



Installation Instructions for AccuShot Fertilizer System

for the YP30, YP40, and YP24 series planters

Before Getting Started

Before you begin installation of your AccuShot Fertilizer System, read these instructions carefully and check that all parts and tools in kit are accounted for. All hand and specialty tools for installation are provided at owner's expense. Please retain these installation instructions for future reference and parts ordering information.

These installation instructions contain information for assembling the AccuShot Fertilizer System to the main machine. Please read all instructions in your Yield-Pro Planter's operator manual thoroughly before proceeding. Your operator manual includes information on operation, adjustment, troubleshooting, and maintenance for this attachment (some manual sections do not apply to all accessories).

Instructions contain information for all makes and models of the applicable machines.

General Information

The AccuShot Fertilizer System kit replaces the existing drive with a variable pump driven by a hydraulic motor under seed monitor control.

AccuShot Fertilizer System	Reference #
YP30-24TR with mounted tanks	417-868A
YP30-24TR with semi-mounted cart	417-869A
YP40-32TR with mounted tanks	417-865A
YP40-32TR with semi-mounted cart	417-866A
YP40-1630 with mounted tanks	417-867A
YP40-1630 with semi-mounted cart	417-875A
YP40-48TR20 with mounted tanks	417-878A
YP24-48TR with semi-mounted cart	417-863A
YP24-2430 with semi-mounted cart	417-864A



Installation Guide QRC

The QR Code (Quick Response) to the left will take you to a web installation guide. Use your smart phone or tablet to scan the QR Code with an appropriate App to begin viewing.



Recommended Manuals

All manuals related to this kit are available free of charge by visiting www.greatplainsag.com. Have machine model and serial numbers available.

Yield-Pro Planter Parts Manuals	Manual #
YP3025A	401-705P
YP4025A	401-627P
YP2425A	401-626P

Refer to page 10 for a detailed list of parts included in these kits. Use these lists to inventory parts received.

Tools Required

The following tools are required for installation:

- General hand tools.

Refer to page 9 for torque values chart.



Yield-Pro QRC

The QR Code (Quick Response) to the left will take you to the Yield-Pro family of manuals. Use your smart phone or tablet to scan the QR Code with an appropriate App to begin viewing.

Installation Instructions

Preparation

Before you begin installation of your Accushot kit, first hook the planter to a tractor and move the opener lock handles to "Field," unfold the drill and lower the openers to the ground. Place the remove lever in float position to relieve any residual hydraulic pressure. Clean the area around the pressure reducing valves by washing or using compressed air.

NOTE

If there is a fertilizer system present, you may leave the system on the machine or remove it. See your machine's parts manual and fertilizer system's installation guide for more information on removing a fertilizer system option.

Getting Started

Remove components for Accushot kit and check that all components are accounted for. Refer to the component list starting on page 2. Make sure to refer to the correct component lists for your product.

Make sure any required tools are on hand. See "Tools Required" on page 1 for a general list of recommended tools for installation.

Familiarize yourself with machine operator manual and operating hydraulics before starting.

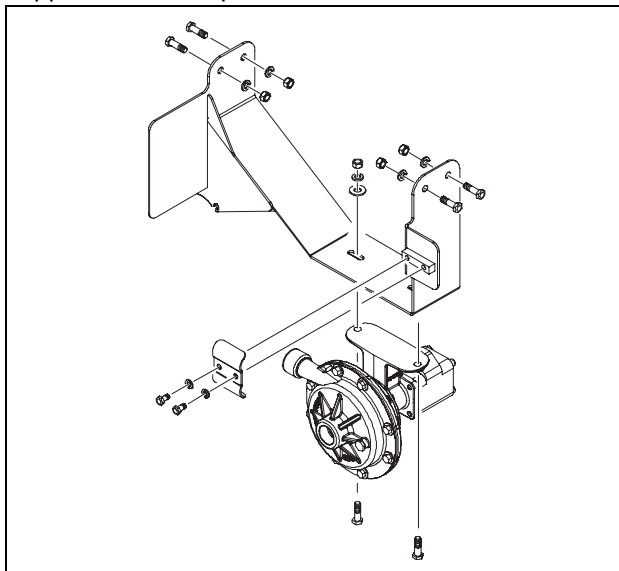
1 Fertilizer Pump with Semi-Mounted Cart

NOTE

Pumps are sent pre-assembled from the factory. If your pump does not come assembled, please refer to your machine's parts manual for assembling your pump.

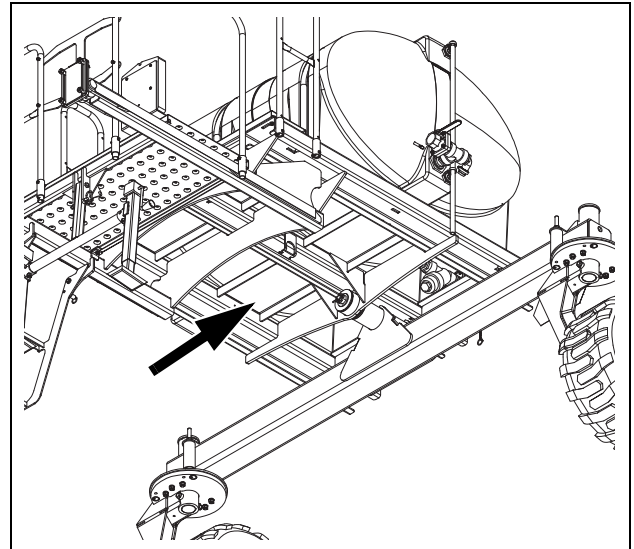
1a. Installing Fertilizer Pump to Pump Mount

The fertilizer pump should come preassembled to the pump mounting hardware. If your pump and mounting hardware do not come pre-assembled, attach assembled fertilizer pump to mount using $\frac{3}{8}$ nuts, flat washers, lock spring washers, and bolts supplied. Refer to parts manual for more information.



1b. Preparing Cart Frame

Locate the bottom right section of the fertilizer cart seen in the drawing below.



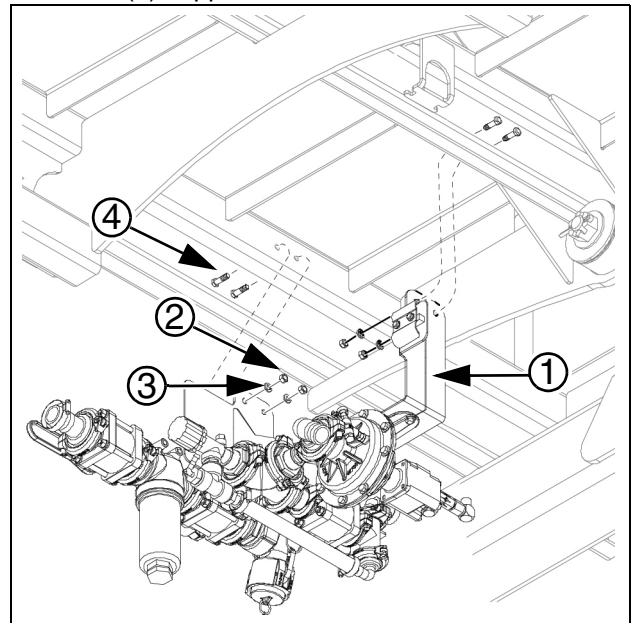
If no holes are present for pump in the cart frame, you will need to make them with a standard power drill. Measure holes so they are 8" apart. Make sure hole markings align with pump mount holes. Drill holes using a 0.44" drill bit.

NOTE

Do not drill holes too close to the bottom or top of the cart frame.

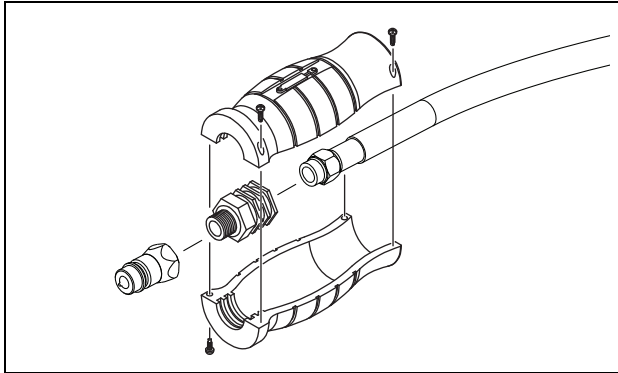
1c. Installing Pump Mount to Cart Frame

If holes are already present or you have finished drilling holes into the cart frame, attach the pump mount (1) using $\frac{3}{8}$ nuts (2), lock spring washers (3), and bolts (4) supplied.

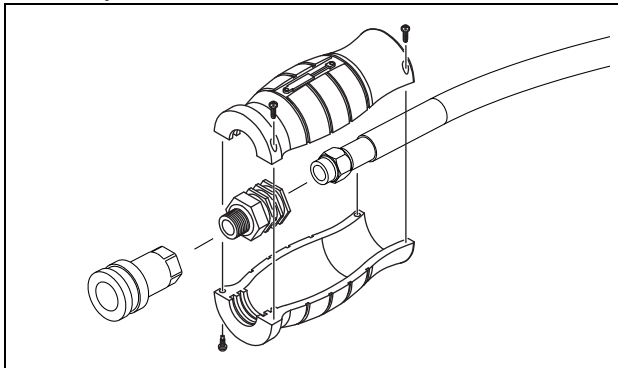


1d. Attaching Rubber Grips & Small Poppets to Hydraulic Hoses for Semi-Mounted Tank

Locate and identify hydraulic hose ports on the back of the hydraulic pump and connect supplied hydraulic hoses. Screw hydraulic grip onto male-end of hydraulic hose connected to the IN port. Attach male poppet to male-end of hydraulic grip, then screw together handle with extended hydraulic symbol over hydraulic grip assembly.



