

BURFORD® CORP.

INSTALLATION GUIDE

FOR YOUR

BURFORD® SPLITTER ASSEMBLY

MODEL STS-860 / STS 861

ORIGINAL INSTRUCTIONS

MODEL NUMBER_____

SERIAL NUMBER_____

WIRING DIAGRAM_____ **ISSUE**_____

Date: March, 2015

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Manual SO100868 Rev "A"

SAFETY PRECAUTIONS

As Burford® Corp. strives to promote safety in the maintenance and operation of Burford® equipment, we request that the following safety features be followed, along with any additional safety procedures set by the customer's in-plant safety officers or local codes.

1. Read manual completely before attempting installation or operation of this unit.
2. This machine may contain programs that are password protected. Contact your supervisor or Burford® Corp. for current password.
3. Incoming electrical power must be properly shielded, routed, and grounded. All safety codes should be followed. Study wiring diagrams before attempting installation.
4. Disconnect power to equipment before removing any guards or covers. Replace guards or covers before resuming operation of the unit.
5. Loose clothing, jewelry and long hair should be considered a safety hazard around mechanical equipment. Ensure that they will not be entangled in the equipment.
6. Keep clear of moving machine parts. Bodily harm and/or serious injury may result from contact with moving gears, sprockets, chains or pneumatically controlled machine components.
7. Do not bypass safety switches.
8. Do not attempt repairs while equipment is running.
9. Use only original equipment parts designed to safely operate in the equipment.
10. Only authorized personnel should be allowed to operate or perform maintenance on the unit.
11. This unit is not wash down ready. Do not wash the unit or any of its electrical or mechanical components, with any form of high pressure or running water.

DISCLAIMER

The descriptions and specifications contained in this Service Manual were in effect at the time this manual was approved for printing. Our policy is one of continuous improvements, and we do hereby reserve the right to discontinue models at any time, or to change specifications, prices, or design without notice and without incurring obligations.

Burford® Corp. expressly disclaims any liability for damages and/or injuries caused as a result of negligence or misuse of its product. Such negligence or misuse includes, but is not limited to, removal of guards, installation and wiring.

Burford® equipment should only be used for the purpose for which it was sold, and should not be modified in any way without notifying the General Manager of Burford® Corp. in writing of the modification.

Burford® Corp. will not accept any responsibility for damaged units or any of their components that have been washed down with high pressure or any form of running fluid, for any purpose.

The original language for this document is English. Translations to other languages may not be accurate.

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1.0 INTRODUCTION

The Burford Stacked Water Splitter has been designed to provide a uniform split automatically without interruption to the product flow. The components are designed to be mounted to the existing water spray frame for a Burford Smart Seeder. This manual contains information to assist and guide the installer during installation.

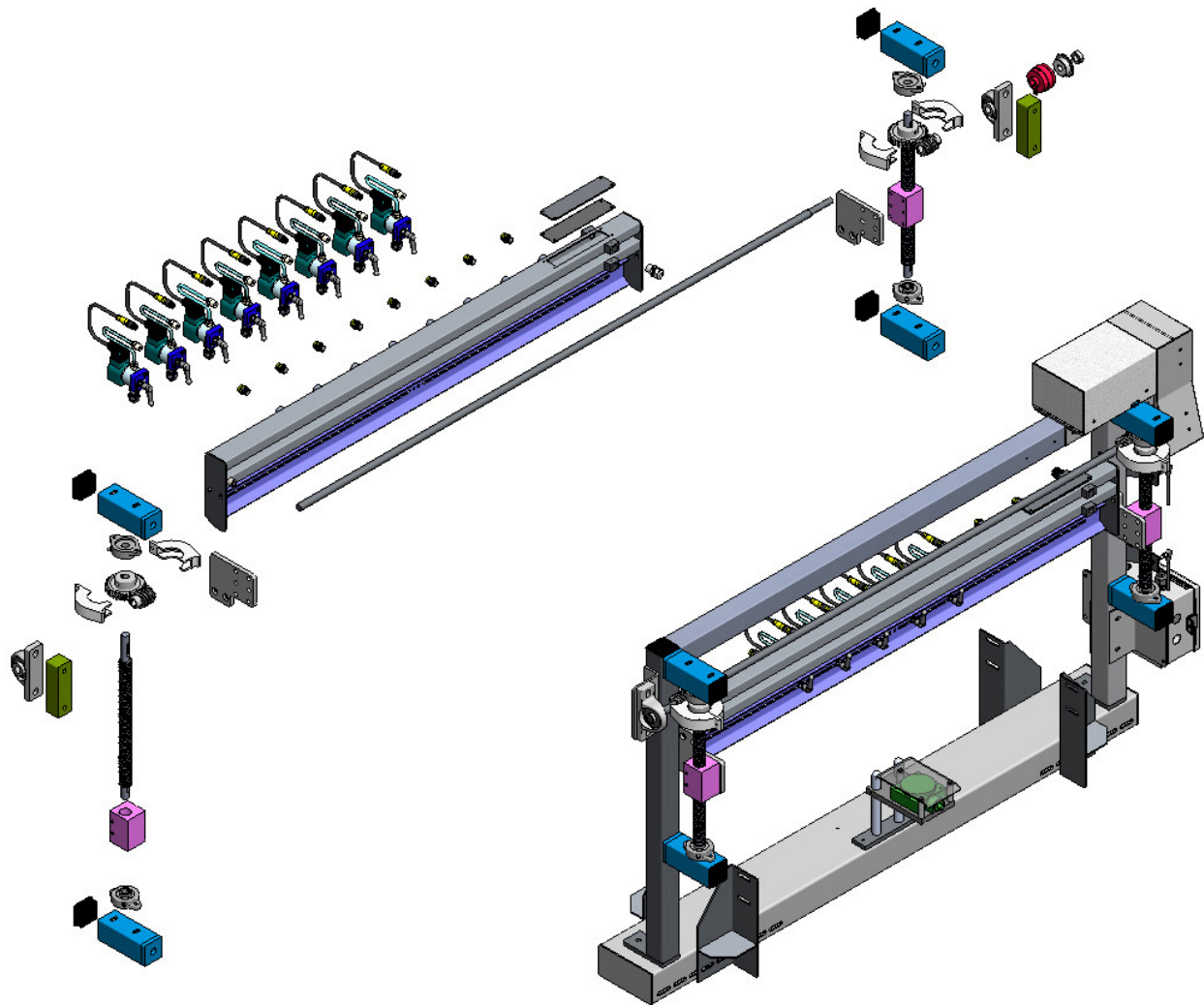


Fig. 1-1 Stacked Water Splitter Install

2.0 INSTALLATION

1. Follow all local and plant lock out procedures before installation begins.
2. Determine the location where the STS-860 will be placed.
3. Remove all electrical service to unit that splitter will be installed on.
4. Roll the booster pump into place and unpack the components for the water splitter.

Caution:	No less than two (2) people should be involved in the installation of the STS-860.
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Note:	Place all hardware and parts removed in a safe secure area, some parts may be needed for installation.
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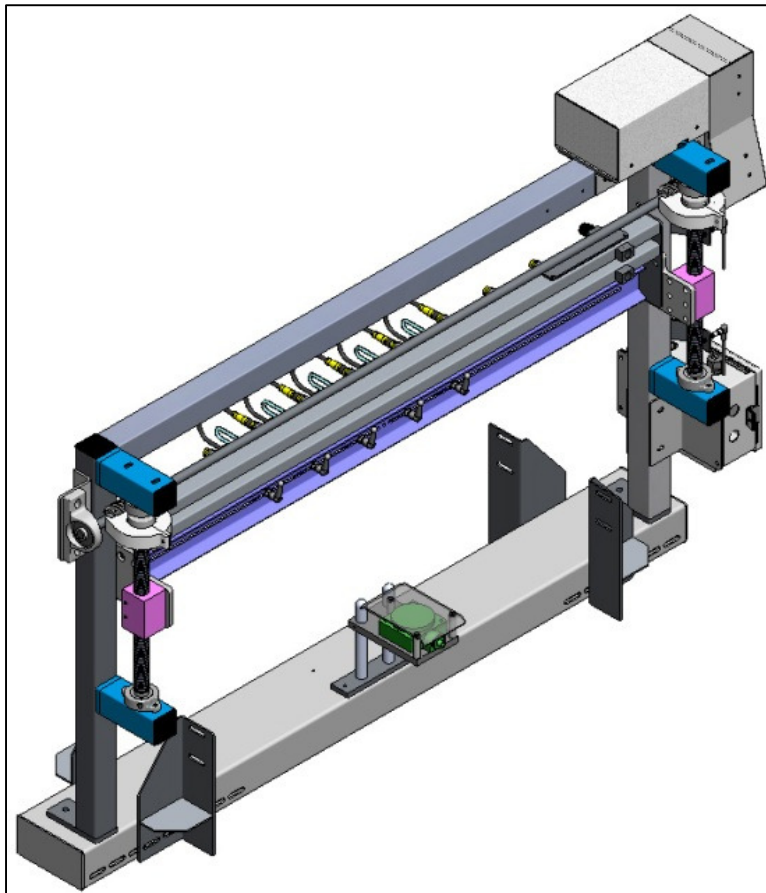


