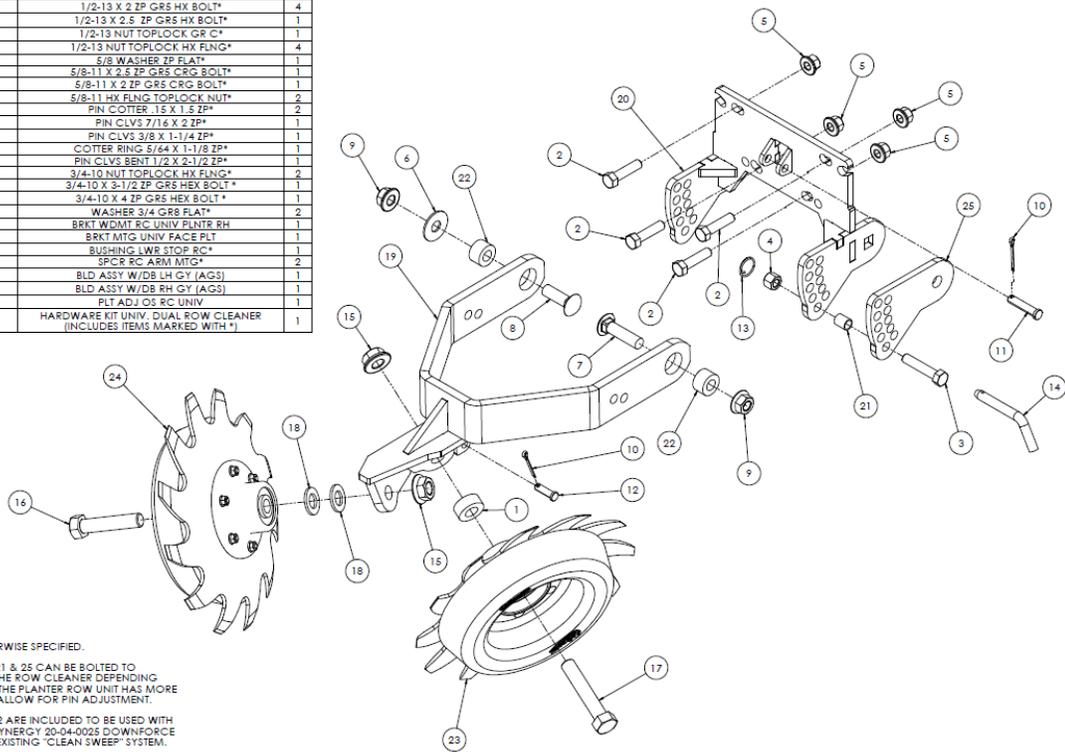


20-01-0224/25 Universal Floating Row Cleaner Assembly Instructions

ITEM NO.	AGS #	DESCRIPTION	QTY.
1	02-02-0589	SPCR GAUGE WHL ARM 1.5	1
2	06-03-0005	1/2-13 X 2.5 ZP GRS HX BOLT*	4
3	06-03-0013	1/2-13 X 2.5 ZP GRS HX BOLT*	1
4	06-03-0021	1/2-13 NUT TOPLOCK GR C*	1
5	06-03-0030	1/2-13 NUT TOPLOCK HX FLNG*	4
6	06-04-0007	5/8 WASHER ZP FLAT*	1
7	06-04-0008	5/8-11 X 2.5 ZP GRS CRG BOLT*	1
8	06-04-0017	5/8-11 X 2 ZP GRS CRG BOLT*	1
9	06-04-0023	5/8-11 HX FLNG TOPLOCK NUT*	2
10	06-05-0002	PIN COTTER .15 X 1.5 ZP*	2
11	06-05-0070	PIN CLVS 7/16 X 2 ZP*	1
12	06-05-0071	PIN CLVS 3/8 X 1-1/4 ZP*	1
13	06-05-0072	COTTER RING 5/64 X 1-1/8 ZP*	1
14	06-05-0073	PIN CLVS 8/32 X 2-3/2 ZP*	1
15	06-04-0029	3/4-10 NUT TOPLOCK HX FLNG*	2
16	06-04-0043	3/4-10 X 3-1/2 ZP GRS HEX BOLT*	1
17	06-06-0065	3/4-10 X 4 ZP GRS HEX BOLT*	1
18	06-06-0066	WASHER 3/4 GRS FLAT*	2
19	20-02-0102	BRKT W/DMT RC UNIV PLNTR RH	1
20	20-03-0001	BRKT MTC UNIV FACE PLT	1
21	20-04-0020	BUSHING LWR STOP RC*	1
22	20-04-0029	SPCR RC ARM MTG*	2
23	20-06-0011	BLD ASSY W/DB LH CY (AGS)	1
24	20-05-0012	BLD ASSY W/DB RH CY (AGS)	1
25	20-10-0032	PLT ADJ OS RC UNIV	1
26	20-09-0002	HARDWARE KIT UNIV. DUAL ROW CLEANER (INCLUDES ITEMS MARKED WITH *)	1



