



BELT LOADER EXTENSION RAMP

OPERATIONS, INSTALLATION & PARTS MANUAL

COMPLETE ASSEMBLIES

PART NUMBER	DESCRIPTION
AP1525-W	BLER, WOLLARD
AP1525-T1	BLER, TUG T1
AP1525-T2	BLER, TUG T2
AP1525-C2000E	BLER, CHARLATTE 2000E
AP1525-C150E	BLER, CHARLATTE 150E

SUBASSEMBLIES & WEAR COMPONENTS

PART NUMBER	DESCRIPTION
AP1525-0000	UNIVERSAL BLER (COMPLETE WITHOUT CAPS & RASH GUARDS; FOR USE WITH WOLLARD, TUG AND CHARLATTE 150E)
AP1525-0010	FLIP RAMP SUBASSEMBLY
AP1525-0011	DRIVE ROLLER W/ BEARING (RED)
AP1525-0012	REJECTION ROLLER W/ BEARING (BLACK)
AP1525-1050	T1 RASH GUARD, RIGHT
AP1525-1051	T1 RASH GUARD, LEFT
AP1525-1052	T2 RASH GUARD, RIGHT
AP1525-1053	T2 RASH GUARD, LEFT
AP1525-1054	WOLLARD RASH GUARD
AP1525-1055L	CHARLATTE 2000E RASH GUARD LEFT
AP1525-1055R	CHARLATTE 2000E RASH GUARD RIGHT

SHIPPING INFORMATION (2 BOXES)

BOX 1 – Ramp Assembly – 24"x24"x2"

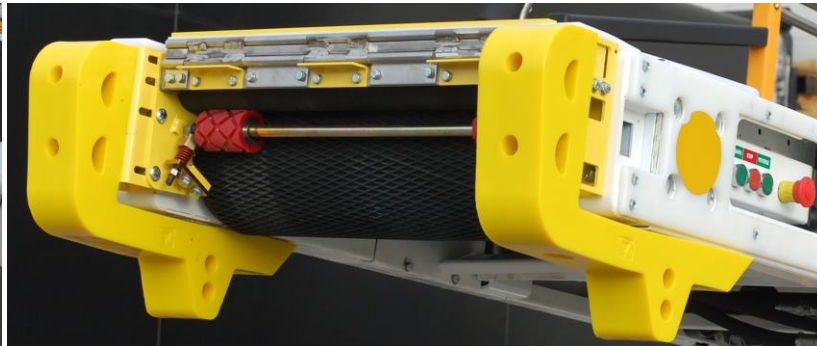
WEIGHT: 21 lbs

BOX 2 – Base Assembly – 34"x10"x6"

WEIGHT: 50 lbs

GENERAL INFORMATION

The Belt Loader Extension Ramp (BLER) is used to bridge the gap when a belt loader is intentionally positioned 6" - 12" away from the aircraft for operational or safety reasons. It features a "rejection" roller that turns in the opposite direction from the belt thus "rejecting" items such as loose straps from getting caught in the mechanism. It utilizes a friction drive system where the drive rollers make contact with the belt and rejection roller simultaneously thus using the power of the belt to turn the rejection roller. Please note that this will cause belt wear in the contact zones.





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OPERATIONS - LOADING THE AIRCRAFT

1. The BLER should be flipped onto the top of the belt when approaching the aircraft.
2. Stop the belt loader with the bumpers 3"-6" away from the aircraft with the belt at approximately the same height as the cargo floor.
3. Kneel on the BLER to open the cargo door, then flip the ramp over into the opening onto the floor.
4. Load the cargo.
5. When loading is complete kneel on the belt and flip the BLER back onto to top of the belt



OPERATIONS - UNLOADING THE AIRCRAFT

The BLER does not have to be used for unloading if the belt loader is positioned below and ~6" away from the aircraft. In this situation approach the aircraft with the BLER flipped down out of the way of operations. The BLER can be used for unloading following the same procedure as loading described above.



OPERATIONS - WHEN NOT IN USE

Always stow the BLER flipped up on top of the belt when not in use in order to avoid accidental damage.

WINTER OPERATIONS

Run belt in reverse to clear ice and snow prior to use.

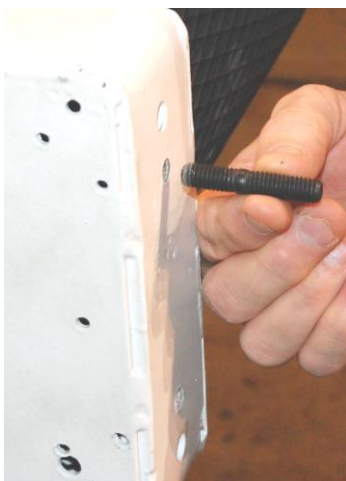


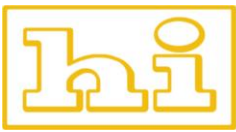
INSTALLATION - (Wollard Shown – See notes at end for TUG & Charlotte)

1. Remove existing Bumper
2. Identify model of belt loader by looking at end cap. The BLER will install as designed onto Wollard End Caps shown in the left hand image. If the end cap is as shown in the right image the BLER will require a 1/4" thick min. spacer as well as modification of the main mounting bracket due to the hole pattern being different by 1/4".



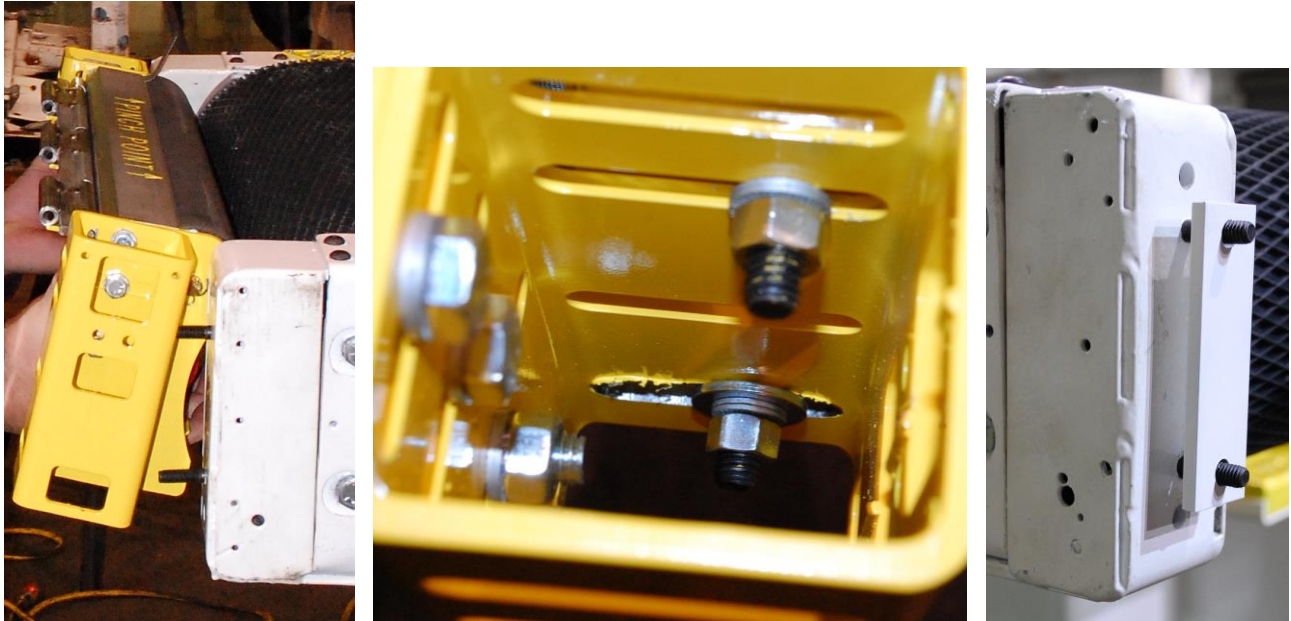
3. Inspect / Repair / Replace weld nuts (3/8-16)
4. Insert supplied 3/8-16 Studs into weld nuts. (*Charlotte uses 5/16-18 Studs*) Insert the shorter length of thread into the end cap weld nuts. Double nut the end and use a wrench to fully seat stud. If interior weld nuts are broken off, they must be repaired prior to continuing installation.