Fig. 2-1 Water Spray Assembly

5. Remove both motor covers to expose motor and gears.

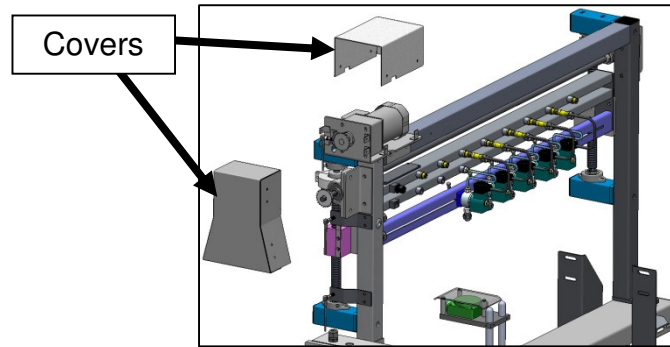


Fig. 2-2 Remove Motor Covers

6. Remove drive chain.

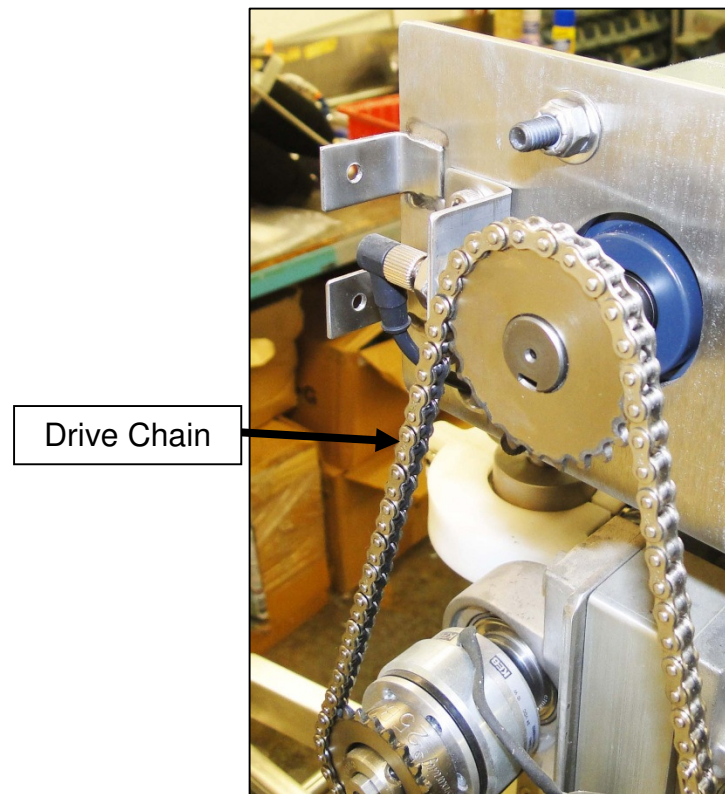


Fig. 2-3 Remove Drive Chain

7. Remove both sensors and brackets.

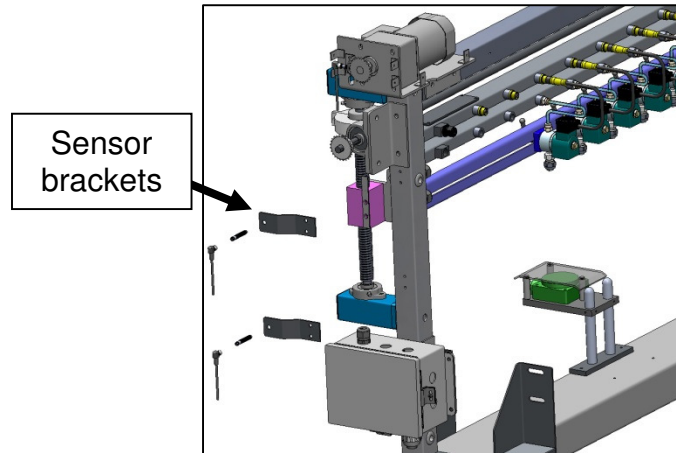


Fig. 2-4 Remove Sensors and Brackets

8. Unplug and drain water hoses going to and from spray frame assembly.
9. Remove bolt from threaded frame bearing mount one mount at a time.

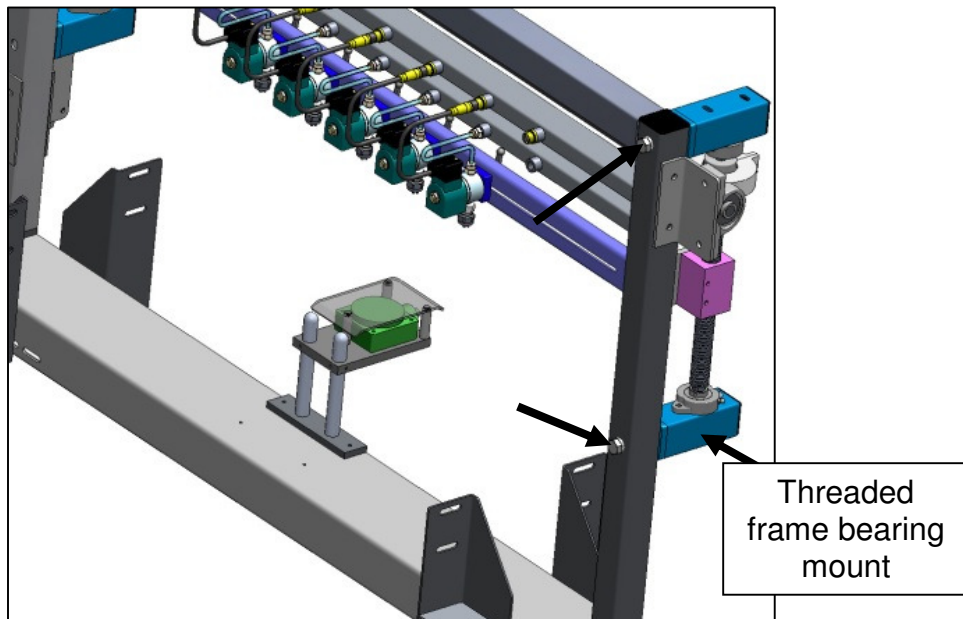


Fig. 2-5 Remove Bearing Mounts

10. Secure non-threaded frame bearing mount to the existing spray frame and threaded bearing mount using supplied bolts. This assembly should be square and the bolts securely tightened.

