 Ponte Verda Beach, FL 32082

Customer ID	Good Thru	Payment Terms	Sales Rep
15-19-171	7/24/20	Net 30	None

Quantity	Item	Description	Unit Price	Amount
8.00	630066	THERMIC OIL 3.785 liters / 1 gallon	88.40	707.20
2.00	804018	SEAL ORANGE 1/2 FOR 9725 (Model D-E-F...Present)™	195.50	391.00
1.00	811021	DIAPHRAGM PUMP	368.90	368.90
1.00	824002	VACUUM GENERATOR w/ MUFFLER FOR 9725-V AND 9711-V	173.40	173.40 OUT
1.00	807002K	Power Supply Board Kit for 9711 & 9725	655.35	655.35
1.00	800012	RETAINING RING 6-GALLON RECYCLER	62.90	62.90

Subtotal	2,358.75
Sales Tax	
Freight	100.00
TOTAL	2,458.75

ENCLOSURE (2a)

NPRTH FLORIDA SHIPYARD, INC.
2060 EAST ADAMS STREET
JACKSONVILLE, FLORIDA 32202

POLLUTION PREVENTION PROJECT DOCUMENTATION JON 6895



P-1 NEW SOLVENT DISTILLATION UNITS INSTALLED IN PAINT SHOP



P-2 WASHER & DRYER INSTALLED AT RAG RECYCLING FACILITY SUPPLY



ENVIRONEERING INC.

109 AZALEA POINT DRIVE SOUTH • PONTE VEDRA BEACH • FLORIDA • 32082

November 24, 2020

Mr. Barry Thomas, President
BECC, Incorporated
2010 Cobb International Boulevard, Suite H
Kennesaw, Georgia 30152

Subject: Pollution Prevention (P2) Plan For North Florida Shipyard, Incorporated in Accordance with Consent Order dated July 18, 2019 for Facility ID Number (FLR 093 598 548) and OGC Number (19-0119) – BECCA DISTILLATION UNITS INSTALLATION – WOOD PALLET OVER BRICK FOUNDATION.

Dear Mr. Thomas,

The two units recently purchased and installed are working well and have exceeded production expectations. The units were installed on the wood pallets that they were shipped on. The installation gives the units excellent air flow for the air cooling system, keeps the units four inches above the existing floor elevation giving a dryer work environment and allows for a level foundation using shims. The existing floor is built from bricks that have settled slightly over the years. The extra height will keep the units dryer and they should have less corrosion over their lifetime than if they were installed directly on the brick floor. The units were installed at the North Florida Shipyard, Incorporated Paint Shop located on the St. Johns River.

Is the installation of the two BECCA distillation units on the wooden shipping pallets over the existing brick floor acceptable to the manufacturer?

It has been a pleasure working with you and I look forward to working with you once again in the future. I can be reached at (904) 665-0100 or mobile (904) 612-1456 if you should have any questions.

Timothy W. Rudolph, P.E., L.A.C.
President, EnviroNEERING, Incorporated
Licensed Professional Engineer 39617 - Florida
Licensed Asbestos Consultant EA 0000074
Asbestos Consultant License AX58
Asbestos Business License ZA0000243

<NFSY-BECC-ENVIRONEERING-6895-LETTER-11-24-2020-A.doc >



(904) 665-0100

(904) 612-1456 • MOBILE

(904) 665-0101 • FAX



BECCA

2010 Cobb International Blvd
Suite H
Kennesaw, GA 30152
T (800) 655-5649
F (800) 655-5684
www.beccainc.com
sales@beccainc.com

11-24-2020

Timothy W. Rudolph, P.E., L.A.C.
109 Azalea Point Drive South
Ponte Verde Beach, FL 32082

Tim,

We are glad that the customer is satisfied with the performance of our units!

I understand the situation with the installation. We have no problem with the use of the pallets under the unit during operation. Actually this has been done in other operations across the country, so we do have experience with the practice.

As always, we look forward to any opportunities to assist you with customer applications.

Barry Thomas
President
BECCA Inc

"Innovation for Waste Minimization"

ENCLOSURE (3)

North Florida Shipyards, Inc.
 2060 E. Adams St
 Jacksonville FL 32202

Purchase Order



Phone: 904 354 3278
Fax:

Purchase Order: 1820005 - 00000005
Revision: Original

Vendor Cheap Bargain Store 1343 University Blvd N Jacksonville FL 32211		Shipping Address North Florida Shipyard 2060 E Adams St Jacksonville FL 32202	
Order Date	Required Date	Payment Terms	FOB
1/8/2020	1/8/2020	Credit Card	

Item and Description	Quantity	UOM	Unit Cost	Extended Cost
Used Large capacity clothes washer	1.0000	EA	300.0000	300.00
Used Large capacity clothes dryer	1.0000	EA	200.0000	200.00
			Subtotal:	500.00
			Sales Tax:	35.00
			Total:	535.00

PO#
1820005
-0005

CUSTOMER'S ORDER NO.		DEPARTMENT	DATE
NAME		01/08/20	
ADDRESS			
2000 E Adams St.			
CITY STATE, ZIP			
Jacksonville FL 32202			
SOLD BY	CASH	C.O.D.	CHARGE
			UN. ACCT.
			MOSE (NET)
			PAID OUT

QUANTITY	DESCRIPTION	PRICE	AMOUNT
1	① Washer Topload GE	300	00
1	① Dryer - GE White	200	00
	Tax	35	00
	Total	535	00
<p>(45) Day Warranty</p> <p>No Return</p> <p>Exchange only</p>			

RECEIVED BY

**DO NOT PAY
CHARGED TO
CREDIT CARD**

CHEAP BARGAIN STORE
3343 UNIVERSITY BLVD N
JACKSONVILLE, FL 32211

01/08/2020 09:37:39

CREDIT CARD
MC SALE

Card #: XXXXXXXXXXXX1328
Chip Card: MASTERCARD
AID: A000000041010
SEQ #: 1
Batch #: 562
INVOICE: 1
Approval Code: 00890Q
Entry Method: Chip Read
Mode: Issuer
Tax Amount: \$0.00

SALE AMOUNT \$535.00

American Rag and Wipers Inc.
 PO Box 26913
 Jacksonville, FL 32226 US
 +1 9043537247
 anita@americanragandwipers.com

Invoice

BILL TO
 North Florida shipyards
 2060 E. Adams St
 Jacksonville, FL 32202

SHIP TO
 North Florida shipyards
 2060 E. Adams St
 Jacksonville, FL 32202

INVOICE #	DATE	TOTAL DUE	DUE DATE	TERMS	ENCLOSED
1023	11/06/2020	\$524.30	12/06/2020	2% 10 days/net 30	

PO#
 09150798

DATE	ACTIVITY	QTY	RATE	AMOUNT
11/06/2020	50cts 10 -50lb cases of color tshirt wipers	20	24.50	490.00T

Please remit to American Rag & Wipers Inc.
 PO BOX 26913
 Jacksonville FL 32226 or pay via credit card
 Thank you for your business. We appreciate you

SUBTOTAL	490.00
TAX	34.30
TOTAL	524.30
BALANCE DUE	\$524.30

ENVIRONMENTAL ENGINEERING Inc. For Equipment Rental
 7001 17th St S
 Jacksonville, FL 32218



STORE# 8180
 8180-JACKSONVILLE 52
 445 PARK STREET
 JACKSONVILLE, FL 32204
 PH: (904)353-4446 FX: (904)355-3268
 HOURS: MON-FRI 7:00 AM-5:00 PM
 SAT 8:00 AM-12:00 PM

SOLD TO: 3009095100000001
 NORTH FLORIDA S/NORTH FLORIDA CUST PO#: 1220004-0000011

2060 E ADAMS ST
 JACKSONVILLE, FL 32202 CUST JOB: NAVSEA
 (904)354-3278

PAF8180@PPG.COM

INVOICE
 #818099023219

SHIP TO:
 DAVE, QUINN
 2060 E ADAMS ST
 JACKSONVILLE, FL 32202
 (904)354-3278



818099061419023219

DATE: 06/14/2019 TIME: 2:05 PM
 STORE REP: DANIEL L
 SALES REP: JIM H
 PAGE 1 OF 1

QTY	ITEM#	DESCRIPTION	PRICE	AMOUNT
6	ATT10/05	PPG THINNER 91-82 / T-10 THINNER	\$105.00	\$630.00 *

Transaction has a tax exempt item, so displaying this string

TERMS:
 Items marked with an asterisk (*) are exempt from sales tax. Freight will be charged on orders, blinds, and wall covering books. Special merchandise in good condition is eligible for 75% refund w/ original invoice within 60 days. Tinted merchandise cannot be returned. Non-tinted merchandise in good condition may be returned w/ original invoice w/in 60 days. Qualifying returns will be made in the same form of payment as original purchase. PPG reserves the right to make large cash returns by check w/in 10 business days. A service fee will be charged on returned checks. See the store manager for details. PPG understands, and Buyer represents that the products sold will be used for commercial or home painting, and will not be used for Nuclear, Chemical or Biological weapons facilities or activities including painting any such items or facilities. Buyer agrees to notify PPG immediately if Buyer becomes aware of any change in the end use of the products. Browse global employment opportunities at na.careers.ppg.com. Let us know how we're doing - visit ppgpaintsurvey.com to give your feedback!

TERMS: NET 30 DAYS
 I agree to pay \$630.00 in accordance with my PPG Credit Agreement (3009095100000001).

REMIT TO:
 PPG PROTECTIVE & MARINE CTGS
 PO BOX 842409
 BOSTON, MA 02284-2409

SUBTOTAL:	\$630.00
LABOR:	\$0.00
FREIGHT:	\$0.00
ECO FEE:	\$0.00
SALES TAX:	\$0.00
INVOICE TOTAL:	\$630.00
HOUSECHARGE-AR:	\$630.00
TOTAL TENDERED:	\$630.00
PENDING AMT:	\$0.00
DUE TO CUSTOMER:	\$0.00

THANK YOU FOR SHOPPING AT PPG!



**More saving.
More doing.**

855 LANE AVE SOUTH
JACKSONVILLE, FL 32205 (904)7816208

6346 00090 17609 05/14/20 03:22 PM

ORDER W955151508
1000-040-114 Homeline 100 Amp 20- 90.00
0000-576-409 Homeline 20 Amp 2-Pole Cir
2@10.65 21.30

	SUBTOTAL	111.30
	SALES TAX	7.80
	TOTAL	\$119.10
XXXXXXXXXXXX1344	MASTERCARD	119.10
AUTH CODE 01402Q/3901136		

P.O.#/JOB NAME: W955151508



6346 90 17609 05/14/2020 3417

RETURN POLICY DEFINITIONS

POLICY ID	DAYS	POLICY EXPIRES ON
A 1	180	11/10/2020

Due to COVID-19, we have extended our returns policy for most items. Please see homedepot.com for details.

DID WE NAIL IT?

Take a short survey for a chance TO WIN
A \$5,000 HOME DEPOT GIFT CARD

Opine en español

www.homedepot.com/survey

User ID: GW2S 41853 35597
PASSWORD: 20264 35507

Entries must be completed within 14 days of purchase. Entrants must be 18 or older to enter. See complete rules on website. No purchase necessary.



Date Ordered: January 17, 2020
Order Number: WA7744E146 A + B
Order Total: 539.19

both 1820010-3

Pick up in Store

Picked up at
Regency Sq
9520 Regency Sq Blvd N
Jacksonville, FL 32225

Product Information

Item	Qty	Price
Square D Homeline 20 Amp Single-Pole Circuit Breaker Model # HOM120CP Store SKU # 576387	1	\$4.31
Square D Homeline 30 Amp 2-Pole Circuit Breaker Model # HOM230CP Store SKU # 576433	1	\$10.24
Leviton 30 Amp Surface Mount Power Single Outlet, Black Model # R20-05054-P00 Store SKU # 222008	1	\$6.49

21.04
1.47

22.51

(A)

Ship to Home

Delivered to
Joe Hartley
2060 E Adams Street
Jacksonville, FL 32202

Product Information

Item	Qty	Price
GE 6 ft Semi-Rigid Dryer Duct Model # WX06X10075DS Store SKU # 100054564B	1	\$9.99

.70 tax
5.99 S/H

16.68

(B)

Payment Information

Billing Address
Charles Fenwick
2060 E Adams Street
Jacksonville, FL 32202
Payment Method
Mastercard | Ending in 1344

Payment Details	
Subtotal	\$31.03
Shipping	\$5.99
Sales Tax	\$2.17
Order Total	\$39.19

ENVIRONEERING, INC.

109 AZALEA POINT DRIVE SOUTH
 PONTE VERDRA BEACH, FL 32082
 ENVIRONEERINGINC@GMAIL.COM

M Invoice

DATE	INVOICE #
11/5/19	17143

BILL TO
North Florida Shipyards, Inc. Mr. Coleman L. Harwell 2060 East Adams Street P.O. Box 3255 Jacksonville, FL 32202

SHIP TO
North Florida Shipyards, Inc. Mr. Coleman L. Harwell 2060 East Adams Street P.O. Box 3255 Jacksonville, FL 32202

Our Job #		P.O. NO.	TERMS	
6895 - Hazardous Waste Project		1820005-	Net 30	
QTY	DESCRIPTION	00001	RATE	AMOUNT
9	HAZARDOUS WASTE DISPOSAL - NINE DRUMS SOLID PAINT WASTE GIANT RESOURCES JON# 6895 - Hazardous Waste Project 2060 East Adams Street, Jacksonville, FL 32202		292.2225	2,630.00

Thank you for your business! 904.665.0100 904.665.0101 FAX 904.612.1456 MOBILE - Tim Rudolph	Sales Tax (7.0%)	\$0.00
	Total	\$2,630.00

Phone #	Fax #	E-mail	Web Site
(904) 665.0100	(904) 665.0101	ENVIRONEERINGINC@GMAIL.COM	environeering.net



GIANT RESOURCE RECOVERY - SUMTER, INC.
 Payment Remittance Address: P.O. BOX 782797
 Philadelphia, PA 19178-2797
 Plant Address: 755 Industrial Road,
 Sumter SC 29150
 (803)773-1400



INVOICE

Document Number: 7500065025	Invoice Date: 10/10/2019	Sales Rep: Lila Richards	Page: 1 / 1
SOLD TO: ENVIRONEERING INC 109 AZALEA POINT BLVD S PONTE VEDRA BEACH FL 32082	SHIP TO: NORTH FLORIDA SHIPYARD INC 2060 E ADAMS ST JACKSONVILLE FL 32202		
	Billing period: 10/10/2019 PO No:	BILL TO: 45467 SHIP TO: 2128320	
	Delivered to plant: GRR! Sumter Load Date: 10/05/2019 EW Invoice: 386089		

PRODUCT/SERVICES

Shp Doc	Date	Profile #	Material	Qty	UoM	Unit Price	TOTAL
000288595GRR	10/10/2019	153401	PAINT SOLIDS	9.000	DR	175.0000	1,575.00
	10/10/2019		FREIGHT SALES	9.000	DR	42.0000	378.00
	10/10/2019		FUEL SURCHARGE	9.000	DR	16.3800	147.42
	10/10/2019		STOP CHARGE	1.000	EA	80.0000	80.00
	10/10/2019		DHEC SAFETY FEE	9.000	DR	1.0300	9.27
	10/10/2019		SC HAZ MATERIAL FEE	9.000	DR	2.2000	19.80
	10/10/2019		E-MANIFEST FEE	1.000	EA	14.0000	14.00
	10/10/2019		ENVIRONMENTAL MANAGEMENT FEE	1,575.000	%	0.1750	275.63

TOTAL 2,489.12

Payment Terms	Due Date	Base Tax Amount	Tax Rate	Tax Amount	Total Amount
30 DAYS D.D.	11/09/2019	2,489.12	0.00	0.00	2,489.12 USD

REMARKS

Paid CITEK 4135 \$2,499.12 = \$2,630.00 ←
 10/29/2019 *TM* 0.95
 FEIN # 57-0441524

MAIL REMITTANCE TO: GIANT RESOURCE RECOVERY - SUMTER, INC., P.O. Box 782797 Philadelphia, PA 19178-2797	PLEASE DETACH AND RETURN WITH YOUR PAYMENT ENVIRONEERING INC 109 AZALEA POINT BLVD S PONTE VEDRA BEACH, FL 32082 7500065025 ZF2 10/10/2019 45467 2,499.12 USD AMOUNT PAID \$ _____
---	--

ENVIRONEERING, INC
1735 Emerson Street
Suite 3
Jacksonville, FL 32207
904-665-0100

American Enterprise Bank
of Florida
63-1553/0630

10/30/19

PAY TO THE
ORDER OF

GIANT RECOVERY - SUMTER, INC.

\$ **2,499.12

Two Thousand Four Hundred Ninety-Nine and 12/100***** DOLLARS

GIANT RECOVERY - SUMTER, INC.
P.O. Box 782797
Philadelphia, PA 19178-2797



[Handwritten Signature]

Authorized Signature

MEMO ... JON # 6895-GIANST CIN-386089 SD10/5/2019



ENVIRONEERING, INC Jacksonville, FL 32207

00413!

GIANT RECOVERY - SUMTER, INC.

Date Type Reference
10/30/19 Bill 386089

Original Amt.
2,499.12

10/30/19
Balance Due Discount
2,499.12
Check Amount

Payment
2,499.12
2,499.12

AMERICAN ENTERP JON # 6895 GIANST CIN-386089 SD10/5/2019

2,499.12

ENVIRONEERING, INC Jacksonville, FL 32207

00413!

GIANT RECOVERY - SUMTER, INC.

Date Type Reference
10/30/19 Bill 386089

Original Amt.
2,499.12

10/30/19
Balance Due Discount
2,499.12
Check Amount

Payment
2,499.12
2,499.12

PAYMENT
RECORD

AMERICAN ENTERP JON # 6895 GIANST CIN-386089 SD10/5/2019

2,499.12

2060 East Adams Street
Jacksonville, Florida 32202

Project Cost Detail with Labor Hours by Transaction Date					
Company: 01 - North Florida Shipyards, Inc.			Report Period: 1/1/2016 - 9/30/2020		
Reg Hrs	OT Hrs	DT Hrs	Quantity	UOM	
Project: 1820010 - DEP Compliance					
Top-Level Cost Code: 10100 - Washer and dryer					
Cost Code: 10100-01 - Washer and dryer, Washer and dryer					
Cost Code: 10100-01-05 - EL - Washer and dryer					
Cost Type: Labor - Labor					
Date: 1/16/2020	ID & Name: 0160 - Jerry Bailey				
3.25			3.2500	Regular, OT, & DT	
Date: 1/16/2020	ID & Name: 0230 - Jhon Duncan				
3.50			3.5000	Regular, OT, & DT	
Date: 1/16/2020	ID & Name: 0505 - Fernando Parra				
3.50			3.5000	Regular, OT, & DT	
Date: 1/17/2020	ID & Name: 0160 - Jerry Bailey				
4.00			4.0000	Regular, OT, & DT	
Date: 1/17/2020	ID & Name: 0505 - Fernando Parra				
4.00			4.0000	Regular, OT, & DT	
Date: 1/17/2020	ID & Name: 0831 - Eric Artis				
4.00			4.0000	Regular, OT, & DT	
Date: 1/21/2020	ID & Name: 0831 - Eric Artis				
3.00			3.0000	Regular, OT, & DT	
Date: 1/21/2020	ID & Name: 2151 - John Reodica				
2.00			2.0000	Regular, OT, & DT	
Totals for Cost Type Labor - Labor					
27.25			27.2500	Regular, OT, & DT	
Totals for Cost Code 10100-01-05 - EL - Washer and dryer					
27.25			27.2500	Regular, OT, & DT	
Cost Code: 10100-01-10 - PF - Washer and dryer					
Cost Type: Labor - Labor					
Date: 1/15/2020	ID & Name: 0365 - Yonimiler Nodal-Hernandez				
8.00			8.0000	Regular, OT, & DT	
Date: 1/15/2020	ID & Name: 2102 - Kevin Weyland				
9.00			9.0000	Regular, OT, & DT	
Date: 1/16/2020	ID & Name: 0365 - Yonimiler Nodal-Hernandez				
4.25			4.2500	Regular, OT, & DT	
Date: 1/16/2020	ID & Name: 2102 - Kevin Weyland				
4.50			4.5000	Regular, OT, & DT	
Date: 1/16/2020	ID & Name: 2150 - Allen Youngblood				
4.50			4.5000	Regular, OT, & DT	
Date: 1/27/2020	ID & Name: 0365 - Yonimiler Nodal-Hernandez				
1.75			1.7500	Regular, OT, & DT	
Date: 1/27/2020	ID & Name: 2102 - Kevin Weyland				
2.00			2.0000	Regular, OT, & DT	
Date: 1/27/2020	ID & Name: 2150 - Allen Youngblood				
1.75			1.7500	Regular, OT, & DT	
Totals for Cost Type Labor - Labor					
35.75			35.7500	Regular, OT, & DT	

2060 East Adams Street
Jacksonville, Florida 32202

Totals for Cost Code 10100-01-10 - PF - Washer and dryer				
	35.75		35.7500	Regular, OT, & DT
Cost Code: 10100-01-20 - WD - Washer and dryer				
Cost Type: Labor - Labor				
	Date: 1/15/2020	ID & Name: 2150 - Allen Youngblood		
	8.00		8.0000	Regular, OT, & DT
	Date: 1/16/2020	ID & Name: 0224 - Dustin Cowgill		
	1.75		1.7500	Regular, OT, & DT
Totals for Cost Type Labor - Labor				
	9.75		9.7500	Regular, OT, & DT
Totals for Cost Code 10100-01-20 - WD - Washer and dryer				
	9.75		9.7500	Regular, OT, & DT
Cost Code: 10100-01-70 - LM - Washer and dryer				
Cost Type: Labor - Labor				
	Date: 6/10/2020	ID & Name: 0281 - Ronald Lathey		
	1.25		1.2500	Regular, OT, & DT
	Date: 6/10/2020	ID & Name: 1736 - Charles Garcia		
	5.00		5.0000	Regular, OT, & DT
	Date: 6/11/2020	ID & Name: 0281 - Ronald Lathey		
	3.25		3.2500	Regular, OT, & DT
	Date: 6/12/2020	ID & Name: 0281 - Ronald Lathey		
	3.25		3.2500	Regular, OT, & DT
	Date: 6/15/2020	ID & Name: 0281 - Ronald Lathey		
	2.50		2.5000	Regular, OT, & DT
	Date: 6/16/2020	ID & Name: 0281 - Ronald Lathey		
	3.00		3.0000	Regular, OT, & DT
	Date: 6/17/2020	ID & Name: 0281 - Ronald Lathey		
	2.25		2.2500	Regular, OT, & DT
	Date: 6/18/2020	ID & Name: 0281 - Ronald Lathey		
	3.25		3.2500	Regular, OT, & DT
	Date: 6/19/2020	ID & Name: 0281 - Ronald Lathey		
	2.50		2.5000	Regular, OT, & DT
	Date: 6/22/2020	ID & Name: 0281 - Ronald Lathey		
	2.75		2.7500	Regular, OT, & DT
Totals for Cost Type Labor - Labor				
	29.00		29.0000	Regular, OT, & DT
Totals for Cost Code 10100-01-70 - LM - Washer and dryer				
	29.00		29.0000	Regular, OT, & DT
Totals for Top-Level Cost Code 10100 - Washer and dryer				
	101.75		101.7500	Regular, OT, & DT
Top-Level Cost Code: 10200 - Paint Recycler				
Cost Code: 10200-01 - Paint Recycler, Paint Recycler				
Cost Code: 10200-01-05 - EL - Paint Recycler				
Cost Type: Labor - Labor				
	Date: 5/29/2020	ID & Name: 0230 - Jhon Duncan		
	2.00		2.0000	Regular, OT, & DT
	Date: 5/29/2020	ID & Name: 0505 - Fernando Parra		

2060 East Adams Street
Jacksonville, Florida 32202

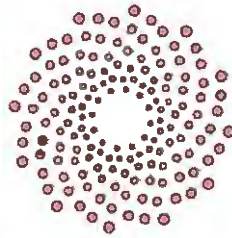
	2.00		2.0000	Regular, OT, & DT
Date: 5/29/2020	ID & Name: 1558 - Carsmo Bolden			
	2.00		2.0000	Regular, OT, & DT
Date: 6/1/2020	ID & Name: 0230 - Jhon Duncan			
	2.00		2.0000	Regular, OT, & DT
Date: 6/1/2020	ID & Name: 0505 - Fernando Parra			
	2.00		2.0000	Regular, OT, & DT
Date: 6/1/2020	ID & Name: 1558 - Carsmo Bolden			
	2.00		2.0000	Regular, OT, & DT
Totals for Cost Type Labor - Labor				
	12.00		12.0000	Regular, OT, & DT
Totals for Cost Code 10200-01-05 - EL - Paint Recycler				
	12.00		12.0000	Regular, OT, & DT
Cost Code: 10200-01-35 - PL - Paint Recycler				
Cost Type: Labor - Labor				
Date: 6/2/2020	ID & Name: 0202 - Albert Bergenholz			
	3.00		3.0000	Regular, OT, & DT
Date: 6/2/2020	ID & Name: 0222 - Florida Kaphers			
	2.25		2.2500	Regular, OT, & DT
Date: 6/2/2020	ID & Name: 2122 - Lawrence Smith			
	3.00		3.0000	Regular, OT, & DT
Date: 6/3/2020	ID & Name: 0222 - Florida Kaphers			
	1.75		1.7500	Regular, OT, & DT
Date: 6/3/2020	ID & Name: 2122 - Lawrence Smith			
	3.00		3.0000	Regular, OT, & DT
Date: 6/4/2020	ID & Name: 0222 - Florida Kaphers			
	2.25		2.2500	Regular, OT, & DT
Date: 6/5/2020	ID & Name: 0222 - Florida Kaphers			
	1.00		1.0000	Regular, OT, & DT
Date: 6/10/2020	ID & Name: 0222 - Florida Kaphers			
	1.50		1.5000	Regular, OT, & DT
Date: 6/11/2020	ID & Name: 0222 - Florida Kaphers			
	2.00		2.0000	Regular, OT, & DT
Date: 6/16/2020	ID & Name: 0222 - Florida Kaphers			
	2.25		2.2500	Regular, OT, & DT
Date: 6/18/2020	ID & Name: 0222 - Florida Kaphers			
	2.50		2.5000	Regular, OT, & DT
Date: 6/19/2020	ID & Name: 0222 - Florida Kaphers			
	1.50		1.5000	Regular, OT, & DT
Date: 6/22/2020	ID & Name: 0222 - Florida Kaphers			
	1.50		1.5000	Regular, OT, & DT
Date: 6/23/2020	ID & Name: 0222 - Florida Kaphers			
	3.25		3.2500	Regular, OT, & DT
Date: 6/23/2020	ID & Name: 1467 - Raphael Thomas			
	2.25		2.2500	Regular, OT, & DT
Date: 6/24/2020	ID & Name: 0222 - Florida Kaphers			
	1.25		1.2500	Regular, OT, & DT
Totals for Cost Type Labor - Labor				

2060 East Adams Street
Jacksonville, Florida 32202

		34.25			34.2500	Regular, OT, & DT		
Totals for Cost Code 10200-01-35 - PL - Paint Recycler								
		34.25			34.2500	Regular, OT, & DT		
Cost Code: 10200-01-70 - LM - Paint Recycler								
Cost Type: Labor - Labor								
		Date: 5/29/2020	ID & Name: 1228 - Richard Takacs					
		3.50			3.5000	Regular, OT, & DT		
		Date: 6/1/2020	ID & Name: 1228 - Richard Takacs					
		2.00			2.0000	Regular, OT, & DT		
		Date: 6/2/2020	ID & Name: 0281 - Ronald Lathey					
		2.25			2.2500	Regular, OT, & DT		
		Date: 6/2/2020	ID & Name: 0298 - Benjamin Turner					
		3.00			3.0000	Regular, OT, & DT		
		Date: 6/2/2020	ID & Name: 1736 - Charles Garcia					
		4.50			4.5000	Regular, OT, & DT		
		Date: 6/3/2020	ID & Name: 0281 - Ronald Lathey					
		2.25			2.2500	Regular, OT, & DT		
		Date: 6/3/2020	ID & Name: 1736 - Charles Garcia					
		2.00			2.0000	Regular, OT, & DT		
		Date: 6/4/2020	ID & Name: 0281 - Ronald Lathey					
		2.25			2.2500	Regular, OT, & DT		
		Date: 6/5/2020	ID & Name: 0281 - Ronald Lathey					
		1.00			1.0000	Regular, OT, & DT		
		Date: 6/5/2020	ID & Name: 0298 - Benjamin Turner					
		1.00			1.0000	Regular, OT, & DT		
		Date: 6/9/2020	ID & Name: 0281 - Ronald Lathey					
		1.25			1.2500	Regular, OT, & DT		
Totals for Cost Type Labor - Labor								
		25.00			25.0000	Regular, OT, & DT		
Totals for Cost Code 10200-01-70 - LM - Paint Recycler								
		25.00			25.0000	Regular, OT, & DT		
Totals for Top-Level Cost Code 10200 - Paint Recycler								
		71.25			71.2500	Regular, OT, & DT		
Totals for Project 1820010 - DEP Compliance								
		173.00			173.0000	Regular, OT, & DT		
		173 HOURS	X \$22.50/HOUR =			\$38,925.00		

This error was pointed out to the Facility 01/05/2021. The Facility corrected the error in its P2 Final Report received 01/19/2021, but a revised summary table with the correct labor rate was not provided as a replacement for this page. The correct labor total should be \$3,892.50. (DEP CLM 3/10/2021)

ENCLOSURE (4)



BECCA®

SOLVENT SAVER RECYCLER

INSTRUCTION MANUAL

STANDARD CAPACITY (SC) 3 GAL MODELS (1100 or 9711) &
HIGH CAPACITY (HC) 6 GAL MODELS (25000 or 9725)



- **Warranty**
- **Safety**
- **Operation**
- **Service Parts**
- **Troubleshooting Guide**
- **Contact Information**

TABLE OF CONTENTS

	<u>PAGE</u>
WARRANTY INFORMATION	4
SOLVENT RECYCLER LISTING CERTIFICATION.....	5-6
SOLVENT RECYCLER SPECIFICATIONS	7
SAFETY AND WARNING	8
General Safety	8
Danger and Warning Labels.....	8
General Safety Rules	9
Personal Safety.....	9
Unit Use and Care.....	10
Safety Rules.....	10-11
OPERATING PRINCIPLES OF THE DISTILLATION UNIT	12
GOALS	13 - 14
WARNING FOR THE DISTILLATION UNIT.....	15
PROTECTION OF THE NATURAL ENVIRONMENT.....	16
INSTALLATION.....	16
DISTILLER ELECTRICAL CONNECTIONS	17
KEYBOARD OPERATIONS	18
SELECTION BETWEEN CELSIUS AND FAHRENHEIT MODE.....	19- 21
STARTING PROCEDURES	22 - 23
SELECTING THE TEMPERATURE AND DURATION OF THE CYCLE.....	24
STARTING THE UNIT	25
DURING THE DISTILLATION CYCLE.....	26
AT THE END OF THE CYCLE.....	26

TABLE OF CONTENTS (cont'd)

	<u>PAGE</u>
CONTROL MODULE SELF-TESTING PROCEDURES	27
TEMPERATURE GUIDE - FLAMMABLE SOLVENTS	28
TEMPERATURE GUIDE - NON-FLAMMABLE CHLORINATED SOLVENTS.....	29
WARNING	29
THERMIC OIL CHANGING PROCEDURES	30
TROUBLESHOOTING GUIDE (Distillation at Atmospheric Pressure)	31 - 32
MAINTENANCE SCHEDULE	33
SCHEMATICS OF UNIT	34 - 38
SERVICE PART NUMBERS FOR RECYCLER	39 - 40
INSTALLATION CODE REQUIREMENTS	41
WARRANTY INFORMATION / TECHNICAL ASSISTANCE	42



LIMITED WARRANTY

Solvent Recyclers (3 & 6 Gallon) & Paint Gun Cleaners

24 MONTH LIMITED WARRANTY

BECCA Solvent Recyclers and Paint Gun Cleaners components are warranted to be free of defects in material or workmanship for 24 months from established purchase date to the original user or from original shipment whichever is sooner. During months 1 through 12 BECCA will repair or replace any component including labor that is found to be defective in material or workmanship as determined by BECCA factory certified service technician. For months 13 through 24 BECCA will furnish parts only (no travel, diagnostic or repair labor is provided) to replace any component that is found to be defective in material or workmanship as determined by BECCA factory certified service technician. In all cases defective parts shall be returned to BECCA for inspection and final approval.