NOTES: UNLESS OTHERWISE SPECIFIED:

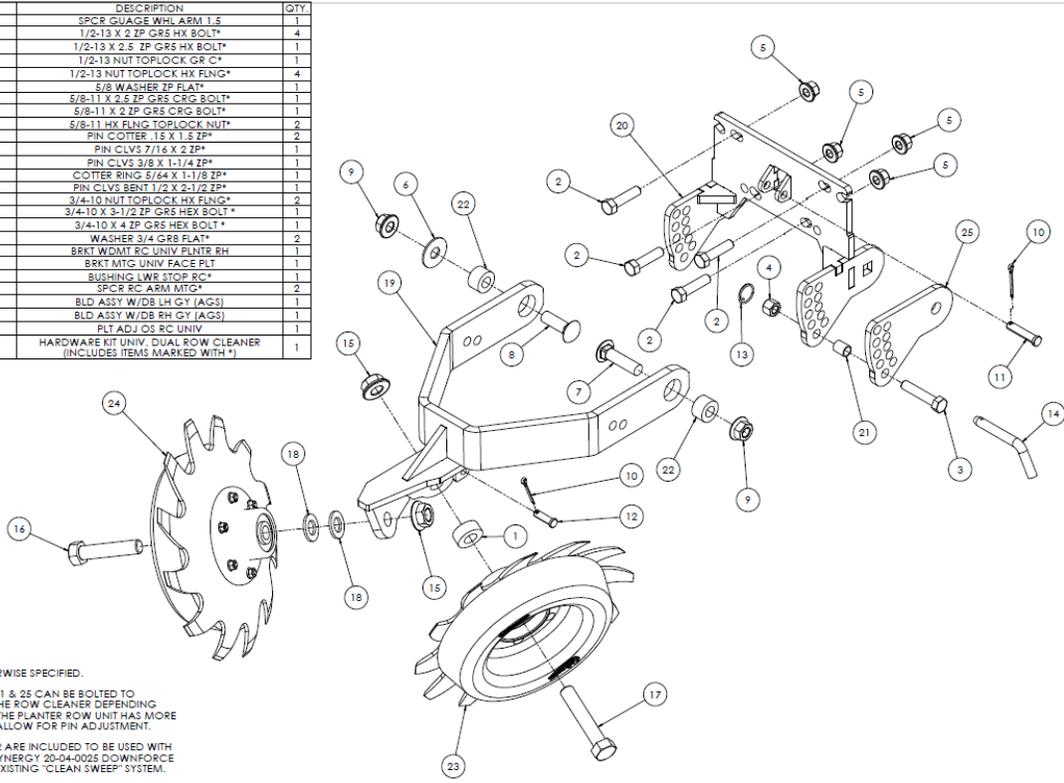
- ITEMS 3,4,13,14,21 & 25 CAN BE BOLTED TO EITHER SIDE OF THE ROW CLEANER DEPENDING WHICH SIDE OF THE PLANTER ROW UNIT HAS MORE FREE SPACE TO ALLOW FOR PIN ADJUSTMENT.
- ITEMS 10, 11 & 12 ARE INCLUDED TO BE USED WITH OPTIONAL AG-SYNERGY 20-04-0025 DOWNFORCE SPRING KIT, OR EXISTING "CLEAN SWEEP" SYSTEM.

