Everett Ship Repair

Notice of Construction Application for Order of Approval
for
Second Dry Dock
at
Everett, Washington Facility

This Notice of Construction Application for Order of Approval submittal consists of several documents, listed below:

A. Notice of Construction Application for Order of Approval Form 50-125P
B. Additional Notice of Construction Application Requirements
    a. SPRAY COATING OPERATIONS
    b. BAGHOUSES AND CARTRIDGE-TYPE DUST COLLECTORS
C. Project Description
D. Vendor and Manufacturer Information
E. Emissions Estimate
F. State Environmental Policy Act (SEPA) Checklist

Questions or requests for additional information can be directed to:

Marie E. Piper

Cascade Environmental Management

316 SE Pioneer Way, #294

Oak Harbor, WA 98277

(360) 672-0088

MarieatCascade@gmail.com

Jon Hie

Everett Ship Repair

2730 Federal Ave

Everett, WA 98201

Phone: (360) 322-4562

jon@everettshiprepair.com

Date submitted to Puget Sound Clean Air Agency: March 24, 2022

CASCADE ENVIRONMENTAL MANAGEMENT

AGENCY USE ONLY	NOC#:	REG#:	Date Fee Pd:	Eng. Assigned:
	12245	30287	4/22/22	

PUGET SOUND
Clean Air Agency

1904 3rd Ave #105, Seattle, WA 98101
206-343-8800
pscleanair.gov

NOTICE OF CONSTRUCTION APPLICATION FOR ORDER OF APPROVAL

The following information must be submitted as part of this application packet before an Agency engineer is assigned to review your project.

SECTION 1. FACILITY INFORMATION

Business Name
Everett Ship Repair, LLC

Equipment Installation Address	City	State	Zip
2730 Federal Ave.	Everett	WA	98201

Is the business registered with the Agency at this equipment installation address?

☒ Yes. Current Registration or AOP No. 30287 ☐ No, not registered ☐ Unknown

Business Owner Name
Ice Cap, LLC

Business Mailing Address	City	State	Zip
5400 Cameron Rd	Freeland	WA	98249

Type of Business
Marine Construction and Repair.

Is the installation address located within the city limits?

☒ Yes ☐ No

NAICS Code	NAICS Description
336611	Ship Building and Repairing

Contact Name (for this application)	Phone	Email
Jon Hie	(360) 322-4562	jon@everettshiprepair.com

Description for Agency Website

Provide a 1-2 sentence simple description of this project. See examples www.pscleanair.gov/176

Addition of second dry dock to existing ship repair facility.

SECTION 2: REQUIRED APPLICATION PACKET ATTACHMENTS

1) **Process flow diagram**
☒ YES, attached. ☐ NO, not attached. This application is incomplete

2) **Emission estimate**. Emission rate increases for all pollutants.
☒ YES, attached. ☐ NO, not attached. This application is incomplete.

3) **Environmental Checklist** (or a determination made by another Agency under the State Environmental Policy Act) www.pscleanair.gov/DocumentCenter/View/170
☒ YES, attached. ☐ NO, not attached. This application is incomplete.

SECTION 2: REQUIRED APPLICATION PACKET ATTACHMENTS (CONT)

4) Attach **equipment form**(s) applicable to your operation. Forms are available online at www.pscleanair.gov/179

☒ YES, attached. ☐ NO, not attached. This application is incomplete.

5) **Detailed Project Description**

The project description must include a detailed description of the project, a list of process and control equipment to be installed or modified, a description of how the proposed project will impact your existing operations (if applicable), and measures that will be taken to minimize air emissions.

Detailed description of the proposed project included in packet?

☒ YES, attached. ☐ NO, not attached. This application is incomplete.

6) **$1,550 filing fee** (nonrefundable)

☒ PAY BY CHECK – Attached and made payable to **Puget Sound Clean Air Agency**

☐ PAY BY CREDIT – Accounting technician will contact person identified below for payment information

Contact Name:	Contact Number:

SECTION 3: PROCESS AND CONTROL EQUIPMENT (attach additional pages if necessary)

Process Equipment		Does this equipment have air pollution control equipment?	**Air Pollution Control Equipment**	
# of Units	Equipment Type & Design Capacity		# of Units	Equipment Type
	See attached	☐ Yes ☐ No		
	Technical Support	☐ Yes ☐ No		
	Document	☐ Yes ☐ No		
		☐ Yes ☐ No		

SECTION 4: CERTIFICATION STATEMENT

I, the undersigned, certify that the information contained in this application and the accompanying forms, plans, specifications, and supplemental data described herein is, to the best of my knowledge, accurate and complete.

Signature

03/21/2022
Date

Jon Hie
Printed Name

General Manager
Title

SECTION 5: APPLICATION SUBMITTAL

☒ **EMAIL application and attachments to:**

NOC@pscleanair.gov

-OR-

☐ **MAIL application, payment, and attachments to:**

Puget Sound Clean Air Agency
ATTN: NOC Application Submittal
1904 3rd Ave, Suite 105 - Seattle, WA 98101

PUGET SOUND
Clean Air Agency

1904 3rd Ave #105, Seattle, WA 98101
206-343-8800
pscleanair.gov

NOC APPLICATION SUPPLEMENTAL FORM

Baghouse, Cartridge-Type Dust Collector, and Fabric Filter

This baghouse or cartridge-type dust collector is:

- ☒ New (including existing, unpermitted equipment)
- ☐ A replacement of an existing baghouse or cartridge-type dust collector
- ☐ A substantial alteration of an existing baghouse or cartridge-type dust collector
- ☐ Relocation

Specify the source of the particulate matter being controlled: Abrasive blasting

Hours of operation per day: 20 Hours of operation per year: 7300

Inlet Gas Stream Characteristics

Inlet Flowrate (acfm): 20,000

Inlet Particulate Concentration (gr/dscf): varies

Temperature Range of Inlet Gas Stream (°F): 45 - 100

Moisture Range of Inlet Gas Stream (%): <50

Outlet Gas Stream Characteristics

Outlet Flowrate (acfm): 20,000

Outlet Particulate Concentration (gr/dscf): 0.0002

Temperature Range of Outlet Gas Stream (°F): 45 - 100

Moisture Range of Outlet Gas Stream (%): <50

Design Specifications

Make: Varies - rentals Model: 20,000CFM electric

Filter Fabric Material: Polyester/Cellulose Blend meeting MERV 16

Filter Cleaning Method:

- ☐ Mechanically shaken
- ☐ Manually shaken
- ☐ Reverse air
- ☒ Pulse-jet
- ☐ Other: _____

Air to Cloth Ratio (acfm/ft2): 2.46 to 1

Baghouse Fan Configuration

- ☒ Induced draft
- ☐ Forced draft
- ☐ Other: _____

Stack Parameters

Exhaust stack parameters (Leave blank for non-ventilated spray areas):

Stack diameter (inches): 28 Stack height above ground (feet): 38

Building Dimensions of project location:

Building Height (highest point of roof) (feet): 24

Building Width (feet): 62 Building Length (feet) 220

Stack damper/rain guard:

☐ None ☐ Hexagonal ☐ Stack within stack ☐ Butterfly ☐ Inverted Cone

☒ Other (specify): Varies but will use only one of the options above

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NOC APPLICATION SUPPLEMENTAL FORM

Spray Coating Operations

This application is for activities or equipment that is:

- ☒ New (including existing, unpermitted equipment)
- ☐ Physical or operational modification of existing equipment
- ☐ Relocation of existing equipment

This application is for activities or equipment that is:

- ☐ Aerospace
- ☐ Wood furniture
- ☐ Motor vehicles
- ☒ Other, please describe: Marine vessels and modules

Note: Spray coating operations for motor vehicles may instead qualify for the General Order of Approval - Automotive Refinishing Operations Spray Booths. www.pscleanair.gov/AutobodyGeneralOrder

Hours of operation per day: 20 Hours of operation per year: 7300

Spray Coating area is:

- ☐ Spray booth/room
- ☐ Outdoor spray area, describe enclosure: _____
- ☐ Prep area
- ☒ Other, please describe: Dry dock with wing walls and shrouds (DD-2)

Design Specifications

Volume of enclosure (cubic feet): 327,360 cf max

Exhaust flow rate (cfm): 20,000

Make: N/A Model: N/A

Exhaust System Overspray Control

☒ Dry filter system:

Dry filter make: N/A Dry filter model: MERV 13

Manometer or differential pressure gauge installed: x Yes ☐ No

☐ Water wash system:

Water flow rate (feet/minute): _____

Flow meter installed: ☐ Yes ☐ No

Form 50-114 | 03/20

Spray Gun Parameters

Type of spray equipment:

- ☒ Air-assisted airless
- ☒ Airless; specify viscosity of coatings: when recommended by manufacturer
- ☐ Electrostatic
- ☒ High volume low pressure (HVLP)
- ☐ Low volume low pressure (LVLP)
- ☐ Other, please describe: _____

Stack Parameters

☐ Stack information is specified on NOC Application Supplemental Form for proposed control device

☒ Stack information specified below:

Stack damper/rain guard:

☐ None ☐ Hexagonal ☐ Stack within stack ☐ Butterfly ☐ Inverted Cone

☒ Other (specify): Varies, but will only utilize the above options

Stack diameter (inches): 28 Stack height above ground (feet): 38

Building Dimensions of project location:

Building Height (highest point of roof) (feet): 24

Building Width (feet): 62 Building Length (feet) 220

Required Attachments

1. Table (Excel file preferred) containing proposed annual usage (gallons/year) of each coating, solvents and other VOC containing materials. Coatings, solvents, and VOC containing materials must be identified with manufacturer, name, product ID, and VOC content (lb/gal)
2. Safety Data Sheets (SDS) for each coating to be applied.
3. Environmental Data Sheets (EDS), Product Data Sheets (PDS), or SDS which show the VOC content (lb/gal) of each coatings and solvents to be applied or used during surface preparation and surface coating

NOTICE OF CONSTRUCTION APPLICATION FOR ORDER OF APPROVAL
FOR
SECOND DRY DOCK AT EVERETT SHIP REPAIR

PROJECT DESCRIPTION

Everett Ship Repair (ESR) is located on a former shipyard site at 2730 Federal Avenue in Everett, Washington. A site location and vicinity aerial view is attached as Figure 1. The facility layout is attached as Figure 2.

Shipyard services encompass repair, overhaul and construction on vessels and vessel modules. Shipbuilding and repair operations include abrasive blasting, spray, brush, and roller coating, welding, grinding, pressure washing, hydroblasting, heavy lift barge vessel hauling and launching (dry dock), and supporting activities. A second dry dock (DD-2) is proposed to be added to the facility for conducting the same type of work as conducted on the existing dry dock. The first dry dock is also known as the *Faithful Servant* and the proposed second dry dock is also known as the *Emerald Lifter*.

Proposed Equipment

The primary emission sources are abrasive blasting and surface coating operations.

Abrasive blasting equipment includes storage hoppers, blast pots, blast nozzles, and dust collectors. Size and quantities of equipment are project dependent. Abrasive blasting media will include garnet, glass, steel shot, and steel grit. No increase in the existing permit limits and conditions for abrasive blasting is needed. With the second dry dock, the abrasive blasting operations will likely be split fairly evenly between the two dry docks.

As with the existing heavy lift barge/dry dock (DD-1), surface coating equipment may include spray guns, spray pumps, rollers, and brushes.

The above equipment is also served by 1600 cfm, 540 bhp diesel-fired air compressors.

Figure 3 provides a process flow diagram for the equipment and operations.

Estimated Hours of Operation

Operations could be in use up to 20 hours per day, 7 days per week, and 52 weeks per year. For estimating potential to emit, operations are assumed to occur 8,760 hours per year.

Estimated Installation Date

Immediately upon approval.

Best Available Control Technology (BACT)

Recent BACT determinations at similar shipyards for abrasive blasting stipulate 100% containment enclosures with dust collectors providing negative air in the local work area. Dust collectors to use MERV 16 filters.

Table 1 provides a summary from a recent BACT determination for abrasive blasting at another local shipyard.

Table 1. Summary of BACT Conditions for Abrasive Blasting

Most Stringent	▪ The abrasive blasting operation shall be conducted in a full enclosure that vents all the exhaust to a dust collector system ▪ No visible emissions shall be allowed from the enclosures containing the abrasive blasting operations, associated ductwork or the dust collection system ▪ Dust collector system with HEPA or MERV 16 filtration ▪ Abrasive material must not contain cadmium, chromium, lead or any individual compound containing cadmium, chromium or lead in amounts greater than 0.1 percent by weight ▪ The abrasive material storage areas and dust collector system holding bins shall be fully enclosed ▪ Dust collector system must be equipped with a pressure gauge

Source: Puget Sound Clean Air Agency, NOC Worksheet No. 11330.

The control of volatile organic compounds (VOCs) and volatile organic hazardous air pollutants (VOHAPs) from surface coating activities typically involves minimizing and limiting the VOC content of the marine coatings. The Shipbuilding and Repair (Surface Coating) NESHAP (40 CFR Part 63, Subpart II) applies to major sources of hazardous air pollutants (HAPs). The rule limits the quantity of VOHAPs in the coating depending upon the category of the marine coating. This NESHAP does not apply to this facility as ESR will maintain Synthetic Minor Source status.

While many of the proposed coatings/thinners are the same as coatings/thinners used in other area shipyards, ESR is also proposing and continues to use several “substitute” coatings/thinners in order to maintain ethyl benzene emissions within Acceptable Source Impact Levels (ASILs).

Overspray is proposed to be controlled by 100% containment enclosures and filtered exhaust using a MERV 13 rating, at a minimum.

Table 2 provides an excerpt from a recent BACT determination summary for spray coating at another local shipyard. Furthermore, it is expected ESR’s current permit conditions, established in 2020, still represent BACT and would be carried forward with the permit for this additional dry dock.

