

Yetter
... for land's sake

FERTILIZER COULTER

MODEL 2975

SET - UP & PARTS MANUAL

YETTER MANUFACTURING CO.
FOUNDED 1930
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Yetter

FOREWORD

You've just joined an exclusive but rapidly growing club.

For our part, we want to welcome you to the group and thank you for buying a Yetter fertilizer coultter.


This is a unique and revolutionary new product.

We hope your new Yetter fertilizer coultter will help you achieve both increased productivity and increased efficiency so that you may generate more profit.

This operator's manual has been designed into four major sections.

Foreword, Safety Precautions, Installation, and Operation.

Throughout the manual references may be made to left side and right side. These terms are used as viewed from the operator's seat facing the front of the tractor.

 This **SAFETY ALERT SYMBOL** indicates important safety messages in the manual. When you see this symbol, be alert to the possibility of **PERSONAL INJURY** and carefully read the message that follows.

The word **NOTE** is used to convey information that is out of context with the manual text. It contains special information such as

specifications, techniques, reference information of a supplementary nature.

The word **IMPORTANT** is used in the text when immediate damage will occur to the machine due to improper technique or operation. Important will apply to the same information as specified by note only of an immediate and urgent nature.

It is the responsibility of the user to read the operator's manual and comply with the safe and correct operating procedure and to lubricate and maintain the product according to the maintenance schedule in the operator's manual.

The user is responsible for inspecting his machine and for having parts repaired or replaced when continued use of the product would cause damage or excessive wear to the other parts.

It is the user's responsibility to deliver his machine to the Yetter dealer who sold him the product for service or replacement of defective parts which are covered by the warranty policy.

IMPORTANT: When raising 3 pt. toolbars watch tractor tire clearance. **EXAMPLE:** In most cases 3 pt. hitch type planters require a cat. 2 or cat. 3 quickhitch coupler to offset toolbar away from tractor tires.

WARRANTY POLICY

Yetter Manufacturing warrants all products manufactured and sold by it against defect in material. This warranty being expressly limited to replacement at the factory of such parts or products as shall appear to be defective after inspection. This warranty does not obligate the Company to bear cost of labor in replacement of parts. It is the policy of the company to make improvements without incurring obligations to add them to any unit already sold. No warranty is made or authorized to be made, other than herein set forth. This warranty is in effect for 1 year after purchase.

Dealer _____

Yetter Manufacturing warrants its own products only and cannot be responsible for damage to equipment on which mounted.

YETTER MODEL 2975 FERTILIZER COULTER

CLAMPS

2990-154	Clamp Kit 2-1/2 Sq. Bar
2990-155	Clamp Kit 2 x 6 Bar
2990-156	Clamp Kit 4 x 4 Bar
2990-157	Clamp Kit 5 x 7 Bar
2990-158	Clamp Kit 7 x 7 Bar
2990-159	Clamp Kit 3" Diamond Bar
2990-160	Clamp Kit 3 - 1/2 Diamond Bar
2990-161	Clamp Kit 3 x 7 Bar
2990-163	Clamp Kit, 3" Sq. Bar
2990-171	Clamp Kit, 3 x 4 Bar
6300-105	Clamp Kit, 5 x 5 Bar