There is no other express warranty, implied warranties, including those of merchantability and fitness for a particular purpose, are limited to one year from purchase and to the extent permitted by law and all implied warranties are excluded. This is the exclusive remedy and liability for consequential and incidental damages under any and all warranties are excluded to the extent exclusion is permitted by law.

CONDITIONS OF WARRANTY

BECCA has no control over working conditions, solvents involved in usage and under which purchaser stores, handles or uses BECCA product. We make no warranty or condition, either expressed or implied with respects to usage or mistreatment of product. These warranties apply only to the original purchaser and do not apply if the unit has been misused, subjected to overloading, neglect, accident, altered or used for any other purpose. BECCA shall not be liable for loss, damage or delay due to, without limitation, acts of God, transportation delays, accident, fire, action of civil or military authority, adverse weather or any other causes beyond BECCA's control. This warranty does not cover transportation, interior or exterior finishes. The use of unauthorized chemicals or solvents with acid content in this unit shall render this warranty null and void. BECCA shall not be responsible or liable for any consequential or incidental damages, including without limitation, loss of production or faulty production, loss of use or loss of profit. Attempts at repair or alterations by the owner shall also constitute a violation of this warranty. Only BECCA certified personnel shall start-up, train, repair or alter BECCA equipment. Paint Gun Cleaner Brushes, Filters, and Plastic Gun Clips & Solvent Recycler Gaskets/Seals, Oil, and Bags are subject to be replaced due to normal usage, wear and tear within the warranty period and are excluded from this warranty.

These warranties replace all other warranties expressed or implied by nature or otherwise, and are not assignable or transferable from original purchaser.

Warranty is in effect after receipt of Registration information & full payment

2010 Cobb Intl Blvd Ste H Kennesaw, GA Phone 1-800-655-5649 Fax 1-800-655-5684

Revision 3/27/07



Certificate of Compliance

Certificate: 1683243

Master Contract: 230679

Project: 1730482

Date Issued: 2006/01/19

Issued to: BECCA, Inc.

2010 Cobb International Blvd NW
Suite H
Kennesaw, GA 30152
USA
Attention: Mr. Barry J. Thomas

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US'



Issued by: Jean-Claude Chow, Eng.

Authorized by: Helene Vaillancourt, Manager,
Certification Services

PRODUCTS

CLASS 2878 02 - HEATERS - Miscellaneous - For Hazardous Locations

CLASS 2878 82 - HEATERS-Miscellaneous - For Hazardous Locations-Certified to U.S. Standards

Class I, Division 1, Group D, Temp code T2B-260°C

Solvent recyclers, permanently connected, stationary, Model 1100, rated 220V, 1 phase, 60Hz, 1.012kW, 4.5A;
Model 25000, 220V, 1 ph, 60Hz, 2.050kW, 9.0A.

Notes:

The 'C' and 'US' indicators adjacent to the CSA Mark signify that the product has been evaluated to the applicable CSA and ANSI/UL Standards, for use in Canada and the U.S., respectively. This 'US' indicator includes products eligible to bear the 'NRTL' indicator. NRTL, i.e. National Recognized Testing Laboratory, is a designation granted by the U.S. Occupational Safety and Health Administration (OSHA) to laboratories which have been recognized to perform certification to U.S. Standards.



Certificate: 1683243

Master Contract: 230679

Project: 1730482

Date Issued: 2006/01/19

1. Final acceptance of the installation subject to local inspection authorities having jurisdiction
2. For use per Manufacturer's Instruction Manual, for mounting clearances, appropriate deposit bag, and conditions of use.

APPLICABLE REQUIREMENTS

CSA-C22.2 No. 30-M1986 - Explosion-Proof Enclosures for Use in Class I Hazardous Locations

CAN/CSA-C22.2 No. 157-92 - Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations

UL Std. No. 823 (8th Edition) - Electric Heaters for Use in Hazardous (Classified) Locations

UL Std. No. 674 (3rd Edition) - Electric Motors and Generators for Use in Hazardous Locations Class I, Groups C and D; Class II, Groups E, F and G

UL Std. No. 2208 (1st Edition) - Solvent Distillation Units

SOLVENT RECYCLER SPECIFICATIONS

SPECIFICATIONS

US Units

Metric Units

	U.S. Units	Metric Units	U.S. Units	Metric Units
Geometrical capacity of boiler	4 Gallons	16 Liters	8 Gallons	32 Liters
Useful capacity of boiler	3 Gallons	11 Liters	6 Gallons	25 Liters
Operating temperature	104°-392°F	40°-200°C	104°-392°F	40°-200°C

Solvent protection	Class I, Div. 1, Group D		Class I, Div. 1, Group D	
Solvent temperature class	T2B – 260°C		T2B – 260°C	
Absolute operating pressure	{ 223 – 1,000 hPa 170 – 760 mmHg -0.223 – 1 bar		223 – 1,000 hPa 170 – 760 mmHg -0.223 – 1 bar	
Relative operating pressure	{ -776 – 0 hPa -590 – 0 mmHg -0.776 – 0 bar		-776 – 0 hPa -590 – 0 mmHg -0.776 – 0 bar	
Time per cycle of distillation	3.5 – 4.5 Hours (estimate)		3.5 – 4.5 Hours (estimate)	
Yield	85% – 97%		85% – 97%	
Cooling system	Fan Cooled		Fan Cooled	
Boiler material	Stainless steel AISI 304		Stainless steel AISI 304	
Cover material	Stainless steel AISI 304		Stainless steel AISI 304	
Condenser material	Copper (standard) / Stainless steel (optional)		Copper (standard) / Stainless steel (optional)	
Voltage	220 V – 1 ph		220 V – 1 ph	
Absorbed power	1,056 W		2,056 W	
Amperage	4.5 amps		9.5 amps	
Thermic oil reservoir capacity Prior to October 2005	2 Gallons	7 Liters	3 Gallons	11 Liters
Thermic oil reservoir capacity After Oct 2005 to Present	2.25 Gallons	8.5 Liters	3.25 Gallons	12.3 Liters
Dimensions (in inches)	33" length x 26" depth x 43" height		33" length x 26" depth x 43" height	
Weight	240 Lbs.	109 Kg	260 Lbs.	118 Kg
Transfer Valve -GW to Recyc	standard		standard	
Groundable Container	1 (not included)		1 (not included)	
Warranty	24 months		24 months	

SAFETY AND WARNING

GENERAL SAFETY

1. Carefully inspect the shipping carton for any signs of transport damage. The damage to the carton often indicates possibility of transport damage to the equipment inside.
2. Carefully remove your Becca Solvent Recycler from the shipping carton.
3. Check your equipment immediately to ensure that it is free of transport damage. Report any transport damage to the carrier without delay for possible claim procedures. Becca Recycling Technologies Inc. is not responsible for damage to equipment after it leaves our warehouse.
4. Check the equipment list and compare it with the parts you have received. If any parts are missing, contact the supplier you purchased the equipment from.
5. This unit is intended for use in Painting and Refinishing Operations in Body Shops and Industrial Facilities. This unit has not been reviewed for use in a laboratory, dry cleaning facilities, aircraft hangers, commercial garages, or service stations.

Before operating the BECCA SOLVENT RECYCLER, read this Instruction Manual completely. All BECCA products are engineered and manufactured to the highest performance standards and have been subjected to detail testing before shipment from the factory.

DANGER AND WARNING LABELS

DANGER



1



2



3

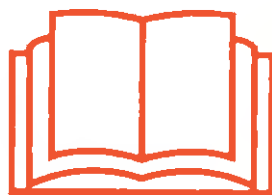


4

WARNING



5



6



7



8

1. Presence of flammable vapors and solvents.
2. No smoking or metal grinding nearby.
3. Keep away from open flames.
4. Wear Breathable Air during use.
5. Observe warnings at all times.
6. Read the Instruction Manual carefully.
7. Wear solvent-proof rubber gloves.
8. Wear protective eyewear before use.

SAFETY AND WARNING (cont'd)

WARNING

« READ ALL INSTRUCTIONS » Failure to follow the SAFETY RULES identified by a BULLET (°) symbol listed BELOW and other safety precautions may result in serious personal injury.
« SAVE THESE INSTRUCTIONS »

GENERAL SAFETY RULES

- ° **KEEP WORK AREA CLEAN.**
- ° **KEEP CHILDREN AWAY.** Do not let visitors come in contact with the equipment. All visitors should be kept away from the work area.

PERSONAL SAFETY

- ° **GUARD AGAINST ELECTRIC SHOCK.** Prevent body contact with grounded surfaces, for example: pipes, radiators. Solvent resisting rubber gloves and non-skid footwear is recommended where damp or wet ground may be encountered. A ground fault circuit interrupter protected power line must be used for these conditions.
- ° **DRESS PROPERLY.** Do not wear loose clothing or jewelry. They can be caught in the moving parts. Wear protective hair covering to contain long hair.
- ° **USE SAFETY EQUIPMENT. WEAR SAFETY GOGGLES** or glasses with side shields.
- ° **STAY ALERT. USE YOUR COMMON SENSE.** Concentrate on what you are doing. Do not operate the unit when you are tired or under the influence of drugs.
- ° **DO NOT OVERREACH.** Keep proper footing and balance at all times.
- ° **BEFORE CONNECTING THE UNIT** to an electric line outlet, be sure the power is the same as that specified on the nameplate of the Solvent Recycler. An electric line with power greater than that specified on the Solvent Recycler can seriously injure the user – as well as damage the Solvent Recycler. If in doubt, DO NOT plug in the unit. Using an electric line outlet with power less than the power specified on the nameplate is harmful to the motor.

SAFETY AND WARNING (cont'd)

UNIT USE AND CARE

- **DO NOT PROCESS NITROCELLULOSE** - Nitrocellulose which is an ester of cellulose and nitric acid cannot be recycled. It automatically ignites at 275°-330°F (135°-166°C) and can be extremely volatile.
- **DO NOT FORCE THE UNIT.** It will perform better and safer at the rate for which it was designed.
- **THE USE OF ANY OTHER ACCESSORIES** not specified in this manual may create a hazard.
- **DISCONNECT THE UNIT,** before servicing.
- **DO NOT ALTER OR MISUSE THE UNIT.** These units are precision built. Any alteration or modification not specified is misuse and may result in a dangerous situation.

Only trained repairmen should attempt (°) ALL REPAIRS, electrical or mechanical. Contact the nearest Becca repair service facility. Use only Becca replacement parts, any other parts may create a hazard.

SAFETY RULES

- **THE OPERATOR MUST WEAR** protective solvent-proof rubber gloves to prevent contact between his hands and the products used for washing.
- **THE OPERATOR MUST WEAR** protective eyewear to prevent spatter from coming in contact with his eyes.
- **STAY ALERT** at all times. Make sure the solvent is not «corrosive». Immediately stop the recycler and replace the solvent whenever you note signs of corrosion on the unit.
- **IF EYES COME IN CONTACT WITH SOLVENTS** rinse thoroughly with water.
- **BEFORE USING** the Solvent Recycler, make sure that all safety devices are in perfect operating condition.
- **REVIEW THE CONTROLS** and their functions before commencing work.
- **USE GROUNDABLE CONTAINERS (Containers, solvents are supplied in, are recommended)** for the collection of solvents.
- **BE CAREFUL** when you load or unload the solvent in the unit. Make sure you do not splash or spill the contents on the workshop floor.
- **THE OPERATOR MUST PERIODICALLY** check the level of the clean solvent contained in the collection pail to prevent it from overflowing.

SAFETY AND WARNING (cont'd)

- **DO NOT USE ELECTRICAL OR PNEUMATICAL TOOLS WITH THE UNIT. AVOID GASEOUS AREAS.** Do not operate portable electric tools in explosive atmospheres in the presence of flammable liquids or gases. Motors in these tools normally spark, and do not scrape or scratch the machine with metal objects; the sparks might ignite fumes.
- **DO NOT ALLOW FAMILIARITY GAINED FROM FREQUENT USE OF YOUR SOLVENT RECYCLER TO BECOME COMMONPLACE.** Always remember that a careless fraction of a second is sufficient to inflict severe injury.
- **DO NOT ALTER OR MISUSE THE UNIT.** Any alteration or modifications is a misuse and may result in serious personal injuries.
- **FIRE EXTINGUISHING SYSTEMS** must be installed in the same room or close to the unit in case of emergency. These appliances must be kept efficient and inspected every year by a certified person.
- **THE INSTALLATION SITE MUST PERMIT PERSONNEL TO EASILY AND QUICKLY MOVE AWAY FROM DANGER ZONES IN CASE OF AN EMERGENCY.**
- **DO NOT USE THE UNIT TO** wash or degrease objects designed to come in contact with food.
- **COMPLY WITH LAWS IN THE COUNTRY** where the Solvent Recycler is installed regarding the use and disposal of the products used to wash clean objects.

THINK SAFETY! SAFETY IS A COMBINATION OF THE OPERATOR'S COMMON SENSE, KNOWLEDGE OF THE SAFETY AND OPERATING INSTRUCTIONS AND ALERTNESS AT ALL TIMES WHEN THE UNIT IS BEING USED.

OPERATING PRINCIPLES OF THE DISTILLATION UNIT

This solvent recycler will recycle many different types of solvents that have been contaminated by paints, pigments, inks, greases, oils, etc. Through the simple distillation process, the distiller separates the contaminants from the original solvent.

The boiling of the polluted solvents consists of a boiler surrounded by a reservoir containing thermal oil, heated by an electrical resistance. The solvent vapors produced in the boiler are eventually conveyed in an air-cooled condenser and then brought back to their liquid state. The cooled solvent is gathered in a clean collecting tank, ready to be re-used again. The process does not alter the characteristics of the distilled solvent. Consequently, the operation can be performed endlessly.

The residues remain inside the boiler and can be unloaded when cold. It is required to use a **BECCA liner bag (Part #630003 for Model 9711 and Part #660006 for Model 9725, for information contact the authorized reseller)** to be placed inside the boiler. These bags facilitate the unloading of residues at the end of the distillation cycle.

The cycle is completely automatic. The operator only has to fill the boiler with dirty solvents, close the lid, touch the **START** button and remove the residues at the end of the cycle.

In case of malfunction, abnormal increase of temperature or power failure, the cycle is automatically **STOPPED** and the recycler **CANNOT** be re-started until the problem has been resolved.

GOALS

The goals that can be achieved with BECCA distillation units are:

1. Solvent recycling with the highest yield possible.
2. Obtaining "special" and not "toxic and noxious" residues.
3. Reducing intervention times and operator discomforts.

As "**Solvent / Contamination product**" topologies are so different that there is no such rule valid for all cases, we will try to summarize providing general information that may be useful to you. Experience will later on help you find the most adequate method of meeting your requirements.

The products to be recycled normally consist of:

Solvent or Reducer + Contaminated Products

- **Solvent**

"Solvent" defines the liquid, which, without reacting chemically, dissolves other substances (solutes), forming a solution.

As every solvent has its own boiling temperature, we must (in order to distill the solvents) set the thermostat at a higher working temperature of about 80°F (30°C) than the boiling point.

- **Reducer**

A mixture of solvent is defined as a "reducer".

As every solvent component in the mixture has its own boiling temperature, in order to proceed to the distillation of a reducer, set the thermostat at a working temperature of about 80°F (30°C) higher than the boiling point of the most high-boiling solvent.

- **Chlorinated Solvents**

Chlorinated Solvents are **non-flammable** solvents, generally utilized for cleaning and degreasing metal surfaces. Normally, these types of solvents are polluted by **oil, grease, etc.**

Atmospheric pressure distillation of chlorinated solvents will result in a partial recovery, leaving a distillation residue containing about 20% of solvents. This occurs when the oil contents in the boiling solution increases; therefore the mixture distillation temperature rises.

These solvents are thermalable, meaning that when they exceed their specific critical temperature they decompose causing the formation of hydrochloric acid. This acidifies the product and therefore **cannot** be re-used.

When operating with atmospheric pressure, and reaching this critical temperature, we shall have distilled only 80% of the solvent.

Operating with a vacuum will allow you to achieve a yield of 100%, as you do not reach the critical temperature (vacuum kit is optional).

GOALS (cont'd)

- **Liquid Polluting Products**

The most common liquid contamination products are:

Oil, Ink and Water

The presence of liquid contamination may (in the distillation phase) drag contaminants into the clean product, leaving traces in the distillate.

For different types of oil and ink with particularly high boiling temperature, this problem normally does not occur and the process of separation may be obtained with a simple distillation.

If there is "**water**" in the contaminated product, you **must recycle** with a **fractional distillation**. This operation is not possible with a simple distillation process.

Unloading a liquid polluting product from the distiller presents no problem. It is possible to obtain a complete separation of the polluting product from the reducer.

This complete separation is not possible when **Chlorinated Solvents** are to be distilled under atmospheric pressure.

For these solvents it is necessary to proceed with a "**vacuum**" distillation. This process allows you to obtain a residue without solvent.

- **Solid Polluting Products**

The most common solid polluting products are:

Resins, Pigments, Paints, Polymers, Glue, Powder, Grease, etc.

Solid polluting products, according to their nature, already classified as "**toxic and noxious**" have the advantage (in comparison to liquid contamination products). They can be unloaded into controlled waste dumps, as they do not release toxic substances into the ground. However, this is on the condition that the percentage of solvent will not exceed that of the Concentration Limit (CL) – a value legally stabilized for different types of solvents used in different Countries.

By **distillation**, and this is another considerable advantage, you can obtain an extremely pure distilled product as there will be no contaminants dragged into the distilled product.

The disadvantage, in comparison with liquid polluting products, is a greater difficulty in cleaning the distillation unit.

Leave a minimal percentage of solvent (3-10%) with the contaminants in the solution of residue, in order to obtain a semi-solid residue, and therefore will be easily discharged.

These percentages, however, are greater than the Concentration Limit (CL) accepted for the disposal in controlled dumps.

WARNING FOR THE DISTILLATION UNIT

The operating staff must be fully instructed on the use and function of the unit as well as on the correct application of the protection devices. The instructions must be repeated in regular intervals.

It is essential to keep the Instruction Manual inside the door slot or close to the unit.

Operator must wear anti-static clothes, avoiding clothes made of synthetic material (nylon, rayon, etc.).

Use groundable containers (Containers, solvents are supplied in, are recommended) for the collection of solvents

Open the cover only after the unit has cooled down, at less than 212°F (100°C).

When unloading residues, it is recommended to use gloves and an anti-vapor mask.

Do not use any metallic tools as they could provoke sparks.

The unit must undergo a revision and control according to its grade of use. Maintenance must be carried out by qualified personnel and according to the indications of the Manufacturer.

It is important to pay attention to the control of the security installations: thermostats, flow controls, thermocouple detectors, switches of safety levels, aspirators, etc.

Before using a distillation unit, which has been out of use for a long time, it must be checked and brought back into optimal condition in order to guarantee the operator's security at all times.

According to the type of liquid to be distilled and the kind of operation to be performed, it is important to adopt adequate personal protection rules.

If you are not using plastic bags, the residues must be cleaned with tools that do not provoke sparks.

The cover works as a safety valve. If you notice steam leaking from the cover, immediately shut down the recycler and consult page 29, "**Defects, Causes and Remedies**". In any case, never modify in any way the parts on top of the cover or block the cover in order to avoid the steam from leaking.

Nitrocellulose which is an ester of cellulose and nitric acid and is a component in many lacquers, inks, adhesives and cements cannot be recycled. It automatically **ignites** at 275°-330°F (135°-166°C) and can be extremely volatile.

It is important to clean the boiler thoroughly after each cycle, as a build up of residue will stop the transmission of heat and cause a malfunction.

If repairs are necessary shut off the power supply **IMMEDIATELY**.

Do not smoke, cause sparks or use open flames near the recycler.

WARNING FOR THE DISTILLATION UNIT (cont'd)

This unit is for use in a 104°F (40°C) environment with no forced ventilation. Under these conditions, the unit shall be spaced a minimum of 5 feet (1.5 meters) from potential sources of ignition such as electrical receptacles, switches, pilot light fixtures, contacts and other similar equipment that can produce sparks. If the equipment is used in higher ambient temperatures an increase in spacing from sources of ignition shall be considered.

This unit has been tested for use with the solvents indicated in the Instruction Manual (see tables on pages 26-27, "**Flammable Solvents and Non-Flammable Chlorinated Solvents**").

PROTECTION OF THE NATURAL ENVIRONMENT

The user must provide protection of the environment so that the recycler may not be the cause for emission of vapors or odors and that the residues are treated and disposed of in a correct way.

INSTALLATION

Placing your BECCA SOLVENT RECOVERY SYSTEM in accordance with the following procedures and the BECCA General Arrangement Drawing.

The unit (if not installed in open air) must be installed in a location with sufficient natural or artificial air ventilation.

Places and zones with sufficient artificial air ventilation are those with such ventilation capacity as to change air circulation ten times per hour. The outlet of the unloading air channels must be placed in a way that the evacuation of emerging vapors does not cause any form of danger.

Complete air circulation should be provided in case of artificial air ventilation.

Air ventilators or their motors should be explosion proof.

Make sure that the emergency exit is easily accessible.

The distillation unit must be positioned near one door that leads to an exit door.

Place a fire extinguisher near the unit (for fire type B and C).

Keep a distance of at least 8 (20cm) inches between the unit and any object to allow the recycler to cool off, and be able to perform the maintenance if necessary.

Place the unit on a flat surface away from heat, sparks and any source of flames.

Connect the unit to an efficient grounding pole.

INSTALLATION (cont'd)

The power cable is located on the right side of the unit. Connect to a 208-240 volt single phase, 15 amps power connection, per the area classification.

When service or maintenance work is required, disconnect the power supply or turn the power off at the main switch.

DISTILLER ELECTRICAL CONNECTIONS

The distiller is equipped with a 3-meter (10-foot) electrical cable for its power supply.

Provide for the installation of an adequate electrical box (CSA or U-L approved).

For the current and voltage specifications, refer to the nameplate on the right side panel.

It is suggested to locate the above-mentioned electrical box, at a height of 5 to 6 feet from the floor.

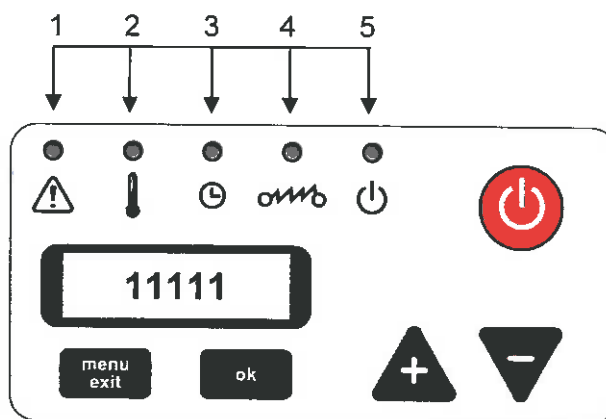
N.B.: In case the electrical wires are connected in a location where there are risks of explosion, an adequate explosion proof box must be installed (for example: protective type Class 1, Div. 1, Group D, with increased safety).

Once the electrical connections are complete, plug the recycler into the box and the keyboard is "ON".

Each time the power is disconnected and reconnected, the BECCA electronic keyboard will self-test itself. During **5 seconds**, all 5 lights and all 5 digits of 7 segment lights will stay on. Then the keyboard will display its own programming version (example: r 2.1) for a few seconds and then the thermometer light will stay "ON" and the actual temperature of the thermic oil will be displayed.

The control board is "READY" for instructions.

KEYBOARD OPERATIONS



Keyboard Symbols:

1: Trouble 2: Temperature 3: Time 4: Electric Heater 5: Start/Stop

This BECCA temperature control board has been designed to control the different cycles during the distillation operation. It controls the temperature of the thermic oil, vapors and the distillate solvent coming out of the condenser. It uses this information to maintain a constant temperature, starts the cooling fan to cool the vapors coming off the condenser and stops the cycle if necessary.

Two heat sensors are used to read different temperatures. The thermic oil and the distillate solvent temperatures are captured using two thermocouples (because of high temperatures rising up to 392°F (200°C). These sensors assure precision of the readings of the temperatures of $\pm 2^\circ\text{F}$ ($\pm 1^\circ\text{C}$).

The BECCA board also totals the number of hours of operation of the recycler. For every two thousand hours of operation, the display code "OIL" will appear to remind you that it is time to replace the thermic oil. The code "OIL" will remain displayed for ten (10) hours and then will disappear.

The display board consists of 5 digits of 7 segments, of 5 independent LEDs and of 5 touch-tone keys (7, 8, 9, 10 and 11) to operate the distiller. The operator can program the temperature, select the amount of time for the cycle, start or stop the cycle, choose Celsius or Fahrenheit degrees, and if necessary, display every code to verify the operation of the distiller in case of problems.

The safety devices will stop the cycle in case one of the sensors detects any trouble. The TROUBLE light will be displayed. The distiller **CANNOT** be re-started until the problem has been resolved.

There are two TROUBLE codes that can be displayed if a problem occurs:

- **O HI** code indicates that the OIL temperature is too **HIGH**.
- **L HI** code indicates that the recycled SOLVENT temperature is too **HIGH**.

The TROUBLE code can be erased by touching the + key (10) for each code. Once all the codes have been erased, the display returns to normal and the TROUBLE light disappears.

SELECTION BETWEEN FAHRENHEIT AND CELSIUS MODE



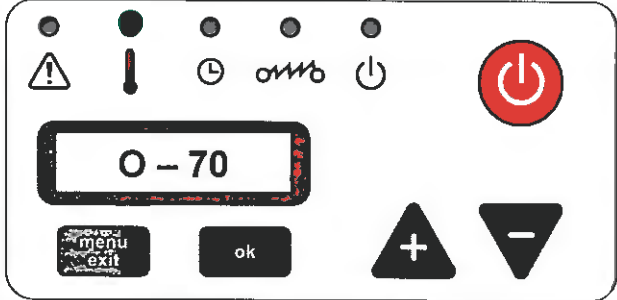


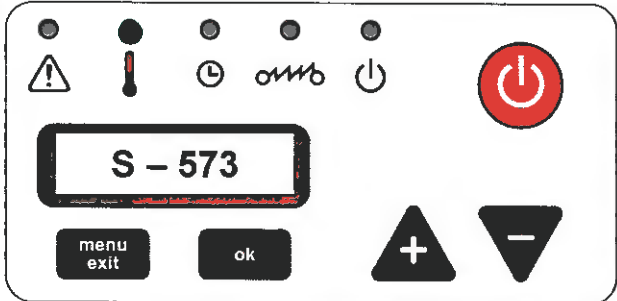


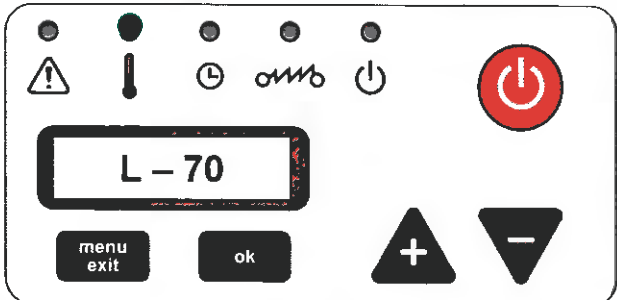

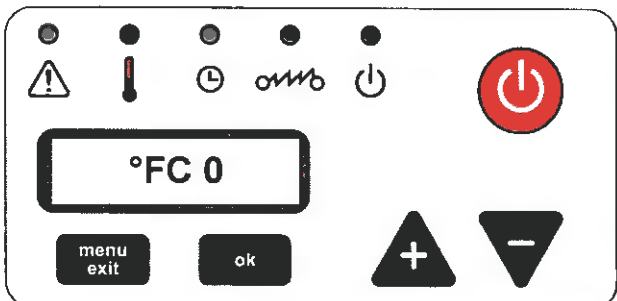
All units manufactured by BECCA are programmed in FAHRENHEIT.