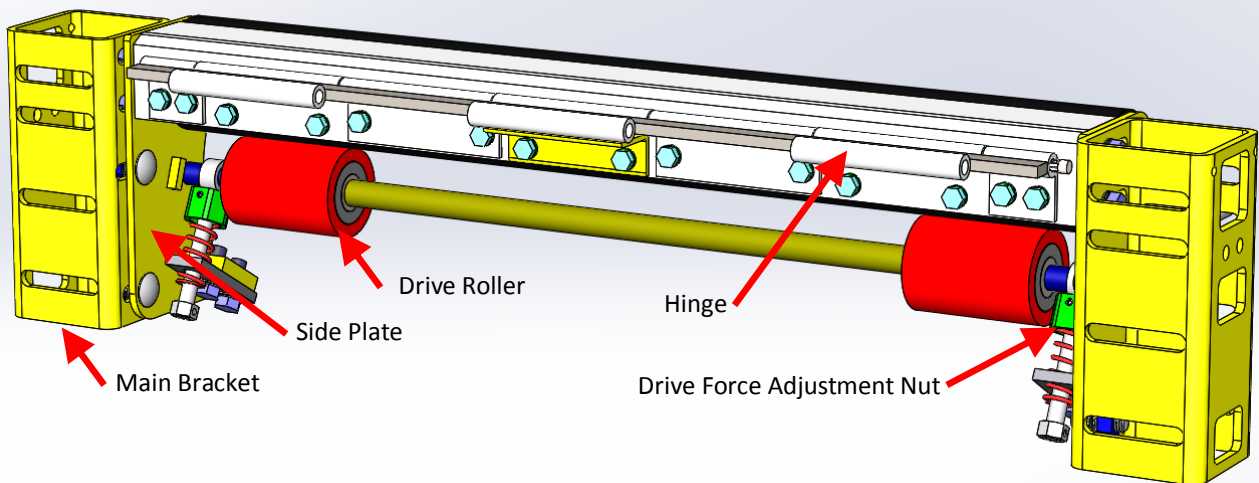
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5. Test Fit - Position the BLER main assembly over the studs with the top stud into the second slot as shown. If installing on a Wollard without the E-Stop opening, the upper surface of the lower slot will need to be ground back $\sim 3/16$ " in order to fit over the stud spacing. Use a large fender washer in place of the supplied Nord-lock washer in this instance. Install spacer for Wollards without E-Stop opening. Spacers are also used on TUGS & Charlattes.



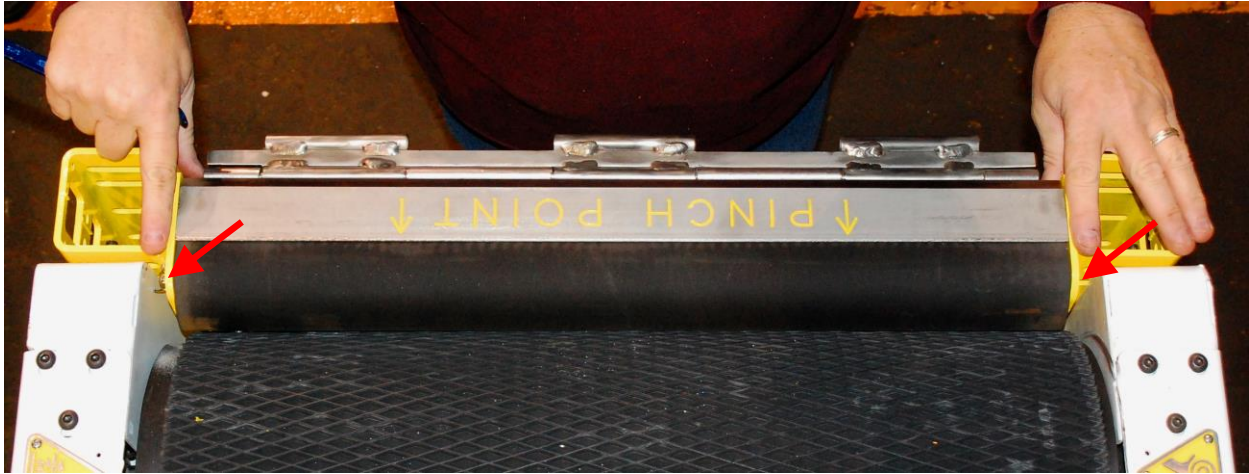
6. Loosen all four internal fasteners per side connecting the roller assembly to the side mounted main brackets (square tubes).

(Guard removed in image below for visibility)