SHANKS

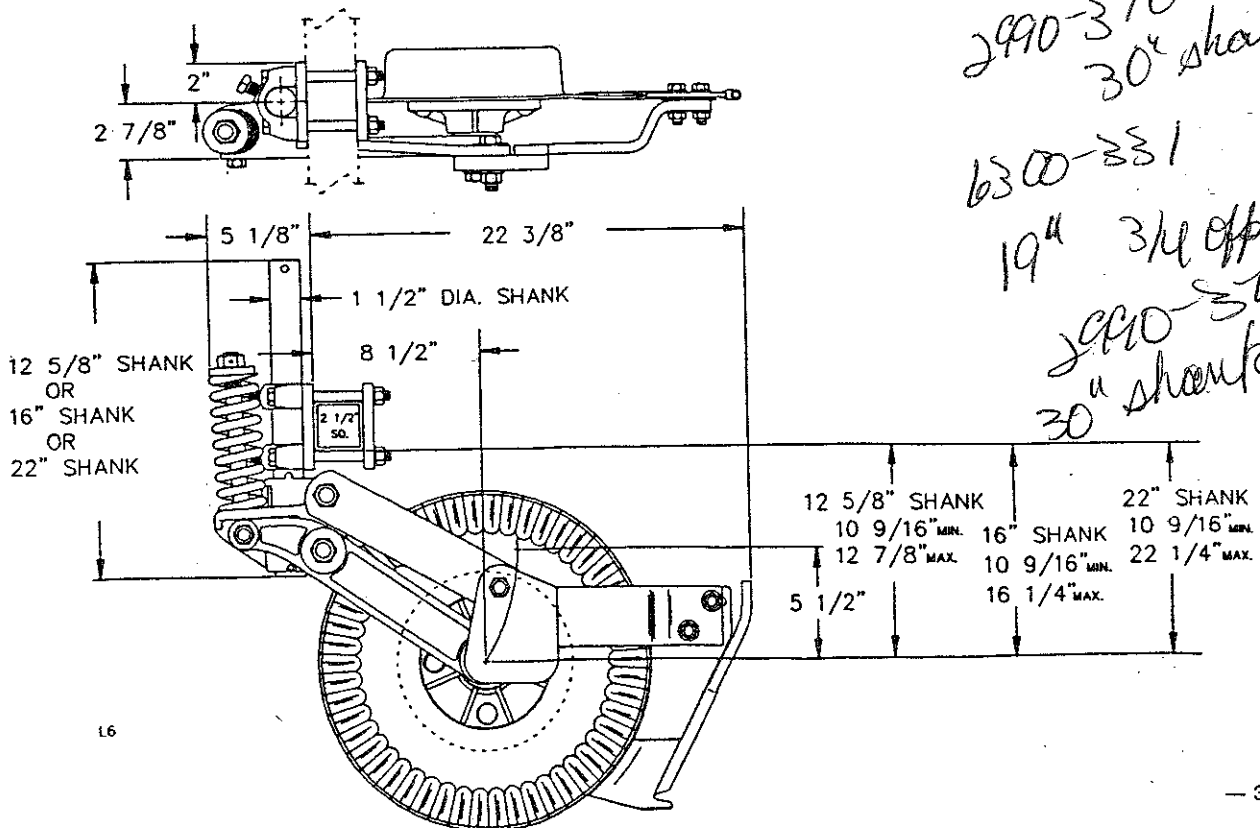
2990-310	Shank 12-5/8"
2990-318	Shank 16"
3010-303-BB	Shank 22" <i>23.31</i>
2990-328	Shank 26"
2990-350	Shank 27-1/8"
3011-302- BB	Shank 22" Long, 5" Offset
2990-208	Shank 12-5/8 Long, 3" Offset

FERTILIZER KNIVES

2975-116	Dry Fertilizer Knife Ass'y
2975-220	Liquid Fertilizer Knife
2975-219	Suspension Fertilizer Knife

OPTIONAL EQUIPMENT

2975-120	Gauge Wheel Kit
2970-133	Knife Scraper



P.A. 3/4 clamp.

2990-166 2 1/2 x 1/2

2990-34A 18" 3/4 Shank

2990-221 27" x 3" offset

2990-370 30" shank

6300-331 19" 3/4 offset 30" shank

SAFETY

A brief description of signal words that may be used in this manual:

CAUTION: Used as a general reminder of good safety practices or to direct attention to unsafe practices.

WARNING: Denotes a specific potential hazard.

DANGER: Denotes the most serious specific potential hazard.

SAFETY PRECAUTIONS

You can make your farm a safer place to live and work if you observe the safety precautions given. Study these precautions carefully and insist that they be followed by those working with you and for you.

Finally, remember this: an accident is usually caused by someone's carelessness, neglect or oversight.



