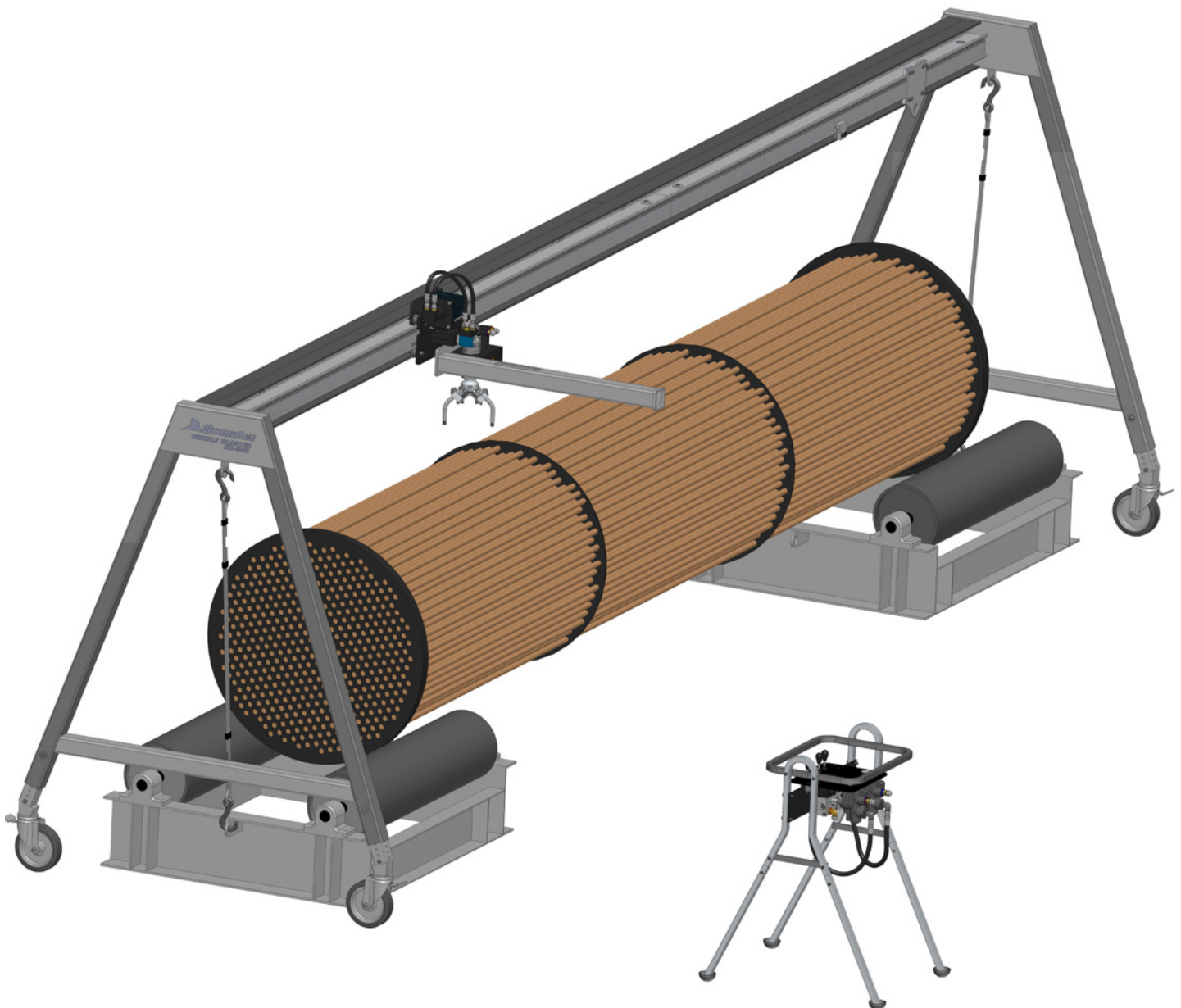




# HYDRAULIC BUNDLE BLASTER (BB-100-XXH) CONTROL BOX (CB-BB-HV) AND *OPTIONAL* HYDRAULIC ROLLERS (BB 101) USER MANUAL



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This manual must be used in accordance with all applicable national laws. The manual shall be regarded as a part of the machine and shall be kept for reference until the final dismantling of the machine, as defined by applicable national law(s).

Updated manuals can be downloaded at:  
<https://www.stoneagetools.com/manuals>

HYDRAULIC BUNDLE BLASTER (BB-100-XXH) SPECIFICATIONS		
	Imperial	Metric
Pressure Range	22k psi	1500 bar
Flow Range	Up to 20 gpm	Up to 76 lpm
Total Rail Length	24-36 ft	7315-11000 mm
Weight Complete	600-700 lbs	272-318 kg
Hydraulic Drive (SG-50)	n/a	
Rotation Speed	250-1000 rpm	
Maximum Water Temperature	160 °F	70 °C
OPTIONAL HYDRAULIC BUNDLE ROLLER SET (BB 101) SPECIFICATIONS		
Total weight	≤4400 lbs	≤1996 kgs
Working Load capacity	35T	
Bearing Load capacity per side	50T	
Working height	21 inches	533mm
Transportation Height	39.5 inches	1003mm
Total width	54 inches	1372mm
Roller length	36 inches	914mm
Total length	54 inches	1372mm
Min bundle	17 inches	432mm
Max bundle	102 inches	2591mm
Center to center sizes between the rollers	27 to 32 inches	686 to 813mm
Diameter of roller	10.75 inches	273mm
Wall thickness	.5 inch	13mm

## DESCRIPTION OF EQUIPMENT AND INTENDED USE

The BUD Tractor Drive is a heavy duty mechanized tool designed to support various models of rotating waterblasting heads for cleaning of conveyors, outsides of tube bundles, walls and other surfaces. It has a hydraulic motor powering linear motion along a slotted rail, and automatically switches direction when it contacts adjustable stops to control the amount of travel along the rail. Sections of rail may be spliced together for longer lengths; rail length is limited by deflection due to jet reaction force.

The BUD Tractor Drive allows mounting of the SG-50 Drive assembly. Depending on the reaction force generated by the waterjet power being used, the carriage may have from 4 to 7 rollers. Various mounting pedestals are required depending on the assembly.

To maximize the life of the tool and slotted rail, it is recommended that jet thrust not exceed 300 lbs. for typical installations. Please contact StoneAge for applications requiring jet thrust beyond 300 lbs.

## KEY FEATURES:

### HYDRAULIC BUNDLE BLASTER (BB-100-XXH)

- Adjustable feed and rotation rates. Both directions of the can be regulated for speed to deliver appropriate cleaning.
- Control Box - Control all movements of the complete package from up to 25 ft/8m away with added bundle roller rotation function.
- Hydraulically driven

### OPERATOR TRAINING

Managers, Supervisors, and Operators **MUST** be trained in Health and Safety Awareness of High-pressure Water Jetting and hold a copy of the Water Jetting Association (WJA) Code of Practice, or equivalent (see [www.waterjetting.org.uk](http://www.waterjetting.org.uk)).

Operators **MUST** be trained to identify and understand all applicable standards for the equipment supplied. Operators should be trained in manual handling techniques to prevent bodily injury.

Operators **MUST** read, understand, and follow the Operational and Training Requirements (Section 7.0) of WJTA-IMCA's Recommended Practices For The Use Of High-pressure Waterjetting Equipment, or equivalent.

Operators **MUST** read, understand and follow the Warnings, Safety Information, Assembly, Installation, Connection, Operation, Transport, Handling, Storage, and Maintenance Instructions detailed in this manual.

StoneAge has designed and manufactured this equipment considering all hazards associated with its operation. StoneAge assessed these risks and incorporated safety features in the design. StoneAge **WILL NOT** accept responsibility for the results of misuse.

### IT IS THE RESPONSIBILITY OF THE INSTALLER/OPERATOR

to conduct a job specific risk assessment prior to use. Job specific risk assessment **MUST** be repeated for each different set up, material, and location.

The risk assessment **MUST** conform to the Health and Safety at Work Act 1974 and other relevant Health and Safety legislation.

The risk assessment **MUST** consider potential material or substance hazards including:

- Aerosols
- Biological and microbiological (viral or bacterial) agents
- Combustible materials
- Dusts
- Explosion
- Fibers
- Flammable substances
- Fluids
- Fumes
- Gases
- Mists
- Oxidizing Agents

### PERSONAL PROTECTIVE EQUIPMENT REQUIREMENTS

Use of Personal Protective Equipment (PPE) is dependent on the working pressure of water and the cleaning application. Managers, Supervisors, and Operators **MUST** carry out a job specific risk assessment to define the exact requirements for PPE. See Protective Equipment for Personnel (Section 6) of WJTA-IMCA's Recommended Practices For The Use Of High-pressure Waterjetting Equipment for additional information.

Hygiene - Operators are advised to wash thoroughly after all waterjetting operations to remove any waterblast residue which may contain traces of harmful substances.

First aid provision - users **MUST** be provided with suitable first aid facilities at the operation site.

### PPE may include:

- **Eye protection:** Full face visor
- **Foot protection:** Kevlar® brand or steel toe capped, waterproof, non-slip safety boots
- **Hand protection:** Waterproof gloves
- **Ear protection:** Ear protection for a minimum of 85 dBA
- **Head protection:** Hard hat that accepts a full face visor and ear protection
- **Body protection:** Multi-layer waterproof clothing approved for waterjetting
- **Hose protection:** Hose shroud
- **Respiratory protection:** May be required; refer to job specific risk assessment

### WARNING

Operations with this equipment can be potentially hazardous. Caution **MUST** be exercised prior to and during machine and water jet tool use. Please read and follow all of these instructions, in addition to the guidelines in the WJTA Recommended Practices handbook, available online at [www.wjta.org](http://www.wjta.org). Deviating from safety instructions and recommended practices can lead to severe injury and/or death.

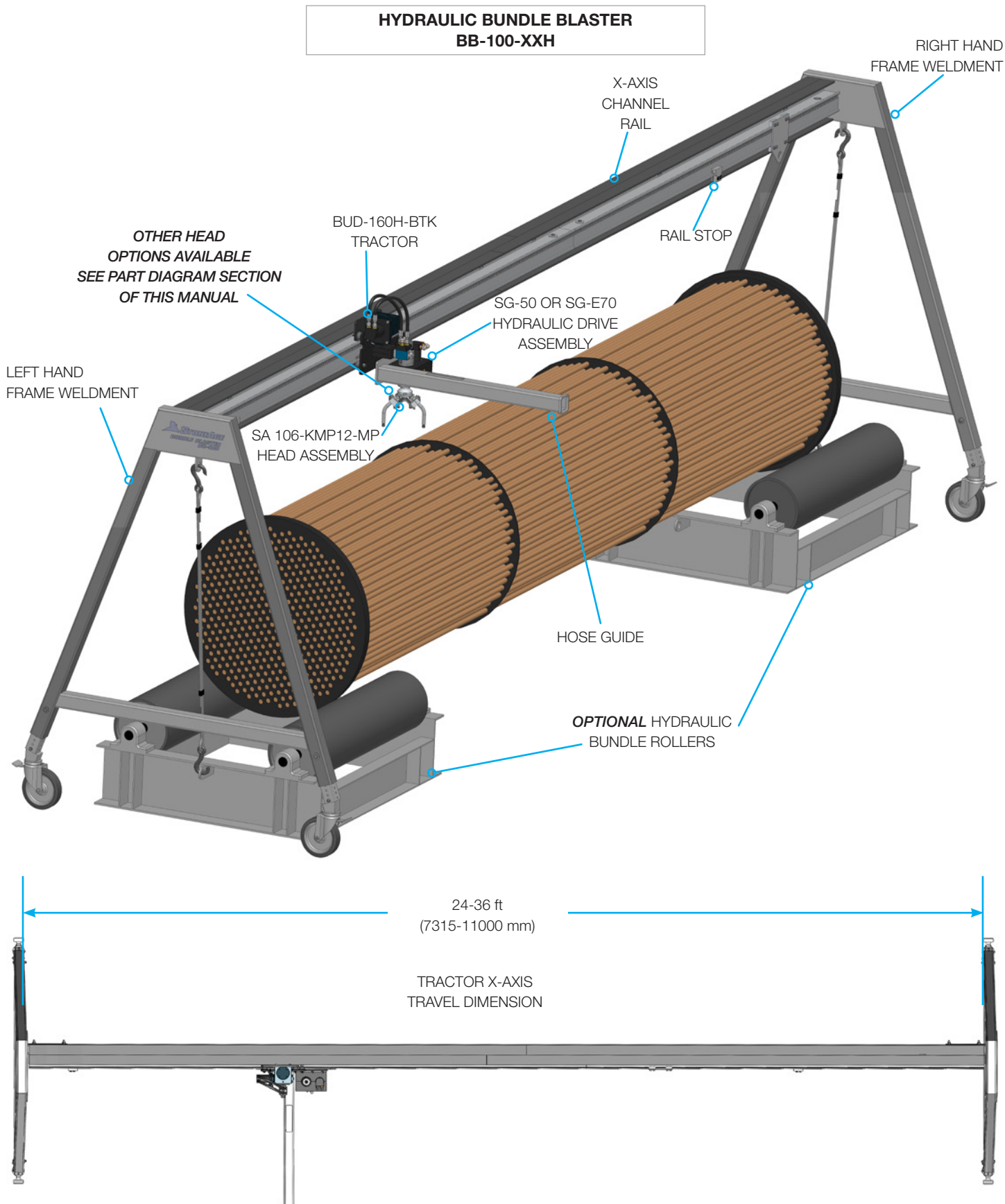
- Do not exceed the maximum operating pressure specified for any component in a system. The immediate work area **MUST** be marked off to keep out untrained persons.
- Inspect the equipment for visible signs of deterioration, damage, and improper assembly. Do not operate until repaired. Make sure all threaded connections are tight and free of leaks.
- Users of the Bundle Blaster System **MUST** be trained and/or experienced in the use and application of high-pressure technology and cleaning, as well as all associated safety measures, according to the WJTA Recommended Practices for the use of High-pressure Water jetting Equipment.
- The Control Box should be located in a safe location where the operator has good visibility of the pipe and hose. The Bundle Blaster System and Control Box **MUST** be supervised at all times and should never be left unattended.
- Test the Control Box before operating the Bundle Blaster System with high-pressure water to verify the control valves move the hose in the intended direction, and that the dump valve is working properly.
- Always de-energize the system before opening the door to service or replace any parts. Failure to do so can result in severe injury and/or death.