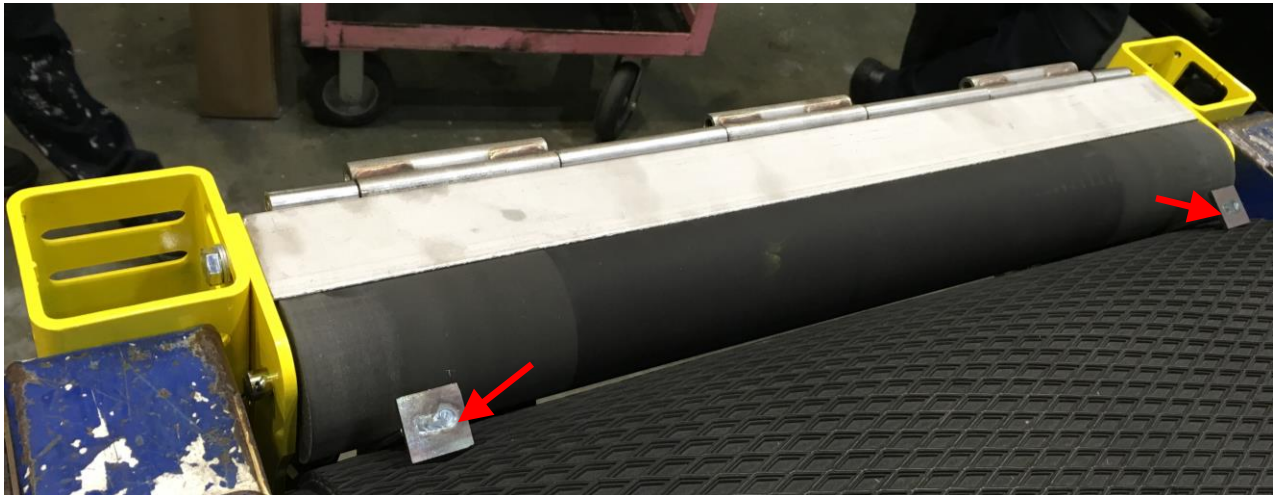




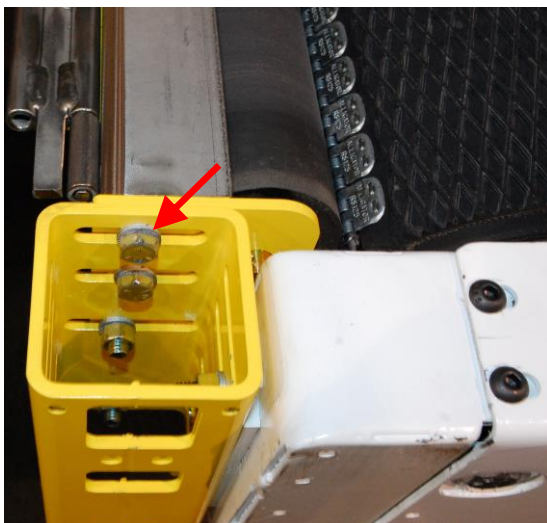
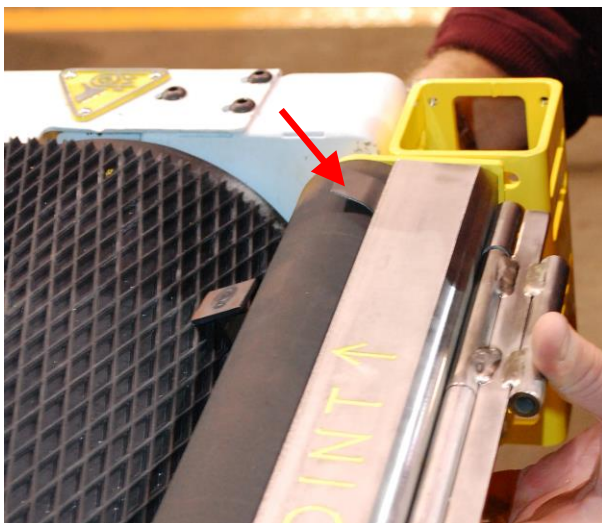
7. **Center** the assembly on the belt and tighten the mounting nuts.



8. Insert "TEE" Gap gauge (supplied) one at each end of the roller as shown below.

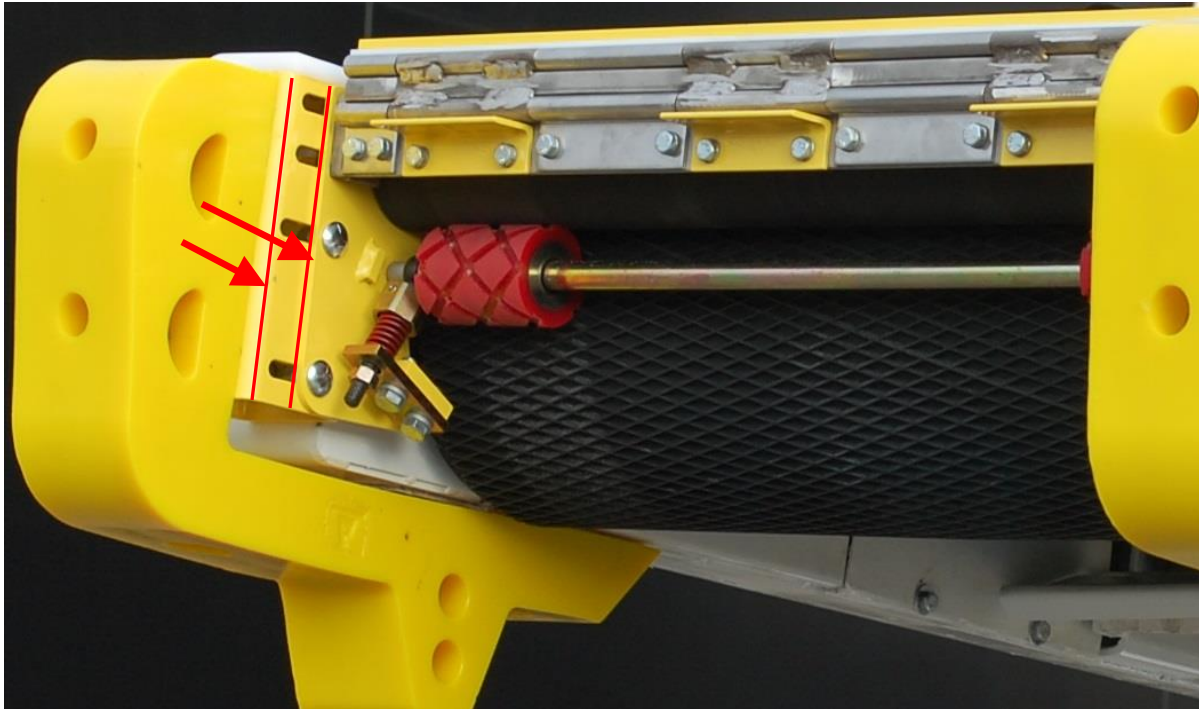


9. Insert 0.03" spacer between main roller (black) and stainless steel angle, one at each end. Push the roller assembly into the belt and tighten the top bolt only on each side.





10. Push the lower part of the assembly in until the edge of the adjusting mounting plate is parallel to the main bracket (square tube) as shown below and tighten the lower nut on the carriage bolt to hold position. Tighten the top two fasteners and then the middle fastener. (*Guard removed for visibility*)

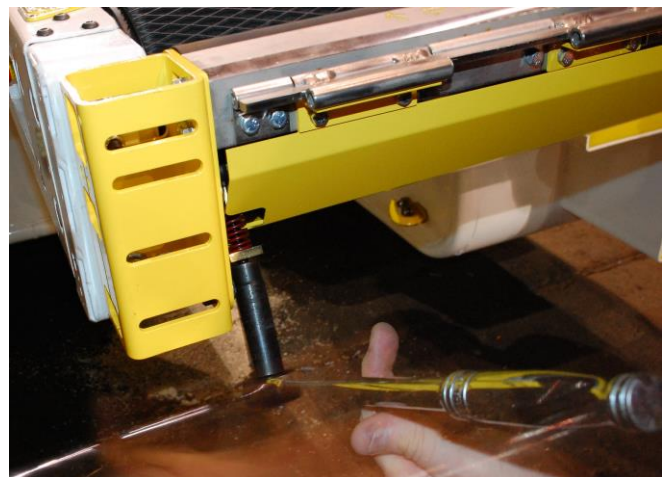


11. Remove all spacers.

CRITICAL INSPECTION: BLACK ROLLER MUST ROLL FREELY.

If it does not, verify that the nut on the end of the spring rod is screwed in, holding the red roller back from contacting the belt. If spacers were used during assembly and the red rollers are not contacting the belt and it still does not spring, please call Hall Industries for assistance.

12. Back off the lock nut on the spring rod until it is nearly completely off, as shown in the image below. This nut is only used during assembly/disassembly, and must be far enough away from the plate as to allow for wear of the red drive rollers.