Never clean, lubricate or adjust a machine that is in motion. Always lower or block the implement before performing service.

If machine must be serviced in the raised position, jack or block it up to prevent it from accidentally falling and injuring someone.

Do not allow riders on the tractor or implement.

Use speeds and caution dictated by the terrain being traversed. Do not operate on any slope steep enough to cause tipping or loss of control.

Be sure all personnel are clear of the immediate area before operating.

Read and understand the operator's manual and require all other persons who will operate the equipment to do the same.

Be familiar with all tractor and implement controls and be prepared to stop engine and implements quickly in an emergency.



Consult your implement and tractor operator's manual for correct and safe operating practices.

Beware of towed implement width and allow safe clearance.

FAILURE TO HEED MAY RESULT IN PERSONAL INJURY OR DEATH.

INSTALLATION

1. Assemble 3/8 x 2-1/2 roll pin into hole closest to end of 1-1/2 dia. shank, leaving approximately equal amount protruding out each side. For 12-5/8" shank, end with-out hole is upper end.
2. Insert lock collar into pivot casting and slide shank up through casting and lock collar. If you wish to lock coulter from pivoting, slide roll pin into slots in casting. If you wish to let coulter pivot, do not align roll pin with casting slots, but slide shank up till roll pin contacts casting surface. Install and tighten 5/8 x 1 setscrew in lock collar to 110 ft. lb. torque maximum.
3. Mount 17" coulter blade loosely to hub using (4) 1/2 x 1-1/2 carriage bolts, lockwashers, and nuts.
- 4a) Mount fertilizer knife to rear support arm using (2) 1/2 x 2 Gr. 5 whizlock bolts and whizlock nuts. Place shims between knife and support arm as required to align knife point with blade. Attach knife lock assembly to upper rear knife bolt at this time also.
- b) **Center blade on hub** by rotating blade and watching clearance between knife and blade. Slide blade on hub as required until the blade runs concentric, no run out on diameter. Tighten (4) 1/2" nuts. If blade wobble is excessive, check for burrs on hub mounting surface and remove if necessary.
- c) Adjust knife clearance to blade **as close as possible**. The high point of the blade should **just** clear the knife as blade is rotated. Be sure blade rotates freely then tighten (2) 1/2" whizlock nuts to 100 ft. lb. Re-check clearance by rotating blade one full revolution after all bolts are tight. See also page 9. Tighten the 3/8" bolt down against the top edge of the knife and lock with jam nuts.

ALTERNATIVE INSTRUCTIONS FOR SIDE KNIVES.

- 4a) *Clamp the mounting bracket and clamp plate around the knife arm with the 3/8 x 1 3/4" bolts.*
- b) *Assemble the side knife to the bracket with 1/2 x 6 1/2" bolt and locknut. This is a pivot bolt so do not over tighten.*
- c) *Install the other two 3/8 x 1 3/4" bolts and finish clamping the parts to the knife arm. Use the 3/8 x 2" bolt with two nuts to adjust the leading edge of the knife against the blade.*
5. Assemble clamp components loosely to planter front bar as shown in parts view of appropriate clamp. The clamp setscrew must mount away from spring, see page 11.
6. Position coulter clamps either toward the inside or outside of the planter openers on each side of the planter to equalize draft. Tighten (4) 1/2" nuts to secure the clamps.
7. Install coulters on planter by inserting shank up through clamps and tightening 5/8 x 1 setscrews.