### PRE-RUN SAFETY CHECK

Refer to WJTA-IMCA's, Recommended Practices For The Use Of High-pressure Water jetting Equipment and/or The Water Jetting Association's, WJA Code of Practice for additional safety information.

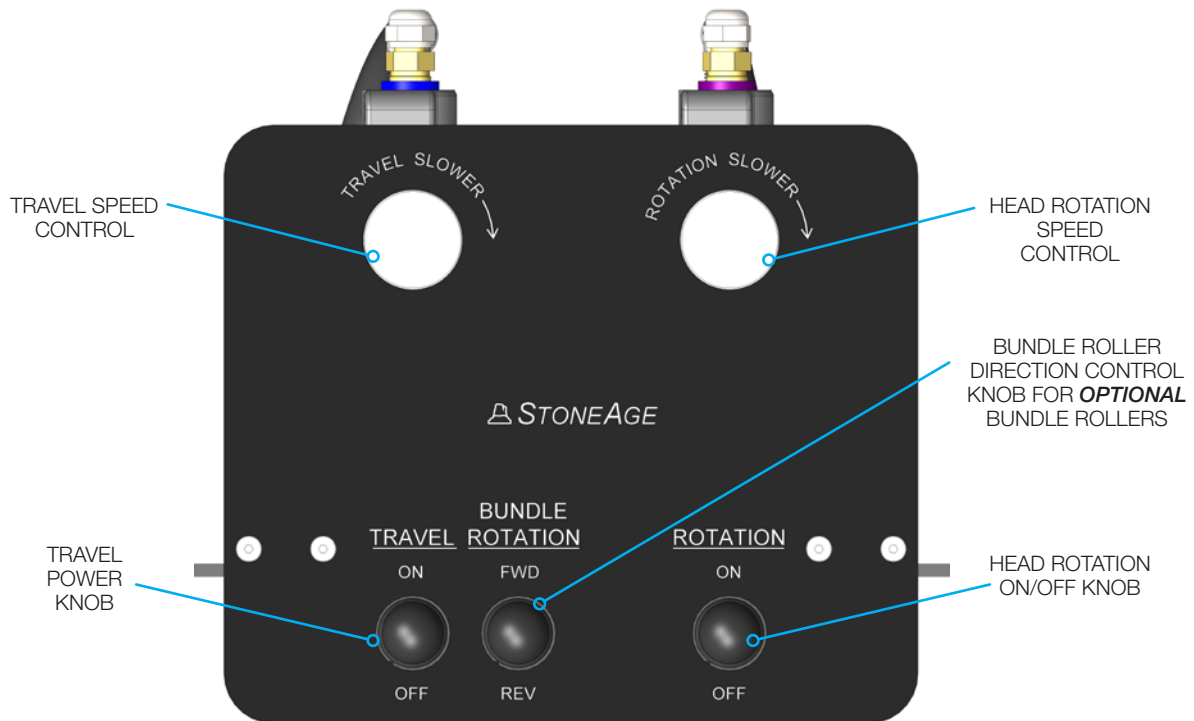
- Complete a job specific risk assessment and act on the resulting actions.
- Ensure the waterblasting zone is properly barricaded and that warning signs are posted.
- Adhere to all site safety procedures.
- Ensure no personnel are in the hydroblasting zone.
- Ensure the work place is free of unnecessary objects (e.g. loose parts, hoses, tools).
- Ensure all operators are using the correct Personal Protective Equipment (PPE).
- Check that the air hoses are properly connected and tight.
- Check all hoses and accessories for damage prior to use. Do not use damaged items. Only high quality hoses intended for water-blast applications should be used as high-pressure hoses.
- Ensure that operators never connect, disconnect, or tighten hoses, adapters, or accessories with the high-pressure water pump unit running.
- Check all high-pressure threaded connections for tightness.

## OVERVIEW-BB-100-XXH HYDRAULIC BUNDLE BLASTER





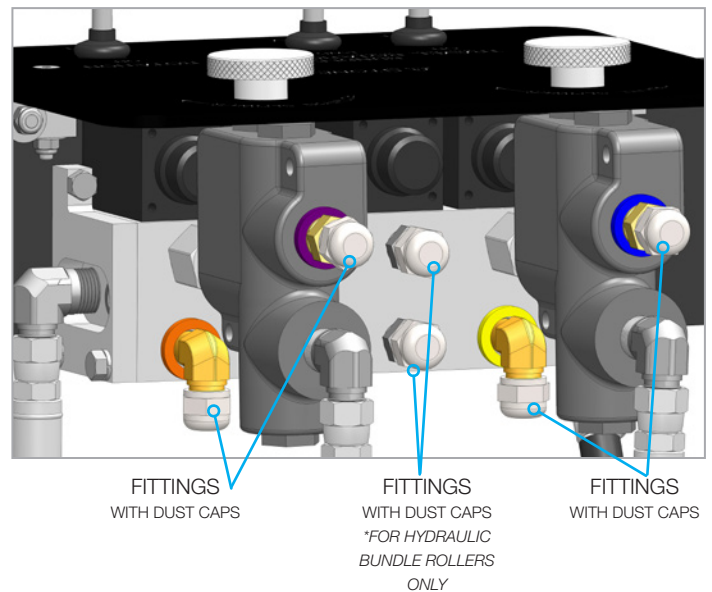
## HYDRAULIC CONTROL BOX CB-BB-HV



## CONTROL BOX FRONT VIEW



## CONTROL BOX REAR VIEW



**\*HYDRAULIC SUPPLY LINES NOT INCLUDED**

**\*\*SEE "PART DIAGRAM" SECTION AT THE BACK OF THIS MANUAL FOR MORE DETAILED PART BREAK DOWNS.**

## BUNDLE BLASTER ASSEMBLY

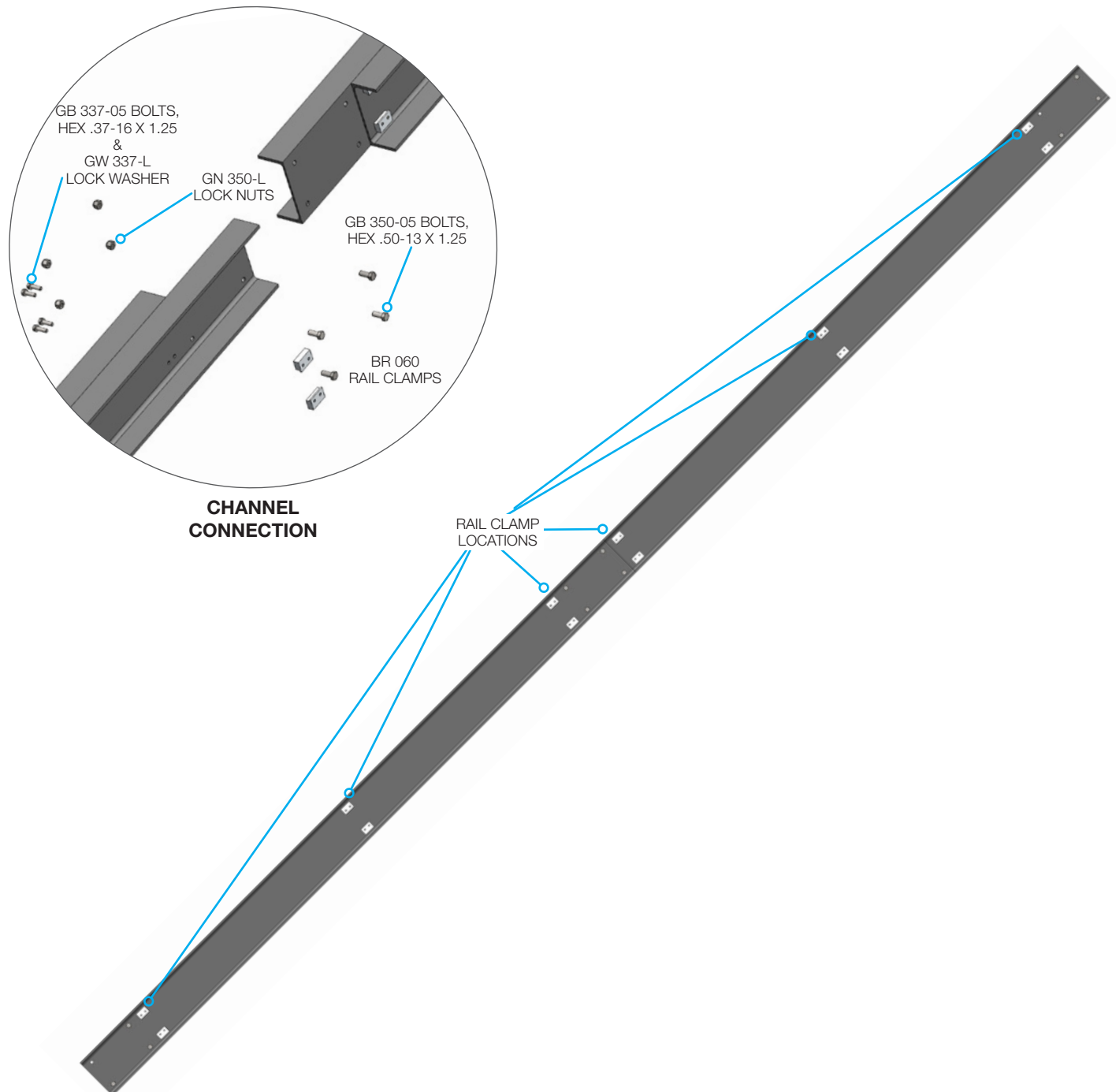
### X-AXIS CHANNEL RAIL ASSEMBLY

Please read carefully through the following detailed instructions for proper assembly steps and techniques. The Rail Clamps should come installed on the Channels. However, for installation of the Box Rail, the bottom Rail Clamps will need to be loosened and the top will need to be removed. If the Rail Clamps are installed, skip to connecting the “Channel Connection” detail.

#### ⚠ CAUTION

A minimum of three people is recommended for this assembly process as well as the use of a fork lift (or another mechanical lifting device).

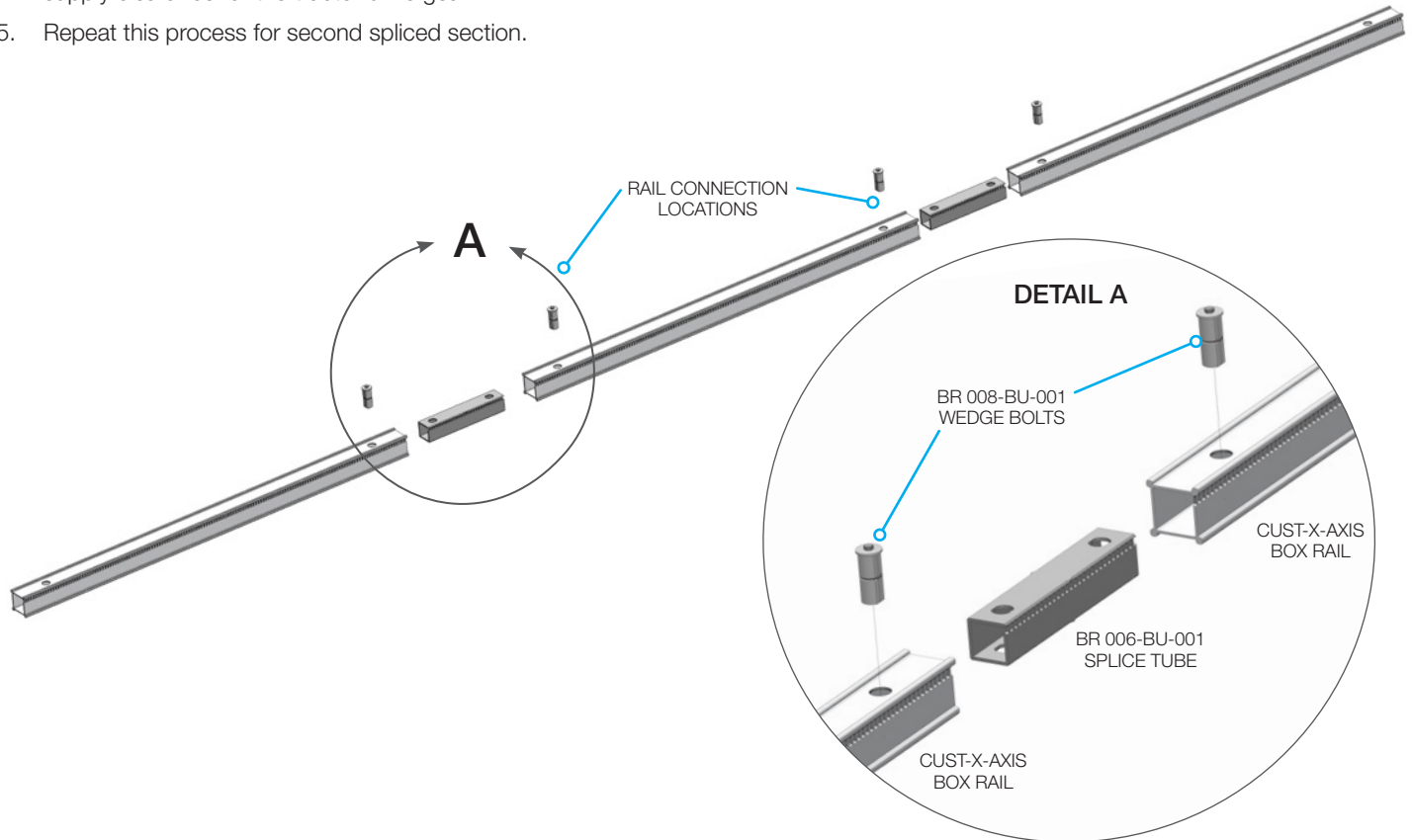
1. On a flat surface, assemble components using supplied hardware shown. The Beam sections are meant to fit flush together.
2. Once the channel sections are properly aligned, torque bolts to 50 ft\*lbs (68 N\*m).