To convert from Fahrenheit to Celcius, please follow the 11 steps indicated below:


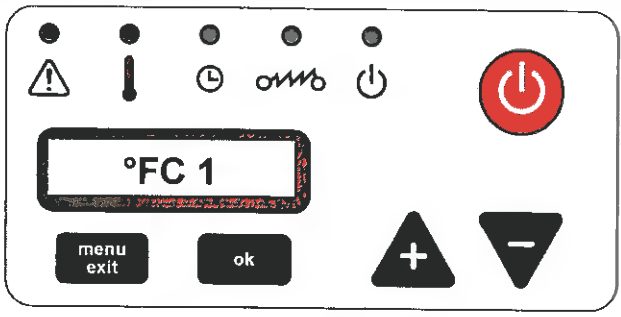
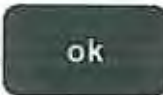
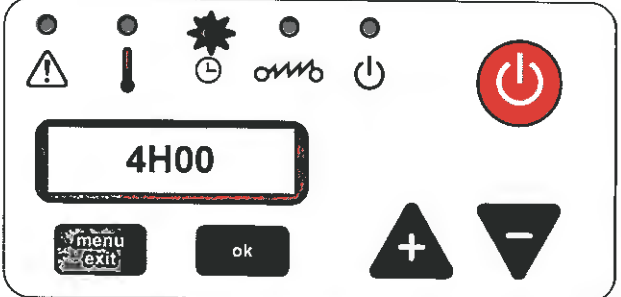
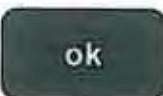
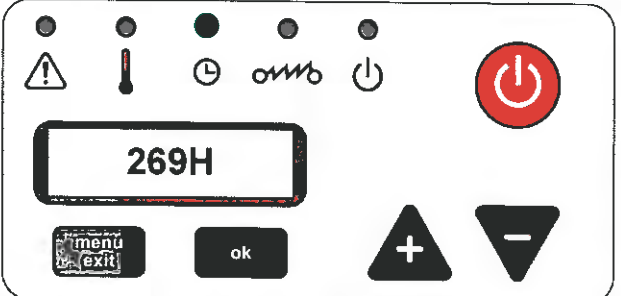
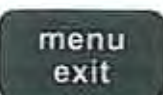
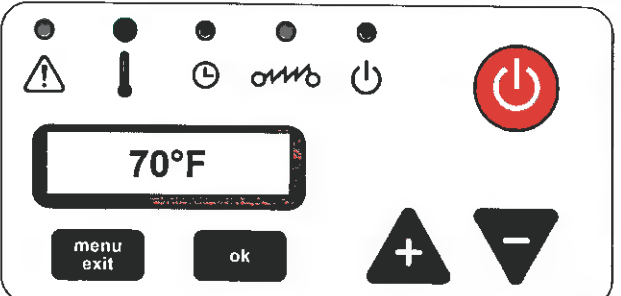
Proceed as follows:

PRESS	INDICATION	RESULT OF THE KEYBOARD
	<p>Thermometer light is on.</p> <p>Keyboard will display the actual temperature of the thermic oil.</p>	
	<p>Step 1 – Press MENU EXIT</p> <p>Thermometer light flashes.</p> <p>The selected temperature of the previous cycle is displayed.</p>	
	<p>Step 2 – Press OK</p> <p>Clock light flashes.</p> <p>The amount of time selected during the previous cycle will be displayed.</p>	
	<p>Step 3 – Press OK</p> <p>Clock light is on.</p> <p>The total amount of working hours of the recycler since day one will be displayed.</p>	

SELECTION BETWEEN CELSIUS AND FAHRENHEIT MODE (cont'd)

PRESS	INDICATION	RESULT OF THE KEYBOARD
	<p>Step 4 – Press </p> <p>Thermometer light is on.</p> <p style="text-align: center;">O = oil</p> <p>The actual temperature of the thermic oil will be displayed.</p>	
	<p>Step 5 – Press </p> <p>Thermometer light is on.</p> <p style="text-align: center;">S = steam</p> <p>Note: This feature has been disabled. The reading is invalid</p>	
	<p>Step 6 – Press </p> <p>Thermometer light is on.</p> <p style="text-align: center;">L = liquid</p> <p>The actual room temperature will be displayed.</p>	
	<p>Step 7 – Press START</p> <p>All lights are off.</p> <p>Display will indicate if set-up is in: 1 = Celsius or 0 = Fahrenheit</p>	

SELECTION BETWEEN CELSIUS AND FAHRENHEIT MODE (cont'd)

PRESS	INDICATION	RESULT OF THE KEYBOARD
	<p>Step 8 – Press + or –</p> <p>All lights are off.</p> <p>Press + or – to change mode: 1 = Celsius 0 = Fahrenheit</p>	
	<p>Step 9 – Press OK</p> <p>Clock light flashes.</p> <p>The amount of time selected during the previous cycle will be displayed.</p>	
	<p>Step 10 – Press OK</p> <p>Clock light is on.</p> <p>The total amount of working hours of the recycler since day one will be displayed.</p>	
	<p>Step 11 – Press MENU EXIT</p> <p>The temperature light is on.</p> <p>Your choice of mode is memorized and the keyboard will display the original menu of actual oil temperature in Celsius or Fahrenheit.</p>	

STARTING PROCEDURES

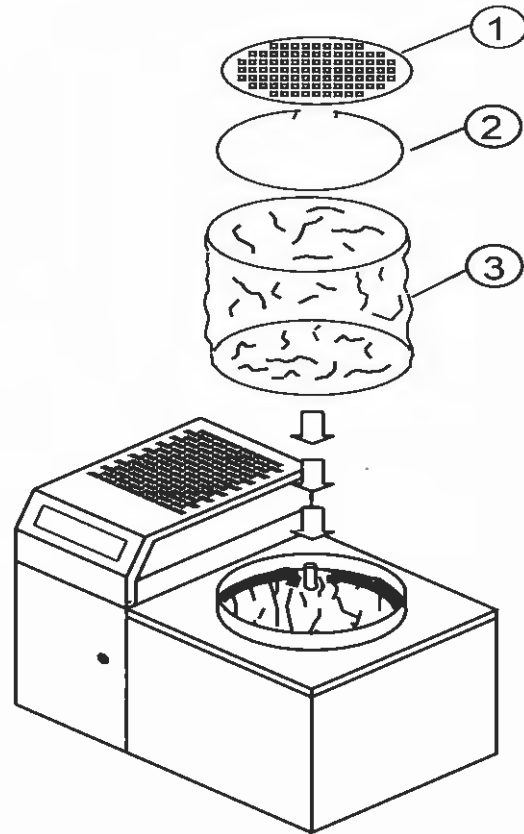
1. Preparation

NOTE: All BECCA recyclers are pre-tested and are shipped with thermic oil in it and are ready to be used.

- A. Install a clean container (of the same capacity or greater than the boiler) underneath the outlet tube where the recycled solvents come out.
- B. The clean container must have an air vent to allow normal fill-up.
- C. If you are using a metallic container, **it must be connected to a ground clip** supplied with the unit.

2. Plastic bag installation steps

- A. Pull the bottom corner of the bag inwards (3).
- B. Insert the retaining ring (#2)
- C. Fold access bag material inwards and fold neatly over the ring – make sure bag material covers the gap between ring grips
- D. Install Foaming Ring (#1) (optional)



STARTING PROCEDURES (cont'd)

3. Filling up the Recycler

- A. Open the cover and fill the boiler with dirty solvents up to approximately $\frac{1}{2}$ - 1 inch (10 – 20 mm) below the grooved slot mark indicating the maximum level. You can also use the automatic loading option to fill up the recycler. The recycler can also be connected to any of the BECCA Spray Gun Washers.

Make sure any paint solids added to the boiler **do not exceed:**

- 3 Gal – 72 ounces of paint solids
- 6 Gal – 144 ounces of paint solids

- B. Before closing the cover, verify the condition of the lid gasket.
- C. According to the type of solvent to be distilled, you must use the proper cover gasket.

Part # 804008 (3 Gal.) Gasket in Orange Color for general use and for solvent mixtures

Part # 804018 (6 Gal.) Gasket in Orange Color for general use and for solvent mixtures

Using a non-suitable gasket will cause vapors to leak from the cover.

Anti – Foaming

Some solvents, during the boiling phase, create a quantity of foam that a correct separation of the solvent from the polluting product is not possible; in fact, in these cases, the distillate will still be dirty. To avoid this inconvenience, it is necessary to use the anti-foam kit (optional on request, Part #824021 for Model 9711 and Part #824022 for Model 9725).

Pay the utmost attention while the residues are drying. Some polluting products with an increase of temperature tend to carbonize with a considerable discharge of smoke from the distiller.

In case this occurs, press the (START / STOP) button to end the cycle.

In this case it is not possible to dry the residues at atmospheric pressure; proceeding to the vacuum distillation phase may solve the problem. This technique allows you to operate at a much lower temperature.

Opening the cover before the distillation cycle is complete will cause the gasket to swell. You must wait at least **one hour**.

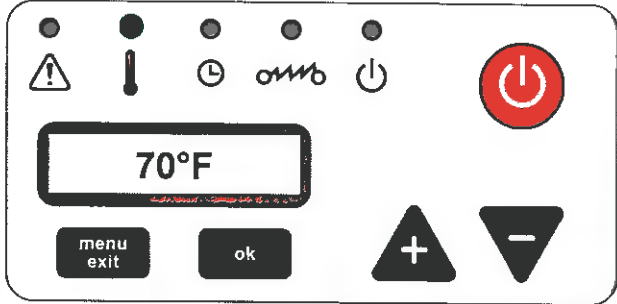



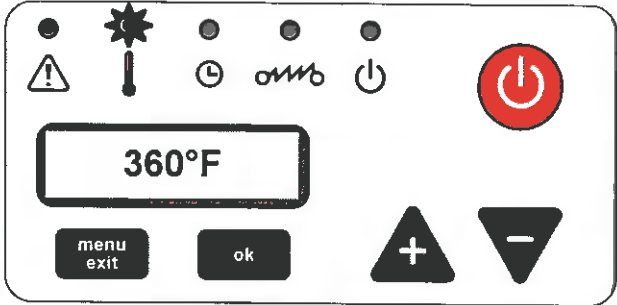
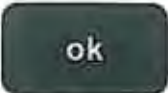


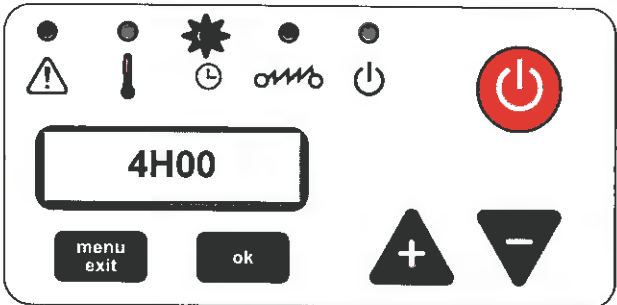
- D. Close and secure the cover properly. Your cover acts as a safety valve. **NEVER** modify the cover mechanism and **NEVER** use any tools to tighten the cover.
- E. **DO NOT SHAKE OR TILT** the loaded recycler during operation.

SELECTING THE TEMPERATURE AND DURATION OF THE CYCLE


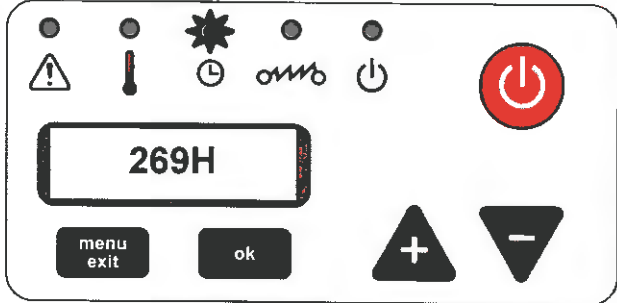

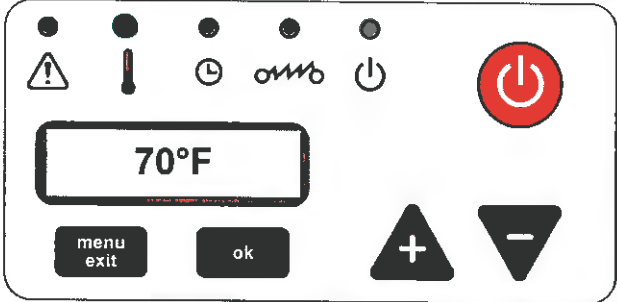
Before starting the cycle, you must select between **CELSIUS** and **FAHRENHEIT** temperatures. Temperature settings are determined by the **BOILING POINT** of the solvent to be reclaimed. The boiling points shown are for **NEW SOLVENTS**.

To recycle contaminated solvents, the temperature setting **MUST BE** Approximately 80°F (30°C) **HIGHER** than the boiling point.


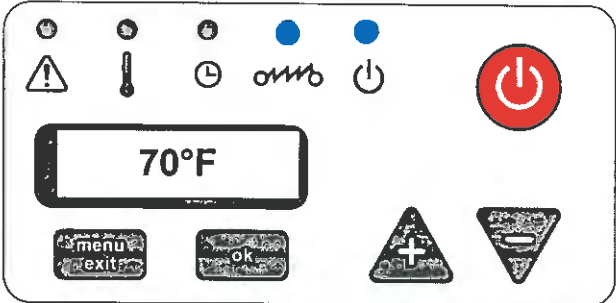
NOTE: The temperature setting starting point indications will vary according to the solvent used and the percentage of contaminants in the solvent.

PRESS	INDICATION	RESULT OF THE KEYBOARD
	<p>Thermometer light is on.</p> <p>Keyboard will display the actual temperature of the thermic oil.</p>	
	<p>Thermometer light flashes.</p> <p>You have the option to select the temperature for the cycle by pressing keys.</p> <p style="text-align: center;">  OR  </p>	
	<p>You have the option to select your own amount of time for the cycle by pressing keys:</p> <p style="text-align: center;">  OR  </p> <p>Recycler will automatically stop when time has expired.</p>	

SELECTING THE TEMPERATURE AND DURATION OF THE CYCLE (cont'd)

PRESS	INDICATION	RESULT OF THE KEYBOARD
	<p>Clock light is on.</p> <p>The total amount of working hours of the recycler since day one will be displayed.</p> <p>This cannot be changed.</p> <p>For every 2,000 hours of operation the message OIL will flash to notify you to change the thermic oil.</p>	
	<p>Thermometer light is on.</p> <p>Keyboard will display the actual temperature of the thermic oil.</p>	

STARTING THE UNIT

PRESS	INDICATION	RESULT OF THE KEYBOARD
	<p>Press the START/STOP key.</p> <p>ON light will go on.</p> <p>Electric element will start heating the thermic oil.</p> <p>Element light will go on.</p> <p>The Lights will Flash:</p> <ul style="list-style-type: none"> • Temperature for 3 sec • Time Setting for 3 sec • Elapsed Time for 3 sec 	

DURING THE DISTILLATION CYCLE

- A. Every **5 seconds**, the keyboard will display 3 different readings:
1. Selected boiling temperature: (Thermometer light will **flash**).
 2. Amount of time selected for that cycle: (Clock light will **flash**).
 3. Elapsed time since starting the unit: (Clock light will be **on**).
- B. Cooling fan will start turning.
- C. Recycled solvents will start dripping approximately **one hour** after the start-up.
- D. At the end of the cycle, the **ON** light will **flash** for about **10 minutes**. The heating element will shut off but the cooling fan will remain on during the cooling cycle.
- E. The cooling fan will automatically shut off at the end of the cooling cycle.

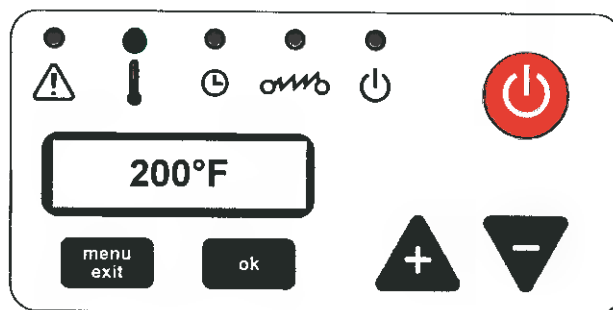
AT THE END OF THE CYCLE

The keyboard will display the total elapsed time for that cycle.

All lights will shut off except the **ON** light.

You can now remove the residues.

Press the stop key.

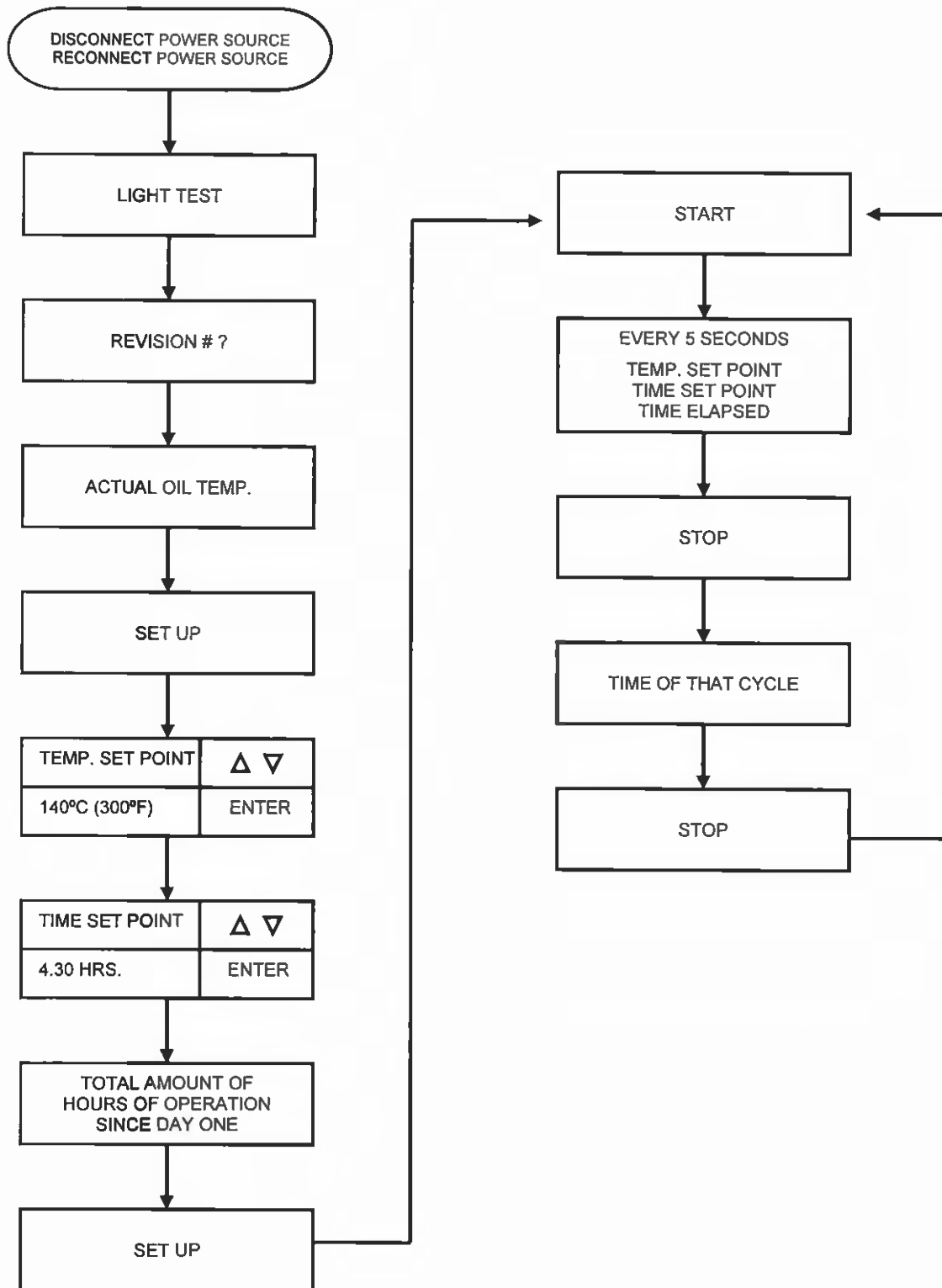


This will show the Temperature of the unit

WARNING! Do Not Open the Cover until the Temperature is below at least 200°F. Ideal Temperature is 170°F

Once below the 200°F, you can remove the Cover and residues

CONTROL MODULE SELF-TESTING PROCEDURES



FLAMMABLE SOLVENTS

SOLVENT TYPE	Distillation Temperature		Temp. Class	Ignition Temperature		Gasket Becca "S"	Condenser	
	°C	°F		°C	°F		Copper	S/st
Acetone	56	133	T2	465	869	A	A	A
Amyl Alcohol	137	279		300	572	A		B
Amyl Acetate	126-155	259-311	T2	375	707	A	A	A
B Naphtha- Heavy	150-220*	302-428*	T-3	250	482	A	A	A
Benzol (Benzene)	80	176	T-1	560	1040	A	B	B
Butanol (Butyl Alcohol)	82	180		477	892	A	A	A
Butyl Acetate	128	262	T-2	370	698	A	B	A
Butyl Carbinol	234*	453*	T-3	228	442	A		A
Butyl Cellosolve	173*	343*	T-3	239	462	A		A
Butyl Cellosolve Acetate	192*	378*	T-3	280	536	A		A
Butyl Diglycol	234*	453*	T-3	228	442	A	A	A
Butyl Glycol	173*	343*	T-3	239	462	A	A	A
Cabinol	65	149	T-2	385	725		B	B
Cellosolve	143	289	T-3	235	455		B	B
Cellosolve Acetate	156	313	T-2	377	711		B	B
Cyclohexane	81	178	T-3	260	500	A	B	B
Cyclohexanol	162	324	T-3	300	572	A	B	B
Cyclohexanone	155	311	T-2	419	786	A	B	B
Dimethylformamide (DMF)	153	307	T-2	445	833	A	A	A
Ethyl Acetate	79	174	T-2	427	801	A	A	A
Ethyl Alcohol (Ethanol)	78	172				A	A	A
Ethyl Benzene	136	277	T-1	466	871	A	A	A
Ethyl Glycol Acetate	156	313	T-2	377	711	A	A	A
Hexamethylene	81	178	T-3	260	500		B	A
Iso Amyl Acetate	125-155	257-311	T-2	375	707	A		A
Iso Butyl Acetate	104-119	219-246	T-2	420	788	A		
Iso Butyl Alcohol	111	232	T-2	430	806	A		
Iso Propane	83	181	T-2	400	752		B	B
Iso Propyl Acetate	89	192	T-2	460	860	A	A	B
Iso Propyl Alcohol	83	181	T-2	400	752	A		A
Iso Propyl Glycol	143	289	T-2	345	653	A		
Lacquer Solvents	140	284	T2	535	995	A	A	A
Methyl Acetate	58	136	T-2	475	887	A	B	A
Methyl Cellosolve	124	255	T-3	285	545	A	B	B
Methyl Cellosolve Acetate	156	313	T-2	377	711	A	B	B
Methyl Ethyl Ketone (M.E.K.)	80	176	T-1	530	986	A	A	A
Methyl Glycol Acetate	137-152	278-305	T-2	380	716	A	A	A
Methyl Isobutyl Ketone (M.I.B.K.)	117	243	T-1	459	858	A	B	B

FLAMMABLE SOLVENTS (cont'd)

SOLVENT TYPE	Distillation Temperature		Temp. Class	Ignition Temperature		Gasket	Condenser	
	°C	°F		°C	°F		Becca "S"	Copper
N. Butanol	118	244	T2	366	691			
N. Hexanol	70	158	T3	240	464			
N. Octanol	126	259	T3	220	428	A		
N. Pentanol	138	280	T2	327	621	A		
N. Propanol	98	208	T2	371	700			
N. Propyl Alcohol	98	208	T2	371	700	A	A	A
Naphtha-Light	155-200*	132-392*	T-3	230	436	A	A	A
Paint Thinner	140	284	T2	535	995	A	B	B
Sec. Butyl Alcohol	101	214	T2	390	734			
Toluol (Toluene)	112	232	T1	535	995	A	A	A
Turpentine	152	170	T3	250	482	A	A	A
White Spirit	150-190*	302-374*	T3	254	489		A	A
Xylol (Xylene)	140	284	T1	525	977	A	A	B

NON-FLAMMABLE CHLORINATED SOLVENTS

SOLVENT TYPE	Distillation Temperature		Temp. Class	Ignition Temperature		Gasket	Condenser	
	°C	°F		°C	°F		Becca "S"	Copper
1,1,1, Trichloroethane-3xl	74*	165*		537	998	A		
1,1,2,2, Tetrachloroethane	147*	297*		NF	NF	A	C	B
1,2, Dichloropropane	95*	203*		557	1035	A		
Chloroform	61*	142*		NF	NF	A	A	A
Chlorotene-Baltane	74*	165*				A		
Dichloroethane	84*	183*		413	775	A		
Freon 113	46*	115*				A	A	A
Methylchloroform	74*	165*		537	998	A		
Methylene Chloride	40*	104*		NF	NF	A	A	A
Dichloromethane								
Perchloroethylene	121*	250*		NF	NF	A	A	A
Carbon Tetrachloride	77*	172*		NF	NF	A		
Tetrachloroethylene	121*	250*		NF	NF	A		
Trichloroethylene-tri-	87*	187*		410	770	A		
Vorclin – Althene-87	188*	370*				A	B	B

WARNING


The information and data set forth in this catalog or the information disclosed by a representative is for your general information only. Many factors influence the resistance of materials to corrosion, such as temperature, concentration, aeration and contaminants.

A – Excellent B – Good C – Poor

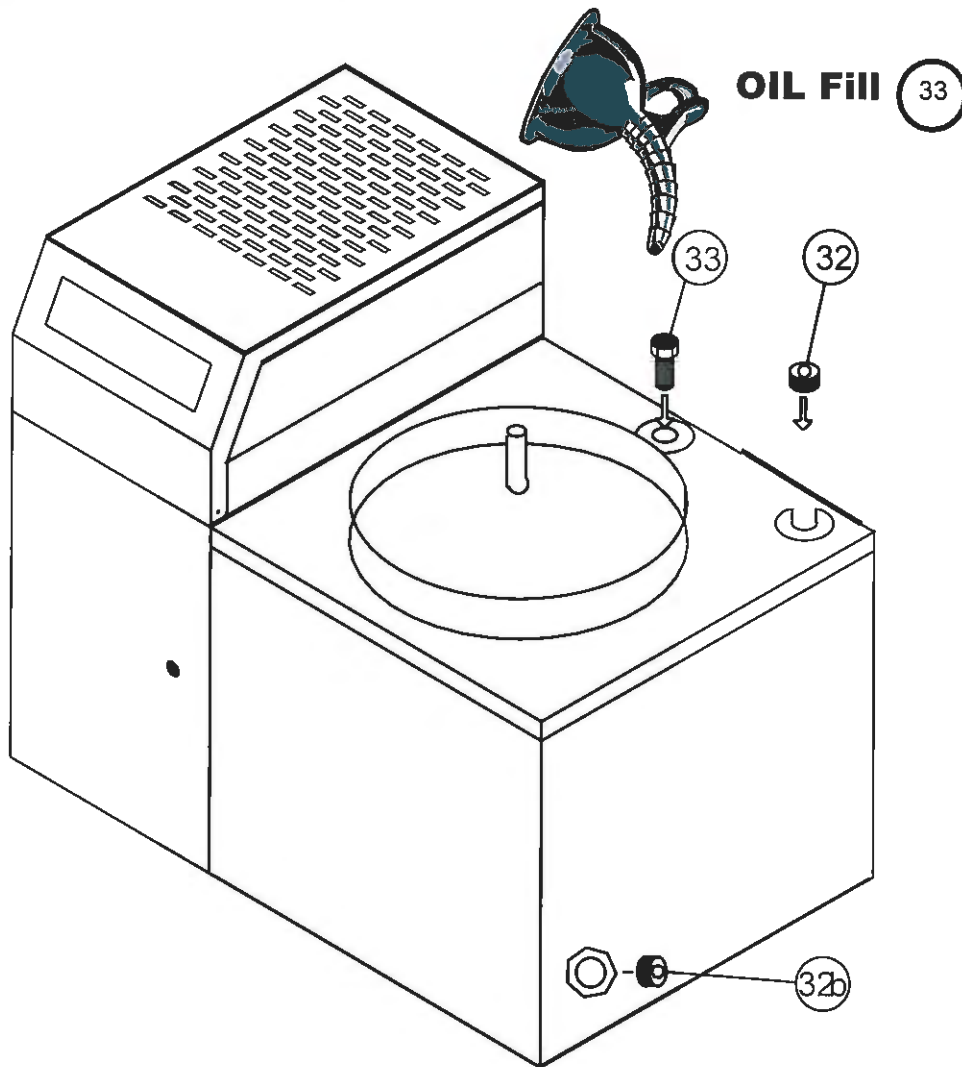
NF – Non-Flammable * – Vacuum distillation only Blank – Information not available

THERMIC OIL CHANGING PROCEDURES

Recommended Annually or 1500 hours, which ever comes first

1. Remove the oil plug (32) and the overflow valve (33).
2. Place the empty oil collector container below the plug (32b) and remove the plug.
3. When empty, remove the container and re-install the plug (32b).
4. Place a funnel on overflow port (33) and  pour new thermic oil (Part # 630066 – 1 Gal) until full. **See Name Plate for required Oil Capacity**
5. Re-install the oil plug (32) and the overflow valve (33).