Screw hydraulic grip onto male-end of hydraulic hose connected to the OUT port. Attach female poppet to male-end of hydraulic grip. Screw together handle with retracted hydraulic symbol over hydraulic grip assembly.

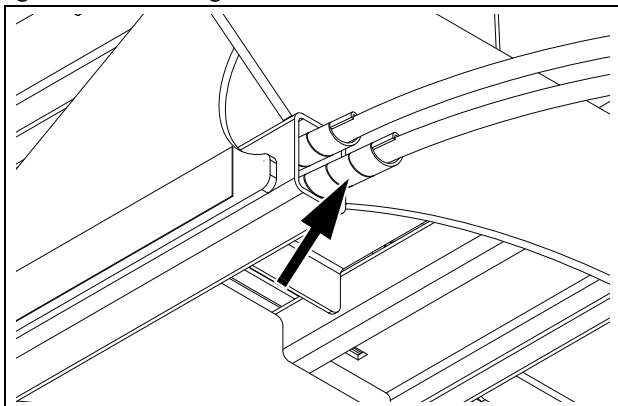


Route hydraulic hose ends with rubber grips and poppets along the tongue of the machine.



NOTE

Cover hoses in supplied hose wrap wherever hose rubs against machine edge.



2 Fertilizer Pump with Onboard Tanks

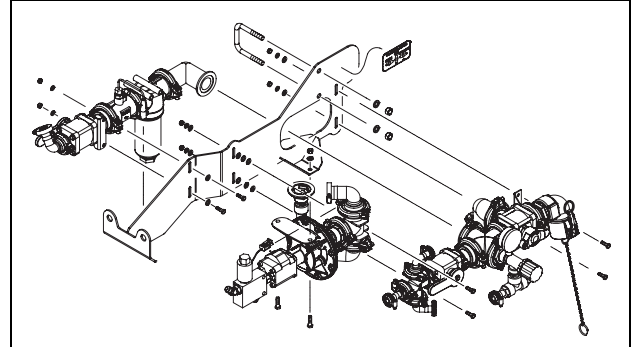


NOTE

Pumps are sent pre-assembled from the factory. If your pump does not come assembled, please refer to your machine's parts manual for assembling your pump.

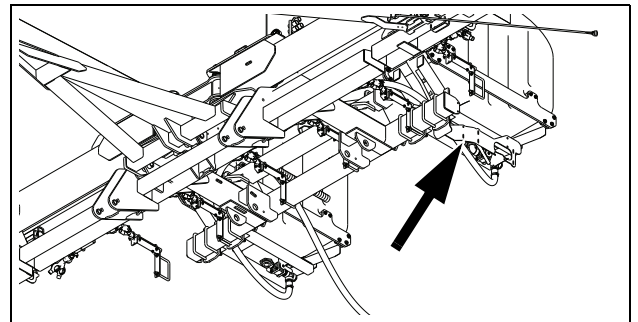
2a. Installing Fertilizer Pump to Pump Mount

The fertilizer pump should come pre-assembled to the pump mounting hardware. If your pump and mounting hardware do not come pre-assembled, attach assembled fertilizer pump to mount using $\frac{3}{8}$ nuts, flat washers, lock spring washers, and bolts supplied. Refer to parts manual for more information.

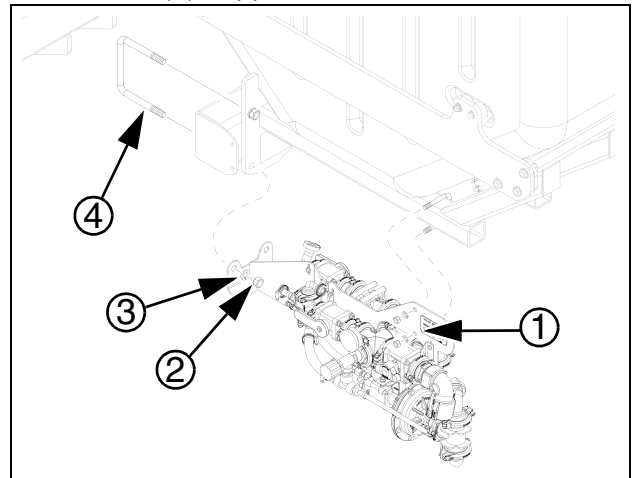


2b. Installing Pump Mount to Fertilizer Tank

Locate the underside of the left-hand fertilizer tank as shown below.



Attach the pump mount (1) with assembled pump using $\frac{3}{8}$ nuts (2), lock spring washers (3), and u-bolts (4) supplied.



2c. Connecting Hydraulic Hoses to Semi-Mounted Cart's Fertilizer Pump

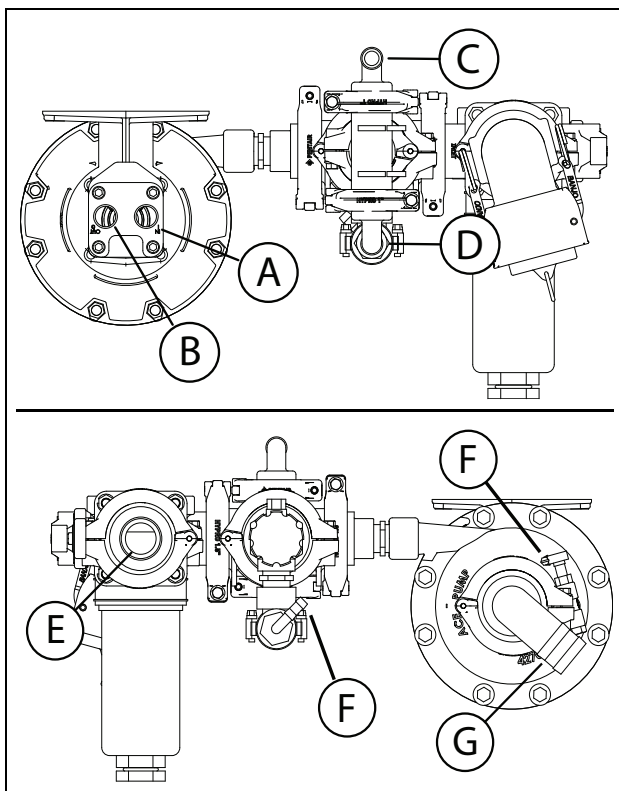
Connect hydraulic hoses to open ports on the pump assembly. Use the images below to attach matching ports using the correct hose.



NOTE

Ports labeled with the same letter are connected by hydraulic hose. Ports without a corresponding letter depicted are routed towards the front of the machine.

A	1/2" hydraulic hose* connected to hose running up tongue
B	1/2" hydraulic hose* connected to hose running up tongue
C	3/4" fertilizer hose* connected to rear of fertilizer tank
D	3/4" hydraulic hose connected to fertilizer pump ports
E	1/2" hydraulic hose* connected to hydraulic shutoff valve
F	3/8" fertilizer hose connected to fertilizer pump ports
G	1/2" hydraulic hose* connected to clean-out valve



Reconnect pre-existing hydraulic hose to available pump port (E).

* indicates connection to hoses pre-existing on machine

2d. Connecting Hydraulic Hoses to Onboard Tank's Fertilizer Pump

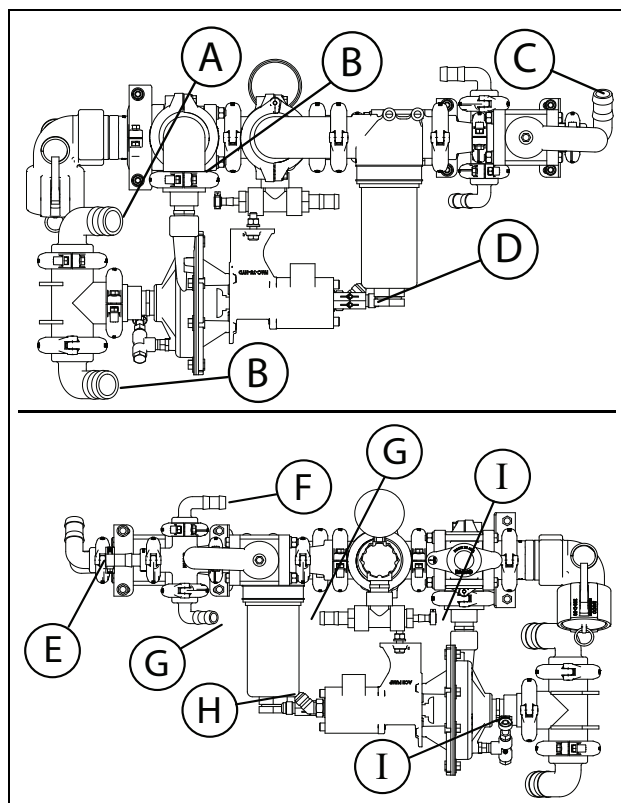
Connect hydraulic hoses to open ports on the pump assembly. Use the images below to attach matching ports using the correct hose.



