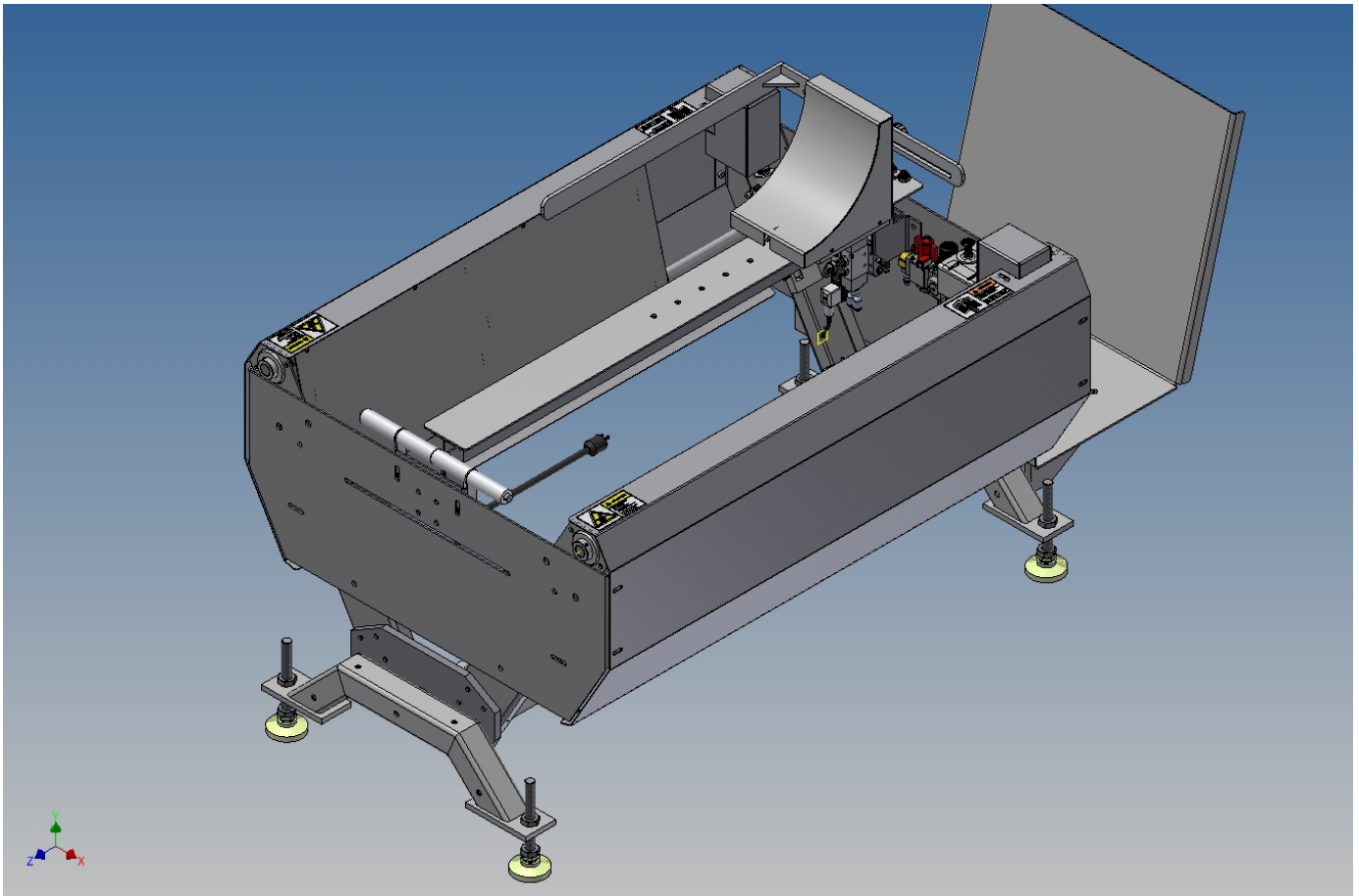


LOVESHAW

Little David™ Case Former

CF5-AF Semi Automatic Case Former



Ver. E

9/3/2015

Operator's Manual

LITTLE DAVID™ CASE FORMER

CF5-AF Operation Manual

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CHAPTER 1: INTRODUCTION

Thank you for purchasing the Little David CF5-AF by Loveshaw. This machine is designed to be a simple yet effective way to form corrugated boxes and hold the box while an operator fills it with product. Some of the key features of the CF5-AF are:

- **ADJUSTMENT FREE** – There are no adjustments required for varying width or length boxes. No scales to read, cranks to turn or locks to fasten. (There are adjustable aids for new users to make running the machine easier.)
- **EASE OF USE** – The operator simply opens the blank and lowers it onto the Tee-Rail and Folding Block to tuck both minor flaps. Then they push the case against the folding block and the major flaps are folded up automatically.
- **FEW MOVING PARTS** – The machine is designed to be low-maintenance due to the low number of moving parts and the low stress levels on the components.
- **VERSATILE** – The CF5-AF will work with nearly any case sealer.
- **SIMPLICITY** – Low number of parts and NO PLC.

It's important that anyone installing, using or maintaining the machine read this manual before starting the task.

After reading this manual, a person will be able to:

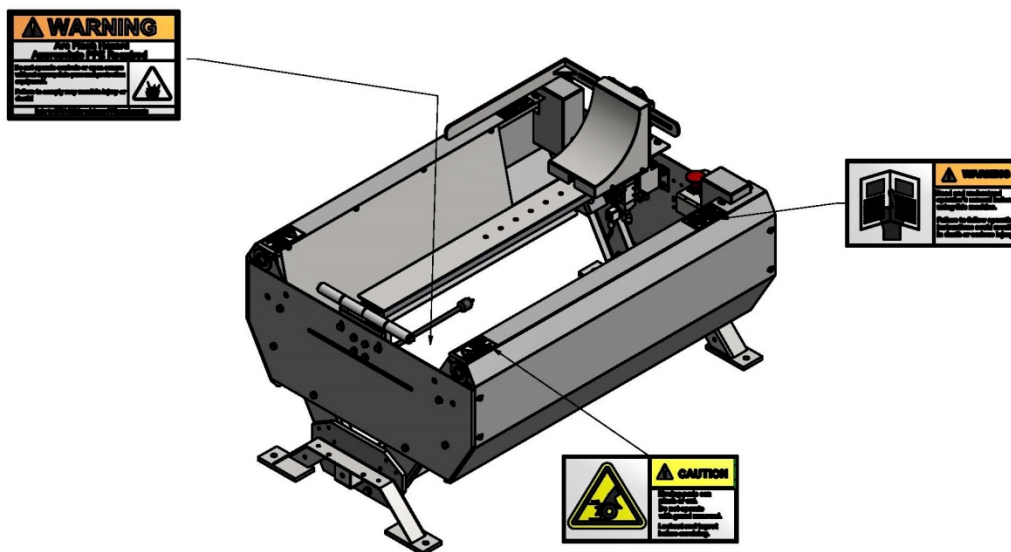
- Set-up the machine and optimize it for their production.
- Maintain the machine in good working order.
- Troubleshoot any problems.
- Order spare parts.

Throughout this manual are illustrations to aid in the performance of the various tasks.

CHAPTER 2: OPERATING SAFETY

Observe the warnings and cautions below when using the Little David CF5-AF case former. If a safety label is missing or not legible it must be replaced immediately.

Failure to follow safety labels can lead to injury or damage to the machine.



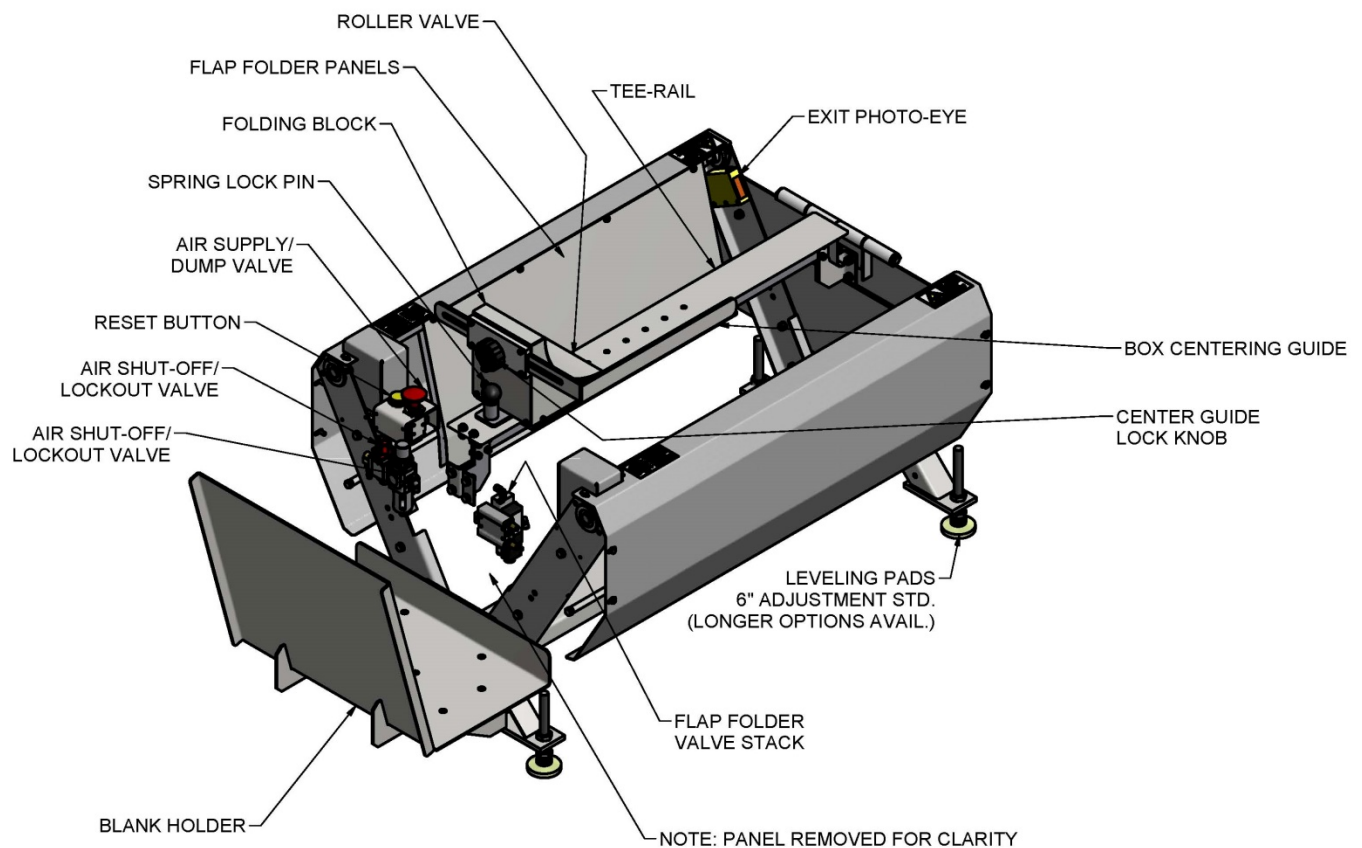
Important Requirement to System Operation