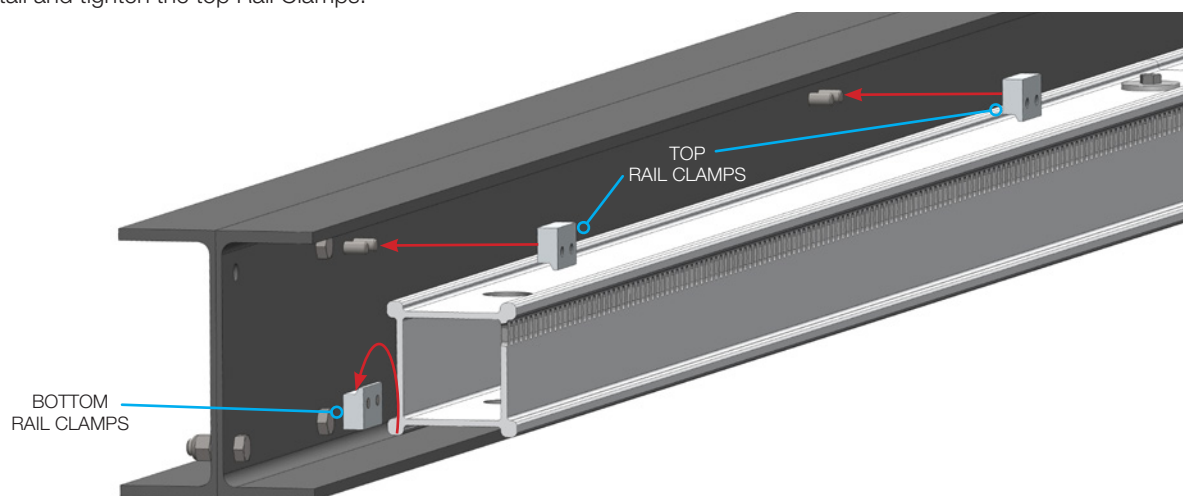
## X-AXIS BOX RAIL ASSEMBLY

1. One side of each Box Rail and Splice Tubes are slotted. It is **CRITICAL to align the slots** with each other or the assembly will not function.
2. Align Rail slots and Splice Tube slots and slide Box Rails over the ends of the splice tube. SEE DETAIL A
3. Use two wedge bolts as shown to pull and tighten these sections of Box Rail together.
4. Tighten both Wedge Bolts simultaneously and make sure the slotted grooves in the splice tube match those in the box rails in order to supply clearance for the tractor drive gear.
5. Repeat this process for second spliced section.



## X-AXIS BOX RAIL TO CHANNEL ASSEMBLY

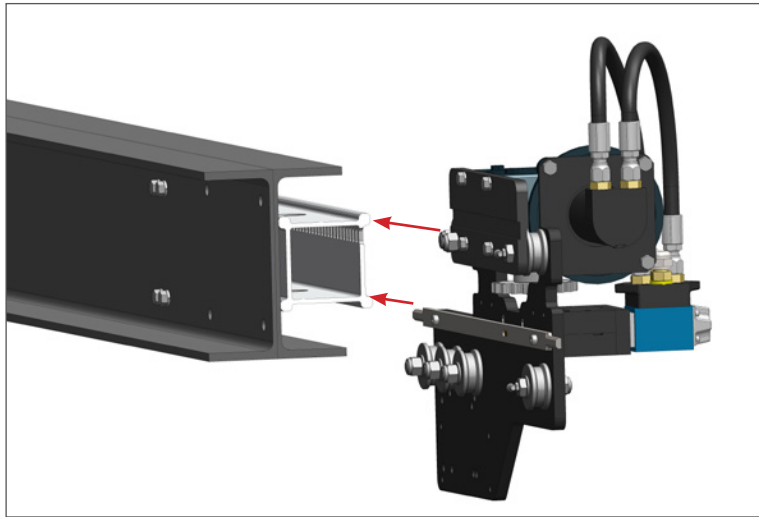
1. To install the Box Rail onto the Channel, loosen the bottom Rail Clamps and remove the top Rail Clamps.
2. Set the Box Rail onto the bottom Rail Clamps with the slots facing out and at the top.
3. Install and tighten the top Rail Clamps.



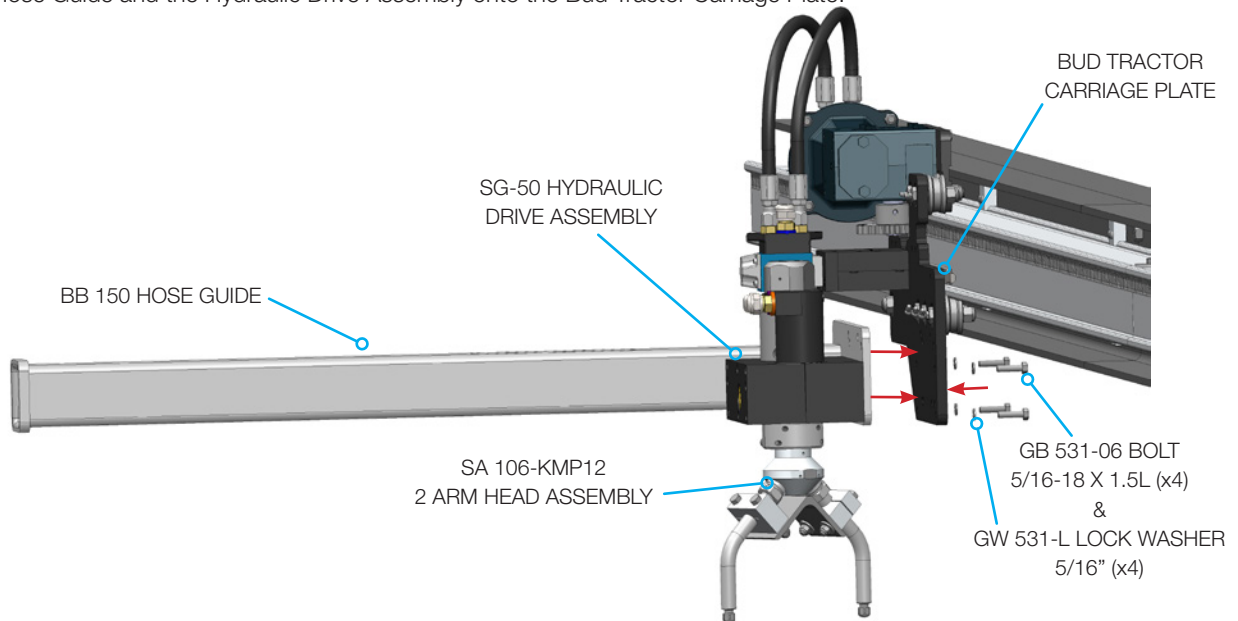
## BUNDLE BLASTER ASSEMBLY

### INSTALLATION OF THE BUD TRACTOR ASSEMBLY, HOSE GUIDE, AND HYDRAULIC DRIVE

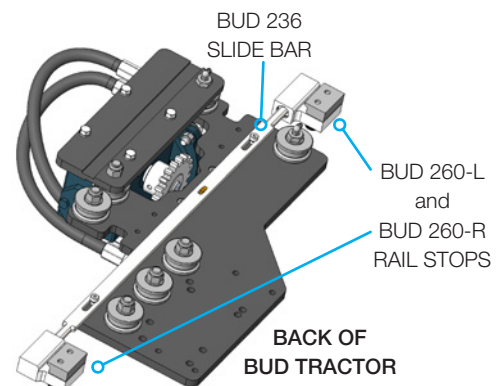
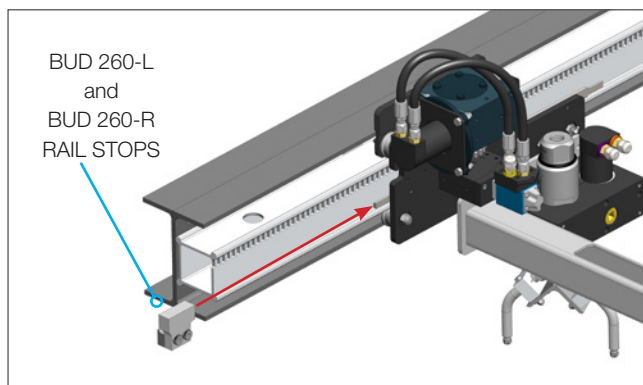
1. The Bud Tractor must be driven onto the Box Rail because the drive gear doesn't rotate freely. Connect the Hydraulic fitting on the front of the Tractor to an external supply and drive the tractor onto the Box Rail towards the center of the track. External Hydraulic lines should be disconnected for the remainder of the assembly.



2. Install the Hose Guide and the Hydraulic Drive Assembly onto the Bud Tractor Carriage Plate.

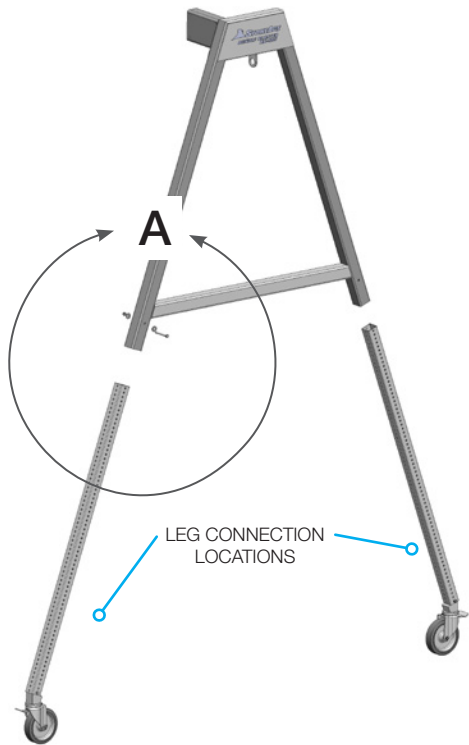


3. Install the Rail Stops at both ends of the Box Rail. It is recommended to position one Rail Stop on each side of the Tractor assembly to keep it from sliding around on the rail through the rest of the assembly process.

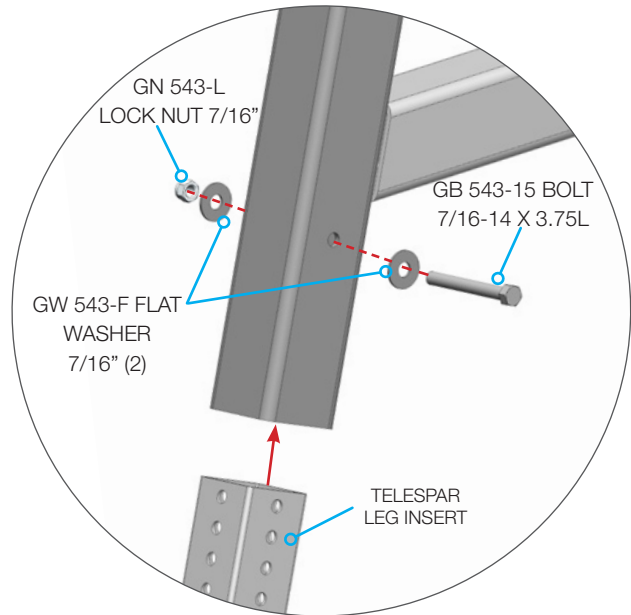


## ASSEMBLE THE SIDE A-FRAMES

1. There are two A-Frame Supports, left and right. Insert the Telespar wheel assemblies into both frames.
2. Adjust the legs to the desired height and install the Bolts, Washers, and Nuts as shown in Detail A below.



DETAIL A

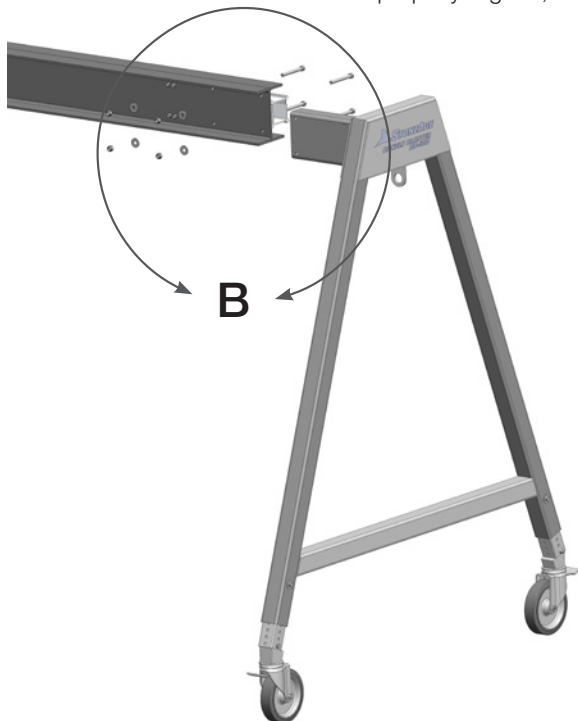


## INSTALL THE SIDE A-FRAMES ON THE RAIL

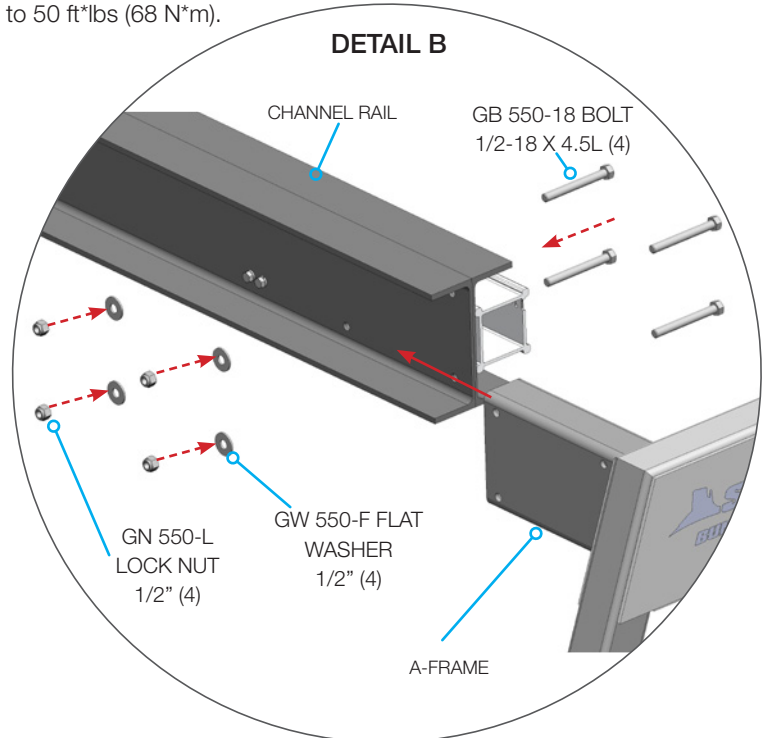
### ⚠ CAUTION

A minimum of three people is recommended for this assembly process as well as the use of a fork lift (or another mechanical lifting device).