NOTE

Ports labeled with the same letter are connected by hydraulic hose. Ports without a corresponding letter depicted are routed towards the front of the machine.

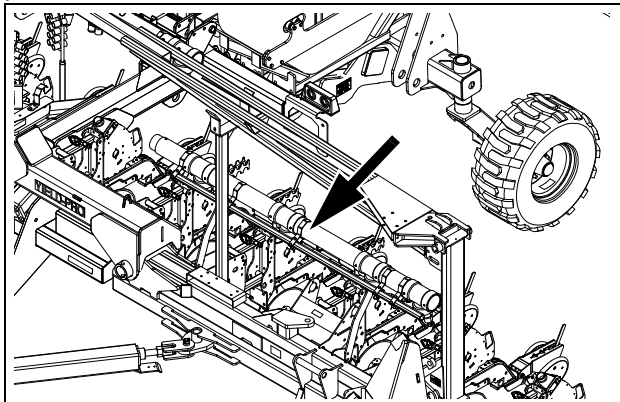
A	1/2" hydraulic hose* connected to clean-out valve tee
B	1/2" hydraulic hose connected to fertilizer pump ports
C	3/4" fertilizer hose* connected to wet boom tee
D	3/8" fertilizer hose* connected to hydraulic pump motor
E	1/2" hydraulic hose* connected to right-side hopper undercarriage
F	3/4" fertilizer hose* connected to left-side hopper undercarriage
G	3/8" fertilizer hose connected to fertilizer pump ports
H	1/2" hydraulic hose* connected to bottom port of pressure valve
I	3/8" fertilizer hose connected to fertilizer pump ports



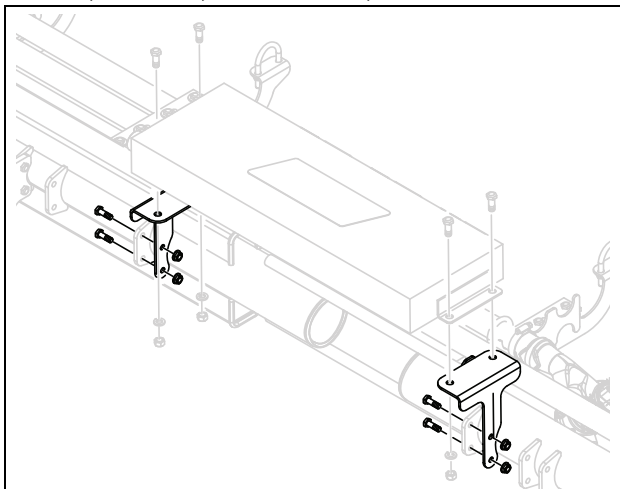
3 Accushot Controller

3a. Installing Mount and Control Box to Cart Frame for YP30

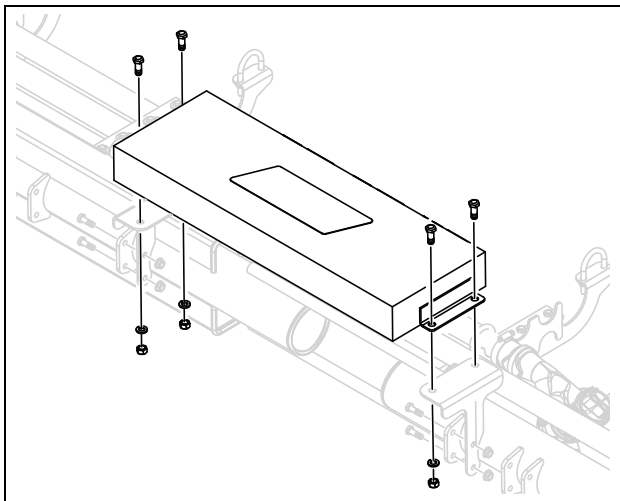
On the left-wing of the machine, locate where the pullbar connects to the cart frame.



On the left-hand side of the pullbar, install the control box mounts onto the implement frame using four sets of bolts, washers, lock washers, and nuts.

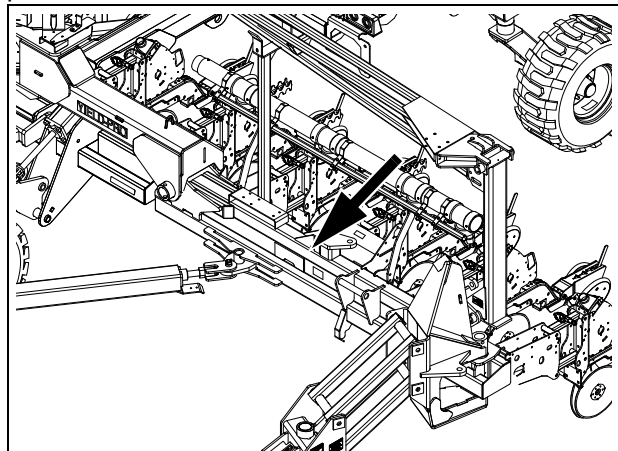


Install control box onto the control box mount using four sets of bolts, washers, and nuts.

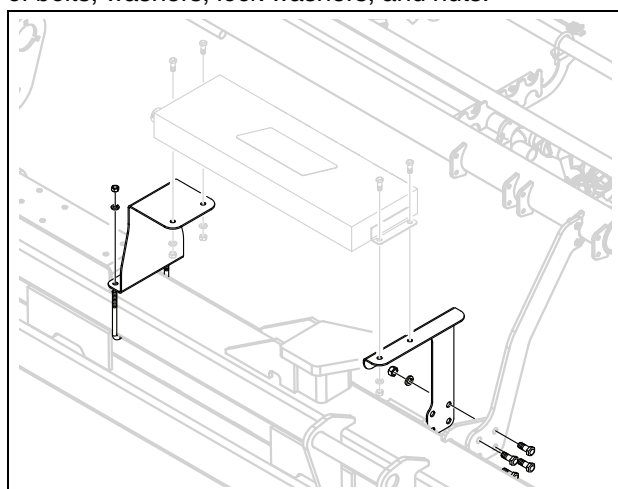


3b. Installing Control Box Mount to Cart Frame for YP40

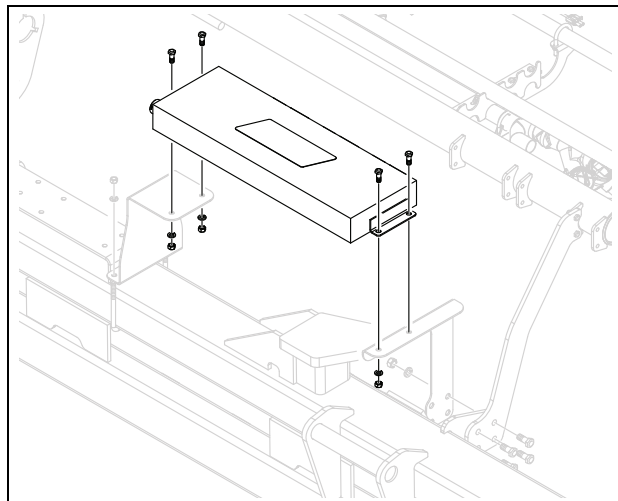
On the left-wing of the machine, locate where the pullbar connects to the cart frame.



On the left-hand side of the pullbar, install the control box mounts onto the implement frame using four sets of bolts, washers, lock washers, and nuts.

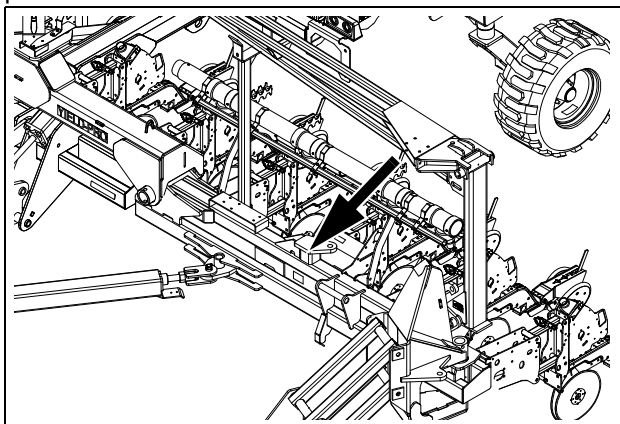


Install control box onto the control box mount using four sets of bolts, washers, and nuts.

