



Installation Instructions for AccuShot Fertilizer System

for the YP12 and 16 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 fixed displacement pump driven by a hydraulic motor under seed monitor control.

Tools Required

The following tools are required for installation:

- General hand tools.

Refer to page 7 for torque values chart.

Further Assistance

If for any reason you do not understand any part of this manual or are otherwise dissatisfied, please contact:

Great Plains Service Department
1525 E. North St.
P.O. Box 5060
Salina, KS 67402-5060

Or go to www.greatplainsag.com and follow the contact information at the bottom of your screen for our service department.



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

YP1225	401-625P
YP1625A	401-625P

AccuShot Fertilizer System	Reference #
Yield-Pro Planter YP12-1230	417-871A
Yield-Pro Planter YP12-24TR	417-873A
Yield-Pro Planter YP16-1630	417-872A
Yield-Pro Planter YP16-32TR	417-874A

Refer to page 8 for a detailed list of parts included in these kits. Use these lists to inventory parts received.



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 8. 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.

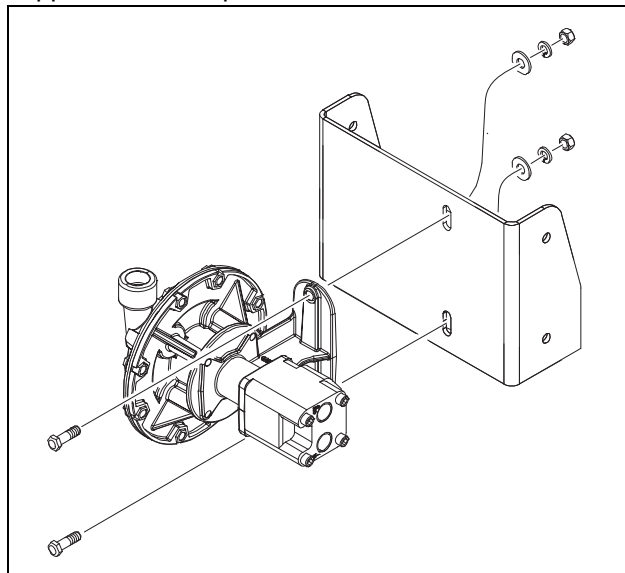
1 Fertilizer Pump with Semi-Mounted Cart

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.

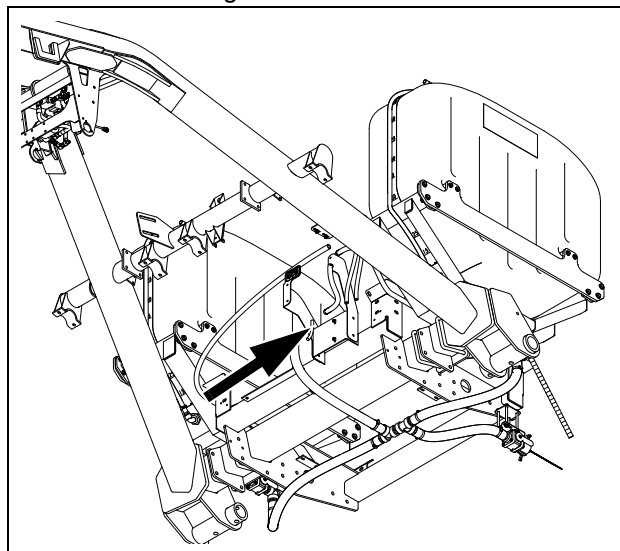
1a. Installing Fertilizer Pump to Pump Mount

The fertilizer pump should come 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.



1b. Preparing Cart Frame

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



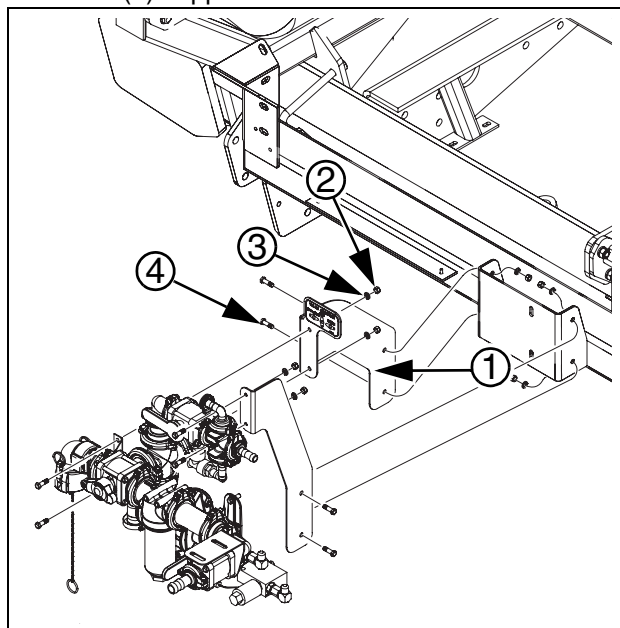
If no holes are present for pump in the cart frame, you will need to make them with a standard power drill. Measure holes so they are 8" apart. Make sure hole markings align with pump mount holes. Drill holes using a 0.44" drill bit.