Thermic oil reservoir capacity Prior to October 2005	2 Gallons	7 Liters	3 Gallons	11 Liters
Thermic oil reservoir capacity After Oct 2005 to Present	2.25 Gallons	8.5 Liters	3.25 Gallons	12.3 Liters



TROUBLESHOOTING GUIDE

Distillation at Atmospheric Pressure

PROBLEM	CAUSE	SOLUTION
Unit heats but does not distill.	<ul style="list-style-type: none"> - More paint in unit than it can handle causing a heat absorber - Tank bottom is dirty. - Thermic oil is worn out. - Lack of thermic oil. - Solvent boiling temperature is higher than the temperature set on the control panel. - Solvent boiling temperature is higher than distiller's maximum working temperature. 	<ul style="list-style-type: none"> - No more paint than allowed: 3 Gal - 72 ounces of paint solids 6 Gal - 144 ounces of paint solids - Clean the tank - Change thermic oil - Add thermic oil - Set a higher temperature on the control panel. - Use a solvent with a lower boiling temperature or use vacuum assist kit (optional).
Vapor comes out from the cover.	<ul style="list-style-type: none"> - Polluting products overheating. - Polluting products decomposing. - Dirt on cover gasket. 	<ul style="list-style-type: none"> - Reduce time and/or working temperature. - Use vacuum distill with the suitable kit. - Clean cover gasket.
Cover gasket swells.	<ul style="list-style-type: none"> - Cover is opened while distiller is hot. 	<ul style="list-style-type: none"> - Open the cover at least one hour after the cycle is complete.
Solvent leaks from the gasket.	<ul style="list-style-type: none"> - Worn out gasket. - Vapor manifold is clogged. - Vapor condenser is clogged. 	<ul style="list-style-type: none"> - Replace the gasket. - Using a funnel, pour in clean solvent, wash vapor tube and blow air into the tube. - Blow out condenser w/ compressed air or replace the condenser.
Unit is in operation mode but does not heat. Indicator light is ON.	<ul style="list-style-type: none"> - Temperature is set at zero. - Burnt out heater. - One of the thermostats is defective. 	<ul style="list-style-type: none"> - Set a higher temperature on the control panel - Replace heater - Change the faulty thermostat.
Distills only part of the dirty solvent.	<ul style="list-style-type: none"> - Insufficient operating time selected. - The undistilled solvent has a boiling temperature higher than the temperature set on the control panel. - Solvent-boiling temperature is higher than the distiller's maximum working temperature. - Large amount of sludge in the bottom of the unit acting as insulator 	<ul style="list-style-type: none"> - Increase the operating time. - Set a higher temperature on the control panel. - Convert to a lower boiling solvent or use a vacuum operated unit. - Place less solid material in tank.

TROUBLESHOOTING GUIDE (cont'd)

Distillation at Atmospheric Pressure

PROBLEM	CAUSE	SOLUTION
Trouble light flashes. Display shows "LHI"	Condensed solvent temperature is over 60°C (140°F). <ul style="list-style-type: none"> - Failed Temp Sensor - Fan motor burns out. - Vapor condenser internally dirty - Vapor condenser externally scaled. 	<ul style="list-style-type: none"> - Replace Temp Sensor - Replace the fan motor. - Clean by compressed air jet. - Wash it, by pouring clean solvent with a funnel into manifold.
Trouble light flashes. Display shows "OHI"	<ul style="list-style-type: none"> - Thermic oil is worn out. - Lack of thermic oil. 	<ul style="list-style-type: none"> - Change thermic oil - Add thermic oil
Unit Shuts off Automatically and then strats up Automatically	<ul style="list-style-type: none"> - Power Supply Board has Triac Switch Failure. 	<ul style="list-style-type: none"> - Replace Power Supply Board
Distillate comes out dirty.	<ul style="list-style-type: none"> - Filled to high in the tank, causing overflow. - Solvent foams. - Temperature set on control panel too high. - Vapor manifold or condenser dirty. 	<ul style="list-style-type: none"> - Load ½" – 1" below ring. - Wait at least 48 hours after utilizing the solvent before starting the next distillation. Use BECCA Foam Grill (Optional) - Reduce working temperature. - Wash it by pouring clean solvent with a funnel into manifold.
Distillate assumes a greenish color. Condenser is becoming corroded.	<ul style="list-style-type: none"> - The solvent is acidic. - Distilling a chlorinated solvent. - Temperature set on the control panel is higher than the temperature indicated on page 26 or 27. - Solvent acidifies. 	<ul style="list-style-type: none"> - Replace copper condenser with a stainless steel condenser. - Set the correct working temperature. - Replace the solvent immediately.
Solvent under the Recycler Bag	<ul style="list-style-type: none"> - This occurs when the solvent condenses inside the unit on its sides and drips through the gap between ring grips. 	<ul style="list-style-type: none"> - assure that the Recycler Bag is folded neatly and pressed up against the tank wall to reduce amount. Note: Some solvent at the bottom of the boiler is good to prevent sticking of the Bag
Distillation time is more than 4 ½ hours.	<ul style="list-style-type: none"> - There is a considerable percentage of water in the dirty solvent. - Lack of thermic oil. - Thermic oil is worn out. - Heater is scaled. 	<ul style="list-style-type: none"> - Replace the solvent. - Add thermic oil. - Change thermic oil. - Remove thermic oil and clean the heater.

MAINTENANCE SCHEDULE

Each use

- Replace Recycler Bag 630003 (3 Gal)
660006 (6 Gal)
- Remove any contaminants from the bottom of the Boiler

Each day

- Wipe-down the unit with solvent. The paint and decals are solvent resistant.
- Remove any contaminants from the bottom of the Boiler

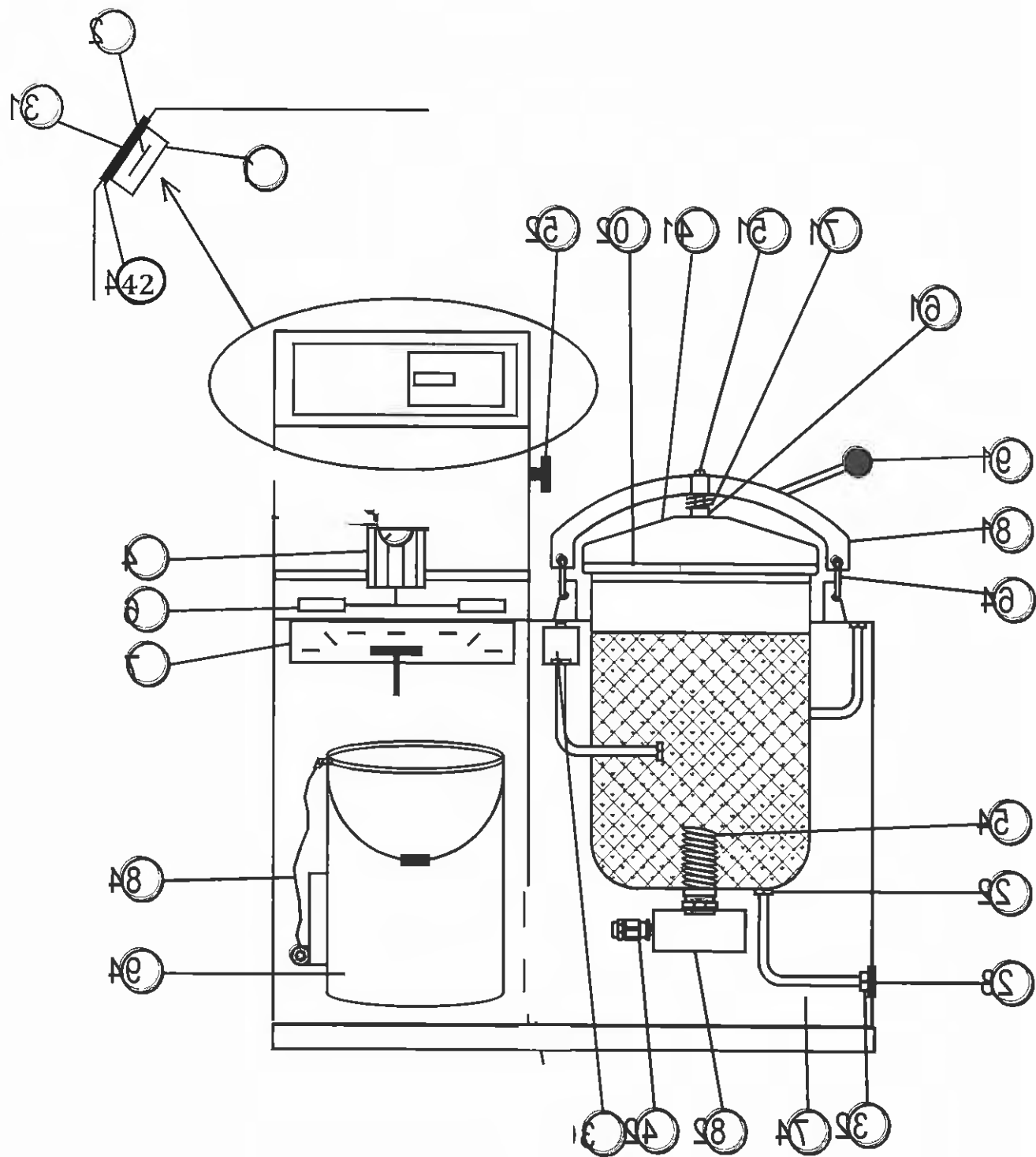
Semi-Annually

- Blow off condenser (externally) to remove dust and dirt
- Replace Becca Protect™ Maintenance Coating (831004)
- Review Ground Clamp (823079)

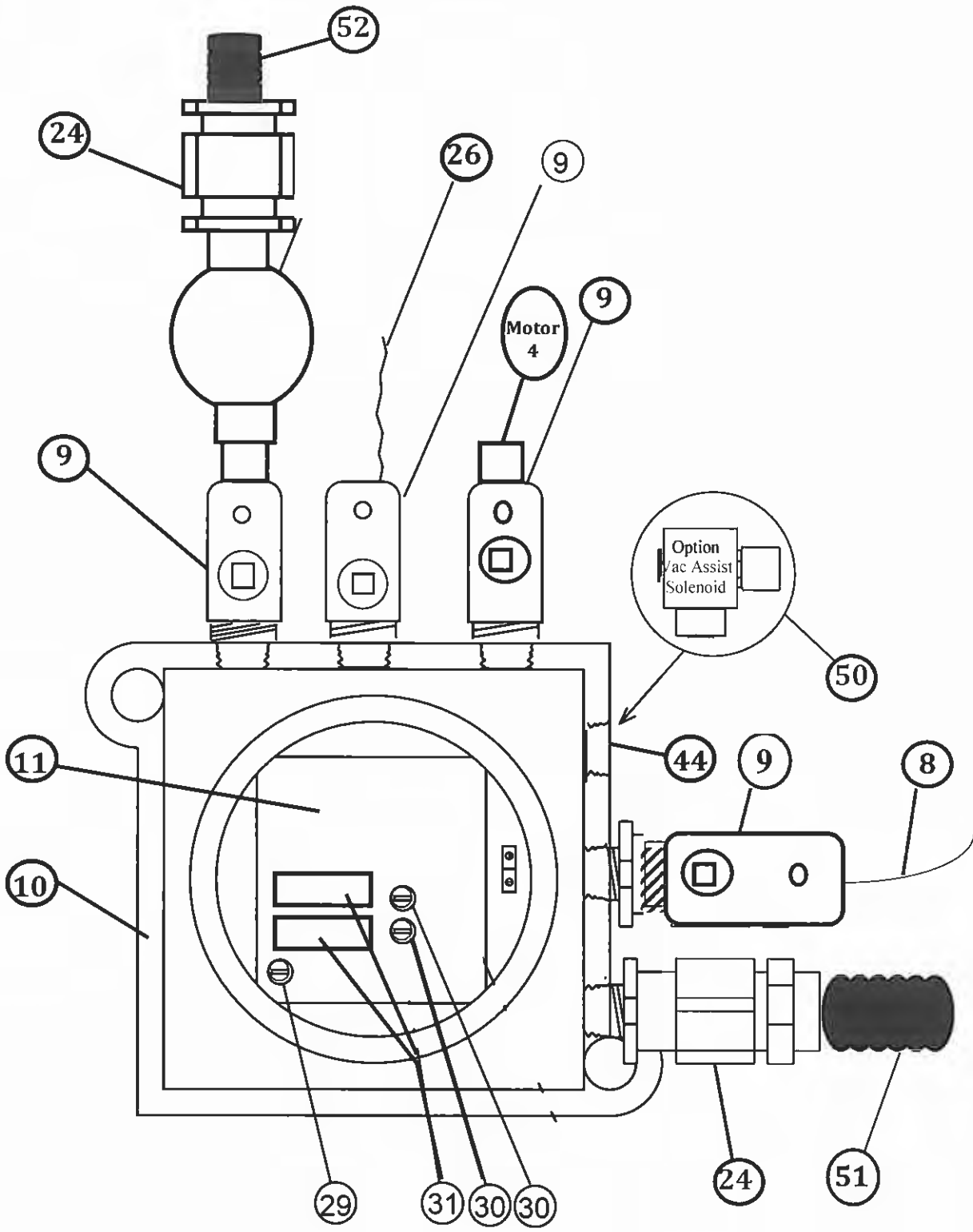
Annually

- Replace Seal 804008 (3 Gal)
804018 (6 Gal)
- Blow out condenser (internally)
- Change Oil (630066) or 1500 Hours (which ever is first)
- Review & Replace illegible or damaged Decals
- Complete Electrical Diagnostic

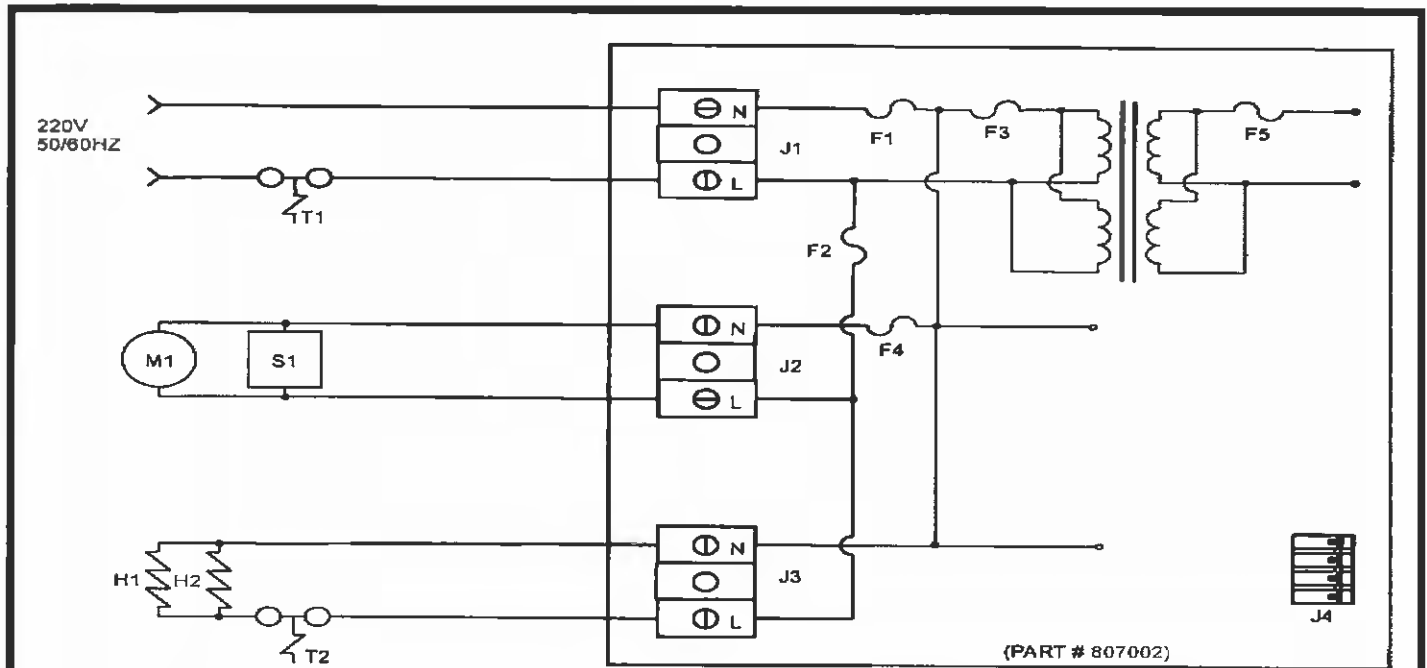
SCHEMATIC OF UNIT



SCHEMATIC OF UNIT (cont'd)



SCHEMATIC OF UNIT (cont'd)



DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER
M1 : MOTOR	803001	F1 : 12 A.	807112
S1 : SOLENOID	824003	F2 : 12 A.	807112
T1 : THERMOSTAT 200 C	808003	F3 : 1/16 A.	807131
T2 : THERMOSTAT 60 C	808002	F4 : 1/16 A.	807131
H1 : HEATER	802001	F5 : 1/4 A.	807130
H2 : HEATER	802001		

F1 = Power

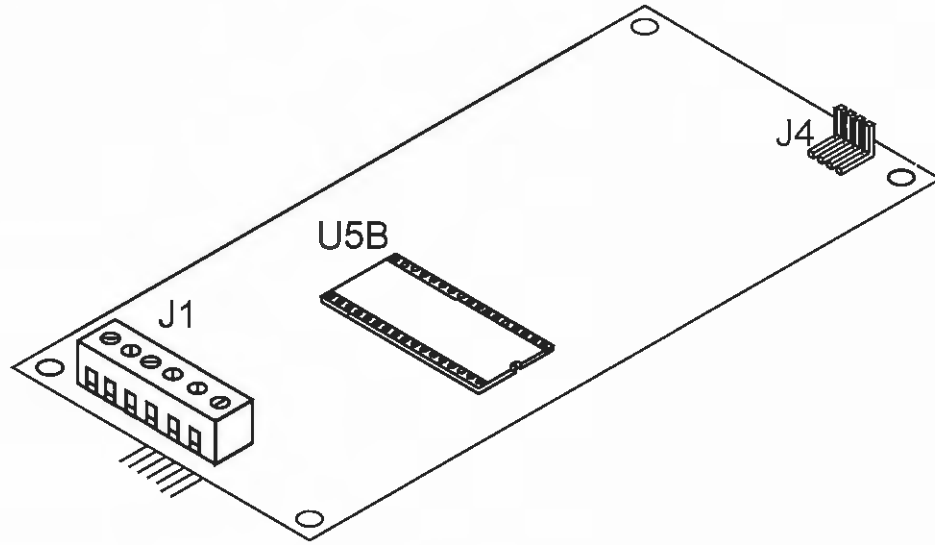
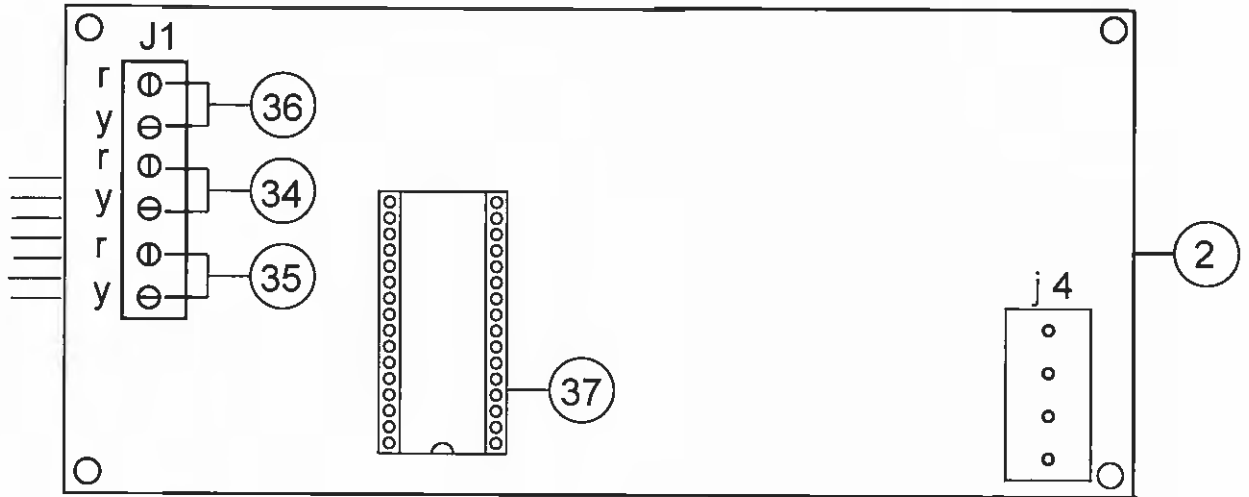
F2 = Power

F3 = Transformer

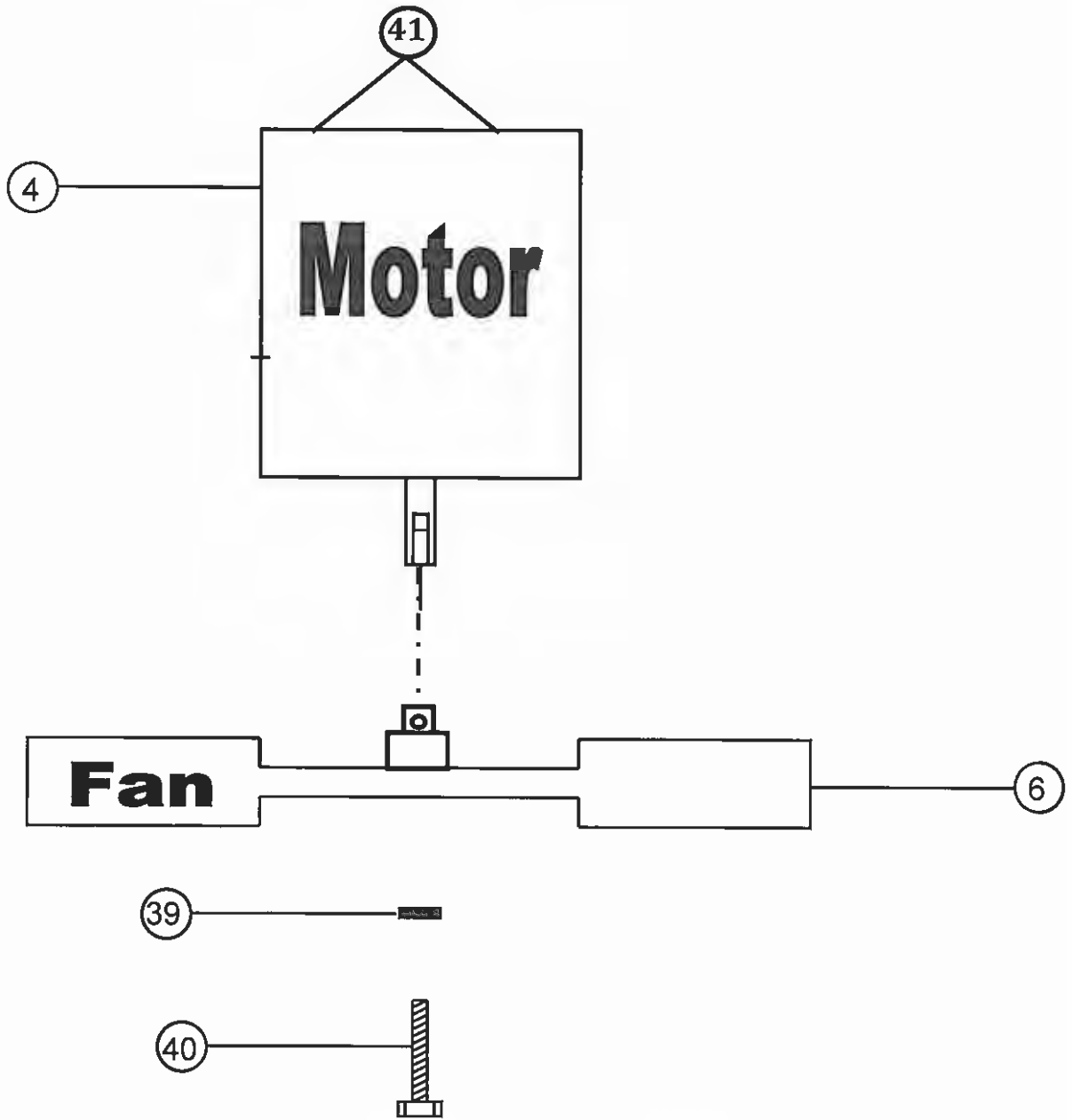
F4 = Transformer

F5 = Tranformer Secondary

SCHEMATIC OF UNIT (cont'd)



SCHEMATIC OF UNIT (cont'd)



SPARE PARTS NUMBERS FOR RECYCLER

INDEX	PART #	DESCRIPTION	QUANTITY
1	823075	CONTROL BOARD PROTECTIVE BOX	1
2	807001K	ELECTRONIC CONTROL BOARD	1
3	820004	OVERFLOW THERMIC OIL TANK	1
4	803001	EXPLOSION-PROOF MOTOR (220 volts – 60 Hz)	1
	803004	EXPLOSION PROOF MOTOR (220 volts – 50 Hz)	Optional
6	803003	COOLING FAN	1
7	805002	COPPER CONDENSER	1
	805003	STAINLESS STEEL CONDENSER	Optional
8	807126	JACK PLUG CABLE	1
9	822012	EXPLOSION-PROOF CONNECTOR (Model F)	1
10	822001	EXPLOSION-PROOF JUNCTION BOX FOR POWER SUPPLY	1
11	807002K	POWER SUPPLY BOARD	1
12	830101	FRAME	1
13	807003	KEYBOARD	1
14	801010	STAINLESS STEEL COVER (9711)	1
	801020	STAINLESS STEEL COVER (9725)	1
15	801002	CAP SCREW	1
16	801003	TENSION ADJUSTING NUT	1
17	801004	SPRING (small)	1
	801005	SPRING (medium)	1
	801006	SPRING (large)	1
18	801008	COVER ARCH (9711)	1
	801018	COVER ARCH (9725)	1
19	801007	HANDLE KNOB	1
20	804008	COVER GASKET (9711-orange)	1
	804018	COVER GASKET (9725-orange)	1
24	822004	EX-PROOF CONNECTOR	5
25	824552	USED SOLVENT TRANSFER VALVE	1
26	808003	OIL SAFETY WORKING THERMOSTAT – 0°-200°C (30°-392°F)	1
28	822002	EXPLOSION-PROOF HEATER JUNCTION BOX	1
29	807130	FUSE - 1/4 AMP.	1
30	807131	FUSES - 1/6 AMP.	2
31	807112	FUSES - 12 AMP.	2
32	823514	PLUG	3

SPARE PARTS NUMBERS FOR RECYCLER (cont'd)

INDEX	PART #	DESCRIPTION	QUANTITY
33	823008	OVERFLOW OIL VALVE	1
34	807122K	OIL THERMOCOUPLE SENSOR	1
36	807123K	LIQUID THERMOCOUPLE SENSOR	1
37	807025	CONTROL CHIP	1
38	803007	FAN SPACER (Older Models Prior to 2005)	1
39	803006	LOCK WASHER	1
40	803005	FAN MOTOR SCREW	1
42	823080	GASKET	1
43	823011	CLOSE NIPPLE - 1/2	1
44	823504	PLUG - 1/2	1
45	802002	HEATER	1
46	801009	SAFETY LATCH (9711)	2
	801019	SAFETY LATCH (9725)	2
47	820009	INOX FLEXIBLE CABLE 24"	1
48	823579	GROUND WIRE WITH CLIP	1
49	823200	5 GALS / 20 LITERS SOLVENT PAIL	(optional)
50	824003	SOLENOID (OPTIONAL VACUUM ASSIST)	1
51	821003	HEATER ELECTRIC CABLE 10' Section	1
52	821003	POWER CABLE 10' Section	1
		OPTIONAL ACCESSORIES	
	823200	5 GALS / 20 LITERS SOLVENT PAIL	
	630003 - 25	PLASTIC LINER BAG - 3 Gal (25 Bags)	
	630003 - 100	PLASTIC LINER BAG - 3 Gal (100 Bags)	
	630006 - 25	PLASTIC LINER BAG - 6 Gal (25 Bags)	
	660006 - 100	PLASTIC LINER BAG - 6 Gal (100 Bags)	
	831004	Becca Protect Film 30" x 200' Roll - Peel away film	

Intermediate Mix Room

Three-Sided Mix Room

Free Standing Mix Room

Entire System Outside Mix Room

Entire System Inside Mix Room

Classification Zones are per:

- A) NFPA 33 Standard for Spray Application Using Flammable and Combustible Materials, Section 4.3.5
- B) International Fire Code, Chapter 34 Flammable and Combustible Liquids 3403.1.1

Zone requirements apply to both Gun Cleaners and Recyclers together and stand alone

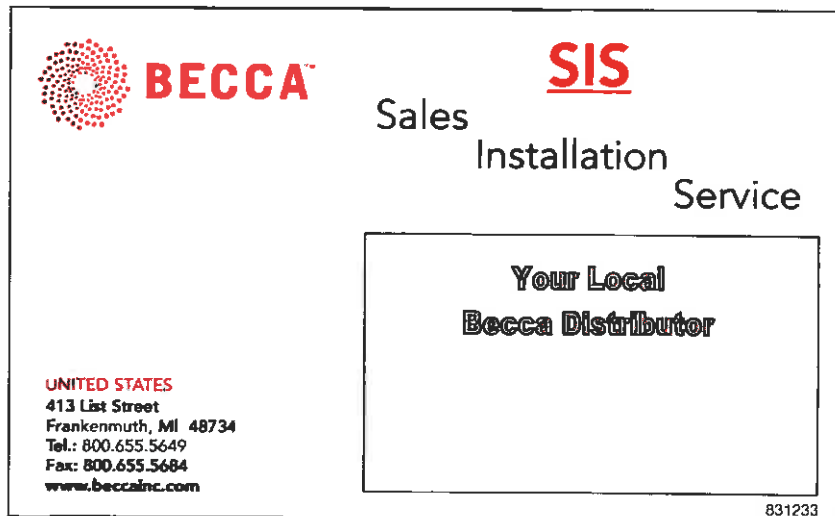
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BECCA
 GENERAL ARRANGEMENT

WARRANTY INFORMATION / TECHNICAL ASSISTANCE

The Warranty of your system begins with the Certified Start-up & Training. This can be done onsite or remotely. Contact BECCA for assistance.