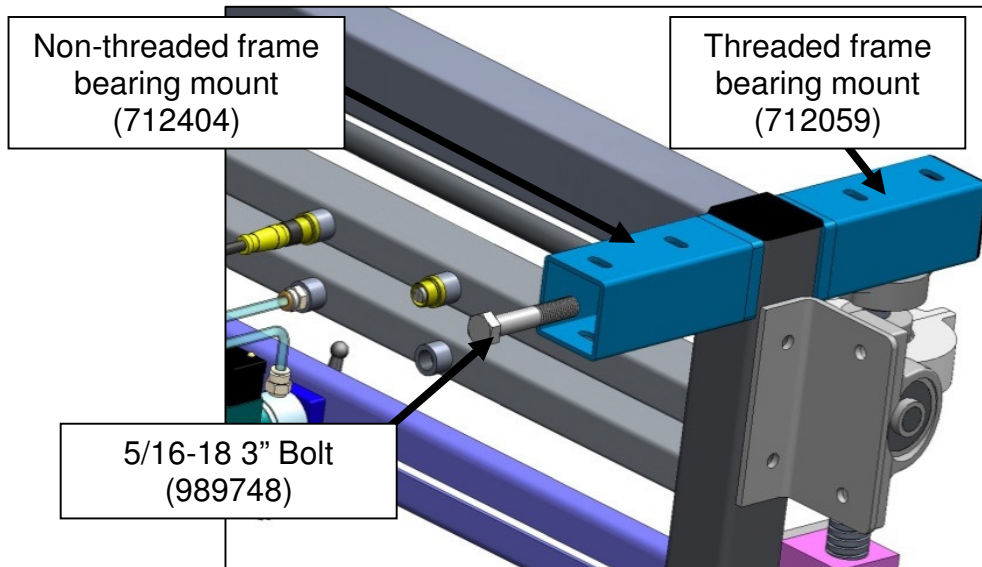


Fig. 2-6 Attach Frame Bearing Mount

11. Repeat Steps (9-10) for each threaded frame bearing mount located on the four corners of the spray frame assembly.

12. Assemble split lift shaft.

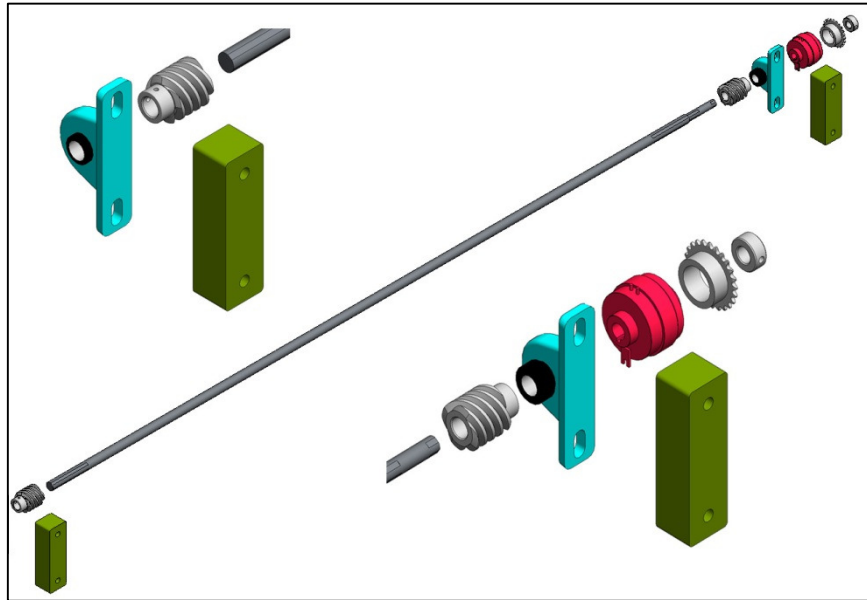


Fig. 2-7 Split Lift Shaft Assembly

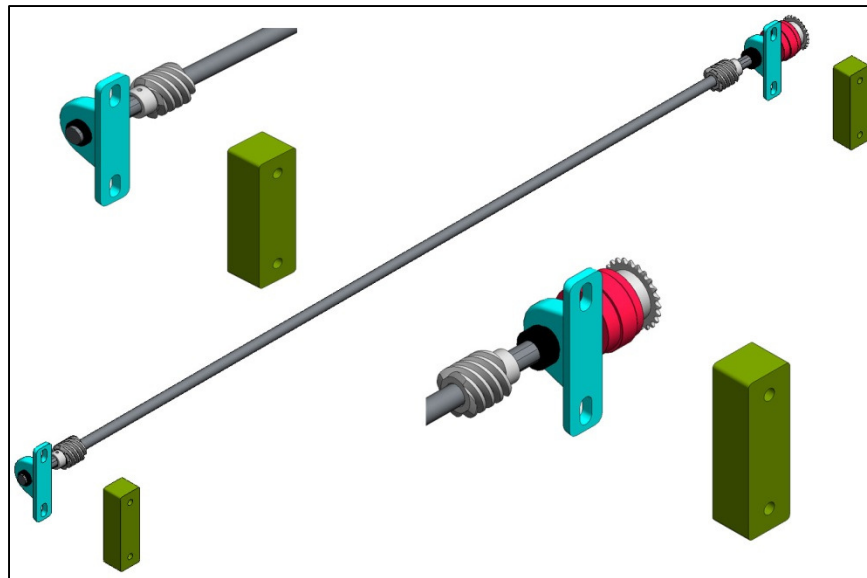


Fig. 2-8 Split Lift Shaft Assembly Completed

13. Attach both ends of the split lift shaft assembly to existing spray frame.



Fig. 2-10 Steps 1-13 Check Point

14. Assemble all-thread lift assemblies.

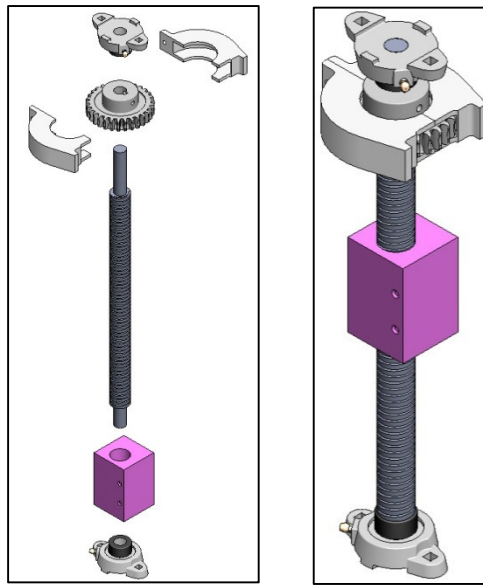


Fig. 2-11 Non Motor Side Assembly

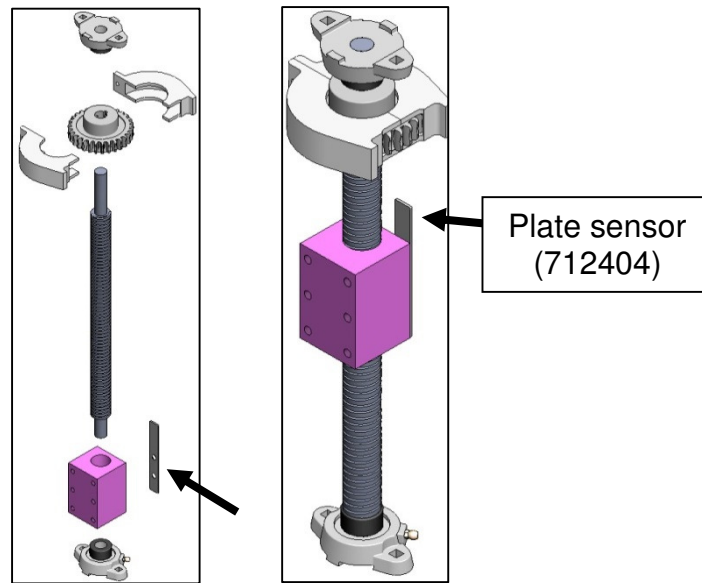


Fig. 2-12 Motor Side Assembly

15. Attach both all-thread lift assemblies to the existing spray frame.