An electrical receptacle must be located near the machine. The line cord connection to the receptacle is the disconnect means for the machine. The receptacle must be located in an area that is easily accessible to all personnel.

Warning: Potential Bodily Injury

- **Always disconnect all sources of energy to the machine before performing maintenance.**
- **Sources of energy include electrical and pneumatic. Refer to your company's lock out tag out procedures.**
- **Never bypass or remove safety guards from the machine.**
- **Never override safety devices such as Emergency Stop switches.**
- **Never make adjustments to the machine when the machine is operating.**
- **Never place hands or body inside confines of the machine unless all power sources are locked out.**
- **Never wear jewelry, loose clothing, such as ties, scarves etc. and long hair must be pulled back when operating this machine.**
- **Never pull a jammed box out of the machine while it is in operation. Stop machine and release pneumatic energy before clearing a jam.**

CHAPTER 3: OVERVIEW AND SPECIFICATIONS



MACHINE SPECIFICATIONS

Electrical: 110 VAC Single Phase, 60 Hz., 1>amp.

Pnuematic: 50 psi, clean, dry air, 1>CFM per minute.

Dimensions: 58" long x 30-1/4" wide x 22-1/4 high (w/o leveling pads).

Weight: 230 lbs.

Box Range: (L x W x H)

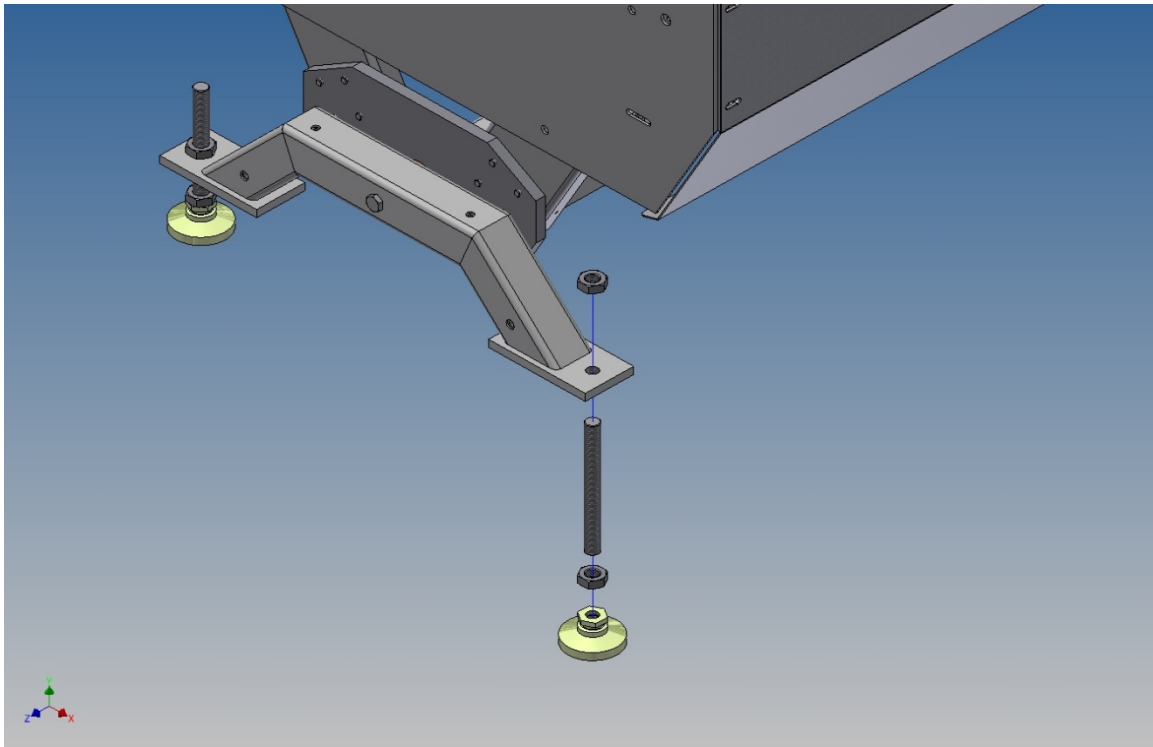
6" x 4" x 3" (Min.)

26" x 22" x infinity (Max.)

CHAPTER 4: INSTALLATION

IMPORTANT: Use care when lifting and moving the machine. Do not drop or jar the machine or damage may result. Lift the machine off of the shipping skid with a powered fork lift by positioning forks under main frame beam. Center the forks under the frame so the unit does not tip.

- **Unpack the shipping box that contains the leveling pads and hardware.**
- **While the machine is elevated and secure, install the threaded rod (5/8-11UNC X 6") and leveling pads. Use a (1) jam nut on top of leveling pad and (1) on rod above machine leg.**



- **Determine the desired height of the machine by measuring the surface to floor distance of your mating case sealer or conveyor. Set the leveling pads so that the Tee-Rail top surface is 1/8"-3/16" above the mating machine's working surface.**
- **Optional threaded rods up to 12" long are available.**

CONNECTION TO CASE SEALERS:

Kits are available to connect the CF5-AF to any of the Little David case sealers. These kits should be used to maintain alignment between the two machines. Installation instructions for connecting specific machines are supplied with each one.

There is also a Universal Connection Kit available to connect the CF5-AF to another company's case sealer or conveyor. The Little David connection kits can be ordered thru our aftermarket department using the following part number format:

.CKCF5AF-_____ Add the model number of your machine.

Example:

.CKCF5AF-LD24 for connection to the Little David LD24

The available kits are:

.CKCF5AF-LD24

.CKCF5AF-LD7

.CKCF5AF-LD3SB

.CKCF5AF-LDR

.CKCF5AF-LDXSS2

.CKCF5AF-LDX/SS

.CKCF5AF-LDXRTB

.CKCF5AF-3SBEXT

.CKCF5AF-LDXUTB

ELECTRICAL AND PNEUMATIC CONNECTIONS

Electrical: The CF5-AF is equipped with a 10 ft. line cord and a NEMA 5-15 male 3-prong straight plug. The current requirement is less than 1 ampere.

Pneumatic: Connect the air supply to the manual shut off valve on the back panel of the machine. The shut off valve comes factory equipped with a Foster 10-3 (Series A) male quick-disconnect fitting. If the mating socket is not available remove the fitting and insert your own 1/4 NPT fitting to connect to plant air.

The regulator should be set to 50 psi.

CHAPTER 5: THEORY OF OPERATION

The basic function of the CF5-AF is to serve as a case former and pack station for a low to medium volume operation. With minimal physical inputs from a human operator, the machine will fold the bottom major flaps of an RSC or HSC corrugated box and hold the box in place while the operator fills it with product and dunnage.

After the case has been filled, the operator will manually push the case out of the machine into either a case sealer or onto conveyor.

The CF5-AF does not have the capacity to tape or glue the flaps. That must be accomplished by a secondary machine. The machine can be used as a semi-automatic case erector when coupled with a side-belt bottom only case sealer.

