

800-798-1968 SHIELDAG.COM



### **Quality Agricultural Equipment**

### **Manufacturers of:**

V-Blades • Sweeps • Chisels & Spikes • Disc Blades • Drill Discs & Hoe Drill Points Related Tillage & Planting Hardware • Fertilizer Knives • Shanks • Coulter Blades • Crop Savers Precision Planting Equipment • Conservation Ripper Points • Strip Till Points • Fertilizer Row Units

### **Distributors of:**

Belted Grain & Fertilizer Conveyors • Salt & Material Handling Conveyors • Seed Handling Equipment Round Baler Belting • Milo Guards & Crop Savers

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### Warranty

Shield Agricultural Equipment (ShieldAg) and Acra-Plant warrant our products to be free of defects in materials and workmanship for a period of 180 days after the date of end user (consumer) purchase from the dealer. The warranty for whole goods equipment shall be exactly the warranty offered on these products by the original equipment manufacturer, and their individual warranties shall replace this warranty. This warranty does not apply to item(s), equipment or component parts that are found to have been subject to abuse or inadequate maintenance, that have been altered in any way or that have been used beyond their advertised capacity, rating or intended use. This warranty shall be for the repair or replacement of the defective item(s) at the sole discretion of Shield Agricultural Equipment. Any warranty replacement or repairs shall be subject to pro-rated consumer usage deductions as outlined below. Any warranty on tillage items expires after 1/2" of edge wear has occurred. Chrome products are warranted for defects in material and workmanship only, and the pro-rating system and 1/2" edge wear rule does not apply to chrome products. Chrome products are not guaranteed for use in rocky or frozen ground. This warranty does not extend to labor incurred in removal or replacement of any item(s). ShieldAg shall not be liable for incidental or consequential damages arising out of the use or inability to use the item(s) for any purpose whatsoever.

Execution of consumer rights for warranty repair or replacement:

- 1. Consumer must provide the dealer with evidence of date of purchase of the item(s) to be considered for warranty. This evidence shall be in the form of a copy of the invoice or bill of sale for the item(s) and this evidence shall accompany the item(s) alleged to be defective.
- 2. The dealer shall provide ShieldAg with #1, above, and with a copy of the ShieldAg invoice to the dealer for the same item(s).
- 3. The ShieldAg Territory Manager or the dealer shall complete a ShieldAg Returned Goods Authorization (RGA) for the item(s) alleged to be defective. It is the dealer's responsibility to return the item(s) to ShieldAg at the dealer's expense; however, the Territory Manager may elect to return the items(s) to ShieldAg via our truck. Extension of this courtesy does not constitute the final decision to authorize warranty replacement or repair for the item(s).
- 4. Upon receipt of the item(s) alleged to be defective and the RGA, the ShieldAg engineering department will inspect the item(s). The engineering department will have sole discretion to authorize warranty replacement or repair.
- 5. ShieldAg engineering department shall assign the pro-rated wear factors to all item(s) subject to a warranty claim. Since the range of item(s) varies widely, the assignment of pro-rated wear factor deductions shall be done in good faith, working with the ShieldAg Territory Manager, the dealer and the consumer. In general, warranty will be pro-rated for wear up to 1/2" of edge wear on the item(s). Any warranty on tillage items expires after 1/2" of edge wear has occurred. The pro-rating system and 1/2" edge wear rule does not apply to chrome products.
- 6. ShieldAg will at its sole discretion replace or repair the item(s) found to be defective, less the prorated wear factors. ShieldAg will return the item(s) that have been repaired or replaced to the dealer including free return transportation via the mode of our choice.

### **Notes on Implied Warranties and Limitations**

There is no implied warranty of merchantability or fitness for a particular purpose. Some states do not allow limitations on implied warranties of merchantability or fitness for a particular purpose, so this limitation may not apply in a given state. Some states do not allow the exclusion or limitation of incidental or consequential damages, so this limitation may not apply in a given state.

### **Shipments & Returns**

This "Shipments and Returns Policy" outlines the rights and obligations of Shield Agricultural Equipment (ShieldAg) dealers with regards to discrepancies in shipments and returns of unsold items to ShieldAg.

### **Shipments**

ShieldAg must be informed of any shortages in shipments within ten (10) days of the arrival of that shipment or shipments at the dealer or end user (in the case of drop-shipments from ShieldAg to the end user). Shortages for truck shipments via LTL, UPS or other common carrier should be forwarded to the carrier for adjustment via freight claim. Shortages deemed by ShieldAg corporate office or our Territory Managers to be our responsibility will be corrected through a credit on the account of the dealer or through replacement of the item(s) that were missing from the shipment. It is the sole responsibility of the dealer to count the item(s) received on shipments and to make appropriate claims for shortages within ten (10) days of the receipt of the item(s).

Execution of dealer rights for shipments:

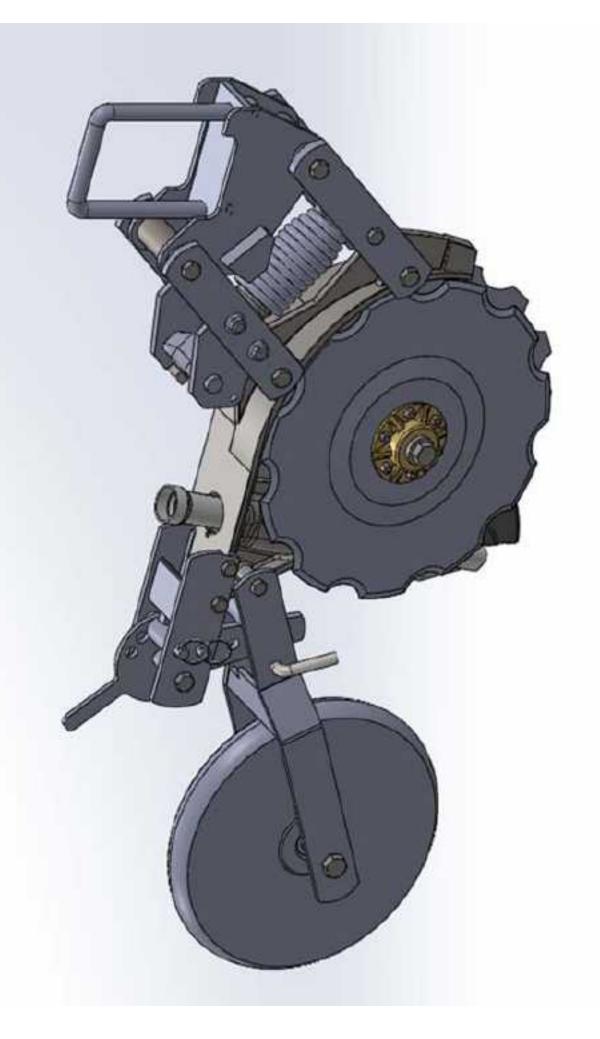
- Dealer shall provide ShieldAg with a copy of the ShieldAg packing slip (pick list) highlighting the item(s) that were alleged to be missing. A copy of the packing slip is to be faxed or mailed to ShieldAg within ten (10) days of the receipt of the shipment.
- 2. The ShieldAg Territory Manager may at our discretion be asked to visit the dealer and examine the shipment and shortage prior to extending credit or replacing the items.
- 3. ShieldAg will at its sole discretion replace the missing item(s) or credit the dealer account for the net dealer cost of the item(s) found to be missing. If replaced, ShieldAg will replace the missing item(s) to the dealer including free return transportation via the mode of our choice.

### **Returns**

ShieldAg does not have any types of oral or written agreements, contracts or arrangements of any type, between ShieldAg and our dealers or distributors that provide for the rights and obligations of the parties with respect to the purchase or sale of equipment or repair parts, beyond the standard obligations created by purchase orders and acceptance of same, for ShieldAg parts. ShieldAg therefore does not fall under any state's "buy back" laws. ShieldAg will not allow returns for any items purchased as "special order" or non-standard as modified for a custom application. ShieldAg will accept the return of standard-stocked new item(s) originally purchased into dealer or distributor stock from ShieldAg for a period of two (2) years from the date of original purchase from ShieldAg. All items returned must be current to the stream of commerce and not deemed to be obsolete. Returned item(s) in new and merchantable condition shall be subject to a thirty percent (30%) restocking charge. Any item(s) requiring rework, repackaging or repainting will be accepted only with a revised (and increased) restock charge after inspection at ShieldAg.

Execution of dealer or distributor rights for returned goods:

- 1. Dealer or distributor shall provide ShieldAg with a copy of the original invoice for the item(s) to be returned and a written explanation of the reason for return.
- 2. The ShieldAg inside salesperson or territory manager will work with the dealer or distributor to complete a ShieldAg Returned Materials Authorization (RMA), also known in the industry as an RGA (Returned Goods Authorization) for the item(s) to be returned. Upon inspection of the original invoice and the written explanation for return, the ShieldAg Inside salesperson or territory manager will authorize return of the item(s) for inspection and subsequent credit. It is the dealer's responsibility to return the item(s) to ShieldAg at the dealer's expense. Receipt of items does not constitute the final decision to extend returned goods credit for the item(s).
- 3. Upon receipt of the item(s) and the completed RMA (RGA), ShieldAg will inspect the items for merchantability and general condition. Credit on account will only be applied after the items have been inspected and accepted. Credit against the dealer or distributor account receivable will be applied less the thirty percent (30%) restocking charge. There will be no cash refunds for returned items. The ShieldAg territory manager or inside salesperson will communicate (to the dealer or distributor) acceptance (or rejection) of the returned goods and the final credit amount.
- **4.** This Policy dated 12/01/2020 supersedes all previous written or oral Returned Goods polices.



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<sup>\*</sup> Manufacturer's suggested retail price. Your price may vary.



### (800) 798-1968 www.acraplant.com

PO Box 687 • Hutchinson, KS • 67504

Fax (620) 662-7482







### ADU OPERATOR'S MANUAL Standard Mounts

### SAFETY FIRST

- 1. Always secure equipment with jack stands or blocking when working underneath the equipment.
- 2. When setting up 3-point type equipment with ACRA Drill Units, check the rating of the tractors 3-pt. hitch. ADU's weigh approximately 104 lbs ea. or more depending on the options. The additional weight of the ADU's may exceed the tractors capacity causing either loss of steering or hydraulic system damage. In some cases weight may have to be added to the front of the tractor.
- 3. When installing, removing or adjusting the row width, handle the parallel linkage with extreme caution to avoid injury. Pinch points exist between the parallel linkage and the brackets. CAUTION!!!! When flexing spring equipped linkage, block to prevent accidental spring back and finger injury.
- 4. The ADU disk blades are very sharp and create pinch points. Wear gloves and use extreme caution when rotating blades or adjusting. Keep hands and feet from under the blades. Wear gloves when making all adjustments near the disk blades, seed tube adjustments or spring tension adjustments. Accidental contact with the edge of the disk blade can cause severe lacerations.

### **SET UP AND INSTALLATION**

- 1. To mount ACRA Drill Units on a drill, locate the center of each section. Mark the center and work towards both ends measuring and marking the space with each row. Each mark will be the center of a drill unit. NOTE: Minimum row spacing for ADU's with standard brackets is 7 ½ inches. Brackets are available to stagger the rows for more residue clearance. Position the row unit and tighten the U-Bolts.
- 2. After mounting row units to the bar, install the flexible O.E.M. tube from the feed cup to the drill unit. Secure to the ADU seed tube to insure they stay in place.
- 3. The ADU Notched disks are set at the factory. To check proper disk clearance. Rotate one disk and it should rotate the other. You should be able to hold one disk and the other should slip against it as you rotate it. The disk should touch and make a scraping sound as they are rotated.
- 4. Adjusting the gap between the blades is done by adding or removing shims that are behind the blades. Note: the left hand blade is attached with a left hand thread 5/8 bolt and the right hand blade is attached with a right hand thread 5/8 bolt. Shims need to be added or removed to center

the V-Slice insert between the blades. You do not need to measure, just visually (eye-ball) it in the center. CAUTION!!!!! Use extreme care when handling the blades. They are extremely sharp and have a pinch point.