- Using (2) 1/2" x 1.75" Bolts Qty. 4 and (5) 1/2" lock nuts Qty. 4, mount (20) Face Plate Mounting Bracket to the Planter Face Plate. Torque to 57 ft. lbs.
- Using (7) 5/8" x 2.5" Carriage Bolt, (8) 5/8" x 2" Carriage Bolt, (22) Arm Bushing Qty. 2, (6) 5/8" Flat Washer and (9) 5/8" Lock Nut Qty. 2. Attach (19) Row Cleaner arms to (20) Face Plate Mount Bracket. Do not tighten until Step 4.
 - Note that half of the planter will utilize Left Hand Row Cleaners and half of the planter will utilize Right Hand Row Cleaners. Typically, the Left Hand Row Cleaners are mounted on the Left hand side of the planter and the Right Hand Row Cleaners are mounted on the right side of the planter.
 - In High residue situations it may be necessary to utilize a Right-Hand Row Cleaner on the left outer row of the planter and vice versa on the right side of the planter. This prevents residue from being thrown over the adjacent row that was just planted.
 - In Narrow Row Spacings (20-22") or high speed planting operations it may be necessary to alternate the Row Cleaners LH-RH across the entire planter.
 - Note that (7) 5/8" x 2.5" Carriage Bolt will be used on the same side as (21) Adjustment Plate

- 3) Using (3) $\frac{1}{2}$ x 2.5" Bolt, (21) Bushing, and (4) $\frac{1}{2}$ " Lock Nut, attach (25) Adjustment Plate to (20) Face Plate Mounting Bracket.
 - a. Note that the adjustment plate can be mounted on either side of the Face Plate Mounting Bracket depending on obstructions that may be present on the planter.
- 4) Torque (9) 5/8" Lock Nuts to 112 Ft. Lbs.
- 5) Using (23) or (24) Blade Assembly, (12) $\frac{3}{4}$ " x 3.5" Bolt, (18) $\frac{3}{4}$ " Washer Qty. 2 and (15) $\frac{3}{4}$ " Lock Nut attach the leading blade assembly to (15) Row Cleaner Arm. Torque to 200 ft. lbs.
 - a. Note that the blades are directional. Left hand blade must be mounted on the left-hand side of the Row Cleaner Arm. Failure to do so will result in residue plugging.
- 6) Using (23) or (24) Blade Assembly, (17) $\frac{3}{4}$ " x 4" Bolt, (1) $\frac{3}{4}$ " Bushing and (15) $\frac{3}{4}$ " Lock Nut attach the trailing blade assembly to (15) Row Cleaner Arm. Torque to 200 ft. lbs.
 - a. Note that the blades are directional. Left hand blade must be mounted on the left-hand side of the Row Cleaner Arm. Failure to do so will result in residue plugging.
- 7) (14) $\frac{1}{2}$ " Clevis Pin and (13) Cotter Ring can be used to set the maximum operating depth of the row cleaners or to lock the row cleaners in place.

20-01-0224/24 Universal Floating Row Cleaner Downforce Spring and Precision Planting® CleanSweep™ Mounting Instructions