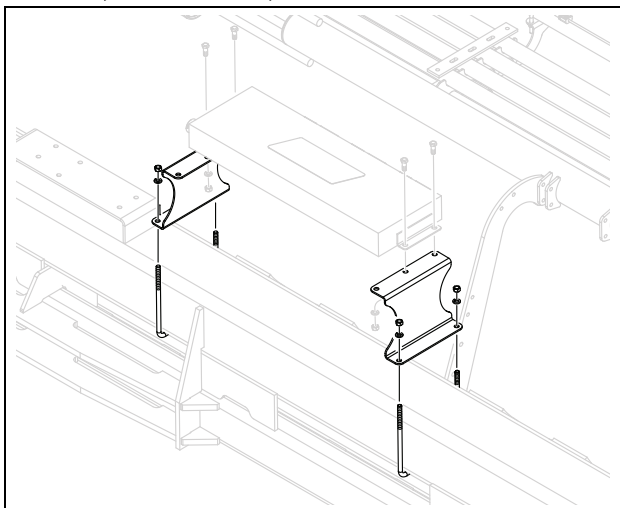


3c. Installing Control Box Mount to Cart Frame for YP24

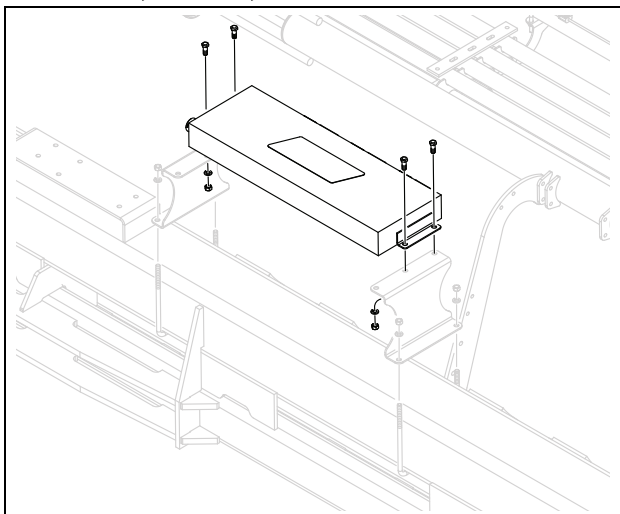
On the left-wing of the machine, locate where the pullbar connects to the cart frame.



On the left-hand side of the pullbar, install the control box mounts onto the implement frame using u-bolts, washers, lock washers, and nuts.

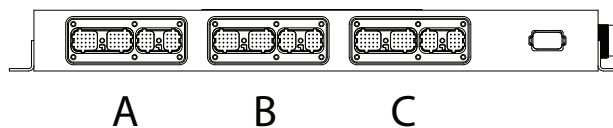


Install control box onto the control box mount using four sets of bolts, washers, and nuts.



3d. Attaching Electrical Harness to Control Box

Plug electrical harness into ports on the back of the control box. Plug harness routed to the left-hand side of the machine into the far left port (A), the harness routed to the center of the machine into the middle port (B), and the harness routed to the right-hand side of the machine into far right port (C).



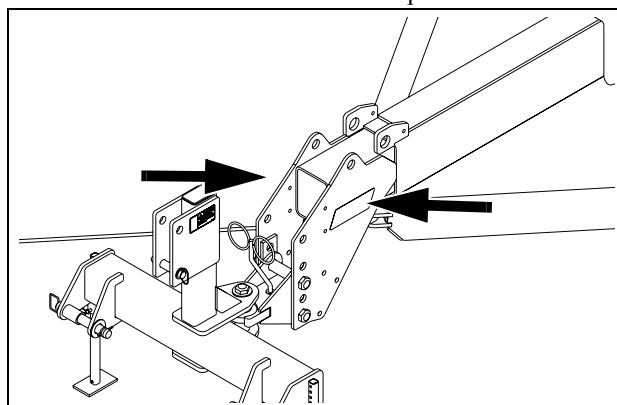
Route electrical harnesses from control box to tongue pull bar. Secure harness with zip ties.

3e. Attaching Control Box Decals to Control Box & Hitch

Locate tongue of the machine. Install an Accushot controller decal on each side of the tongue's hitch.

NOTE

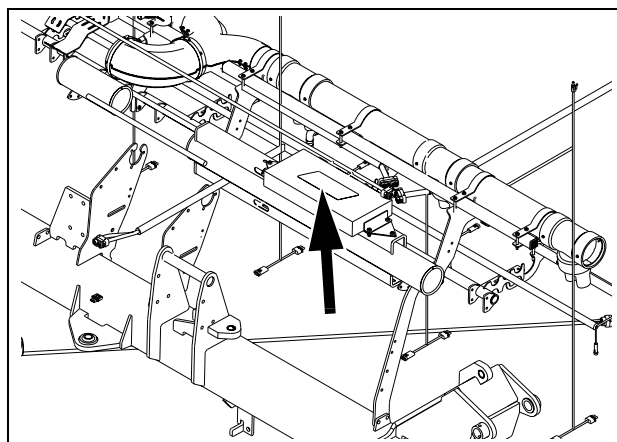
Decal placement should be as symmetrical as possible and each decal's orientation should face up.



Locate the frame on the left-hand side of the machine. Install remaining Accushot controller decal to frame.

NOTE

Accushot controller decal should be oriented on top of the machine frame with text facing out from the center of the machine.

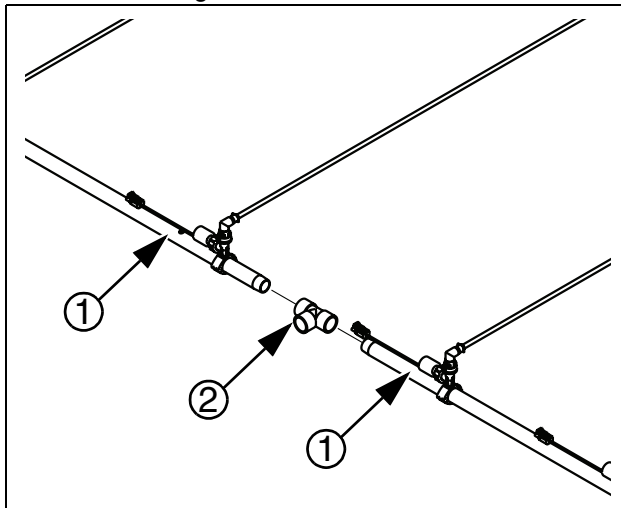


4 Wet Boom

4a. Connecting Wet Booms to Tee

Locate the wet boom bundles in your Accushot kit. Make sure all parts for your machine's wet booms are accounted for by reviewing the parts list starting on page 10.

Connect two wetboom tubes (1) together using supplied tees (2). Do this until you have two sets of connected tubing.

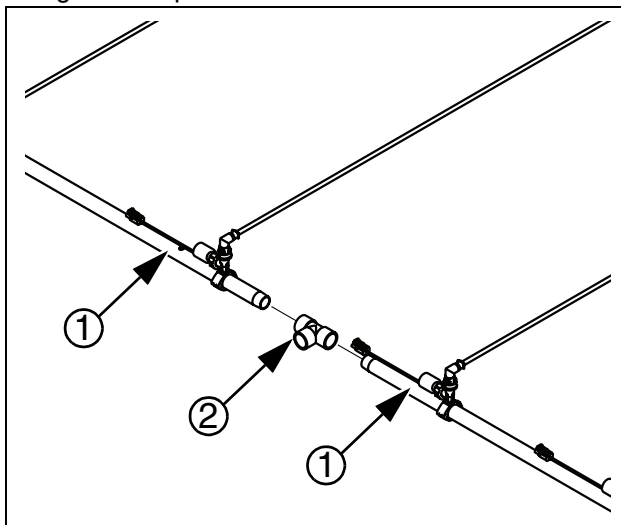


4b. Routing Wet Booms along Wings

For each wing of the machine, route wetboom tube along the wing. Spread wetboom tube evenly so that solenoid nozzles align with machine openers.

Route Accushot valve harnesses along wings. Connect harness ports to

Locate the remaining wetboom tubes and connect them using a supplied tee. Route wet boom tubes along center opens and secure to machine frame.



Route Accushot valve harness along center. Connect harness ports to controller.

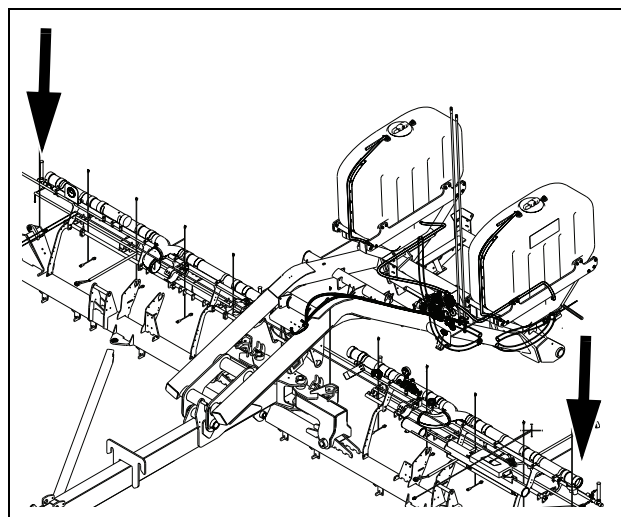
5 Sensor Harness

5a. Installing Long Seed Sensor Harnesses to Machine Ends

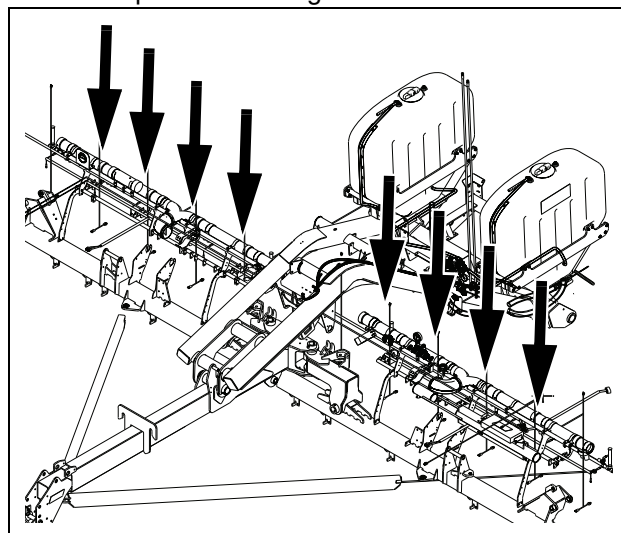
Separate kit's seed sensor harnesses into long and short piles.