5. After approximately 8 hours of operation, check the disk clearance for optimum disk cutting action.

### **OPERATING INSTRUCTIONS**

ACRA Drill Units are designed and built to customer's mounting bar operation height. The standard unit is designed to attach to a mounting bar operating at 18-20 inches above the ground. This will flex the parallel linkage to a working attitude of approximately 45 degrees to the ground. This gives the best performance. There are several bar operation heights being used. Remember, for best performance the parallel link arm should be deflected to approximately 45 degrees. When toolbar height is properly adjusted, parallel linkage will operate between a 30 and a 60 degree angle. To adjust your drill for best possible results, follow this sequence:

- 1. Level drill toolbar front to back and side to side. This must be done regardless of make or model. Refer to owner's manual for leveling and height adjustments.
- 2. Adjust spring down pressure for field conditions. Spring tension is set by adjusting the tension bolt. At the factory, it is set at a minimum. Adding two revolutions adjusts to approximately 150 lbs down pressure at the opener V-Slice insert. A total of 8 revolutions will increase it to approximately 230 lbs. Beyond 8 additional revolutions of the tension bolt can cause permanent spring damage by over stretching and permanently deforming the spring. Units with two springs are adjusted the same way, tightening each the same amount. Two springs increase down pressure from 300 lbs to 425 lbs of down pressure.
- 3. Raise the gage wheel and operate a short distance. Dig down to see where seed is being placed. Remember the seed trench is approximately 3/8 below the bottom of the disk blades. Adjust the gage wheel to maintain the depth that you want to place the seed. NOTE: First time users of these units will initially plant too deep.
- 4. Seed not in the bottom of the trench would indicate the seed tube is too high. Seed tube position is relative to ground speed and soil conditions. The seed tube can be adjusted higher for fast ground speed or wet conditions and lower for slower speeds and dry conditions.
- 5. ALWAYS WHEN MAKING SHARP TURNS, LIFT THE DRILL SO THE UNITS ARE OUT OF THE GROUND TO PREVENT DAMAGE TO THE DRILL UNIT.
- 6. **NEVER BACK UP WITH THE ACRA DRILL UNIT IN THE GROUND.** This will cause the seed tube to plug with soil. NOTE: Periodically check bolts for tightness.

### **TROUBLE SHOOTING**

Disk plugging
 Dirt build up
 Seed tube plugging
 Planting too deep
 Adjust disk gap, soil too wet, disk blades worn
 Adjust disk gap, soil too wet, disk blades worn
 Lower drill on the move, seed tube too low
 Back off spring tension, toolbar too low

### **SERVICE AND STORAGE**

- 1. Do not let V-slice insert get too short or rounded-off. Insert must stick below the disk blades at least 1/8 inch. Inserts can be sharpened to a sharp V if rounded off.
- 2. Disk blade diameter should not be below 14 inches. Residue management is severely reduced when the notch depth is shallow. Always maintain proper blade gap.
- 3. Each joint of the parallel linkage has a Nylatron bushing for a bearing surface that requires no greasing saving daily maintenance time. These should be checked for wear at the beginning of each season and should be replaced when showing excessive wear.
- 4. When storing for the off season, do not coat the insert with grease. Do not set the drill or planter down with the inserts supporting the weight of the equipment. Do not set equipment on concrete. The insert is a casting and breakage can occur.
- 5. It is best to reduce the spring tension when stored.
- 6. Storing the equipment in direct sunlight diminishes the life of rubber tired gage wheels and ADU seed tubes.

### **PRIMARY SERVICE ITEMS**

1. AP-300537	Nylatron Bushing
2. AP-331100	V-Slice Insert
3. AP-301112	Seed Tube
4. AP-301151	11 Notch Disk Assembly
5. AP-301152	15 Notch Disk Assembly
6. AP-301155	Disk Bearing

See other items in the parts list. Schematic included.

AP-ADU4X4P

## AP-ADU4X4P Complete Unit

4 X 4 U-bolt AP-500531 BAR HEIGHT **( 1ea )** 4 X 4 bracket AP-305629 18-20 AP-302242 Center **Body Assembly** 0 **( ①** Includes everything seen here ⊗ ⊙<sub>®</sub> AP-334998 single spring parallel link assembly Ô 0  $\mathfrak{M}$ **(**  $\odot$ **Bracket, less press wheel AP-300434 Press Wheel** AP-510712 2 X 13 **Press Wheel** 