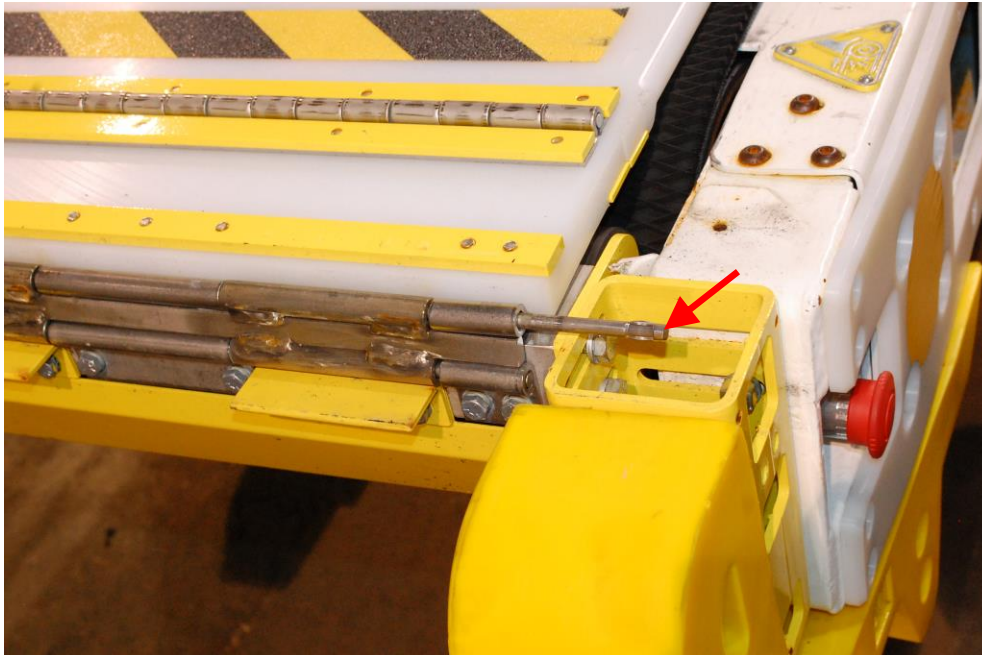


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13. The unit is now ready for testing. Remove the spacers and run the belt forwards and back checking the gap between the rejection roller (black) and the belt, especially at the splice. If the gap is uneven, too large or is making contact repeat the adjustment procedure to ensure an even gap of $\sim 1/8$ ". Check for sufficient drive force by applying pressure to the black roller while running. You should not be able to stop the rotation by hand pressure. Be CAREFUL to avoid the pinch point.



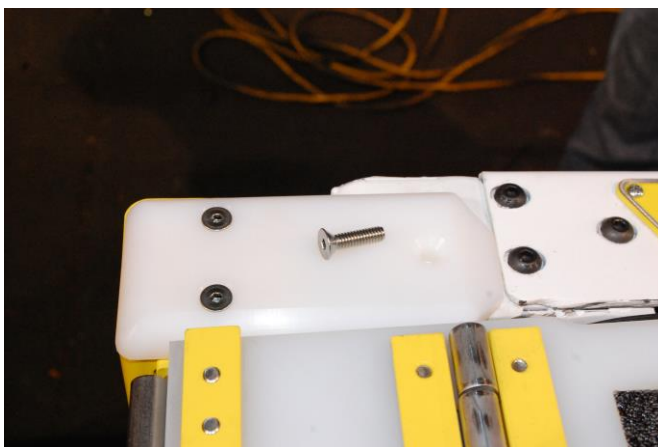
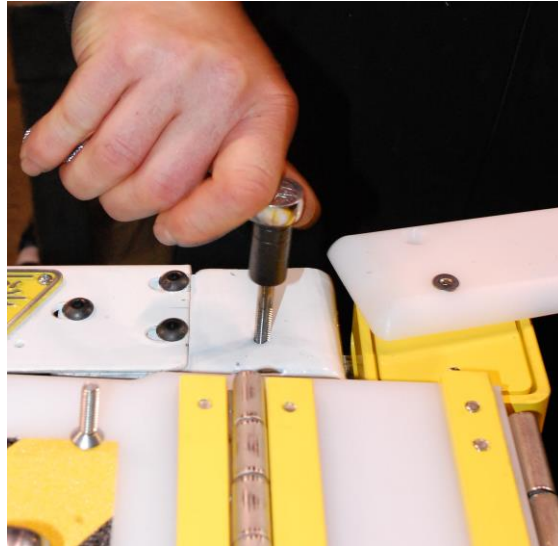
14. Install flip ramp subassembly by removing the hinge pin from flip ramp subassembly, positioning the hinge as shown and driving the pin back through. If pin drives in very easily rotate pin until bulge is oriented up and down for maximum engagement with hinge. If pin is still loose in the hinge bend the very end of the pin by impacting with a hammer. Pin must be secure so it doesn't walk out during use.





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15. Install Rash Guards using the supplied 1/4-20 hex cap screws & washers. Match Drill & Tap into the frame to install the 3rd screw. Trim rash guards with sharp knife if it interferes with frame and does not sit flat.





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16. Modify bumper as shown to match hole pattern in BLER. The upper mounting hole must be slotted.



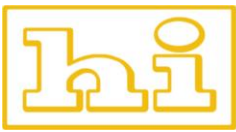
17. Reinstall B-Bumper (sometimes called delta bumpers) ensuring lateral clearance to the flip ramp using installer supplied hardware depending on the type of bumper. Image below is final assembly.





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INSTALLATION NOTES - TUG & Charlatte 150E

When installing on TUG T1 or T2 and Charlatte 150E adapter brackets or spacers are used to space the BLER away from the frame and different rash guards are used. See drawings for additional detail.

INSTALLATION NOTES - Charlatte 2000E

When installing on the Charlatte 2000E the existing E-Stop box is removed and the E-Stop is inserted into the C2000E main brackets. Match drill and tap into the bracket to attach the white side scuff guard to the main brackets. See drawings for additional detail.



Installation Questions - Call 412-287-7038 Scott Kennedy or 412-719-2183 Volus McKenna

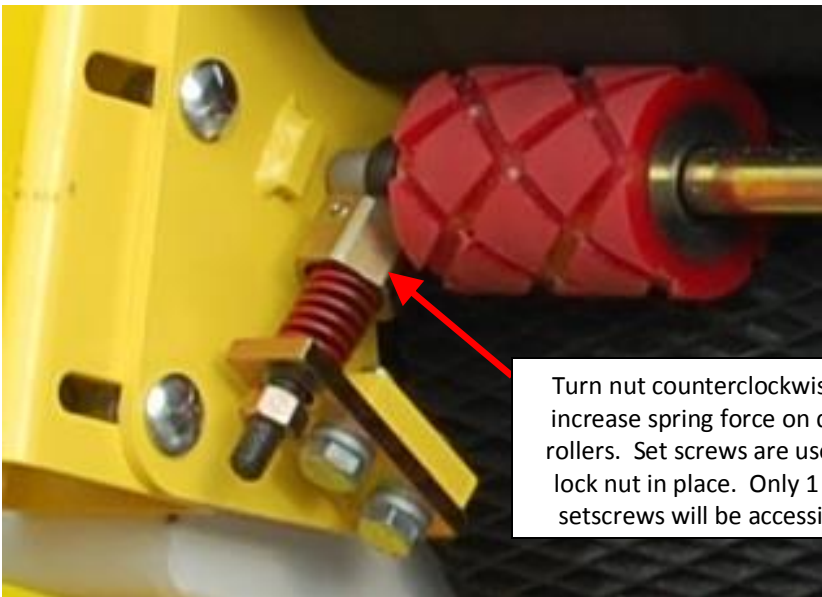


INSTALLATION NOTES – FINAL INSPECTION CHECKLIST

- Verify Rejection Roller (Black) turns in opposite direction of belt.
- Verify that the belt does not rub on the Rejection Roller.
- Verify that locknuts at end of spring rods is turned to very end of rod
- Verify that all hardware is tight.
- Verify that rash guards are tight down to top of bed frame. Do not allow any opening that can catch baggage.