Table 2. Summary of BACT Conditions for Spray Coating

Pollutant	Emissions Limitation	Implementation of BACT
VOCs (minus water and exempt compounds)	▪ VOC content limit of 2.9 lbs per gallon of general use, inorganic zinc high-build and nonskid coating applied ▪ VOC content limit of 3.3 lbs per gallon of antifouling coating applied ▪ VOC content of 3.5 lbs per gallon of heat resistant and high-gloss coating applied	▪ Maintaining a list of all materials containing VOCs and TAPs. The list must contain the material content amounts of each specified pollutant ▪ Maintaining a monthly and rolling 12-month material usage calculation for all materials containing VOCs and TAPs ▪ Maintaining up-to-date safety data sheets (SDS) and formulation data for all VOC and TAP containing materials
Volatile TAPs	▪ Volatile TAP content limit of 2.9 lbs per gallon of general use, inorganic zinc high-build or nonskid coating applied ▪ Volatile TAP VOC content limit of 3.3 lbs per gallon of antifouling coating applied ▪ Volatile TAP VOC content of 3.5 lbs per gallon of heat resistant or high-gloss coating applied	
PM	0.0002 gr/dscf and no visible emissions	▪ The spray-coating operation shall be conducted in a full enclosure that vents all the exhaust to a dust collector system ▪ No visible emissions shall be allowed from the enclosure containing the abrasive blasting operations, the dust collection system and any associated ductwork ▪ Dust collector system is designed with HEPA filtration ▪ The dust collector system holding bins shall be fully enclosed ▪ Dust collector system must be equipped with a pressure gauge
Non-volatile TAPs	0.0002 gr/dscf and no visible emissions	

Source: Puget Sound Clean Air Agency, NOC Worksheet No. 11330.

Toxics Best Available Control Technology (t-BACT)

Refined dispersion modeling analyses of the facility indicate concerns with ethyl benzene emissions with standard marine coatings and thinners. While there are no control technologies specific to toxic air pollutant (TAP) emissions from shipyard surface coating operations, this facility would continue to use "substitute" coatings and thinners, where possible, to maintain ethyl benzene emissions below permit limits.

Emissions Estimate

Abrasive Blasting

At this time, all abrasive blasting is done on vessels on the dry dock moored at ESR's dock. The BACT determination dictates all abrasive blasting to be performed in 100% containment enclosures with dust collectors providing negative air in the local work area. Dust collectors use MERV 16 filters. This operation is unchanged with respect to maximum permitted grit usage, grit types, and emissions. These current permit conditions are expected to be brought forward as conditions for the new dry dock.

Surface Coating

At this time, all surface coating is done on vessels on the DD-1 dry dock moored at ESR's dock. The BACT determination in 2020 dictated all surface coating operations to be performed in 100% containment enclosures with negative air in the local work area. Filter assemblies use MERV 13 filters with MD-18F paint arrestor pre-filters. ESR tracks coating and thinner usage to maintain HAP emissions within Synthetic Minor Source status and TAP emissions to meet ASILs. Emissions estimates from coating operations are summarized in Attachment E.

Emissions Stack Parameters

Currently all emissions are vented through the dust collector and ducted to a permanent stack on the dry dock. The stack is 65' high with an unobstructed vertical exhaust. Figure 2 shows the maximum containment dimensions and the stack location on the existing dry dock (DD-1). The second dry dock (DD-2) is smaller and has wingwalls that are 24' tall. It is proposed to place the dust collector for this dry dock atop the wingwall in the southwest corner of the dry dock. The baghouse and the paint filter assembly would vent through a stack that exhausts 38' above the dry dock deck via an unobstructed vertical exhaust.

Dispersion Modeling

The dispersion modeling that represents ESR accompanies this application and technical support document. The modeling includes emission rates from both dry docks operating simultaneously so as to represent a worst-case scenario. Table 3 provides a summary of the results of the dispersion modeling.

Table 3. Modeling Summary for Everett Ship Repair

Toxics Summary																
TAP	**Xylenes**	**Ethyl Benzene**	**n-Butyl Alcohol**	**Toluene**	**MIBK**	**Cumene**	**1,2-Ethanediamine**	**Propylene glycol monomethyl ether**	**Phenol**	**Methanol**	**n-Butyl Acetate**	**1,2,4-Trimethyl Benzene**	**1,3,5-Trimethyl Benzene**	**Isopropyl Alcohol**	**Ethylene glycol monobutyl ether**	**Hexavalent Chromium (estimated)**
CAS	1330207	100414	71363	108883	108101	98828	107153	107982	108952	67561	123864	95636	108678	67630	111762	
Avg Period	24-hr	year	-	24-hr	24-hr	24-hr	-	24-hr	24-hr	24-hr	-	-	-	1-hr	24-hr	Annual
Lb/Avg Period	33.02	1628.15	-	0.01	0.00	1.66	-	0.00	0.00	6.29	-	-	-	0.49	2.25	0.02
SQER (lb/avg period)	16	65	-	370	220	30	-	520	15	1500	-	-	-	5.9	6.1	0.00065
ASIL (ug/m3)	220	0.4	-	5000	3000	400	-	7000	200	20000	-	-	-	3200	82	4.00E-06
Modeled Concentration (ug/m3)	17.6	0.398	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.98E-06

CASCADE ENVIRONMENTAL MANAGEMENT

Figure 2. Everett Ship Repair Site Layout

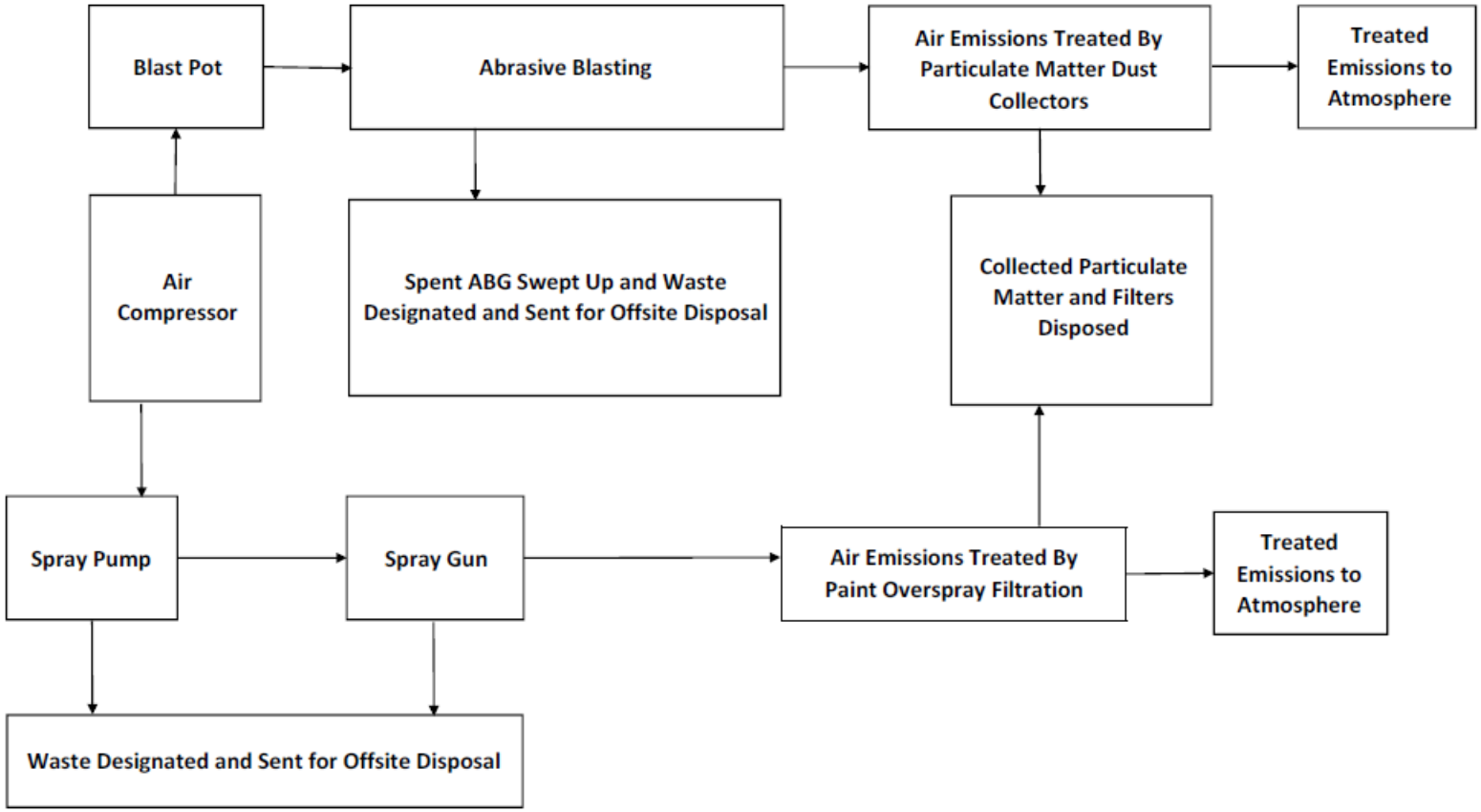
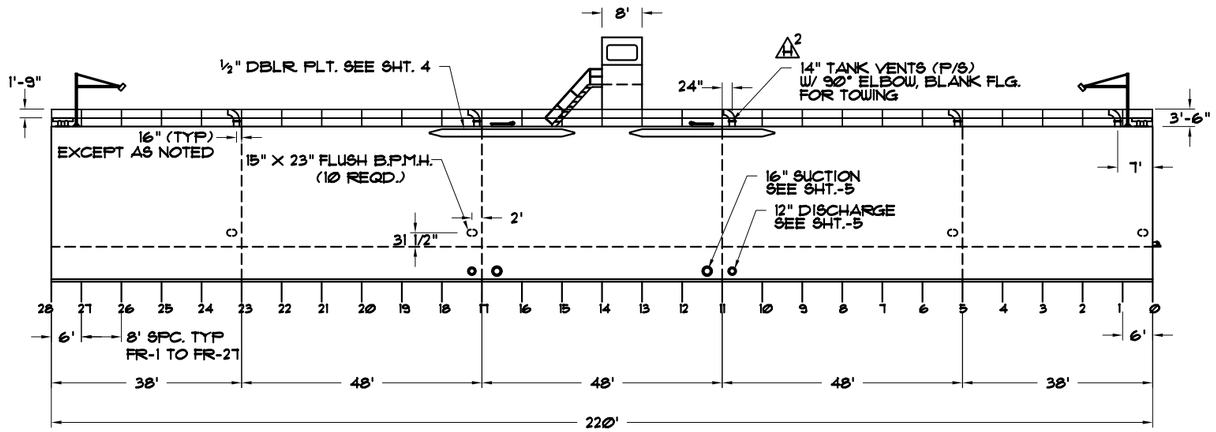
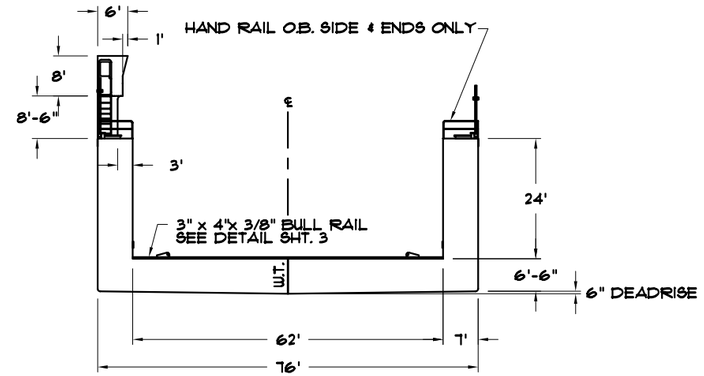


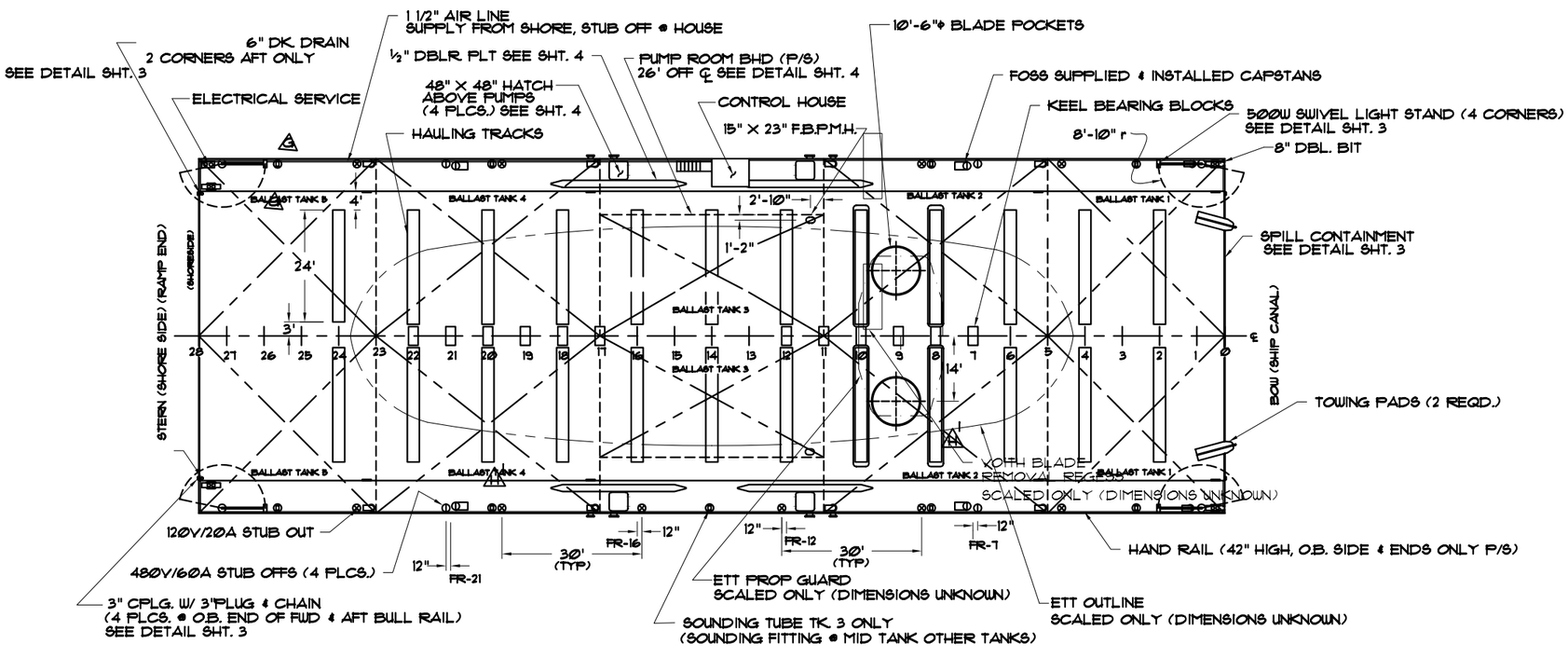
Figure 3. Process Flow Diagram for Dry Docks DD-1 and DD-2



OUTBOARD PROFILE



TRANSVERSE SECTION
LOOKING FORWARD



PLAN VIEW

NOTES:

1) BLADE POCKETS ARE 10'-6"ϕ, CENTERED ON FR-9 & 14'-0" OFF C.L.
2) ○ ZIDELL FABRICATED/INSTALLED 500W SWIVEL LIGHTS
3) ⊕ ZIDELL INSTALED 120VOLT/20AMP WEATHER PROOF "STUB OUTS"
4) ◫ ZIDELL SUPPLIED INSTALLED 480 VOLT/60 AMP CONDUIT RUNS & "STUB OUTS" FOR 4 FOSS SUPPLIED CAPSTANS.
5) ◫□ FOSS SUPPLIED CAPSTANS

REV.:	ITEM:	DATE:	DESCRIPTION:
A	1)	4-22-97	ADDED DETAILS PER ENGINEERING & CUSTOMER REQUEST
B	1)	4-28-97	ADDED DETAILS PER CUSTOMER
C	1)	4-30-97	ADDED VENTS, SOUNDING TUBES
D	1)	5-5-97	ADDED AIR LINE, KEEL BLOCKING, BITTS
	2)		CHANGED DRAINS TO TWO AFT ONLY
	3)		CHANGED3" CPLG. TO 4 PLACES
	4)	5-19-97	CHANGED LOCATION OF HATCHES
	5)		CHANGED VENT MAKEUP
	6)		CHANGED HIEGHT OF ACCESS M.H.
E	1)	8-5-97	REMOVED POCKET DRAIN FROM O.B. LOCATION
F	1)	8-18-97	ADDED BLIND FLG. TO SUCTION & DISCHARGE PIPING.
G	1)	8-26-97	CHANGED HAULING TRACK LENGTH FROM 24'-6" TO 24'-0" MOVE I.B. SIDE TO 36" OFF C.L.
H	1)	8-28-97	CHANGE LOCATION OF 60A STUB-OFFS PER OWNER REQUEST.
	2)	9-19-97	ADDED 90° ELBOW TO VENTS PER OWNER REQUEST

ZIDELL MARINE CORPORATION
3121 S.W. MOODY PORTLAND, OREGON

Quality Barges
World – Wide

TITLE: 220' X 76' X 31' DRYDOCK GENERAL ARRANGEMENT

DRWG. #: 5005	Scale: 1/16" = 12"	REV H
Project No: 659	Date: 3-18-97	
Drawn By: W.L.	CHK BY:	SHEET 1

Instructions, Parts

XTR™ 5 and XTR™ 7 Airless Spray Gun

312145K

EN

For use with protective coating materials.

XTR 5

5000 psi (35 MPa, 345 bar) Maximum Working Pressure

XTR 7

7250 psi (50 MPa, 500 bar) Maximum Working Pressure

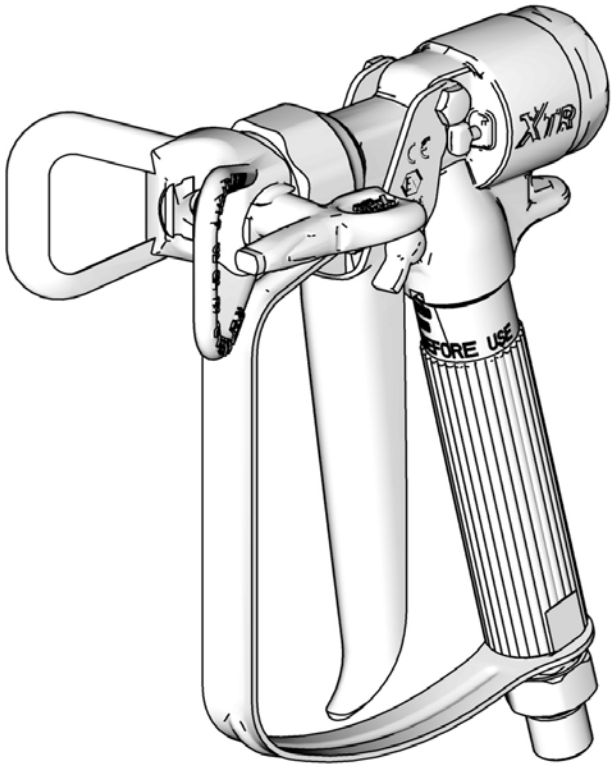
See page **Parts**, page 14, for model information.

Important Safety Instructions

Read all warnings and instructions in this manual and in your sprayer instruction manual before using the equipment. Save all instructions.

Important Medical Information

Read the medical alert card provided with the gun. It contains injection injury treatment information for a doctor. Keep it with you when operating the equipment.



ti5045b

CE Ex II 2 G Ex h T6 Gb

PROVEN QUALITY. LEADING TECHNOLOGY.

Contents

Warnings

The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbols refer to procedure-specific risks. When these symbols appear in the body of this manual or on warning labels, refer back to these Warnings. Product-specific hazard symbols and warnings not covered in this section may appear throughout the body of this manual where applicable.

⚠ WARNING

SKIN INJECTION HAZARD

High-pressure fluid from gun, hose leaks, or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. **Get immediate surgical treatment.**

- Do not spray without tip guard and trigger guard installed.
- Engage trigger lock when not spraying.
- Do not point gun at anyone or at any part of the body.
- Do not put your hand over the spray tip.
- Do not stop or deflect leaks with your hand, body, glove, or rag.
- Follow the **Pressure Relief Procedure** when you stop spraying and before cleaning, checking, or servicing equipment.
- Tighten all fluid connections before operating the equipment.
- Check hoses and couplings daily. Replace worn or damaged parts immediately.

FIRE AND EXPLOSION HAZARD

Flammable fumes, such as solvent and paint fumes, in **work area** can ignite or explode. Paint or solvent flowing through the equipment can cause static sparking. To help prevent fire and explosion:

- Use equipment only in well-ventilated area.
- Eliminate all ignition sources; such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static sparking).
- Ground all equipment in the work area. See **Grounding** instructions.
- Never spray or flush solvent at high pressure.
- Keep work area free of debris, including solvent, rags and gasoline.
- Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present.
- Use only grounded hoses.
- Hold gun firmly to side of grounded pail when triggering into pail. Do not use pail liners unless they are anti-static or conductive.
- **Stop operation immediately** if static sparking occurs or you feel a shock**.** Do not use equipment until you identify and correct the problem.
- Keep a working fire extinguisher in the work area.

WARNING

EQUIPMENT MISUSE HAZARD

Misuse can cause death or serious injury.

- Do not operate the unit when fatigued or under the influence of drugs or alcohol.
- Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See **Technical Specifications** in all equipment manuals.
- Use fluids and solvents that are compatible with equipment wetted parts. See **Technical Specifications** in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request Safety Data Sheets (SDSs) from distributor or retailer.
- Do not leave the work area while equipment is energized or under pressure.
- Turn off all equipment and follow the **Pressure Relief Procedure** when equipment is not in use.
- Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.
- Do not alter or modify equipment. Alterations or modifications may void agency approvals and create safety hazards.
- Make sure all equipment is rated and approved for the environment in which you are using it.
- Use equipment only for its intended purpose. Call your distributor for information.
- Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.
- Do not kink or over bend hoses or use hoses to pull equipment.
- Keep children and animals away from work area.
- Comply with all applicable safety regulations.

PRESSURIZED ALUMINUM PARTS HAZARD

Use of fluids that are incompatible with aluminum in pressurized equipment can cause serious chemical reaction and equipment rupture. Failure to follow this warning can result in death, serious injury, or property damage.

- Do not use 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents.
- Do not use chlorine bleach.
- Many other fluids may contain chemicals that can react with aluminum. Contact your material supplier for compatibility.

TOXIC FLUID OR FUMES HAZARD

Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled or swallowed.

- Read Safety Data Sheets (SDSs) for handling instructions and to know the specific hazards of the fluids you are using, including the effects of long-term exposure.
- When spraying, servicing equipment, or when in the work area, always keep work area well-ventilated and always wear appropriate personal protective equipment. See **PERSONAL PROTECTIVE EQUIPMENT** warnings in this manual.
- Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.

BURN HAZARD

Equipment surfaces and fluid that is heated can become very hot during operation. To avoid severe burns:

- Do not touch hot fluid or equipment.

⚠ WARNING

RECOIL HAZARD

Gun may recoil when triggered. If you are not standing securely, you could fall and be seriously injured.

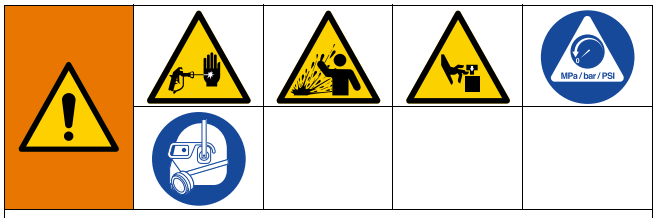
PERSONAL PROTECTIVE EQUIPMENT

Always wear appropriate personal protective equipment and cover all skin when spraying, servicing equipment, or when in the work area. Protective equipment helps prevent serious injury, including long-term exposure; inhalation of toxic fumes, mists or vapors; allergic reaction; burns; eye injury and hearing loss. This protective equipment includes but is not limited to:

- A properly fitting respirator, which may include a supplied-air respirator, chemically impermeable gloves, protective clothing and foot coverings as recommended by the fluid manufacturer and local regulatory authority.
- Protective eyewear and hearing protection.

Pressure Relief Procedure

Follow the Pressure Relief Procedure whenever you see this symbol.



This equipment stays pressurized until pressure is manually relieved. To help prevent serious injury from pressurized fluid, such as skin injection, splashing fluid and moving parts, follow the Pressure Relief Procedure when you stop spraying and before cleaning, checking, or servicing the equipment.

1. Engage the trigger lock.
2. Shut off the pump.
3. Disengage the trigger lock.
4. Hold a metal part of the gun firmly to a grounded metal pail. Trigger the gun to relieve pressure.
5. Engage the trigger lock.
6. Open the fluid drain valve over a waste container (see **System Requirements**, page 7). Leave drain valve open.

If pressure is not fully relieved:

- Spray tip is clogged. For RAC tip, see **Cleaning Tips/Clearing Clogs**, page 9. For flat tip, slowly loosen tip guard retaining nut to relieve pressure. Remove and clean the tip.
- Hose is clogged. Slowly loosen hose end coupling to relieve pressure. Clean the hose obstruction.

Grounding

The equipment must be grounded to reduce the risk of static sparking. Static sparking can cause fumes to ignite or explode. Grounding provides an escape wire for the electric current.

Check your local electrical code and pump or sprayer manual for detailed grounding instructions.

Spray gun: ground through connection to a properly grounded fluid hose and pump.

Fluid hose: use only electrically conductive hoses with a maximum of 500 ft. (150 m) combined hose length to ensure grounding continuity. Check electrical resistance of hoses. If total resistance to ground exceeds 29 megohms, replace hose immediately.

Fluid supply container: follow local code.

Object being sprayed: follow local code.

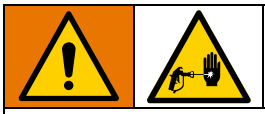
Solvent pails used when flushing: follow local code. Use only conductive metal pails, placed on a grounded surface. Do not place the pail on a nonconductive surface, such as paper or cardboard, which interrupts grounding continuity.

To maintain grounding continuity when flushing or relieving pressure: hold metal part of the spray gun/dispense valve firmly to the side of a grounded metal pail, then trigger the gun/valve.

System Requirements

- Install a bleed-type master air valve on a pneumatic pump air supply line to relieve air trapped between this valve and pump after air regulator is shut off. Trapped air can cause the pump to cycle unexpectedly.
- Install a fluid drain valve between the pump and gun to relieve pressure in displacement pump, hose, and gun. Triggering to relieve pressure may not be sufficient. See the **Pressure Relief Procedure**, page 6.

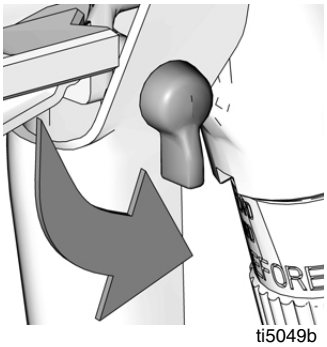
Gun Trigger Lock



To prevent injury when the gun is not in use, always engage the gun's trigger lock if unit is being shut down or left unattended. A wallet-sized warning card with important injection treatment information is included with the gun. Additional cards are available at no charge. Provide a card to all operators.

The trigger lock must move freely, and easily snap into the locked position. If the trigger lock is damaged or movement is restricted, replace with new trigger kit (16) immediately.

Trigger Locked
(no spray)



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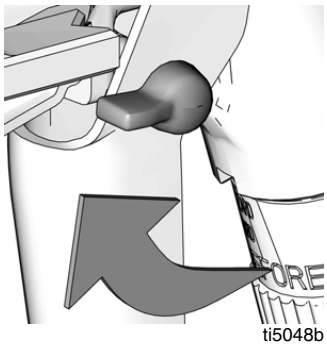
Trigger Unlocked
(spray)



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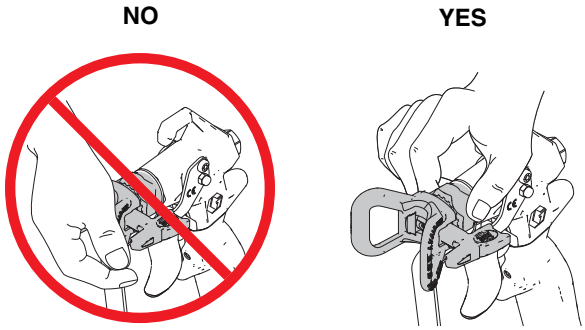
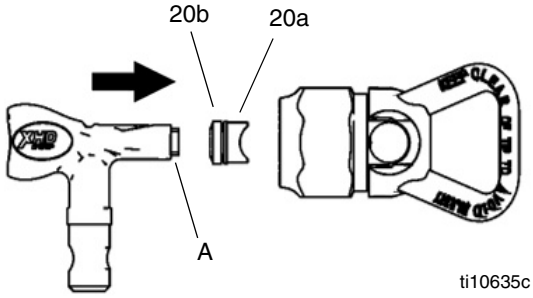
Spray Tip Installation

To avoid serious injury from skin injection, do not put your hand in front of the spray tip when installing or removing the spray tip and tip guard.

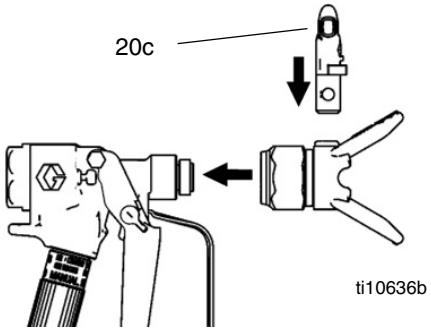


RAC Tip

1. Follow the **Pressure Relief Procedure**, page 6. Engage the trigger lock.
2. Snap gasket (20b) on fluid seal (20a). Use tool (A) to insert gasket and seal into housing, seal first. Tip the tool to remove it when seal is in place.