8. Install 5/16 x 2-1/2 cotter pins in all vertical 1-1/2 dia. shanks. This cotter pin prevents loss of coulter should the clamp setscrews work loose. Cotter pin can be installed between clamp castings or on top, above top casting depending on shank.
9. Set coulter depth by loosening setscrews in clamp castings. For John Deere 7000 front fold planters there may not be enough up adjustment to operate coulter at proper depth, (not more than hub deep). Not all toolbars on John Deere planters operate at the same height. If necessary, cut off top of 1-1/2 dia. shank to allow proper adjustment.
10. On John Deere 7000 front fold planters there are (2) hoses that may interfere with coulter operation. Loosen hydraulic fittings and swivel these hoses up out of the way to provide clearance when coulter flexes up.
11. If you have elected to let coulter swivel, set lock collar to allow swivel in one or both directions as required. If you have elected to hold coulter rigid, set coulter straight with the direction of travel. Tighten set screw to 110 ft. lb. torque maximum.
12. Set spring tension by adjusting 3/4" locknut till 1/8" of threads are exposed above the nut. This should provide approximately 180 lbs. of down pressure before the spring begins to deflect. When the spring nut is tightened 1" down, approximately 350 lbs. of force is necessary at blade center to move the blade upward. Maximum force on blade when spring is fully deflected is approximately 1100 lbs.
13. Grease 4 fittings on each coulter before operation. The hub bearings should be greased only a few times each season. **Do not forget the lower parallel arm/spindle grease zerk.**
14. NEVER mount coulters under planter drive shaft to allow coulter blades to contact shaft when obstacle is struck. Coulters must be mounted so blade can always flex up and clear drive shaft.

NOTE: Dry fertilizer must be free of chunks greater than 1/4" in size to prevent plugging. Yetter recommends using screened fertilizer or running fertilizer through screen when hoppers are filled. Clean hoppers thoroughly at the beginning of season to prevent plugging problems.

The rubber dry fertilizer tube may appear to be 'stretched' when the planter is in the transport position. This does not affect operation of the planter and should not be detrimental to the fertilizer tube.

OPERATION

Yetter Model 2975 fertilizer coulters are designed to apply fertilizer 3" to 5" deep. See your fertilizer dealer for recommended depth and distance away from row for your particular fertilizer. A popular placement setting is 2" below and 2" away from the seed. High deposit rates require the fertilizer to be placed farther away from the row to avoid crop "burn."

Yetter Model 2975 fertilizer coulters can be set up to swivel or not swivel as required. By not allowing the coulters to swivel, the distance between seed and fertilizer varies less when planting on contour.

When mounting Model 2975 coulters on 3-point or 2-point hitch planters, the coulters should be set up to swivel, particularly if a 4-wheel drive tractor is used. This reduces the side load on the coulters during operation. It is preferable to allow the coulters to swivel.

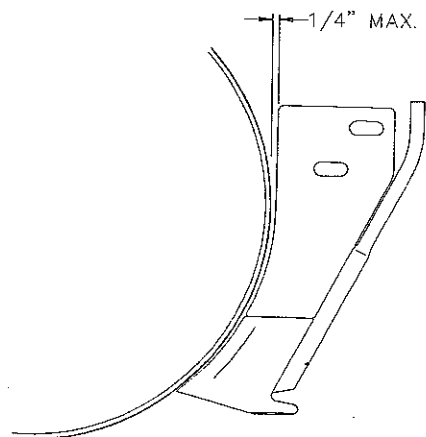
IMPORTANT: For proper operation, the planter frame must operate level and at the correct height, usually 20" - 22" whilst in operation.

In hard no-till conditions the desired operating depth may not be possible. Tighten spring nut to maintain depth if spring is flexing rather than lower coulters to obtain maximum depth.

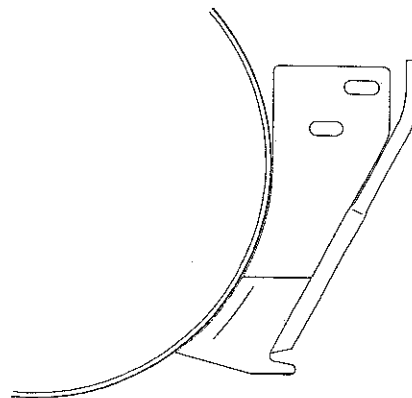
Planter weight may limit operating depth in hard conditions, particularly with mounted or semi-mounted planters. Be sure planter has enough weight to keep drive wheels on the ground during operation or plant populations can be drastically affected.