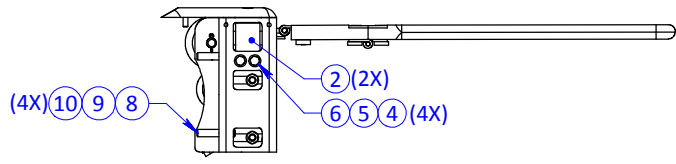
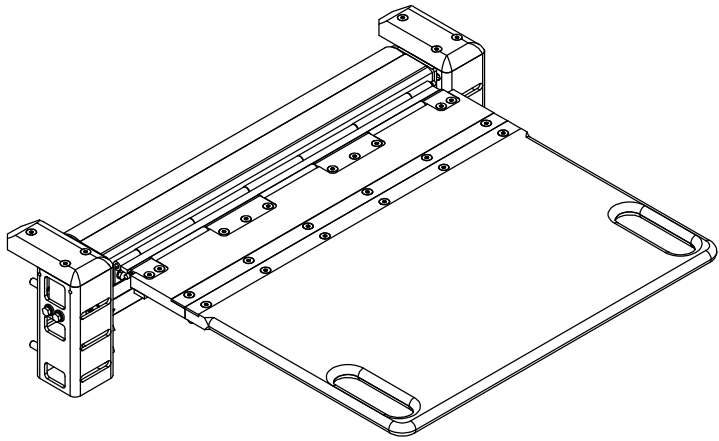
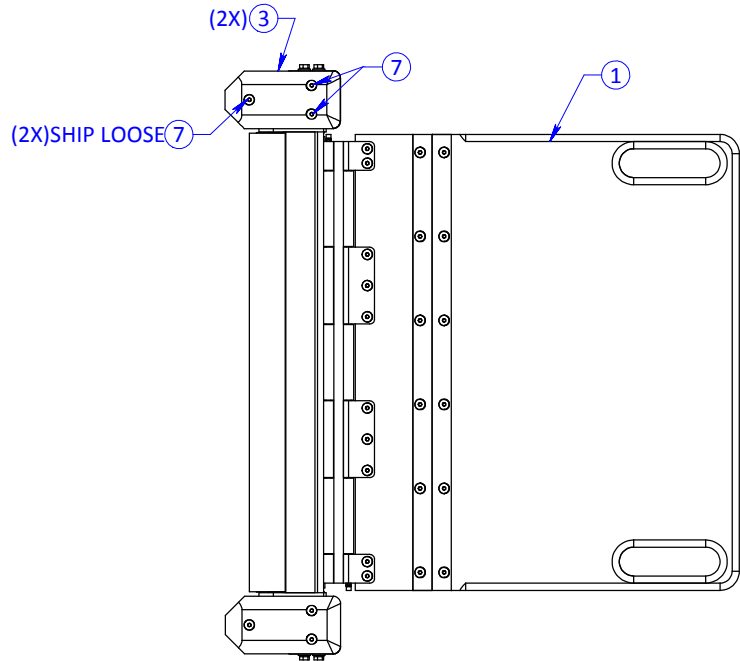
PM INSPECTION CHECKLIST

- Inspect condition of Rejection Roller. Large gouges that cause gaps larger than 1/8" are cause for replacement.
- Inspect condition of Drive Rollers (Red). Remove guard to perform inspection. If all tread is worn off then rollers should be replaced.
- Inspect Rejection Roller drive force by turning belt on and trying to stop the roller from turning with hand pressure. Check in both directions. Rejection roller should not be able to be stopped with medium to high levels of hand pressure. Be careful to not catch a finger in the pinch point.
- Adjust Rejection Roller driver force. If Drive rollers are worn but not to point of replacement, increased drive force can be obtained by turning the spring adjustment nuts (plated yellow with 3 setscrews in the side) to increase the spring pre-compression. Lock into position with a setscrew as access permits. Replace guard after adjustment procedure.
- Verify Rejection Roller (Black) turns in opposite direction of belt.
- Verify that the belt does not rub on the Rejection Roller.
- Verify that there is a gap between the spring rod locknut and plate.
- Verify that all hardware is tight.
- Verify that rash guards are tight down to top of bed frame. Do not allow any opening that can catch baggage.



Turn nut counterclockwise to increase spring force on drive rollers. Set screws are used to lock nut in place. Only 1 or 2 setscrews will be accessible.

REVISIONS				
REV	DESCRIPTION	DATE	BY	CHK



ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	AP1525-0000	UNIVERSAL BASE ASSEMBLY
2	2	AP1525-1064	CAP, WOLLARD
3	2	AP1525-1054	RASH GUARD, WOLLARD
4	4	AP1525-2017	1/4 WASHER, SAE TYPE A
5	4	AP1525-2014	1/4 HEAVY SPLIT LOCK WASHER
6	4	AP1525-2013	1/4-20 x 3/4 HEX CAP SCREW
7	6	AP1525-2100	1/4-20X1 FLAT HEAD SCREW (SS)
8	4	AP1525-2015	3/8-16 X 2 DOUBLE STUD
9	4	AP1525-2009	3/8" NORDLOCK WASHER
10	4	AP1525-2012	3/8-16 HEX NUT
11	2	AP1525-1070	TEE GAP GAUGE

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

TOLERANCES		
ANGLE	.XX	.XXX
± 0.5°	± .01	± .005
X<12"=± 1/32"	X>12"=±1/16"	