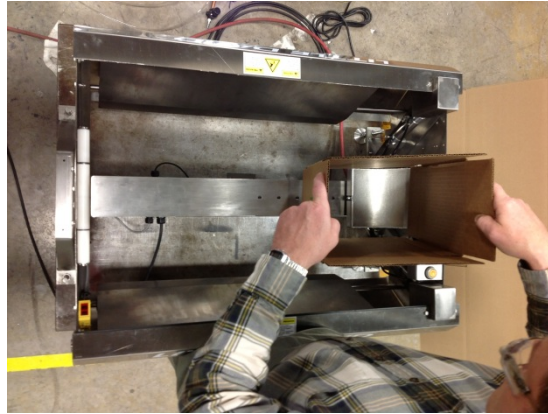
The operating sequence is as follows:

1. Based on the length of the cases you are using, set the folding block forward to minimize the distance between the front of the case and the front of the machine. This will reduce the time required to push the box out of the machine. Lift up on the spring pin located at the back of the folding block and move the folding block accordingly. The spring pin will snap into the tee rail when aligned with the series of holes. (This function is not available on machine with pneumatic pusher option)



2. To turn the machine on, pull up on the RED knob marked "E-STOP". This will supply air to the pneumatic system.
THIS DEVICE DOES NOT CONTROL ELECTRIC POWER.
3. The operator will pick up a blank and grip it at the top, on the minor flaps and open the case to form its shape.

4. **Position the case centered over the tee-rail with the long side of the box running in the direction of box travel.**



5. **Lower the case front end first onto the tee-rail to fold the front minor. While doing this lower the rear end onto the sloped surface of the folding block to fold in the rear minor.**



6. **In one motion, bring the case downward and forward until it sits evenly on the tee-rail.**



- 7. Slide case rearward until it contacts the nose of the folding block. The roller air switch housed in the nose will be activated and the major folding panels will rise up.**



- 8. If the case does not fold properly press the yellow “RESET” button and repeat step 7.**

- 9. At this point the case is ready to be filled.**

- 10a. Manual Version - Once the case is ready the operator will push it out over the rollers into the mating machine. When the box clears the exit photo-eye, the flap folders will reset and the machine is ready for the next cycle.**



10b. Pusher Version - Once the case is filled and ready the operator will push the green start button (fig. 1). This will actuate the pusher and transfer case into the mating machine (fig. 2). The exit photo-eye will reset the flaps down and return the pusher to the home position so the machine is ready for the next cycle (fig. 3).



Figure 1



Figure 2



Figure 3

CHAPTER 6: MAINTENANCE

THE FOLLOWING MAINTENANCE CHECKS SHOULD BE PERFORMED AFTER EVERY 40 HOURS OF OPERATION.

MECHANICAL

1. CHECK ALL FASTENERS FOR TIGHTNESS
2. CHECK ALIGNMENT OF CF5AF RELATIVE TO THE MATING CASE SEALER OR CONVEYOR IN BOTH THE HORIZONTAL AND VERTICAL DIRECTIONS.
3. ADJUST VEE-WHEELS (PUSHER VERSION) TO ELIMINATE PLAY.
4. CHECK FLAP FOLDER BUMPERS FOR WEAR AND POSITION.

PNEUMATIC

1. CHECK ALL HOSES AND FITTINGS FOR LEAKS OR DAMAGE.
2. CHECK ALL AIR CYLINDERS FOR WEAR. THE FLAP FOLDER CYLINDERS ARE NON-REBUILDABLE, THROWAWAY TYPE. REPLACE AS NECESSARY. THE PUSHER CYLINDER IS REBUILDABLE. SEE THE RECOMMENDED SPARE PARTS LIST TO ORDER A REBUILD KIT.
3. CHECK FOR TIGHTNESS AND PROPER FUNCTION OF ALL OF THE MANUALLY ACTUATED VALVES INCLUDING THE FLAP FOLDER VALVE, THE RESET VALVE, THE PUSHER VALVE AND THE E-STOP VALVE. REPLACE ANY MALFUNCTIONING VALVE.
4. CHECK THE AIR FILTER. CLEAN THE ELEMENT AS NECESSARY.
5. SET AIR PRESSURE TO 50 P.S.I.

ELECTRICAL

1. CHECK ALL WIRES FOR GOOD CONNECTION AND INSULATION.
 2. CHECK THE EXIT PHOTO-EYE FOR SENSITIVITY, ALIGNMENT AND TIMING. REFER TO INSTRUCTIONS IN SECTION
-

CHAPTER 7: TROUBLE SHOOTING

- **BOX DOESN'T FOLD PROPERLY**

1. MAKE SURE BOX IS CENTERED OVER TEE RAIL BEFORE BUMPING BOX AGAINST FLAP FOLDER SWITCH.
2. MAKE SURE BOX IS SITTING FLAT ON TEE RAIL.
3. REVIEW "THEORY OF OPERATION" SECTION FOR CORRECT SEQUENCE OF ACTIONS TO FORM A BOX.

- **FLAP FOLDERS DON'T ACTUATE**

1. CHECK TO SEE THAT AIR SUPPLY IS CONNECTED, SHUT-OFF VALVE IS TURNED ON, AIR REGULATOR SET TO 50 PSI, AND E-STOP BUTTON IS PULLED UP.
2. IS FLAP FOLDER VALVE FUNCTIONAL? TRY ACTUATING BY HAND. ADJUST POSITION OF VALVE OR REPLACE AS NECESSARY.
3. CHECK AIR FLOW CONTROLS ON THE FLAP FOLDER CYLINDERS. ADJUST AS NECESSARY. BE SURE TO TIGHTEN LOCK NUTS AFTER ADJUSTING.
4. PERFORM LOCK-OUT/TAG-OUT OF ELECTRICAL POWER AND AIR SUPPLY THEN CHECK FOR ANY MECHANICAL OBSTRUCTION.

- **FLAP FOLDERS DON'T RETRACT**

1. DOES MACHINE HAVE ELECTRICAL POWER?
2. PHOTO-EYE (PE) IS PICKING UP INADVERTENT SIGNAL:
 - a) CHECK TO SEE IF SOMETHING IS BLOCKING THE FIELD OF THE PE.
 - b) ADJUST ANGLE OF PE TO AVOID PICKING UP MACHINE COMPONENTS.
 - c) REDUCE SENSITIVITY OF PE (SEE APPENDIX).
3. CHECK SOLENOID VALVE FOR PROPER FUNCTION:
 - a) IS DIN CONNECTOR TIGHT?
 - b) IS VALVE STICKING? TEST BY PRESSING MANUAL OVERRIDE.
 - c) REPLACE VALVE IF NECESSARY
4. PERFORM LOCK-OUT/TAG-OUT OF ELECTRICAL POWER AND AIR SUPPLY THEN CHECK FOR ANY MECHANICAL OBSTRUCTION.

- **BOX PUSHER (OPTIONAL) DOES NOT MOVE FORWARD OR RETRACT**

1. IS LOAD TOO HEAVY? INCREASE AIR PRESSURE (60 PSI MAX.)
2. PNEUMATIC VALVE MALFUNCTION: REPLACE.
3. AIR CYLINDER LEAKING: REPLACE.
4. PERFORM LOCK-OUT/TAG-OUT OF ELECTRICAL POWER AND AIR SUPPLY THEN CHECK FOR ANY MECHANICAL OBSTRUCTION.

- **BOX QUALITY ISSUES**

1. CORNERS OF FLAPS ARE CURLING:
 - a) ARE FLAP FOLDING PANELS COMING UP ALL THE WAY? ADJUST BY REMOVING CYLINDER GUARD AND ROTATING SHAFT CLAMP.
 - b) ARE RAMPS PROPER ADJUSTED? SET TOP OF RAMPS TANGENT TO THE EXIT ROLLERS.
 - c) ARE EXIT ROLLERS SET TO THE RIGHT HEIGHT RELATIVE TO THE CASE SEALER OR CONVEYOR?
 - a. TOP OF ROLLERS SHOULD BE EVEN WITH WORKING SURFACE OF NEXT MACHINE.
 - d) IS THE MACHINE AT THE CORRECT HEIGHT RELATIVE TO THE CASE SEALER OF CONVEYOR?
 - a. TOP OF TEE RAIL SHOULD BE 1/8" TO 3/16" HIGHER THAN WORKING SURFACE OF NEXT
 - b. MACHINE.
-

CHAPTER 8: WARRANTY

Little David® Warranty
For: CASE FORMER MODELS
CF25-T, CF50-T, CF50T-XL MODELS

1 YEAR WARRANTY ON DRIVE MOTOR
1 YEAR WARRANTY ON GEAR REDUCER
3 YEAR WARRANTY ON TAPE CARTRIDGE

(EXCEPT FOR MOVING PARTS THAT ARE SUBJECT TO
NORMAL WEAR, TEAR AND REPLACEMENT, WHICH ARE
WARRANTED ONLY TO BE FREE FROM DEFECTS IN
MATERIAL AND WORKMANSHIP.)