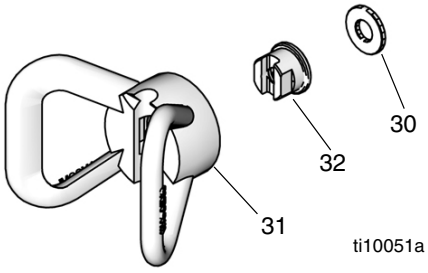


3. Install tip cylinder (20c) as shown. Turn 90° counterclockwise to spray position, so the arrow faces forward. Install assembled RAC onto spray gun.

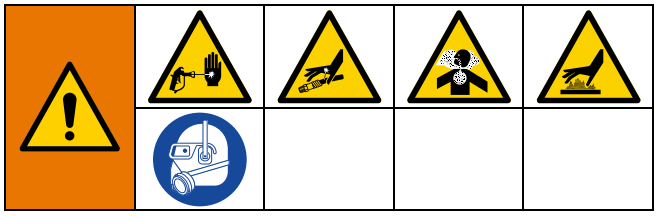


Flat Tip

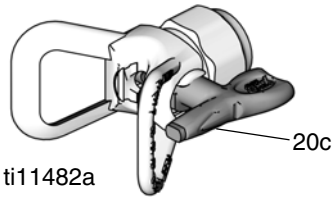
1. Follow the **Pressure Relief Procedure**, page 6. Engage the trigger lock.
2. Insert tip (32) and gasket (30) into back of guard (31).
3. Install the guard over the end of the gun.



Operation



1. Connect a grounded fluid hose.
2. Without spray tip attached, flush the pump. Use the lowest pressure possible.
3. Prime. Refer to the sprayer manual.
4. Follow the **Pressure Relief Procedure**, page 6.
5. Install the spray tip and tip guard.
6. RAC tips only: In spray position, arrow on tip cylinder (20c) faces forward.



7. Hold the gun perpendicular and approximately 12 inches (304 mm) from the surface. Wear gloves if the fluid temperature exceeds 110°F (43°C).
8. Move the gun first, then pull the gun trigger to spray onto test paper.
   a. Adjust the fluid pressure until spray is completely atomized.
   b. If adjusting the pressure does not give a good spray pattern, follow **Pressure Relief Procedure**, page 6, then try another tip size.
9. Trigger the gun full-open or full-close.

Adjusting Spray Pattern

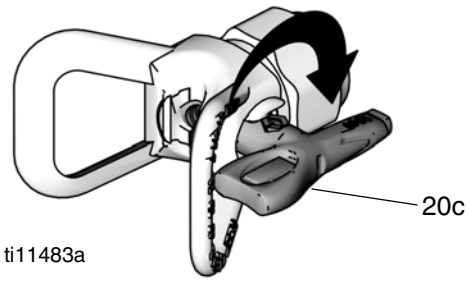
The spray tip orifice and spray angle determine pattern coverage and size. When you need more coverage, use a larger spray tip rather than increasing fluid pressure.

1. Follow the **Pressure Relief Procedure**, page 6. Engage the trigger lock.
2. Loosen tip guard retaining nut.
3. Align the guard horizontally to spray a horizontal pattern. Align guard vertically to spray a vertical pattern.
4. Tighten the nut.

Cleaning Tips/Clearing Clogs

NOTE: Clean the tip guard at the end of each workday.

1. Follow the **Pressure Relief Procedure**, page 6. Engage the trigger lock.
2. Clean the spray tip.
   a. RAC tips: Rotate tip 180° so arrow on tip cylinder (20c) faces backward. Disengage the trigger lock. Trigger the gun into a pail or onto the ground to remove clog. Engage the trigger lock. Rotate tip 180° back to spray position.



   b. Flat tips: Remove tip and clean with a solvent-soaked brush.
3. If the RAC tip is still clogged:
   a. Shut off sprayer and disconnect power source.
   b. Open the fluid drain valve (see **System Requirements**, page 7) to relieve pressure.
   c. Remove and clean the spray tip.

Maintenance

Failure to clean or replace the filter or damaged handle bore can result in serious injury.

Before performing any maintenance on the gun, read all warnings in this manual and relieve pressure.

Flushing

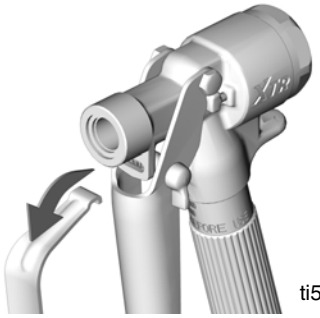
Flush the pump and gun before fluid can dry in it. If available, use flushing procedure provided in your pump manual instead of this procedure.

1. Follow the **Pressure Relief Procedure**, page 6. Engage the trigger lock.
2. Remove the spray tip and guard from gun. Clean with solvent.
3. Put the pump intake in a grounded pail of compatible solvent.
4. Start the pump at its lowest pressure.
5. Disengage trigger lock, then trigger the gun into the paint pail. When solvent appears, release trigger.
6. Trigger the gun into solvent pail. Circulate fluid until the system is thoroughly flushed.
7. Follow the **Pressure Relief Procedure**, page 6. Engage the trigger lock.

Cleaning and Replacing Filter

(Not applicable for XTR510, XTR706, and 17V677)

1. Follow the **Pressure Relief Procedure**, page 6. Engage the trigger lock.
2. Disconnect the trigger guard from the gun body by pushing up on the guard hook and pulling it out of the notch.



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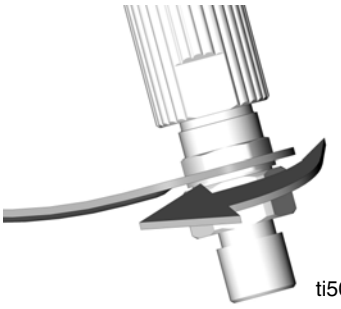
3. The trigger guard beneath the gun handle can then be used as a wrench to loosen the nut.



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4. When the alignment notches are no longer engaged, use your hand to twist the handle and remove it from the gun head.
5. Remove the filter.
6. Clean the filter using a soft brush.
7. Replace the filter.
8. Apply a light coating of grease to the threads and then attach.
9. Use the trigger guard to tighten the nut.
10. Reattach the trigger guard to the gun.

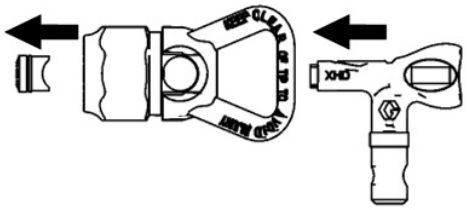
Cleanup

Flush the gun after each work shift and store in a dry location. Do not leave the gun or any parts in water or cleaning solvents.

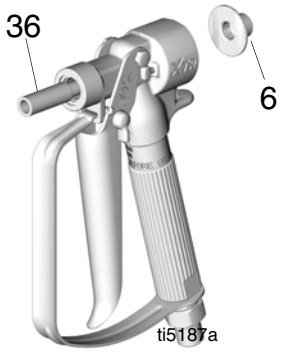
Repair

Disassembly

1. Follow the **Pressure Relief Procedure**, page 6. Engage the trigger lock.
2. Disconnect the fluid hose. Remove the RAC tip guard and tip (19 and 20a–20c) or flat tip guard and tip (30, 31, and 32).
3. RAC tip only: Use tool to push gasket and seal out the back of the housing.



4. Using a wrench, remove the cap (4) with spring (5) (releases spring tension on needle).
5. Remove the valve seat (10) and gasket (9).
6. While holding the needle (36), use tool to remove the needle retainer (6).



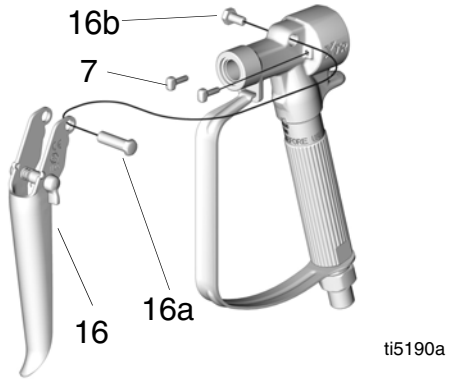
7. Pull the needle (8) out.
8. Using a socket wrench, remove the seal retainer (2) from the back of the gun. Use a pick to remove the gasket (3).
9. Clean and replace parts as needed.

Trigger Removal

NOTE: To avoid losing parts, be ready for two actuator pins (7) to fall out of the gun body when the trigger (16) is removed.

XTR 7 Guns

1. Using a wrench, remove screw (16b) from the pivot pin (16a).
2. Slide the pivot pin (16a) out of the gun body, and remove the trigger (16).
3. Before reinstalling the trigger, grease the actuator pins (7) and the pivot pin (16a).



XTR 5 Guns

1. Using a socket wrench, remove screw (16c) from each side of the gun body and remove the trigger.
2. Before reinstalling the trigger, grease the actuator pins (7).

Assembly

1. Press a new gasket (3*) into the gun body. Lightly grease the seal retainer (2*) and install. Torque to 48–72 in-lb (5–8 N•m).
2. Lightly grease and replace the needle (8*). Press the needle through the seal retainer.

NOTICE

Use only tool (36) and fingers to tighten the needle. Do not overtighten or breakage may occur.

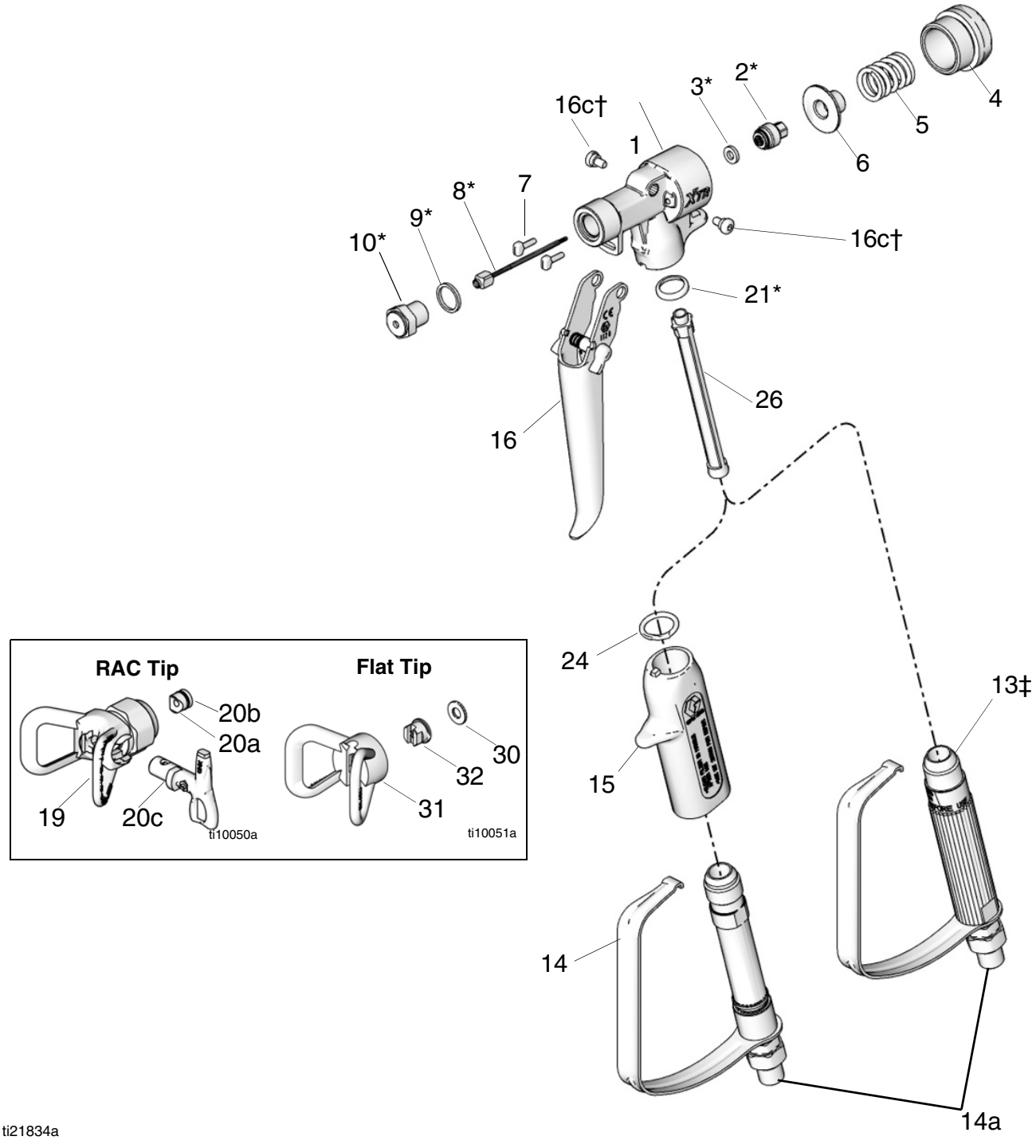
3. Apply light-strength Loctite™ to needle threads. Holding the needle with too (36*), install needle retainer (6). Tighten until it bottoms out. Do not overtighten.
4. Lightly grease valve seat (10*) threads. Squeeze the trigger to retract the needle and install gasket (9*) and valve seat (10*). Torque valve seat to 26–32 ft-lb (34–43 N•m).
5. Grease and install the spring (5) and cap (4). Tighten the cap to 10–13 ft-lb (8–10 N•m).

Test Gun Before Using

1. Engage the trigger lock. Connect the fluid hose to the gun.
2. Start and prime the pump.
3. Disengage the trigger lock and trigger the gun into a metal waste container.
4. Release the trigger. The gun should immediately stop spraying and there should be no leaks. If there is a problem, follow the **Pressure Relief Procedure**, page 6. Check through the **Assembly** procedure and correct any problem.
5. Install the tip and tip guard before regular use.