Install long seed sensor harnesses on the far ends and exact center of the machine.

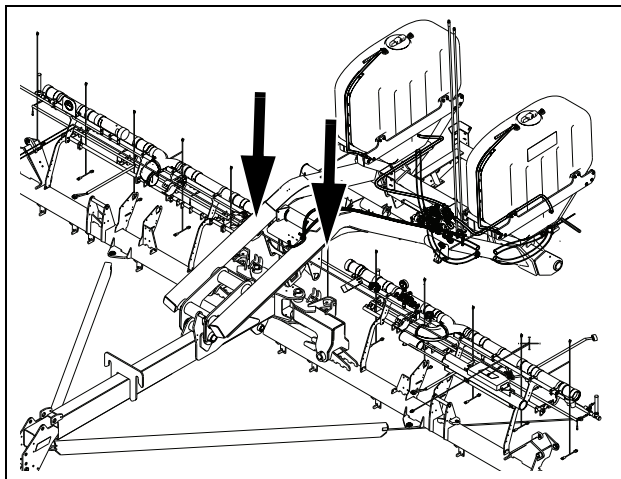
If your kit came with four long seed sensor harnesses, install them as follows: one on the left-wing tip, one on the right-wing tip, and two in the immediate center of the machine. Double the amounts used if your kit came with eight long seed sensor harnesses instead of four.



Split short Accushot seed sensors into two even piles. Install all of one set of seed sensors onto the rows starting from the first available opener on the left-side of the machine. Then install the remaining seed sensors onto the rows starting from the first available opener on the right-side of the machine.

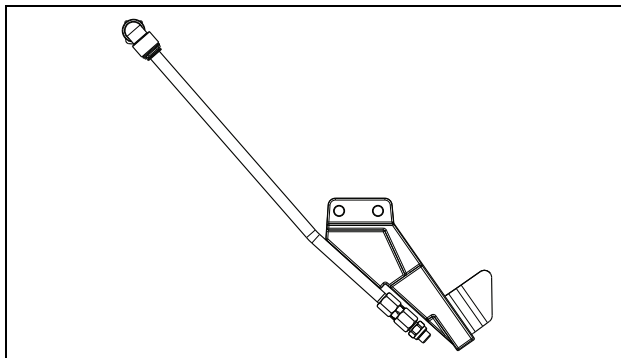


Install the remaining long seed sensor harnesses onto the remaining available middle rows of your machine.



6 Blade Separator

Remove blade separator parts from shipping container. Separators ship fully assembled as shown below.

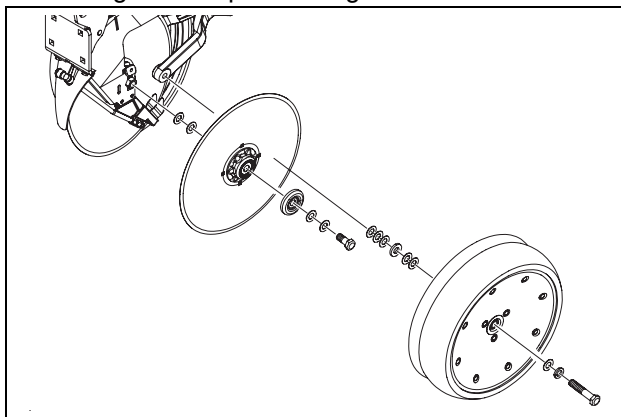


NOTE

Total number of assembled blade separators should equal the number of openers on the machine.

6a. Removing Pre-Existing Scrapper Separator

Starting with the first opener on the left-hand side of the machine, remove gauge tire assembly by loosening nut and sliding out with pre-existing hardware.



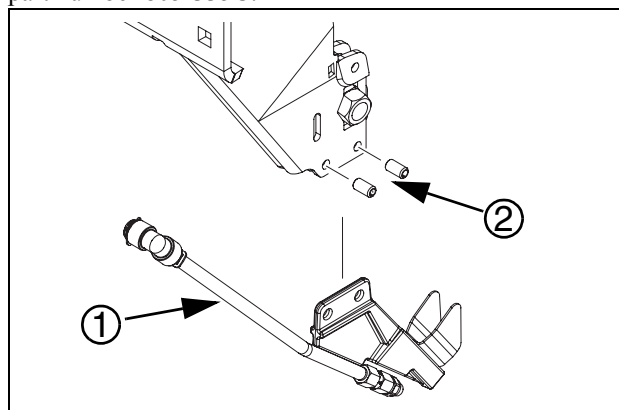
6b. Installing AccuShot Blade Separator and Routing Fertilizer Line

Remove pre-existing scrapper separator by extracting pin rolls and sliding scrapper separator out. Insert new AccuShot blade separator (1) and secure with pin rolls (2). Then reassemble gauge tire onto the opener.

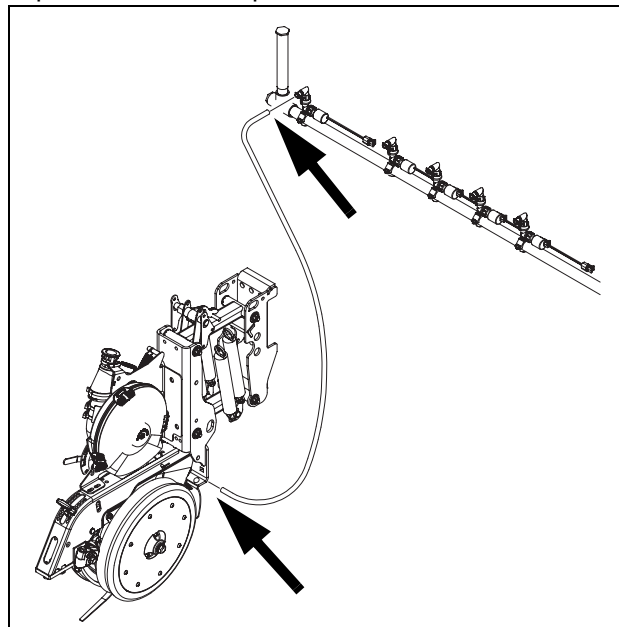


NOTE

If pin rolls are lost or damaged, order replacements using part number 805-335C.









Route blade separator's attached fertilizer tube through opener shield and attach elbow cap. Route tubing from aligned wetboom port down to the blade separator's elbow cap.



Secure fertilizer tube to the opener using supplied zip ties.

Torque Values Chart

Bolt Size in-tpi ^a	Bolt Head Identification					
						
	Grade 2	Grade 5	Grade 8			
	N-m ^b	ft-lb ^d	N-m	ft-lb	N-m	ft-lb
1/4-20	7.4	5.6	11	8	16	12
1/4-28	8.5	6	13	10	18	14
5/16-18	15	11	24	17	33	25
5/16-24	17	13	26	19	37	27
3/8-16	27	20	42	31	59	44
3/8-24	31	22	47	35	67	49
7/16-14	43	32	67	49	95	70
7/16-20	49	36	75	55	105	78
1/2-13	66	49	105	76	145	105
1/2-20	75	55	115	85	165	120
9/16-12	95	70	150	110	210	155
9/16-18	105	79	165	120	235	170
5/8-11	130	97	205	150	285	210
5/8-18	150	110	230	170	325	240
3/4-10	235	170	360	265	510	375
3/4-16	260	190	405	295	570	420
7/8-9	225	165	585	430	820	605
7/8-14	250	185	640	475	905	670
1-8	340	250	875	645	1230	910
1-12	370	275	955	705	1350	995
1 1/8-7	480	355	1080	795	1750	1290
1 1/8-12	540	395	1210	890	1960	1440
1 1/4-7	680	500	1520	1120	2460	1820
1 1/4-12	750	555	1680	1240	2730	2010
1 3/8-6	890	655	1990	1470	3230	2380
1 3/8-12	1010	745	2270	1670	3680	2710
1 1/2-6	1180	870	2640	1950	4290	3160
1 1/2-12	1330	980	2970	2190	4820	3560