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.Connecting Hydraulic Hoses to Fertilizer Pump

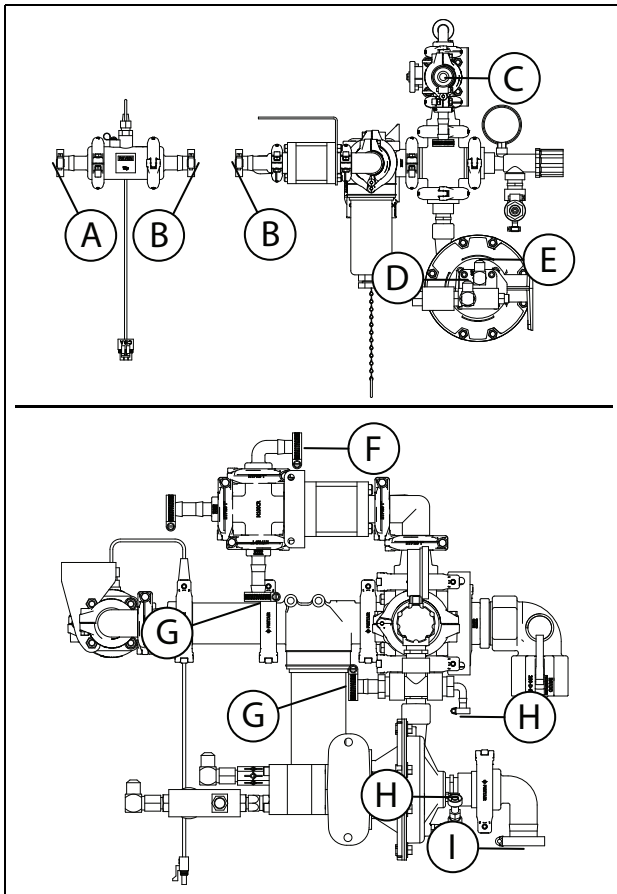
Connect hydraulic hoses to open ports on the pump assembly. Use the images below to attach matching ports using the correct hose.



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	3/4" fertilizer hose* connected to wet boom tee
B	3/4" fertilizer hose connected to fertilizer pump ports
C	3/4" fertilizer hose* connected to left-side hopper undercarriage
D	1/2" hydraulic hose connected to hose running up tongue
E	1/2" hydraulic hose connected to hydraulic shutoff valve
F	3/4" fertilizer hose* connected to right-side hopper undercarriage
G	3/4" fertilizer hose connected to fertilizer pump ports
H	3/8" hydraulic hose connected to fertilizer pump ports
I	1/2" hydraulic hose connected to clean-out valve

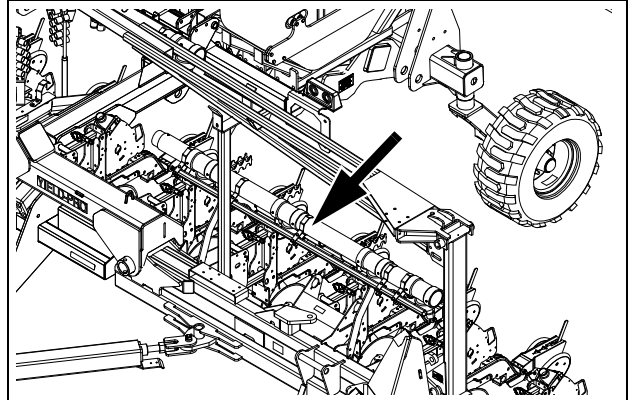


Reconnect pre-existing hydraulic hose to available pump port (E).

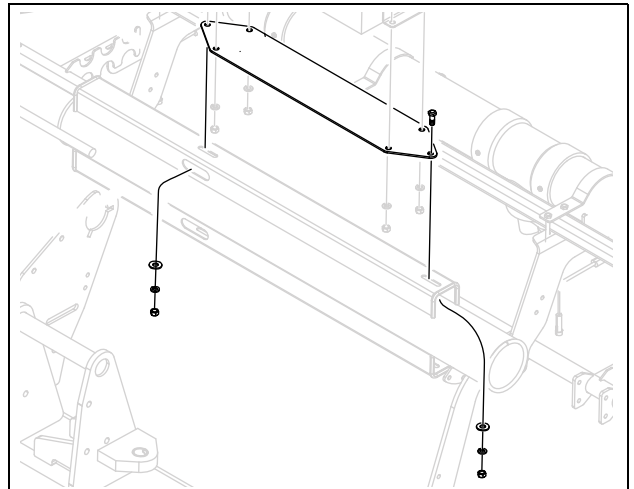
2 Accushot Controller

2a.Installing Mount and Control Box to Cart Frame for YP12

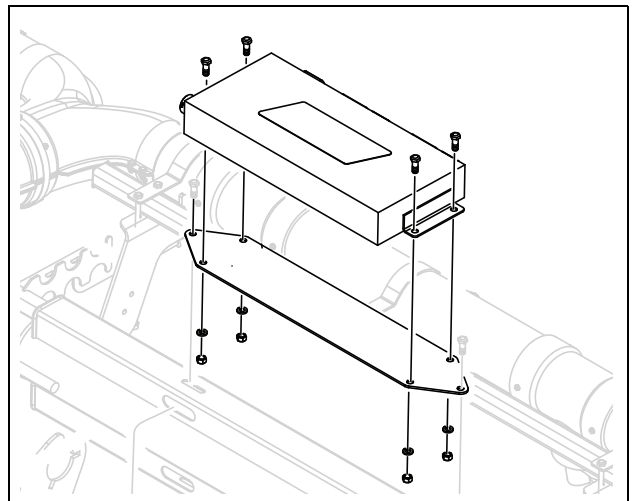
On the left-wing of the machine, locate where the pullbar connects to the cart frame.



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

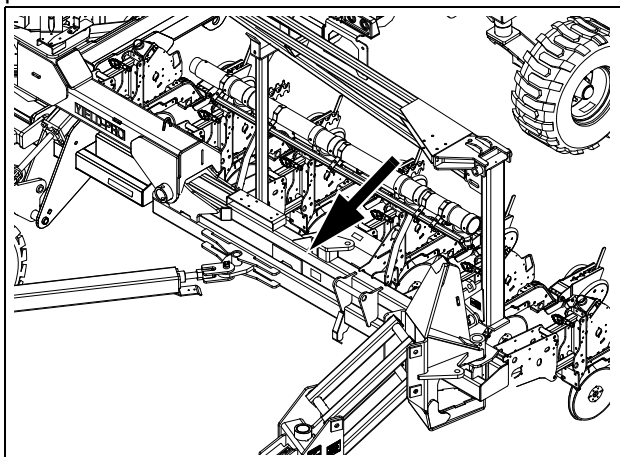


Install control box onto the control box mount using four sets of bolts, washers, and nuts.