1. Set coulters to run vertical to the ground. Operating depth and blade wear can be affected if coulters are mounted crooked. If coulters are set-up to not swivel be sure they run straight with the direction of travel.
2. After a few hours use, check all bolts and setscrews for tightness.
3. After a few days use, check coulters for loose bearings. There should be no end play in the hub bearings to allow it to wobble. If necessary, remove hub cap and cotter pin, adjust slotted nut to remove wobble, re-insert cotter pin and replace hub cap.
4. **KNIFE ADJUSTMENT IS CRITICAL.** Adjust knife-blade clearance regularly, see page 8. An optional knife scraper Part 2970-133 is available to reduce the frequency of adjustment on the fertilizer coulters knife. In addition this allows better operation in tough conditions such as freshly disced soils with abundant trash in the top four inches of loose soil (see below). NOTE: A 'bump' will appear behind knife scraper, on blade where protected, this must be ground off periodically to maintain correct knife-blade clearance.
5. **BLADE WEAR** can affect operation in loose trash conditions. If knife adjustment does not stop plugging problems, it may be necessary to replace blade.

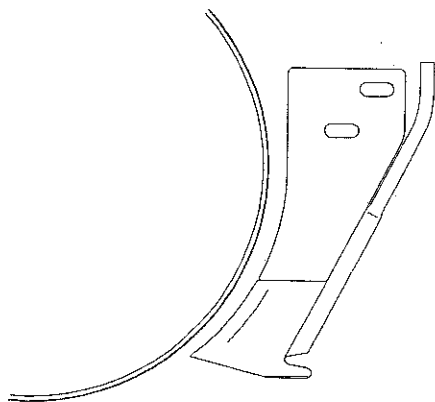
KNIFE ADJUSTMENT



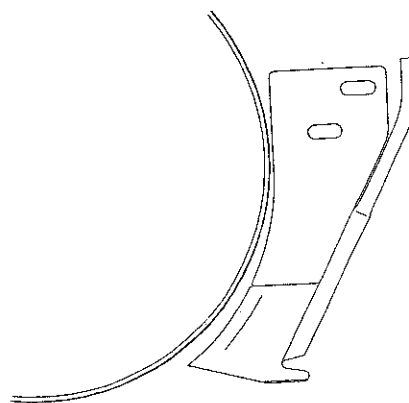
CORRECT



CORRECT



INCORRECT



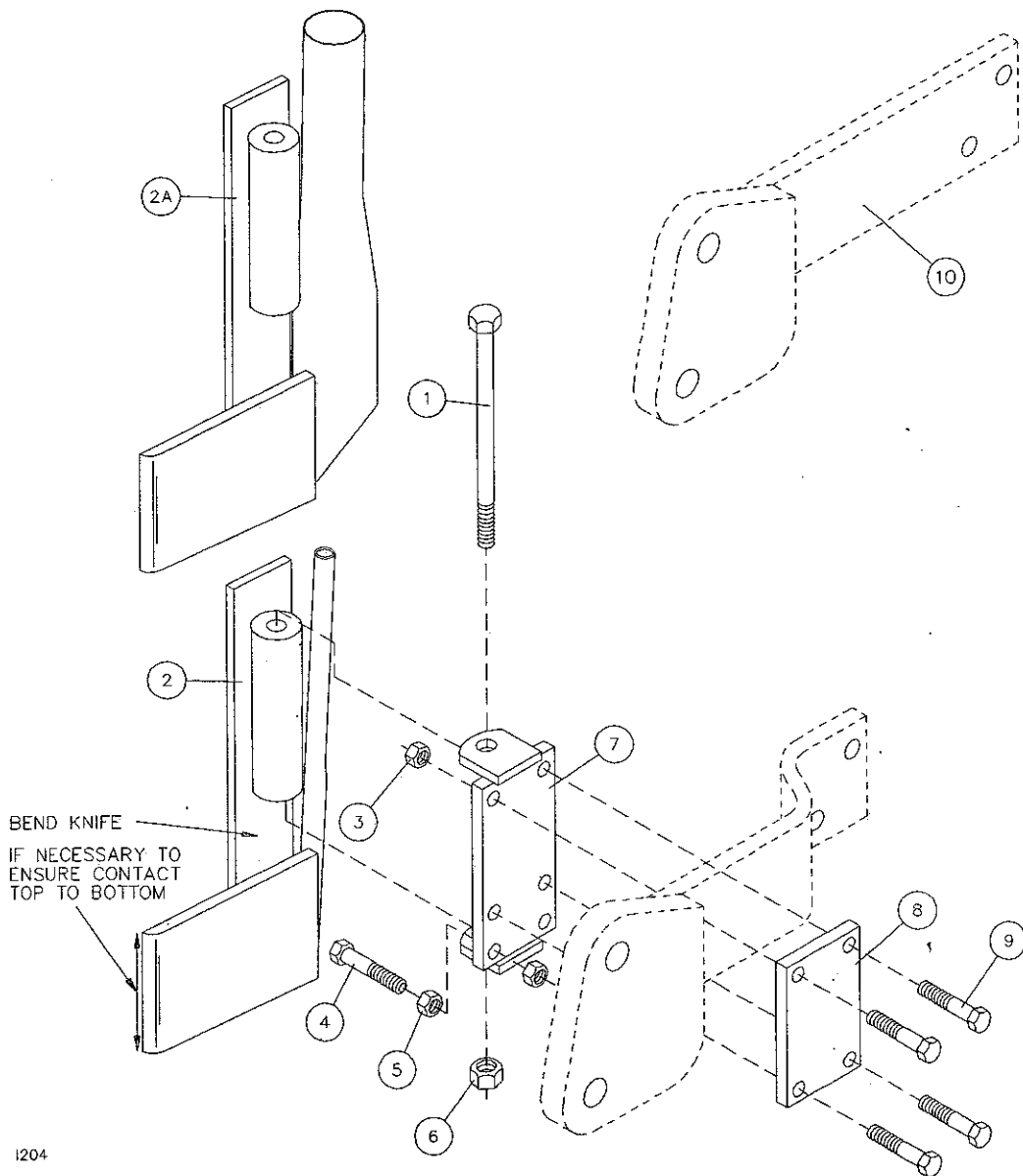
INCORRECT

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The adjustment of knife clearance to the blade is critical to trouble free operation of the fertilizer couler, in certain conditions the couler can "plug" in just a few feet if not correctly adjusted.

1. The disc blade **must** run concentric. Adjust by loosening 4 hub nuts and centering the blade.
2. Set knife to rub slightly on blade, especially at bottom of knife. See illustrations above. Tighten whizlock nuts to 100 ft. lb. by using the wrench on **both** the bolt head and the nut.
3. Adjust the 3/8 x 1" bolt down against the top edge of the knife to lock the knife in place, tighten both jam nuts to lock, see page 10 for illustration.