Bolt Size mm x pitch ^c	Bolt Head Identification					
						
	Class 5.8	Class 8.8	Class 10.9			
	N-m	ft-lb	N-m	ft-lb	N-m	ft-lb
M 5 X 0.8	4	3	6	5	9	7
M 6 X 1	7	5	11	8	15	11
M 8 X 1.25	17	12	26	19	36	27
M 8 X 1	18	13	28	21	39	29
M10 X 1.5	33	24	52	39	72	53
M10 X 0.75	39	29	61	45	85	62
M12 X 1.75	58	42	91	67	125	93
M12 X 1.5	60	44	95	70	130	97
M12 X 1	90	66	105	77	145	105
M14 X 2	92	68	145	105	200	150
M14 X 1.5	99	73	155	115	215	160
M16 X 2	145	105	225	165	315	230
M16 X 1.5	155	115	240	180	335	245
M18 X 2.5	195	145	310	230	405	300
M18 X 1.5	220	165	350	260	485	355
M20 X 2.5	280	205	440	325	610	450
M20 X 1.5	310	230	650	480	900	665
M24 X 3	480	355	760	560	1050	780
M24 X 2	525	390	830	610	1150	845
M30 X 3.5	960	705	1510	1120	2100	1550
M30 X 2	1060	785	1680	1240	2320	1710
M36 X 3.5	1730	1270	2650	1950	3660	2700
M36 X 2	1880	1380	2960	2190	4100	3220

a. in-tpi = nominal thread diameter in inches-threads per inch

b. N·m = newton-meters

c. mm x pitch = nominal thread diameter in mm x thread pitch

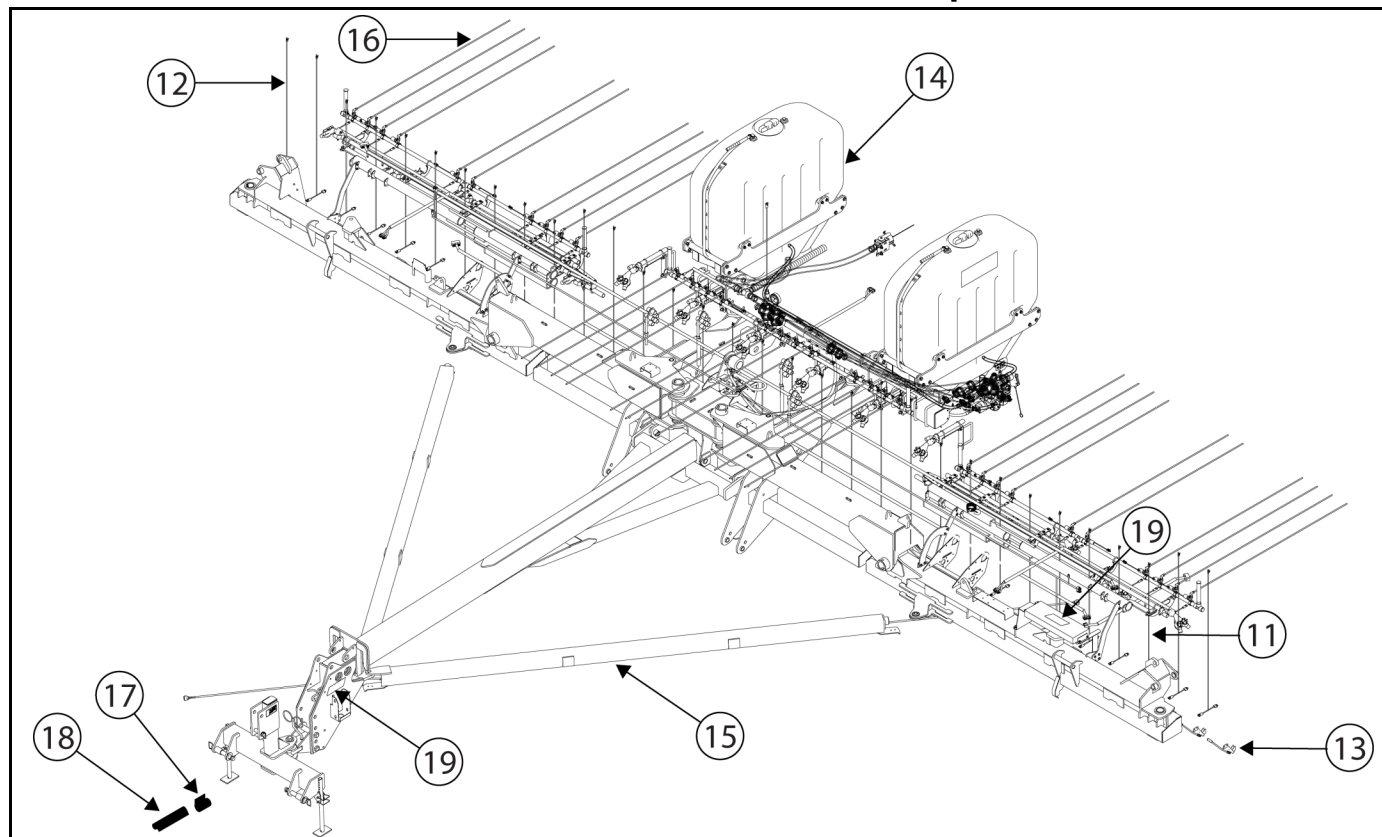
d. ft-lb = foot pounds

Torque tolerance + 0%, -15% of torquing values. Unless otherwise specified use torque values listed above.

25199

Component Lists

YP30 and YP40 with Mounted Tanks Installation Components



Callout	Part Number	Part Description	Qty.
11	115204-001	ACCUSHOT SEED SENSOR T HARN 48	**
12	115204-002	ACCUSHOT SEED SENSOR T HARN 60	**
13	417-785V	ACCUSHOT BLADE SEPARATOR	**
14	417-800K	YP30/40/44 ACCUSHOT FERT PUMP	1
15	800-060C	CABLE TIE .19X14.25 3D1A 50LB	50
16	800-112C	CABLE TIE .19X7.X5 1.75D 50LB	150
17	858-708C	DECAL ACCUSHOT CONTROLLER	3

YP30-24TR

Callout	Part Number	Part Description	Qty.
18	417-811A	ACCUSHOT YP30 BASE ASM	1
19	417-816S	ACCUSHOT WETBOOM 08R15	3

YP40-32TR

Callout	Part Number	Part Description	Qty.
18	417-493L	YP40 ACCUSHOT BASE ASM	1
19	417-787S	ACCUSHOT WETBOOM 12R15	1
20	417-814S	ACCUSHOT WETBOOM 10R15	2

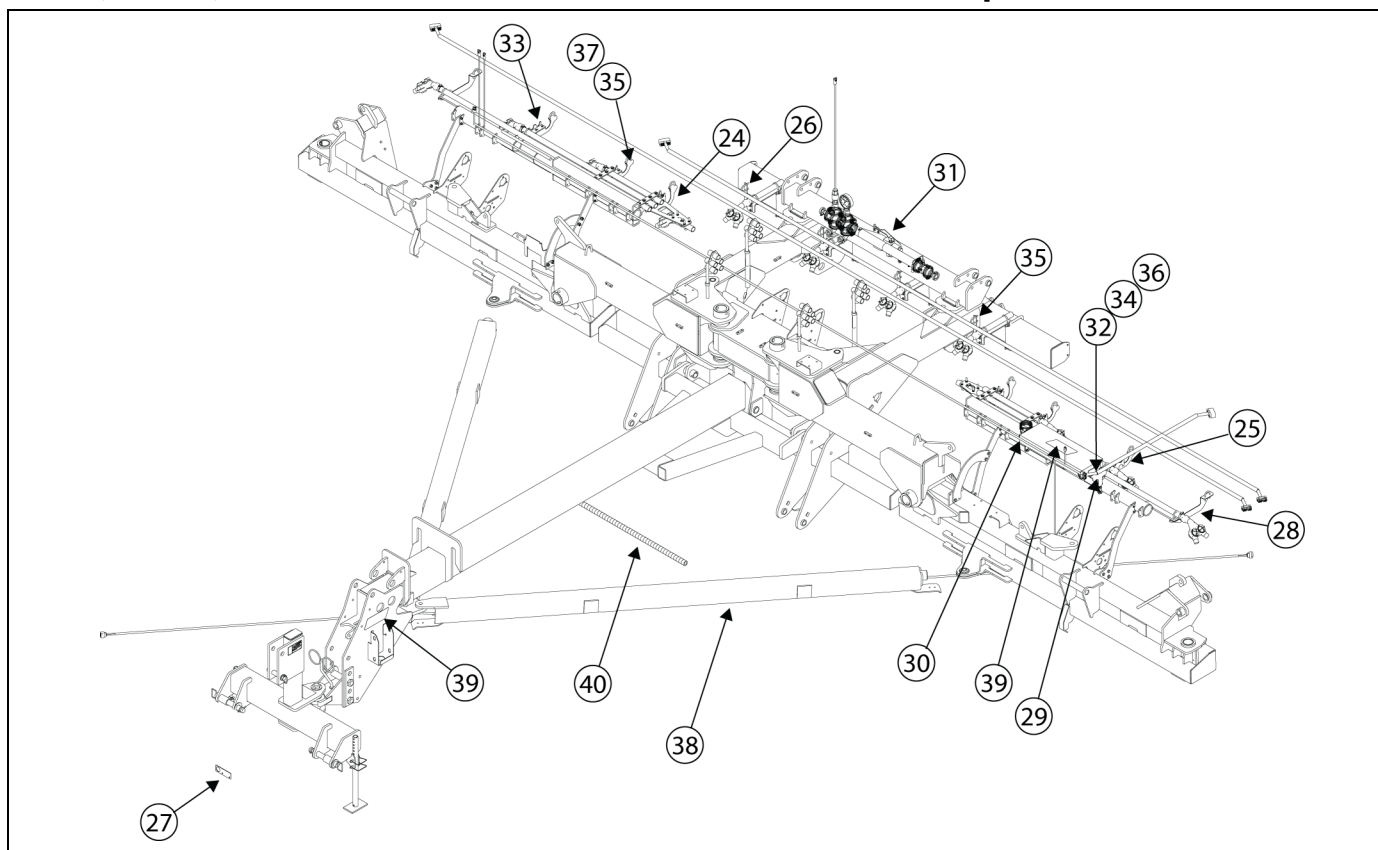
YP40-1630

Callout	Part Number	Part Description	Qty.
18	417-493L	YP40 ACCUSHOT BASE ASM	1
19	417-788S	ACCUSHOT WETBOOM 06R30	1
20	417-815S	ACCUSHOT WETBOOM 05R30	2