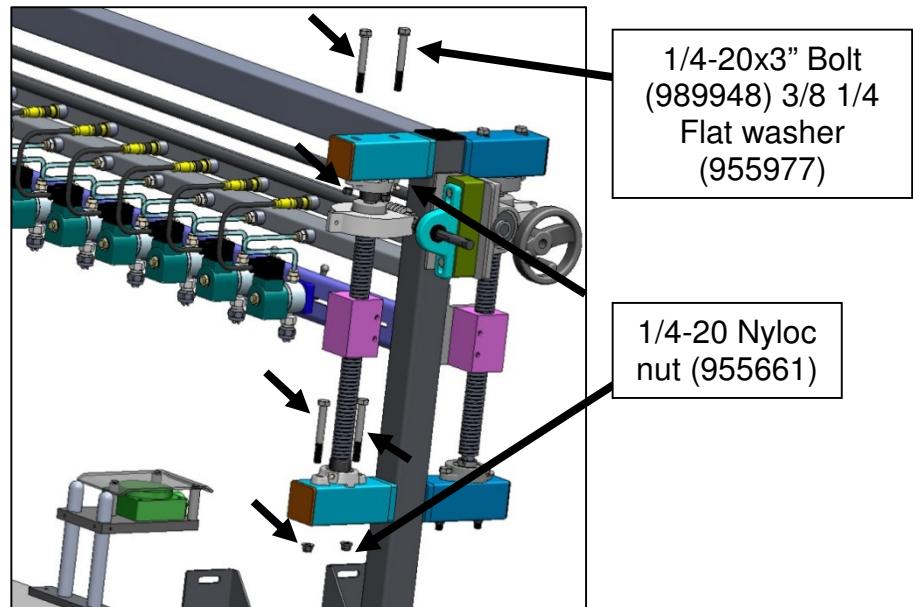


Fig. 2-13 Attach All-Thread Lift Assemblies

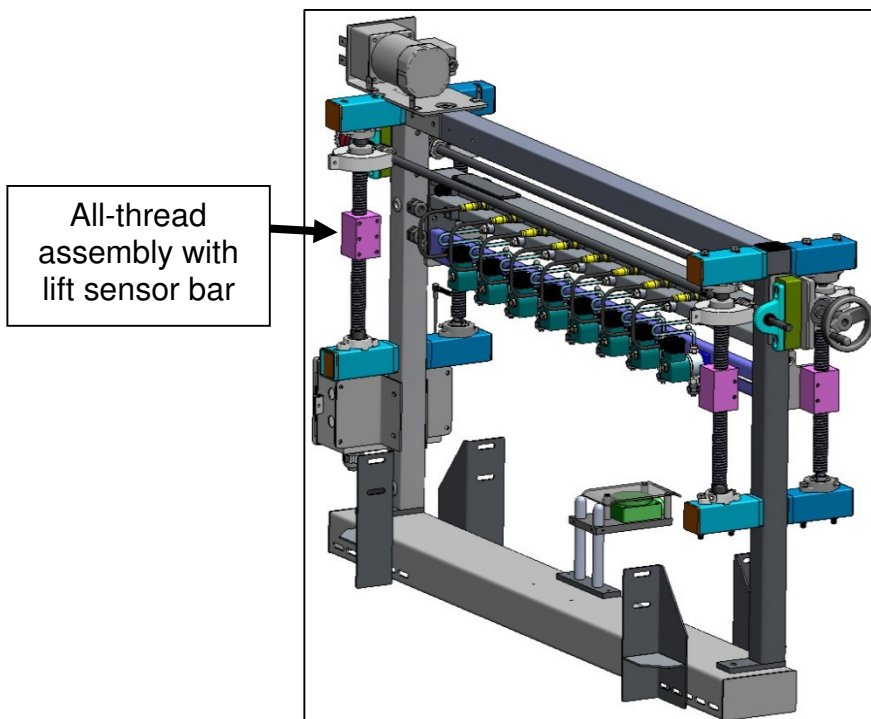


Fig. 2-14 All-Thread Lift Assemblies Attached

16. Attach manifold support brackets to manifold.

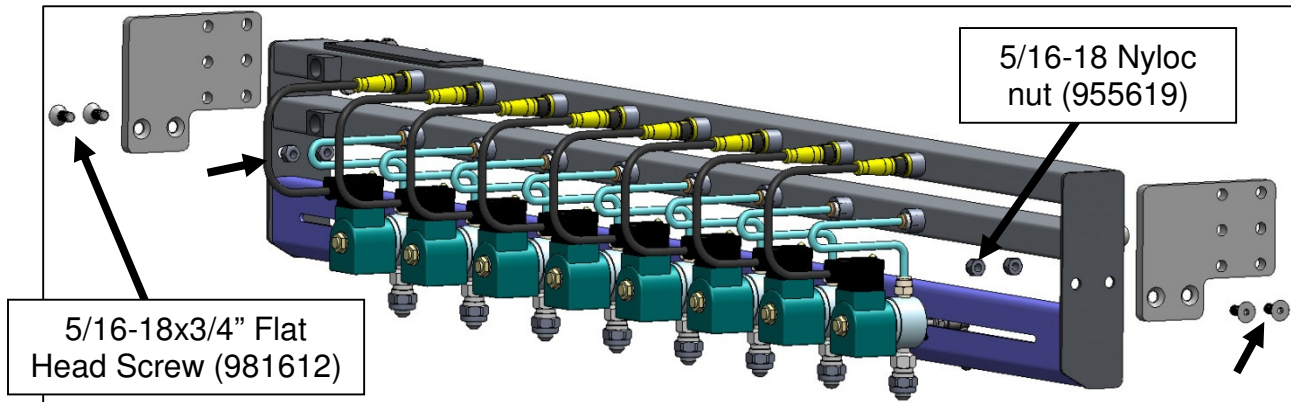


Fig. 2-15 Attach Manifold Support Brackets

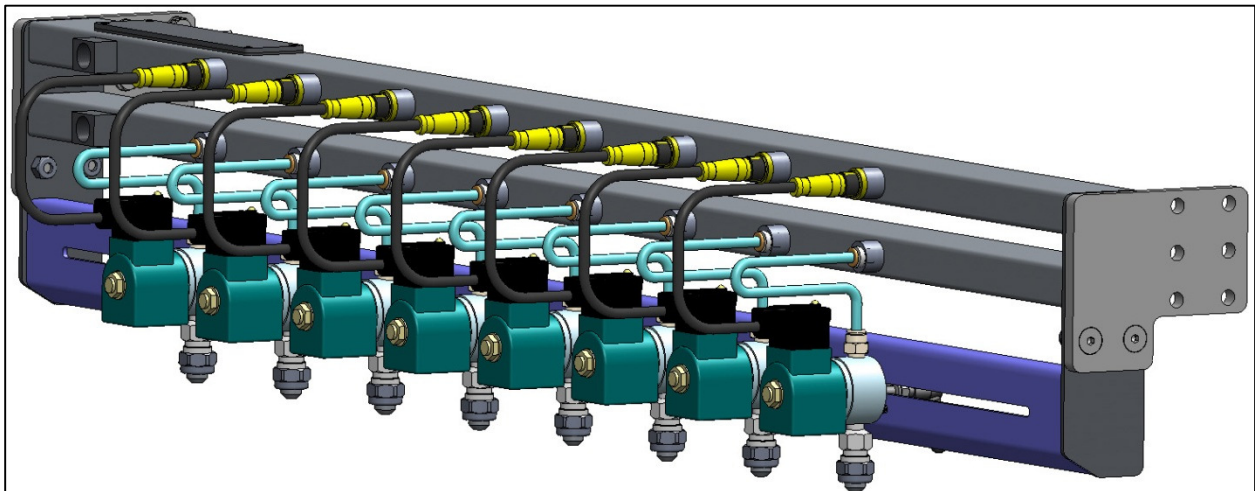


Fig. 2-16 Manifold Support Brackets Installed

17. Attach manifold to existing spray frame.

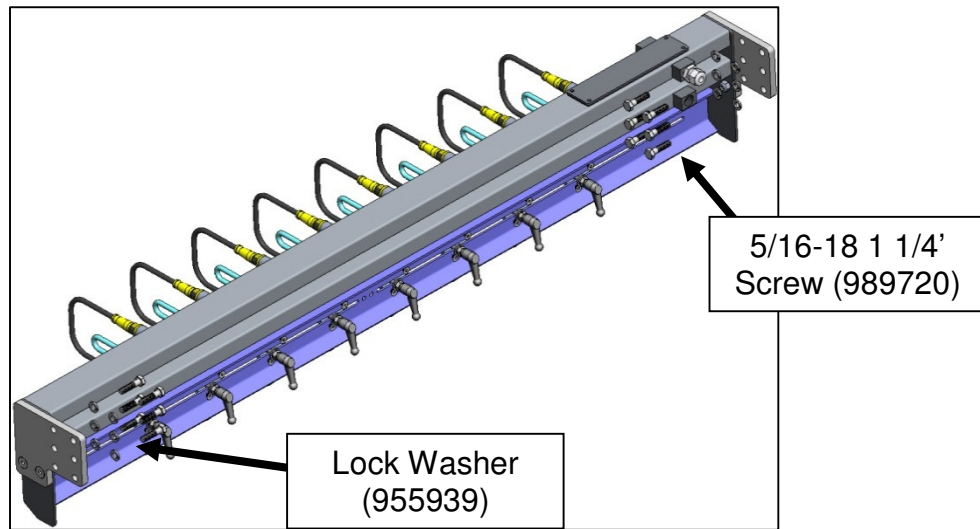


Fig. 2-17 Manifold Assembly

18. Measure the distance from the each frame bearing mount to the top of each manifold securing block, move the blocks up and down as needed to change this distance, this distance should be as close to equal as possible.