4

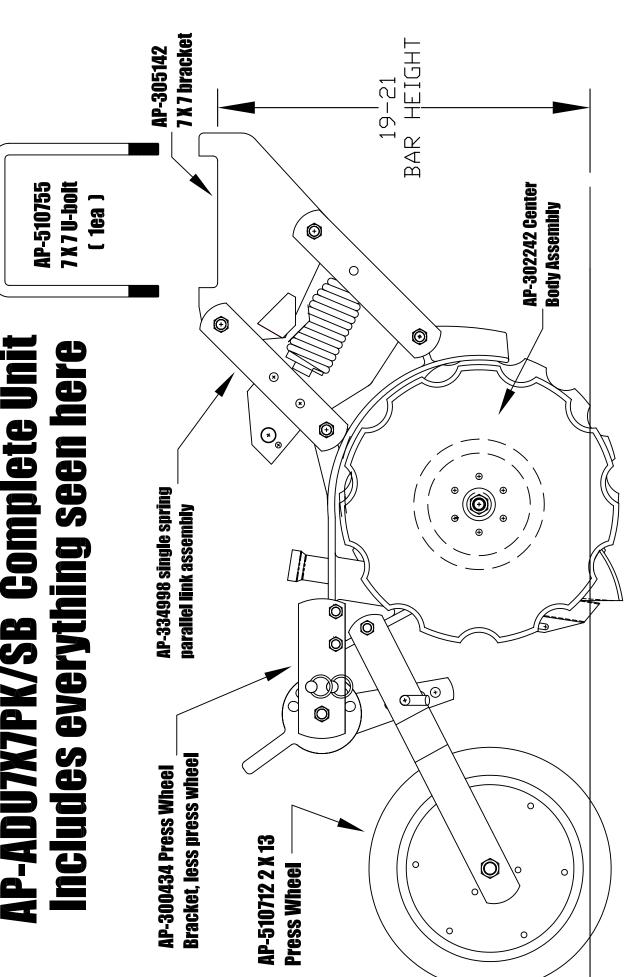
800-798-1968 www.shieldag.com

DESCRIPTION
Standard ADU, 4 X 4, with 2 X 13 Press Wheel

**ASSEMBLY NUMBER** 

AP-ADU4X4P

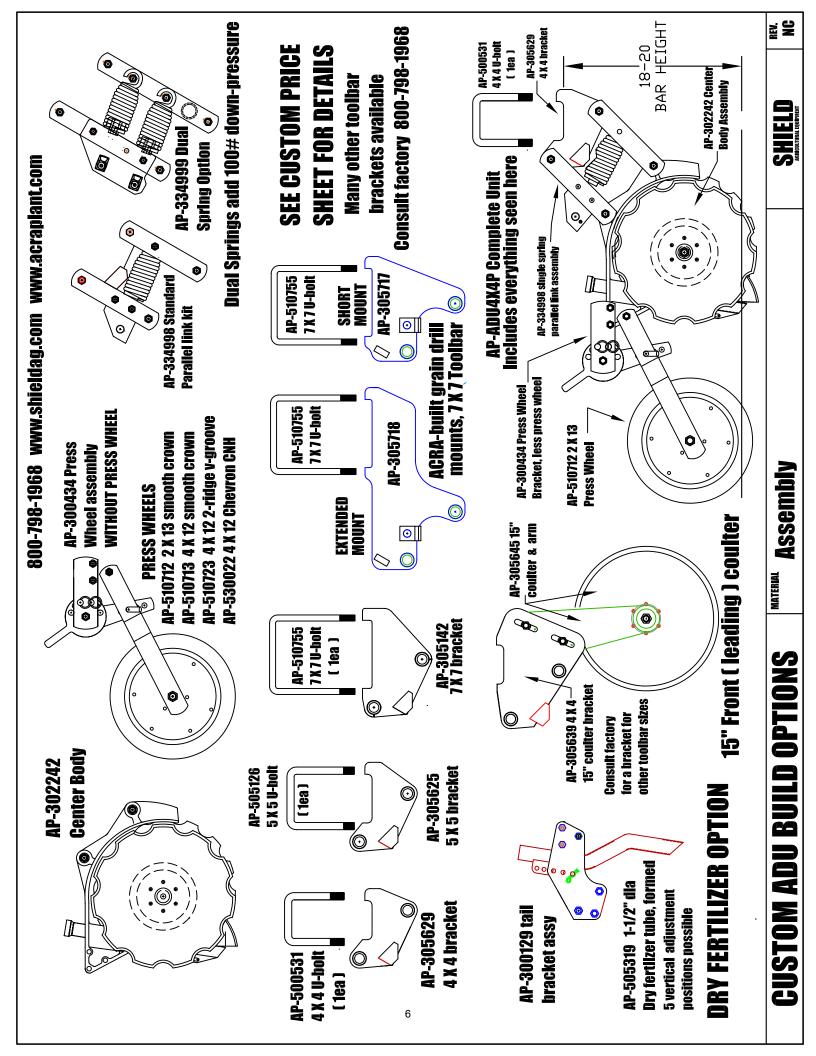
## Includes everything seen here AP-ADU7X7PK/SB Complete Unit