1. Slide the rectangular tube end of the A-Frame assembly into their respective ends of the Channel Rail. Install fasteners as shown in Detail B, below.
2. Once the A-Frame sections are properly aligned, torque bolts to 50 ft\*lbs (68 N\*m).



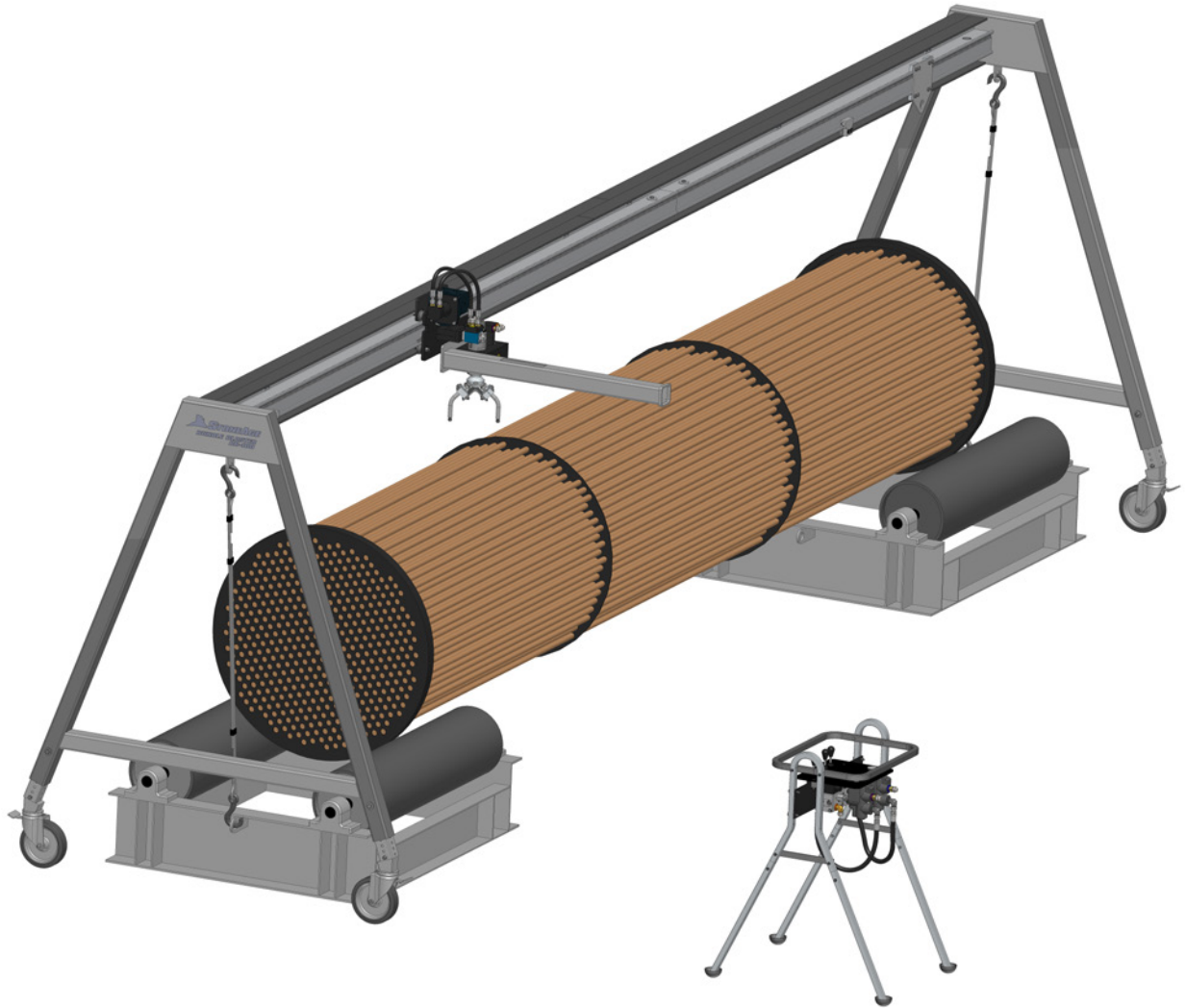
DETAIL B



## BUNDLE BLASTER ASSEMBLY

### FINAL ASSEMBLY

The Bundle Blaster can now be moved into place over the tube bundle to be cleaned. Set the Control Box as far away from the blast zone as possible, but within sight of the operation. See the next section of this manual for Control Box connection instructions.



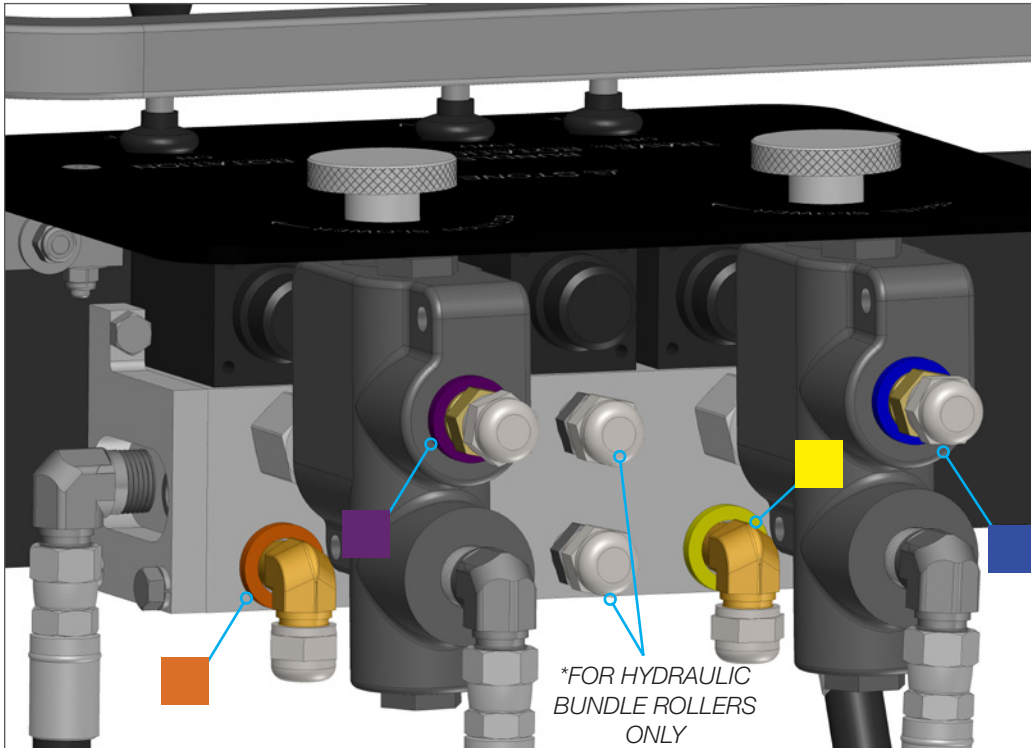
### Hose Connections

Remove all dust caps from the Control Box and Tractors.

Connect hydraulic hoses (*not supplied by StoneAge*) from the control box to the Hydraulic Tractor. Hose ends need to be female JIC with thread size 3/4-16 UNF.

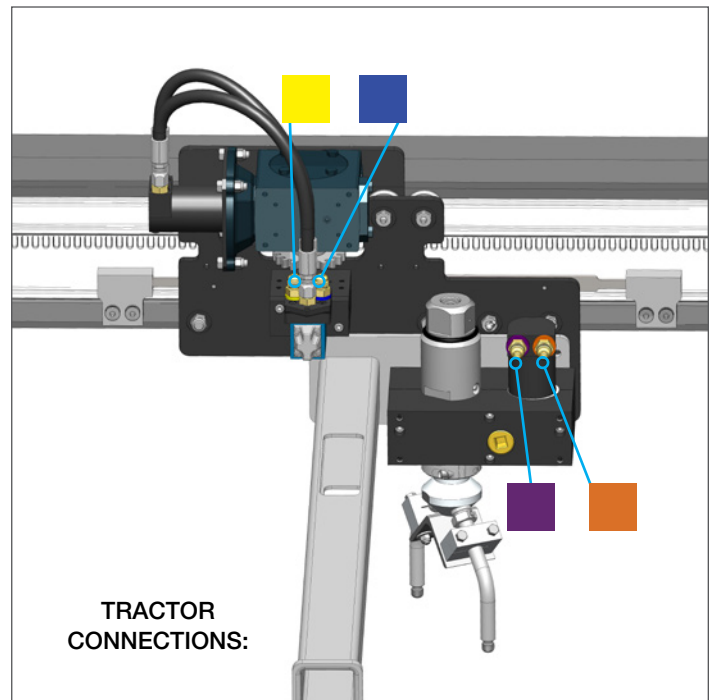
*IF USING HYDRAULIC BUNDLE ROLLERS;* Connect the two fittings shown below to the fittings on the Drive Side Rollers with customer supplied, hydraulic hoses.

CB CONNECTIONS



### NOTICE

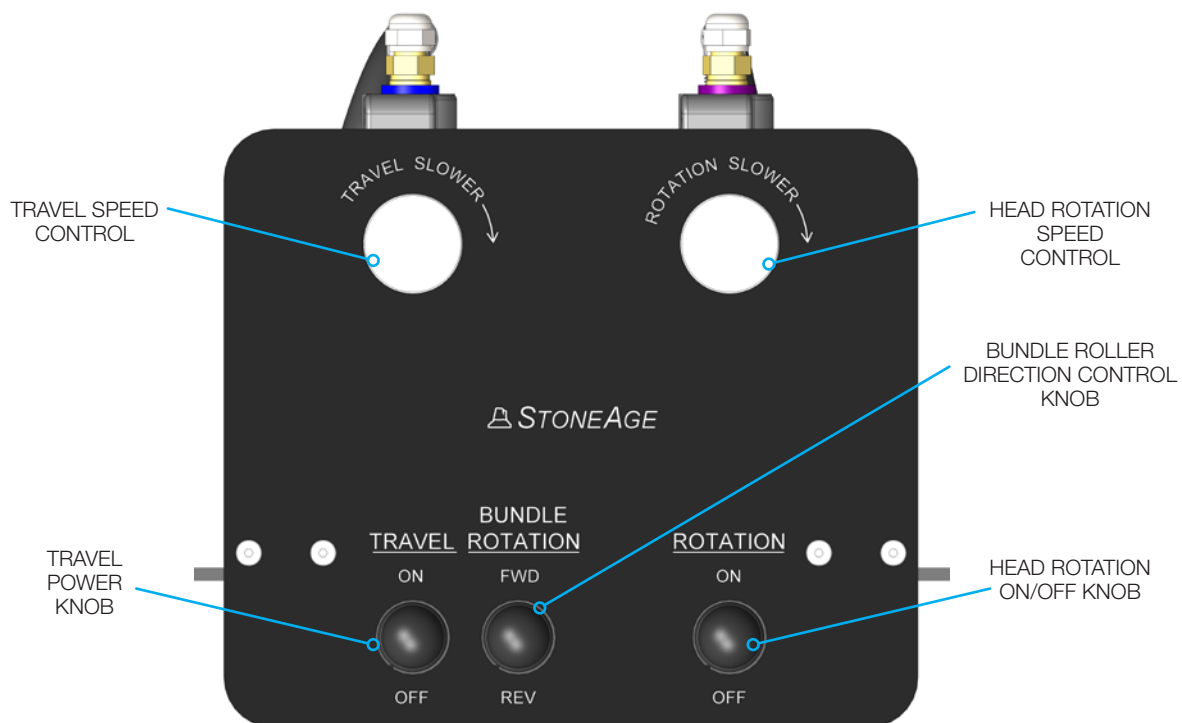
It is helpful to connect each color coded hose one color at a time to ensure proper connection. Test that each drive is moving in the correct direction before starting job.



## SET-UP AND OPERATION

### OPERATION OF HYDRAULIC CONTROL BOX (CB-BB-HV)

- Be sure to test the Control Box to ensure that the drive is moving in the intended directions before operating at pressure.
- Make certain the rail is firmly mounted to support the reaction force from the waterjets.
- Dry run the tractor to set the stops on the rail in the correct positions.
- If the feed rate of the tractor is slowed down too much the reversing valves may not operate reliably; increase the setting on the Travel Speed Control.
- Depending on water swivel type, water may need to be passing through the swivel to keep it cool while rotating.
- Grease the rollers every 200 hours of use; inspect the aluminum rail for wear.
- Pull "TRAVEL" knob up into the ON position to activate HYDRAULIC TRACTOR DRIVE.
- Use the "TRAVEL SLOWER" knob to adjust the speed of the X-AXIS Side to Side drive.
- Pull "ROTATION" knob up into the ON position to activate the Head Rotation.
- Use the "ROTATION SLOWER" knob to adjust the speed of the Head Rotation..
- Use the "BUNDLE ROTATION" knob to control the tube bundle rollers and roll the bundle back and forth.