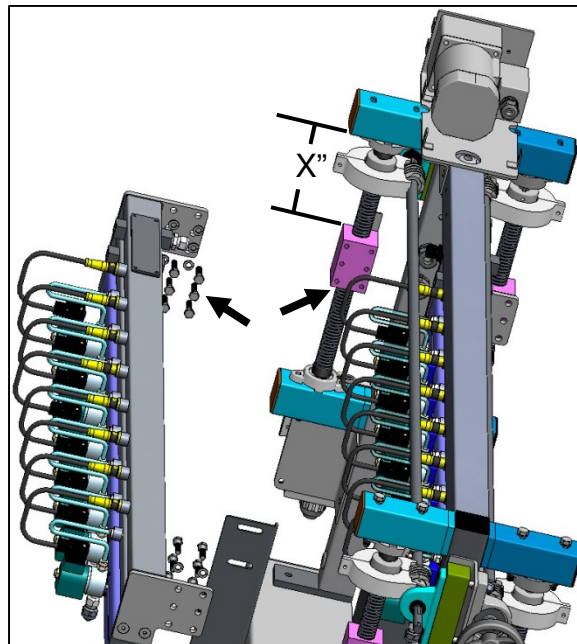


Fig. 2-18 Attach Manifold Assembly

19. Attach sensor brackets and sensors to existing spray frame.

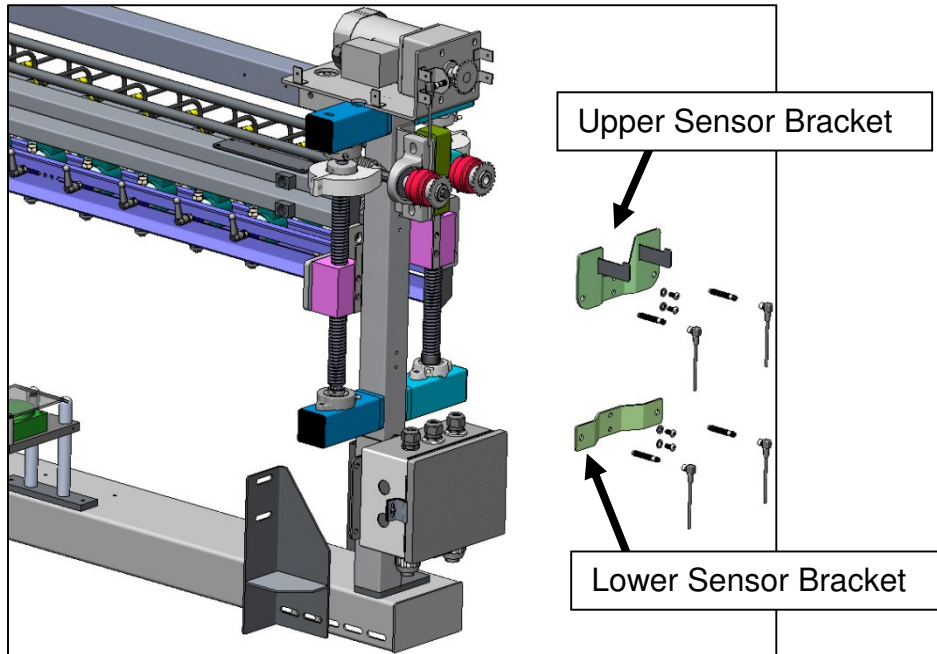


Fig. 2-20 Attach Sensor Brackets And Sensors

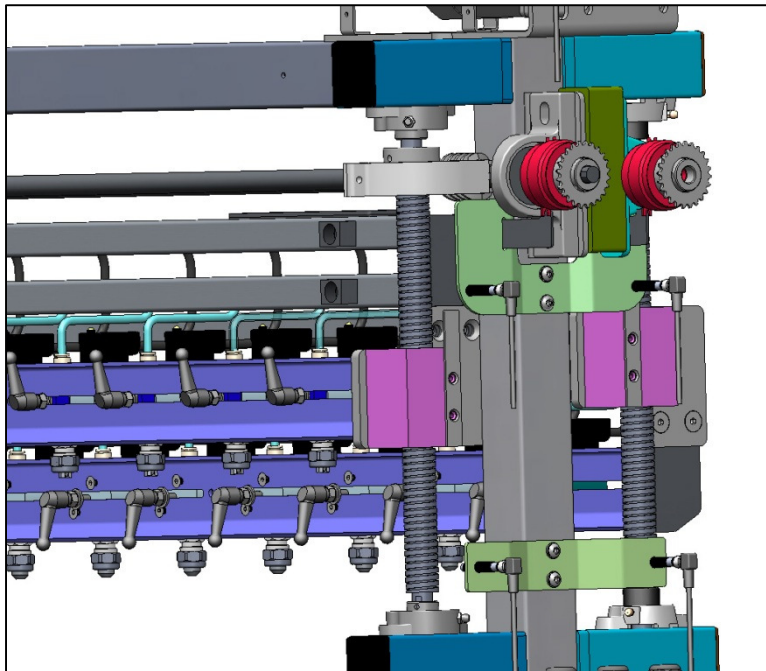


Fig. 2-19 Sensor Brackets A sensors Installed

At this Point the overall assembly should resemble Figure 2-21.

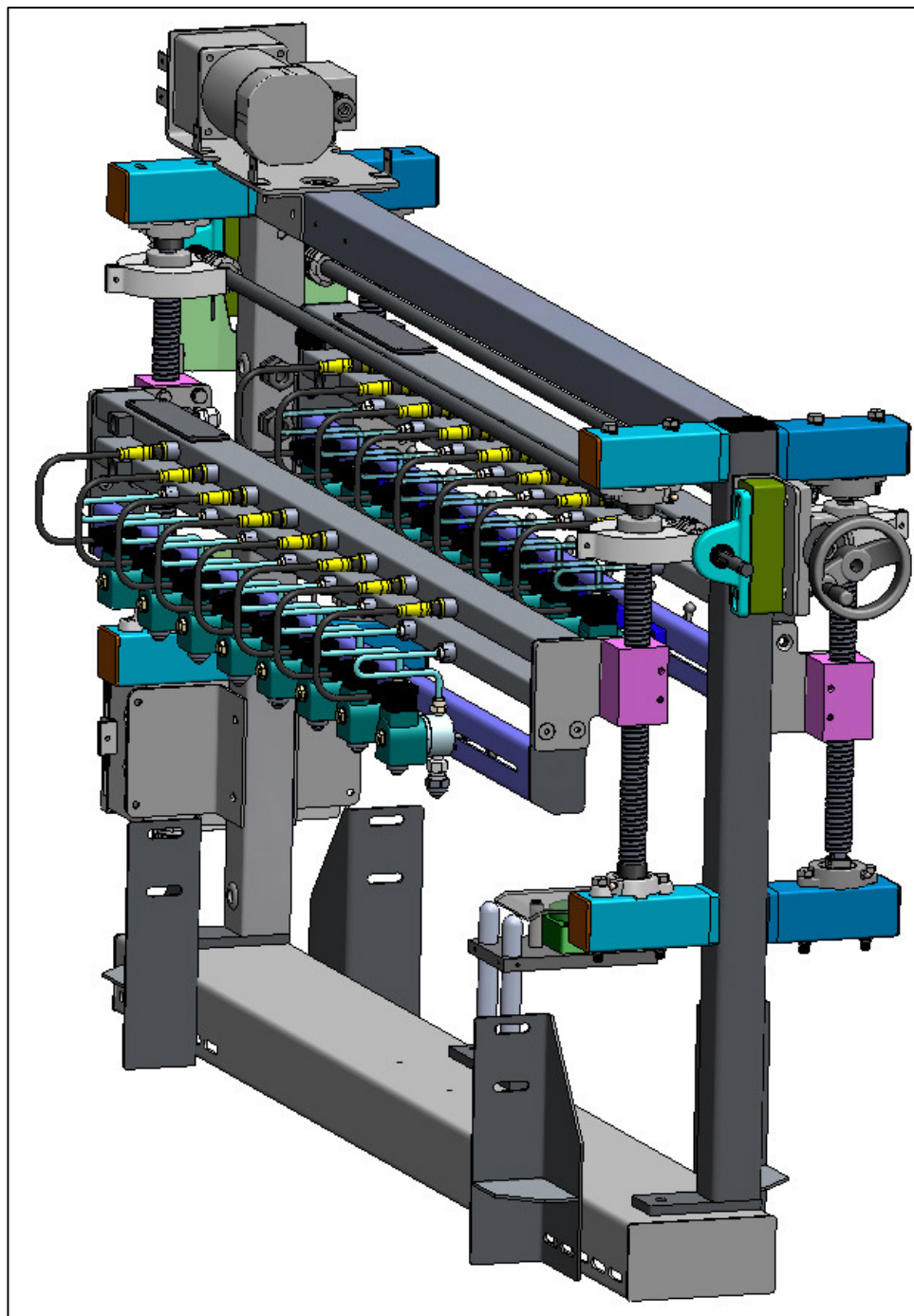


Fig. 2-21 Steps 1-20 Check Point

20. Level and tighten all all-thread lift shafts.

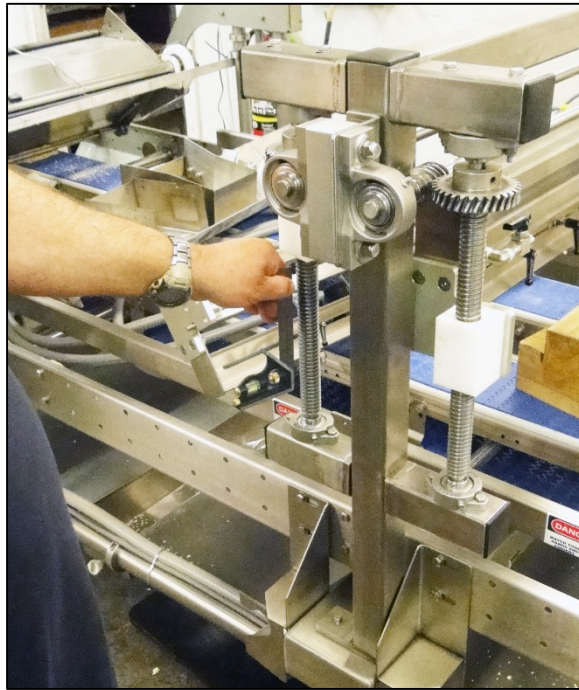
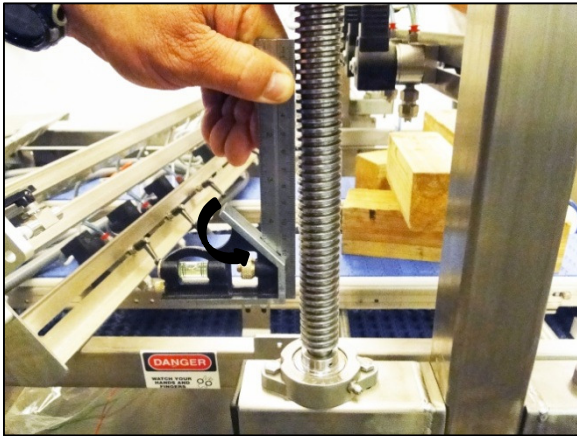