THIRD ANGLE PROJECTION

CHECK	DATE
CBM	9/7/2016
DRAWN	DATE
MCKENNA	12/10/2015

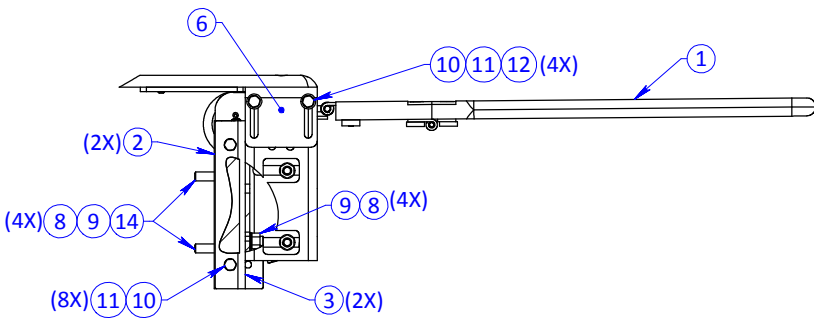
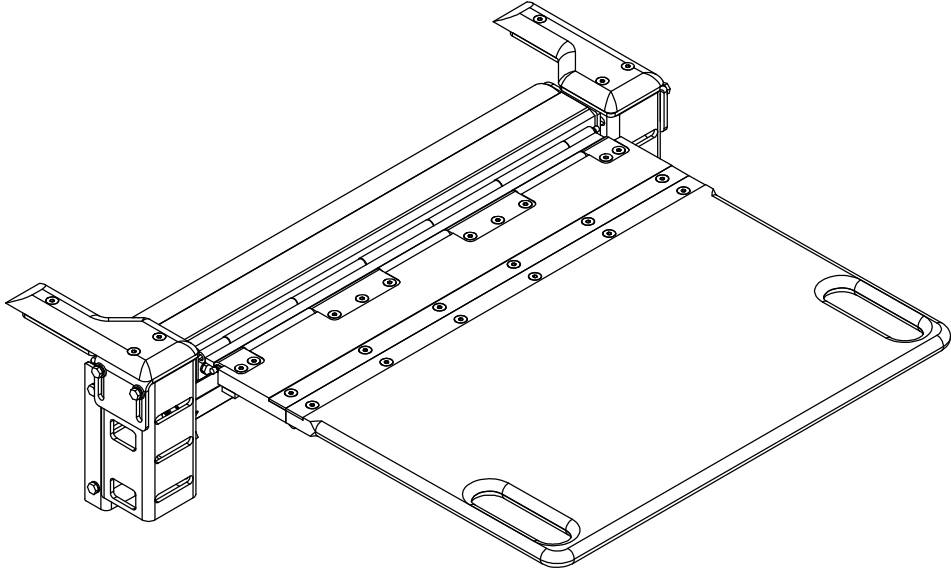
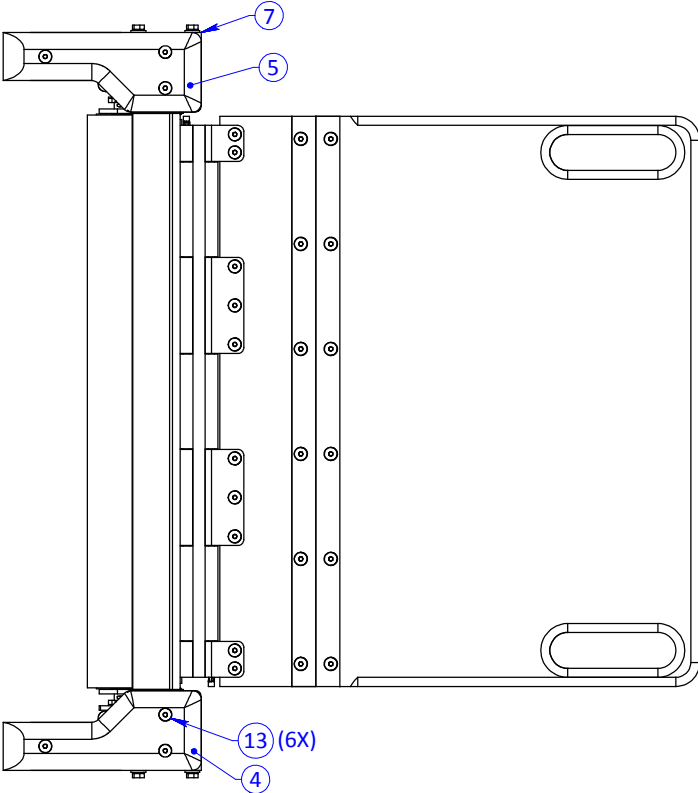
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Hall Industries, Inc.

PROJECT	BLER
FILE NAME	AP1525-W WOLLARD MANUAL VERSION
DESCRIPTION	WOLLARD KIT

SIZE	DWG/PART NO.	REV
A	AP1525-W	0
SCALE 1:5	WEIGHT: 71.73 LBS	SHEET 1 OF 1

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REVISIONS				
REV	DESCRIPTION	DATE	BY	CHK



ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	AP1525-0000	UNIVERSAL BASE ASSEMBLY
2	2	AP1525-1043	TUG "T2" INNER CHANNEL
3	2	AP1525-1044	TUG "T2" OUTER CHANNEL
4	1	AP1525-1052	RASH GUARD, T2, RIGHT
5	1	AP1525-1053	RASH GUARD, T2, LEFT
6	1	AP1525-1062	CAP, T2, RIGHT
7	1	AP1525-1063	CAP, T2, LEFT
8	6	AP1525-2009	3/8" NORDLOCK WASHER
9	6	AP1525-2012	3/8-16 HEX NUT
10	12	AP1525-2013	1/4-20 x 3/4 HEX CAP SCREW
11	12	AP1525-2014	1/4 HEAVY SPLIT LOCK WASHER
12	4	AP1525-2017	1/4 WASHER, SAE TYPE A
13	6	AP1525-2018	1/4-20 X 3/4 FLAT HEAD SCREW (SS)
14	4	AP1525-2015	3/8-16 X 2 DOUBLE STUD
15	2	AP1525-1070	TEE GAP GAUGE

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

TOLERANCES		
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	± 0.5°	± .01 ± .005
	X<12"=± 1/32"	X>12"=±1/16"

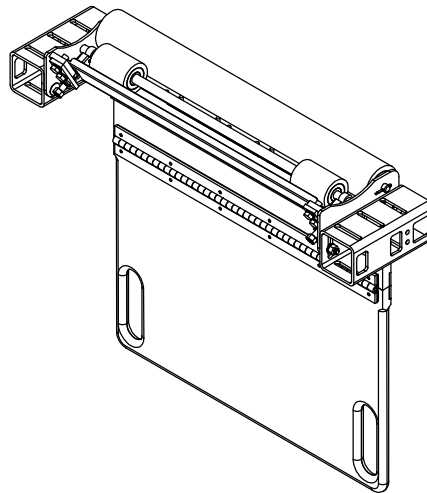
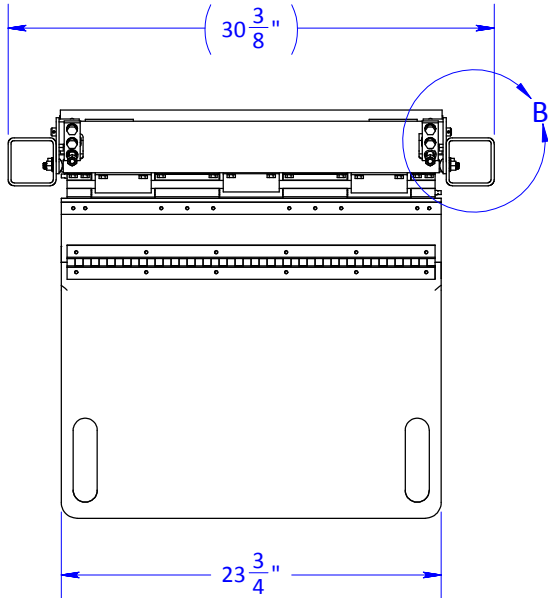
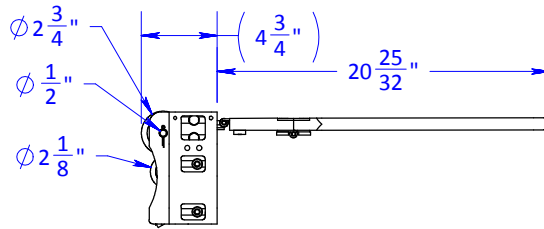
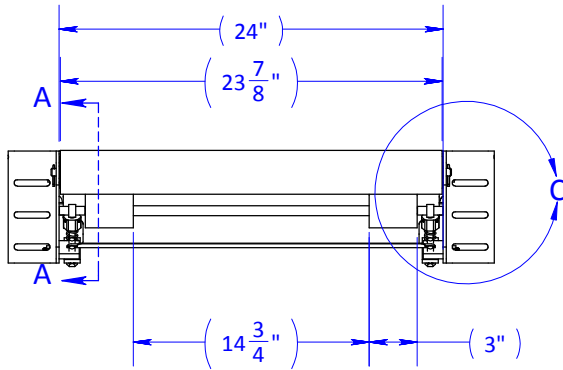
THIRD ANGLE PROJECTION

CHECK	DATE
VTM	9/7/2016
DRAWN	DATE
ANDERSON	9/7/2016

hi 514 Mecklem In Ellwood City, PA 16117
Hall Industries, Inc.