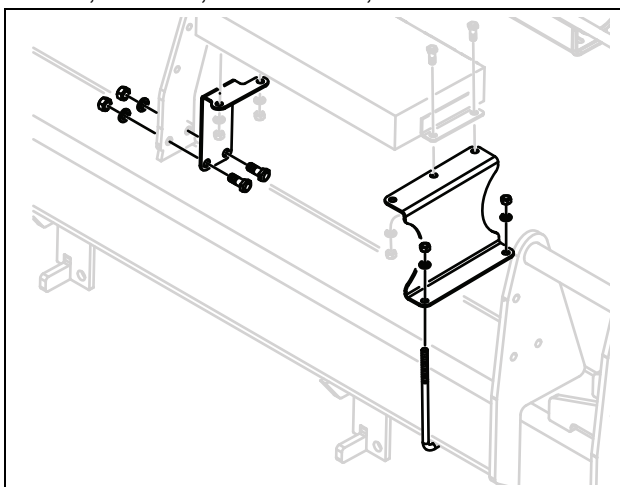


2b. Installing Control Box Mount to Cart Frame for YP16

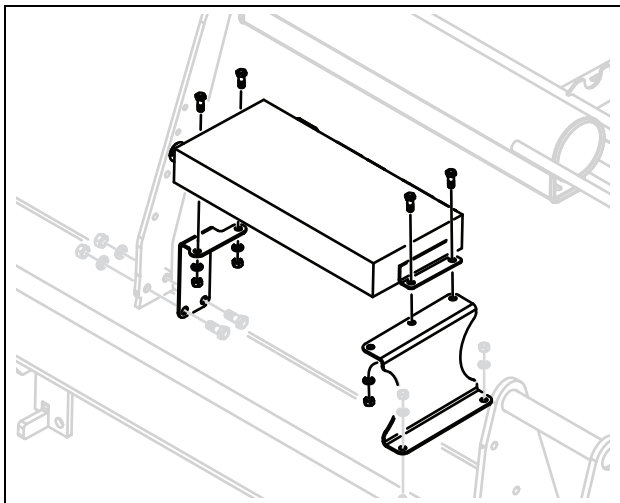
On the left-wing of the machine, locate where the pullbar connects to the cart frame.



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.

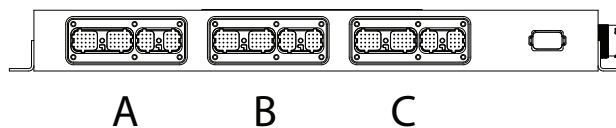


Install control box onto the control box mount using four sets of bolts, washers, and nuts.



2c. 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.

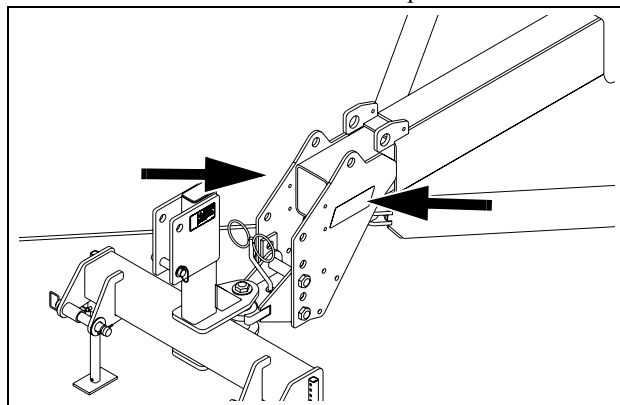
2d. Attaching Control Box Decals to Control Box & Hitch

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.

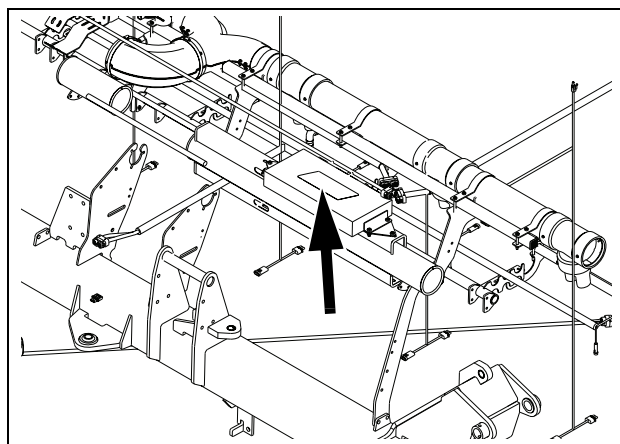


Locate the frame on the left-hand side of the machine. Install remaining Accushot controller decal to frame.



NOTE

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

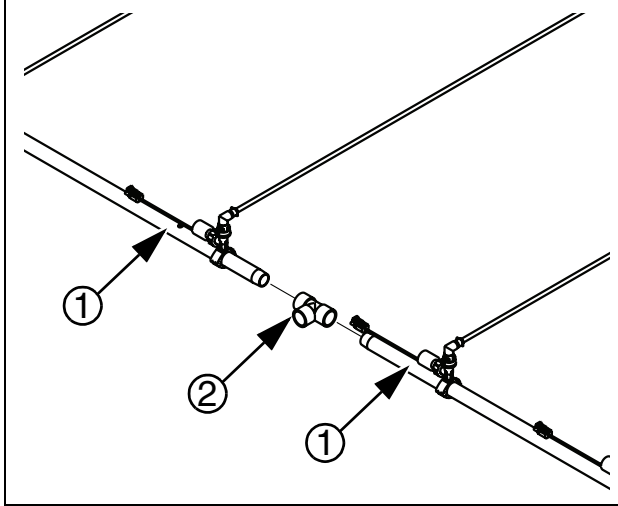


3 Wet Boom

3a. 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 8.