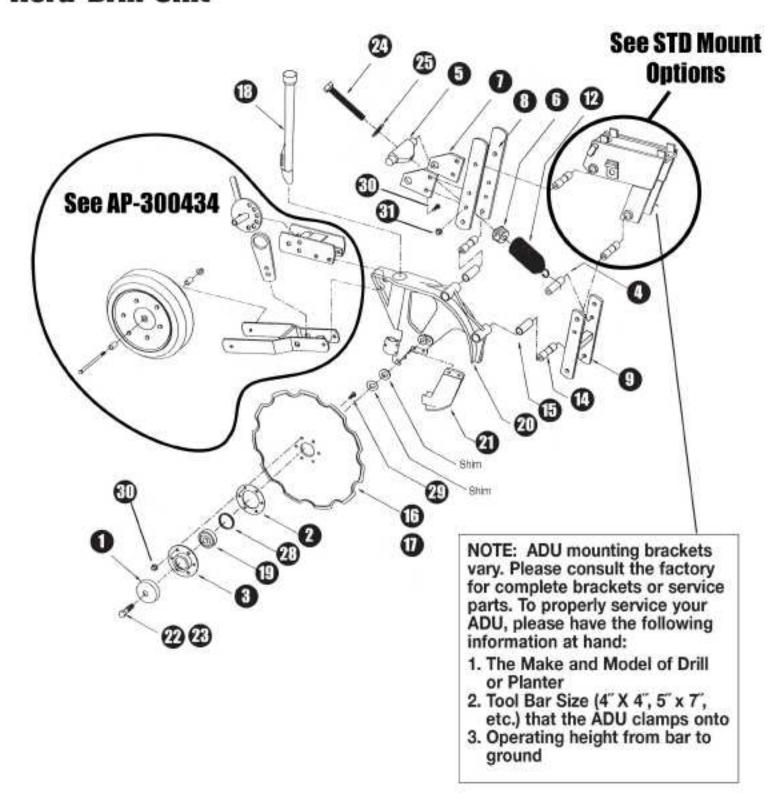
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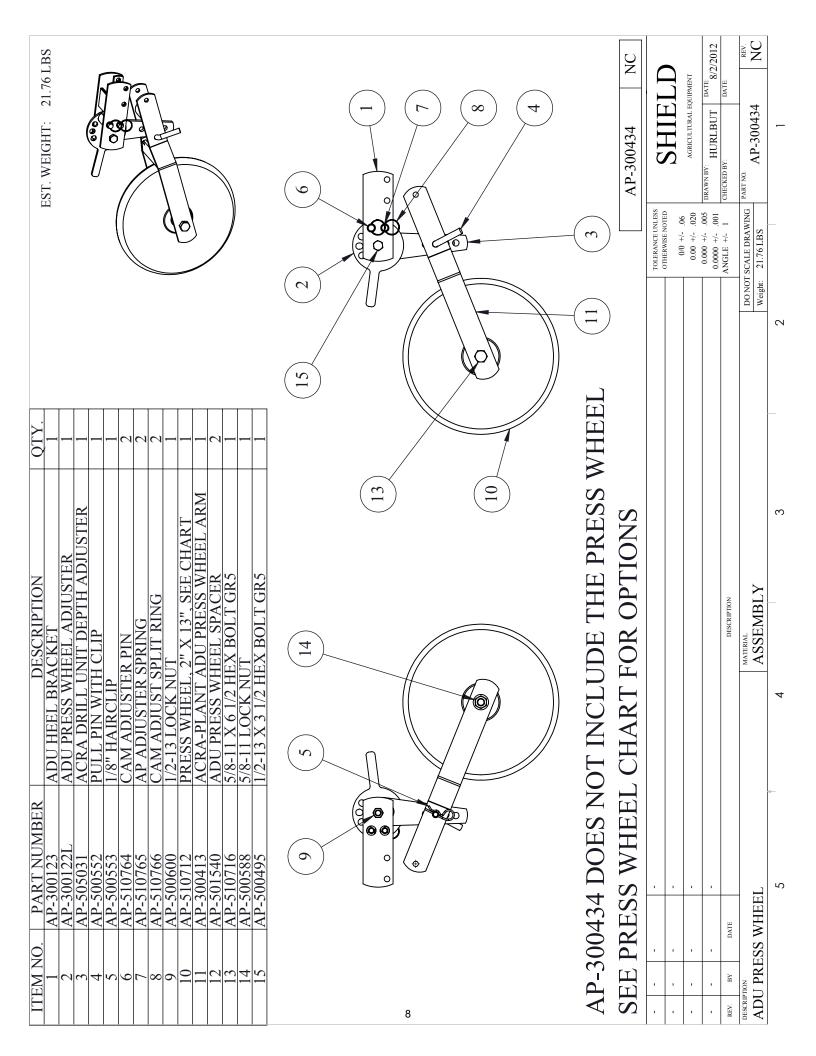
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AP-ADU7X7PK/SB

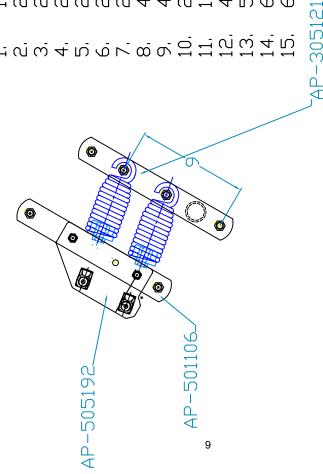


### **Acra-Drill Unit**





# **AP-334999** complete **DOUBLE SPRING** assembly



'4 CARRIAGE MACHINED HINGE BUSHING 5/8-11X 4 1/2 HEX TAP MOUNT BUSHING WASHER OCK HEX NUT NYLATRON BUSHING SPRING NUT LINK ARM INK ARM SPRING ANCHOR ANCHOR MAIN SPRING TOPL 7/16-14 X SAE SPRING SPRING UPPER MAIN AP-500499 AP-500679 AP-500583 AP-300039 AP-505192 AP-300196 AP-300055 AP-300527 AP-300537 AP-500512 4P-500621 AP-30001 AP-501106 OF MATERIALS П П Б Р. Р. Р. Р. Р. EA. EA. EA. 0.000044000 4 N

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## AP-334999 for NORTH AMERICA

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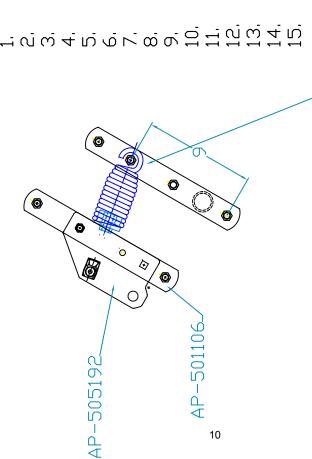
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### **Conversion Kii** AP-334999V3

## **Convert ADU with Single Spring to ADU with Dual Spring**



7/16-14 X 1 1/4 CARRIAGE MACHINED HINGE BUSHING 5/8-11X 4 1/2 HEX TAP OCK HEX NUT MOUNT BUSHING WASHER BAR NYLATRON BUSHING ARM SPRING NUT INK ARM SPRING ANCHOR ANCHOR SAE FLAT MAIN SPRING TOPL SPRING SPRING UPPER MAIN AP-500499 AP-500679 AP-500583 AP-505192 AP-300527 AP-300537 4P-300039 4P-300055 AP-500512 AP-300196 4P-500621 AP-300011 AP-501106 AP-305121 OF MATERIALS Е А. А. А. А. EA. EA. EA. Е Р.  $\Box$ 