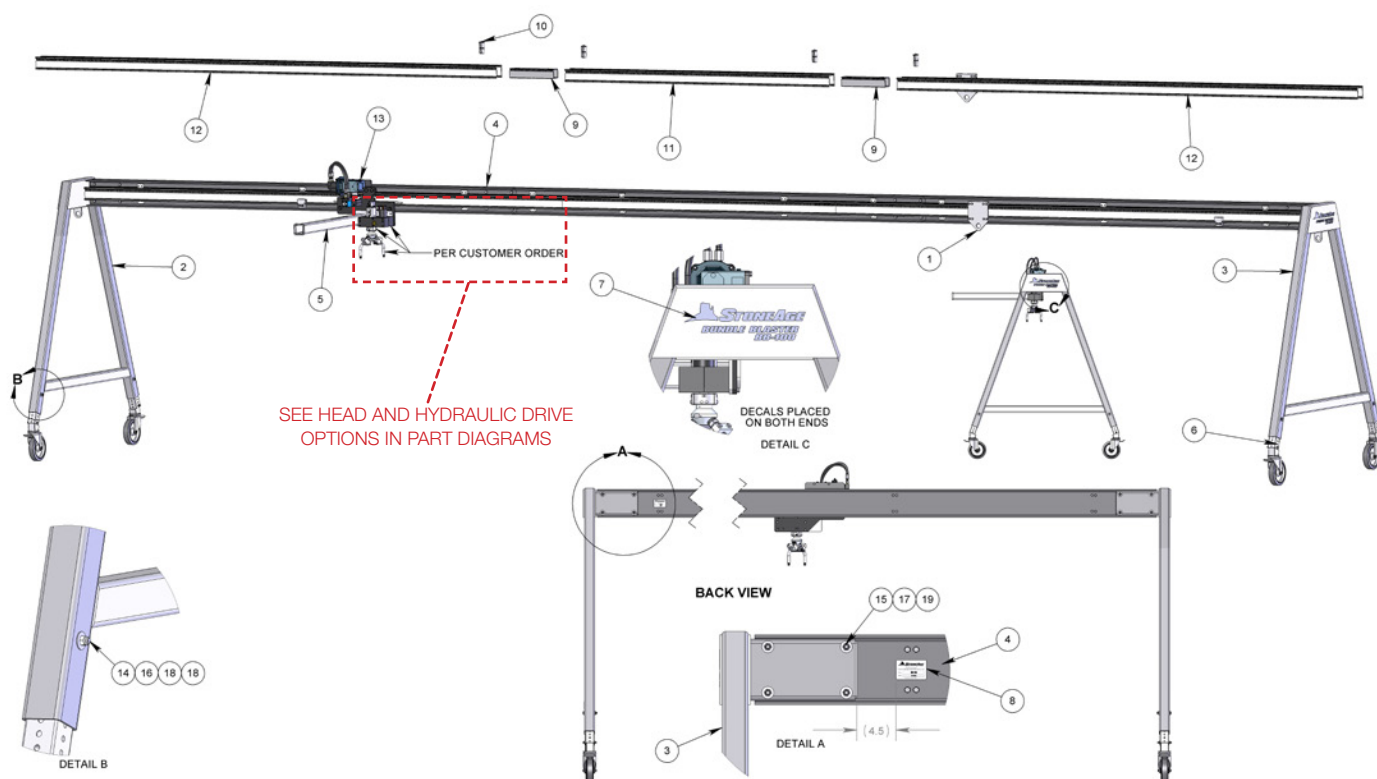
## STORAGE, TRANSPORTATION, AND HANDLING

Use mild soapy water to clean the accessory components in order to remove corrosive materials. Before storing, use compressed air to blow off debris and moisture. If the unit will be stored without use for more than a week, squirt some air tool oil into the air motors and run them briefly to distribute the oil, otherwise they probably will not run the next time the equipment is used.



**HYDRAULIC BUNDLE BLASTER (BB-100-XXH)**

24FT OR 36 FT (7315 mm OR 11000 mm)



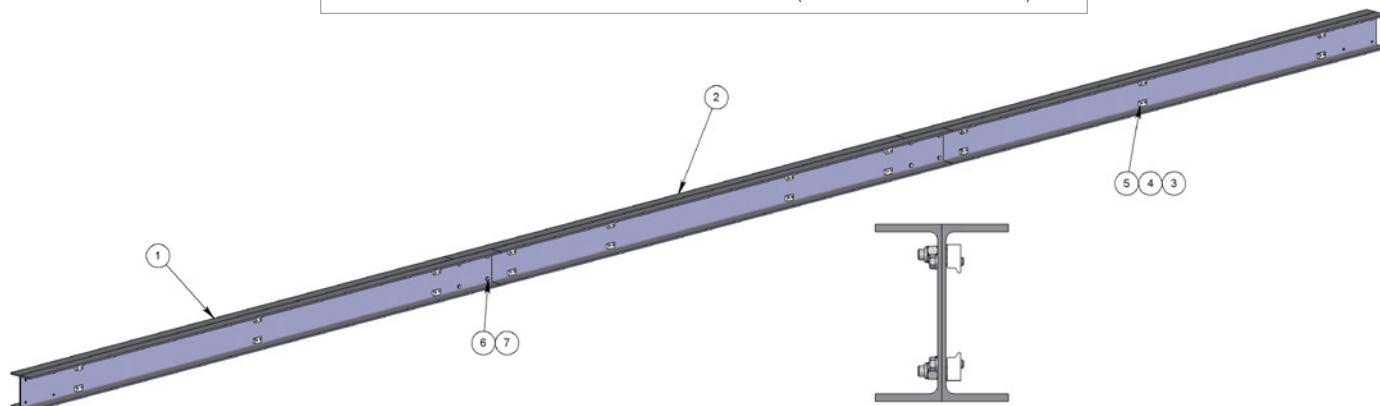
#	PART NUMBER	24FT QTY	36 FT QTY.
1	BB 070 RAIL PLATE ASSY	1	1
2	BB 090-LH WELDMENT, FRAME	1	1
3	BB 090-RH WELDMENT, FRAME	1	1
4	BB 110-XX CHANNEL RAIL ASSY	1	1
5	BB 150 HOSE GUIDE WELDMENT	1	1
6	BB 220 CASTER TUBE & WHEEL ASSY	4	4
7	BB 500 DECAL	2	2
8	BB 504 SERIAL PLATE	1	1
9	BR 006-BU-001 SPLICE TUBE	1	2

10	BR 008-BU-001 WEDGE BOLT	2	4
11	BU 004-08 BOX RAIL EXTENSION	1	1
12	BU 004-14 BOX RAIL EXTENSION	1	2
13	BUD-160H-BTK DRIVE ASSY	1	1
14	GB 543-15 BOLT, HEX .43-14 X 3.75	4	4
15	GB 550-18 BOLT, HEX .50-13 X 4.50	8	8
16	GN 543-L NYLOK NUT	4	4
17	GN 550-L NYLOK NUT	8	8
18	GW 543-F FLAT WASHER	8	8
19	GW 550-F FLAT WASHER	8	8

## PARTS DIAGRAM

### HYDRAULIC BUNDLE BLASTER (BUD 110-XX)

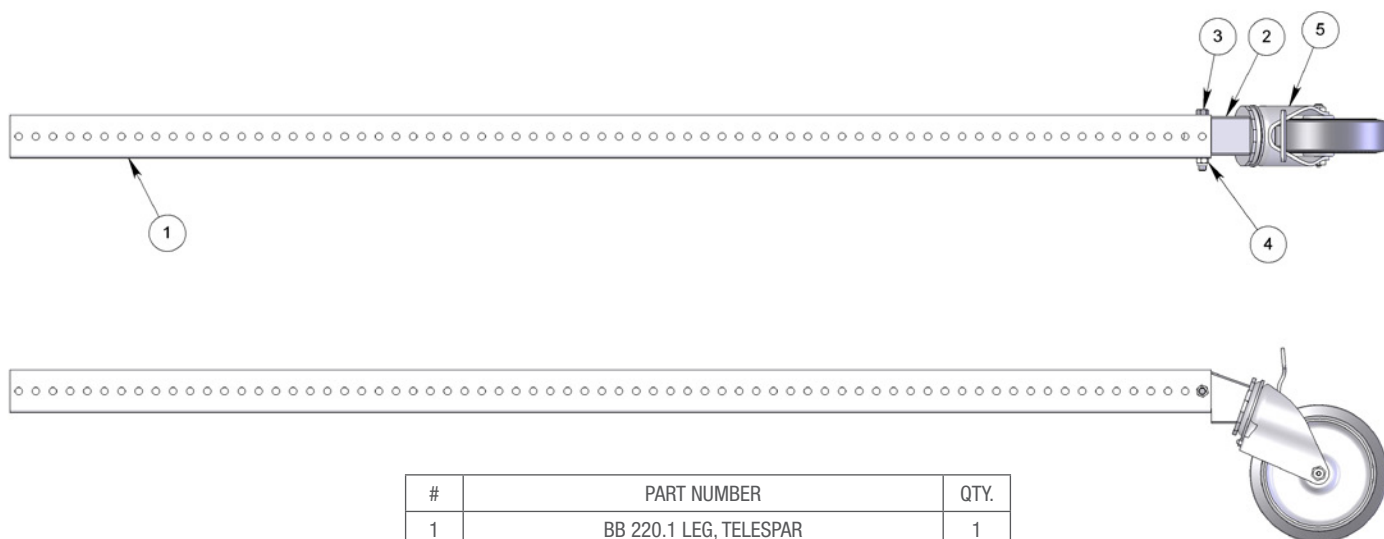
CHANNEL RAIL ASSEMBLY 24 FT OR 36 FT (7315mm OR 11000 mm)



#	PART NUMBER	24FT QTY	36 FT QTY.
1	BB 107 CHANNEL END BEAM ASSY	2	2
2	BB 107-36 CHANNEL MID BEAM ASSY	-	1
3	GW 537-L LOCK WASHER	24	40
4	GB 537-05 BOLT, HEX .37-16 X 1.25	24	40
5	BR 060 RAIL CLAMP	12	20
6	GB 550-05 BOLT, HEX .50-13 X 1.25	4	8
7	GN 550-L NYLOK NUT	4	8

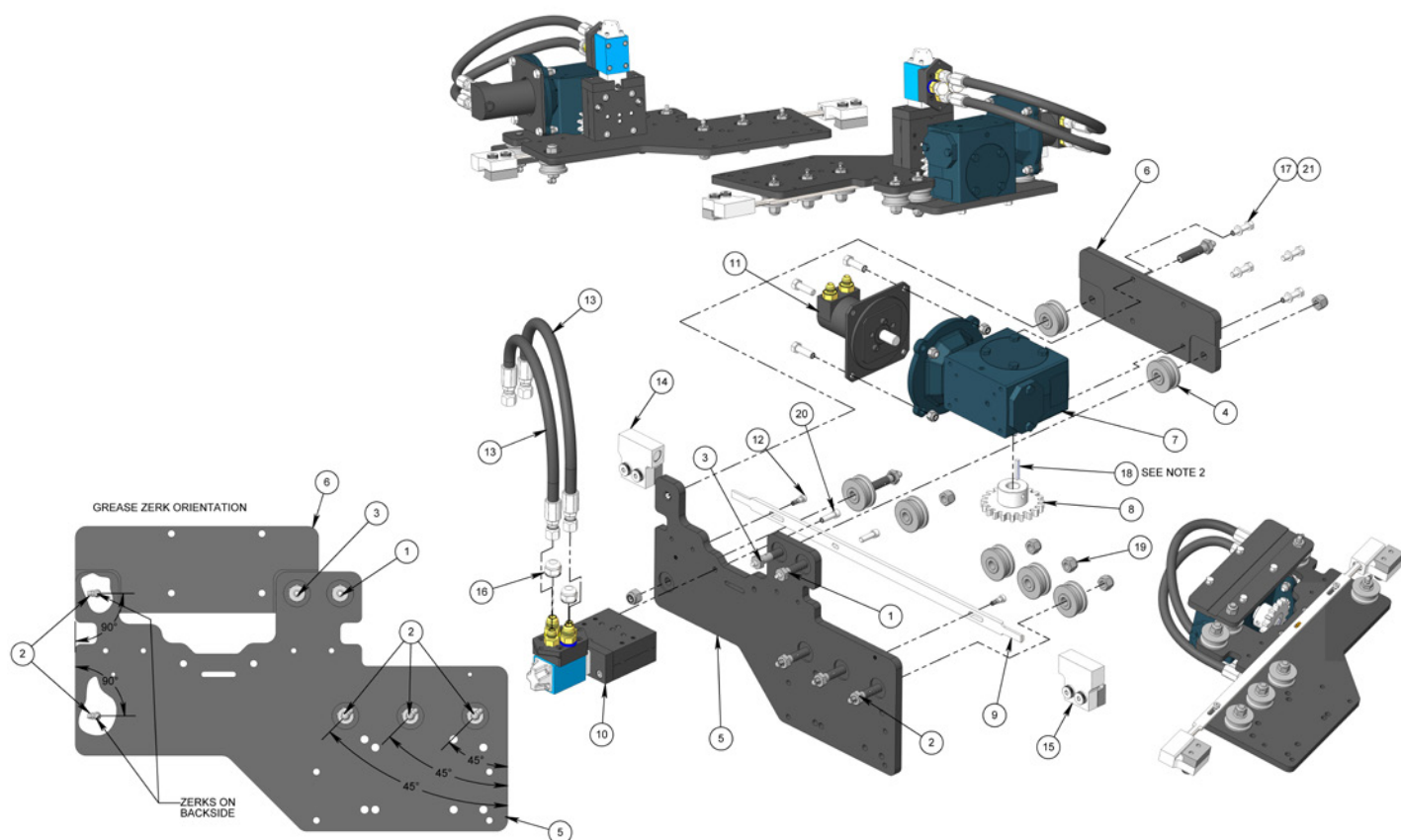
### HYDRAULIC BUNDLE BLASTER (BB 220)

CASTER AND TUBE WELDMENT



#	PART NUMBER	QTY.
1	BB 220.1 LEG, TELESAR	1
2	BB 220.2 WHEEL INSERT	1
3	GB 543-13 BOLT, HEX .43-14 X 3.25	1
4	GN 543-L NYLOK NUT	1
5	LP 089 WHEEL	1