1 YEAR ON PLC
1 YEAR ALL OTHER PARTS (EXCEPT FOR WEAR AND MOVING PARTS.)

For: CASE FORMER MODELS
CF5 & CF5AF

1 YEAR ON PLC
1 YEAR ALL OTHER PARTS (EXCEPT FOR WEAR AND MOVING PARTS.)

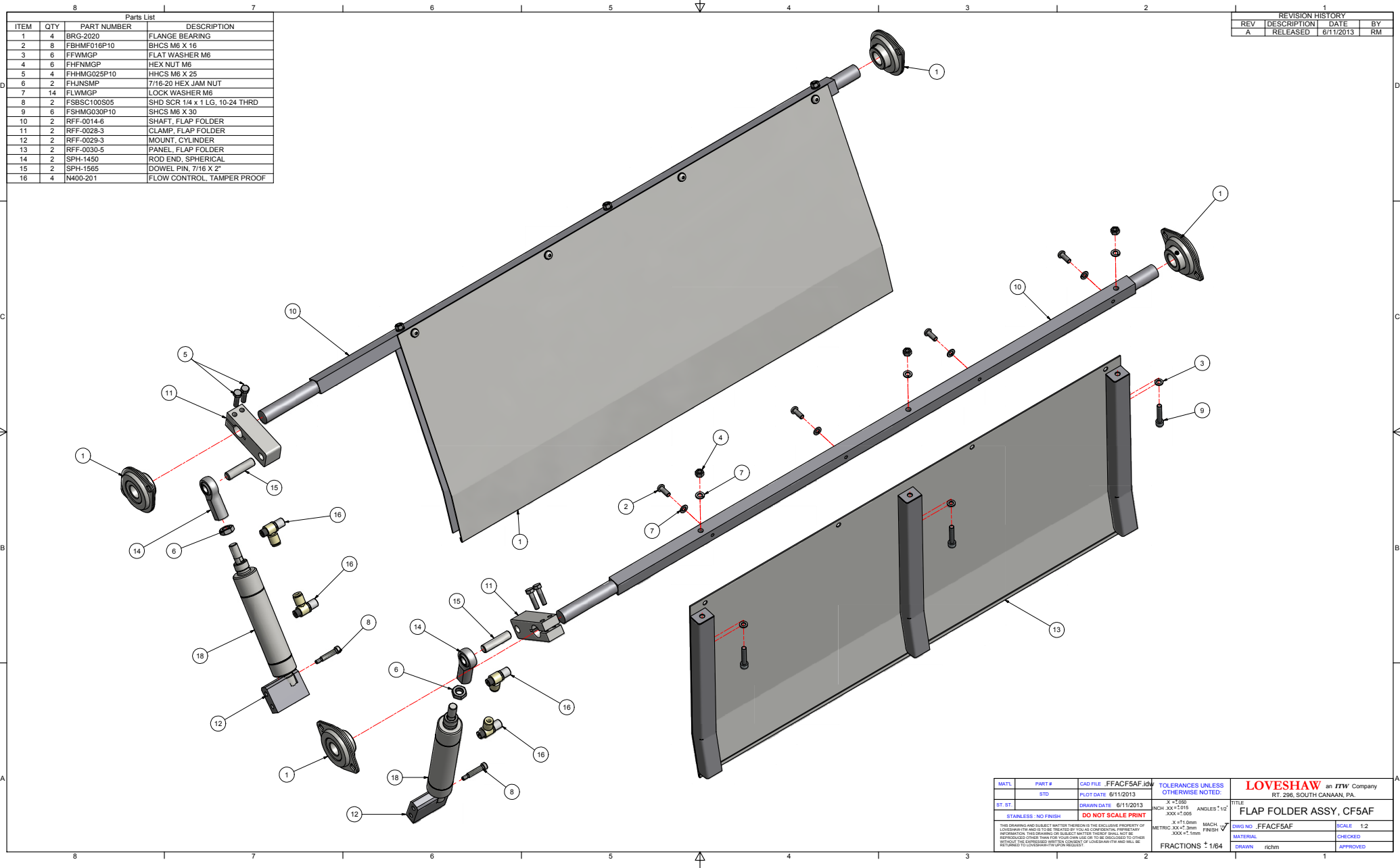
*LIMITED WARRANTY – **LOVESHAW**, WARRANTS ONLY THAT THE
GOODS SOLD BY IT SHALL BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP, UNDER PROPER AND
NORMAL USE AND MAINTENANCE, AS FOLLOWS:
DRIVE MOTOR - 1 YEAR
GEAR REDUCER - 1 YEAR
TAPE CARTRIDGE - 3 YEARS (EXCEPT FOR MOVING PARTS THAT ARE SUBJECT TO
NORMAL WEAR, TEAR AND REPLACEMENT, WHICH ARE
WARRANTED ONLY TO BE FREE FROM DEFECTS IN
MATERIAL AND WORKMANSHIP.)
PLC - 1 YEAR
ALL OTHER PARTS - 1 YEAR (EXCEPT FOR MOVING PARTS THAT ARE SUBJECT TO
NORMAL WEAR, TEAR AND REPLACEMENT, WHICH ARE
WARRANTED ONLY TO BE FREE FROM DEFECTS IN
MATERIAL AND WORKMANSHIP.)
THE WARRANTY PERIOD SHALL COMMENCE AS OF THE DATE OF DELIVERY TO THE PURCHASER. THE
OBLIGATION OF LOVESHAW UNDER THIS WARRANTY IS STRICTLY LIMITED TO THE COST OF REPAIRING OR
REPLACING, AS LOVESHAW MAY ELECT, ANY PART OR PARTS THAT PROVE IN LOVESHAW'S JUDGMENT TO HAVE
BEEN DEFECTIVE IN MATERIAL OR WORKMANSHIP AT THE TIME THE GOODS WERE SHIPPED FROM LOVESHAW'S
PLANT. ANY WARRANTY CLAIM NOT MADE IN WRITING TO LOVESHAW AT ITS HOME OFFICE WITHIN THE
APPLICABLE WARRANTY PERIOD AND WITHIN 10 DAYS OF FAILURE WILL NOT BE VALID. THIS IS THE SOLE AND
EXCLUSIVE REMEDY AVAILABLE UNDER THIS WARRANTY. UNDER NO CIRCUMSTANCES WILL LOVESHAW BE LIABLE
FOR INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES.
IF REQUESTED BY LOVESHAW, PURCHASER SHALL RETURN ANY DEFECTIVE PART OR PARTS TO LOVESHAW'S
PLANT, FREIGHT PREPAID. ALL WARRANTY PART REPLACEMENTS AND REPAIRS MUST BE MADE BY LOVESHAW
OR A LOVESHAW AUTHORIZED TO HANDLE THE GOODS COVERED BY THIS WARRANTY. ANY OUTSIDE WORK OR
ALTERATIONS DONE WITHOUT LOVESHAW'S PRIOR WRITTEN APPROVAL WILL RENDER THIS WARRANTY VOID.
LOVESHAW, WILL NOT ASSUME ANY EXPENSE OR LIABILITY FOR ANY REPAIRS MADE TO ITS
GOODS OUTSIDE ITS WORKS WITHOUT ITS PRIOR WRITTEN CONSENT. THIS WARRANTY SHALL NOT APPLY TO
ANY ITEM THAT HAS NOT BEEN USED, OPERATED, AND MAINTAINED IN ACCORDANCE WITH LOVESHAW'S
RECOMMENDED PROCEDURES LOVESHAW SHALL HAVE NO LIABILITY WHATSOEVER WHERE THE GOODS HAVE
BEEN ALTERED, MISUSED, ABUSED OR INVOLVED IN AN ACCIDENT.
NO PERSON IS AUTHORIZED TO MAKE ANY WARRANTY OR TO CREATE ANY LIABILITY BINDING UPON LOVESHAW.
WHICH IS NOT STATED IN THIS WARRANTY. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES
OF ANY KIND, EXPRESSED OR IMPLIED, WHICH ARE HEREBY EXCLUDED. IN PARTICULAR, THE IMPLIED
WARRANTY OF MERCHANTABILITY, AS WELL AS THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR
PURPOSE ARE HEREBY EXCLUDED.