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### AP-334999V3 for NORTH AMERICA

AP-305121

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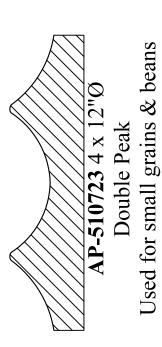
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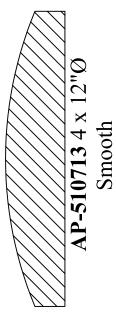
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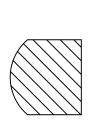
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## Press Wheel Options







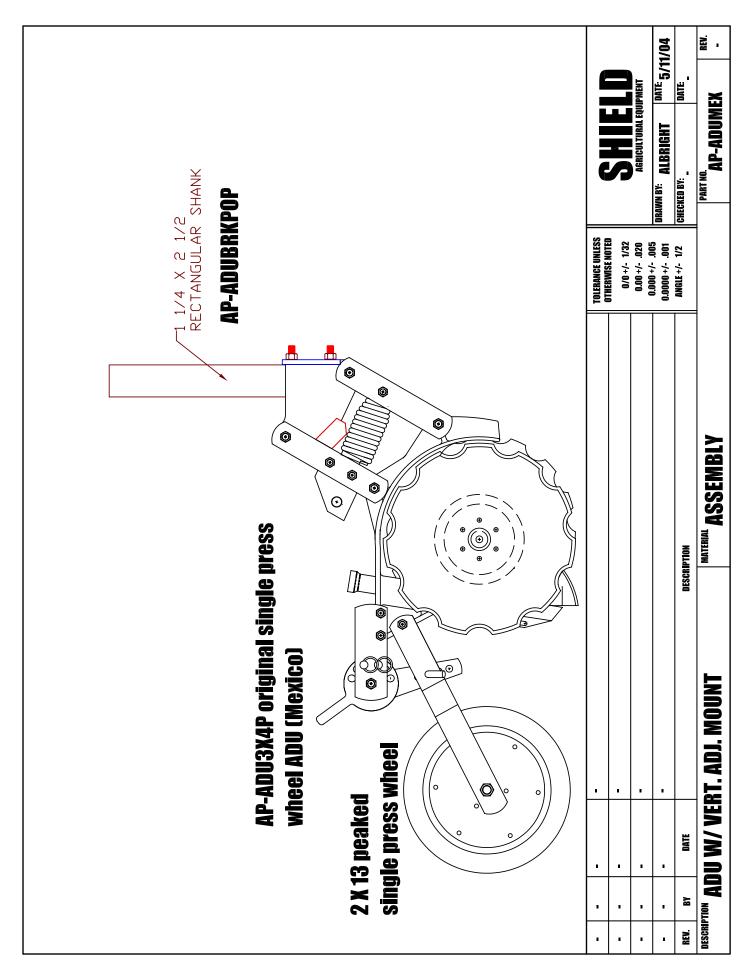


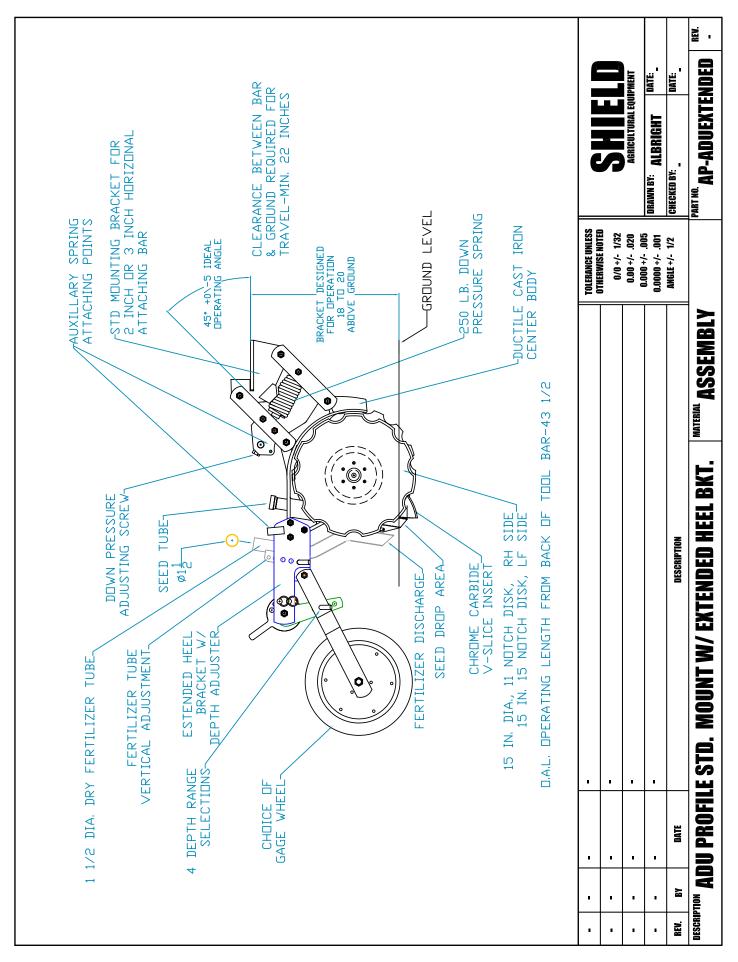
AP-510711 1 x 12"Ø
Round Crown
Used on V-Wheel Closers