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

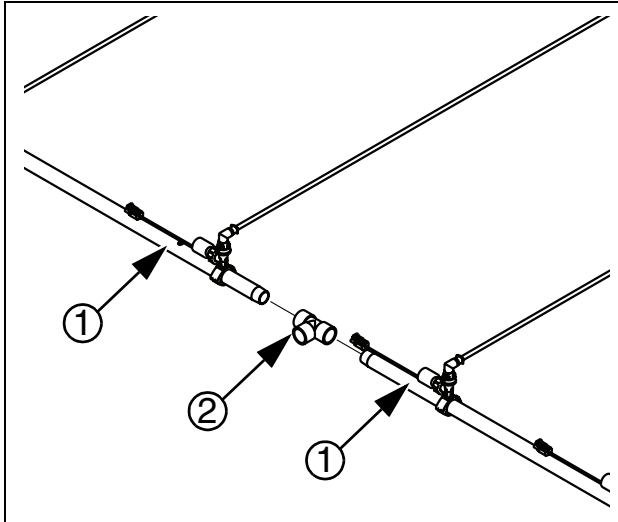


3b. Routing Wet Booms along Wings

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.

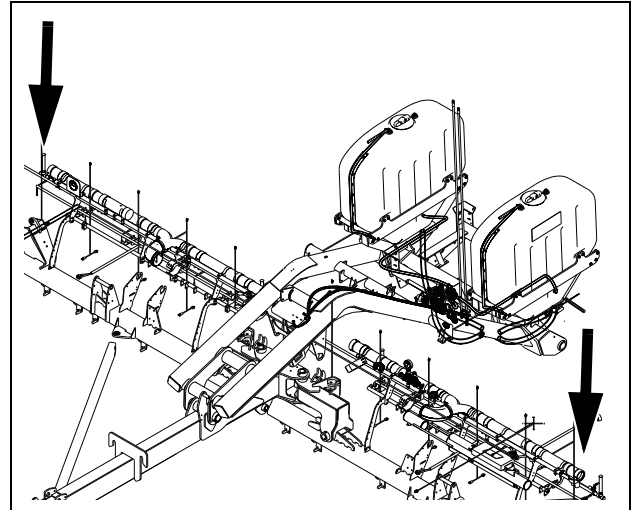
4 Sensor Harness

4a. Installing Long Seed Sensor Harnesses to Machine Ends

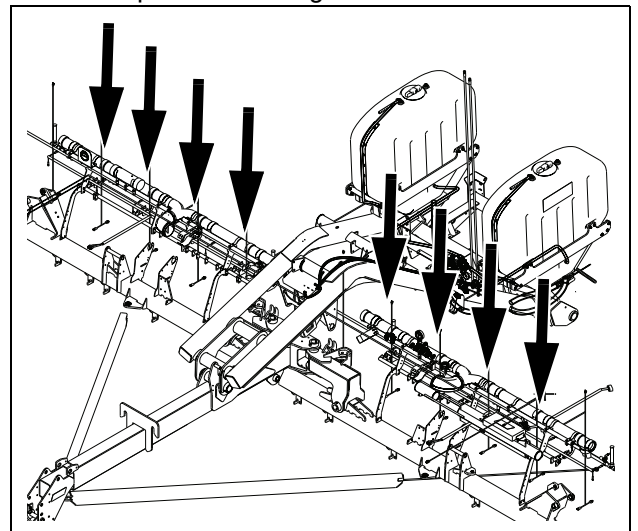
Separate kit's seed sensor harnesses into long and short piles.

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

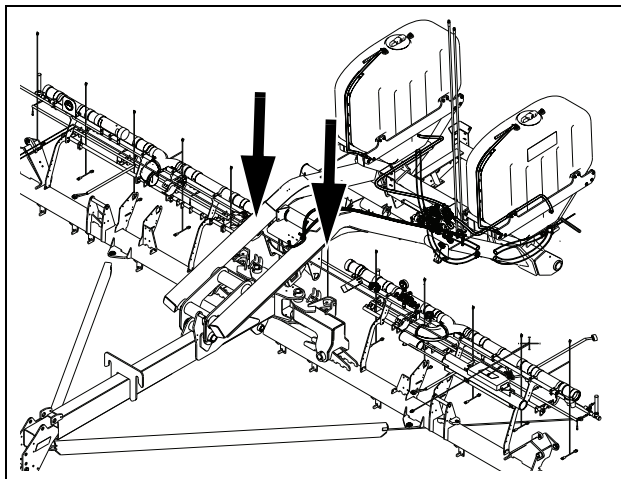
If your kit came with four long seed sensor harnesses, install them as follows: one on the left-wing tip, one on the right-wing tip, and two in the immediate center of the machine. Double the amounts used if your kit came with eight long seed sensor harnesses instead of four.



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.

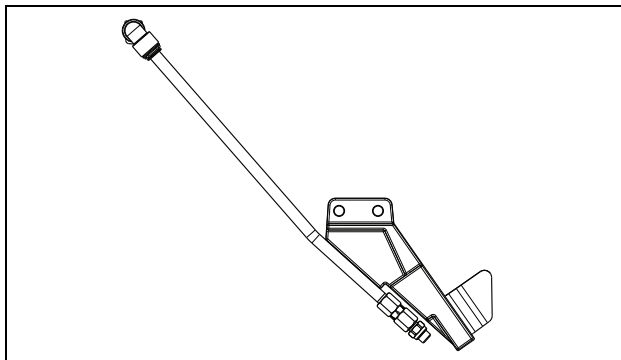


Install the remaining long seed sensor harnesses onto the remaining available middle rows of your machine.