Fig. 2-22 Level All-Thread Shafts

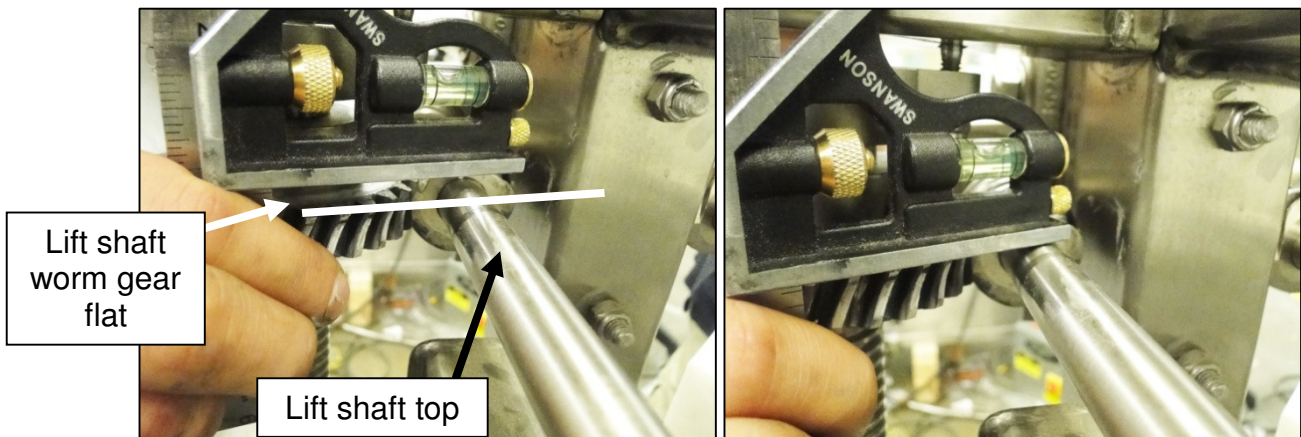
21. Check level of each shaft twice at 90 degree angles from each measurement. Once leveled securely tighten all bolts securing the all-thread lift shafts.



22. Level both spray and split lift shafts. Each top end of lift shafts should be level with the corresponding flat of the lift shaft worm gear. Securely tighten the bolts on each end after leveling the shafts.



Fig. 2-23 Level Lift Shafts



23. Inspect the entire spray/split assembly noting that all nuts and bolts are securely tightened.

24. Install chain around all three sprockets. Chain should fit snug without a lot of extra movement, add and remove links as needed.

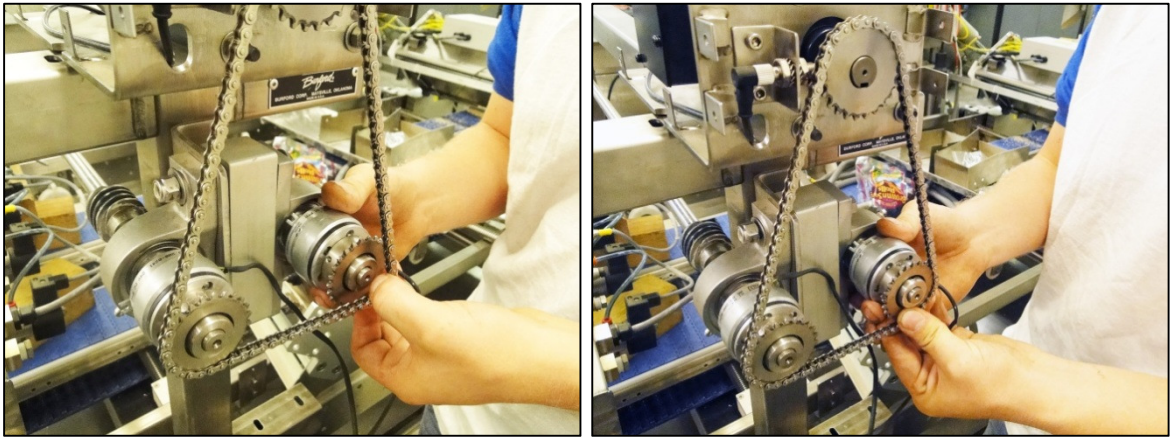


Fig. 2-24 Install Chain

25. Route all electrical wires from split manifold to the junction box where the spray manifold is wired to. Also install and route the supplied conduit from the main enclosure to the junction box, Follow the wiring diagram supplied to complete wiring