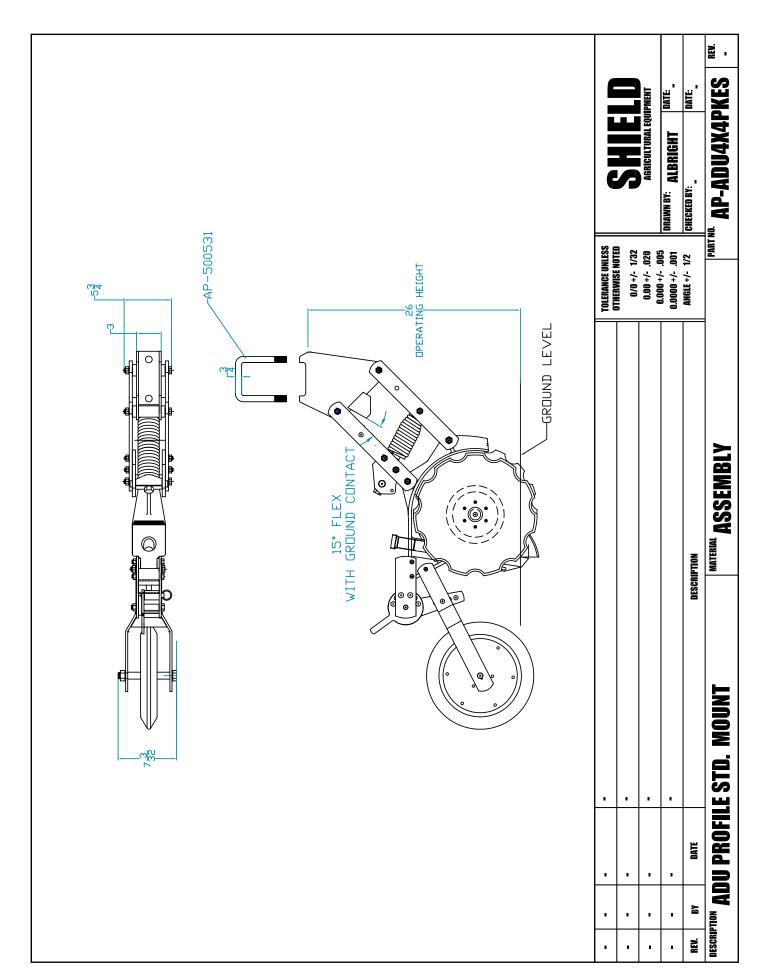
**AP-510712** 2 x 13"Ø Smooth

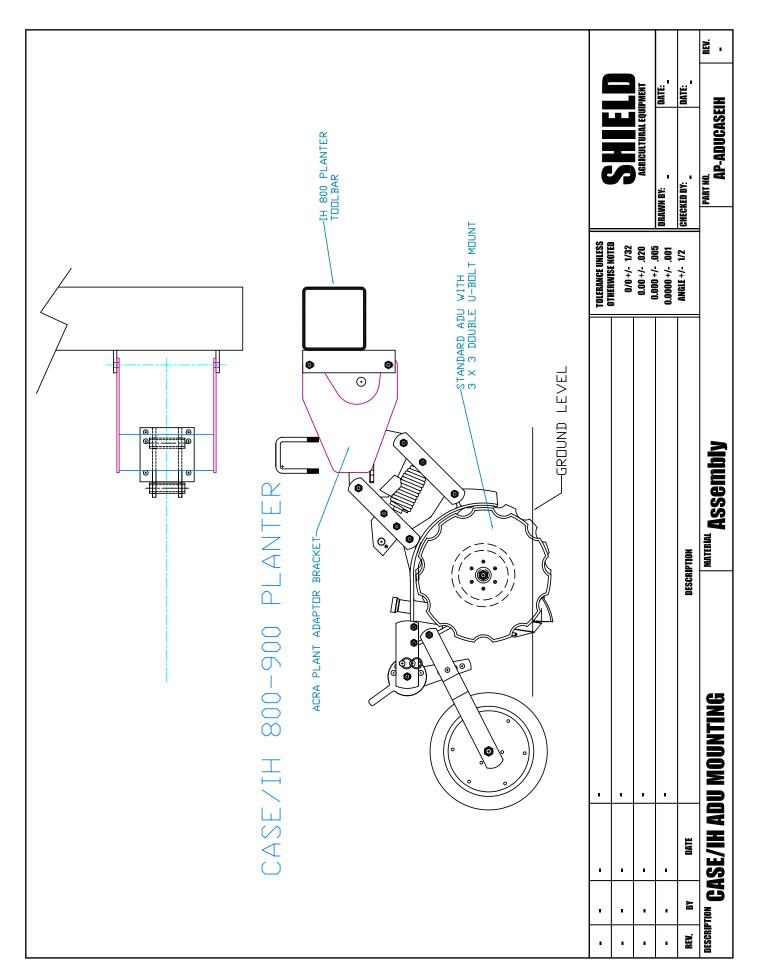
Most popular for small grains

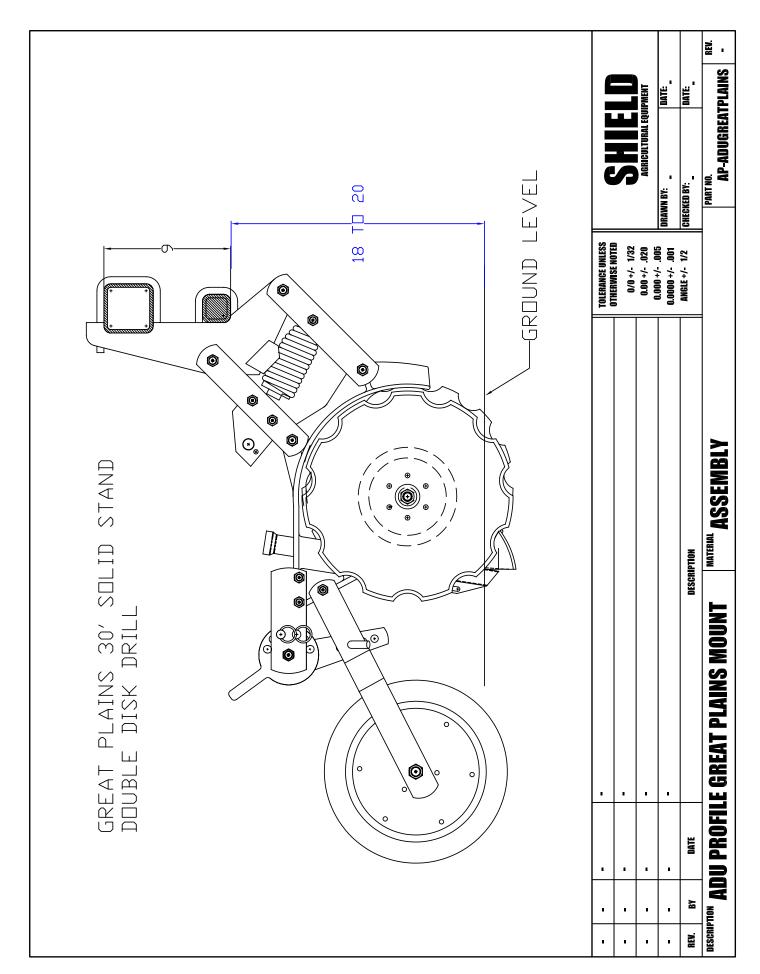
\*Other Styles Available On Special Order\*

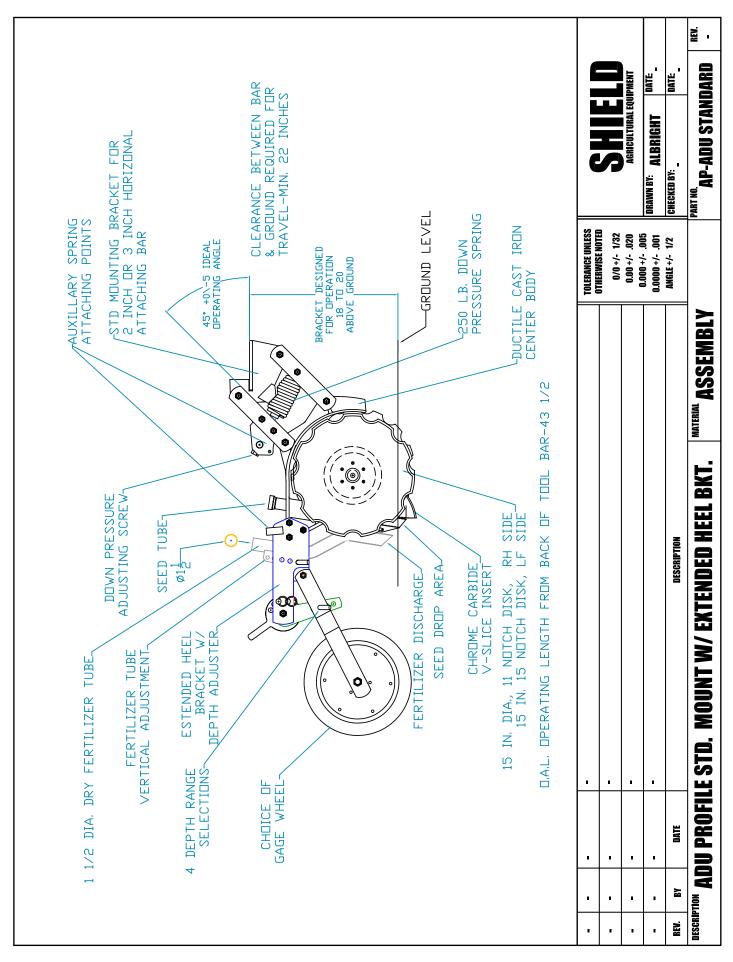












### **Acra Drill unit Planning Guide**

Acra Plant offers several "off the shelf" versions of the ADU for standard toolbars. We have also engineered dozens of optional mounts and packing/closing wheels for just about any drill or planter application.

OEM Drill conversions
 Air seeders
 Row crop planters
 Seed research plot drills/planters

If one of the Acra Plant standard solutions does not suit your need, "measure up" what you need and answer the following questions, then call 800-798-1968 and we'll step you through a "customization process" to tailor the ADU to your application:

ATTACHING TOOLBAR SIZE Vertical	(Height) and Horizontal (Width) of your toolbar
BAR OPERATING HEIGHT Measure f	rom the bottom of the toolbar to the ground in the operating position
PRESS WHEEL DESIRED Narrow, wid	e, V-closer, and desired SIZE of your press wheel