For more information, prices or technical assistance, contact your local BECCA distributor or call / fax our Becca Care™ Numbers:



The image shows a rectangular box containing the BECCA logo (a red circular pattern of dots) and the word "BECCA" in red. To the right, "SIS" is written in red with a red underline. Below "SIS" are the words "Sales", "Installation", and "Service" stacked vertically. In the center, there is a smaller rectangular box with the text "Your Local Becca Distributor". In the bottom left corner, the following text is listed: "UNITED STATES", "413 List Street", "Frankenmuth, MI 48734", "Tel.: 800.655.5649", "Fax: 800.655.5684", and "www.beccainc.com". In the bottom right corner of the main box, the number "831233" is printed.

2010 Cobb International Blvd Suite H
Kennesaw, GA 30152

Tel: (800) 655-5649 (U.S.A.)

Fax: (800) 655-5684 (U.S.A.)

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Washers

Safety Instructions 2, 3

Operating Instructions

Care and Cleaning
of the Washer..... 13
Features 12
Loading and Using
the Washer 11
Operating instructions..... 4-10

Installation Instructions. 14-18

Troubleshooting Tips..... 19-24

Consumer Support

Consumer Help Indicator 10
Consumer Support..... 26
Parts and Accessories..... 3, 26
Warranty..... 25

**Owner's Manual &
Installation Instructions**

GTW485
GTW460

English/Français/Español

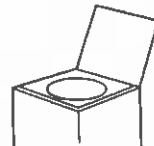
G002

Write the model and serial
numbers here:

Model # GTW460SJ4WW

Serial # GG175353G


You can find
them under
the lid of the
washer.



IMPORTANT SAFETY INFORMATION. READ ALL INSTRUCTIONS BEFORE USING.


 This is the safety alert symbol. This symbol alerts you to potential hazards that can kill you or hurt you and others. All safety messages will follow the safety alert symbol and the word "DANGER", "WARNING", or "CAUTION". These words are defined as:

 **DANGER** Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

 **WARNING** Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

 **CAUTION** Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

IMPORTANT SAFETY INSTRUCTIONS

 **WARNING** To reduce the risk of death, fire, explosion, electric shock, or injury to persons when using your appliance, follow basic precautions, including the following:

- Read all instructions before using the appliance.
- DO NOT wash or dry articles that have been previously cleaned in, washed in, soaked in or spotted with gasoline, dry-cleaning solvents, or other flammable or explosive substances, as they give off vapors that could ignite or explode.
- DO NOT add gasoline, dry-cleaning solvents, or other flammable or explosive substances to the wash water. These substances give off vapors that could ignite or explode.
- Under certain conditions, hydrogen gas may be produced in a hot-water system that has not been used for 2 weeks or more. HYDROGEN GAS IS EXPLOSIVE. If the hot water system has not been used for such a period, before using a washing machine, turn on all hot-water faucets and let the water flow from each for several minutes. This will release any accumulated hydrogen gas. As the gas is flammable, DO NOT smoke or use an open flame during this time.
- DO NOT allow children to play on or in this appliance. Close supervision of children is necessary when this appliance is used near children. Before the washer is removed from service or discarded, remove the door or lid. Failure to follow these instructions may result in death or injury to persons.
- DO NOT reach into the appliance if the tub or agitator is moving to prevent accidental entanglement.
- DO NOT install or store this appliance where it will be exposed to the weather.
- DO NOT tamper with controls, repair or replace any part of this appliance or attempt any servicing unless specifically recommended in the user maintenance instructions or in published user repair instructions that you understand and have the skills to carry out.
- DO NOT operate this appliance if it is damaged, malfunctioning, partially disassembled, or has missing or broken parts including a damaged cord or plug.
- Unplug the appliance or turn off the circuit breaker before servicing. Pressing the *Power* button DOES NOT disconnect power.
- See "Electrical Requirements" located in the Installation Instructions for grounding instructions.

SAVE THESE INSTRUCTIONS

PROPER INSTALLATION



This washer must be properly installed and located in accordance with the Installation Instructions before it is used.

- Ensure that the hot water hose is connected to the "H" valve and the cold water hose is connected to the "C" valve.
- Install or store where it will not be exposed to temperatures below freezing or exposed to the weather, which could cause permanent damage and invalidate the warranty.
- Properly ground washer to conform with all governing codes and ordinances. Follow details in Installation Instructions.
- Optional drain hose extension recommended for discharging heights from 60" - 96".
- This washer does not include water supply hoses. GE strongly recommends the use of factory specified parts. A list of factory hoses available for purchase are listed. These hoses are manufactured and tested to meet GE specifications. GE strongly recommends the use of new water supply hoses. Hoses degrade over time and need to be replaced every 5 years to reduce the risk of hose failures and water damage.

⚠ WARNING



- Electrical Shock Hazard

Plug into a grounded 3 prong outlet.

DO NOT remove ground prong.

DO NOT use an adapter.

DO NOT use an extension cord.

Failure to follow these instructions can result in death or electrical shock.

- Ensure washer is properly leveled and washer legs are adjusted such that unit is stable.

Parts and Accessories

Order on-line at GEApplianceparts.com today, 24 hours a day or by phone at 800.626.2002 during normal business hours. In Canada, visit your local GE parts distributor or call 800.661.1616.

Part Number	Accessory
PM14X10002	4 ft rubber water supply hoses
Or	
PM14X10005	4 ft braided water supply hoses
WH49X301	Drain hose extension
PM7X1	Washer Floor Tray

START-UP SEQUENCE



- Any time the washer is being started or restarts after the washer lid has been opened and closed, the washer will turn on the cold water valve for two short periods followed by a 10 second pause before continuing.
- If the lid is opened during this period, the washer will pause. You will have to push the **Start** button again to restart the cycle.

WHEN NOT IN USE



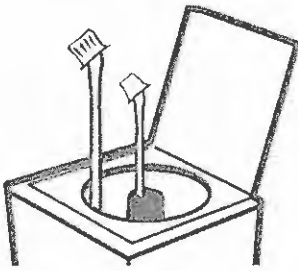
- Turn off water faucets to minimize leakage if a break or rupture should occur. Check the condition of the fill hoses; GE recommends changing the hoses every 5 years.


SAVE THESE INSTRUCTIONS

Operating instructions.

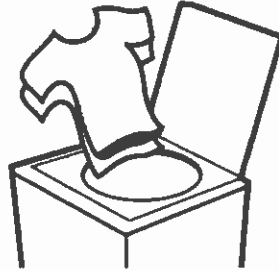
Throughout this manual, features and appearance may vary from your model.

Step 1



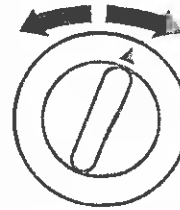
- Add fabric softener to the fabric softener dispenser (on some models); see page 12.
- Add the manufacturer's recommended amount of detergent. GE recommends the use of High Efficiency detergents such as  in your energy efficient washer. Place detergent pods in the bottom of the wash basket before adding clothes.

Step 2



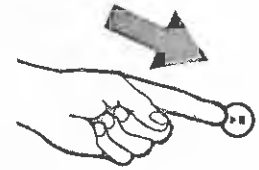
- Loosely add items around agitator. Overloading may negatively impact wash performance. See page 11 for suggested loading examples.
 - Close lid.
- NOTE:** Washer will not start with lid open.

Step 3



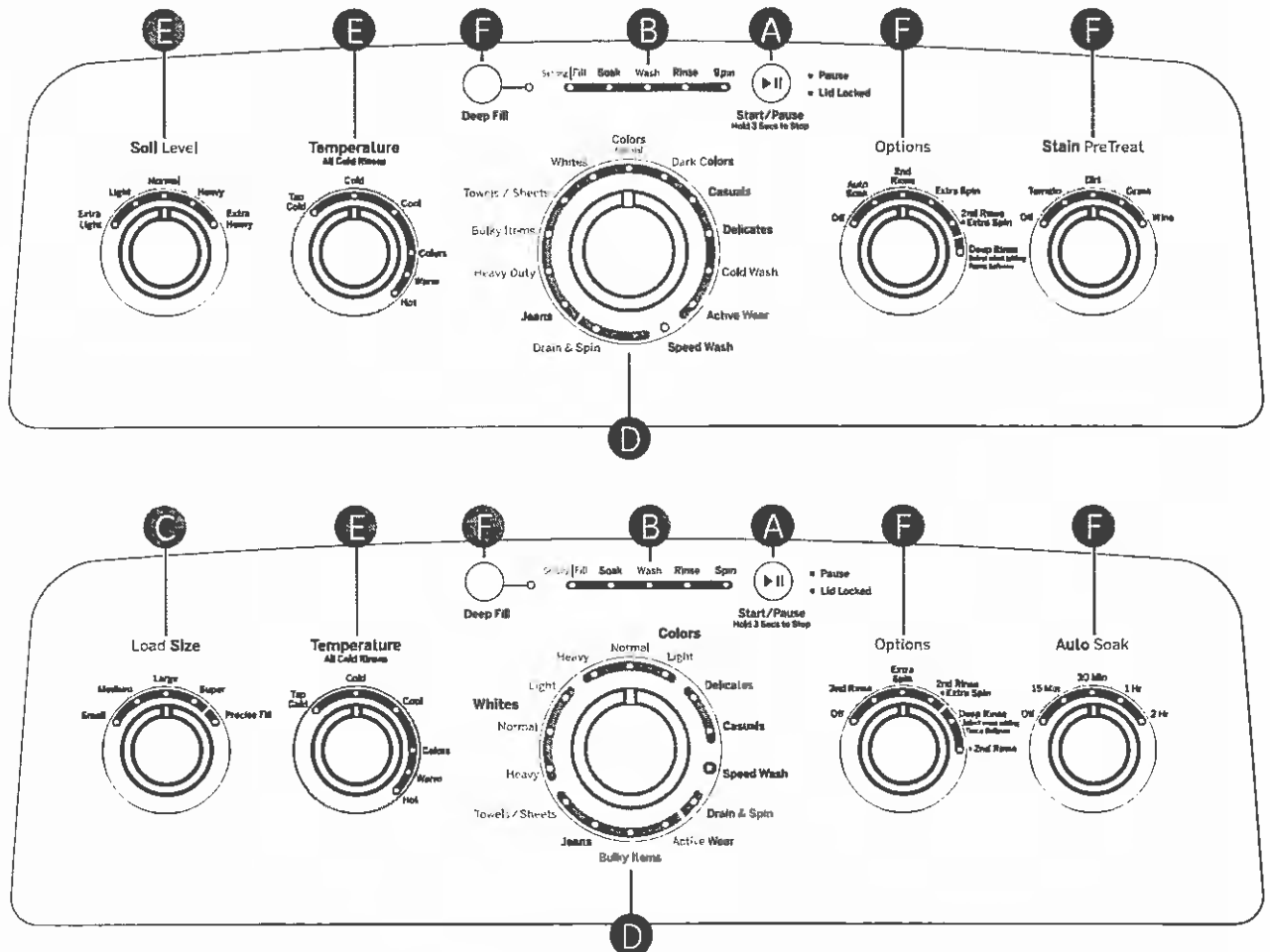
- Select wash cycle.
- Select wash options, including *Deep Rinse* option (on some models) when using fabric softener.
- Select options.

Step 4



- Press *Start*.

Controls



Operating instructions.

A Start/Pause

Press **Start** to begin the cycle. **NOTE:** The lid must be closed for the washer to start the cycle. If the lid is closed, the lid will lock and the **Lid Locked** light will illuminate.

Pressing **Pause** will unlock the lid (if locked at that time), pause the cycle and the **Pause** indicator light will blink.

To continue the cycle, press **Start** again. If machine is paused more than 24 hours, the cycle will be cancelled. If water remains in the machine, select the **Drain & Spin** cycle to drain basket and spin water out of the washer basket.

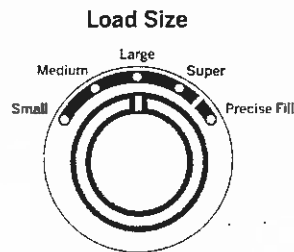
B Cycle Status Lights

Shows whether the washer is in the **Fill**, **Soak**, **Wash**, **Rinse** or **Spin** portion of the cycle.

C Load Size (on some models)

Add  detergent to the bottom of the basket and fabric softener to the dispenser (on some models) prior to loading clothes.

Loosely load items in the washer basket. Overloading may negatively impact wash performance. Adjust the load size accordingly.



Make the load selection.

Precise Fill (on some models)

- For convenience, best performance and optimal efficiency, select **Precise Fill** for models so equipped. This selection automatically provides the correct amount of water suited to the size and type of load placed in the unit. Lid will be locked for the duration of the load sensing process, which includes a series of short spins and a portion of the water fill.
- If you prefer to manually select the water level, select **Small** through **Super**. While **Precise Fill** is best for most loads and general washing, you may want to manually select the load size for specialty items such as bulky, lightweight comforters or pillows, where you want to ensure a larger water level is applied. Manual load size selections should be made for wet items placed in the washer, such as soaked towels or garments.
- The washer will not fill with water when **Precise Fill** is selected if the lid is opened. When the lid is closed the machine is able to begin filling with water in order to sense the load size.

NOTE: This is a high-efficiency washing machine. This system requires less water while providing effective cleaning action. You may notice that the water level is lower than on your previous washer. This is normal.

D Wash Cycles-Cycle Selector Knob

The wash cycle controls the type of washing process. The cycle selector knob can be turned in either direction. Turning the knob after starting a cycle will stop the washer and change the cycle/options to the new selection. Press **Start** to begin the new cycle selection. The chart below will help you match the items to be washed with the best wash cycle settings. For optimal performance, select the cycle that most closely matches the items being washed.

Selections and options shown in **bold** are default settings for that cycle.

Some cycles and options may not be available on some models.

Items to Wash	Cycle	Wash Temp	Soil Level	Spin Selection	Options Available	Cycle Details
Heavily to lightly soiled colorfast cottons, household linens, work and play clothes.	Colors	Hot Warm Colors Cool Cold Tap Cold	Ex. Heavy Heavy Normal Light Ex. Light	Max/Extra Normal	Stain PreTreat Guide Deep Fill Auto Soak Deep Rinse 2nd Rinse	This is the normal cycle which is recommended for normally soiled cotton and linen items. Choose the Heavy or Extra Heavy soil level selection and Warm or Hot water temperature selection as appropriate for your clothes load for a higher degree of cleaning. Incorporates multi-stage fills and wash periods to provide optimal fabric care. For models on which there is no temperature selection on the control panel, this cycle provides a Warm wash temperature only.
Dark colored cottons, linens, and mixed loads.	Dark Colors	Hot Warm Colors Cool Cold Tap Cold	Ex. Heavy Heavy Normal Light Ex. Light	Max/Extra Normal	Stain PreTreat Guide Deep Fill Auto Soak Deep Rinse 2nd Rinse	Lower wash temperatures, a shorter wash period, and a deep fill rinse (on some models) minimizes fading and spotting of dark colored cotton fabrics. Incorporates multi-stage fills and wash periods to provide optimal fabric care. For models on which there is no temperature selection on the control panel this cycle provides a Cold wash temperature only.
Casual clothes, lightly soiled office wear.	Casuals	Hot Warm Colors Cool Cold Tap Cold	Ex. Heavy Heavy Normal Light Ex. Light	Max/Extra Normal	Stain PreTreat Guide Deep Fill Auto Soak Deep Rinse 2nd Rinse	Wash period tailored to care for casual clothes and office wear items. Incorporates multi-stage fills and wash periods to provide optimal fabric care.
Lingerie and special care fabrics with light to normal soil.	Delicates	Hot Warm Colors Cool Cold Tap Cold	Ex. Heavy Heavy Normal Light Ex. Light	Max/Extra Normal	Stain PreTreat Guide Deep Fill Auto Soak Deep Rinse 2nd Rinse	Utilizes a unique "tri-pulse" extra gentle agitate profile to provide special care to delicate fabrics. It is recommended to place small or ultra delicate items in mesh bags before washing. For models on which there is no temperature selection on the control panel, this cycle provides a Cool wash temperature only.
Medium to lightly soiled athletic wear items.	Active Wear	Hot Warm Colors Cool Cold Tap Cold	Ex. Heavy Heavy Normal Light Ex. Light	Max/Extra Normal	Stain PreTreat Guide Deep Fill Auto Soak Deep Rinse 2nd Rinse	Cycle designed for care of medium to lightly soiled active wear, athletic wear, and technical fabrics. Incorporates a multi stage wash period with soak to effectively treat body soils and odors. Use the Heavy Duty cycle for heavily soiled sports clothing constructed of sturdy fabric.
Medium to dark colored cottons, linens, and mixed loads.	Cold Wash	Hot Warm Colors Cool Cold Tap Cold	Ex. Heavy Heavy Normal Light Ex. Light	Max/Extra Normal	Deep Fill Auto Soak Deep Rinse 2nd Rinse	Cycle combines multiple extended wash agitation periods with soak periods to provide enhanced cleaning performance and energy efficiency with colder water temperatures.

Operating instructions.

D Wash Cycles-Cycle Selector Knob - Continued

Items to Wash	Cycle	Wash Temp	Soil Level	Spin Selection	Options Available	Cycle Details
Small loads of lightly soiled items that are needed in a hurry	Speed Wash	Hot Warm Colors Cool Cold Tap Cold	Ex. Heavy Heavy Normal Light Ex. Light	Max/Extra Normal	Stain PreTreat Guide Deep Fill Auto Soak Deep Rinse 2nd Rinse	Utilizes an expedited wash period and time saving continuous spray rinse to clean small lightly soiled loads in the fastest time possible.
Wet load of items. For items that need only to be rinsed, use this cycle with Deep Rinse option.	Drain & Spin			Max/Extra Normal	 Deep Rinse 2nd Rinse	Utilizes a high speed spin to extract water from wet items. For items that need to be rinsed, select the Deep Rinse and/or 2nd Rinse option when using this cycle.
Jeans with medium to light soil. For heavily soiled work jeans, use the Heavy Duty Cycle.	Jeans	Hot Warm Colors Cool Cold Tap Cold	Ex. Heavy Heavy Normal Light Ex. Light	Max / Extra Normal	Stain PreTreat Guide Deep Fill Auto Soak Deep Rinse 2nd Rinse	Combines higher water levels, a specially designed agitation profile, and multi step wash and soak periods to care for jeans with medium to light soil. Use the Heavy Duty cycle for heavily soiled work jeans.
Sturdy fabrics with heavy to medium soil.	Heavy Duty	Hot Warm Colors Cool Cold Tap Cold	Ex. Heavy Heavy Normal Light Ex. Light	Max / Extra Normal	Stain PreTreat Guide Deep Fill Auto Soak Deep Rinse 2nd Rinse	Incorporates multi-step wash and soak periods combined with extended wash periods to effectively clean heavily to medium soiled sturdy fabrics
Large coats, bed spreads, mattress covers, sleeping bags, and similar large bulky items.	Bulky Items	Hot Warm Colors Cool Cold Tap Cold	Ex. Heavy Heavy Normal Light Ex. Light	Max / Extra Normal	Stain PreTreat Guide Deep Fill Auto Soak Deep Rinse 2nd Rinse	Provides a Deep Fill/max fill wash water level to wash bulky items. Also incorporates a Deep Fill rinse to effectively rinse bulky items.
Towels. Sheets.	Towels / Sheets	Hot Warm Colors Cool Cold Tap Cold	Ex. Heavy Heavy Normal Light Ex. Light	Max / Extra Normal	Stain PreTreat Guide Deep Fill Auto Soak Deep Rinse 2nd Rinse	Cycle designed washing towels or sheets, using a higher water level and a soak period to effectively clean these items. It is recommended that towels and sheets be washed separately for best care and washing performance.
Heavy to medium soiled whites, household linens, work and play clothes.	Whites	Hot Warm Colors Cool Cold Tap Cold	Ex. Heavy Heavy Normal Light Ex. Light	Max / Extra Normal	Stain PreTreat Guide Deep Fill Auto Soak Deep Rinse 2nd Rinse	Combines the hottest water temperature available (based on water heater setting) with longer wash periods to clean and brighten whites. It is recommended that a Oxi or chlorine bleach product appropriate for items being washed be used with this cycle to maximize whitening performance. For models on which there is no temperature selection on the control panel, this cycle provides a Hot wash temperature only.

E Settings

Select settings for agitation (*Soil*) and water temperature (*Temp*).

NOTE: Longer *Spin* times typically reduce dryer time/energy usage (i.e. reduces total energy when using both a washer and a dryer).

F Cycle Options

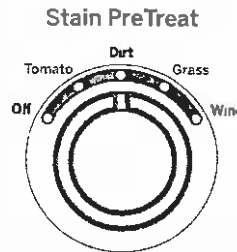
Stain PreTreat (on some models)

The *Stain PreTreat* feature allows you to indicate what stains are on the garments in your load. This feature incorporates a patent pending treatment method. An initial water fill is performed at a temperature tailored to the stain type selected and to an amount which enables a concentrated cleaning step. A stain scrubbing period, followed by an active soak, is conducted to effectively treat the stain. Then additional water is added to the selected temperature and the wash phase is conducted for the cycle selected.

This feature can be applied to most wash cycles as described in the cycle guide.

To use Stain PreTreat:

1. Select the desired wash cycle.
2. Select the stain to be treated under the *Stain PreTreat* options.



Stain PreTreat Guide

Category	Recommended Temperatures Treatment/Wash	Stain	For best results, before placing in washer:
Tomato	Cool/Warm	Sauce Catsup Salsa	Pretreat with liquid detergent or stain remover product; rinse with cool water.
Dirt	Cool/Warm	Dirt Clay Mud	Allow dirt to dry; remove loose dirt using a brush. Rinse with cool water.
Grass	Cold/Warm	Grass Lipstick Chocolate Gravy Mayonnaise BBQ Sauce	Pretreat with liquid detergent or stain remover product. Brush lightly; rinse with cold water.
Wine	Cool/Warm	Wine Soda Kool-Aid Tea Coffee Juice Beer	Pretreat with mixture of Oxi product and cool water. Add Oxi product along with detergent in the washer.

- Recommended temperatures are optimal for stain removal performance; adjust temperature selection to suit load being washed.
- Ensure stain is completely removed after wash cycle and before placing in dryer; very tough stains may require a second treatment.

Operating instructions.

F Cycle Options - Continued

Deep Fill

Select the **Deep Fill** feature for loads where extra water is needed.

Press the **Deep Fill** button once before starting the cycle to add an incremental amount of water to the wash load. Holding the **Deep Fill** button for 3 seconds will provide the deepest fill level possible, this will increase cycle time due to the additional time it takes to fill the washer.

To cancel the option if desired, press the **Deep Fill** button again.

NOTE: The **Deep Fill** button can also be pressed after the washer has completed filling and is in the wash phase if additional water is desired. To stop the extra fill, press the **Deep Fill** button again and the water will stop.

Auto Soak

This option begins with a brief agitation, soaks for a specified period of time, then moves through the rest of the cycle automatically.

2nd Rinse

When you use extra detergent or bleach to clean heavily soiled clothes, use the **2nd Rinse** option to better remove additional residues.

Extra Spin

Select to provide additional spin time, increasing energy efficiency through reducing drying times.

2nd Rinse + Extra Spin

Provides both a second rinse and an extra spin.

Deep Rinse

Set this option to provide a deep rinse or when using fabric softener. This option may change other settings (e.g. **Spin** may go to a higher setting) to maximize performance.

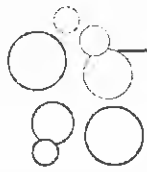
NOTE: Do not use fabric softener dispensing balls with this washer. They do not work correctly in high efficiency washers.

Consumer Help Indicator

Your washer is equipped with Consumer Help Indicator (CHI). CHI is our way to communicate a simple remedy for some situations that you can perform without the need to call for service. The chart below describes the helpful lights you may notice flashing when you return to the washer.

Spin LED	After the wash cycle, the clothing wasn't evenly distributed enough to spin out the water. Redistribute the clothes more evenly in the washer and then run a Drain & Spin cycle.
Rinse LED (Water took too long to Pump Out)	Resume cycle or enter Drain & Spin . If water pumps out, then the clog has likely cleared. If water remains in the washer, check for clogged or pinched drain hose. This situation could be more likely to appear, over time, if the external drain hose has been extended or restricted.
Fill LED (Water not entering washer)	Check your house water supply. Did you forget to turn on one or both supply valves after installation or coming back from vacation? As soon as the message starts to scroll, the washer will initiate a 3 minute lock-out period. The washer controls won't respond/change during this time. After the 3 minutes, you can begin your cycle again. If you try to bypass the lock-out period by unplugging the washer, the 3 minute timer will start over again.
Two LED lights flashing	If your machine has stopped itself before the cycle completed. The two furthest right LED lights will flash. This indicates that an error has occurred. Try to run a Drain & Spin cycle to see if it will clear. If it does not clear, call 800.GE.CARES (800.432.2737) for service.

Always follow fabric manufacturer's care label when laundering.



Proper Use of Detergent

Using too little or too much detergent is a common cause of laundry problems.

Use less detergent if you have soft water, a smaller load or a lightly soiled load.

For spots, apply pre-treatment to items as recommended on the product label. Application should be made in the basket to prevent overspray which may cause the coloring on the lid or graphics to fade.

Place detergent pods in the bottom of the wash basket before adding clothes.

GE recommends the use of High Efficiency detergents such as **he** in your energy efficient washer. HE detergents are formulated to work with low water wash and rinse systems. HE detergents reduce the oversudsing problems commonly associated with regular detergents.

When using high efficiency or concentrated detergents, consult the product label to determine amount required for optimum performance. Excessive detergent will negatively impact wash performance.



Sorting Wash Loads

Sort by color (whites, lights, colors), soil level, fabric type (sturdy cottons, easy care, delicates) and whether the fabric produces lint (terry cloth, chenille) or collects lint (velveteen, corduroy). Wash lint producers such as cotton towels and socks separate from lint collectors including synthetic garments and dress pants.

WARNING - Fire Hazard

Never place items in the washer that are dampened with gasoline or other flammable liquids.

No washer can completely remove oil.

Do not dry anything that has ever had any type of oil on it (including cooking oils).

Doing so so can result in death, explosion, or fire.

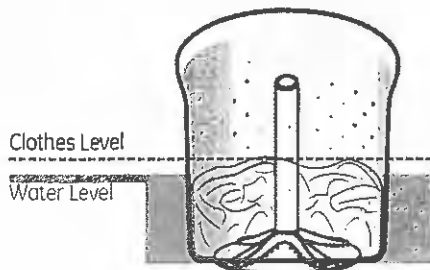


Loading the Washer

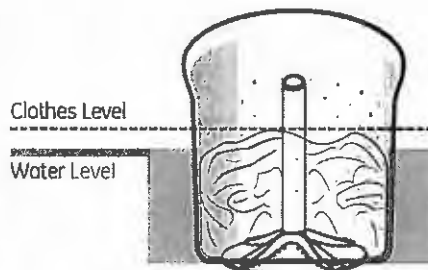
Load dry items loosely in the washer basket. For best results, load items evenly and loosely around the outside of the basket, filling in towards the center on larger loads. To add items after washer has started, press **Start/Pause** if the lid is locked; wait until the **Lid Lock** indicator on the display is no longer illuminated before attempting to open the lid. Lift the lid and submerge additional items around the outside of the basket. Close the lid and press **Start** to resume. Adjust load size selection and/or use **Deep Fill** option if necessary.

- Do *not* place large items such as sheets, blankets and towels across the Infusor (on some models). Load them around the outside of the basket.
- Do *not* put lawn or sofa cushions into the washer as they are too big to move. Remove outer covers and **ONLY** wash them.

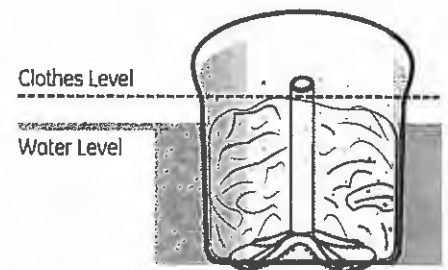
Average Small Load



Average Medium Load



Average Large Load



About washer features.