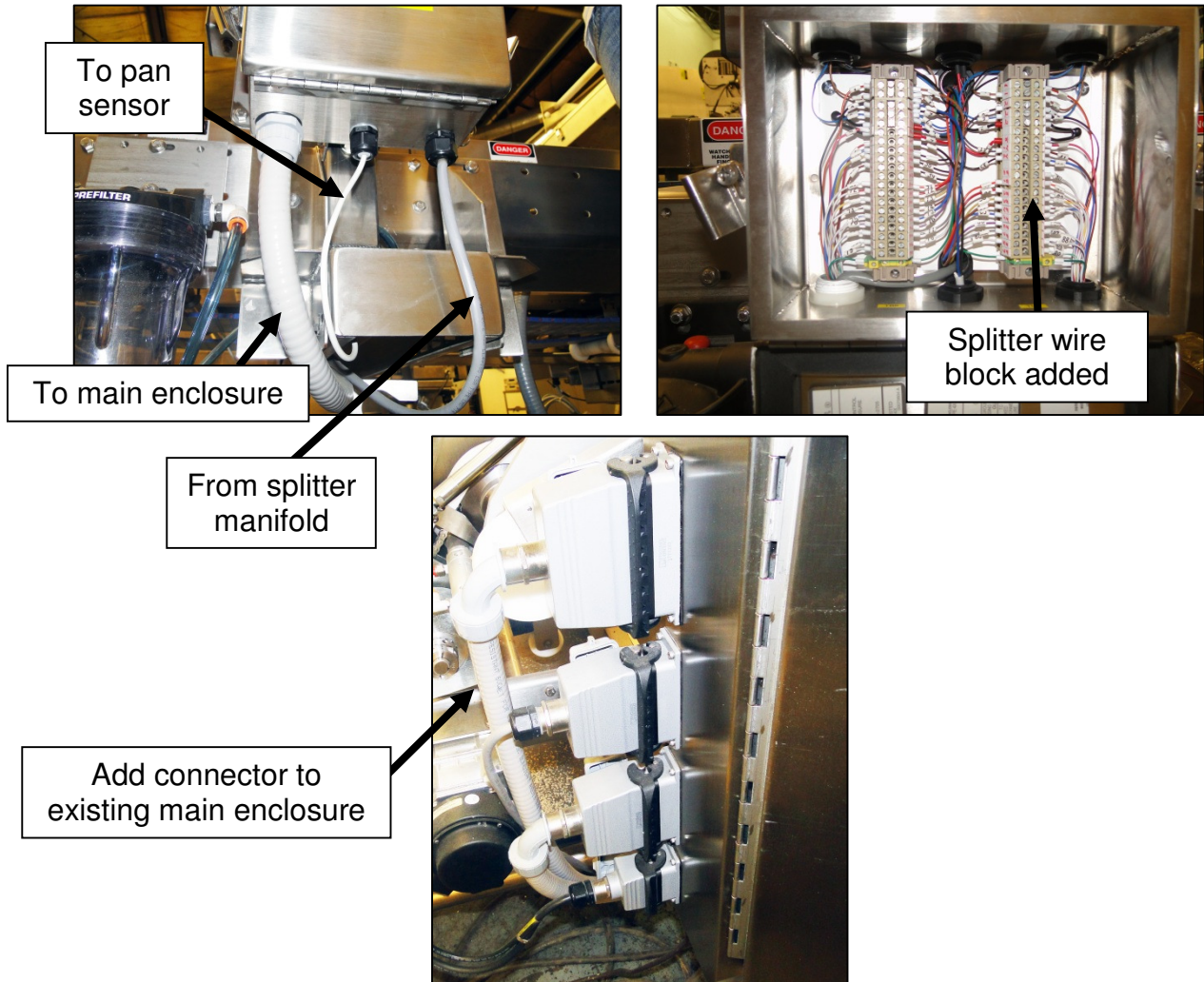


Fig. 2-25 Route Cables And Wires

26. Route and plumb all water lines on spray and split manifolds.

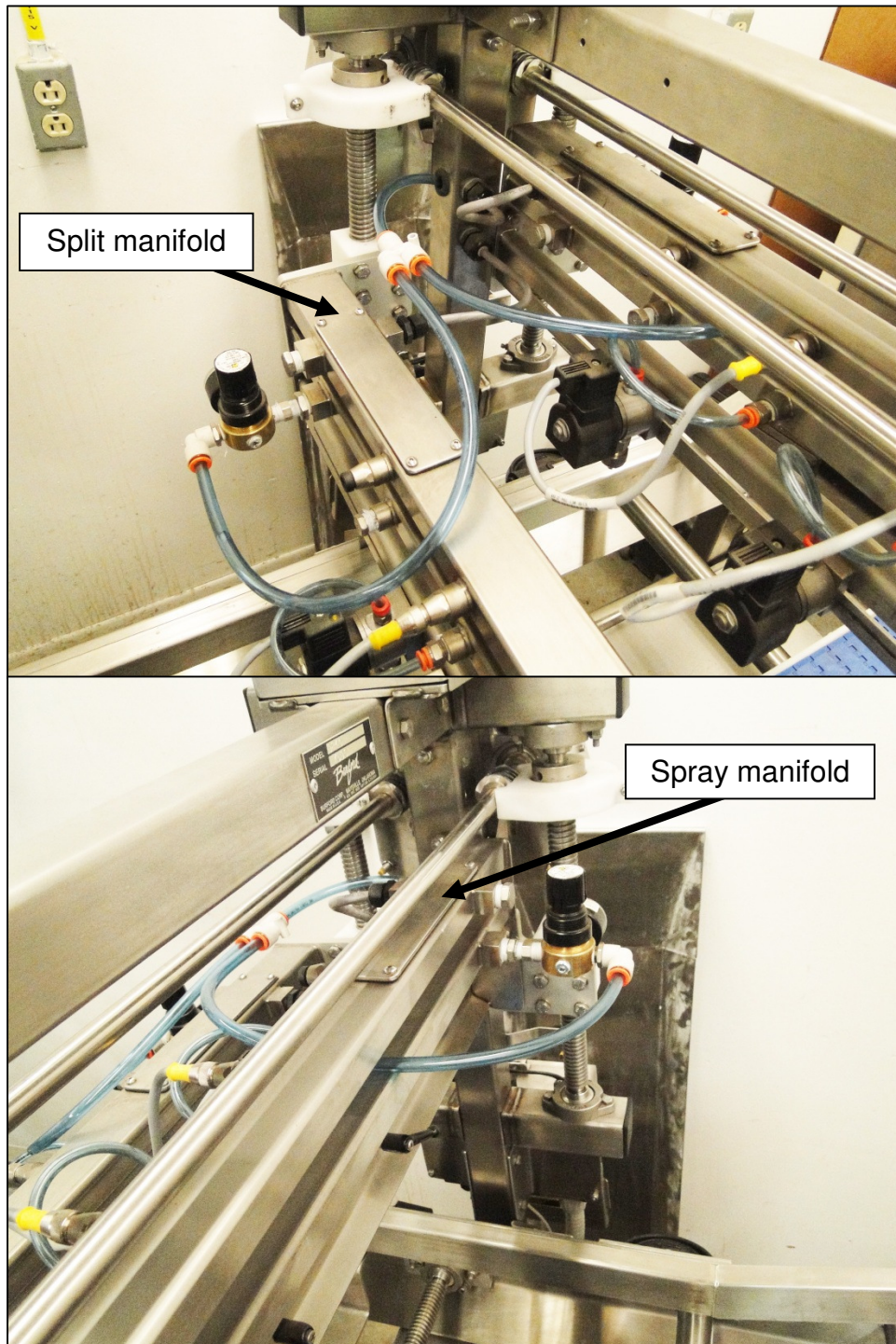


Fig. 2-26 Route And Plumb Water Lines

27. Connect water supply (from pump to main water filter).
28. Re-install all covers.

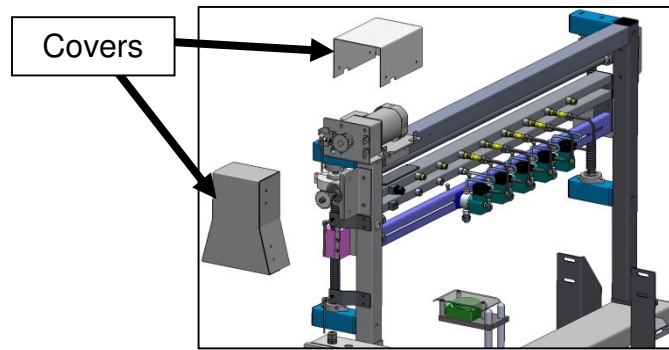


Fig. 2-27 Install Motor Covers

29. Energize main enclosure.
30. Refer to supplied CD to access “ADD SPLITTER-README.txt” file and follow steps to set up screens for the installed splitter.

2.1.1 Pump cart and manifold pressure.

Pressure settings for the pump cart air pressure and the manifold fluid pressure are outlined below. Different dough will require changes in pressure settings to achieve the desired split depth. These settings are general and may differ from application to application.

Pump Cart Air Pressure: 80 psi max

Pump Cart Accumulator Pressure: 30 psi

Manifold Liquid Pressure: 30-40 psi for standard (1-23 nozzles) manifold (single supply hose).

Manifold Liquid Pressure: 40-50 psi for high volume (24-60 nozzles) manifold (dual supply hoses).