5 Blade Separator

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

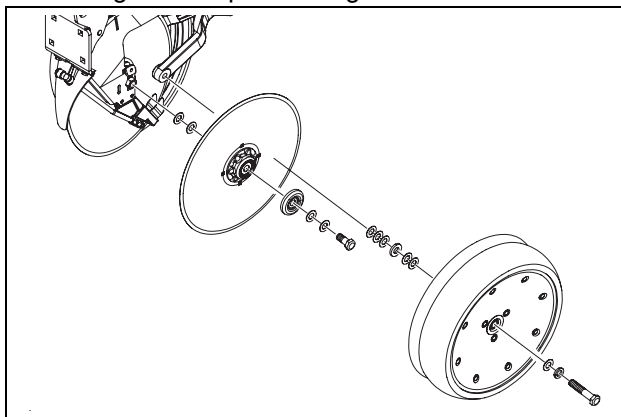


NOTE

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

5a. 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.



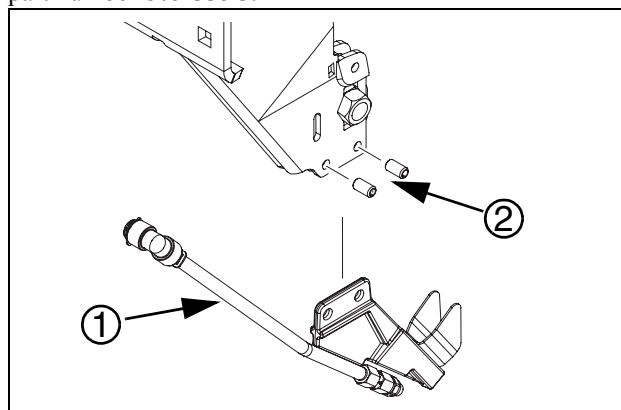
5b. Installing AccuShot Blade Separator and Routing Fertilizer Line

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.