Automatic Load Sensing (on some models)

This determines the correct agitate profile, agitate duration and amount of water suited to the size and type of load placed in the washer. The washer will not start the wash cycle or fill with water if the lid is open. When the lid is closed the machine is able to begin filling with water in order to sense the load size.

NOTE: Automatic Load Sensing initiates a spin at the beginning of the cycle and will take as much as 3 minutes to complete (significantly shorter for smaller loads), this is normal operation.

NOTE: This is a high efficiency washing machine with agitator wash action. This system requires less water while providing effective cleaning action. You may notice that the water level is lower than on your previous washer. This is normal for an agitator-equipped washer.

Liquid Fabric Softener Dispenser (on some models)

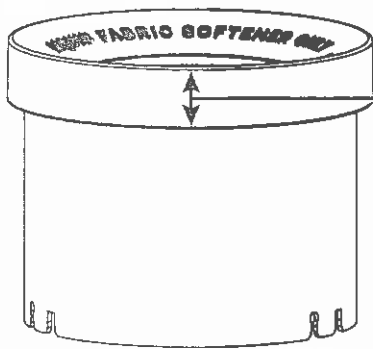
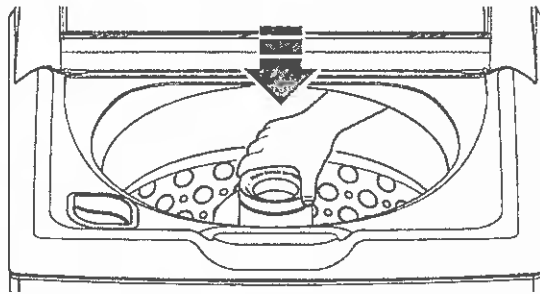
The **agitator cap** fits into the top of the agitator. If it accidentally comes off, simply put it back on.

The **fabric softener dispenser** automatically releases liquid fabric softener at the proper time during the cycle.

Do not stop the washer or raise the lid during the first spin. This will cause the dispenser to empty too soon.

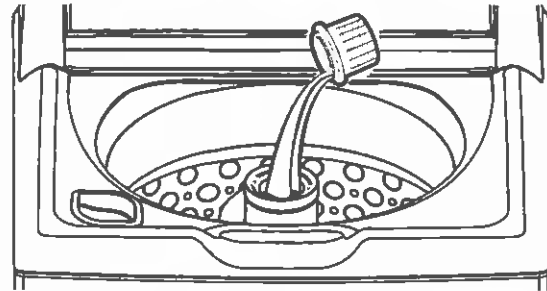
To use, follow these steps:

- 1 Make sure dispenser is securely attached to agitator.



ONLY this portion of the dispenser is visible once installed into agitator

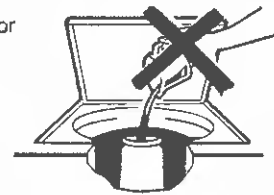
- 2 Use only liquid diluted fabric softener. Pour into dispenser, using amount recommended on package.



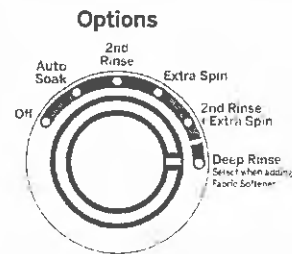
Never pour fabric softener directly on clothes. It may stain them.

- 3 Add water to dispenser until it reaches the maximum fill line.

Do not pour anything into the agitator if the agitator cap or dispenser is removed.



- 4 Select **Deep Rinse** option.

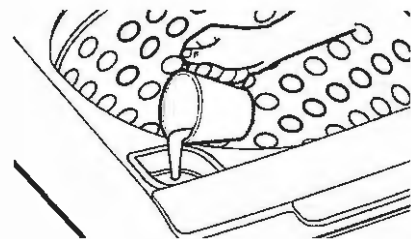


Note: Fabric softener may not dispense properly if the **Deep Rinse** option is not selected.

Liquid Bleach

Liquid chlorine bleach should be added through the bleach dispenser in the **front left corner**. Follow bleach manufacturer's recommendations for the correct amount of liquid chlorine bleach based on load size, taking care to not apply or spill it directly on clothing.

NOTE: Do not use liquid chlorine bleach and laundry pretreatments such as an Oxi product in the same wash load.



Pretreatment

Place laundry pretreatments, such as an Oxi product, directly in the bottom of the wash basket before loading clothes.

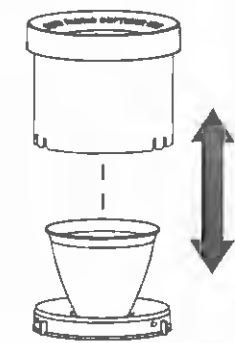
NOTE: Do not use liquid chlorine bleach and laundry pretreatments such as an Oxi product in the same wash load.

Exterior of the Washer

Immediately wipe off any spills with a damp cloth.

Interior of the Washer

Leave the lid open after washing to allow moisture to evaporate. If you want to clean the basket, use a clean soft cloth dampened with liquid detergent; then rinse. (Do not use harsh or gritty cleaners.)



Separate for cleaning

Cleaning the Fabric Softener Dispenser (on some models)

- 1 Remove the dispenser from the top of the agitator.
- 2 Separate the dispenser cup from the cover by grasping the top and pushing down on the inside of the cup with your fingers. Dispenser cup will pop free from the cover.
- 3 To clean the dispenser, soak both the dispenser cup and the dispenser cover in the following solution:
 - 1 US gallon (3.8 liters) warm water
 - 1/4 cup (60 ml) heavy-duty liquid detergent
 - 1 cup (240 ml) bleach
- 4 If necessary, loosen buildup with a clean, soft cloth after soaking. Do not use a stiff brush; you may roughen the surface of the dispenser.
- 5 Rinse and reassemble dispenser. Place dispenser back on the agitator.

Water Supply Hoses

Hoses connecting washer to faucet should be replaced every 5 years.

Moving and Storage

Ask the service technician to remove water from drain pump and hoses. Do not store the washer where it will be exposed to the weather.

Long Vacations

Be sure water supply is shut off at faucets. Drain all water from hoses and water filter pump area if weather will be below freezing.

Installation Instructions

Washer

If you have any questions, call 800.GE.CARES (800.432.2737)
or visit our Website at: GEAppliances.com
In Canada, call 1.800.561.3344 or visit www.GEAppliances.ca

! This is the safety alert symbol. This symbol alerts you to potential hazards that can kill you or hurt you and others. All safety messages will follow the safety alert symbol and the word "DANGER", "WARNING", or "CAUTION". These words are defined as:

! DANGER Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

! WARNING Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

! CAUTION Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

BEFORE YOU BEGIN

Read these instructions completely and carefully.

- **IMPORTANT** – Save these instructions for local inspector's use.
- **IMPORTANT** – Observe all governing codes and ordinances.
- **Note to Installer** – Be sure to leave these instructions with the Consumer.
- **Note to Consumer** – Keep these instructions for future reference.
- **Skill level** – Installation of this appliance requires basic mechanical and electrical skills.
- **Completion time** – 1-3 hours
- Proper installation is the responsibility of the installer.
- Product failure due to improper installation is not covered under the Warranty.

TOOLS REQUIRED FOR WASHER INSTALLATION

Pliers



Level



PARTS SUPPLIED



Drain Hose



Cable Tie



Owner's Reference Guide



Drain Hose Clip



Clamp

PARTS REQUIRED (Sold separately)



Water Hoses (2)



Rubber Washers (2)
and Strainer Screens (2)

Drain Hose Extension (For discharge heights from 60" - 96"

GE Parts and Accessories

Order on-line at GEApplianceparts.com today, 24 hours a day or by phone at 800.626.2002 during normal business hours.

Part Number	Accessory
PM14X10002	4 ft Rubber Water Supply Hoses
Or	
PM14X10005	4 ft Braided Metal Water Supply Hoses
WH1X2267	Rubber Washer (1) and Screen (1)
WH49X301	Drain Hose Extension (For discharge heights from 60" - 96"

NOTE: We strongly recommend the use of new water supply hoses. Hoses degrade over time and need to be replaced every 5 years to reduce the risk of hose failures and water damage.

Installation Instructions

LOCATION OF YOUR WASHER

Do Not Install the Washer:

1. In an area exposed to dripping water or outside weather conditions. The ambient temperature should never be below 60°F (15.6°C) for proper washer operation.
2. In an area where it will come in contact with curtains or drapes.
3. On carpet. The floor **MUST** be a hard surface with a maximum slope of 1/2" per foot (1.27 cm per 30 cm). To make sure the washer does not vibrate or move, you may have to reinforce the floor.

NOTE: If floor is in poor condition, use 3/4" impregnated plywood sheet solidly attached to existing floor covering.

IMPORTANT: Minimum Installation Clearances - Alcove or Closet

- If your washer is approved for installation in an alcove or closet, there will be a label on the back of the machine describing requirements.
- Minimum clearance between washer and adjacent walls or other surfaces: 0" either side, 2" front, 3" rear. Vertical space from floor to overhead shelving, cabinets, ceiling, etc. = 60".
- Closet doors must be louvered or otherwise ventilated and require 60 square inches of opening near the top of the door and 60 square inches near the bottom of the door. If a dryer is located in the same closet, then these areas must be doubled.

NOTE: The clearances stated on this label are minimums. Consideration must be given to providing adequate clearances for installing and servicing.

WATER SUPPLY REQUIREMENTS

WATER PRESSURE - Must be 20 psi minimum to 120 psi maximum.

WATER TEMPERATURE - Household water heater should be set to deliver water at 120° to 150°F (50° to 66°C) TO THE WASHER when hot wash is selected.

SHUTOFF VALVES - Both hot and cold shutoff valves (faucets) should be supplied.

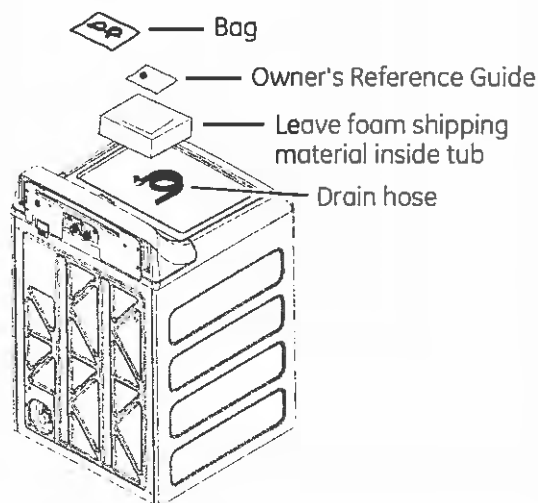
DRAIN - Water should be drained into standpipe. Discharge height **MUST NOT BE LESS THAN 30 INCHES**, and no more than 8 feet above the base of the washer. Standpipe must be 1-1/2 inches minimum inside diameter and must be open to atmosphere.

1 UNPACKING THE WASHER

After the machine is in the home, remove outside packing material/carton from washer.

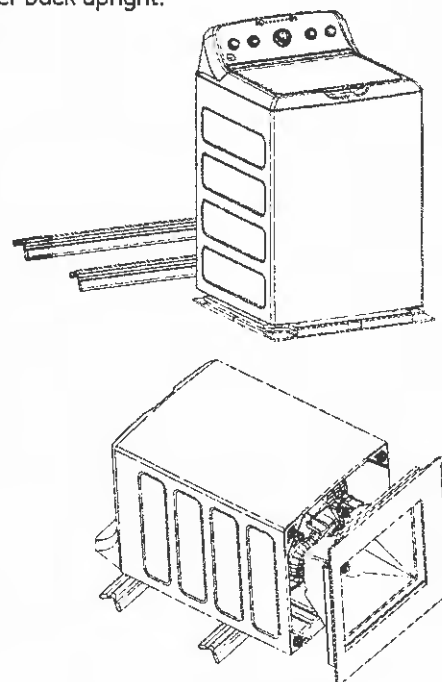
Remove bag (containing clamp, cable tie and drain hose clip), drain hose and Owner's Reference Guide from tub.

NOTE: Leave foam shipping material inside tub opening to hold tub in place during the rest of installation.



2 REMOVE THE BASE

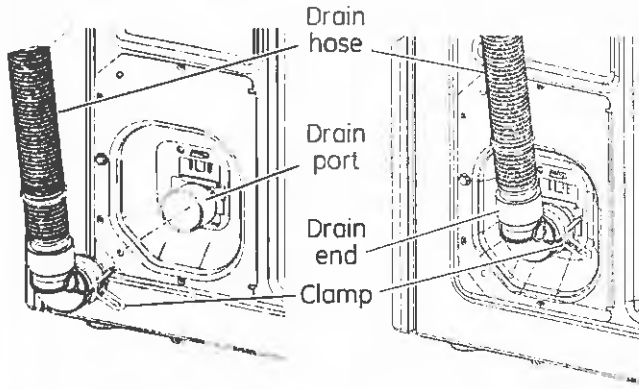
Remove base from unit by placing foot on side of base and tipping unit back on corner post. Remove base and bring the washer back upright.



Installation Instructions

3 CONNECT DRAIN HOSE TO WASHER

Connect drain hose to drain port on back of washer. Open clamp with pliers and slide onto hose end. Holding clamp open, push hose end onto drain port until fully seated. Release clamp between locating ribs on hose end. Outlet of hose end should be oriented vertically.

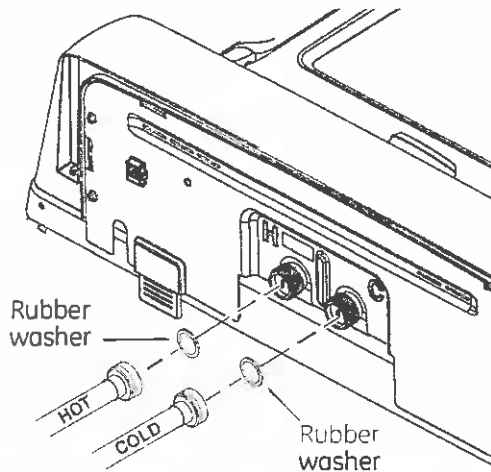


4 CONNECT WATER HOSES TO WASHER

Disconnect electrical cord before installing water hoses. If not installed, install rubber washer in one end of hot water hose. Thread hot water hose onto connection labeled H at top rear of washer. Hand tighten and use pliers to tighten hoses between 1/8 and 1/4 turn beyond hand-tight.

If not installed, install rubber washer in one end of cold water hose C. Thread cold water hose onto connection labeled C at top rear of washer. Hand tighten and use pliers to tighten hoses between 1/8 and 1/4 turn beyond hand-tight.

Move washer as close to final location as possible, leaving room for you to make water, drain, and electrical connections to your home.



5 CONNECT WATER HOSES TO OUTLET VALVES

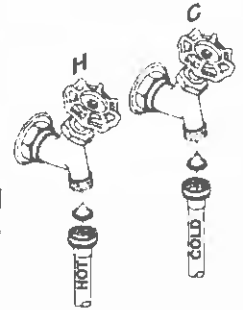
Determine which is HOT water line before attaching water hoses to faucets. Traditionally, HOT faucet is on left.

(If screen washers are not installed) With protruding part of screen toward you, install strainer screen/rubber washer into each of the free ends of two water hoses.

Connect hot water hose to hot water outlet valve of your home. Hand tighten and use pliers to tighten hoses between 1/4 and 1/2 turn beyond hand-tight. Open hot water valve.

Connect cold water hose to cold water outlet valve of your home. Hand tighten and use pliers to tighten hoses between 1/4 and 1/2 turn beyond hand-tight. Open cold water valve.

Check for leaks and drips at the hose couplings. Tighten as necessary.



Installation Instructions

6 CONNECT TO DRAIN

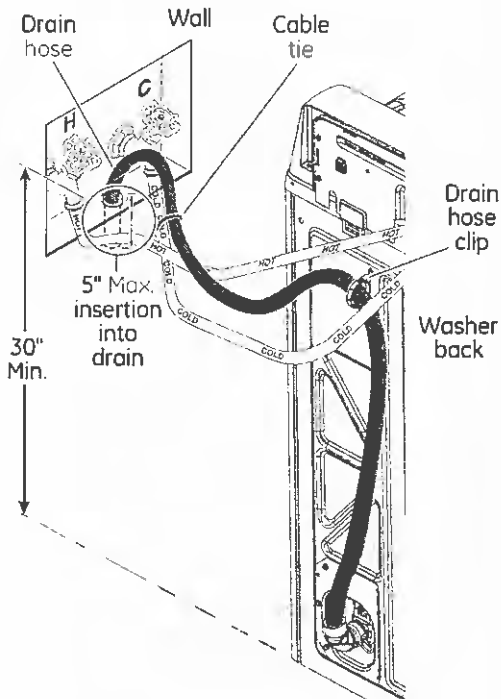
Install drain hose clip on rear panel of washer. Route drain hose through clip and insert free end into drain opening of your home.

NOTE: If longer drain hose is required, order drain hose extension kit, GE part number WH49X301. Connect additional drain hose (contained in kit) to original hose with hose clamp (contained in kit).



NOTE: Install hose guide on hose end if equipped.

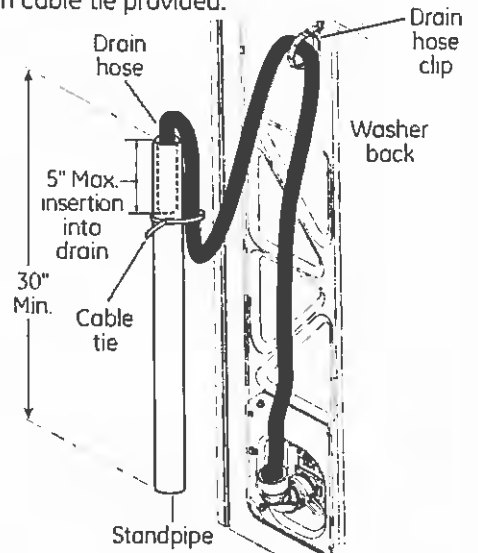
If water valves and drain are built into wall, fasten drain hose to one of the water hoses with cable tie provided.



NOTE: Placing the drain hose too far down the drain pipe can cause a siphoning action. No more than 5" of hose should be in the drain pipe. There must be an air gap around the drain hose. A snug fit can also cause a siphoning action.

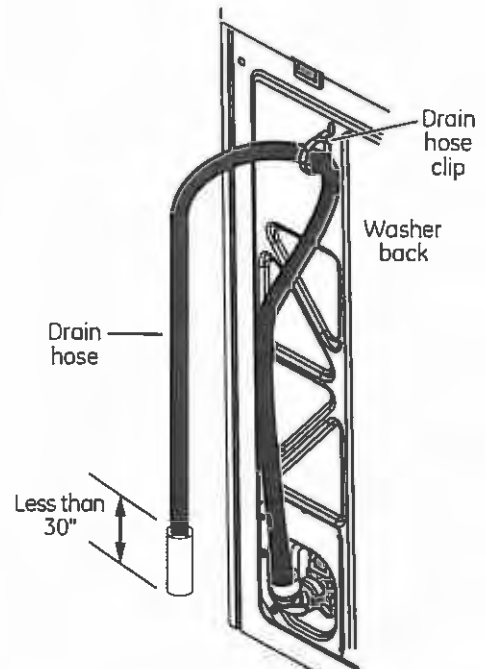
6 CONNECT TO DRAIN (Continued)

If your drain is a standpipe, fasten drain hose to standpipe with cable tie provided.



NOTE: Placing the drain hose too far down the drain pipe can cause a siphoning action. No more than 5" of hose should be in the drain pipe. There must be an air gap around the drain hose. A snug fit can also cause a siphoning action.

If drain discharge height does not meet 30" minimum height requirement, end of drain hose must be secured in drain opening of home by installer and have an air gap around hose to prevent siphoning.



NOTE: Placing the drain hose too far down the drain pipe can cause a siphoning action. No more than 5" of hose should be in the drain pipe. There must be an air gap around the drain hose. A snug fit can also cause a siphoning action.

Installation Instructions

ELECTRICAL REQUIREMENTS

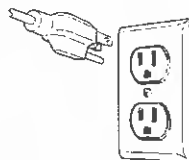
⚠ WARNING - Fire Hazard

- Plug into a grounded 3-prong outlet.
- DO NOT** remove ground prong.
- DO NOT** use an adapter.
- DO NOT** use an extension cord.
- Failure to follow these instructions can result in death, fire or electrical shock.

CIRCUIT - Individual, properly polarized and grounded 15 or 20 amp circuit breaker or time-delay fuse.

POWER SUPPLY - 2 wire plus ground, 120 Volt, single phase, 60 Hz, alternating current.

Outlet Receptacle - Properly grounded 3-prong receptacle to be located so the power cord is accessible when the washer is in an installed position. If a 2-prong receptacle is present, it is the owner's responsibility to have a licensed electrician replace it with a properly grounded 3-prong grounding type receptacle.



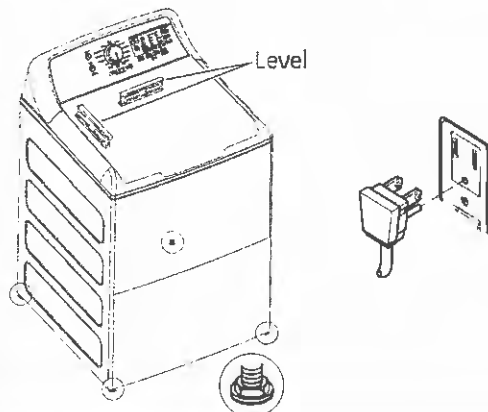
Washer must be electrically grounded in accordance with local codes and ordinances, or in the absence of local codes, in accordance with the NATIONAL ELECTRICAL CODE, ANSI/NFPA NO. 70 latest edition. Check with a licensed electrician if you are not sure that the washer is properly grounded.

7 CONNECT POWER AND INSTALL

Make sure large dial control (on some models) on washer is pushed in to the OFF position.

Insert plug of electrical cord into a 115V, 15- or 20-amp wall receptacle. Move washer into final position. Place level on flat top side edges of washer. Adjust all four leveling legs until washer is level left-to-right and front-to-back. Remove level.

Open tub lid. Remove and discard tub shipping material (see Step 1). Remove plastic protector sheet from control panel face.

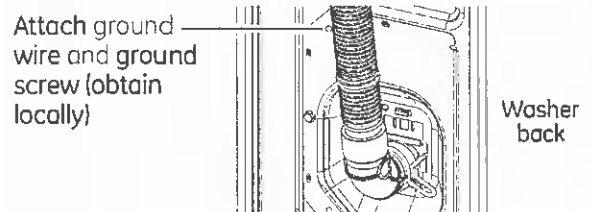


GROUNDING INSTRUCTIONS

This appliance must be grounded. In the event of malfunction or breakdown, grounding will reduce the risk of electric shock by providing a path of least resistance for electric current. This appliance is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

⚠ WARNING Improper connection of the equipment-grounding conductor can result in a risk of electrical shock. Check with a qualified electrician, or service representative or personnel, if you are in doubt as to whether the appliance is properly grounded. **DO NOT** modify the plug on the power supply cord. If it will not fit the outlet, have a proper outlet installed by a qualified electrician.

If required by local codes, an external 18 gauge or larger copper ground wire (not provided) may be added. Attach to washer cabinet with a #10-16 x 1/2" sheet metal screw (available at any hardware store) to rear of washer as illustrated.



Mobile Home Installation:

Installation must conform to Standard for Mobile Homes, ANSI A119.1 and National Mobile Home Construction and Safety Standards Act of 1974 (PL93-383).

FINAL CHECKLIST

Before starting the washer, check to make sure:



- Main power is turned on.
- The washer is plugged in.
- The water faucets are turned on.
- The unit is level and all four leveling legs are firmly on the floor.
- The shipping foam and cardboard are removed.
- The drain hose is properly tied up.
- There are no leaks at the faucet, drain line or washer.

Run the washer through a complete cycle.

- Check for water leaks and proper operation.
- Place these instructions in a location near the washer for future reference.

Before you call for service...Troubleshooting Tips

Save time and money! Review the charts on the following pages, or visit GEAppliances.com. You may not need to call for service.

WATER	Possible Causes	What To Do
Small amount of water remaining in dispenser (on some models) at end of cycle	Normal dispenser operation	It is normal for a small amount of water to remain in dispenser after the cycle.
Short spray and delay after pushing the Start button	Lid was opened and closed between cycle selection and start	This is normal. See <i>START-UP SEQUENCE</i> in the <i>Safety Instructions</i> section.
Water level seems low	This is normal	Water may not cover the top level of the clothes. This is normal for this high efficiency washer.
Low water flow	Water valve screens are stopped up	Turn off the water source and remove the water connection hoses from the upper back of the washer and the water faucets. Clean both the hose screens (if so equipped) and the screens in the machine using a brush or a toothpick. Reconnect the hoses and turn the water back on. Check to ensure there are no leaks at the connections.
Water siphoning out of washer	Drain standpipe is too low or hose too far into standpipe	The drain hose must exceed 32" height at some point between the washer back and the drain pipe. Use anti-siphon clip. See the <i>Installation Instructions</i> .
Too many suds	Soft water	Try less detergent.
	Too much detergent	Measure your detergent carefully. Use less soap if you have soft water, a smaller load or a lightly soiled load.
	Type of detergent	Switch to High Efficiency detergent such as 
Water leaks	Type of detergent	Switch to High Efficiency detergent such as 
	Using too much detergent in washer	Use less detergent. Use less soap if you have soft water, a smaller load or a lightly soiled load.
	Fill hoses or drain hose is improperly connected	Make sure hose connections are tight at faucets and rubber washers are installed. Make sure end of drain hose is correctly inserted in and secured to drain facility.
	Household drain clogged	Check household plumbing. You may need to call a plumber.
	Drain hose rubs on wall	Make sure drain hose does not make contact with the wall. May cause excessive wear on the hose.
	Constant water pressure to fill hoses at water source	Tighten hoses at the faucets. Check condition of the fill hoses; they should be replaced every 5 years.
Water temperature seems incorrect	Cooler water temperatures provide improved energy efficiency	New laundry detergents have been formulated to work with cooler water temperatures without affecting wash performance.
	Water supply is turned off or improperly connected	Turn both hot and cold faucets fully on and make sure hoses are connected to correct faucets. NOTE: Water valves are marked "H" and "C".
	Water valve screens are stopped up	Turn off the water source and remove the water connection hoses from the upper back of the washer and the water faucets. Clean both the hose screens (if so equipped) and the screens in the machine using a brush or a toothpick. Reconnect the hoses and turn the water back on. Check to ensure there are no leaks at the connections.
	Cool/Cold Water when selecting Hot	This is normal. The washer senses water temperature (on some models) and optimizes for best results. Cold water is added periodically when hot is selected.
	House water heater is not set properly	Make sure house water heater is delivering water at 120°F-140°F (48°C-60°C).

Before you call for service...Troubleshooting Tips

Save time and money! Review the charts on the following pages, or visit GEAppliances.com. You may not need to call for service.

WATER	Possible Causes	What To Do
<i>Water pumped out before cycle is complete</i>	Lid lifted or cycle was put in pause for over 24 hours	Reset cycle.
<i>Water won't drain</i>	Drain hose is kinked or improperly connected	Straighten drain hose and make sure washer is not sitting on it. Top of drain outlet should be less than 6 ft (1.8 m) above floor.
<i>Washer spins and pauses at the beginning of cycles</i>	This is normal	The washer is sensing the load.
<i>Washer pauses during wash cycle</i>	The Soak Option was chosen	This is normal. The washer alternates between agitate and soak during these cycles to get your clothes cleaner with less wear.
	This is normal	Many cycles incorporate a series of soaks within the agitation period to get your clothes clean with less wear.

OPERATION	Possible Causes	What To Do
<i>Residual powder in dispenser or clogging of dispensers (on some models)</i>	Wash water too cold or low home water pressure	Select a warmer wash temperature if possible to improve dissolving of detergent or use liquid detergent. Make sure siphon caps are free of debris and fully pressed into position. Remove and clean tray if clogging occurs.
<i>Laundry additives dispensing too soon (Dispensers on some models)</i>	Overfilling of dispensers	Do not overfill or add water to dispenser. Select Deep Rinse option when using fabric softener.
<i>Washer pauses during spin cycle</i>	This is normal	The washer may pause during the spin cycle to remove soapy water more efficiently.
<i>Washer won't operate</i>	Washer is unplugged	Make sure cord is plugged securely into a working outlet.
	Water supply is turned off	Turn both hot and cold faucets fully on.
	Controls are not set properly	Check controls.
	Lid is open—safety feature prevents agitation and spinning when lid is up	Close lid and press Start .
	Circuit breaker/fuse is tripped/blown	Check house circuit breakers/fuses. Replace fuses or reset breaker. Washer should have a separate outlet.
	Electronics need to be reset	Unplug washer, wait 2 minutes, plug back in and press Start .
	Start was not pressed	Press Start .
<i>Detergent packets not dissolving</i>	Laundry detergent packet placed in dispenser	Laundry detergent packets should not be used in the dispensers. They should only be added directly to the wash basket following the manufacturer's directions.
<i>Unexplained time and/or settings changes</i>	Changing options (on some models)	This is normal. Several options will change other options to maximize washer performance.
<i>Basket seems loose</i>	Basket moves or rotates freely	Washer basket does not have a traditional brake. Washer basket will move freely. This is normal.