YP40-48TR20

Callout	Part Number	Part Description	Qty.
18	417-876L	YP40-20TR ACCUSHOT BASE ASM	1
19	417-861S	ACCUSHOT WETBOOM 10R15	1
20	417-814S	ACCUSHOT WETBOOM 10R15	2

YP30, YP40, and YP24 with Small Cart Installation Components



Callout	Part Number	Part Description	Qty.
11	115204-001	ACCUSHOT SEED SENSOR T HARN 48	**
12	115204-002	ACCUSHOT SEED SENSOR T HARN 60	**
13	417-785V	ACCUSHOT BLADE SEPARATOR	**
14	417-784K	ACCUSHOT SML PUMP ASSEMBLY	1
15	800-060C	CABLE TIE .19X14.25 3D1A 50LB	50
16	800-112C	CABLE TIE .19X7.X5 1.75D 50LB	150
17	858-708C	DECAL ACCUSHOT CONTROLLER	3
18	417-793L	YP40 ACCUSHOT BASE ASM	1

YP40-1630

Callout	Part Num.	Part Description	Qty.
19	417-793L	YP40 ACCUSHOT BASE ASM	1
20	417-788S	ACCUSHOT WETBOOM 06R30	1
21	417-815S	ACCUSHOT WETBOOM 05R30	2

YP40-32TR

Callout	Part Num.	Part Description	Qty.
19	417-793L	YP40 ACCUSHOT BASE ASM	1
20	417-787S	ACCUSHOT WETBOOM 12R15	1
21	417-814S	ACCUSHOT WETBOOM 10R15	2

YP30-24TR

Callout	Part Num.	Part Description	Qty.
19	417-811A	ACCUSHOT YP30 BASE ASM	1
20	417-816S	ACCUSHOT WETBOOM 08R15	3

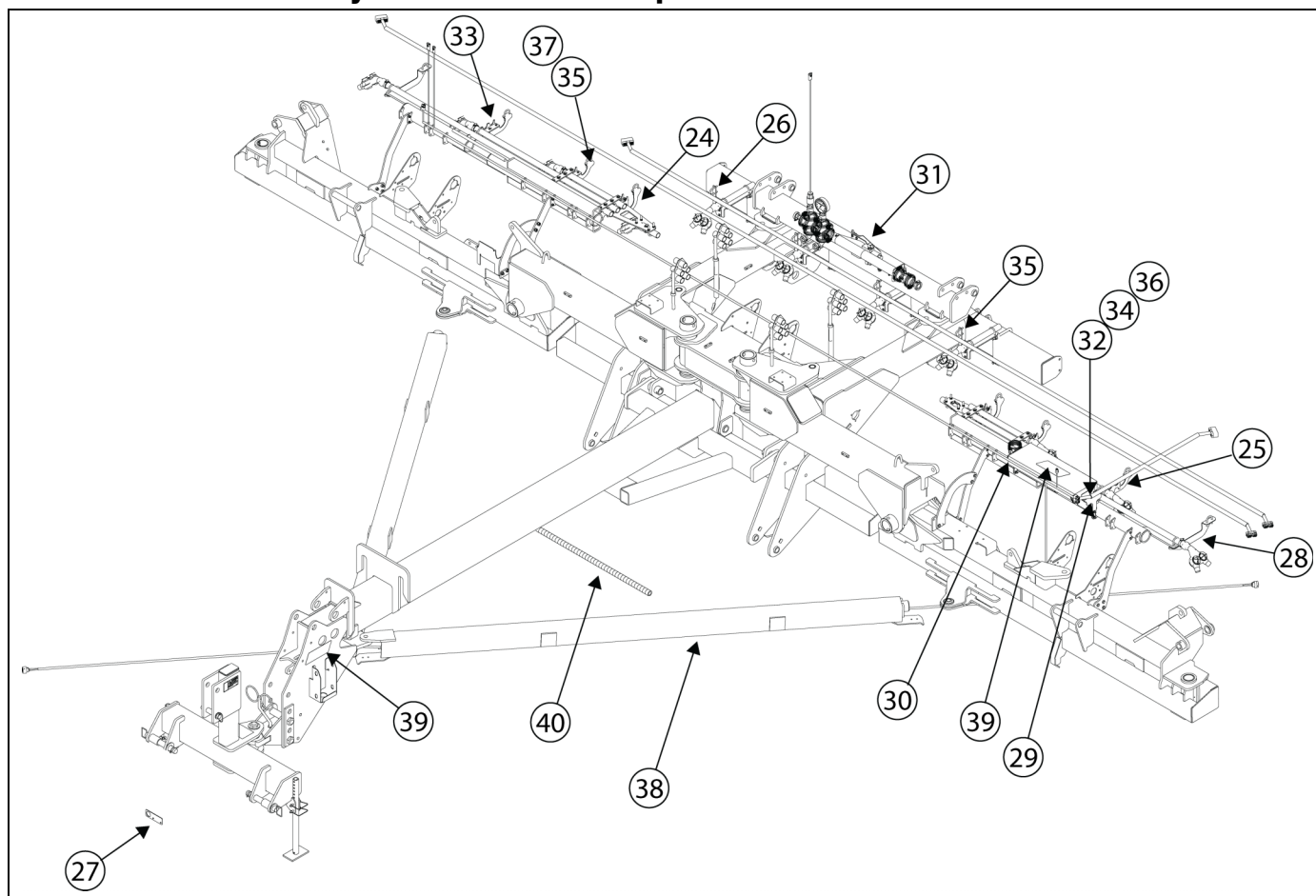
YP24-2430

Callout	Part Num.	Part Description	Qty.
19	417-788S	ACCUSHOT WETBOOM 06R30	1
20	417-789S	ACCUSHOT WETBOOM 09R30	2

YP24-48TR

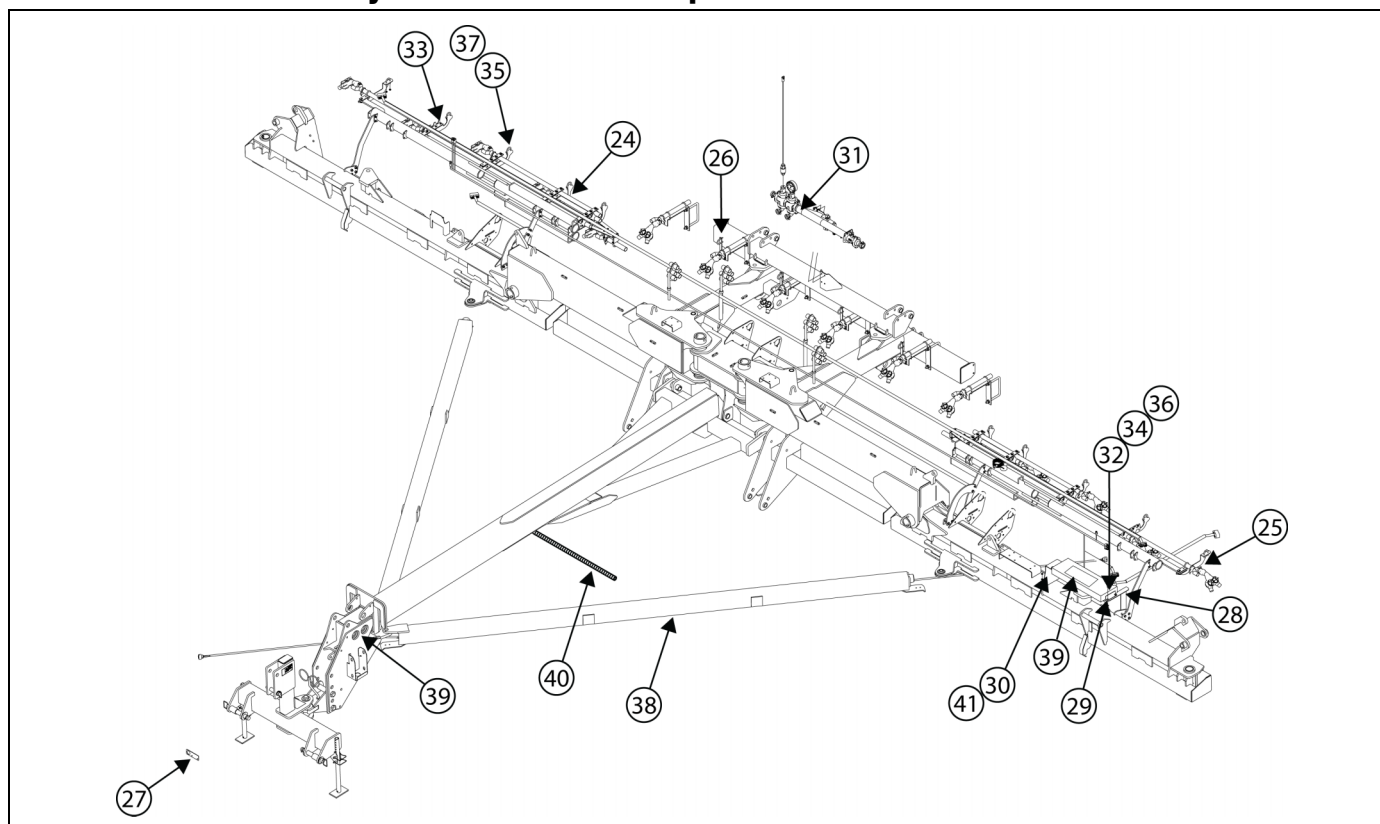
Callout	Part Num.	Part Description	Qty.
22	417-787S	ACCUSHOT WETBOOM 12R15	1
23	417-780S	ACCUSHOT WETBOOM 18R15	2