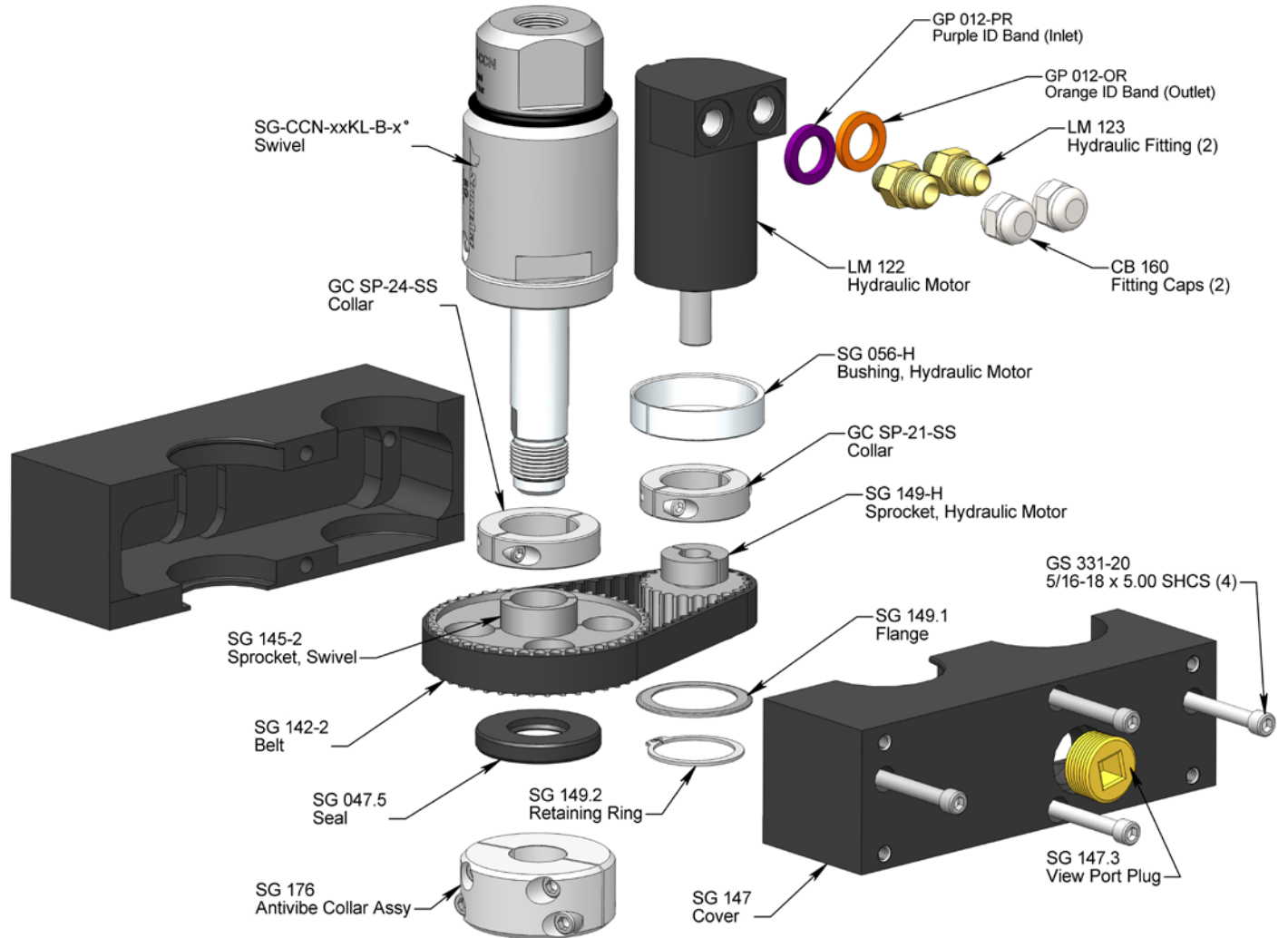
**HYDRAULIC BUNDLE BLASTER (BUD 160H-BTK)**  
HYDRAULIC TRACTOR



#	PART NUMBER	QTY.
1	BR 052-2.0 AXLE-ZERK	1
2	BR 052-2.0-90 AXLE-ZERK	5
3	BR 052-2.5 AXLE-ZERK	1
4	BR 055 ROLLER BEARING ASSY	7
5	BUD 135 PLATE, CARRIAGE	1
6	BUD 136 PLATE, GEARBOX	1
7	BUD 160-PC GEARBOX	1
8	BUD 170 GEAR WELDMENT	1
9	BUD 236 SLIDE BAR	1
10	BUD 240 HYD VALVE ASSY	1

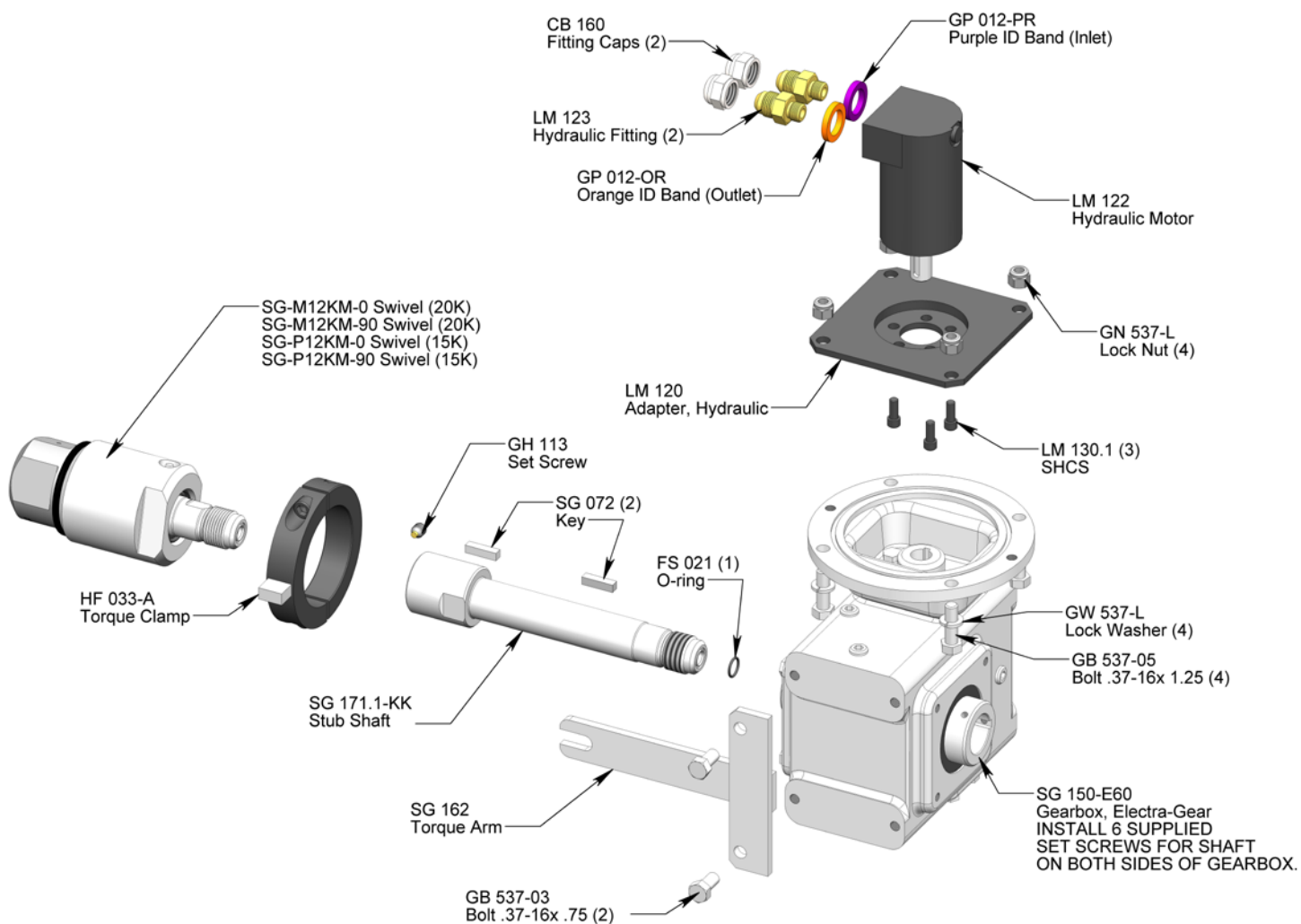
11	BUD 241 HYD MOTOR & ADAPTER ASSY	1
12	BUD 246 SHOULDER SCREW .31 X .31 LG	2
13	BUD 252 HYDRAULIC HOSE	2
14	BUD 260-L RAIL STOP ASSY, LEFT	1
15	BUD 260-R RAIL STOP ASSY, RIGHT	1
16	CB 160 FTG, CAP J8F	2
17	GB 331-05 BOLT, HEX .31-18 X 1.25 SS	4
18	GK 188-188-1250-SE KEY .188 X .188 X 1.250 SQ END	1
19	GN 350-L NUT, NYLOK .50-13 SS	6
20	GS 331-04 SHCS .31-18 X 1.00 SS	2
21	GW 331-L WASHER, LOCK .31 SS	4

## HYDRAULIC BUNDLE BLASTER (SG-50) STANDARD HYDRAULIC DRIVE ASSEMBLY



## HYDRAULIC BUNDLE BLASTER (SG-E70-XX)

SLOW SPIN HYDRAULIC DRIVE ASSEMBLY



PARTS DIAGRAM (HEAD OPTIONS)

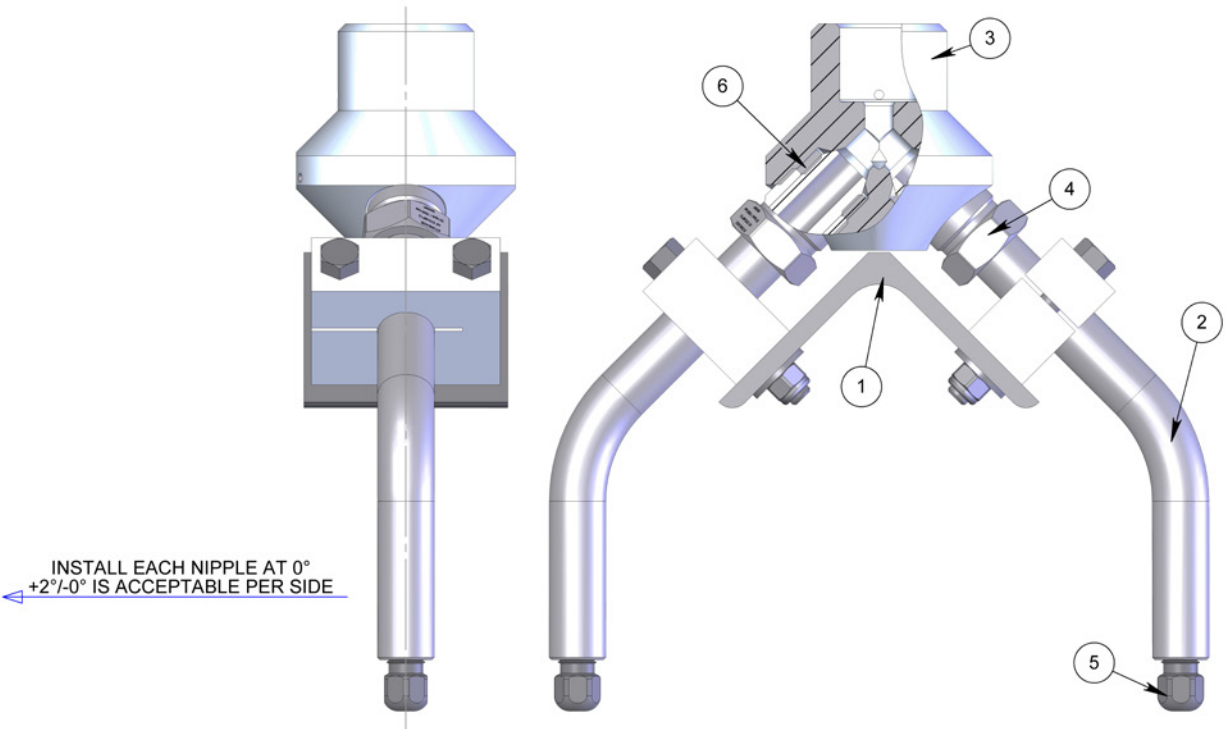
**OPTIONAL SA 577-G12XX-XX**  
3/4" NPT OR MP NIPPLE WITH RELIEF FOR  
OC8 CARBIDE NOZZLE HOLDER



SA 577-G12XX-XX  
NIPPLE

OC8 CARBIDE  
NOZZLE HOLDER

**OPTIONAL SA 106-KMP12-MP**  
KMP12 HEAD ASSEMBLY



INSTALL EACH NIPPLE AT 0°  
+2°/-0° IS ACCEPTABLE PER SIDE

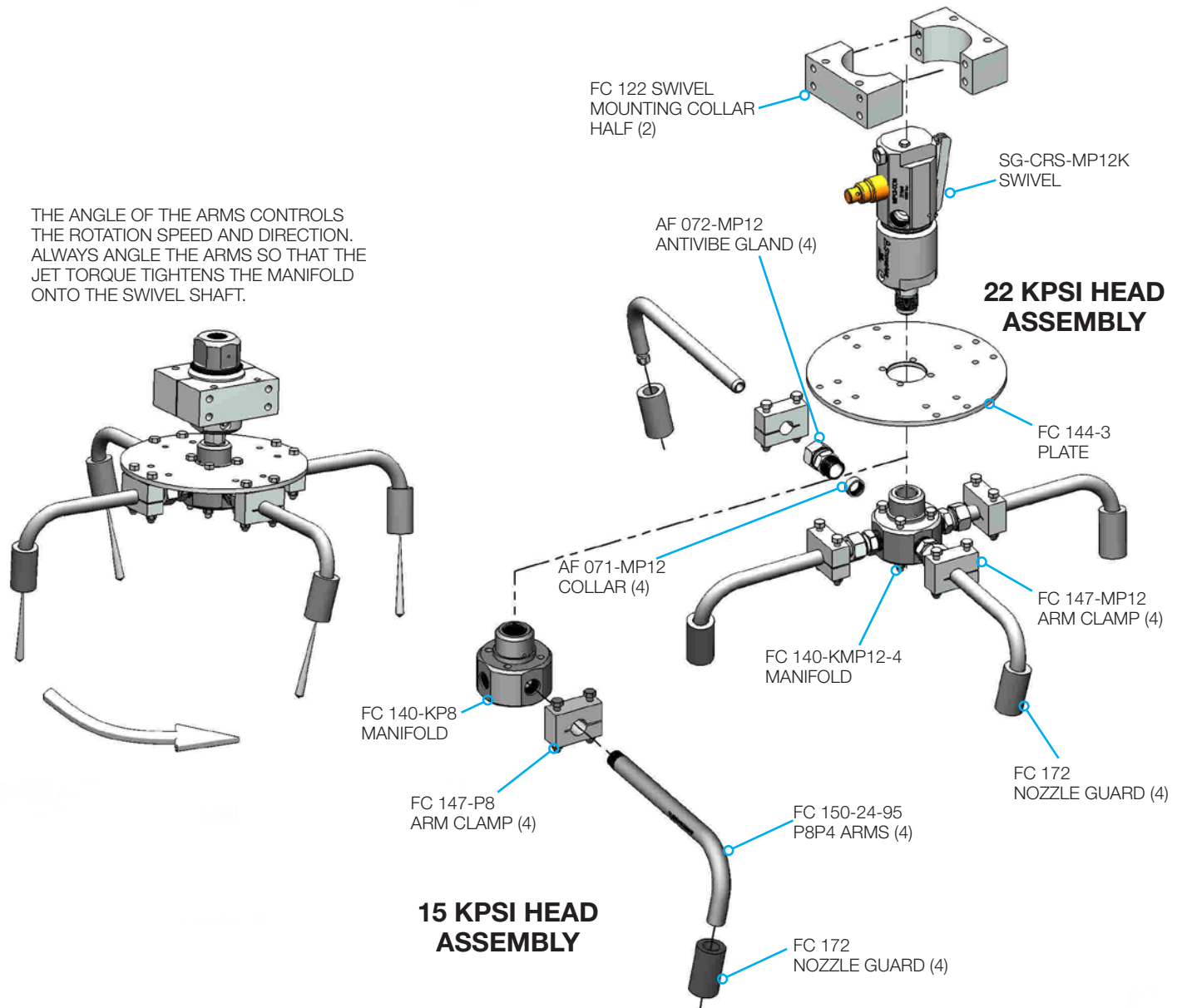
#	PART NUMBER	QTY.
1	SA 106-MP12 STABILIZING ASSY	1
2	SA 577-MP12LP4-8-45 NIPPLE	2
3	SA 103-KMP12-45 HEAD	1
4	AF 070-MP12 GLAND	2
5	AP4 XXX NOZZLE, LONG	2
6	AF 071-MP12 COLLAR	2



**OPTIONAL FC 240-18-X AND FC 240-24-X**

15, 000 AND 22,000 PSI MANIFOLD ARMS ASSEMBLY

THE ANGLE OF THE ARMS CONTROLS THE ROTATION SPEED AND DIRECTION. ALWAYS ANGLE THE ARMS SO THAT THE JET TORQUE TIGHTENS THE MANIFOLD ONTO THE SWIVEL SHAFT.