Before you call for service...Troubleshooting Tips

PERFORMANCE	Possible Causes	What To Do
Colored spots	Incorrect use of fabric softener	Check fabric softener package for instructions and follow directions for using dispenser. Make sure you have selected the Deep Rinse option. Pretreat stain and rewash using Speed Wash cycle before drying.
	Dye transfer	Sort whites or lightly colored items from dark colors.
Grayed or yellowed clothes	Detergent amount	Be sure to follow detergent manufacturer's directions.
	Hard water	Use a water conditioner or install a water softener.
	Water is not hot enough	Make sure water heater is delivering water at 120°F-140°F (48°C-60°C).
	Washer is overloaded	Loosely load clothes no higher than the top row of holes in the washer basket. For best results, load items around the outside of the basket.
	Dye transfer	Sort clothes by color. If fabric label states wash separately, unstable dyes may be indicated.
Lint or residue on clothes	Clothes are air or line dried	If you do not dry your clothes with a clothes dryer, your clothes may retain more lint.
	Incorrect sorting	Separate lint producers from lint collectors.
	Washing too long	Wash small loads for a shorter time using Light Soil setting.
	Detergent not dissolving	Rewash, next time: Try a liquid detergent Use warmer water temperature.
	Overloading	Loosely load clothes in the washer basket. For best results, load items around the outside of the basket.
	Incorrect use of fabric softener	Check fabric softener package for instructions and follow directions for using dispenser. Make sure you have selected the Deep Rinse option.

PERFORMANCE	Possible Causes	What To Do
<i>Clothes too wet</i>	No spin selected	Select a spin option.
	Incorrect cycle selected	Make sure the cycle selected matches the load you are washing. Some fabrics will feel wetter when rinsed with cold water.
	Wash load out of balance	Redistribute load in washer and run through <i>Drain & Spin</i> cycle.
<i>Pilling</i>	Result of normal wear on poly-cotton blends and fuzzy fabrics	While this is not caused by the washer, you can slow the pilling process by washing garments inside out.
<i>Snags, holes, tears, rips or excessive wear</i>	Pins, snaps, hooks, sharp buttons, belt buckles, zippers and sharp objects left in pockets	Fasten snaps, hooks, buttons and zippers. Remove loose items like pins, objects in pockets and sharp buttons. Turn knits (which snag easily) inside out.
	Undiluted chlorine bleach	Check bleach package instructions for proper amount. Never add undiluted bleach to wash or allow clothes to come in contact with undiluted bleach.
	Chemicals like hair bleach or dye, permanent wave solution	Rinse items that may have chemicals on them before washing. Use <i>Speed Wash</i> cycle with <i>Extra Rinse</i> option.
<i>Wrinkling</i>	Incorrect wash and dry cycles	Match Cycle selection to the type of fabric you are washing (especially for easy care loads).
	Improper sorting	Avoid mixing heavy items (like jeans) with light items (like blouses). Try a fabric softener.
	Overloading	Loosely load clothes in the washer basket.
	Repeated washing in water that is too hot	Wash in warm or cold water.

Before you call for service...Troubleshooting Tips

SOUNDS	Possible Causes	Reason
Washer seems too quiet	Quiet by design	The washer is very quiet during portions of the wash cycle.
"Clicking"	Shifter mechanism is engaging or disengaging	The drive system will engage at the start of agitate and disengage when agitate is complete. This occurs multiple times during the wash.
Back and forth "swoosh"	Electric motor reversing direction	This sound is the motor rotating back and forth to clean your laundry.
Quick short agitation sounds at end of agitate	Clothing redistribution	At the end of agitate, the motor makes short agitation strokes to redistribute the load.
"Click" when water stops filling	Relay switch	The relay makes a click sound when activated. The water level activates the relay and stops filling.
"Clicking" behind Control during fill	Automatic Temperature Control Valve	Two valves mix cold and hot water. The "clicking" is when either valve turns on or off to raise or lower the fill water temperature.
Water flow changes during fill	Automatic Temperature Control Valve	Two valves mix cold and hot water. The "clicking" is when either valve turns on or off to raise or lower the fill water temperature.
Motor sounds during spin	Motor ramping up/down during spin cycle	The motor will speed up incrementally during the spin cycle. When spin is complete, it will coast until it stops.
"Humming"	Water drain pump	The drain pump will make a humming sound when pumping out water after agitation stops and continue until spin is complete.
	Drive motor	The drive motor will make a "humming" sound during the wash and spin phases of the cycle.
"Gurgling"	Water drain pump	When the pump starts drawing in air, it starts to gurgle. The washer should then begin spinning and the sound will continue until it is done spinning.
Water "swishing"	Washing process	Water swishing while the unit is agitating is normal, especially with smaller loads.
Washer rocking/moving	Washer leveling legs uneven	To level the washer, adjust the leveling legs by rotating the individual leg in the proper direction for up or down.
"Squeaking" sound	Washer not level and rubbing on cabinet	To level the washer, adjust the leveling legs by rotating the individual leg in the proper direction for up or down.

GE Appliances Washer Warranty.



All warranty service provided by our Factory Service Centers, or an authorized Customer Care® technician. To schedule service, in the United States, visit us on-line at GEAppliances.com, or call 800.GE.CARES (800.432.2737). In Canada, visit GEAppliances.ca or call 1.800.561.3344. Please have serial number and model number available when calling for service.

Staple your receipt here. Proof of the original purchase date is needed to obtain service under the warranty.

Servicing your appliance may require the use of the onboard data port for diagnostics. This gives a GE Factory Service technician the ability to quickly diagnose any issues with your appliance and helps GE improve its products by providing GE with information on your appliance. If you do not want your appliance data to be sent to GE, please advise your technician NOT to submit the data to GE at the time of service.

For The Period Of: We Will Replace:

One Year From the date of the original purchase	Any factory specified part of the washer which fails due to a defect in materials or workmanship. During this limited one-year warranty , we will also provide, free of charge , all labor and related service to replace the defective part.
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What Is Not Covered:

- Service trips to your home to teach you how to use the product.
- Improper installation, delivery or maintenance.
- Failure of the product if it is abused, misused, or used for other than the intended purpose or used commercially.
- Replacement of house fuses or resetting of circuit breakers.
- Products which are not defective or broken, or which are working as described in the Owner's Manual.
- Damage to the product caused by accident, fire, floods or acts of God.
- Incidental or consequential damage caused by possible defects with this appliance.
- Defects or damage due to operation in freezing temperatures.
- Damage caused after delivery.
- Product not accessible to provide required service.

EXCLUSION OF IMPLIED WARRANTIES—Your sole and exclusive remedy is product repair as provided in this Limited Warranty. Any implied warranties, including the implied warranties of merchantability or fitness for a particular purpose, are limited to one year or the shortest period allowed by law.

In the United States:

This warranty is extended to the original purchaser and any succeeding owner for products purchased for home use within the USA. If the product is located in an area where service by a GE Authorized Servicer is not available, you may be responsible for a trip charge or you may be required to bring the product to an Authorized GE Service location for service. In Alaska, the warranty excludes the cost of shipping or service calls to your home.

Some states do not allow the exclusion or limitation of incidental or consequential damages. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. To know what your legal rights are, consult your local or state consumer affairs office or your state's Attorney General.

Warrantor: General Electric Company, Louisville, KY 40225

In Canada:

This warranty is extended to the original purchaser and any succeeding owner for products purchased in Canada for home use within Canada. If the product is located in an area where service by a GE Authorized Servicer is not available, you may be responsible for a trip charge or you may be required to bring the product to an Authorized GE Service location.

Some provinces do not allow the exclusion or limitation of incidental or consequential damages. This warranty gives you specific legal rights, and you may also have other rights which vary from province to province. To know what your legal rights are, consult your local or provincial consumer affairs office.

Warrantor: MC Commercial, Burlington, ON, L7R 5B6

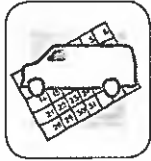
Consumer Support.



GE Appliances Website

In the U.S.: GEAppliances.com

Have a question or need assistance with your appliance? Try the GE Appliances Website 24 hours a day, any day of the year! For greater convenience and faster service, you can now download Owner's Manuals, order parts or even schedule service on-line. In Canada: www.GEAppliances.ca

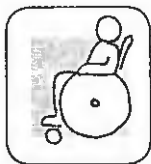


Schedule Service

In the U.S.: GEAppliances.com

Expert GE repair service is only one step away from your door. Get on-line and schedule your service at your convenience any day of the year! Or call 800.GE.CARES (800.432.2737) during normal business hours.

In Canada, call 1.800.561.3344



Real Life Design Studio

In the U.S.: GEAppliances.com

GE supports the Universal Design concept—products, services and environments that can be used by people of all ages, sizes and capabilities. We recognize the need to design for a wide range of physical and mental abilities and impairments. For details of GE's Universal Design applications, including kitchen design ideas for people with disabilities, check out our Website today. For the hearing impaired, please call 800.TDD.GEAC (800.833.4322).

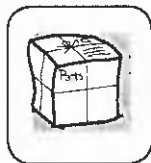
In Canada, contact: Manager, Consumer Relations, MC Commercial
Suite 310, 1 Factory Lane
Moncton, N.B. E1C 9M3



Extended Warranties

In the U.S.: GEAppliances.com

Purchase a GE extended warranty and learn about special discounts that are available while your warranty is still in effect. You can purchase it on-line anytime, or call 800.626.2224 during normal business hours. GE Consumer Home Services will still be there after your warranty expires. In Canada, consult your local listings for an extended warranty provider.



Parts and Accessories

In the U.S.: GEAppliances.com

Individuals qualified to service their own appliances can have parts or accessories sent directly to their homes (VISA, MasterCard and Discover cards are accepted). Order on-line today, 24 hours every day or by phone at 800.626.2002 during normal business hours.

Instructions contained in this manual cover procedures to be performed by any user. Other servicing generally should be referred to qualified service personnel. Caution must be exercised, since improper servicing may cause unsafe operation.

In Canada, consult your local listings for your nearest GE parts distributor or call 800.661.1616.



Contact Us

In the U.S.: GEAppliances.com

If you are not satisfied with the service you receive from GE, contact us on our Website with all the details including your phone number, or write to:

General Manager, Customer Relations
GE Appliances, Appliance Park
Louisville, KY 40225

In Canada: www.GEAppliances.ca, or write to: Director, Consumer Relations, MC Commercial
Suite 310, 1 Factory Lane
Moncton, N.B. E1C 9M3

For questions on installation call 1-800-626-2000 (US) and 1-800-561-3344 (Canada).



Register Your Appliance

In the U.S.: GEAppliances.com

Register your new appliance on-line—at your convenience! Timely product registration will allow for enhanced communication and prompt service under the terms of your warranty, should the need arise. You may also mail in the pre-printed registration card included in the packing material. In Canada: www.GEAppliances.ca

MOD **GTDP490ED0WS**

SER **LZ710733A**

XDU1B

120/240 V

60 HZ

5600 W

24 A

3 WIRE

120/208 V

60 HZ

4400 W

22 A

3 WIRE

LISTED E9527

48N9



LISTED
Clothes
Dryer
48N9

GENERAL ELECTRIC, LOUISVILLE, KY. 40225 Made in CANADA
GE Answer Center® www.GEAppliances.com or 1.800.626.2000



Dryers

Safety Instructions 2-4

Operating Instructions

Control Panel 5, 6

Control Settings 7

Features 8

Loading and Using
the Dryer 10-11

Reversing the Door 9

Venting the Dryer 11

Troubleshooting Tips ... 12, 13

Consumer Support

Consumer Support 16

Warranty 15

laundry your way!

Write the model and serial numbers here:

Model # GTDP490ED0WS

Serial # LZ710733A

You can find them on a label on the front of the dryer behind the door.

IMPORTANT SAFETY INFORMATION. READ ALL INSTRUCTIONS BEFORE USING.

⚠ WARNING!

For your safety, the information in this manual must be followed to minimize the risk of fire or explosion, electric shock, or to prevent property damage, personal injury, or death.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- Installation and service must be performed by a qualified installer, service agency or the gas supplier.

WHAT TO DO IF YOU SMELL GAS:

- 1 Do not try to light a match, or cigarette, or turn on any gas or electrical appliance.
- 2 Do not touch any electrical switch; do not use any phone in your building.
- 3 Clear the room, building or area of all occupants.
- 4 Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions carefully.
- 5 If you cannot reach your gas supplier, call the fire department.

California Safe Drinking Water and Toxic Enforcement Act

This act requires the governor of California to publish a list of substances known to the state to cause cancer, birth defects or other reproductive harm and requires businesses to warn customers of potential exposure to such substances.

Gas appliances can cause minor exposure to four of these substances, namely benzene, carbon monoxide, formaldehyde and soot, caused primarily by the incomplete combustion of natural gas or LP fuels.

Properly adjusted dryers will minimize incomplete combustion. Exposure to these substances can be minimized further by properly venting the dryer to the outdoors.



PROPER INSTALLATION

This dryer must be properly installed and located in accordance with the Installation Instructions before it is used. If you did not receive an Installation Instructions sheet, you can receive one by visiting GEAppliances.com or by calling 800.GE.CARES (800.432.2737).

- Properly ground dryer to conform with all governing codes and ordinances. Follow details in Installation Instructions.
- Install or store where it will not be exposed to temperatures below freezing or exposed to the weather, which could cause permanent damage and invalidate the warranty.
- Connect to a properly rated, protected and sized power supply circuit to avoid electrical overload.
- Remove all sharp packing items and dispose of all shipping materials properly.
- Remove the colored protective tape from the control panel.

Exhaust/Ducting

- 1 All dryers **MUST** be exhausted to the outside to prevent large amounts of moisture and lint from being blown into the room.
- 2 Use only rigid metal 4" diameter ductwork inside the dryer cabinet and use only rigid metal 4" diameter or UL approved transition ducting between the dryer and the home duct. **USE OF PLASTIC OR OTHER COMBUSTIBLE DUCTWORK CAN CAUSE A FIRE. PUNCTURED DUCTWORK CAN CAUSE A FIRE IF IT COLLAPSES OR BECOMES OTHERWISE RESTRICTED IN USE OR DURING INSTALLATION.**

For complete details, follow the Installation Instructions.

IMPORTANT SAFETY INFORMATION. READ ALL INSTRUCTIONS BEFORE USING.

GEAppliances.com

⚠ WARNING!



YOUR LAUNDRY AREA

- Keep the area underneath and around your appliances free of combustible materials, (lint, paper, rags, etc.), gasoline, chemicals and other flammable vapors and liquids.
- Keep the floor around your appliances clean and dry to reduce the possibility of slipping.
- Close supervision is necessary if this appliance is used by or near children. Do not allow children to play on, with or inside this or any other appliance.
- Keep all laundry aids (such as detergents, bleaches, etc.) out of the reach of children, preferably in a locked cabinet. Observe all warnings on container labels to avoid injury.
- Never climb on or stand on the dryer top.
- Keep the area around the exhaust opening and adjacent surrounding areas free from the accumulation of lint, dust and dirt.
- Do not obstruct the flow of ventilating air. Do not stack or place laundry or throw rugs against the front or back of the dryer.



WHEN USING YOUR DRYER

- Never reach into the dryer while the drum is moving. Before loading, unloading or adding clothes, wait until the drum has completely stopped.
- Clean the lint filter before each load to prevent lint accumulation inside the dryer or in the room. **DO NOT OPERATE THE DRYER WITHOUT THE LINT FILTER IN PLACE.**
- Do not wash or dry articles that have been cleaned in, washed in, soaked in or spotted with combustible or explosive substances (such as wax, oil, paint, gasoline, degreasers, dry-cleaning solvents, kerosene, etc.). These substances give off vapors that may ignite or explode. Do not add these substances to the wash water. Do not use or place these substances around your washer or dryer during operation.
- Do not place items exposed to cooking oils in your dryer. Items contaminated with cooking oils may contribute to a chemical reaction that could cause a clothes load to catch fire.
- Any article on which you have used a cleaning solvent or that contains flammable materials (such as cleaning cloths, mops, towels used in beauty salons, restaurants or barber shops, etc.) must not be placed in or near the dryer until solvents or flammable materials have been removed. There are many highly flammable items used in homes such as acetone, denatured alcohol, gasoline, kerosene, some household cleaners, some spot removers, turpentine, waxes, wax removers and products containing petroleum distillates.
- The laundry process can reduce the flame retardancy of fabrics. To avoid such a result, carefully follow the garment manufacturer's care instructions.
- Do not dry articles containing rubber, plastic or similar materials such as padded bras, tennis shoes, galoshes, bath mats, rugs, bibs, baby pants, plastic bags, pillows, etc. that may melt or burn. Some rubber materials, when heated, can under certain circumstances produce fire by spontaneous combustion.
- Do not store plastic, paper or clothing that may burn or melt on top of the dryer during operation.
- Garments labeled "Dry Away from Heat" or "Do Not Tumble Dry" (such as life jackets containing Kapok) must not be put in your dryer.
- Do not dry fiberglass articles in your dryer. Skin irritation could result from the remaining particles that may be picked up by clothing during subsequent dryer uses.
- To minimize the possibility of electric shock, unplug this appliance from the power supply or disconnect the dryer at the household distribution panel by removing the fuse or switching off the circuit breaker before attempting any maintenance or cleaning (except the removal and cleaning of the lint filter). **NOTE:** Turning the Cycle Selector knob to an off position or pressing PAUSE does **NOT** disconnect the appliance from the power supply.

Safety Instructions

Operating Instructions

Troubleshooting Tips

Consumer Support

IMPORTANT SAFETY INFORMATION. READ ALL INSTRUCTIONS BEFORE USING.

⚠ WARNING!



WHEN USING YOUR DRYER (cont.)

- Never attempt to operate this appliance if it is damaged, malfunctioning, partially disassembled, or has missing or broken parts, including a damaged cord or plug.
- The interior of the machine and the exhaust duct connection inside the dryer should be cleaned at least once a year by a qualified technician. See the Loading and Using the Dryer section.
- If yours is a gas dryer, it is equipped with an automatic electric ignition and does not have a pilot light. **DO NOT ATTEMPT TO LIGHT WITH A MATCH.** Burns may result from having your hand in the vicinity of the burner when the automatic ignition turns on.
- You may wish to soften your laundered fabrics or reduce the static electricity in them by using a dryer-applied fabric softener or an anti-static conditioner. We recommend you use either a fabric softener in the wash cycle, according to the manufacturer's instructions for those products, or try a dryer-added product for which the manufacturer gives written assurance on the package that their product can be safely used in your dryer. Service or performance problems caused by use of these products are the responsibility of the manufacturers of those products and are not covered under the warranty to this appliance.
- Do not spray any type of aerosol into, on, or near dryer at any time. Do not use any type of spray cleaner when cleaning dryer interior. Hazardous fumes or electrical shock could occur.



WHEN NOT USING YOUR DRYER

- Grasp the plug firmly when disconnecting this appliance to avoid damage to the cord while pulling. Place the cord away from traffic areas so it will not be stepped on, tripped over or subjected to damage.
- Do not attempt to repair or replace any part of this appliance or attempt any servicing unless specifically recommended in this Owner's Manual or in published user-repair instructions that you understand and have the skills to carry out.
- Before discarding a dryer, or removing it from service, remove the dryer door to prevent children from hiding inside.
- Do not tamper with controls.

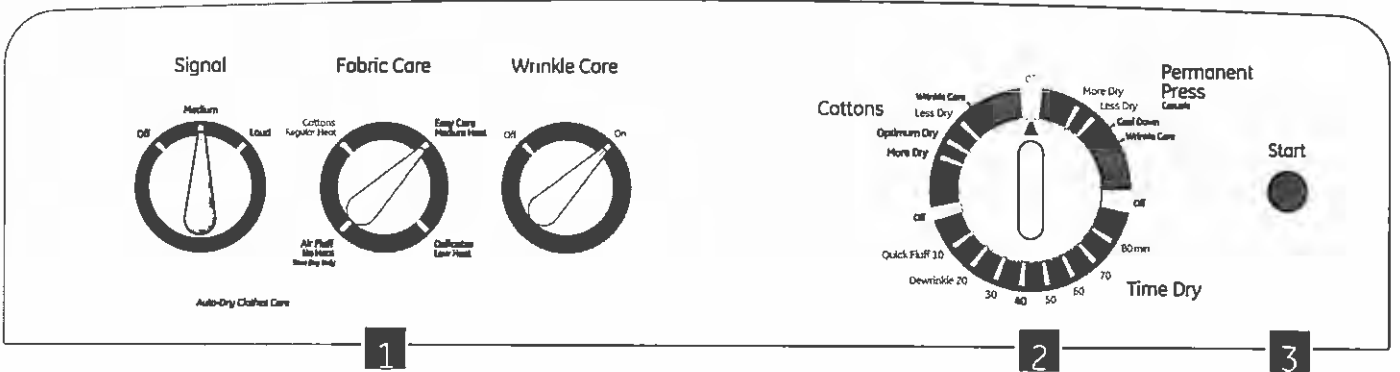
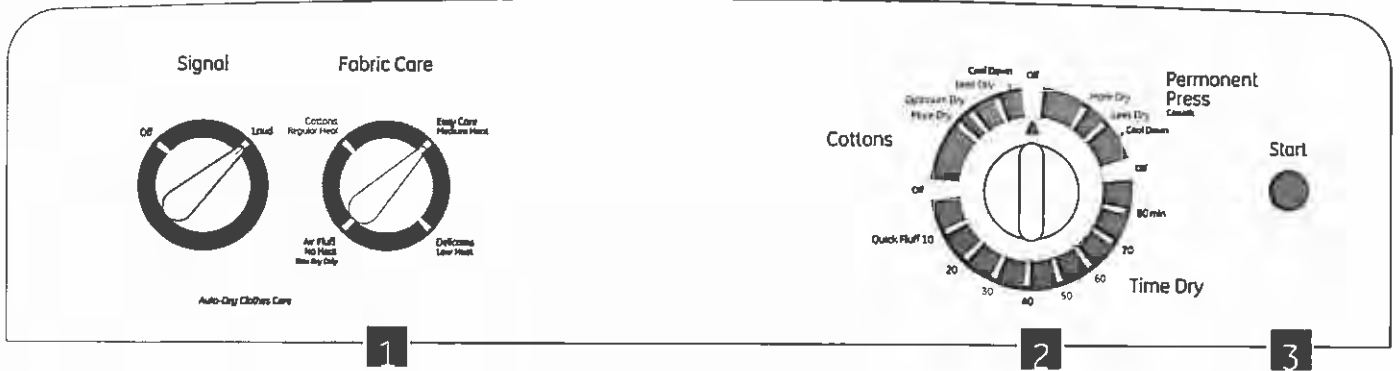


**READ AND FOLLOW THIS SAFETY INFORMATION CAREFULLY.
SAVE THESE INSTRUCTIONS**

⚠ WARNING!

To reduce the risk of fire, electric shock, or injury to persons, read the **IMPORTANT SAFETY INSTRUCTIONS** before operating this appliance.

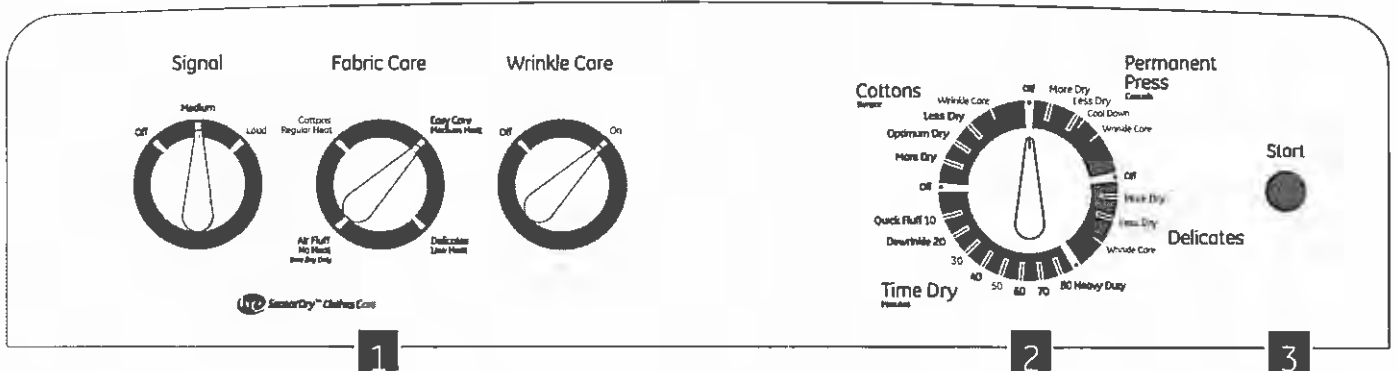
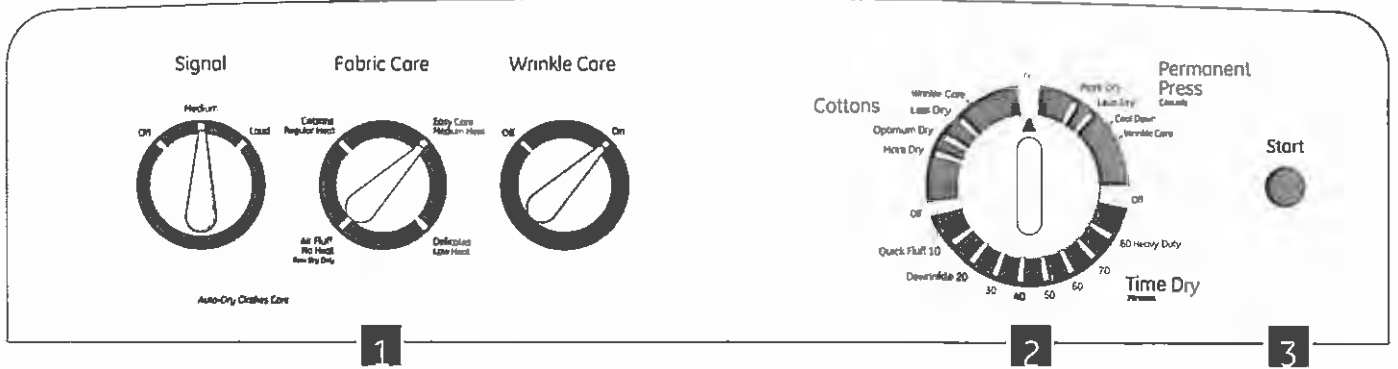
Throughout this manual, features and appearance may vary from your model.



NOTE: Drying times will vary according to the type of heat used (Electric, Natural or LP gas), size of load, types of fabrics, wetness of clothes and condition of exhaust ducts.

About the dryer control panel.

Throughout this manual, features and appearance may vary from your model.



NOTE: Drying times will vary according to the type of heat used (Electric, Natural or LP gas), size of load, types of fabrics, wetness of clothes and condition of exhaust ducts.

IMPORTANT: Clean the lint filter each time you use the dryer.

1 Fabric Care/Temperature (Not all features are on all models)

Cottons For regular to heavy cottons.
Reg. Heat

Easy Care For synthetics, blends, delicates and items labeled permanent press.
Med. Heat

DELICATES On some models. For delicates, synthetics and items labeled tumble dry low.
Low Heat

Air Fluff For fluffing items without heat. Use the **Time Dry** cycle.
No Heat

Automatic cycles automatically determine fabric dryness. Select **Less Dry** if you want your clothes slightly damp at the end of the drying cycle. Select **More Dry** if you want them to feel drier.

Timed cycles run for a selected time.

2 Drying Cycles (Not all features are on all models)

Cottons For cottons and most linens. For most loads, select **Optimum Dry** (on some models).

Permanent Press/Casuals For wrinkle-free, permanent press and delicate items, and knits.

Delicates For delicate items, special-care fabrics and knits.

Time Dry Set the Cycle Selector at the desired drying time.

Dewrinkle For removing wrinkles from items that are clean and dry or that are very lightly damp.

Quick Fluff For freshening or fluffing up already dry clothing, fabrics, linens and pillows. Use with **Air Fluff No Heat**. Provides 10 minutes of no heat tumbling.

3 Start—Close the dryer door. Select **Start**. Opening the door during operation will stop the dryer. To restart the dryer, close the door and select **Start** to complete the cycle.

Color Logic (on some models)

Select the correct **Fabric Care** setting. Match the particular color below the words with the same color on the Cycle Dial.

Example: Drying a load of clothing labeled permanent press.

1 Choose the **Fabric Care** setting—for this load it would be the **Easy Care Med. HEAT** (which is a particular color).

2 Turn the Cycle Dial to the area that has the same color as the **Fabric Care** setting you have chosen—for this load it would be the **Easy Care Automatic**.

About the dryer features.

Wrinkle Care



Wrinkle Care Option (on some models)

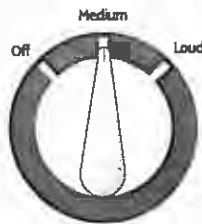
Use this option to minimize the wrinkles in clothes. It provides approximately 15 minutes of no-heat tumbling after the clothes are dry.

This option can only be used with the **Cottons** and **Easy Care** cycles.

If you are using the **Cycle Signal** knob and you select the **Wrinkle Care** option, a signal will sound at the end of the drying time and several times during the **Wrinkle CARE** cycle. This will remind you that it is time to remove the clothes.

If **Wrinkle Care** is not on, the dryer will stop once the timer reaches the **Wrinkle Care** mark on the cycle dial.

Signal



Cycle Signal Option (on some models)

This signal will sound just before the end of the cycle to remind you to remove the clothes. On some models, the signal sound level cannot be adjusted.

If you selected the **Wrinkle Care** option, the signal will sound at the end of the drying time and will sound several times during the **Wrinkle Care** cycle. This will remind you that it is time to remove the clothes.