LOVESHAW
2206 EASTON TURNPIKE, BOX 83 SOUTH CANAAN, PA 18459
TEL: 570.937.4921 - 800.572.3434 - FAX: 570.937.3229

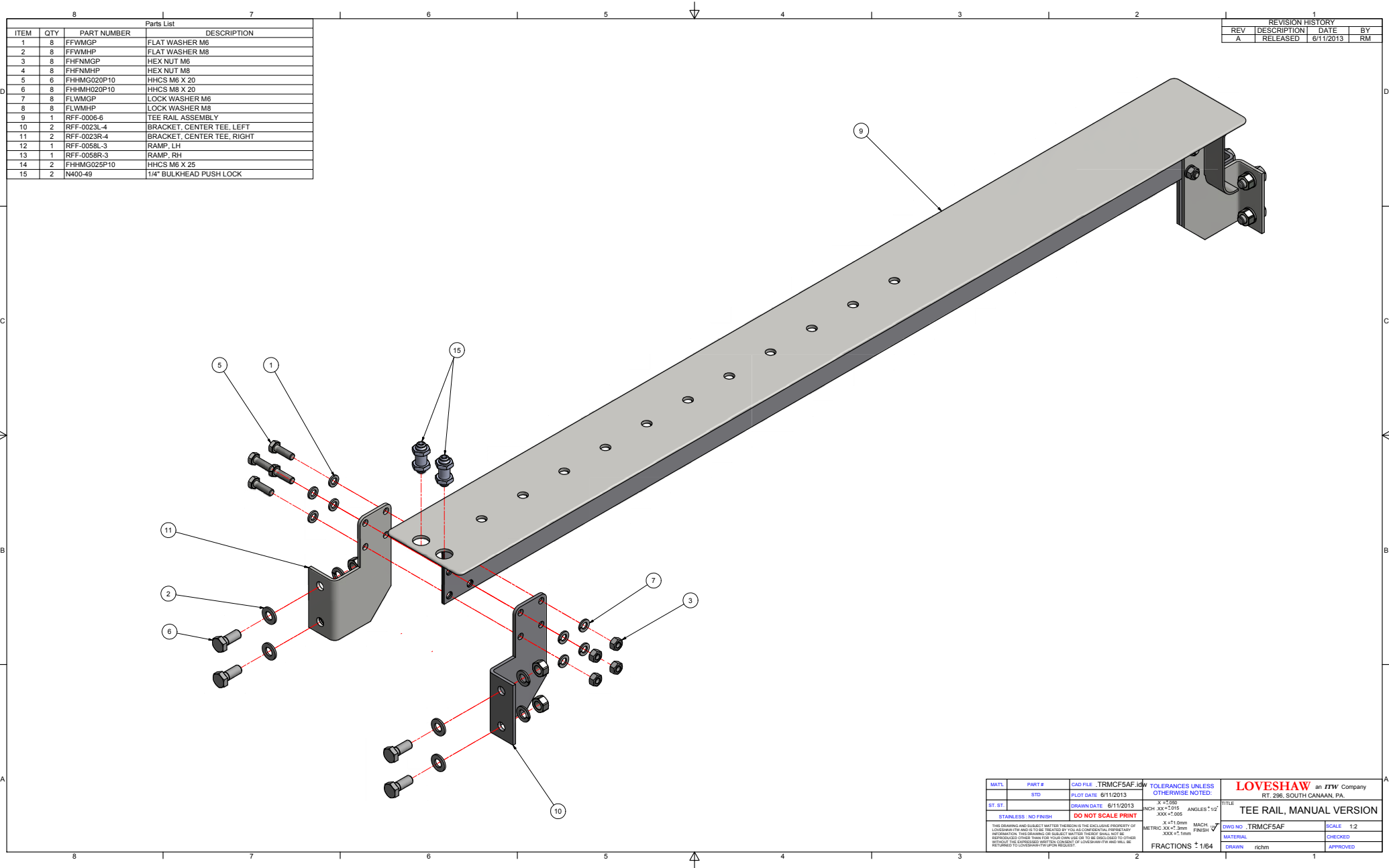
CHAPTER 9: **MACHINE COMPONENTS**

Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	4	BRG-2020	FLANGE BEARING
2	8	FBHMF016P10	BHCS M6 X 16
3	6	FFWMGP	FLAT WASHER M6
4	6	FHFMGP	HEX NUT M6
5	4	FHFMG025P10	HHCS M6 X 25
6	2	FHJNSMP	7/16-20 HEX JAM NUT
7	14	FLWMGP	LOCK WASHER M6
8	2	FSBSC100S05	SHD SCR 1/4 x 1 LG, 10-24 THRD
9	6	FSHMG030P10	SHCS M6 X 30
10	2	RFF-0014-6	SHAFT, FLAP FOLDER
11	2	RFF-0028-3	CLAMP, FLAP FOLDER
12	2	RFF-0029-3	MOUNT, CYLINDER
13	2	RFF-0030-5	PANEL, FLAP FOLDER
14	2	SPH-1450	ROD END, SPHERICAL
15	2	SPH-1565	DOWEL PIN, 7/16 X 2"
16	4	N400-201	FLOW CONTROL, TAMPER PROOF

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	6/11/2013	RM



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DATE	6/11/2013	MACH	✓	METRIC	XX ± 0.3mm	FINISH	
THIS DRAWING AND SUBJECT MATTER THEREON IS THE EXCLUSIVE PROPERTY OF LOVESHAW AND IS TO BE TREATED BY YOU AS CONFIDENTIAL. IF YOU REPRODUCE OR SUBJECT MATTER THEREOF SHALL NOT BE REPRODUCED OTHER THAN FOR YOUR OWN USE OR TO BE DISCLOSED TO OTHERS WITHOUT THE EXPRESS WRITTEN CONSENT OF LOVESHAW AND SHALL BE RETURNED TO LOVESHAW UPON REQUEST.				FRACTIONS 1/64			
DWG NO. FFACF5AF		SCALE 1:2		MATERIAL		DRAWN richm	
CHECKED		APPROVED					



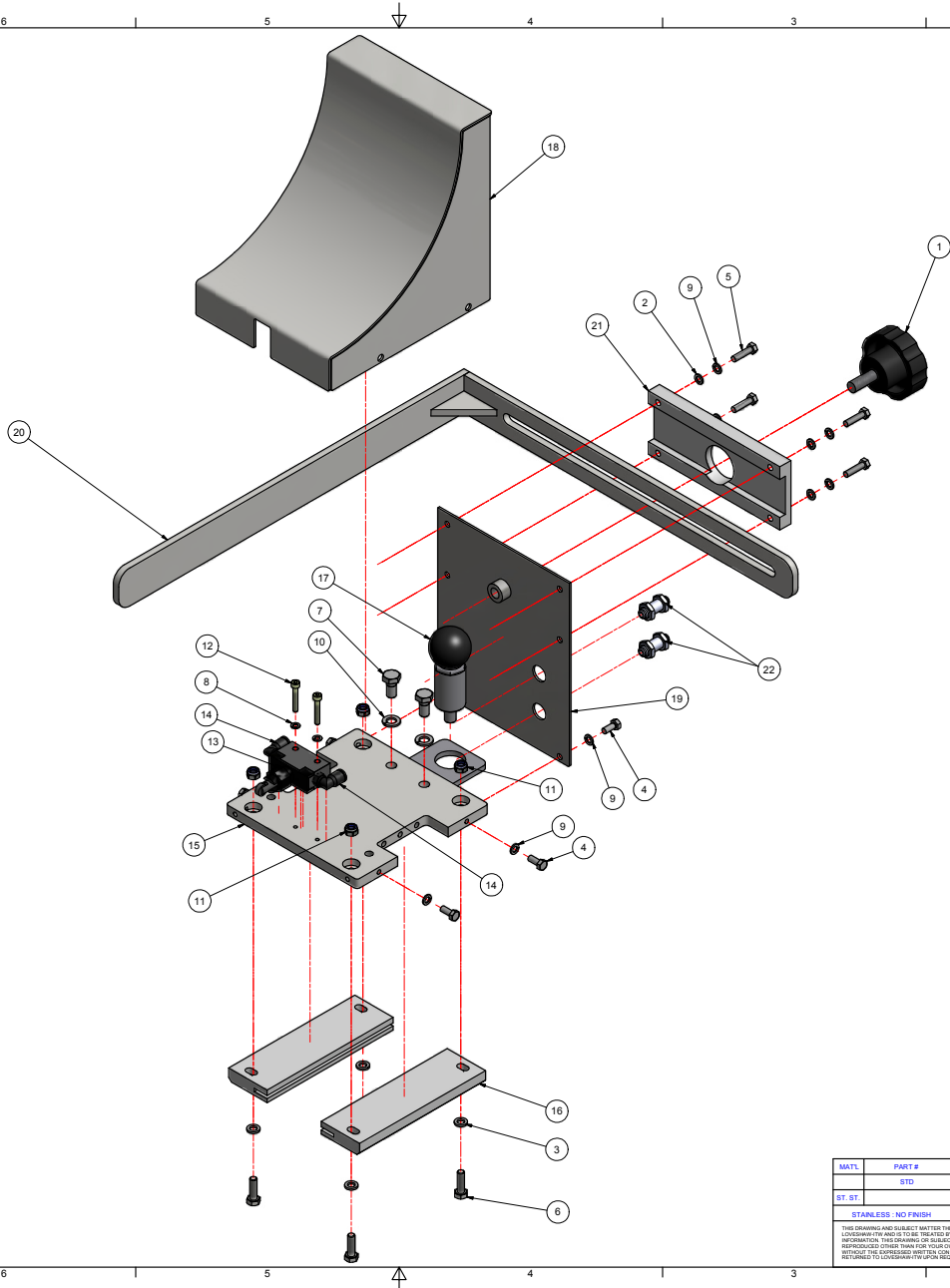
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2	8	FFWMHP	FLAT WASHER M8
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4	8	FHFMHP	HEX NUT M8
5	6	FHHMG020P10	HHCS M6 X 20
6	8	FHHMH020P10	HHCS M8 X 20
7	8	FLWMGP	LOCK WASHER M6
8	8	FLWMHP	LOCK WASHER M8
9	1	RFF-0006-6	TEE RAIL ASSEMBLY
10	2	RFF-0023L-4	BRACKET, CENTER TEE, LEFT
11	2	RFF-0023R-4	BRACKET, CENTER TEE, RIGHT
12	1	RFF-0058L-3	RAMP, LH
13	1	RFF-0058R-3	RAMP, RH
14	2	FHHMG025P10	HHCS M8 X 25
15	2	N400-49	1/4" BULKHEAD PUSH LOCK

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REV	DESCRIPTION	DATE	BY
A	RELEASED	6/11/2013	RM

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FRACTIONS: 1/64				DRAWN: richm	APPROVED:

ITEM		QTY	PART NUMBER	Parts List	DESCRIPTION
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2	4	FFWMFP	FFWMFP	FFWMFP	FLAT WASHER M5
3	4	FFWMGP	FFWMGP	FFWMGP	FLAT WASHER M6
4	6	FHHMF012P10	FHHMF012P10	FHHMF012P10	HHCS M5 X 12
5	4	FHHMF020P10	FHHMF020P10	FHHMF020P10	HHCS M5 X 20
6	4	FHHMF020P10	FHHMF020P10	FHHMF020P10	HHCS M6 X 20
7	2	FHHMF016P10	FHHMF016P10	FHHMF016P10	HHCS M8 X 16
8	2	FLWMFP	FLWMFP	FLWMFP	LOCK WASHER M4
9	10	FLWMFP	FLWMFP	FLWMFP	LOCK WASHER M5
10	2	FLWMHP	FLWMHP	FLWMHP	LOCK WASHER M8
11	4	FNLNMGFP	FNLNMGFP	FNLNMGFP	NYLOCK NUT M6
12	2	FSHME025P10	FSHME025P10	FSHME025P10	SHCS M4 X 25
13	1	N402-160	N402-160	N402-160	VALVE, ROLLER
14	2	PF-29	PF-29	PF-29	ELBOW, 1/8 NPT X 1/4 PUSH LOC
15	1	RFF-0010-5	RFF-0010-5	RFF-0010-5	BASE, PUSHER
16	2	RFF-0013-4	RFF-0013-4	RFF-0013-4	GUIDE, CARRIAGE
17	1	RFF-0015-4	RFF-0015-4	RFF-0015-4	SPRING PIN ASSEMBLY
18	1	RFF-0047-6	RFF-0047-6	RFF-0047-6	FOLDING BLOCK
19	1	RFF-0048-4	RFF-0048-4	RFF-0048-4	BACK PANEL, FOLDING BLOCK
20	1	RFF-0052-5	RFF-0052-5	RFF-0052-5	GUIDE, BOX CENTERING
21	1	RFF-0057-4	RFF-0057-4	RFF-0057-4	SLIDE, BOX CENTERING GUIDE
22	2	N400-49	N400-49	N400-49	1/4" BULKHEAD PUSH LOK

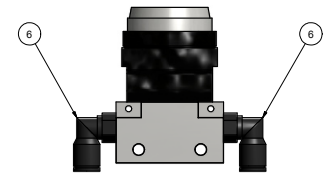
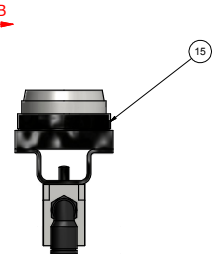
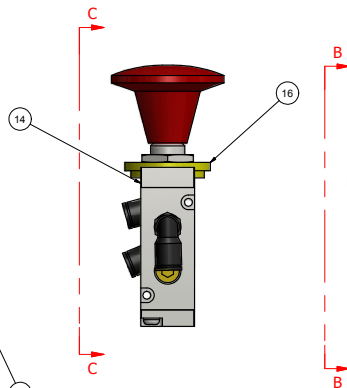
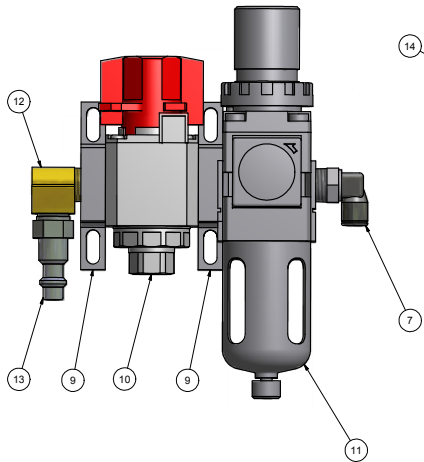
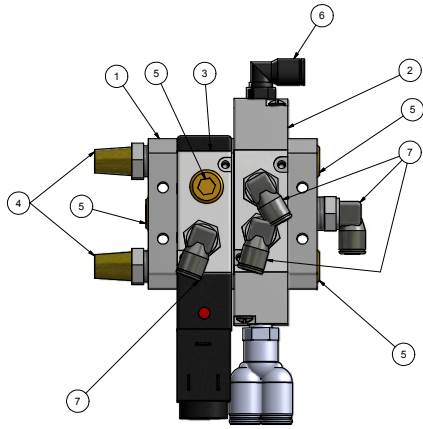
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A	RELEASED	6/11/2013	RM



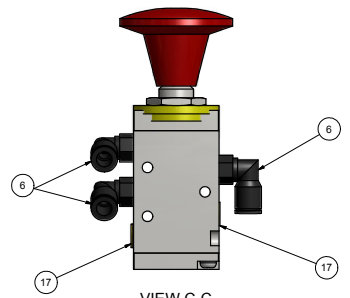
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			DRAWN DATE: 6/11/2013	INCH: .XX = ±0.015		TITLE	
				XXX = ±0.005		FOLDING BLOCK, CF5AF	
STAINLESS - NO FINISH		DO NOT SCALE PRINT		X = ±0.005		DWG NO: FBACFAF	
				METRIC: XX = ±.3mm		SCALE: 1:2	
				XXX = ±.1mm		MATERIAL	
						DRAWN: richm	
						CHECKED:	
						APPROVED:	
						FRACTIONS: 1/64	

8			1	7		
			Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION			
	1	N402-143	MANIFOLD, 2 STATION			
2	1	N402-158	VALVE, AIR PILOTED			
3	1	N402-133	VALVE SOL 5/2			
4	2	N400-16	MUFFLER			
5	4	PF-9	PLUG, HEX SOC PIPE, 1/4 NPT			
6	6	PF-29	ELBOW, 1/8 NPT X 1/4 PUSH LOC			
7	5	N400-26	ELBOW, 1/4 NPT X 1/4 PUSH LOC			
8	1	N400-241	WYE, 1/8 NPT X 1/4 PUSH-LOC			
9	2	N681/B	BRACKET			
10	1	N640	VALVE, MANUAL LOCK-OUT			
11	1	N716	FILTER/REGULATOR, 0-60 PSI, 1/4 NPT			
12	1	PF-10	BRASS STREET ELBOW, 90, 1/4 NPT			
13	1	PF-22	QUICK DISCONNECT PLUG, 1/4 NPT			
14	1	N402-156	VALVE, MANUALLY OPERATED			
15	1	N402-154	VALVE, PUSH BUTTON			
16	1	RFF-0046-3	WASHER, MANUAL VALVE			
17	2	H109B	PLUG, HEX, 1/8 NPT			
NS	1	N522	COIL HOSE, MULTI-BORE, 1/4"			

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	6/12/2013	RM



SECTION B-B
SCALE 1 : 1

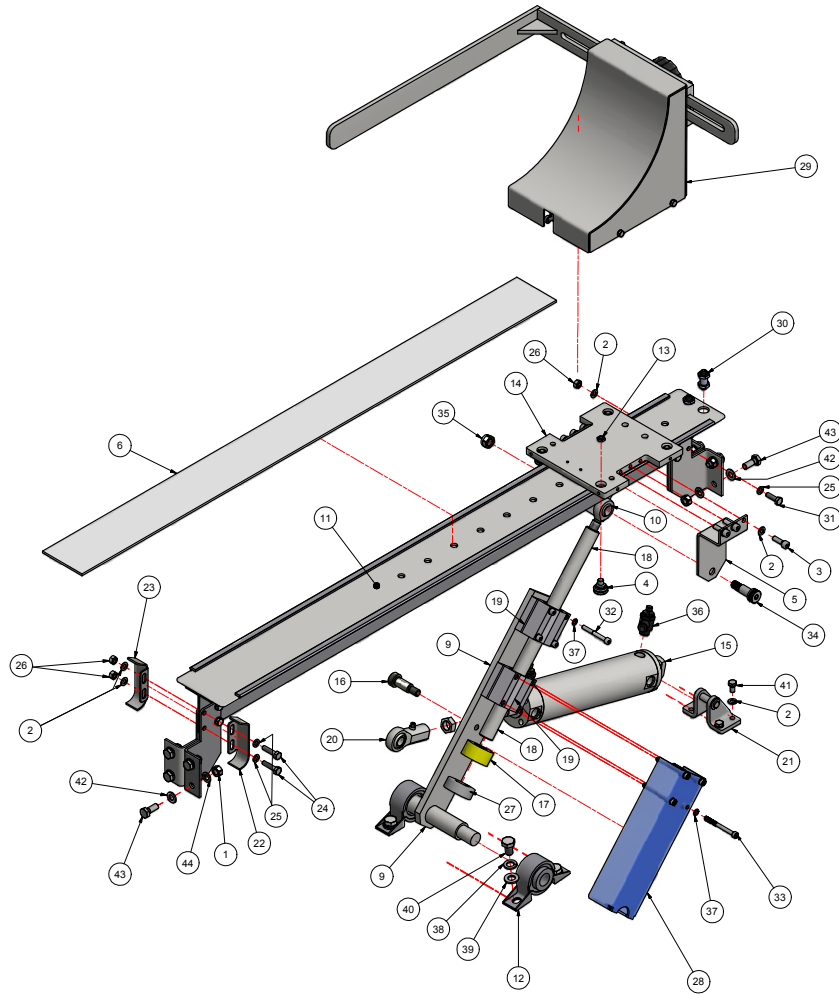


VIEW C-C

NOTE:
1. USE PIPE THREAD SEALANT ON ALL FITTINGS.