**15, 000 PSI MANIFOLD ARMS ASSEMBLY**

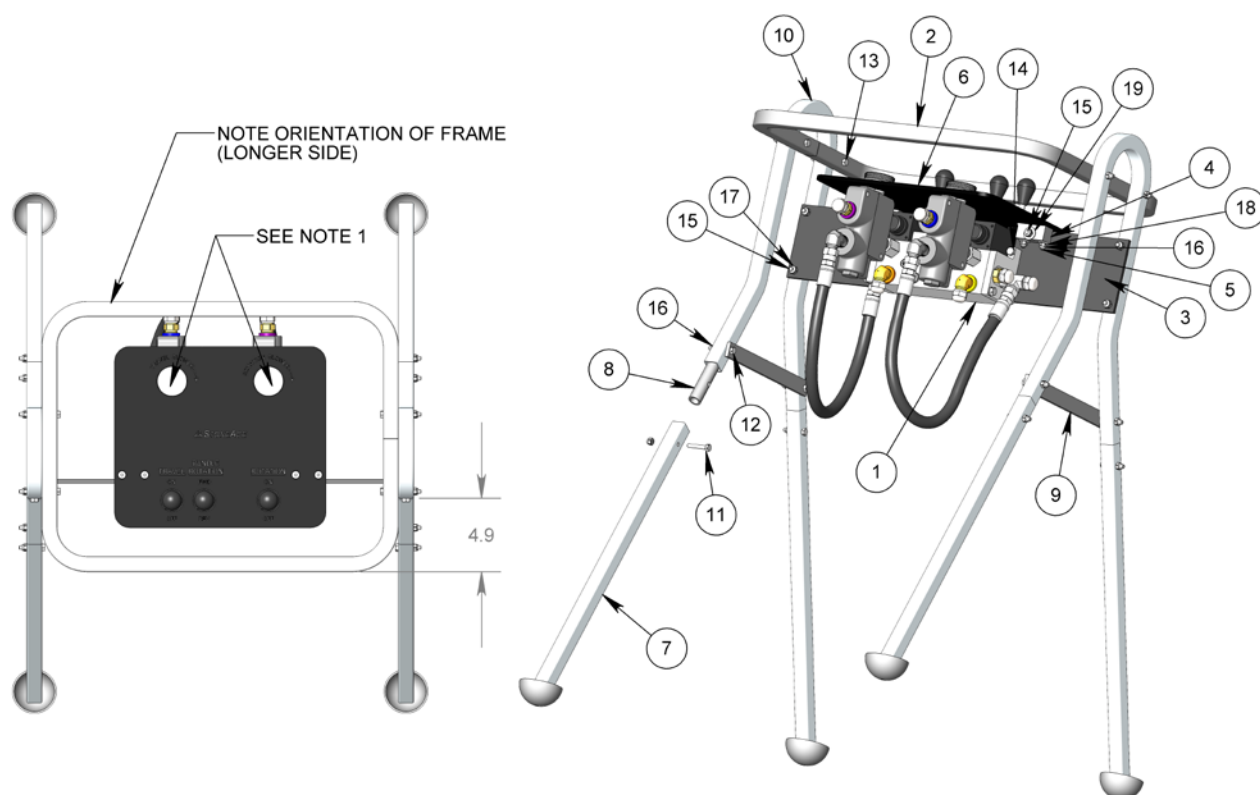
PART NUMBER	QTY.
FC 140-KP8 MANIFOLD	1
FC 144-3 PLATE, SUPPORT	1
FC 147-P8 ARM CLAMP	4
FC 150-24-95 P8 ARM	4
FC 172 NOZZLE GUARD	4
GB 531-10 BOLT 5/16-18 X 2-1/2 ZINC	8
GB 531-11 BOLT 5/16-18 X 2-3/4 ZINC	4
GN 531-L NUT 5/16 LOCK ZINC	12

**22, 000 PSI MANIFOLD ARMS ASSEMBLY**

PART NUMBER	QTY.
AF 071-M12 COLLAR	4
AF 072-M12 GLAND, ANTI-VIBE	4
FC 140-XX12 MANIFOLD	1
FC 144-3 PLATE, SUPPORT	1
FC 147-XX12 ARM CLAMP	4
FC 160-24-95 XX12 ARM	4
FC 172 NOZZLE GUARD	4

**HYDRAULIC BUNDLE BLASTER (CB-BB-HV)**

CONTROL BOX

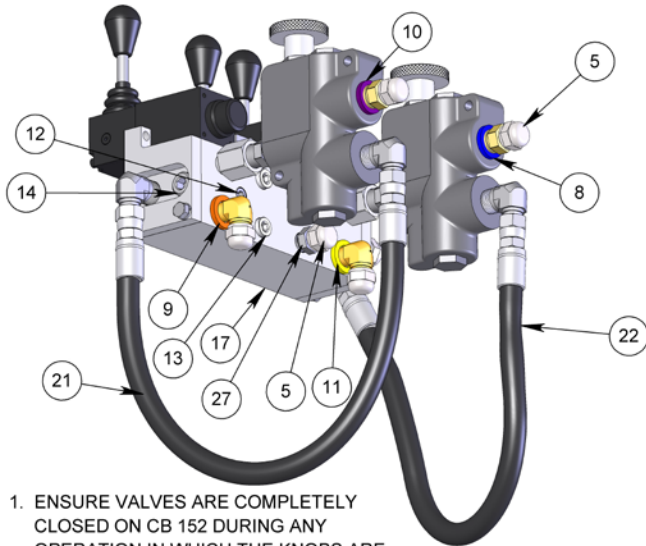


1. BEFORE INSTALLING CB 159 KNOBS ON THE CB-BB-HV.1 ASSY, BE SURE THAT BOTH (TRAVEL & ROTATION) VALVES ARE COMPLETELY IN THE CLOSED/CLOCKWISE DIRECTION. THEN INSTALL KNOBS.

#	PART NUMBER	QTY.
1	CB-BB-HV.1 ASSY, HYD CONTROL	1
2	CB 002 FRAME	1
3	CB 004-H MOUNTING PLATE	1
4	CB 006 MOUNT BLOCK	2
5	CB 508 FSHCS .25-20 X 1.75 SS	4
6	CB 012-BB-HV HYD PLATE	1
7	CB 107 LEG WELDMENT	4
8	CB 108 LEG INSERT	4
9	CB 109 FRAME SUPPORT	2

10	CB 110 FRAME ARCH	2
11	GB 525-06 BOLT, HEX .25-20 X 1.50	4
12	GB 525-07 BOLT, HEX .25-20 X 1.75	4
13	GB 525-10 BOLT, HEX .25-20 X 2.50	4
14	GB 531-06 BOLT, HEX .31-18 X 1.50	2
15	GB 531-07 BOLT, HEX .31-18 X 1.75	6
16	GN 525-L NYLOK NUT	16
17	GN 531-L NYLOK NUT	8
18	GW 525-F FLAT WASHER	4
19	GW 531-F FLAT WASHER	4

**HYDRAULIC BUNDLE BLASTER (CB-BB-HV.1)**  
CONTROL BOX SUB ASSEMBLY



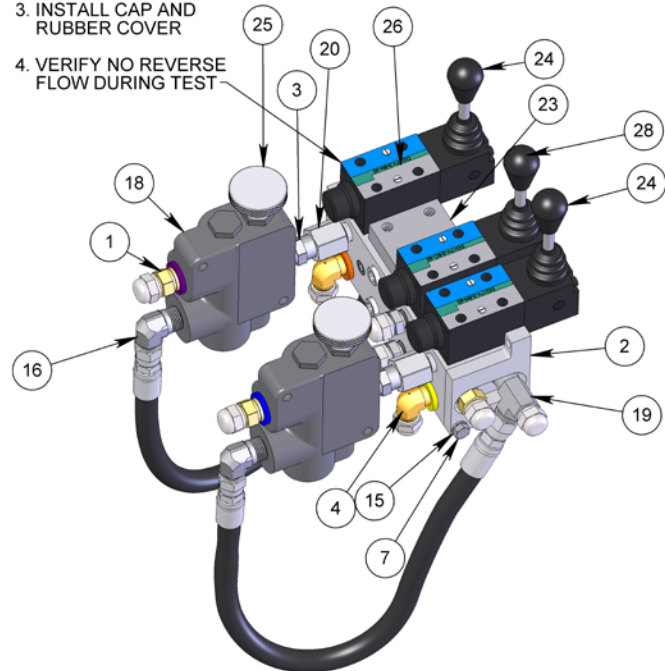
1. ENSURE VALVES ARE COMPLETELY CLOSED ON CB 152 DURING ANY OPERATION IN WHICH THE KNOBS ARE REMOVED FROM THE VALVES.

NOTES:

**VALVE MODIFICATION  
BOTH CB 250 VALVES**

1. REMOVE RUBBER COVER AND CAP
2. INSERT SPACER
3. INSTALL CAP AND RUBBER COVER
4. VERIFY NO REVERSE FLOW DURING TEST

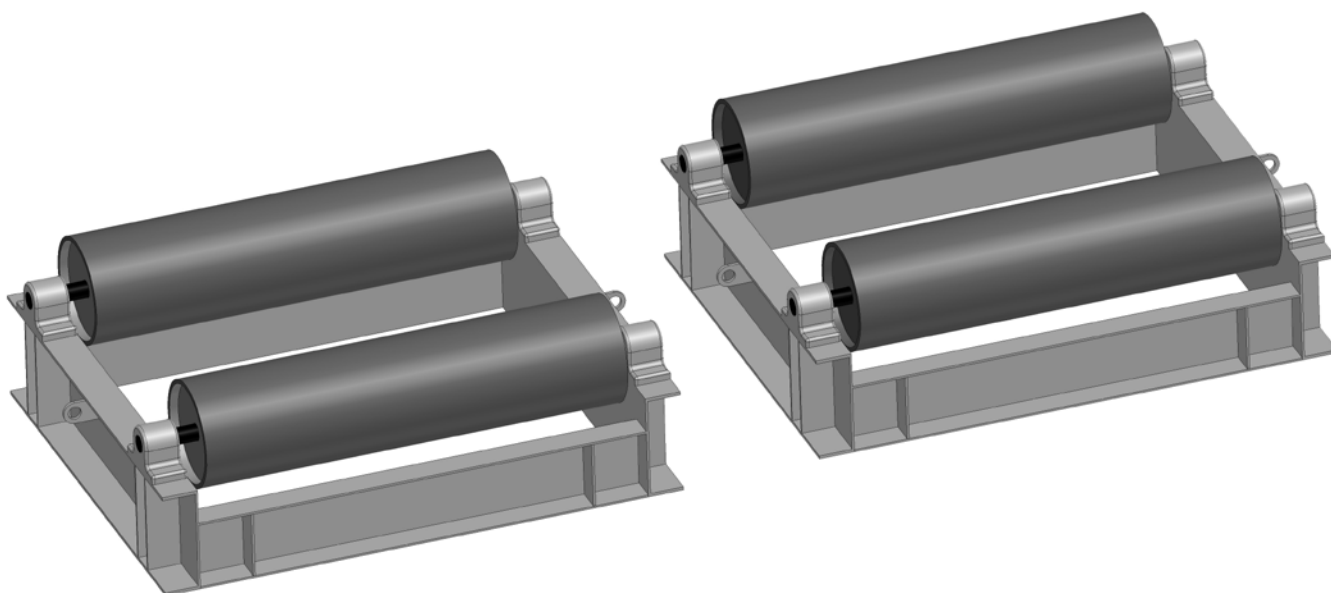
CB 250 RUBBER COVER AND CAP



#	PART NUMBER	QTY.
1	BR 157 FTG, ADAPTER P8M J8M	3
2	CB 005 BRACKET, VALVE MOUNT	2
3	CB 116 NIPPLE	2
4	CB 126 FITTING, ELBOW OUTLET	2
5	CB 160 FTG, CAP J8F	8
6	CB 257 SPACER, VALVE REVERSE LIMIT VICKERS	2
7	GB 531-04 BOLT, HEX .31-18 X 1.00	4
8	GP 012-BL BLUE ID BAND LG	1
9	GP 012-OG ORANGE ID BAND LG	1
10	GP 012-PR PURPLE ID BAND LG	1
11	GP 012-YL YELLOW ID BAND LG	1
12	GP 025-P4SS HEX SOCKET PLUG	1
13	GP 025-P6SS HEX SOCKET PLUG	2
14	GP 025-P8SS HEX SOCKET PLUG	1

15	GW 531-L LOCK WASHER	4
16	HRS 573 FTG, ELBOW 90 P8M J8M	3
17	CB 149 VALVE MANIFOLD	1
18	CB 152 FLOW CONTROL VALVE	2
19	CB 153 FTG, TEE RUN P8M J8M J8M	1
20	CB 154 FTG, REDUCER P8F P6M	2
21	CB 155 HYD HOSE 1	1
22	CB 155 HYD HOSE 2	1
23	CB 156 HYD CONTROL VALVE COVER PLATE	1
24	CB 250 HYD CONTROL VALVE, DETENT	2
25	CB 159 KNOB, SS	2
26	GS 519-05 SHCS .19-24 X 1.25 ZINC	12
27	CB 122 FTG, ADAPTER P6M J8M	2
28	CB 251 HYD CONTROL VALVE, SPRING	1

**HYDRAULIC BUNDLE BLASTER (BB 101)**  
OPTIONAL HYDRAULIC BUNDLE ROLLER SET  
(PURCHASED ASSEMBLY, NO PART BREAK DOWN)



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## TERMS AND CONDITIONS

1. **Acceptance of Terms and Conditions.** Receipt of these Terms and Conditions of Sale ("Terms and Conditions") shall operate as the acceptance by StoneAge, Inc. ("Seller") of the order submitted by the purchaser ("Buyer"). Such acceptance is made expressly conditional on assent by Buyer to these Terms and Conditions. Such assent shall be deemed to have been given unless written notice of objection to any of these Terms and Conditions (including inconsistencies between Buyer's purchase order and this acceptance) is given by Buyer to Seller promptly on receipt hereof.