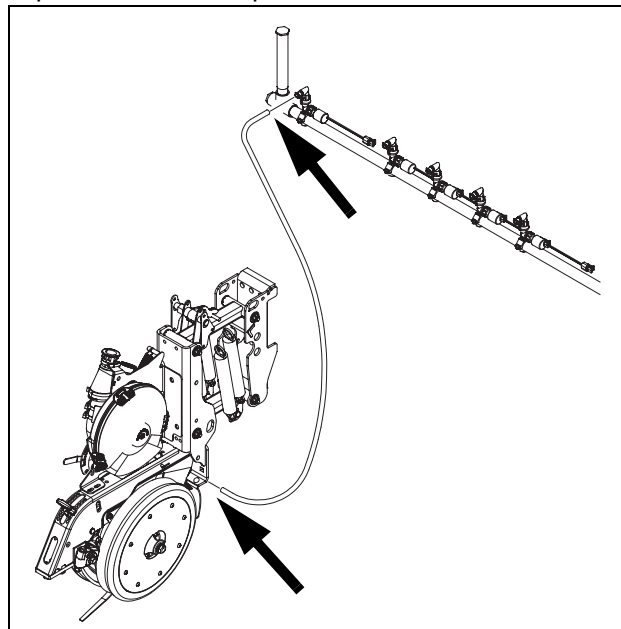


NOTE

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

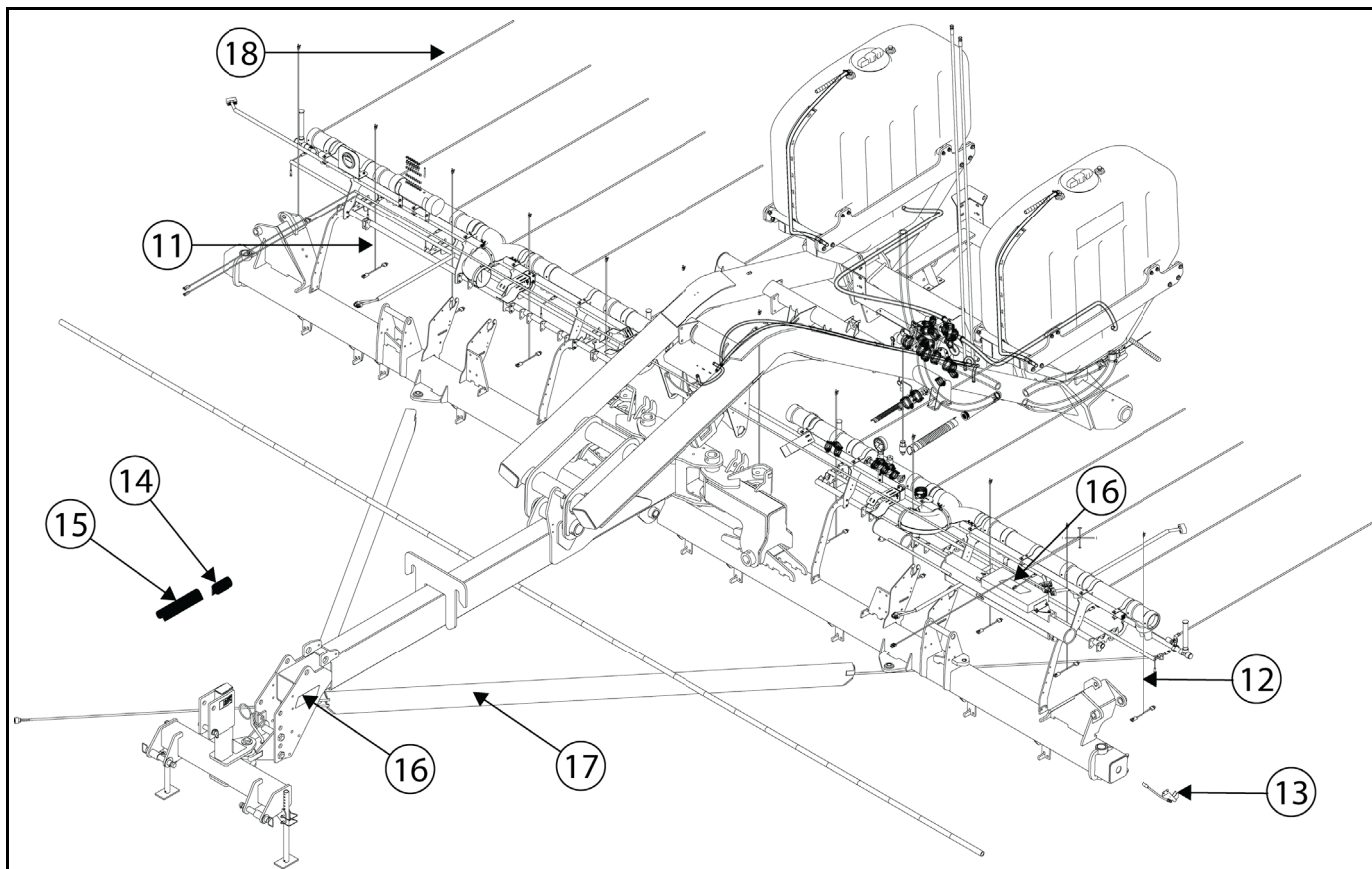
b. N·m = newton-meters

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



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	800-060C	CABLE TIE .19X14.25 3D1A 50LB	50
15	800-112C	CABLE TIE .19X7.X5 1.75D 50LB	150
16	858-708C	DECAL ACCUSHOT CONTROLLER	3

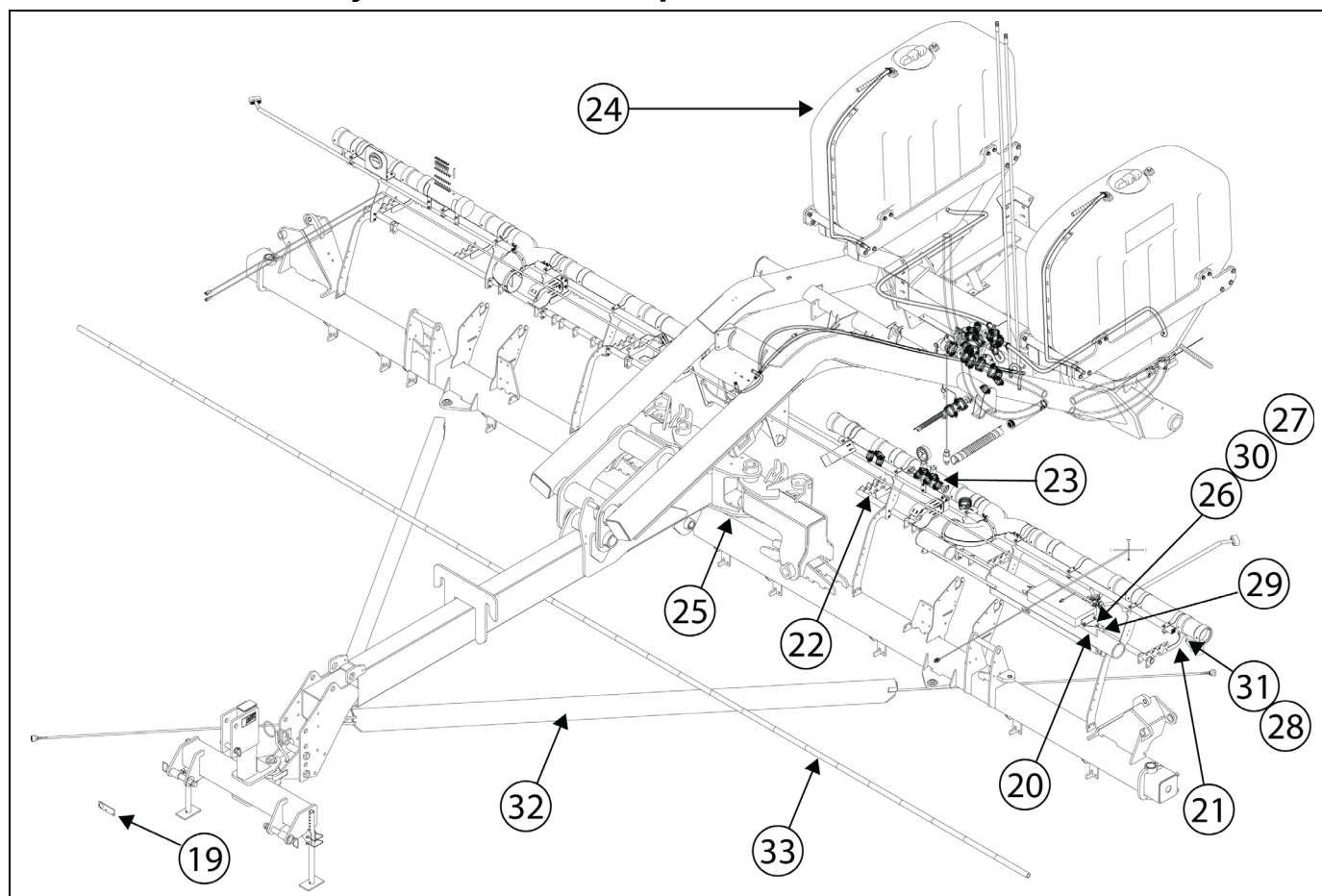
Callout	Part Number	Part Description	Qty.
17	417-809L	ACCUSHOT YP12 BASE ASM	1
18	417-788S	ACCUSHOT WETBOOM 06R30	2

Callout	Part Number	Part Description	Qty.
17	417-809L	ACCUSHOT YP12 BASE ASM	1
18	417-787S	ACCUSHOT WETBOOM 12R15	2

Callout	Part Number	Part Description	Qty.
17	417-812L	ACCUSHOT YP16 BASE ASM	1
18	417-817S	ACCUSHOT WETBOOM 08R30	2