ITEM NO.	AGS #	DESCRIPTION	QTY
1	02-02-0589	SPCR GUAGR WHL ARM 1 S	1
2	06-03-0005	1/2-13 X 2 ZP GRS HX BOLT*	4
3	06-03-0019	1/2-13 X 2.5 ZP GRS HX BOLT*	1
4	06-03-0021	1/2-13 NUT TOPLOCK GR C*	1
5	06-03-0030	1/2-13 NUT TOPLOCK HX FLNG*	4
6	06-04-0007	5/8 WASHER ZP FLAT*	1
7	06-04-0008	5/8-11 X 2.5 ZP GRS CRG BOLT*	1
8	06-04-0017	5/8-11 X 2 ZP GRS CRG BOLT*	1
9	06-04-0023	5/8-11 HX FLNG TOPLOCK NUT*	2
10	06-05-0002	PIN COTTER 1.5 X 1.5 ZP*	2
11	06-05-0070	PIN CLVS 7/16 X 2 ZP*	1
12	06-05-0071	PIN CLVS 3/8 X 1-1/4 ZP*	1
13	06-05-0072	COTTER RING 5/64 X 1-1/8 ZP*	1
14	06-05-0073	PIN CLVS BBNT 1/2 X 2-1/2 ZP*	1
15	06-06-0029	3/4-10 NUT TOPLOCK HX FLNG*	2
16	06-06-0043	3/4-10 X 3-1/2 ZP GRS HEX BOLT*	1
17	06-06-0065	3/4-10 X 4 ZP GRS HEX BOLT*	1
18	06-06-0066	WASHER 3/4 GRB FLAT*	2
19	20-02-0102	BRKT W/DMT RC UNIV PLNTR RH	1
20	20-03-0001	BRKT MITG UNIV FACE PLT	1
21	20-04-0020	BUSHING LWR STOP RC*	1
22	20-04-0029	SPCR RC ARM MITG*	2
23	20-05-0011	BLD ASSY W/DB LH GY (AGS)	1
24	20-05-0012	BLD ASSY W/DB RH GY (AGS)	1
25	20-10-0032	PLT ADJ OS RC UNIV	1
26	20-09-0002	HARDWARE KIT UNIV DUAL ROW CLEANER (INCLUDES ITEMS MARKED WITH *)	1

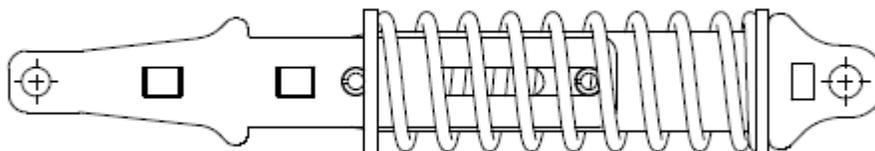


NOTES: UNLESS OTHERWISE SPECIFIED:

- ITEMS 3, 4, 13, 14, 21 & 25 CAN BE BOLTED TO EITHER SIDE OF THE ROW CLEANER DEPENDING WHICH SIDE OF THE PLANTER ROW UNIT HAS MORE FREE SPACE TO ALLOW FOR PIN ADJUSTMENT.
- ITEMS 10, 11 & 12 ARE INCLUDED TO BE USED WITH OPTIONAL AG-SYNERGY 20-04-0025 DOWNFORCE SPRING KIT, OR EXISTING "CLEAN SWEEP" SYSTEM.

Downforce Spring Mounting Instructions

- 1) Using (11) 7/16" Pin, (12) 3/8" and (10) Cotter Pin Qty. 2 Mount Downforce Spring to (19) Row Cleaner Arm and (20) Face Plate Mount Bracket.
 - a. (14) 1/2" Clevis Pin and (13) Cotter Ring can be used to set the maximum operating depth of the row cleaners or to lock the row cleaners in place. If row cleaners are too aggressive use (14) Clevis Pin to decrease the operating depth.



Precision Planting® CleanSweep™ Mounting Instructions

- 2) Using (11) 7/16" Pin, (12) 3/8" and (10) Cotter Pin Qty. 2 Mount CleanSweep™ Cylinder to (19) Row Cleaner Arm and (20) Face Plate Mount Bracket.
 - a. Note that the planter row unit must be able to completely raise without contacting the CleanSweep™ cylinder. If contact occurs in the fully raised position it may be necessary to mount the cylinders with the air line fittings facing downward.
 - b. If contact occurs it may be necessary to use row unit stops. Precision Planting® Part Number 755202 for John Deere Planters and PN 729273 for Kinze Planters.