Fig. 2-28 Pump Cart Pressure



Fig. 2-29 Manifold Pressure

3.0 ASSEMBLY DRAWINGS AND PARTS LISTS

3.1 Splitter Water Frame Assembly (210380-003 “B”)

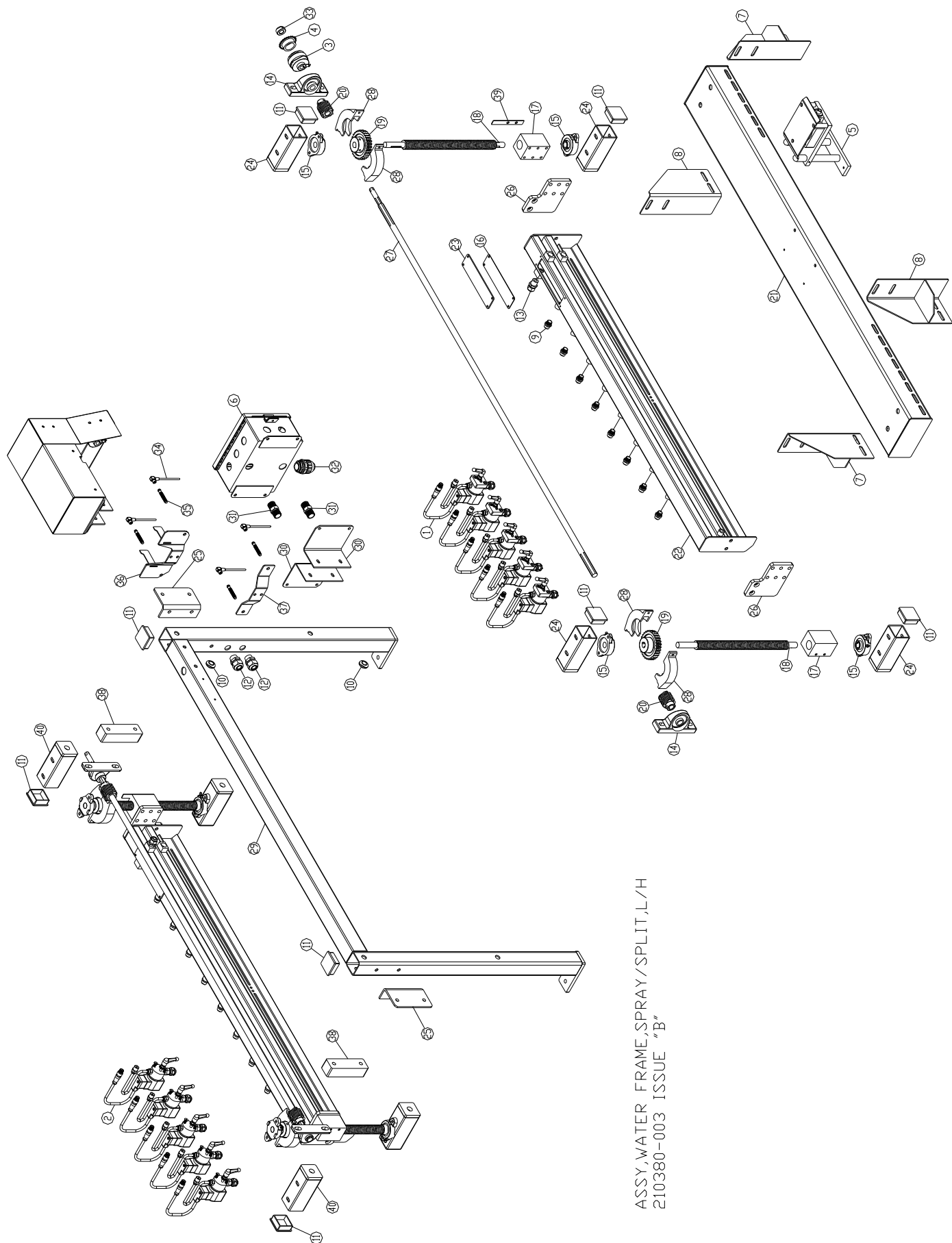
REF	PART #	QTY	DESCRIPTION
1	210389	REF	ASSY, NOZZLE, WATER SPRAY
2	210390	REF	ASSY, NOZZLE, WATER SPLITTER
3	304238	1	CLUTCH, 24 V.D.C.
4	304219	1	SPROCKET,RWK,25-B-24 1.104 BORE
5	210397	1	ASSY, SENSOR, PANCAKE PROX.
6	210398-002	1	ASSY, ENCLOSURE WATER SPRAY/SPLIT
7	304830	2	A/W, ANGLE MOUNT, 9840
8	304831	2	A/W, ANGLE MOUNT, 9840S
9	610169	8	SENSOR,BULKHEAD,M12,5 WIRE,F,QC
10	610922	2	GROMMET, 1/2B X 3/16G X 1/8W
11	610923	6	PLUG, 2" SQ TUBE, PLASTIC
12	610954	2	CONNECTOR, CORD, .39-.56, DOME, NYLON
13	610969	1	CONNECTOR,CORD,3/16-5/16 STR, NYLON
14	611237	2	BEARING, 5/8 PILLOW BLOCK, SST
15	611238	4	BEARING, 5/8, 2 BOLT FLANGE, SST
16	611534	1	GASKET, TERMINAL MANIFOLD COVER
17	711933	2	BLOCK, INNER CHASSIS, HEIGHT ADJ.
18	711934	2	SHAFT, INNER CHASSIS, HEIGHT ADJ.
19	711938	2	RWK, WORM GEAR
20	711939	2	RWK, WORM STEEL, 5/8" B, 10 D.P.

210380-003 ISSUE “B”

3.1 Splitter Water Frame Assembly (210380-003 "B")

REF	PART #	QTY	DESCRIPTION
21	712050	1	A/W, BASE WATER SPRAY 46"
22	712052	1	A/W, NOZZLE/ELEC. MNT.
23	712058	1	PLATE, TERMINAL MANIFOLD COVER
24	712059	4	A/W, BEARING MNT. VERTICAL
25	712077	2	BRACKET, BEARING MNT. HORIZ.
26	712078	2	PLATE, MANIFOLD MNT. MAIN
27	712080	1	SHAFT, HEIGHT ADJUSTMENT, WATER
28	712081	4	GUARD, WORM GEAR
29	712083	1	A/W, MAIN FRAME, WATER
30	712089	2	BRACKET, ENCLOSURE MNT.
31	712883	2	NIPPLE,REWORK,1/2 NPT,WATER SPRAY
32	C00179	1	CONNECTOR, CONDUIT,3/4"-STR NYLON
33	C05448	1	COLLAR,1/2" SET,SST
34	C07626	2	SENSOR,CABLE,M8,3WIRE,F,QC,90
35	304350-001	2	SENSOR,PROX,8MM,10-30V,PNP,NC
36	712061	1	A/W, HOME SENSOR/CLUTCH TAB
37	712064	1	BRACKET, OVERTRAVEL SENSOR MOUNT
38	712079	2	BLOCK, SPLITTER, BEARING MOUNT
39	712082	1	PLATE, SENSOR MT
40	712404	2	A/W, BEARING MT, HEIGHT ADJ, SPLIT

210380-003 ISSUE "B"



ASSY. WATER FRAME, SPRAY/SPLIT, L/H
210380-003 ISSUE "B"

Pump Box Assembly (C0600801N)

REF	PART #	QTY	DESCRIPTION
1	103878	23'	HOSE, AIR 1/4" DIA NEOPRENE
2	110415	3	FITTING, 1/4 NPT M PUSH ON
3	110423	1	FITTING, 1/4" NPT PLUG
4	110426	1	FITTING,NIPPLE,CLOSE,1/2 NPTM,BRS
5	110430	7	FITTING,HOSE BARB,3/4-16JIC X 1/2H
6	110431	1	FITTING,CONN,1/2MPT X 3/4-16F,BRS
7	112034	1	FITTING,COUPLING,1/4 NPTF,BRS
8	118871	1	FITTING,QC,STEM,AIR,1/4 NPTM,BRS
9	303674	1	GAUGE 0-200 PSI 1/4 NPT BACK MT SST
10	305716	1	FLOAT VALVE MINI ADJ 1/2"
11	611121	1	PUMP, AIR POWERED DBL DIAPHRAGM
12	713714	1	REGULATOR BRACKET, PUMP CART
13	955409	2	NUT HEX JAM 1/4-20 UNC SST
14	955661	30	NUT HEX NYLOC 1/4-20 UNC SST
15	955977	30	WASHER FLAT 1/4" SST
16	989910	10	SCREW FIN HEX 1/4-20 X 5/8" SST
17	989912	20	SCREW FIN HEX 1/4-20 X 3/4" SST
18	989948	2	SCREW FIN HEX 1/4-20 X 3 SST
19	A04225	4	CASTER, 3" LOCKING/SWIVEL, 145#
20	A06856	1	FITTING, REDUCING ELL 1/2F X 3/8M SS
21	A06859	1	FITTING, 1/2MPT X 1/2 TUBE
22	A07726	1	FITTING, PLUG 1/2" PVC
23	C00414	4	CLAMP 1/4" TO 5/8" SST

C0600801 ISSUE "N"

3.2 Pump Box Assembly (C0600801N), cont'd.

REF	PART #	QTY	DESCRIPTION
24	C00415	8	CLAMP #6 STAINLESS HOSE
25	C00435	24'	HOSE, 1/2" VINYL W/ POLYESTER
26	C00537	1	REGULATOR, AIR, 1/4 NPT PORTS
27	C00578	1	FILTER, WATER, 3/4" NPTF
28	C00579	1	FILTER REPLACEMENT # EC110
29	C00998	1	FITTING 49FB 1/4 X 7/16 JIC 90 BR
30	C01903	6	FITTING, ELL, 1/2MPT X 3/4-16F, BRS
31	C01915	1	FITTING, HOSE BARB, 7/16-20JIC X 1/4H
32	C01947	4	FITTING, BUSHING, 3/4 X 1/2 SST
33	C01958	1	FITTING, REDUCER, 1" MPT X 3/8FPT, SST
34	C02343	1	BRACKET WATER FILTER
35	C03613	1	FITTING, COUPLING, 1/2 NPTF, SST
36	C05339	1	FITTING, REDUCER, 1" x 1/2" SST
37	C05431	1	VALVE, 1/2 NPT 2-WAY, BALL, SST
38	C05576	2	FITTING, 1/2 NPT BULKHEAD, PL.
39	C06171	1	TANK, WATER RECHARGER
40	C06174	1	FITTING, BULKHEAD 1" POLY
41	C06176	1	RWK, TANK & COVER
42	C06183	1	TEE MOUNT A/W
43	C06195	1	PLATE, COVER CLAMP
44	C06196	1	BRACKET, UPPER TANK
45	C06200	1	A/W, TANK BASE
46	C07623	1	QUICK CONNECT BODY, 1/2 MPT

C0600801 ISSUE "N"

ASSEMBLY, PUMP BOX, PS2
C0600801 ISSUE "N"

HOSE LENGTH SCHEDULE	
F	PUMP TO REGULATOR
E	ACCUMULATOR TO SYSTEM
D	PUMP TO ACCUMULATOR
C	ACCUMULATOR TO TANK
B	TANK TO PUMP
A	FILTER TO TANK
QTY	DESCRIPTION