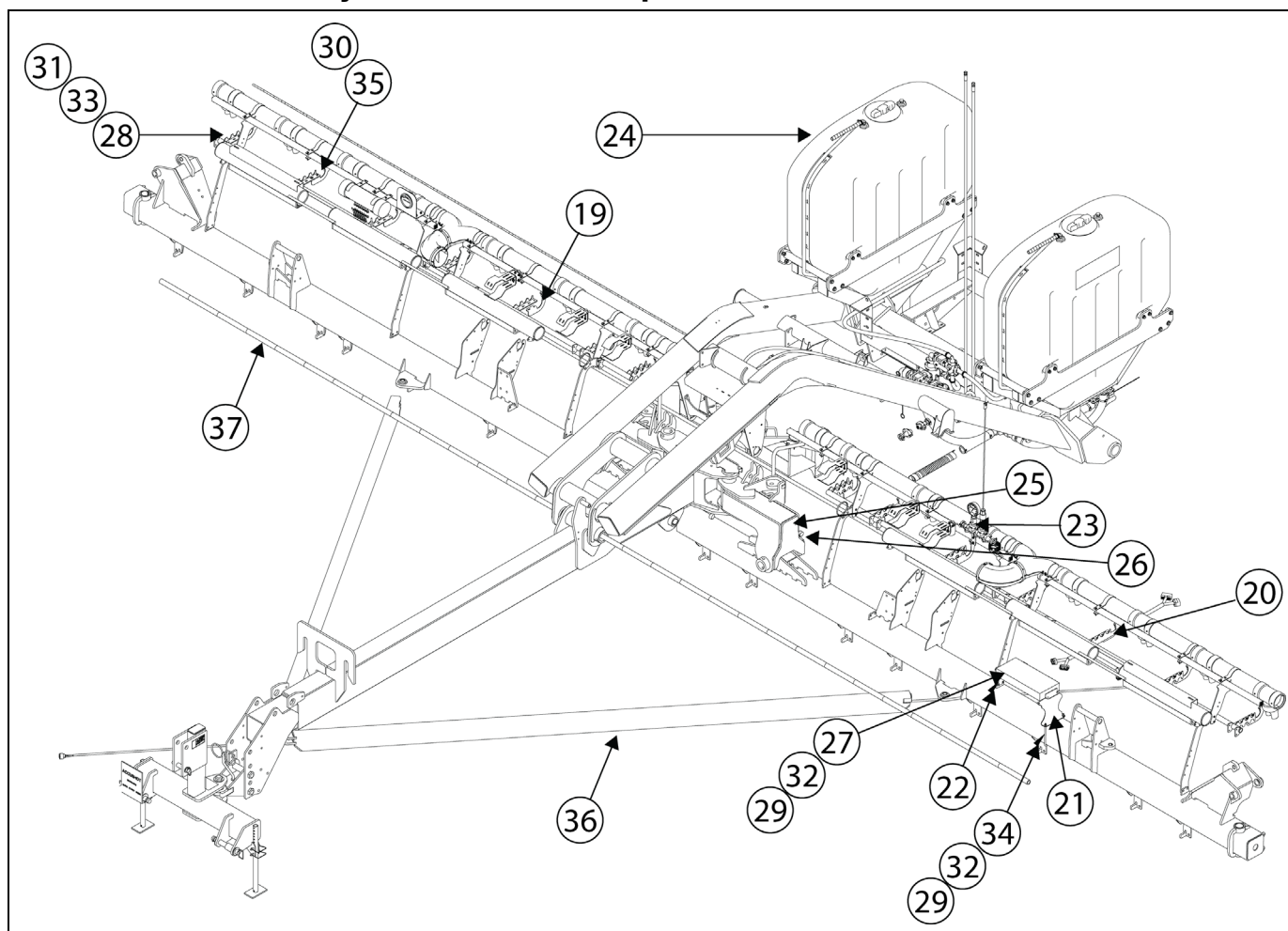
Callout	Part Number	Part Description	Qty.
17	417-812L	ACCUSHOT YP16 BASE ASM	1
18	417-820S	ACCUSHOT WETBOOM 16R15	2