Parts

XTR5


16c†
3*
2*
4
5
6
1
8*
7
9*
10*
16c†
21*
26
16
24
13‡
15
14
14a
RAC Tip
Flat Tip
20b
20a
19
20c
ti10050a
30
32
31
ti10051a
ti21834a

Ref.	Part	Description	Quantity						
			XTR500	XTR501	XTR502	XTR503	XTR504	XTR505	XTR510
1	15J771	BODY, gun	1	1	1	1	1	1	1
2*	245881	SEAL, retainer assembly	1	1	1	1	1	1	1
3*	---	GASKET	1	1	1	1	1	1	1
4	15K000	CAP, end	1	1	1	1	1	1	1
5	117350	SPRING	1	1	1	1	1	1	1
6	15E088	RETAINER, needle	1	1	1	1	1	1	1
7	15E085	PIN, actuator	2	2	2	2	2	2	2
8*	248591	NEEDLE	1	1	1	1	1	1	1
9*	156766	GASKET	1	1	1	1	1	1	1
10*	245858	SEAT, valve	1	1	1	1	1	1	1
13‡	255275	HANDLE; includes trigger guard and swivel	1	1			1	1	1
14	248952	HANDLE KIT			1	1			
14a★	---	SWIVEL							
15	276997	HANDLE SLEEVE, insulated			1	1			
16†	287449	TRIGGER KIT, 4-finger, straight; includes 16c	1	1			1		1
	287451	TRIGGER KIT, 4-finger, curved; includes 16c			1				
	287450	TRIGGER KIT, 2-finger; includes 16c				1		1	
16c†	117602	SCREW, shoulder, #8-32	2	2	2	2	2	2	2
19	XHD001	GUARD, RAC tip	1		1	1	1	1	1
20	XHDxxx	SWITCH, RAC tip; 519 size included			1	1	1	1	
	XHDxxx	SWITCH, RAC tip; 519 size							1
20a✓	---	SEAL, fluid			1	1	1	1	1
20b✓	---	GASKET			1	1	1	1	1
20c	---	TIP, spray, XHD RAC			1	1	1	1	1
21*	179733	SEAL, sleeve	1	1	1	1	1	1	1
24	119740	O-RING			1	1			
26	287032	FILTER, 60 mesh included with gun	1	1	1	1	1	1	
	287034	FILTER, 60 mesh and 100 mesh combo	1	1	1	1	1	1	
29▲	222385	TAG, warning (not shown)	1	1	1	1	1	1	1
30	166969	GASKET		1					
31	220251	GUARD, flat tip		1					
32	163519	TIP, flat		1					
36*	194744	TOOL, repair, packing	1	1	1	1	1	1	1

--- *Not for sale.*

▲ *Replacement Danger and Warning labels, tags, and cards are available at no cost.*

* *Parts included in Repair Kit 248837, purchased separately.*

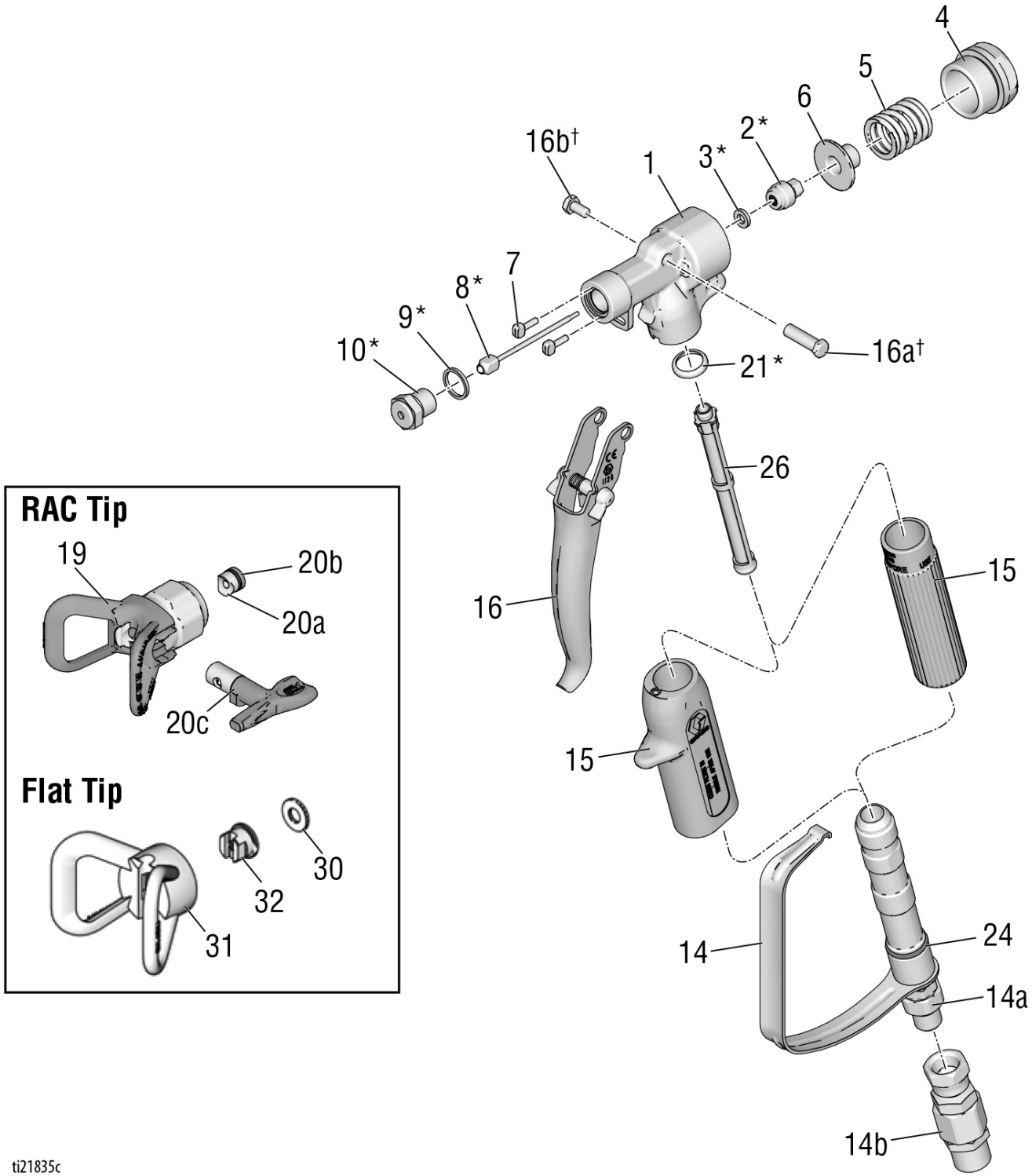
† *Trigger kit (16) includes mounting hardware for either XTR5 or XTR7 gun.*

‡ *Handle is not pressure rated for use with the XTR 7. For an XTR 7, order handle 248952 and sleeve 276997 or 15E083 depending on your model.*

✓ *Included in OneSeal™ Repair Kit XHD010 (5 each per package, purchase separately).*

★ *Do not remove swivel. If the swivel needs to be replaced, order replacement handle kit 248952.*

XTR7



ti21835c

Ref.	Part	Description	Quantity							
			XTR700	XTR701	XTR702	XTR703	XTR704	XTR705	XTR706	17V677
1	15E178	BODY, gun	1	1	1	1	1	1		
	17V381	BODY, gun							1	1
2*	245881	SEAL, retainer assembly	1	1	1	1	1	1	1	1
3*	---	GASKET	1	1	1	1	1	1	1	1
4	15A864	CAP, end	1	1	1	1	1	1	1	1
5	117350	SPRING	1	1	1	1	1	1	1	1
6	15E088	RETAINER, needle	1	1	1	1	1	1	1	1
7	15E085	PIN, actuator	2	2	2	2	2	2	2	2
8*	248591	NEEDLE	1	1	1	1	1	1	1	1
9*	156766	GASKET	1	1	1	1	1	1	1	1
10*	245858	SEAT, valve	1	1	1	1	1	1	1	1
14	248952	KIT, repair, handle	1	1	1	1	1	1		
	17V749	KIT, repair, handle							1	1
14a★	---	SWIVEL								
14b	17G980	SWIVEL							1	1
15	276997	HANDLE SLEEVE, insulated			1	1			1	1
	15E083	HANDLE SLEEVE, round	1	1			1	1		
16	287449	TRIGGER KIT, 4-finger, straight; includes 16a and 16b	1	1			1			
	287451	TRIGGER KIT, 4-finger, curved; includes 16a and 16b			1				1	1
	287450	TRIGGER KIT, 2-finger; includes 16a and 16b				1		1		
16a†	192272	PIN, pivot	1	1	1	1	1	1	1	1
16b†	203953	SCREW, cap, #10-24	1	1	1	1	1	1	1	1
19	XHD001	GUARD, RAC tip	1		1	1	1	1	1	1
20	XHDxxx	SWITCH, RAC tip; 519 size included			1	1	1	1		
		SWITCH, RAC tip: 523 size included								1
		SWITCH, RAC tip: 531 size included							1	1
20a✓	---	SEAL, fluid			1	1	1	1	1	1
20b✓	---	GASKET			1	1	1	1	1	1
20c	---	TIP, spray, XHD RAC			1	1	1	1	1	1
21*	179733	SEAL, sleeve	1	1	1	1	1	1	1	1
24**	119740	O-RING	1	1	1	1	1	1	1	1
26	287032	FILTER, 60 mesh included with gun	1	1	1	1	1	1		
	287034	FILTER, 60 mesh and 100 mesh combo	1	1	1	1	1	1		

Ref.	Part	Description	Quantity							
			XTR700	XTR701	XTR702	XTR703	XTR704	XTR705	XTR706	17V677
29▲	222385	TAG, warning (not shown)	1	1	1	1	1	1	1	1
30	166969	GASKET		1						
31	220251	GUARD, flat tip		1						
32	163519	TIP, flat		1						
36*	194744	TOOL, repair, packing	1	1	1	1	1	1	1	1

--- Not for sale.

▲ Replacement Danger and Warning labels, tags, and cards are available at no cost.

** Parts included in Repair Kit 248837, purchased separately.*

★ Do not remove swivel. If the swivel needs to be replaced, order replacement handle kit 248952.

† Trigger Kit (16) includes mounting hardware for either the XTR5 or XTR7 gun.

✓ Included in OneSeal™ Repair Kit XHD010 (5 each per package, purchase separately).

*** Included in Handle Repair Kits 248952 and 17V749.*

Technical Specifications

XTR5 and XTR7 Airless Spray Gun		
	US	**Metric**
Maximum working pressure (XTR5)	5000 psi	35 MPa, 345 bar
Maximum working pressure (XTR7)	7250 psi	50 MPa, 500 bar
Maximum fluid operating temperature	160°F	71°C
Noise (dBa)		
Maximum sound pressure	84.3 dBa at 6000 psi (41 MPa, 414 bar)	
Sound power	95.7 dBa at 6000 psi (41 MPa, 414 bar)	
Sound pressure measured using the HD519 tip and water. *Sound power tested per ISO-9614-2.*		
Inlet/Outlet Sizes		
Fluid inlet size	1/4 npsm (m) or 3/8 NPT (XTR706)	
Fluid orifice size	0.090 in.	2.3 mm
Materials of Construction		
Wetted materials on all models	Aluminum, stainless steel, acetal, polyethylene, nylon, polypropylene, carbide, polyurethane, solvent-resistant o-rings	
Notes		
All trademarks or registered trademarks are the property of their respective owners.		

Graco Standard Warranty

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

GRACO MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY GRACO. These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

FOR GRACO CANADA CUSTOMERS
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Graco Information

For the latest information about Graco products, visit www.graco.com.
For patent information, see www.graco.com/patents.
TO PLACE AN ORDER, contact your Graco distributor or call to identify the nearest distributor.
Phone: 612-623-6921 or Toll Free: 1-800-328-0211 Fax: 612-378-3505

All written and visual data contained in this document reflects the latest product information available at the time of publication.
Graco reserves the right to make changes at any time without notice.

Original instructions. This manual contains English. MM 312145
Graco Headquarters: Minneapolis
International Offices: Belgium, China, Japan, Korea

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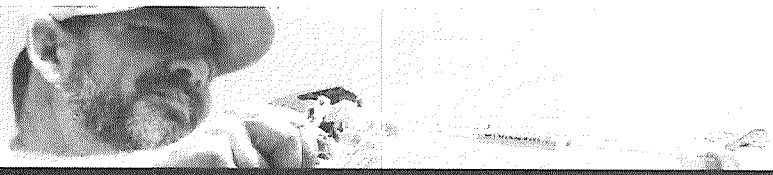
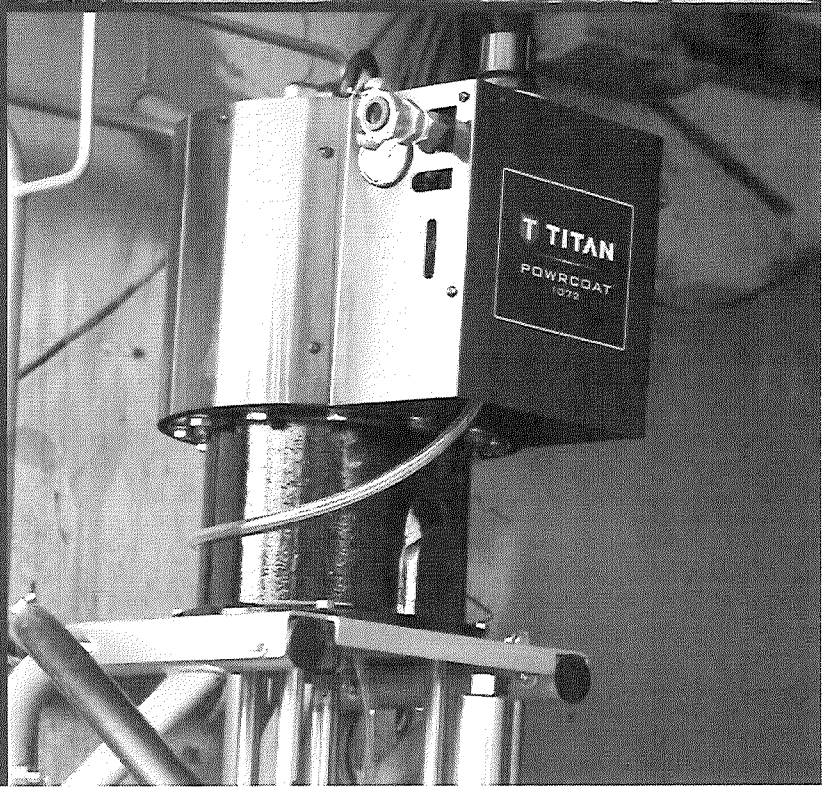
www.graco.com
Revision K, September 2018