the ADU linkage—REMEMBER, we car	(Standard) or <b>DOUBLE SPRING</b> (Optional) down pressure springs in get to about 200 # of down pressure per row (plus unit weight), but your the additional load and you MAY need to add ballast to the bar with double
ROW SPACING DESIRED Distance be	etween rows
STAGGERED ROWS DESIRED YES	<b>NO</b> Important for NARROW row configuration or trash flow
DRY FERTILIZER DESIRED YES seed placement and WHAT SIZE feed h	NO Tell us HOW MUCH #/acre and WHERE you want it with respect to the nose you are using
(swivel mounts or vertical shank moun	ecial mountings for an odd geometry or mounting, tell us a little about it nts)
YOUR NAME:	COMPANY NAME:
PHONE:	
ADDRESS:	

You can COPY this page with the information filled out and FAX IT to 800-878-1849 or 620-662-7482 or Email it to: InformationRequests@shieldag.com www.acraplant.com www.shieldag.com Phone: 800-798-1968

### STRAIGHT FROM THE HEARTLAND SHIELDAG.COM



### CALL THE DEALER NEAREST YOU

PHONE: (620) 662-7221 (800) 798-1968

FAX: (620) 662-7482

MAILING: PO BOX 687 • HUTCHINSON, KS 67504

SHIPPING: 950 SCOTT BLVD • SOUTH HUTCHINSON, KS 67505