MATL	PART #	CAD FILE	PNEUCF5AFM-110	UNLESS OTHERWISE NOTED:	LOVESHAW an ITW Company RT. 296, SOUTH CANAAN, PA.	
BT	ST	PLOT DATE	6/12/2013		TITLE PNEUMATIC ASSEMBLY CF5AF MANUAL VERSION	
		DRAWN DATE	6/12/2013		DWG NO. PNEUCF5AFM	
					SCALE 1:1	
					MATERIAL	
					DRAWN richm	
					APPROVED	
					FRACTIONS 1/64	

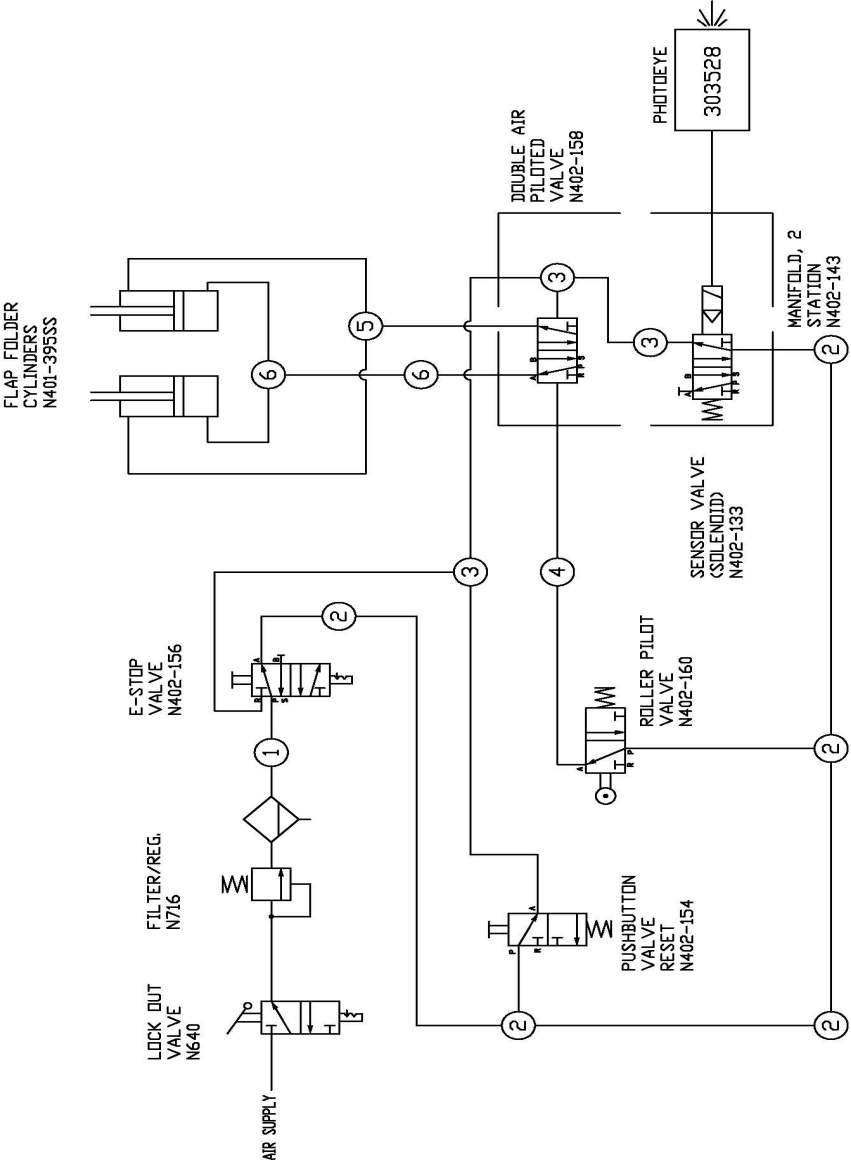
REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	1/12/2015	BJF



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	8	FHFNHMP	HEX NUT M8
2	18	FLWMGP	LOCK WASHER M6
3	6	FSHMG020P10	SHCS M6 X 20
4	4	RL-1014	VEE WHEEL, STUDDED
5	2	RFF-0012-4	TAB, CARRIAGE
6	1	RFF-0008-4	SLIDE STRIP
7	2	RFF-0023L-4	BRACKET, CENTER TEE, LEFT
8	2	RFF-0023R-4	BRACKET, CENTER TEE, RIGHT
9	1	RFF-0027-5	PUSHER ARM
10	1	BRG-2018	ROD END, M12 MALE
11	1	RFF-0022-6	TEE RAIL ASSY, VEE-TRACK
12	2	BRG-2021	MOUNTED BEARING, 3/4"
13	4	FHJNMGP	M6 HEX JAM NUT
14	1	RFF-0010-5	BASE, PUSHER
15	1	N401-390	CYLINDER, 50mm X 6.5"
16	1	FSBSJ100B05	SB 1/2 DIA. x 1L x 3/8-16 THRD
17	1	SPH-1558	BUMPER, URETHANE
18	1	TS20-05-320-4	LINEAR SHAFT, 20mm X 320mm
19	2	PB20-SB-1	BEARING, PILLOW BLOCK
20	1	BRG-2019	ROD END, 1/2", FEMALE, 1/2-20 THRD.
21	1	N680	PIVOT BRACKET
22	1	RFF-0058L-3	RAMP, LH
23	1	RFF-0058R-3	RAMP, RH
24	2	FHHMG025P10	HHCS M6 X 25
25	8	FFWMGP	FLAT WASHER M6
26	8	FHFNMGF	HEX NUT M6
27	1	SPC-1013	COLLAR 20mm ID
28	1	RFF-0081-5	PUSH ROD GUARD
29	1	FBACF5R	FOLDING BLOCK ASSEMBLY, CF5AF
30	2	N400-49	1/4" BULKHEAD PUSH LOCK
31	6	FHHMG020P10	HHCS M6 X 20
32	4	FSHMF045P10	SHCS M5 X 0.8 - 45 MM L.G.
33	4	FSHMF055B10	M5 X 55mm SHCS
34	1	SPH-1547	SHOULDER BOLT M10 x 20mm
35	1	FNLNIMP	NYLOCK NUT M10
36	2	N591	FLOW CONTROL, 1/4 NPT X 1/4 TUBE
37	8	FLWMFP	LOCK WASHER M5
38	4	FLWMIP	LOCK WASHER M10
39	4	FFWMIP	FLAT WASHER M10
40	4	FHHM1016P10	HHCS M10 X 16
41	4	FHHMG012P10	HHCS M6 X 12
42	8	FFWMHP	FLAT WASHER M8
43	8	FHHMH020P10	HHCS M8 X 20
44	8	FLWMHP	LOCK WASHER M8

MATL	PART #	CAD FILE	TRPCF5R.idw	TOLERANCES UNLESS OTHERWISE NOTED:		LOVESHAW 2206 EASTON TPK., SOUTH CANAAN, PA.	
BT	STD	PLOT DATE		INCH XX ±.015 XXX ±.005		TITLE PUSHER ASSEMBLY, CF5AF	
ST ST		DRAWN DATE	1/12/2015	ANGLES 1° 12'			
STAINLESS - NO FINISH			DO NOT SCALE PRINT				
<small>THIS DRAWING AND SUBJECT MATTER THEREON IS THE EXCLUSIVE PROPERTY OF LOVESHAW AND IS TO BE TREATED BY YOU AS CONFIDENTIAL, PROPRIETARY INFORMATION. THIS DRAWING OR SUBJECT MATTER THEREON SHALL NOT BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE EXPRESS WRITTEN CONSENT OF LOVESHAW AND WILL BE RETURNED TO LOVESHAW UPON REQUEST.</small>				X=1.0mm XXX ±.1mm		DWG NO	SCALE
				METRIC XX ±.015 XXX ±.005		MACH F	CHECKED
						MATERIAL	SCALE
						DRAWN	by:bjf
				FRACTIONS 1/64		APPROVED	

CHAPTER 10: SCHEMATICS



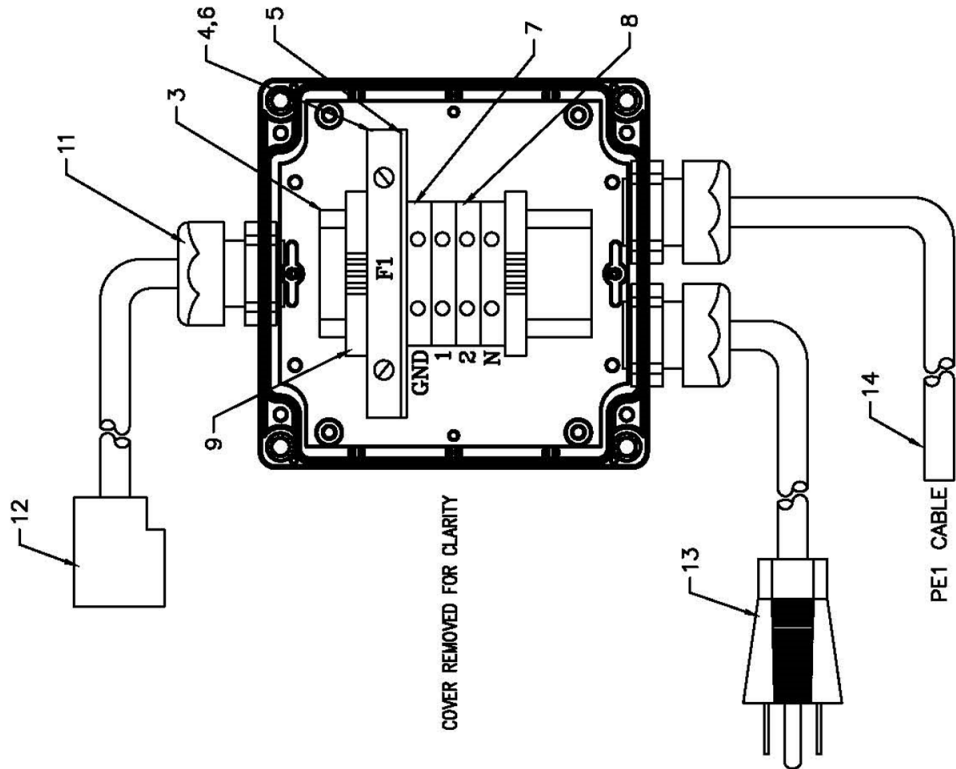
CAD FILE: G850471

TOLERANCES EXCEPT AS NOTED	THE LOVESHAW CORPORATION RT 296, SOUTH CANAAN, PA.		
DECIMAL (3 PLC)	TITLE: CF5AF - MANUAL VERSION PNEUMATIC SCHEMATIC		
FRACTIONAL	DWG. NO. RFF-0076-4	SCALE: N/A	DATE: 12/14/13
ANG. - 1/2"	MATERIAL: N/A	DRAWN: MILLON	APPRVD: --