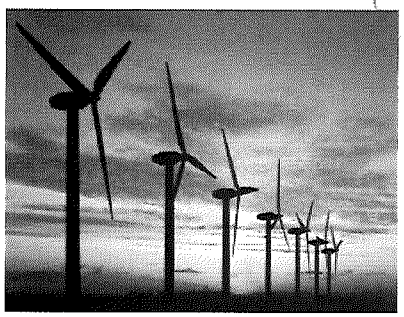
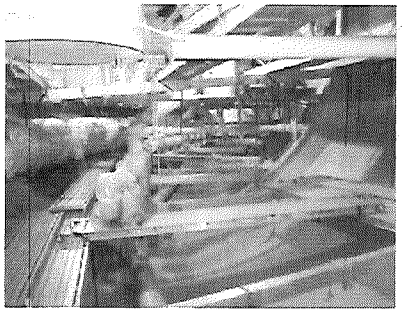
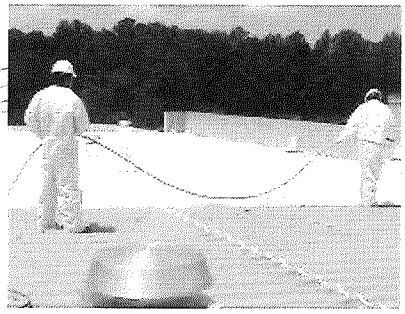
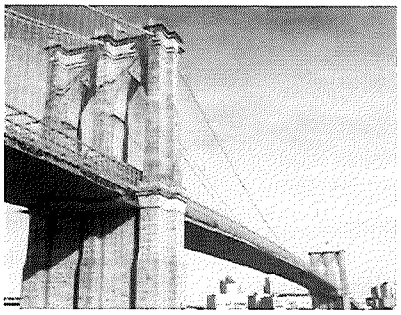
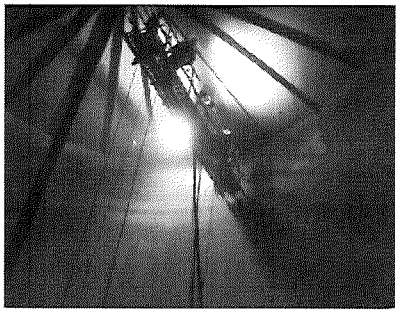
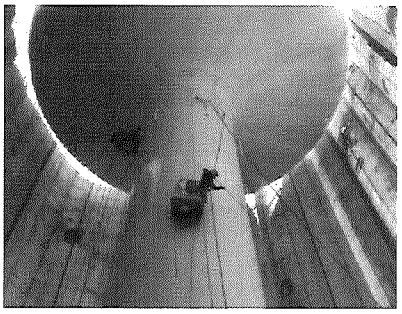
TITAN®

HIGH PERFORMANCE
PROTECTIVE COATINGS



POWRCOAT™ SERIES

The durability, reliability, and ease of operation that you need are built in to each unit. Severe Service™ means twice the life with half the maintenance. PowrCoat Sprayers have been used throughout the world, providing their owners with dependable, efficient operation.

Severe Service Fluid Section
Features self-adjusting packings.

Severe Service Piston Rod and Cylinder
Titan's proprietary hard-chrome plating is the hardest and slickest wear surface in the industry.

High Capacity Outlet Filter
Featuring 3 outlet ports, manual pressure relief/recirculation valve and easy-on/off filter element access.

Air Filter, Moisture Separator, Regulator and Lubricator
Included on all PowrCoat models.

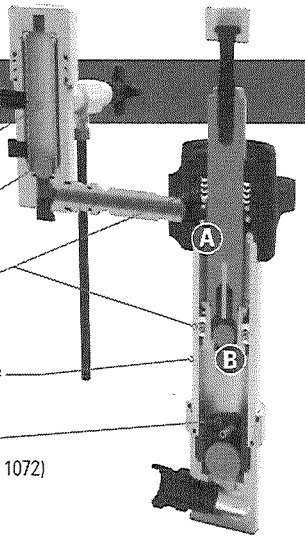
Heavy-Duty Frame
Features large 16" pneumatic tires, convenient lift handles, heavy-duty crane hook and high capacity hose rack that holds up to 200 feet of 1/2" hose.

Severe Service™ Pump is Standard

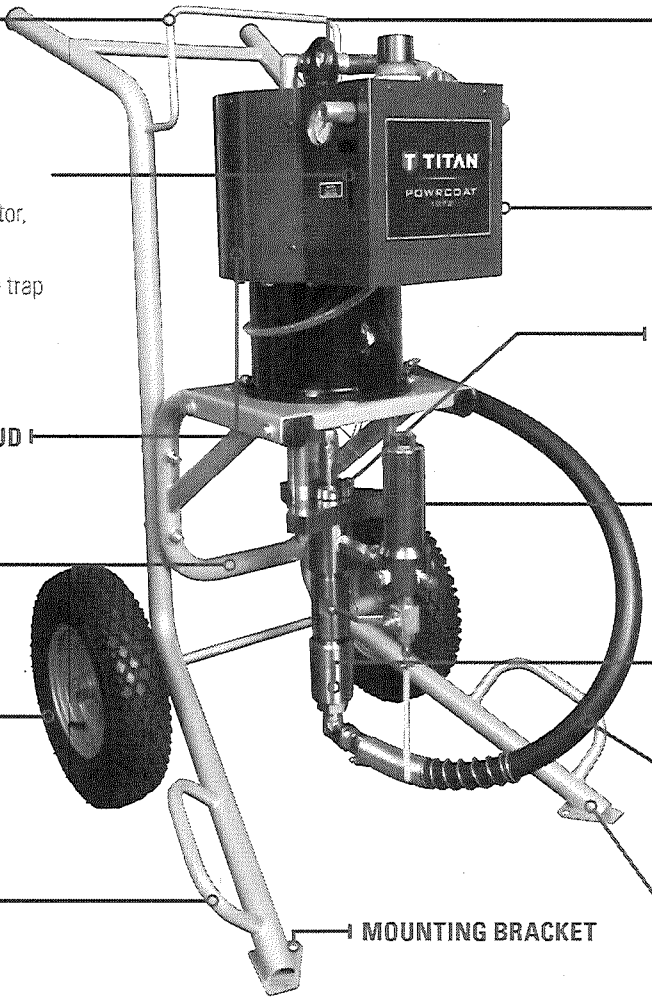
Ⓐ PowrCoat Piston
Engineered to provide unmatched chemical and solvent resistance while creating an ultra-smooth surface, providing less friction and wear.

Ⓑ Tungsten Carbide Valve Seats
Provides maximum life and smooth, efficient operation with hardened stainless steel check balls.

*Alternate packing materials are available for specialized applications.



A SPRAYER FOR EVERY APPLICATION



HEAVY-DUTY HOSE WRAP & GUN HOLDER
Holds up to 200' of 1/2" hose.

AIRCARE™ SYSTEM
- Complete FRL (Filter, Regulator, Lubricator) comes standard
- Automatic draining moisture trap
- Easy access air filter and lubrication reservoir

HEAVY-DUTY METAL SHROUD
Protects FRL and air motor.

INTEGRATED WALL MOUNT BRACKET

LARGE, 16" PNEUMATIC TIRES

LIFT HANDLES

HEAVY-DUTY CRANE HOOK

HIGH-EFFICIENCY ANTI-ICING MOTOR

PISTON LUBE™ SYSTEM
Easy access and visual piston lubrication reservoir.

HIGH CAPACITY OUTLET FILTER
Reduces tip plugging.

SEVERE SERVICE™ PUMP

MATERIAL SUCTION FEED ASSEMBLY
5-gallon siphon tube, hose and suction filter screen.

MOUNTING BRACKET

HEAVY-DUTY CART

PowrCoat Technical Data

SPECIFICATIONS	630	730	745	940	960	975	1045	1064	1072
Air Motor Diameter (inches)	6	7	7	9	9	9	10	10	10
Ratio	30:1	30:1	45:1	40:1	60:1	75:1	45:1	64:1	72:1
Stroke Length (inches)	4.0	4.0	4.0	4.0	4.0	4.0	4.75	4.75	4.75
Max. Operating Pressure (PSI)	3480	3000	4500	4000	6000	7500	4500	6400	7200
Max. Air Input Pressure (PSI)	116	100	100	100	100	100	100	100	100
Volume Flow - 60 CPM	1 gal (3.6 l)/min	3 gal (10.7 l)/min	2 gal (7.3 l)/min	3 gal (10.7 l)/min	2 gal (7.3 l)/min	1.5 gal (5.7 l)/min	4 gal (15.2 l)/min	3 gal (11.3 l)/min	3 gal (10.0 l)/min
Approximate Air Requirement Per Gallon of Output @ 100 PSI (6.9 bar) Air Pressure	25.0 SCFM (0.71 m³/min)	28.0 SCFM (0.79 m³/min)	40.0 SCFM (0.79 m³/min)	36.4 SCFM (1.03 m³/min)	53.0 SCFM (1.50 m³/min)	67.9 SCFM (1.92 m³/min)	43.0 SCFM (1.22 m³/min)	57.7 SCFM (1.63 m³/min)	64.9 SCFM (1.84 m³/min)
Max. Recommended Air Volume Requirements (CFM)	40	112	148	145	148	142	172	174	175
Fluid Output Per Cycle (cc)	61	182	114	182	114	95	254	188	167
Cart Part Number	0533630C	0533730C	0533745C	0533940C	0533960C	0533975C	05331045C	05331064C	05331072C
Wall Mount Part Number	0533630W	0533730W	0533745W	0533940W	0533960W	0533975W	05331045W	05331064W	05331072W
55-Gallon Material Suction Feed Assembly Kit (Optional)	0533247 (¾")	103-808 (1")	103-808 (1")	103-808 (1")	103-808 (1")	103-808 (1")	0533259 (1")	0533259 (1")	0533259 (1")

Optional Liquids: Air Care 1qt (311-101), Piston Lube 1qt (700-926)

XTR™ Airless Spray Guns

Rugged Design to Handle the Toughest Protective Coatings

Built for Extreme Conditions

- Compact design allows for easy maneuverability
- XTR-5: maximum fluid pressure of 5000 (345 bar, 34.5 MPa)
- XTR-7: maximum fluid pressure of 7250 (500 bar, 50 MPa)
- Variety of handle and trigger options
- High quality materials and construction

PROVEN QUALITY. LEADING TECHNOLOGY.

Genuine Graco Fluid Hoses Make the Difference

Xtreme-Duty™ 4500 psi (310 bar) High Pressure Hose

Part #	Length	Hose Diameter	Female NPSM
H42503	3 ft (0.9 m)	1/4 in (6.4 mm)	1/4 in
H42506	6 ft (1.8 m)	1/4 in (6.4 mm)	1/4 in
H42510	10 ft (3.0 m)	1/4 in (6.4 mm)	1/4 in
H42525	25 ft (7.6 m)	1/4 in (6.4 mm)	1/4 in
H42550	50 ft (15.2 m)	1/4 in (6.4 mm)	1/4 in
H4251X	100 ft (30.5 m)	1/4 in (6.4 mm)	1/4 in
H43803	3 ft (0.9 m)	3/8 in (9.5 mm)	3/8 in
H43806	6 ft (1.8 m)	3/8 in (9.5 mm)	3/8 in
H43810	10 ft (3.0 m)	3/8 in (9.5 mm)	3/8 in
H43825	25 ft (7.6 m)	3/8 in (9.5 mm)	3/8 in
H43850	50 ft (15.2 m)	3/8 in (9.5 mm)	3/8 in
H4381X	100 ft (30.5 m)	3/8 in (9.5 mm)	3/8 in
H45010	10 ft (3.0 m)	1/2 in (12.7 mm)	1/2 in
H45025	25 ft (7.6 m)	1/2 in (12.7 mm)	1/2 in
H45050	50 ft (15.2 m)	1/2 in (12.7 mm)	1/2 in
H4501X	100 ft (30.5 m)	1/2 in (12.7 mm)	1/2 in

Xtreme-Duty 5600 psi (386 bar) High Pressure Hose

Part #	Length	Hose Diameter	Female NPSM
H52503	3 ft (0.9 m)	1/4 in (6.4 mm)	1/4 in
H52506	6 ft (1.8 m)	1/4 in (6.4 mm)	1/4 in
H52510	10 ft (3.0 m)	1/4 in (6.4 mm)	1/4 in
H52525	25 ft (7.6 m)	1/4 in (6.4 mm)	1/4 in
H52550	50 ft (15.2 m)	1/4 in (6.4 mm)	1/4 in
H5251X	100 ft (30.5 m)	1/4 in (6.4 mm)	1/4 in
H53803	3 ft (0.9 m)	3/8 in (9.5 mm)	3/8 in
H53806	6 ft (1.8 m)	3/8 in (9.5 mm)	3/8 in
H53810	10 ft (3.0 m)	3/8 in (9.5 mm)	3/8 in
H53825	25 ft (7.6 m)	3/8 in (9.5 mm)	3/8 in
H53850	50 ft (15.2 m)	3/8 in (9.5 mm)	3/8 in
H5381X	100 ft (30.5 m)	3/8 in (9.5 mm)	3/8 in
H55010	10 ft (3.0 m)	1/2 in (12.7 mm)	1/2 in
H55025	25 ft (7.6 m)	1/2 in (12.7 mm)	1/2 in
H55050	50 ft (15.2 m)	1/2 in (12.7 mm)	1/2 in
H5501X	100 ft (30.5 m)	1/2 in (12.7 mm)	1/2 in

Xtreme-Duty 7250 psi (500 bar) High Pressure Hose

Part #	Length	Hose Diameter	Female NPSM
H72503	3 ft (0.9 m)	1/4 in (6.4 mm)	1/4 in
H72506	6 ft (1.8 m)	1/4 in (6.4 mm)	1/4 in
H72510	10 ft (3.0 m)	1/4 in (6.4 mm)	1/4 in
H72525	25 ft (7.6 m)	1/4 in (6.4 mm)	1/4 in
H72550	50 ft (15.2 m)	1/4 in (6.4 mm)	1/4 in
H7251X	100 ft (30.5 m)	1/4 in (6.4 mm)	1/4 in
H73803	3 ft (0.9 m)	3/8 in (9.5 mm)	3/8 in
H73806	6 ft (1.8 m)	3/8 in (9.5 mm)	3/8 in
H73810	10 ft (3.0 m)	3/8 in (9.5 mm)	3/8 in
H73825	25 ft (7.6 m)	3/8 in (9.5 mm)	3/8 in
H73850	50 ft (15.2 m)	3/8 in (9.5 mm)	3/8 in
H7381X	100 ft (30.5 m)	3/8 in (9.5 mm)	3/8 in
H75010	10 ft (3.0 m)	1/2 in (12.7 mm)	1/2 in
H75025	25 ft (7.6 m)	1/2 in (12.7 mm)	1/2 in
H75050	50 ft (15.2 m)	1/2 in (12.7 mm)	1/2 in
H7501X	100 ft (30.5 m)	1/2 in (12.7 mm)	1/2 in

Lightweight and Ergonomic

Technical Specifications

Maximum fluid working pressure . . . . . **XTR-5:** 5000 psi (345 bar, 34.5 MPa)
XTR-7: 7250 psi (500 bar, 50 MPa)
Fluid orifice . . . . . 0.090 in (2.3 mm)
Fluid inlet . . . . . 1/4 npsm
Maximum fluid temperature . . . . . 160º F (71º C)
Sound pressure . . . . . 84.3dB(A)*
Sound power . . . . . 95.7dB(A)*
Dimensions . . . . . **XTR-5:** Weight 14.5 oz (411 g), Length 4.35 in (111 mm), Height 7.1 in (180 mm)
XTR-7: Weight 24 oz (688 g), Length 4.35 in (111 mm), Height 7.1 in (180 mm)
Wetted parts . . . . . Aluminum, stainless steel, polyethylene, polyurethane, polypropylene, nylon, acetal, carbide, solvent-resistant O-rings
Instruction Manual 312145

* Results are maximum readings taken at 6000 psi (414 bar, 41 MPa), with GHD519 tip, using water. Sound power level was tested to ISO 9614-2.