PROJECT	BLER
FILE NAME	AP1525-T2 TUG T2 MANUAL VERSION
DESCRIPTION	TUG T2 ASSEMBLY
SIZE	DWG/PART NO.
A	AP1525-T2
SCALE 1:8	WEIGHT: 57.62 LBS
	SHEET 1 OF 1

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ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	AP1525-1008	MAIN BRACKET
2	1	AP1525-3000	ATTACHMENT PLATE WELDMENT
3	1	AP1525-3000M	MIRROR-SIDEPLATE WELDMENT
4	1	AP1525-3002	ANGLE WELDMENT
5	1	AP1525-0010	FLIP BOARD SUBASSEMBLY
6	2	AP1525-0011	DRIVE ROLLER W BEARINGS
7	1	AP1525-0012	REJECTION ROLLER W BEARINGS
8	2	AP1525-1001	SPRING CUP
9	1	AP1525-1003	DRIVE ROLLER SHAFT
10	1	AP1525-1004	LARGE ROLLER SHAFT
11	2	AP1525-1005	SPRING PLATE
12	4	AP1525-1007	SPACER
13	3	AP1525-1013	HINGE STOP
14	1	AP1525-GUARD	GUARD
16	2	AP1525-2000	ROD END
16	2	AP1525-2001	SPRING
17	2	AP1503-2004	SHIM WASHER, 1/2" X 3/4" X 1/32"
18	6	AP1525-2007	CUP POINT SET SCREW 10-24 X 3/16"
19	4	AP1525-2008	3/8-16 X 1 CARRIAGE BOLT
20	12	AP1525-2009	3/8" NORDLOCK WASHER
21	2	AP1525-2010	3/8-16 CENTERLOCK NUT
22	8	AP1525-2011	3/8-16 x 1 HEX CAP SCREW
24	4	AP1525-2012	3/8-16 HEX NUT
24	14	AP1525-2013	1/4-20 x 3/4 HEX CAP SCREW
25	14	AP1525-2014	1/4 HEAVY SPLIT LOCK WASHER
26	2	AP1525-2016	COTTER PIN 7/64 X 1"

NOTES:

1. SEE SHEET 2 FOR SECTION A-A AND DETAILS B & C

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TOLERANCES

ANGLE .XX .XXX
 ± 0.5° ± .01 ± .005
 X<12"=± 1/32" X>12"=±1/16"

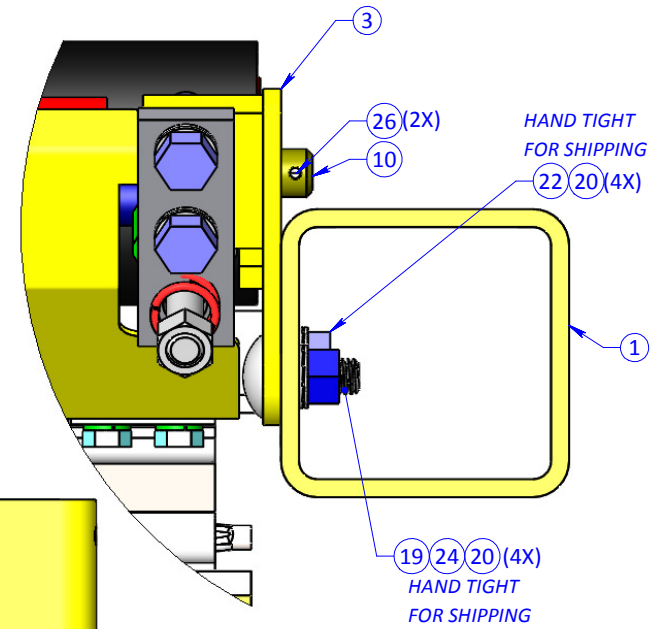
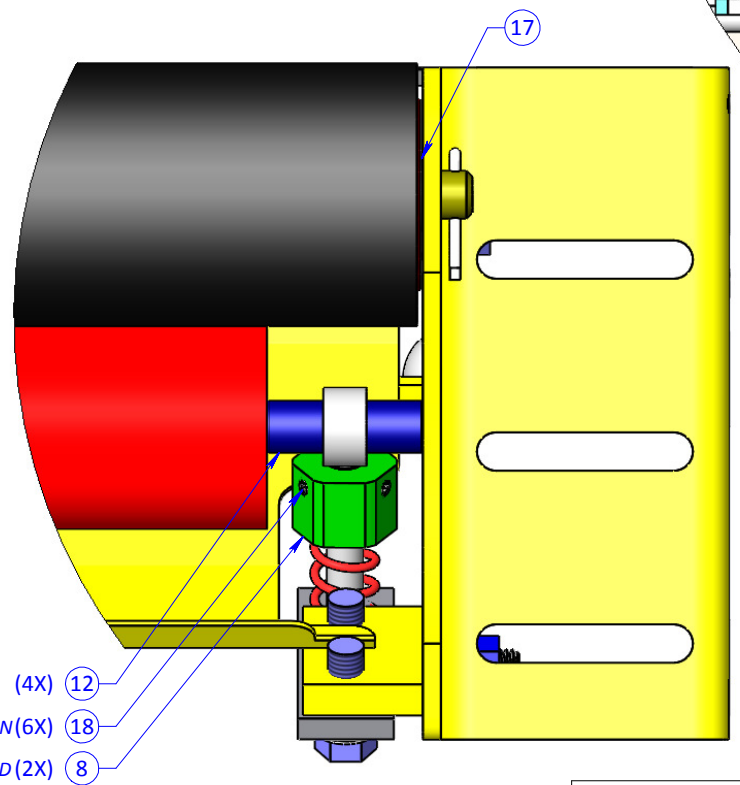
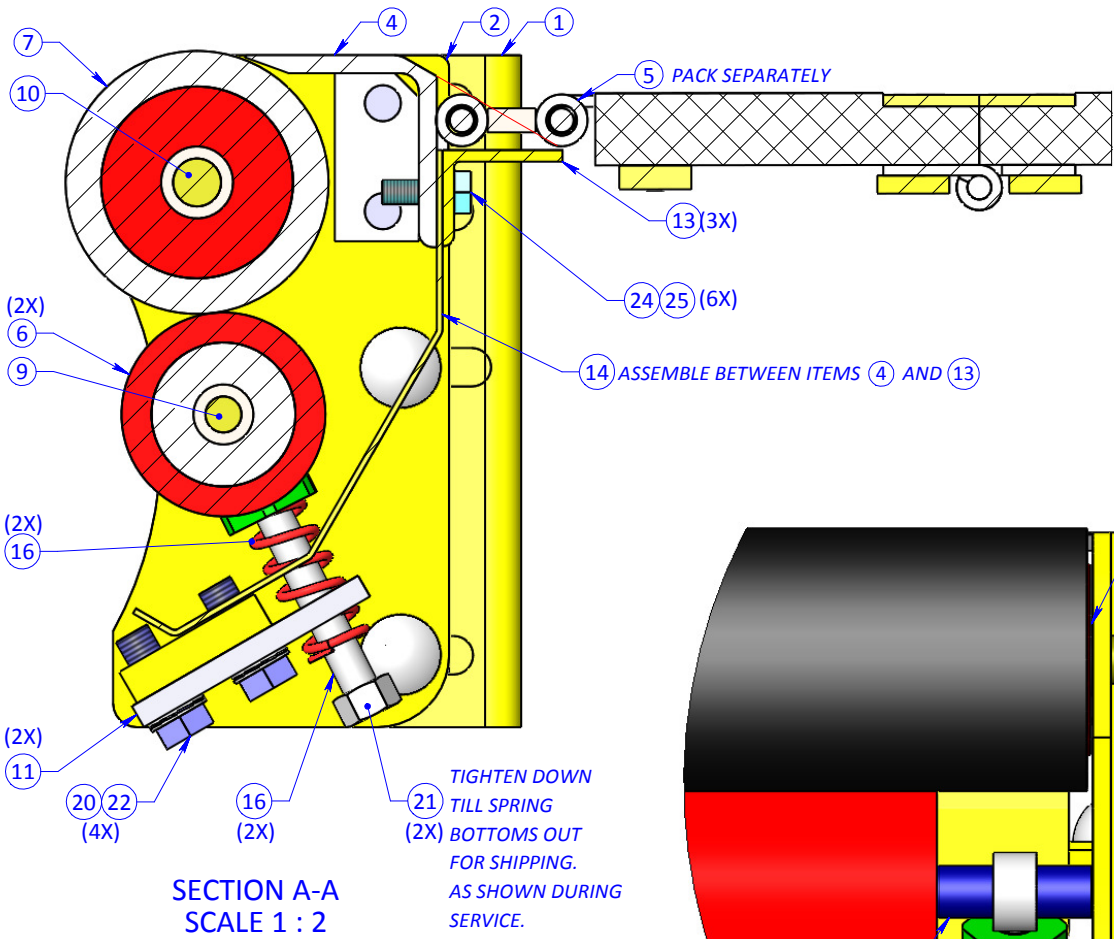
THIRD ANGLE PROJECTION