YP12 Base Assembly Installation Components - 417-809L



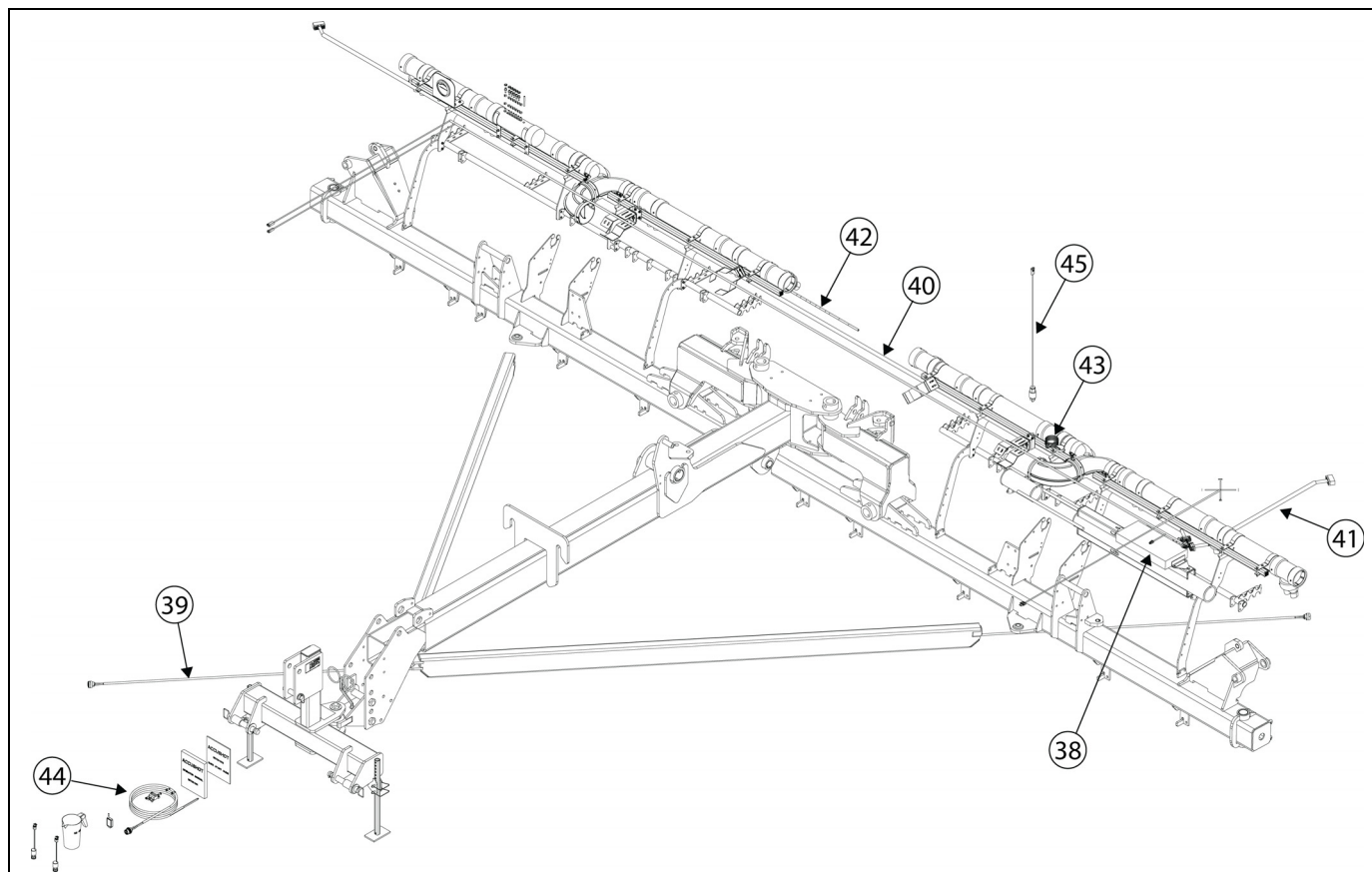
Callout	Part Number	Part Description	Qty.
19	417-645D	ACCUSHOT POWER PLUG MNT PLT	1
20	417-665D	TOP CONTROL BOX MNT	1
21	417-707D	WETBOOM MNT PLATE SHORT YP12	6
22	417-708D	WETBOOM MNT PLATE MID YP12	4
23	417-808S	FERT PRESSURE SENSOR ASST	1
24	417-813L	ACCUSHOT 12/16 PUMP ASSEM	1
25	800-239C	P-CLAMP 1 1/4	5
26	802-017C	HHCS 3/8-16X1 GR5	6
27	803-014C	NUT HEX 3/8-16 PLT	6
28	803-043C	NUT HEX WHIZ 5/16-18 PLT	20
29	804-011C	WASHER FLAT 3/8 USS PLT	2
30	804-013C	WASHER LOCK SPRING 3/8 PLT	6
31	806-192C	U-BOLT 5/16-18 X 1 1/2X2 1/2 RND	10
32	823-466C	ACCUSHOT YP12 BASE ELEC	1
33	990-082R	HOSE 1 1D 200PSI EPDM	30

YP16 Base Assembly Installation Components - 417-812L



Callout	Part Number	Part Description	Qty.
19	417-640D	WETBOOM MOUNT PLT LH MID	6
20	417-641D	WETBOOM MOUNT PLT LH SHORT	8
21	417-643D	TUBE MNT CONTROL BOX MNT PLT	1
22	417-656D	CONTROL BOX MNT PLT	1
23	417-808S	FERT PRESSURE SENSOR ASST	1
24	417-813L	ACCUSHOT 12/16 PUMP ASSEM	1
25	800-238C	.375 WIRING AND TUBE CLIP	1
26	800-239C	P-CLAMP 1 1/4	9
27	802-017C	HHCS 3/8-16X1 GR5	4
28	802-159C	HHCS 5/16-18X1 GR5	8
29	803-014C	NUT HEX 3/8-16 PLT	6
30	803-043C	NUT HEX WHIZ 5/16-18 PLT	6
31	803-177C	NUT HEX LOCK 5/16-18 FLG.	8
32	804-013C	WASHER LOCK SPRING 3/8 PLT	6
33	804-036C	WASHER FLAT 5/16 SAE PLT	4
34	806-073C	U-BOLT 3/8-16 X 7 1/32 X 7 7/8	1
35	806-192C	U-BOLT 5/16-18 X 1 1/2X2 1/2 RND	14
36	823-465C	ACCUSHOT YP16 BASE ELEC	1
37	990-082R	HOSE 1 1D 200PSI EPDM	30

YP12 and YP16 Base Electric Components - 823-466C & 823-465C



Shared Components

Callout	Part Number	Part Description	Qty.
38	115100-361	ACCUSHOT CONTROL BOX 18-18	1
39	115201-003	ACCUSHOT POWER HARNESS 324	1
40	115206-001	ACCUSHOT GPS SENSOR MAG MNT	1
41	115400-001	ACCUSHOT CAB KIT	1
42	116301-001	ACCUSHOT PRESSURE SENSOR	1

YP12 - 823-466C Exclusive Components

Callout	Part Number	Part Description	Qty.
43	115203-004	ACCUSHOT VALVE 12CH EXT 324	1
44	115203-005	ACCUSHOT VALVE 12CH EXT 048	1
45	115205-001	ACCUSHOT ACC HARN YP16	1

YP16 - 823-465C Exclusive Components

Callout	Part Number	Part Description	Qty.
43	115203-001	ACCUSHOT VALVE 18CH EXT 324	1
44	115203-003	ACCUSHOT VALVE 18CH EXT 048	1



Great Plains, Mfg.
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