Ordering Information

XTR-5 Airless Spray Gun
Maximum working pressure: 5000 psi (345 bar, 34.5 MPa)
XTR500 1" round handle, four-finger trigger, no tip
XTR501 1" round handle, four-finger trigger, flat tip*
XTR502 Oval insulated handle, four-finger trigger, XHD RAC tip*
XTR503 Oval insulated handle, two-finger trigger, XHD RAC tip*
XTR504 1" round handle, four-finger trigger, XHD RAC tip*
XTR505 1" round handle, two-finger trigger, XHD RAC tip*

XTR-7 Airless Spray Gun
Maximum working pressure: 7250 psi (500 bar, 50.0 MPa)
XTR700 Round handle, four-finger trigger, no tip
XTR701 Round handle, four-finger trigger, flat tip*
XTR702 Oval insulated handle, four-finger trigger, XHD RAC tip*
XTR703 Oval insulated handle, two-finger trigger, XHD RAC tip*
XTR704 Round handle, four-finger trigger, XHD RAC tip*
XTR705 Round handle, two-finger trigger, XHD RAC tip*
*Includes 519 tip

Accessories
287450 2-finger trigger kit
287449 4-finger round trigger kit
287451 4-finger oval insulation trigger kit
246294 10 in (254 mm) gun extension, 7250 psi (500 bar, 50 MPa)
246295 15 in (380 mm) gun extension, 7250 psi (500 bar, 50 MPa)
246296 18 in (457 mm) gun extension, 7250 psi (500 bar, 50 MPa)
246297 180º spray nozzle, 7/8-14 UNC-2B, 7250 psi (500 bar, 50 MPa)
248837 Gun repair kit, includes gasket, needle and seat
XHD001 XHD RAC Guard
287032 Filter, 60 mesh, included in every gun
287033 Filter, 100 mesh
287034 Filter, 60 and 100 mesh combination

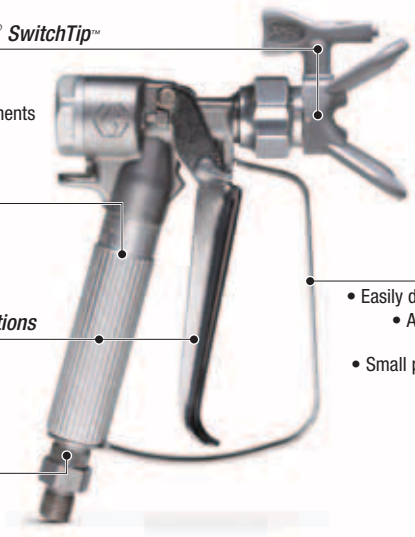
Quality Features for Ultimate Coatings Results

Needle Assembly and XHD™ RAC® SwitchTip™
- Exceptional life, pattern and finish
- Great for high solids coatings
- Factory set needle needs no adjustments

Easy Out™ Gun Filter
- Reduces tip plugs
- Eliminates collapsed filters
- Provides more filtration area

Variety of Handle and Trigger Options
- 2-and 4-finger trigger options
- Oval-insulated or round handle
- Lightweight trigger pull

EasyGlide™ Swivel
- Allows easier gun movement under high pressure

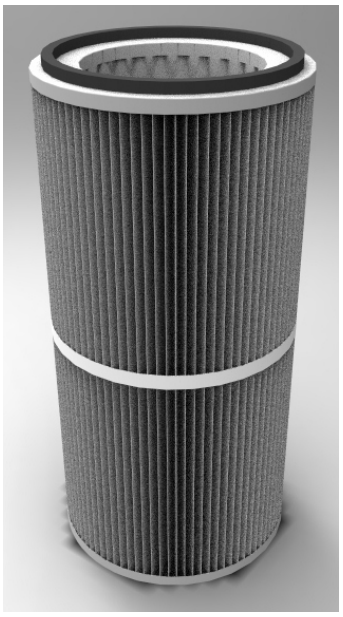


Trigger Guard
- Easily detaches for access to filter
- Acts as a wrench to remove filter from gun handle
- Small profile sprays in tight areas

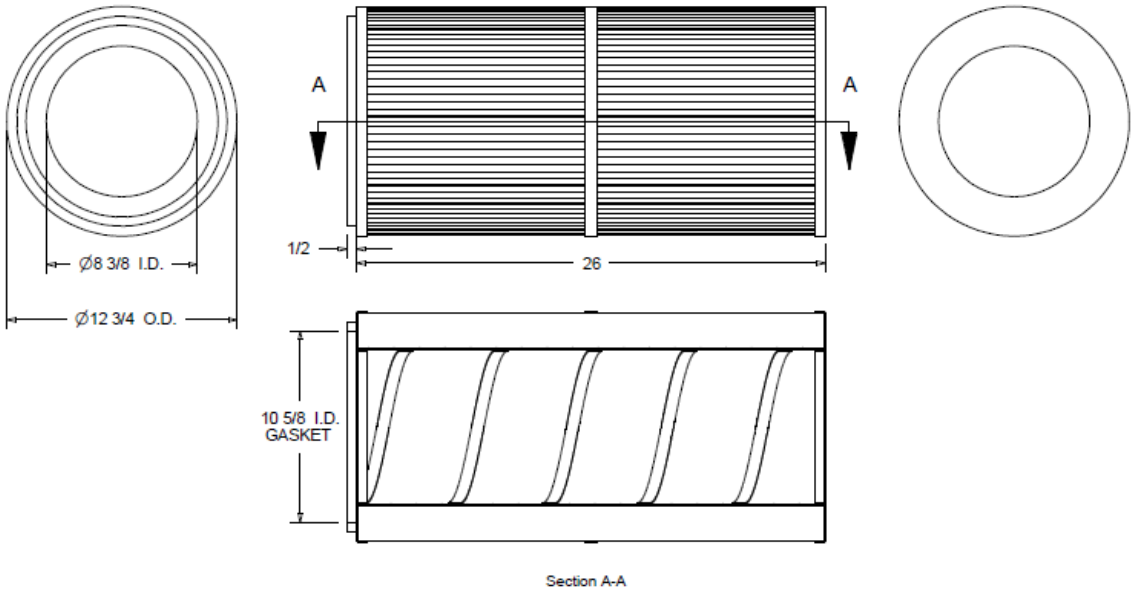
Call today for product information or to request a demonstration
1-877-844-7226 or visit us at www.graco.com

APEL international inc.

Technical Data Sheet



Part Number		C808C1
Dimensions		12 ¾" OD x 8 ⅜" ID x 26" L
MERV Rating		16
Media		Spunbond Polyester w/ PTFE
Frazier Permeability		6-8 CFM/ft^2 @ ½" w.c.
Fractional Efficiency		99.99 on .5 micron particles*
Pleats		70
Surface Area		94.3 Square Feet
End Caps		E.G. Steel
Inner Support		Helical Galv. Expanded Metal
Outer Support		1 Band (Woven Polyester)
Gasket		½" x ½" Polyisoprene (Qty 1)
Temperature Rating		240ºF



**Fractional efficiency is measured after 350 hours of operation. Actual efficiency of the filter may vary based on the application. Efficiency will also be affected by dust concentration, size of the particle, the airflow and the cleaning methods.*

Surface Coating Example Emissions Estimate - Everett Ship Repair

Material	Color	Type	Quantity	VOCs (Total)	Xylenes as	Ethyl Benzene	n-Butyl Alcohol	Toluene	MIBK	Cumene	1,2-Ethanediamine	Propylene glycol monomethyl ether	Phenol	Methanol	n-Butyl Acetate	1,2,4-Trimethyl Benzene	1,3,5-Trimethyl Benzene	Isopropyl Alcohol	Ethylene glycol monobutyl ether	Solids (assumes all non VOC solid)	PM
					106423 HAP	100414 HAP	71363	108883 HAP	108101 HAP	98828 HAP	107153	107982	108952 HAP	67561 HAP	123864	95636	108678	67630	111762		
			gallons	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs		lbs
PRIMARY VOC EMISSIONS																					
International																					
INTERLAC 665	GREEN	Finish Coat	2000	7020.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	58.74%	8.22
INTERLAC 665	BLACK	Finish Coat	2000	7004.48	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	57.60%	8.06
INTERLAC 665	LIGHT BASE	Finish Coat	2000	7020.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63.72%	8.92
INTERFINE 979	ALL COLORS	Finish Coat	2000	3628.76	0.00	0.00	0.00	4.00	0.00	0.00	0.00	0.00	0.00	2296.00	400.00	0.00	0.00	920.00	0.00	83.40%	11.68
INTERTHANE 990HS	LIGHT BASE	Finish Coat	500	1361.70	10.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.00	10.00	5.00	0.00	0.00	79.60%	2.79
INTERTHANE 990HS	ULTRA DEEP BASE	Finish Coat	500	1365.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	540.00	10.00	5.00	0.00	0.00	76.96%	2.69
INTERTHANE 990HS	WHITE	Finish Coat	500	1361.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	430.00	60.00	0.00	0.00	0.00	78.00%	2.73
INTERTUF 262	BLACK	AC	5000	11897.40	0.00	0.00	4400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2000.00	1100.00	0.00	0.00	79.92%	27.97
INTERTUF 262	GREY	AC	5000	11672.25	0.00	0.00	4700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2000.00	750.00	0.00	0.00	80.30%	28.11
INTERTUF 262	OFF WHITE	AC	5000	11900.35	0.00	0.00	4150.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2150.00	900.00	0.00	0.00	80.33%	28.12
INTERZINC 22	GREENISH GREY	AC	500	2042.88	330.00	80.00	70.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2660.00	0.00	80.80%	2.83
Jotun																					
Hardtop Pro	All Colors	Finish Coat	1000	2670.00	270.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1810.00	0.00	0.00	0.00	0.00	77.62%	5.43
Tankguard DW	All Colors	Tank Lining	500	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.82%	3.49
Tankguard 412	All Colors	Tank Lining	500	637.80	15.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	90.03%	3.15
Sherwin-Williams																					
Seaguard 5000 HS Epoxy	AC	AF	10000	20468.80	0.00	0.00	10467.00	0.00	0.00	465.20	0.00	0.00	0.00	0.00	3489.00	30000.00	0.00	0.00	0.00	82.40%	57.68
Seaguard P30 Red	AF	AF	500	1396.01	815.85	181.30	362.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	84.60%	2.96
Seaguard P30 Black	AF	AF	500	1375.22	803.70	178.60	446.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	84.60%	2.96
S-W Vinyl Copper	AF	AF	10000	27112.30	0.00	0.00	9895.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	55412.00	0.00	0.00	0.00	0.00	86.30%	60.41
Thinners/Solvents/Cleaners																					
International GTA-220/T-10	Thinner	Thinners	2000	14178.00	299.96	0.00	4259.40	0.00	0.00	139.98	0.00	0.00	0.00	0.00	0.00	3579.50	1379.81	0.00	0.00	0.00%	0.00
Interthane 950	Cleaner	Cleaner	500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00
Jotun Thinner #26	Thinner	Thinners	500	3669.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3669.60	0.00	0.00	0.00	0.00	0.00%	0.00
Sherwin Williams R1K4	Reducer for Vinyl Copper AF	Thinners	1000	6420.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00
Sherwin Williams R6K30	Reducer for Seaguard 5000 HS	Thinners	1000	6760.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00
Cleaner - Degreaser (1150)	Solvent	Thinners	400	240.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	819.82	92.68%	2.60
TOTAL (gallons)			*52,400*																		
TOTAL, Primary (lbs/yr)				*151212.47*	*2544.51*	*559.90*	*38750.50*	*4.00*	*0.00*	*605.18*	*0.00*	*0.00*	*0.00*	*2296.00*	*66250.60*	*39809.50*	*4139.81*	*3580.00*	*819.82*		
TOTAL, Primary (tpy)				*75.6*	*1.3*	*0.3*	*19.4*	*0.0*	*0.0*	*0.3*	*0.0*	*0.0*	*0.0*	*1.1*	*33.1*	*19.9*	*2.1*	*1.8*	*0.4*		
LIMITED USE																					
INTERSHIELD 300V	ALUMINIUM	AC	1200	3263.30	1752.00	180.00	828.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	72.00	0.00	0.00	0.00	73.70%	6.19
INTERGARD 7500	ALUMINUM	AC	1200	1878.49	1104.00	156.00	312.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	86.70%	7.28
INTERSHIELD 300V	BRONZE	AC	1200	3272.88	1791.42	132.25	841.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	120.23	0.00	0.00	0.00	74.00%	6.22
INTERSPEED 6400NA	AF	AF	2000	6418.68	4860.00	600.00	960.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	82.20%	11.51
TOTAL, Limited Use (gallons)			*5,600*																		
TOTAL, Limited Use (lbs/yr)				*14833.36*	*9507.42*	*1068.25*	*2941.60*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*192.23*	*0.00*	*0.00*	*0.00*		
TOTAL, Limited Use (tpy)				*7.4*	*4.8*	*0.5*	*1.5*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*0.0*		
TOTAL, (gallons)			**58,000**																		
TOTAL, All (lbs/yr)				**166,046**	**12,052**	**1,628**	**41,692**	**4**	**0**	**605**	**0**	**0**	**0**	**2,296**	**66,251**	**40,002**	**4,140**	**3,580**	**820**		302.0 lbs PM
TOTAL, All (tpy)				**83**	**6**	**1**	**21**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**33**	**20**	**2**	**2**	**0**		0.15 tons PM
MAX SINGLE HAP (tpy)			*6.0*																		
TOTAL HAPS (tpy)			*8.3*																		

pscleanair.org
Puget Sound Clean Air Agency

Puget Sound Clean Air Agency
1904 Third Avenue, Suite 105 | Seattle, WA 98101-3317 Phone 206-343-8800 | 206-343-7522 Fax

ENVIRONMENTAL CHECKLIST

Because of the State Environmental Policy Act, the action for which you are filing a Notice of Construction and Application for Approval to this Agency requires the completion of an environmental checklist.