YP30 Base Assembly Installation Components - 417-811L



Callout	Part Number	Part Description	Qty.
24	417-640D	WETBOOM MOUNT PLT LH MID	4
25	417-641D	WETBOOM MOUNT PLT LH SHORT	4
26	417-642D	YP CENTER SECTION BOOM MNT PLT	4
27	417-645D	ACCUSHOT POWER PLUG MNT PLT	1
28	417-662D	BOOM END MNT PLT	2
29	417-663D	YP30 ACCUSHOT MNT BRKT	1
30	417-664D	YP30 CONTROLLER MNT BRKT	1
31	417-798K	YP30/40/44 ACCUSHOT FERT SPLIT	1
32	802-017C	HHCS 3/8-16X1 GR5	4
33	802-159C	HHCS 5/16-18X1 GR5	12
34	803-014C	NUT HEX 3/8-16 PLT	6
35	803-043C	NUT HEX WHIZ 5/16-18 PLT	40
36	804-013C	WASHER LOCK SPRING 3/8 PLT	6
37	806-192C	U-BOLT 5/16-18 X 1 1/2X2 1/2 RND	12
38	823-467C	ACCUSHOT YP30 BASE ELEC	1
39	858-708C	DECAL ACCUSHOT CONTROLLER	3
40	990-082R	HOSE 1 1/2 ID 200PSI EPDM	30

YP40 Base Assembly Installation Components - 417-793L and 417-876L



Callout	Part Number	Part Description	Qty.
24	417-640D	WETBOOM MOUNT PLT LH MID	4
25	417-641D	WETBOOM MOUNT PLT LH SHORT	4
26	417-642D	YP CENTER SECTION BOOM MNT PLT	4
27	417-645D	ACCUSHOT POWER PLUG MNT PLT	1
28	417-662D	BOOM END MNT PLT	2
29	417-652D	YP40 ACCUSHOT CNTRLR RH MNT PLT	1
30	417-653D	YP40 AS CNTRLR RH MNT PLT	1
31	417-798K	YP30/40/44 ACCUSHOT FERT SPLIT	1
32	802-017C	HHCS 3/8-16X1 GR5	4
33	802-159C	HHCS 5/16-18X1 GR5	12
34	803-014C	NUT HEX 3/8-16 PLT	6
35	803-043C	NUT HEX WHIZ 5/16-18 PLT	40
36	804-013C	WASHER LOCK SPRING 3/8 PLT	6
37	806-022C	U-BOLT 3/8-16 X 6 1/32 X 5 PLT	1
38	806-192C	U-BOLT 5/16-18 X 1 1/2X2 1/2 RND	14
39	990-082R	HOSE 1 1D 200PSI EPDM	40

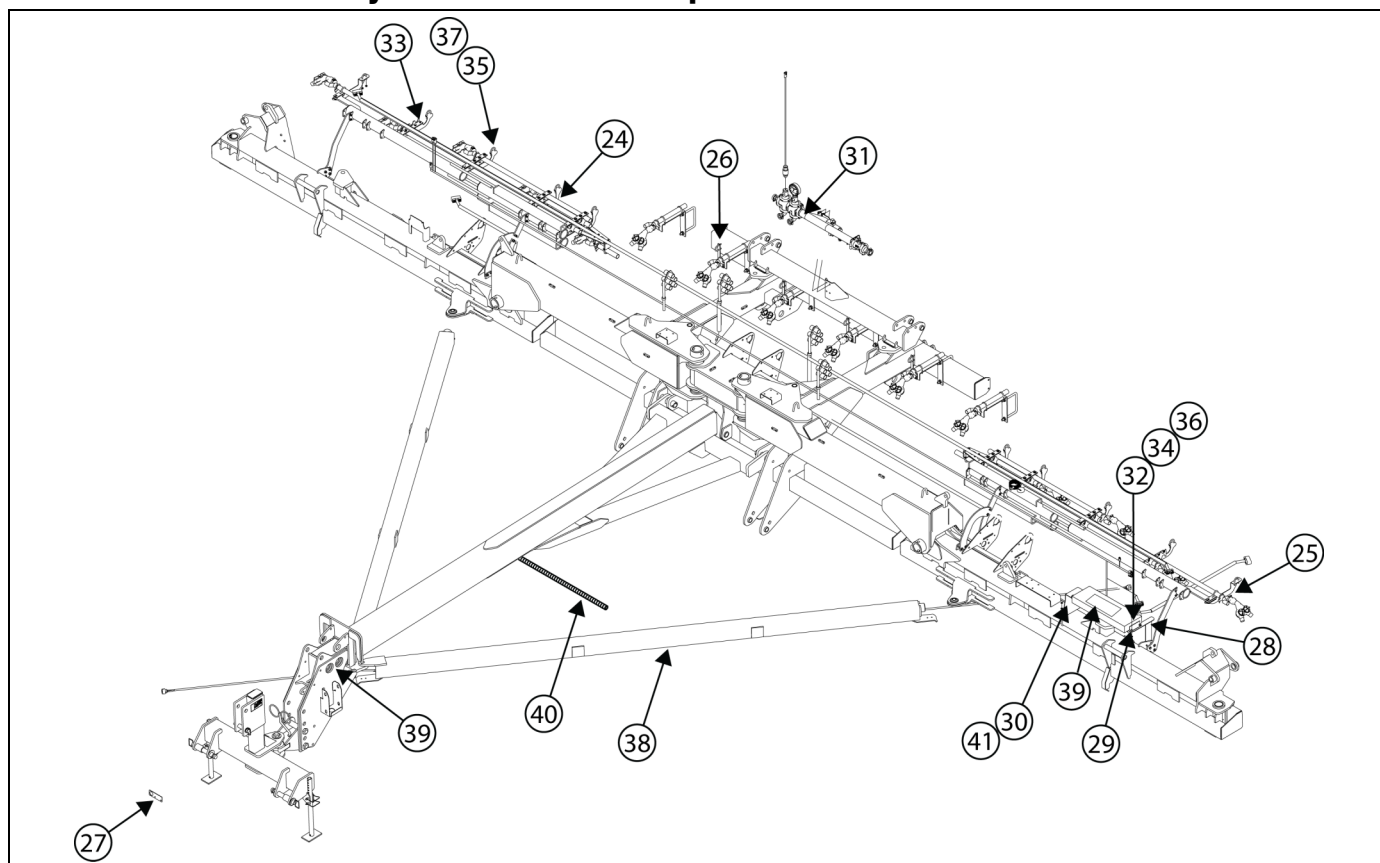
417-793L Exclusive Parts - Used by YP40-1630 and YP40-32TR Only

Callout	Part Number	Part Description	Qty.
40	823-464C	ACCUSHOT YP40 BASE ELEC ASM	1

417-876L Exclusive Parts - Used by YP40-48TR20 Only

Callout	Part Number	Part Description	Qty.
40	823-469C	ACCUSHOT YP40-20TR BASE ELEC ASM	1

YP24 Base Assembly Installation Components - 417-781L



Callout	Part Number	Part Description	Qty.
24	417-640D	WETBOOM MOUNT PLT LH MID	4
252	417-641D	WETBOOM MOUNT PLT LH SHORT	10
26	417-642D	YP CENTER SECTION BOOM MNT PLT	6
27	417-643D	TUBE MNT CONTROL BOX MNT PLT	2
28	417-645D	ACCUSHOT POWER PLUG MNT PLT	1
29	417-651D	TUBE RND 5/8ODX14GWX1.72	2
30	417-784K	ACCUSHOT SML PUMP ASSEMBLY	1
31	800-124C	CLAMP WRM DRV #24 SS (1.06-2)	3
32	802-017C	HHCS 3/8-16X1 GR5	4
33	802-159C	HHCS 5/16-18X1 GR5	12
34	803-014C	NUT HEX 3/8-16 PLT	8
35	803-043C	NUT HEX WHIZ 5/16-18 PLT	52
36	804-013C	WASHER LOCK SPRING 3/8 PLT	8
37	806-073C	U-BOLT 3/8-16 X 7 1/32 X 7 7/8	2
38	806-192C	U-BOLT 5/16-18 X 1 1/2X2 1/2 RND	20
39	823-461C	YP24 ACCUSHOT BASE ELEC	1
40	990-082R	HOSE 1 1D 200PSI EPDM	30



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