CHECK DATE
 MCKENNA 12/5/2015
 DRAWN DATE
 ANDERSON 12/4/2015

hi 514 Mecklem In Ellwood City, PA 16117
Hall Industries, Inc.

PROJECT	BLER
FILE NAME	AP1525-0000 BLER UNIVERSAL-MANUAL
DESCRIPTION	UNIVERSAL BASE ASSEMBLY
SIZE	DWG/PART NO.
A	AP1525-0000
SCALE 1:12	WEIGHT: 70.00 LBS
	SHEET 1 OF 2

REV
0



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SEE SHEET 1 FOR BOM

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TOLERANCES

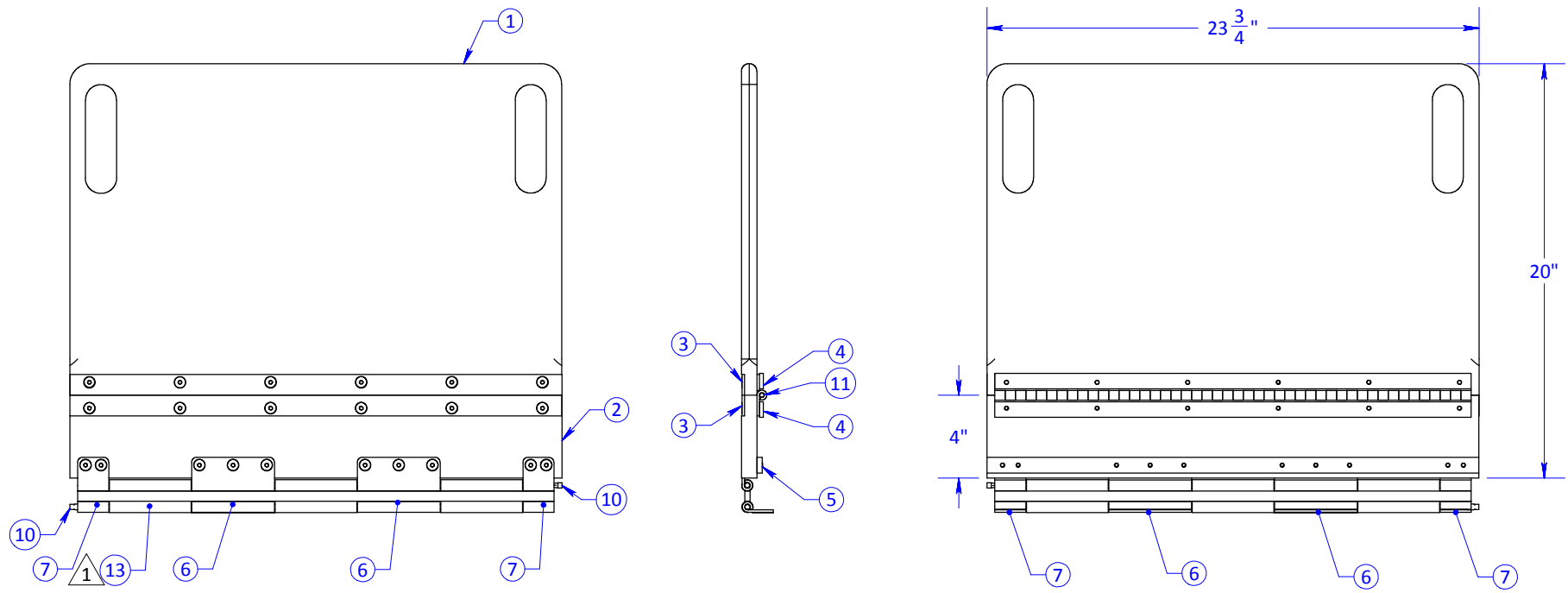
ANGLE	.XX	.XXX
± 0.5°	± .01	± .005
X<12"=± 1/32"	X>12"=±1/16"	

THIRD ANGLE PROJECTION

CHECK	DATE
MCKENNA	12/5/2015
DRAWN	DATE
ANDERSON	12/4/2015

hi 514 Mecklem In Ellwood City, PA 16117 Hall Industries, Inc.	
PROJECT	BLER
FILE NAME	AP1525-0000 BLER UNIVERSAL-MANUAL
DESCRIPTION	UNIVERSAL BASE ASSEMBLY
SIZE	DWG/PART NO.
A	AP1525-0000
SCALE 1:12	WEIGHT: 70.00 LBS
	SHEET 2 OF 2
REV	0

REVISIONS				
REV	DESCRIPTION	DATE	BY	CHK
1	HINGE: 1 WELDED PART INSTEAD OF 3	7/29/2016	VTM	SAK



ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	AP1525-1020	FRONT PLATE
2	1	AP1525-1021	FRONT PLATE TRANSITION
3	2	AP1525-1022	TOP SCREW PLATE
4	2	AP1525-1023	BOTTOM SCREW PLATE
5	1	AP1525-1024	HINGE SCREW PLATE
6	2	AP1525-1026	HINGE PLATE A
7	2	AP1525-1028	HINGE PLATE B
8	2	AP1525-1027	HINGE PLATE C
9	2	AP1525-1029	HINGE PLATE D
10	2	AP1525-1031	HINGE PIN
11	1	AP1525-1025	PIANO HINGE (CUSTOM)
12	22	AP1525-2100	1/4-20X1 FLAT HEAD SCREW (SS)
13	1	AP1525-1030W	HINGE SPACER
14	1	AP1525-1033	HINGE SHIM LARGE

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		hi 514 Mecklem In Ellwood City, PA 16117	
TOLERANCES		Hall Industries, Inc.	
ANGLE	.XX .XXX	PROJECT	BLER
± 0.5°	± .01 ± .005	FILE NAME	AP1525-0010 FLIP BOARD SUBASSEMBLY
X<12"=± 1/32"	X>12"=±1/16"	DESCRIPTION	FLIP BOARD SUBASSEMBLY
THIRD ANGLE PROJECTION		SIZE	DWG/PART NO.
CHECK	DATE	A	AP1525-0010
MCKENNA	12/3/2015	SCALE 1:8	WEIGHT: LBS
DRAWN	DATE	SHEET 1 OF 1	
ANDERSON	12/7/2015		