BUT: If you can answer "yes" to either of the following statements with respect to the action being proposed, the attached checklist need not be completed:

1. I have obtained a State, City, or County Permit and filled out an environmental checklist. **Yes** (**No**)

   If yes, complete the following:

   State, City or County Department: _____

   Date the checklist was completed: _____

   Attach a copy of the checklist

2. An environmental checklist or assessment has previously been filled out for another agency. **Yes** (**No**)

   If yes, complete the following:

   Agency: _____

   Date the checklist was completed: _____

   Attach a copy of the checklist

If your answers are NO to both of the above statements, you must complete the attached environmental checklist.

Prepared by:

Signature _____

Name _____

Position _____

Agency/Organization _____

Date Submitted _____

ENVIRONMENTAL CHECKLIST

Date: October 22, 2019

Proponent: Puget Sound Clean Air Agency

Project, Brief Title: Everett Ship Repair

Purpose of Checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of Checklist for Nonproject Proposals:

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of Sections A, B, and C plus section D: Supplemental Sheet for Nonproject Actions.

Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Section B: Environmental Elements that do not contribute meaningfully to the analysis of the proposal.

ENVIRONMENTAL CHECKLIST

A. BACKGROUND

1. Name of proposed project, if applicable: Everett Ship Repair New Shipyard			
2. Name of Applicant Everett Ship Repair			
3. Applicant Address 2730 Federal Avenue	City Everett	State WA	Zip 98201
Applicant Phone 360.969.0216	Applicant Email bobp@everettshiprepair.com		
Contact Person Bob Post	Title Project Manager		
Company/Firm Everett Ship Repair			
4. Date Checklist Prepared October 22, 2019	**5.** Agency Requesting Checklist Puget Sound Clean Air Agency		
6. Proposed timing or schedule (including phasing, if applicable). Begin operations Fall 2019.			
7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? Yes (No.) If yes, explain.			
8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal. Accompanying Notice of Construction for Approval to Operate application.			
9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? Yes (No.) If yes, explain.			
10. List any government approvals or permits that will be needed for your proposal, if known. Puget Sound Clean Air Agency air permit, Department of Ecology NPDES permit and Port of Everett and Fire Marshal approvals.			

ENVIRONMENTAL CHECKLIST

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.

Shipbuilding and repair operations including abrasive blasting, spray, brush, and roller coating, welding, grinding, pressure washing, hydroblasting, heavy lift barge vessel hauling and launching (dry dock), and other support activities.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

Section 19 Township 29 Range 05 Quarter SW - ASSESSED P/P # 0019539 BLDG LOCATED ON LAND ACCT 29051900301600 (The site located within the Port of Everett.)

ENVIRONMENTAL CHECKLIST

B. ENVIRONMENTAL ELEMENTS

1. EARTH

a. General description of the site:

(flat) rolling hilly steep slopes mountains

other _____

b. What is the steepest slope on the site (approximate percent slope)? No significant slopes.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them, and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

Designated Urban Land in soil survey.

d. Are there surface indications or history of unstable soils in the immediate vicinity? (Yes) No. If yes, describe.

Washington State Department of Natural Resources classifies the Port property along this waterfront area as "HIGH" for liquefaction susceptibility.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill. None proposed.

f. Could erosion occur as a result of clearing, construction, or use? Yes (No) If yes, generally describe.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? No change – all impervious surfaces currently.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any: None.

ENVIRONMENTAL CHECKLIST

2. AIR

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke, greenhouse gases) during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities, if known.

Particulate matter from mobile equipment/vehicles, abrasive blasting, welding, grinding, and spray coating. Volatile Organic Compounds from use of paints, coatings, solvent, and thinners. Details provided in accompanying Notice of Construction for Approval to Operate application.

b. Are there any off-site sources of emissions or odor that may affect your proposal? Yes (No.) If yes, generally describe.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Full enclosures and dust collectors. Details provided in accompanying Notice of Construction for Approval to Operate application.

3. WATER

a. Surface

1. Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? (Yes) No. If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

Puget Sound via Possession Sound and East Waterway.

2. Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? (Yes) No. If yes, please describe and attach available plans.

Will adhere to NPDES Permit and Best Management Practices.

3. Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

None.

4. Will the proposal require surface water withdrawals or diversions? (Yes) No. Give general description, purpose, and approximate quantities if known.

Only by submerging of dry dock.

ENVIRONMENTAL CHECKLIST

5. Does the proposal lie within a 100-year floodplain? (Yes) No. If yes, note location on the site plan. Zone AE (EL 8 feet). Site plan provided in accompanying Notice of Construction for Approval to Operate application.

6. Does the proposal involve any discharges of waste materials to surface waters? Yes (No) If yes, describe the type of waste and anticipated volume of discharge.
(Dry dock ballast tank and deck waters not considered waste materials.)

b. Ground Water

1. Will groundwater be withdrawn from a well for drinking water or other purposes? Yes (No) If yes, give a general description of the well, proposed uses and approximate quantities withdrawn from the well.

Will water be discharged to groundwater? Yes (No) If yes, give general description, purpose, and approximate quantities, if known.

2. Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: domestic sewage; industrial, containing the following chemicals...; agricultural; etc.). Describe the general size of the systems, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve. None.

c. Water Runoff (including storm water)

1. Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? (Yes) No. If yes, describe.
Only dry dock ballast tank water and deck/floor contact water will enter surface waters (see NPDES permit.) All other water (including storm water) is collected and disposed via sanitary sewer system.

2. Could waste material enter ground or surface waters? Yes (No) If yes, generally describe.
(Impervious surfaces and water routed to sanitary sewer system.)

3. Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? Yes (No) If yes, describe.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, impacts, if any: Will adhere to NPDES Permit and Best Management Practices.

ENVIRONMENTAL CHECKLIST

4. PLANTS

a. Check the types of vegetation found on the site:

Deciduous Trees:	Alder	Maple	Aspen	other (specify):
Evergreen Trees:	Fir	Cedar	Pine	other (specify):
Shrubs				
Grass				
Pasture				
Crop or Grain				
Orchards, Vineyards, or other permanent crops				
Other types of Vegetation (specify):				
Wet Soil Plants:	Cattail	Buttercup		other (specify):
	Bulrush	Skunk Cabbage		
Water Plants:	Water Lily	Eelgrass	Milfoil	other (specify):

b. What kind and amount of vegetation will be removed or altered? None.

c. List threatened or endangered species known to be on or near the site. None.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any: None.

e. List all noxious weeds and invasive species known to be on or near the site. None.

5. ANIMALS

a. Indicate birds and other animals that have been observed on or near the site or are known to be on or near the site.

Birds:	Hawk	(Heron)	other (specify): Osprey, waterfowl
	(Eagle)	Songbirds	

Mammals:	Deer	Bear	other (specify):
	Elk	Beaver	
Fish:	Bass	(Salmon)	(Trout)
	Hearing	Shellfish	other (specify):

b. List any threatened or endangered species known to be on or near the site. None.

c. Is the site part of a migration route? Yes (No) If yes, explain.

d. Proposed measures to preserve or enhance wildlife, if any: None.

e. List any invasive animal species known to be on or near the site. None.

6. ENERGY AND NATURAL RESOURCES

a. What kinds of energy (electric, natural gas, oil, woodstove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Electricity for heating, office, and manufacturing.

b. Would your project affect the potential use of solar energy by adjacent properties? Yes (No) If yes, generally describe.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any: None.

ENVIRONMENTAL CHECKLIST

7. ENVIRONMENTAL HEALTH

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste that could occur as a result of this proposal? (Yes) No. If yes, describe: Building and equipment to meet local fire and building code requirements. Project involves use of coatings and solvents containing volatile organic compounds. The facility to be regulated by the Puget Sound Clean Air Agency and Department of Ecology for environmental compliance.

2. Describe any known or possible contamination at the site from present or past uses.
None currently known. Previous site contamination has been remediated.

3. Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity. None.

4. Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.
Diesel and other fuels, marine coatings and solvents/thinners.

5. Describe special emergency services that might be required.
Spill response and confined space rescue.

6. Proposed measures to reduce or control environmental health hazards, if any: Maintain full enclosures and follow Best Management Practices.

b. Noise

1. What types of noise exist in the area that may affect your project (for example, traffic, equipment, operation, other)? None.

2. What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example, traffic, construction, operation, other)? Indicate what hours noise would come from the site. Abrasive blasting, welding, grinding, and spray coating operations generate noise.

3. Proposed measures to reduce or control noise impacts, if any: None. According to Everett Municipal Code (EMC) 20.08.110(I), "noise emanating from marine-oriented construction sites except between the hours of ten p.m. and seven a.m. on weekdays and weekends if the receiving property is located in District I of the city" is exempt from the noise code.

ENVIRONMENTAL CHECKLIST

8. LAND AND SHORELINE USE

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? Yes (No.) If yes, describe.
The site is a former shipyard and it and the surrounding area is zoned M-2 Industrial. The site located within the Port of Everett.

b. Has the project site been used as working farmlands or working forest lands? Yes (No.) If yes, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use? None.

1. Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? Yes (No.) If yes, how?

c. Describe any structures on the site. See attached facility layout plan.

d. Will any structures be demolished? Yes (No.) If yes, what?

e. What is the current zoning classification of the site? M-2

f. What is the current comprehensive plan designation of the site? Industrial

g. If applicable, what is the current shoreline master program designation of the site?
Urban Deep Water Port

h. Has any part of the site been classified as a critical area by the city or community? (Yes) No. If yes, specify. Washington State Department of Natural Resources classifies the Port property along this waterfront area as "HIGH" for liquefaction susceptibility.

i. Approximately how many people would reside or work in the completed project? 75

j. Approximately how many people would the completed project displace? Zero.

k. Proposed measures to avoid or reduce displacement impacts, if any: None.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any: Discussions with City of Everett and Port of Everett.

m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of longterm commercial significance, if any: None.

9. HOUSING

a. Approximately how many units would be provided, if any? Indicate whether high- middle- or low-income housing. None.

b. Approximately how many units, if any, would be eliminated? Indicate whether high- middle- or lowincome housing. None.

c. Proposed measures to reduce or control housing impacts, if any: None.

10. AESTHETICS

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed? Dry dock enclosure could reach up to 60 feet.

b. What views in the immediate vicinity would be altered or obstructed? Unchanged.

c. Proposed measures to reduce or control aesthetic impacts, if any: None.

ENVIRONMENTAL CHECKLIST

11. LIGHT AND GLARE

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?
All lighting will be shielded to avoid shining light at neighboring residences, properties, or navigable waterways.

b. Could light or glare from the finished project be a safety hazard or interfere with views? No.

c. What existing off-site sources of light or glare may affect your proposal? None.

d. Proposed measures to reduce or control light and glare impacts, if any: None other than described above.

12. RECREATION

a. What designated and informal recreational opportunities are in the immediate vicinity? None.

b. Would the proposed project displace any existing recreational uses? Yes (No.) If yes, describe.

c. Proposed measures to reduce or control impacts on recreation, including recreational opportunities to be provided by the project or applicant, if any: None.

13. HISTORIC AND CULTURAL PRESERVATION

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers located on or near the site? Yes (No.) If yes, specifically describe.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources. None.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.
Department of Archaeology and Historic Preservation website.

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required. None.

14. TRANSPORTATION

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on-site plans, if any.
Existing infrastructure – facility located on Federal Avenue.

b. Is site or affected geographic area currently served by public transit? Yes (No.) If yes, generally describe. If not, what is the approximate distance to the nearest transit stop? The nearest transit route is along West Marine View Drive, located 675 feet to the East. The nearest transit station is located ~2000 feet to the Southeast at Pacific Ave & Nassau St.

c. How many parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate? Unchanged.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? Yes (No.) If yes, generally describe (indicate whether public or private).

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation?
(Yes) No. If yes, generally describe.
The facility is located along the East Waterway, off Possession Sound.

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates? Unchanged.

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? Yes (No.) If yes, generally describe.

h. Proposed measures to reduce or control transportation impacts, if any: None.

15. PUBLIC SERVICES

a. Would the project result in an increased need for public services (for example, fire protection, police protection, public transit, health care, schools, other)? Yes (No.) If yes, generally describe.

b. Proposed measures to reduce or control direct impacts on public services, if any: None.

16. UTILITIES

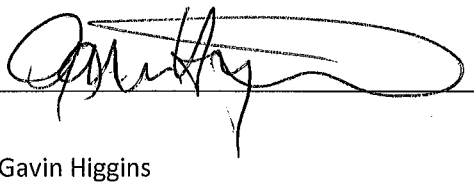
a. Indicate utilities currently available at the site:

(Electricity)	Natural gas	(Water)	(Refuse Service)
(Telephone)	(Sanitary Sewer)	Septic System	Other (specify):

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity that might be needed.

No new services needed. Electricity provided by Snohomish County PUD.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.	
Signature	
Name	Gavin Higgins
Position	Chief Executive Officer
Agency/Organization	Everett Ship Repair
Date Submitted	October 22, 2019

ENVIRONMENTAL CHECKLIST

D. SUPPLEMENTAL SHEET FOR NON-PROJECT ACTIONS

(Do not use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment in section B of this checklist.

When answering these questions, be aware of how the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substance; or production of noise?
Proposed measures to avoid or reduce such increases are:
2. How would the proposal be likely to affect plants, animals, fish, or marine life?
Proposed measures to protect or conserve plants, animals, fish, or marine life are:
3. How would the proposal be likely to deplete energy or natural resources?
Proposed measures to protect or conserve energy and natural resources are:
4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?
Proposed measures to protect such resources or to avoid or reduce impacts are:

ENVIRONMENTAL CHECKLIST

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?
Proposed measures to avoid or reduce shoreline and land use impacts are:
6. How would the proposal be likely to increase demands on transportation or public services and utilities?
Proposed measures to reduce or respond to such demand(s) are:
7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.