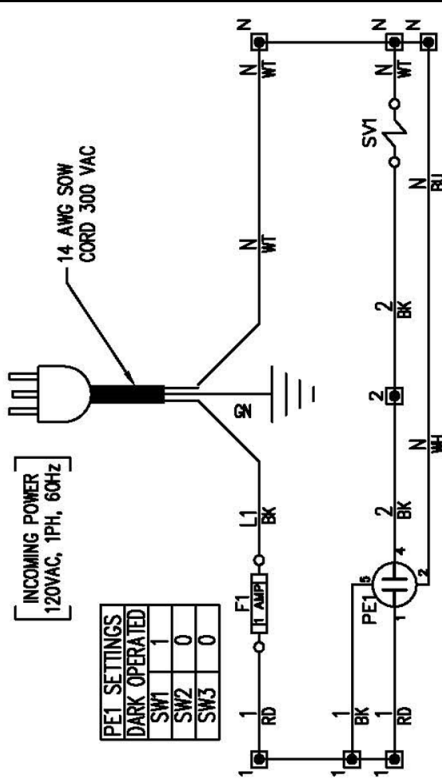
REVISION RECORD				
REV	DESCRIPTION	DATE	ATH	DR CK

KEY	PART NO.	DESCRIPTION
1	SS1-I	ENCLOSURE
2	SS1-I-P	PANEL
3	SS6-L	DIN RAIL
4	SS6-FUSE	FUSE HOLDER
5	SS6-FUSE-EB	BARRIER PLATE
6	SS5-A	FUSE, 1 AMP
7	SS6-B	GROUND TERMINAL
8	SS6-A	SINGLE TERMINAL
9	SS6-C	TERMINAL ANCHOR
10	SS6-MC	MARKER CARD
11	AH199-1-RK	CONNECTOR W/ NUT
12	N646	DIN CONNECTOR CABLE
13	A149-LC-14/3	LINE CORD
14	A18-4-WD	4 CONDUCTOR CABLE

CUSTOMER TO SUPPLY PROPERLY PROTECTED
INCOMING POWER AS PER LOCAL CODES.



COVER REMOVED FOR CLARITY

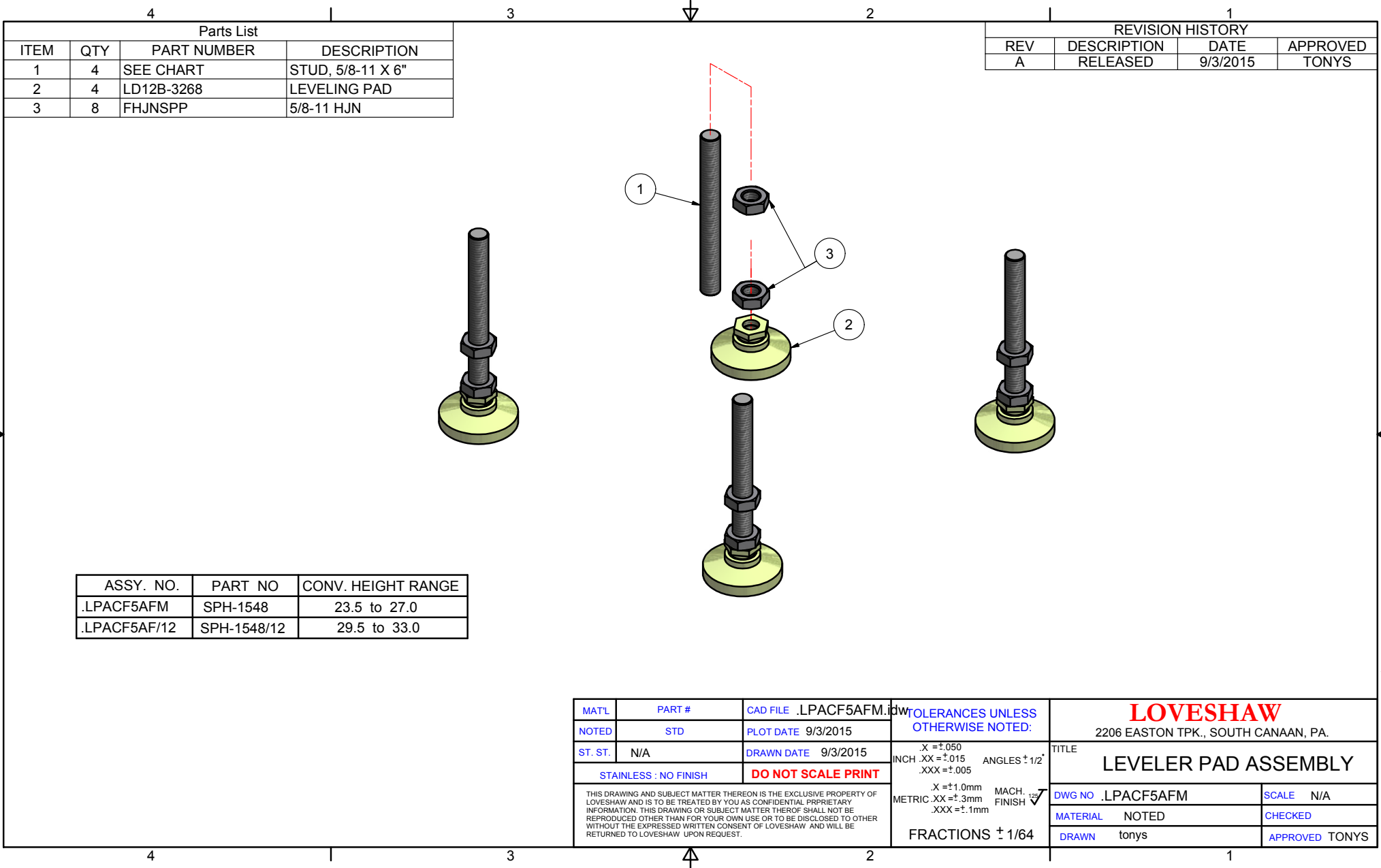


TOLERANCES EXCEPT AS NOTED		THE LOVESHAW CORPORATION RT 296, SOUTH CANAAN, PA.	
DECIMAL (3 PLC) +/- .005	TITLE: ELECTRICAL BOX ASSY	CF5 RANDOM - 120/1/60	
FRACTIONAL +/- 1/64	DWG. NO. ED2472	SCALE: N/A	DATE: 08/09/12
ANG. - 1/2°	MATERIAL: N/A	DESIGNED: MENTA	APPRVD: ---
		DRAWN: WM	

CHAPTER 11: MACHINE AVAILABLE SPECIAL OPTIONS

- FULL STAINLESS STEEL CONSTRUCTION
- PNEUMATICALLY POWERED CASE PUSHER
- BLANK HOLDER
- CUSTOM CONNECTION KITS
- CASTERS
- SPARE PARTS KIT

CONTACT YOUR LITTLE DAVID DISTRIBUTOR OR CALL OUR AFTERMARKET DEPARTMENT AT 800-962-2633 TO INQUIRE ABOUT SPECIAL OPTIONS.



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	4	SEE CHART	STUD, 5/8-11 X 6"
2	4	LD12B-3268	LEVELING PAD
3	8	FHJNSPP	5/8-11 HJN

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED
A	RELEASED	9/3/2015	TONYS

ASSY. NO.	PART NO	CONV. HEIGHT RANGE
.LPACF5AFM	SPH-1548	23.5 to 27.0
.LPACF5AF/12	SPH-1548/12	29.5 to 33.0

MATL	PART #	CAD FILE .LPACF5AFM.dwg	TOLERANCES UNLESS OTHERWISE NOTED: .X = ±.050 INCH .XX = ±.015 ANGLES ± 1/2° .XXX = ±.005 .X = ±1.0mm MACH. FINISH ✓ METRIC .XX = ±.3mm .XXX = ±.1mm FRACTIONS ± 1/64	LOVESHAW 2206 EASTON TPK., SOUTH CANAAN, PA.	
NOTED	STD	PLOT DATE 9/3/2015		TITLE LEVELER PAD ASSEMBLY	
ST. ST.	N/A	DRAWN DATE 9/3/2015			
STAINLESS : NO FINISH		DO NOT SCALE PRINT			
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			MATERIAL NOTED	CHECKED	
			DRAWN tonys	APPROVED TONYNS	