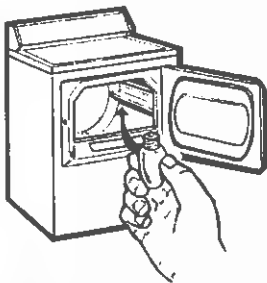
NOTE:

- **Remove garments promptly at the sound of the signal. Place clothes on hangers so wrinkles won't set in.**
- **Use the Cycle Signal especially when drying fabrics like polyester knits and permanent press. These fabrics should be removed so wrinkles won't set in.**

Automatic Cycle Signal (on some models)

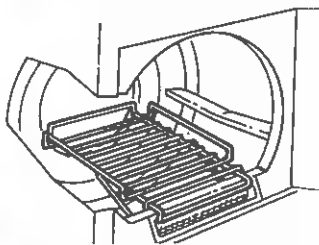
At the end of each cycle, there is approximately 15 minutes of no-heat tumbling after the laundry is dry.

A reminder signal will sound periodically during this time to remind you to remove the laundry.



Drum Lamp (on some models)

Before replacing the light bulb, be sure to unplug the dryer power cord or disconnect the dryer at the household distribution panel by removing the fuse or switching off the circuit breaker. Reach above dryer opening from inside the drum. Remove the bulb and replace with the same size bulb.



Drying Rack (on some models)

A handy drying rack may be used for drying delicate items such as washable sweaters.

Hook the rack over the lint filter so the rack extends into the dryer drum.

NOTE:

- **The drying rack must be used with the Time Dry cycle.**
- **Do not use this drying rack when there are other clothes in the dryer.**

Stainless Steel Drum (on some models)

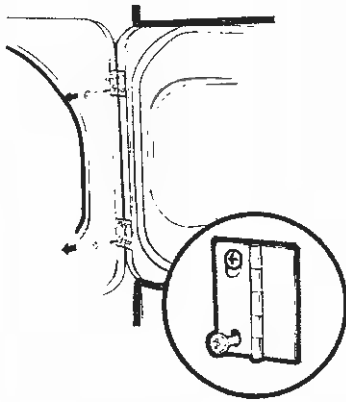
The stainless steel used to make the dryer drum provides the highest reliability available in a GE dryer. If the dryer drum should be scratched or dented during normal use,

the drum will not rust or corrode. These surface blemishes will not affect the function or durability of the drum.

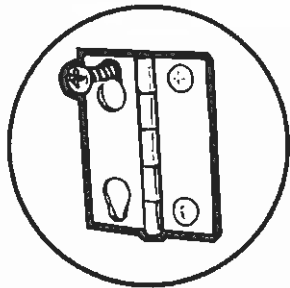
Reversing the Door

Tools needed:

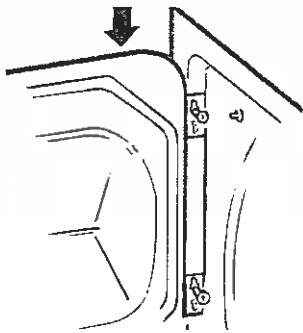
- Standard #2 Phillips screwdriver
- Tape-tipped putty knife



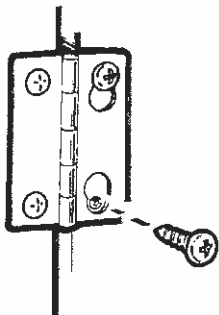
- 1 Open the door and remove the filler plugs opposite the hinges. With the door completely open, remove the bottom screw from each hinge on the dryer face. Insert these screws about half way into the **TOP** holes, for each hinge, on the opposite side (where you removed the filler plugs). Apply firm pressure to get the screw started in new holes.



- 2 Loosen top screw from each hinge on the dryer face half way. With one hand holding the top of the door and the other hand holding the bottom, remove the door from the dryer by lifting it **UP** and **OUT**.



- 3 Rotate the door 180°. Insert it on the opposite side of the opening by moving the door **IN** and **DOWN** until the top hinge and the bottom hinge are resting on the top screws inserted in step 1.



- 4 Remove the remaining screws from the side of the opening from which the door was removed. With these screws, secure each hinge at the bottom. Tighten the two top screws of each hinge. Reinsert the plastic plugs on the side from which the door was removed.

Loading and using the dryer.

Always follow the fabric manufacturer's care label when laundering.



Sorting and Loading Hints

As a general rule, if clothes are sorted properly for the washer, they are sorted properly for the dryer.

Do not add fabric softener sheets once the load has become warm. They may cause fabric softener stains. Bounce® Fabric Conditioner Dryer Sheets have been approved for use in all GE Dryers when used in accordance with the manufacturer's instructions.

Do not overload. This wastes energy and causes wrinkling.

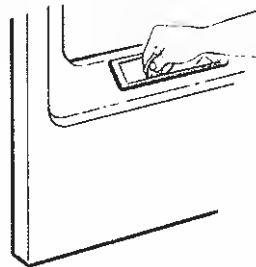
Do not dry the following items: fiberglass items, woolsens, rubber-coated items, plastics, items with plastic trim and foam-filled items.



Care and Cleaning of the Dryer

The Exterior: Wipe or dust any spills or washing compounds with a damp cloth. Dryer control panel and finishes may be damaged by some laundry pretreatment soil and stain remover products. Apply these products away from the dryer. The fabric may then be washed and dried normally. Damage to your dryer caused by these products is not covered by your warranty.

The Lint Filter: Clean the lint filter before each use. Moisten your fingers and reach into the filter opening. Run your fingers across the filter. Have a qualified technician vacuum the lint from the dryer once a year.



Stainless Steel: To clean stainless steel surfaces, use a damp cloth with a mild, non-abrasive cleaner suitable for stainless steel surfaces. Remove the cleaner residue, and then dry with a clean cloth.

The Exhaust Duct: Inspect and clean the exhaust ducting at least once a year to prevent clogging. A partially clogged exhaust can lengthen the drying time.

Follow these steps:

- 1 Turn off electrical supply by disconnecting the plug from the wall socket.
- 2 Disconnect the duct from the dryer.
- 3 Vacuum the duct with the hose attachment and reconnect the duct.

The Exhaust Hood: Check from the outside that the flaps of the hood move freely when operating. Make sure that there is not wildlife (birds, insects, etc.) nesting inside the duct or hood.

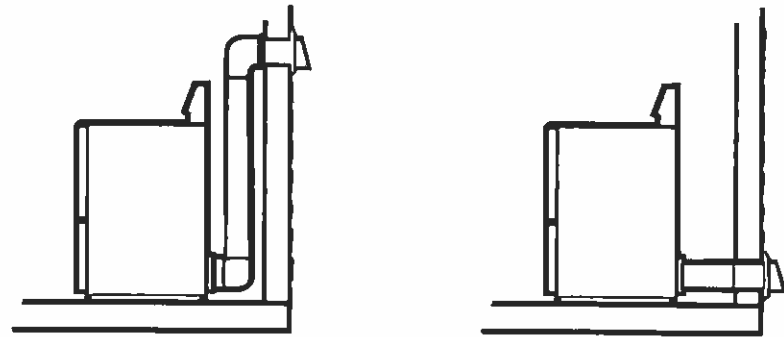


Venting the Dryer

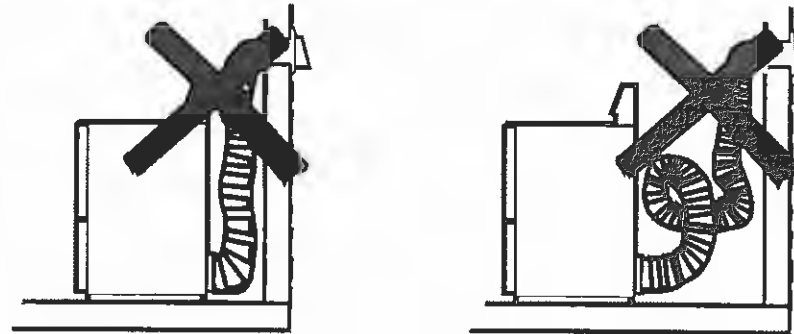
For the best drying performance, the dryer needs to be properly vented. *The dryer will use more energy and run longer if it is not vented to the below specifications. Carefully follow the details on Exhausting in the Installation Instructions.*

- Use only rigid metal 4" diameter ductwork inside the dryer cabinet. Use only rigid metal or UL listed flexible metal 4" diameter ductwork for exhausting to the outside.
- Do not use plastic or other combustible ductwork.
- Use the shortest length possible.
- Do not crush or collapse.
- Avoid resting the duct on sharp objects.
- *Venting must conform to local building codes.*

Correct Venting



Incorrect Venting



Safety Instructions

Operating Instructions

Troubleshooting Tips

Consumer Support

Before you call for service...



Troubleshooting Tips

Save time and money! Review the charts on the following pages, or visit GEAppliances.com. You may not need to call for service.

Problem	Possible Causes	What To Do
Dryer doesn't start	Dryer is unplugged	<ul style="list-style-type: none"> Make sure the dryer plug is pushed completely into the outlet.
	Fuse is blown/circuit breaker is tripped	<ul style="list-style-type: none"> Check the house fuse/circuit breaker box and replace fuse or reset breaker. NOTE: Most electric dryers use 2 fuses/breakers.
Dryer doesn't heat	Fuse is blown/circuit breaker is tripped; the dryer may tumble but not heat	<ul style="list-style-type: none"> Check the house fuse/circuit breaker box and replace both fuses or reset both breakers. Your dryer may tumble if only one fuse is blown or one breaker tripped.
	Gas service is off	<ul style="list-style-type: none"> Make sure gas shutoff at dryer and main shutoff are fully open.
Dryer shakes or makes noise	Some shaking/noise is normal. Dryer may be sitting unevenly	<ul style="list-style-type: none"> Move dryer to an even floor space, or adjust leveling legs as necessary until even.
Greasy spots on clothes	Improper use of fabric softener	<ul style="list-style-type: none"> Follow directions on fabric softener package.
	Drying dirty items with clean ones	<ul style="list-style-type: none"> Use your dryer to dry only clean items. Dirty items can stain clean items and the dryer.
	Clothes were not completely clean	<ul style="list-style-type: none"> Sometimes stains which cannot be seen when the clothes are wet appear after drying. Use proper washing procedures before drying.
Lint on clothes	Lint filter is full	<ul style="list-style-type: none"> Clean lint screen before each load.
	Improper sorting	<ul style="list-style-type: none"> Sort lint producers (like chenille) from lint collectors (like corduroy).
	Static electricity can attract lint	<ul style="list-style-type: none"> See suggestions in this section under Static occurs.
	Overloading	<ul style="list-style-type: none"> Separate large loads into smaller ones.
	Paper, tissue, etc. left in pockets	<ul style="list-style-type: none"> Empty all pockets before laundering clothes.
Static occurs	No fabric softener was used	<ul style="list-style-type: none"> Try a fabric softener. Bounce® Fabric Conditioner Dryer Sheets have been approved for use in all GE Dryers when used in accordance with the manufacturer's instructions.
	Overdrying	<ul style="list-style-type: none"> Try a fabric softener. Adjust setting to Less Dry or Damp Dry.
	Synthetics, permanent press and blends can cause static	<ul style="list-style-type: none"> Try a fabric softener.
Inconsistent drying times	Type of heat	<ul style="list-style-type: none"> Automatic drying times will vary according to the type of heat used (electric, natural or LP gas), size of load, types of fabrics, wetness of clothes and condition of exhaust ducts.

<i>Problem</i>	<i>Possible Causes</i>	<i>What To Do</i>
<i>Clothes take too long to dry</i>	Improper sorting	<ul style="list-style-type: none"> Separate heavy items from lightweight items (generally, a well-sorted washer load is a well-sorted dryer load).
	Large loads of heavy fabrics (like beach towels)	<ul style="list-style-type: none"> Large, heavy fabrics contain more moisture and take longer to dry. Separate large, heavy fabrics into smaller loads to speed drying time.
	Controls improperly set	<ul style="list-style-type: none"> Match control settings to the load you are drying.
	Lint filter is full	<ul style="list-style-type: none"> Clean lint filter before every load.
	Improper or obstructed ducting	<ul style="list-style-type: none"> Check installation instructions for proper ducting/venting. Make sure ducting is clean, free of kinks and unobstructed. Check to see if outside wall damper operates easily. Check the Installation Instructions to make sure the dryer venting is correct.
	Blown fuses or tripped circuit breaker	<ul style="list-style-type: none"> Replace fuses or reset circuit breakers. Since most dryers use 2 fuses/breakers, make sure both are operating.
	Overloading/combining loads	<ul style="list-style-type: none"> Do not put more than one washer load in the dryer at a time.
<i>Clothes are wrinkled</i>	Underloading	<ul style="list-style-type: none"> If you are drying only one or two items, add a few items to ensure proper tumbling.
	Overdrying	<ul style="list-style-type: none"> Select a shorter drying time. Remove items while they still hold a slight amount of moisture. Select a <i>Less Dry</i> or <i>Damp Dry</i> setting.
	Letting items sit in dryer after cycle ends	<ul style="list-style-type: none"> Remove items when cycle ends and fold or hang immediately.
<i>Clothes shrink</i>	Overloading	<ul style="list-style-type: none"> Separate large loads into smaller ones.
	Some fabrics will naturally shrink when washed. Others can be safely washed, but will shrink in the dryer	<ul style="list-style-type: none"> To avoid shrinkage, follow garment care labels exactly. Some items may be pressed back into shape after drying. If you are concerned about shrinkage in a particular item, do not machine wash or tumble dry it.

Consumer Support	Troubleshooting Tips	Operating Instructions	Safety Instructions
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Notes.

GE Dryer Warranty.



All warranty service provided by our Factory Service Centers, or an authorized Customer Care[®] technician. To schedule service, on-line, 24 hours a day, visit us at GEAppliances.com, or call 800.GE.CARES (800.432.2737). Please have serial number and model number available when calling for service.

Staple your receipt here. Proof of the original purchase date is needed to obtain support under the warranty.

For The Period Of: GE Will Replace:

One Year

From the date of the original purchase

Any part of the dryer which fails due to a defect in materials or workmanship. During this **limited one-year warranty**, GE will also provide, **free of charge**, all labor and related service costs to replace the defective part.

What GE Will Not Cover:

- Service trips to your home to teach you how to use the product.
- Improper installation, delivery or maintenance.
- Failure of the product if it is abused, misused, or used for other than the intended purpose or used commercially.
- Replacement of the light bulb.
- Products which are not defective or broken, or which are working as described in the Owner's Manual.
- Replacement of house fuses or resetting of circuit breakers.
- Damage to the product caused by accident, fire, floods or acts of God.
- Incidental or consequential damage caused by possible defects with this appliance.
- Defects or damage due to operation in freezing temperatures.
- Damage caused after delivery.
- Product not accessible to provide required service.

EXCLUSION OF IMPLIED WARRANTIES—Your sole and exclusive remedy is product repair as provided in this Limited Warranty. Any implied warranties, including the implied warranties of merchantability or fitness for a particular purpose, are limited to one year or the shortest period allowed by law.

This warranty is extended to the original purchaser and any succeeding owner for products purchased for home use within the USA. If the product is located in an area where service by a GE Authorized Servicer is not available, you may be responsible for a trip charge or you may be required to bring the product to an Authorized GE Service location. In Alaska, the warranty excludes the cost of shipping or service calls to your home.

Some states do not allow the exclusion or limitation of incidental or consequential damages. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. To know what your legal rights are, consult your local or state consumer affairs office or your state's Attorney General.

Warrantor: General Electric Company, Louisville, KY 40225

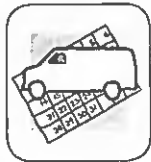
Consumer Support.



GE Appliances Website

GEAppliances.com

Have a question or need assistance with your appliance? Try the GE Appliances Website 24 hours a day, any day of the year! For greater convenience and faster service, you can now download Owner's Manuals, order parts or even schedule service on-line.



Schedule Service

GEAppliances.com

Expert GE repair service is only one step away from your door. Get on-line and schedule your service at your convenience 24 hours any day of the year! Or call 800.GE.CARES (800.432.2737) during normal business hours.



Real Life Design Studio

GEAppliances.com

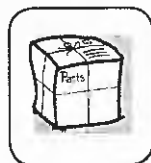
GE supports the Universal Design concept—products, services and environments that can be used by people of all ages, sizes and capabilities. We recognize the need to design for a wide range of physical and mental abilities and impairments. For details of GE's Universal Design applications, including kitchen design ideas for people with disabilities, check out our Website today. For the hearing impaired, please call 800.TDD.GEAC (800.833.4322).



Extended Warranties

GEAppliances.com

Purchase a GE extended warranty and learn about special discounts that are available while your warranty is still in effect. You can purchase it on-line anytime, or call 800.626.2224 during normal business hours. GE Consumer Home Services will still be there after your warranty expires.



Parts and Accessories

GEAppliances.com

Individuals qualified to service their own appliances can have parts or accessories sent directly to their homes (VISA, MasterCard and Discover cards are accepted). Order on-line today, 24 hours every day or by phone at 800.626.2002 during normal business hours.

Instructions contained in this manual cover procedures to be performed by any user. Other servicing generally should be referred to qualified service personnel. Caution must be exercised, since improper servicing may cause unsafe operation.



Contact Us

GEAppliances.com

If you are not satisfied with the service you receive from GE, contact us on our Website with all the details including your phone number, or write to: General Manager, Customer Relations
GE Appliances, Appliance Park
Louisville, KY 40225



Register Your Appliance

GEAppliances.com

Register your new appliance on-line—at your convenience! Timely product registration will allow for enhanced communication and prompt service under the terms of your warranty, should the need arise. You may also mail in the pre-printed registration card included in the packing material.

MOD. **GTDP490ED0WS**

SER. **LZ710733A**

XDU1B

120/240 V

120/208 V

60 HZ

60 HZ

5600 W

4400 W

24 A

22 A

3 WIRE

3 WIRE

LISTED E9527

48N9



LISTED
Clothes
Dryer
48N9

GENERAL ELECTRIC, LOUISVILLE, KY. 40225 Made in CANADA
GE Answer Center® www.GEAppliances.com or 1.800.626.2000

ENCLOSURE (5)

SAFETY DATA SHEET



Date of issue/Date of revision 28 April 2016

Version 5

Section 1. Identification

Product name : T-10 THINNER
Product code : ATT10
Other means of identification : Not available.
Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Product use : Industrial applications.
Use of the substance/ mixture : Coating. Paints. Painting-related materials.
Uses advised against : Not applicable.

Manufacturer : PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272
Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)

Technical Phone Number : (414) 764-6000 (OAK CREEK, WI) 8:00 a.m. - 5:00 p.m. Central

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 3
ACUTE TOXICITY (oral) - Category 4
ACUTE TOXICITY (inhalation) - Category 4
SKIN IRRITATION - Category 2
SERIOUS EYE DAMAGE - Category 1
CARCINOGENICITY - Category 2
TOXIC TO REPRODUCTION (Unborn child) - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (central nervous system (CNS), hearing organs, kidneys and liver) - Category 2
ASPIRATION HAZARD - Category 1

Section 2. Hazards identification

GHS label elements

Hazard pictograms**Signal word**

: Danger

Hazard statements

: Flammable liquid and vapor.
Harmful if swallowed or if inhaled.
Causes serious eye damage.
Causes skin irritation.
Suspected of damaging the unborn child.
Suspected of causing cancer.
May be fatal if swallowed and enters airways.
May cause respiratory irritation.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure. (central nervous system (CNS), hearing organs, kidneys, liver)

Precautionary statements

Prevention

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

Response

: Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Storage

: Store locked up. Store in a well-ventilated place. Keep cool.

Disposal

: Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements

: Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Avoid contact with skin and clothing. Wash thoroughly after handling. Emits toxic fumes when heated.

Hazards not otherwise classified

: Prolonged or repeated contact may dry skin and cause irritation.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture
Product name : T-10 THINNER

Ingredient name	%	CAS number
butan-1-ol	≥20 - ≤44	71-36-3
xylene	≥20 - ≤40	1330-20-7
heptan-2-one	≥10 - ≤20	110-43-0
ethylbenzene	≥5.0 - ≤10	100-41-4
toluene	<1.0	108-88-3

SUB codes represent substances without registered CAS Numbers.

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Description of necessary first aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
- Ingestion** : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation. Defatting to the skin.
- Ingestion** : Harmful if swallowed. Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness

Section 4. First aid measures

- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
dryness
cracking
blistering may occur
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
stomach pains
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

Section 5. Fire-fighting measures

- Specific hazards arising from the chemical** : Flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Special precautions** : Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Vapors are heavier than air and may spread along floors. If this material is part of a multiple component system, read the Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Do not store above the following temperature: 35°C (95°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
butan-1-ol	ACGIH TLV (United States, 3/2015). TWA: 20 ppm 8 hours.
xylene	OSHA PEL (United States, 2/2013). TWA: 300 mg/m ³ 8 hours. TWA: 100 ppm 8 hours. ACGIH TLV (United States, 3/2015). STEL: 651 mg/m ³ 15 minutes. STEL: 150 ppm 15 minutes. TWA: 434 mg/m ³ 8 hours. TWA: 100 ppm 8 hours. OSHA PEL (United States, 2/2013). TWA: 435 mg/m ³ 8 hours.

Section 8. Exposure controls/personal protection

heptan-2-one	TWA: 100 ppm 8 hours. ACGIH TLV (United States, 3/2015). TWA: 233 mg/m ³ 8 hours. TWA: 50 ppm 8 hours. OSHA PEL (United States, 2/2013). TWA: 465 mg/m ³ 8 hours. TWA: 100 ppm 8 hours.
ethylbenzene	ACGIH TLV (United States, 3/2015). TWA: 20 ppm 8 hours. OSHA PEL (United States, 2/2013). TWA: 435 mg/m ³ 8 hours. TWA: 100 ppm 8 hours.
toluene	OSHA PEL Z2 (United States, 2/2013). AMP: 500 ppm 10 minutes. CEIL: 300 ppm TWA: 200 ppm 8 hours. ACGIH TLV (United States, 3/2015). TWA: 20 ppm 8 hours.

Key to abbreviations

A	= Acceptable Maximum Peak	S	= Potential skin absorption
ACGIH	= American Conference of Governmental Industrial Hygienists.	SR	= Respiratory sensitization
C	= Ceiling Limit	SS	= Skin sensitization
F	= Fume	STEL	= Short term Exposure limit values
IPEL	= Internal Permissible Exposure Limit	TD	= Total dust
OSHA	= Occupational Safety and Health Administration.	TLV	= Threshold Limit Value
R	= Respirable	TWA	= Time Weighted Average
Z	= OSHA 29 CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances		

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Section 8. Exposure controls/personal protection

- Eye/face protection** : Chemical splash goggles and face shield.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Gloves** : For prolonged or repeated handling, use the following type of gloves:

Recommended: polyvinyl alcohol (PVA), Viton®, butyl rubber, neoprene
May be used: nitrile rubber
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Clear.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : >37.78°C (>100°F)
- Flash point** : Closed cup: 25°C (77°F)
- Material supports combustion.** : Yes.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Not available.
- Evaporation rate** : Not available.
- Vapor pressure** : Not available.

Section 9. Physical and chemical properties

Vapor density	: Not available.
Relative density	: 0.84
Density (lbs / gal)	: 7.01
Solubility	: Insoluble in the following materials: cold water.
Partition coefficient: n-octanol/water	: Not available.
Viscosity	: Kinematic (40°C (104°F)): <0.07 cm ² /s (<7 cSt)
Volatility	: 100% (w/w)
% Solid. (w/w)	: 0

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: When exposed to high temperatures may produce hazardous decomposition products. Refer to protective measures listed in sections 7 and 8.
Incompatible materials	: Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.
Hazardous decomposition products	: Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
butan-1-ol	LC50 Inhalation Vapor	Rat	24000 mg/m ³	4 hours
	LC50 Inhalation Vapor	Rat	8000 ppm	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-
xylene	LD50 Oral	Rat	790 mg/kg	-
	LC50 Inhalation Gas.	Rat	6670 ppm	4 hours
	LC50 Inhalation Vapor	Rat	5000 ppm	4 hours
heptan-2-one	LD50 Dermal	Rabbit	>1.7 g/kg	-
	LD50 Oral	Rat	4.3 g/kg	-
	LC50 Inhalation Vapor	Rat	>16.7 mg/l	4 hours
ethylbenzene	LD50 Dermal	Rabbit	10.206 g/kg	-
	LD50 Oral	Rat	1.6 g/kg	-
	LC50 Inhalation Vapor	Rat	4000 ppm	4 hours
	LD50 Dermal	Rabbit	17.8 g/kg	-

Section 11. Toxicological information

toluene	LD50 Oral	Rat	3.5 g/kg	-
	LC50 Inhalation Vapor	Rat	49 g/m ³	4 hours
	LC50 Inhalation Vapor	Rat	8000 ppm	4 hours
	LD50 Dermal	Rabbit	8.39 g/kg	-
	LD50 Oral	Rat	636 mg/kg	-

Conclusion/Summary : There are no data available on the mixture itself.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
xylene	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-

Conclusion/Summary

Skin : There are no data available on the mixture itself.

Eyes : There are no data available on the mixture itself.

Respiratory : There are no data available on the mixture itself.

Sensitization

Conclusion/Summary

Skin : There are no data available on the mixture itself.

Respiratory : There are no data available on the mixture itself.

Mutagenicity

Conclusion/Summary : There are no data available on the mixture itself.

Carcinogenicity

Conclusion/Summary : There are no data available on the mixture itself.

Classification

Product/ingredient name	OSHA	IARC	NTP
xylene	-	3	-
ethylbenzene	-	2B	-
toluene	-	3	-

Carcinogen Classification code:

IARC: 1, 2A, 2B, 3, 4

NTP: Known to be a human carcinogen; Reasonably anticipated to be a human carcinogen

OSHA: +

Not listed/not regulated: -

Reproductive toxicity

Conclusion/Summary : There are no data available on the mixture itself.

Teratogenicity

Conclusion/Summary : There are no data available on the mixture itself.

Specific target organ toxicity (single exposure)

Name	Category
butan-1-ol	Category 3
xylene	Category 3
toluene	Category 3

Specific target organ toxicity (repeated exposure)

Section 11. Toxicological information

Name	Category
xylene	Category 2
ethylbenzene	Category 2
toluene	Category 2

Target organs : Contains material which causes damage to the following organs: brain.
Contains material which may cause damage to the following organs: blood, kidneys, lungs, the nervous system, liver, peripheral nervous system, gastrointestinal tract, upper respiratory tract, skin, central nervous system (CNS), ears, eye, lens or cornea.

Aspiration hazard

Name	Result
xylene	ASPIRATION HAZARD - Category 1
ethylbenzene	ASPIRATION HAZARD - Category 1
toluene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation. Defatting to the skin.
- Ingestion** : Harmful if swallowed. Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
dryness
cracking
blistering may occur
reduced fetal weight
increase in fetal deaths
skeletal malformations

Section 11. Toxicological information

Ingestion : Adverse symptoms may include the following:
 stomach pains
 nausea or vomiting
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Conclusion/Summary : There are no data available on the mixture itself. Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone. If splashed in the eyes, the liquid may cause irritation and reversible damage. Ingestion may cause nausea, diarrhea and vomiting. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Short term exposure

Potential immediate effects : There are no data available on the mixture itself.

Potential delayed effects : There are no data available on the mixture itself.

Long term exposure

Potential immediate effects : There are no data available on the mixture itself.

Potential delayed effects : There are no data available on the mixture itself.

Potential chronic health effects

General : May cause damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : Suspected of damaging the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	1405.6 mg/kg
Dermal	2303.3 mg/kg
Inhalation (gases)	9079.1 ppm
Inhalation (vapors)	18.02 mg/l
Inhalation (dusts and mists)	2.458 mg/l

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
ethylbenzene	Acute LC50 150 to 200 mg/l Fresh water	Fish - Lepomis macrochirus - Young of the year	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
xylene	-	-	Readily
ethylbenzene	-	-	Readily
toluene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
butan-1-ol	0.88	-	low
xylene	3.16	7.4 to 18.5	low
heptan-2-one	1.98	-	low
ethylbenzene	3.15	79.43	low
toluene	2.73	8.32	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14. Transport information

	DOT	IMDG	IATA
UN number	UN1263	UN1263	UN1263
UN proper shipping name	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL
Transport hazard class (es)	3	3	3
Packing group	III	III	III
Environmental hazards	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.
Product RQ (lbs)	283.72	Not applicable.	Not applicable.
RQ substances	(xylene, N-Butanol)	Not applicable.	Not applicable.

Additional information

- DOT** : Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
- IMDG** : None identified.
- IATA** : None identified.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

United States

United States inventory (TSCA 8b) : All components are listed or exempted.

U.S. Federal regulations :

SARA 302/304

SARA 304 RQ : Not applicable.

Composition/information on ingredients

No products were found.

SARA 311/312

Classification : Fire hazard
 Immediate (acute) health hazard
 Delayed (chronic) health hazard

Composition/information on ingredients

Section 15. Regulatory information

Name	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
butan-1-ol	Yes.	No.	No.	Yes.	No.
xylene	Yes.	No.	No.	Yes.	Yes.
heptan-2-one	Yes.	No.	No.	Yes.	No.
ethylbenzene	Yes.	No.	No.	Yes.	Yes.
toluene	Yes.	No.	No.	Yes.	Yes.

SARA 313

Supplier notification	Chemical name	CAS number	Concentration
	butan-1-ol	71-36-3	15 - 40
	xylene	1330-20-7	15 - 40
	ethylbenzene	100-41-4	3 - 7

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health : 3 * Flammability : 3 Physical hazards : 0

(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 3 Flammability : 3 Instability : 0

Date of previous issue : 11/16/2015

Organization that prepared the MSDS : EHS

Key to abbreviations

: ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 UN = United Nations

Section 16. Other information

✔ Indicates information that has changed from previously issued version.

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.