Seller desires to provide Buyer with prompt and efficient service. However, to individually negotiate the terms of each sales contract would substantially impair Seller's ability to provide such service. Accordingly, the product(s) furnished by Seller are sold only according to the terms and conditions stated herein and with the terms and conditions stated in any effective StoneAge Dealer Agreement or StoneAge Reseller Agreement, if applicable. Notwithstanding any terms and conditions on Buyer's order, Seller's performance of any contract is expressly made conditional on Buyer's agreement to these Terms and Conditions unless otherwise specifically agreed to in writing by Seller. In the absence of such agreement, commencement of performance, shipment and/or delivery shall be for Buyer's convenience only and shall not be deemed or construed to be an acceptance of Buyer's terms and conditions.

2. **Payment/Prices.** Unless other arrangements have been made in writing between Seller and Buyer, payment for the product(s) shall be made upon receipt of invoice. The prices shown on the face hereof are those currently in effect. Prices invoiced shall be per pricelist in effect at the time of shipment. Prices are subject to increase for inclusion of any and all taxes which are applicable and which arise from the sale, delivery or use of the product(s), and the collection of which Seller is or may be responsible to provide to any governmental authority, unless acceptable exemption certificates are provided by Buyer in accordance with applicable law. Buyer shall pay all charges for transportation and delivery and all excise, order, occupation, use or similar taxes, duties, levies, charges or surcharges applicable to the product(s) being purchased, whether now in effect or hereafter imposed by any governmental authority, foreign or domestic.

3. **Warranty.** SELLER MAKES NO WARRANTIES OR REPRESENTATIONS AS TO THE PERFORMANCE OF ANY PRODUCT EXCEPT AS SET FORTH IN THE STONEAGE LIMITED WARRANTY PROVIDED WITH THE PRODUCT.

4. **Delivery.** Seller is not obligated to make delivery by a specified date, but will always use its best efforts to make delivery within the time requested. The proposed shipment date is an estimate. Seller will notify Buyer promptly of any material delay and will specify the revised delivery date as soon as practicable. UNDER NO CIRCUMSTANCES SHALL SELLER HAVE ANY LIABILITY WHATSOEVER FOR LOSS OF USE OR FOR ANY DIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM DELAY REGARDLESS OF THE REASON(S).

All product(s) will be shipped F.O.B. point of origin, unless specifically agreed otherwise, and Buyer shall pay all shipping costs and insurance costs from that point. Seller, in its sole discretion, will determine and arrange the means and manner of transportation of the product(s). Buyer shall bear all risk of loss commencing with the shipment or distribution of the product(s) from Seller's warehouse. Order shortages or errors must be reported within fifteen (15) business days from receipt of shipment to secure adjustment. No product(s) may be returned without securing written approval from Seller.

5. **Modification.** These Terms and Conditions are intended by Seller and Buyer to constitute a final, complete and exclusive expression of agreement relating to the subject matter hereof and cannot be supplemented or amended without Seller's prior written approval.

6. **Omission.** Seller's waiver of any breach or Seller's failure to enforce any of

these Terms and Conditions at any time, shall not in any way affect, limit or waive Seller's right thereafter to enforce and compel strict compliance with every term and condition hereof.

7. **Severability.** If any provision of these Terms and Conditions is held to be invalid or unenforceable, such invalidity or unenforceability shall not affect the validity or enforceability of the other portions hereof.

8. **Disputes.** Seller and Buyer shall attempt in good faith to promptly resolve any dispute arising under these Terms and Conditions by negotiations between representatives who have authority to settle the controversy. If unsuccessful, Seller and Buyer shall further attempt in good faith to settle the dispute by nonbinding third-party mediation, with fees and expenses of such mediation apportioned equally to each side. Any dispute not so resolved by negotiation or mediation may then be submitted to a court of competent jurisdiction in accordance with the terms hereof. These procedures are the exclusive procedures for the resolution of all such disputes between the Seller and Buyer.

9. **Governing Law.** All sales, agreements for sale, offers to sell, proposals, acknowledgments and contracts of sale, including, but not limited to, purchase orders accepted by Seller, shall be considered a contract under the laws of the State of Colorado and the rights and duties of all persons, and the construction and effect of all provisions hereof shall be governed by and construed according to the laws of such state.

10. **Jurisdiction and Venue.** Seller and Buyer agree that the state or federal courts located within the City and County of Denver, Colorado shall have sole and exclusive jurisdiction over any litigation concerning any dispute arising under these Terms and Conditions not otherwise resolved pursuant to Section 9 as well as any alleged defects of any Products or damages sustained as a result of such alleged defects. Seller and Buyer further agree that should any litigation be commenced in connection with such a dispute, it shall only be commenced in such courts. Seller and Buyer agree to the exclusive jurisdiction of such courts and neither will raise any objection to the jurisdiction and venue of such courts, including as a result of inconvenience.

11. **Attorney's Fees.** If any litigation is commenced between Seller and Buyer, or their personal representatives, concerning any provision hereof, the party prevailing in the litigation shall be entitled, in addition to such other relief that is granted, to a reasonable sum as and for their attorneys' fees and costs in such litigation or mediation.

### STONEAGE TRADEMARK LIST

View the list of StoneAge's trademarks and service marks and learn how the trademarks should be used. Use of StoneAge trademarks may be prohibited, unless expressly authorized.

<http://www.StoneAgeTools.com/trademark-list/>

### STONEAGE PATENT DATA

View the list of StoneAge's current U.S. patent numbers and descriptions.

<http://www.sapatents.com>

### STONEAGE TERMS AND WARRANTY

View StoneAge's Terms and Warranty Conditions online.

<http://www.stoneagetools.com/terms>

<http://www.stoneagetools.com/warranty>

Warranties set forth herein extend only to End-Users, meaning customers acquiring, or that have previously acquired, a product manufactured by



StoneAge ("Product") for their own use and not for resale, either directly from StoneAge Inc. ("StoneAge") or from a StoneAge Authorized Dealer or Reseller ("Dealer"). No warranty of any kind or nature is made by StoneAge beyond those expressly stated herein.

**1. LIMITED WARRANTY PERIOD.** Subject to the limitations and conditions hereinafter set forth, StoneAge warrants its Product to be free from defects in workmanship and material for a period of one (1) year from the date of purchase by the End-User, provided that the end of the limited warranty period shall not be later than eighteen (18) months from the date of shipment of the Product to the Dealer or the End-User by StoneAge ("Limited Warranty Period"). All replacement parts which are furnished under this Limited Warranty and properly installed shall be warranted to the same extent as the original Product under this Limited Warranty if, and only if, the original parts were found to be defective within the original Limited Warranty Period covering the original Product. Replacement parts are warranted for the remainder of the original Limited Warranty Period. This Limited Warranty does not cover any component part of any Product not manufactured by StoneAge. Any such component part is subject exclusively to the component manufacturer's warranty terms and conditions.

**2. LIMITED WARRANTY COVERAGE.** StoneAge's sole obligation under this Limited Warranty shall be, at StoneAge's option and upon StoneAge's inspection, to repair, replace or issue a credit for any Product which is determined by StoneAge to be defective in material or workmanship. StoneAge reserves the right to examine the alleged defective Product to determine whether this Limited Warranty is applicable, and final determination of limited warranty coverage lies solely with StoneAge. No statement or recommendation made by a StoneAge representative, Dealer or agent to End-User shall constitute a warranty by StoneAge or a waiver or modification to any of the provisions hereof or create any liability for StoneAge.

**3. WARRANTY SERVICE PROVIDERS.** Service and repair of the Product is to be performed only by StoneAge authorized service representatives, including Dealers who are authorized repair centers, with StoneAge approved parts. Information about StoneAge authorized service representatives can be obtained through the StoneAge website at [www.stoneagetools.com/service](http://www.stoneagetools.com/service). Unauthorized service, repair or modification of the Product or use of parts not approved by StoneAge will void this Limited Warranty. StoneAge reserves the right to change or improve the material and design of the Product at any time without notice to End-User, and StoneAge is not obligated to make the same improvements during warranty service to any Product previously manufactured.

**4. WARRANTY EXCLUSIONS.** This Limited Warranty does not cover, and StoneAge shall not be responsible for the following, or damage caused by the following: (1) any Product that has been altered or modified in any way not approved by StoneAge in advance in writing; (2) any Product that has been operated under more severe conditions or beyond the rated capacity specified for that Product; (3) depreciation or damage caused by normal wear and tear, failure to follow operation or installation instructions, misuse, negligence or lack of proper protection during storage; (4) exposure to fire, moisture, water intrusion, electrical stress, insects, explosions, extraordinary weather and/or environmental conditions including, but not limited to lightning, natural disasters, storms, windstorms, hail, earthquakes, acts of God or any other force majeure event; (5) damage to any Product caused by any attempt to repair, replace, or service the Product by persons other than StoneAge authorized service representatives; (6) costs of normal maintenance parts and services; (7) damage sustained during unloading, shipment or transit of the Product; or (8) failure to perform the recommended periodic maintenance procedures listed in the Operator's Manual accompanying the Product.

**5. REQUIRED WARRANTY PROCEDURES.** To be eligible for warranty service, the End-User must: (1) report the Product defect to the entity where the Product was purchased (i.e. StoneAge or the Dealer) within the Limited Warranty Period specified in this Limited Warranty; (2) submit the original invoice to establish ownership and date of purchase; and (3) make the Product available to a StoneAge authorized service representative for inspection to determine eligibility for coverage under this Limited Warranty. This Limited Warranty shall not extend to any person or entity who fails to provide proof of original

purchase from StoneAge or a Dealer. No Product may be returned for credit or adjustment without prior written permission from StoneAge.

**6. DISCLAIMER OF IMPLIED WARRANTIES AND OTHER REMEDIES.** EXCEPT AS EXPRESSLY STATED HEREIN (AND TO THE FULLEST EXTENT ALLOWED UNDER APPLICABLE LAW), STONEAGE HEREBY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND ANY AND ALL WARRANTIES, REPRESENTATIONS OR PROMISES AS TO THE QUALITY, PERFORMANCE OR FREEDOM FROM DEFECT OF THE PRODUCT COVERED BY THIS LIMITED WARRANTY. STONEAGE FURTHER DISCLAIMS ALL IMPLIED INDEMNITIES.

**7. LIMITATION OF LIABILITY.** End-User specifically acknowledges that the Product may be operated at high speeds and/or pressures, and that as such it may be inherently dangerous if not used correctly. End-User shall familiarize itself with all operation materials provided by StoneAge and shall at all times use and require its agents, employees and contractors to use all necessary and appropriate safety devices, guards and proper safe operating procedures. In no event shall StoneAge be responsible for any injuries to persons or property caused directly or indirectly by the operation of the Product if End-User or any agent, employee, or contractor of End-User: (1) fails to use all necessary and appropriate safety devices, guards and proper safe operating procedures; (2) fails to maintain in good working order such safety devices and guards; (3) alters or modifies the Product in any way not approved by StoneAge in advance in writing; (4) allows the Product to be operated under more severe conditions or beyond the rated capacity specified for the Product; or (5) otherwise negligently operates the Product. End-User shall indemnify and hold StoneAge harmless from any and all liability or obligation incurred by or against StoneAge, including costs and attorneys' fees, to or by any person so injured.

TO THE FULL EXTENT ALLOWED BY APPLICABLE LAW, STONEAGE SHALL NOT BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR PUNITIVE DAMAGES (INCLUDING WITHOUT LIMITATION, LOSS OF PROFITS, LOSS OF GOODWILL, DIMINUTION OF VALUE, WORK STOPPAGE, INTERRUPTION OF BUSINESS, RENTAL OF SUBSTITUTE PRODUCT, OR OTHER COMMERCIAL LOSS EVEN TO THE EXTENT SUCH DAMAGES WOULD CONSTITUTE DIRECT DAMAGES), WITH RESPECT TO THE COVERED STONEAGE PRODUCT, OR OTHERWISE IN CONNECTION WITH THIS LIMITED WARRANTY, REGARDLESS OF WHETHER STONEAGE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

IT IS UNDERSTOOD THAT STONEAGE'S LIABILITY, WHETHER IN CONTRACT, IN TORT, UNDER ANY WARRANTY, IN NEGLIGENCE, OR OTHERWISE SHALL NOT EXCEED THE AMOUNT OF THE PURCHASE PRICE PAID BY THE END-USER FOR THE PRODUCT. STONEAGE'S MAXIMUM LIABILITY SHALL NOT EXCEED, AND END-USER'S REMEDY IS LIMITED TO EITHER (1) REPAIR OR REPLACEMENT OF THE DEFECTIVE WORKMANSHIP OR MATERIAL OR, AT STONEAGE'S OPTION, (2) REFUND OF THE PURCHASE PRICE, OR (3) ISSUANCE OF A CREDIT FOR THE PURCHASE PRICE, AND SUCH REMEDIES SHALL BE END-USER'S ENTIRE AND EXCLUSIVE REMEDY.

YOU, THE END-USER, UNDERSTAND AND EXPRESSLY AGREE THAT THE FOREGOING LIMITATIONS ON LIABILITY ARE PART OF THE CONSIDERATION IN THE PRICE OF THE STONEAGE PRODUCT YOU PURCHASED.

Some jurisdictions do not allow the limitation or exclusion of liability for certain damages, so the above limitations and exclusions may not apply to you. This Limited Warranty gives you specific legal rights, and you may also have other rights which vary from jurisdiction to jurisdiction. If any provisions of this Limited Warranty is held to be invalid or unenforceable, such invalidity or unenforceability shall not affect the validity or enforceability of the other portions hereof.



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