SIDE KNIFE

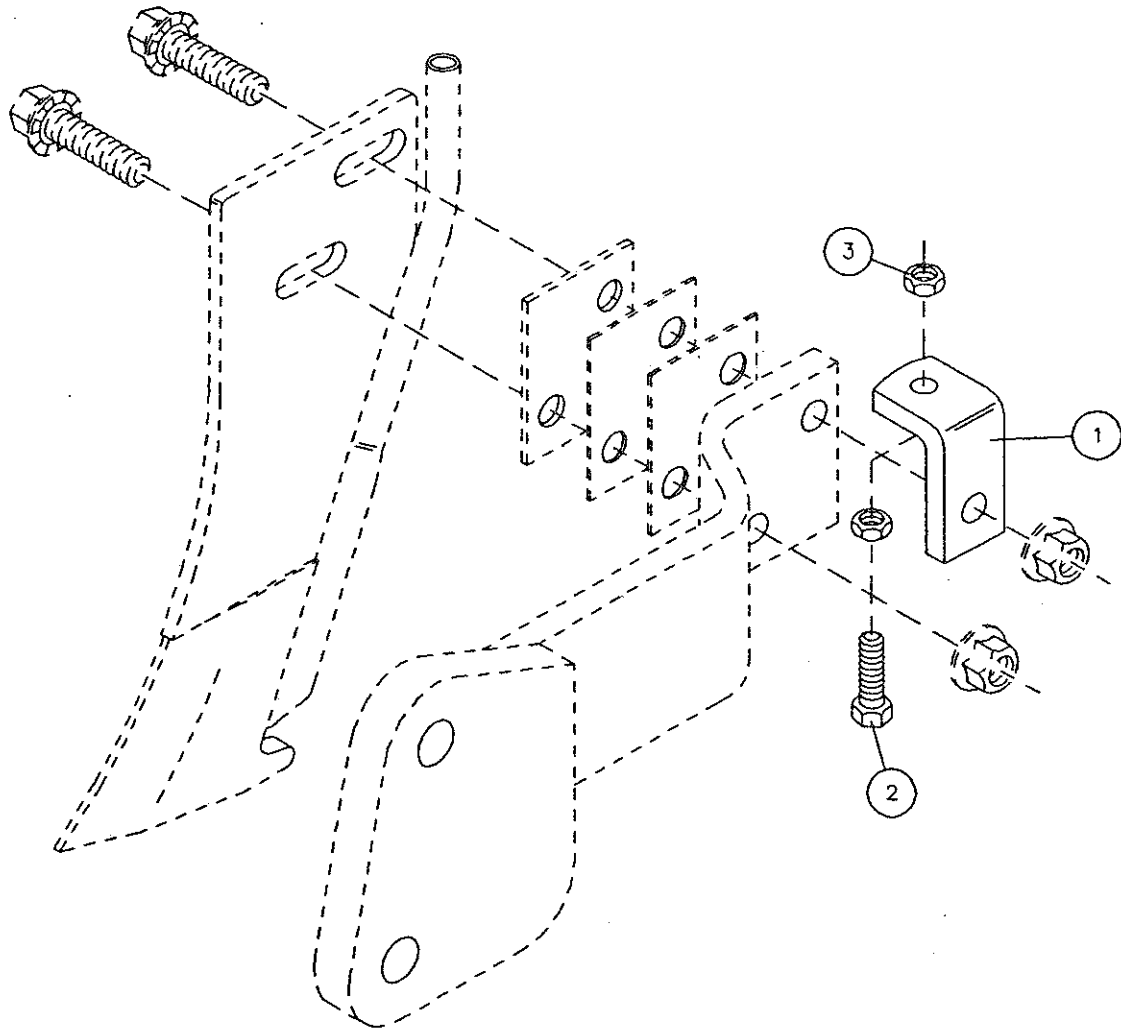


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Key	Qty.	Part No.	Description
1	1	2502-372	1/2 - 13 X 6 1/2 HHCS Gr. 5, ZP
2	1	2975-226	Side Knife, R.H. WA
	altn	2975-223	Side Knife, L.H. WA
2A	altn	2975-228	Side Dry Knife W.A., R.H.
	altn	2975-229	Side Dry Knife W.A., L.H.
3	4	2520-255	3/8 - 16 Lock Hex Nut ZP
4	1	2502-240	3/8 - 16 x 2 HHCS Gr. 5 ZP
5	2	2520-251	3/8 - 16 Hex Nut ZP
6	1	2520-357	1/2 - 13 Lock Hex Lock Nut ZP
7	1	2975-227	Side Knife Bracket WA
8	1	2975-337	Side Knife Clamp Plate
9	4	2502-245	3/8 - 16 x 1 3/4 HHCS Gr. 5 ZP
10	*	2975-280	Straight Knife Arm WA (LH)
	*	2975-281	Straight Knife Arm WA (RH) (shown)

*for dry side knife only

KNIFE LOCK



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The knife lock is attached to the upper rear knife bolt as shown in the illustration above.

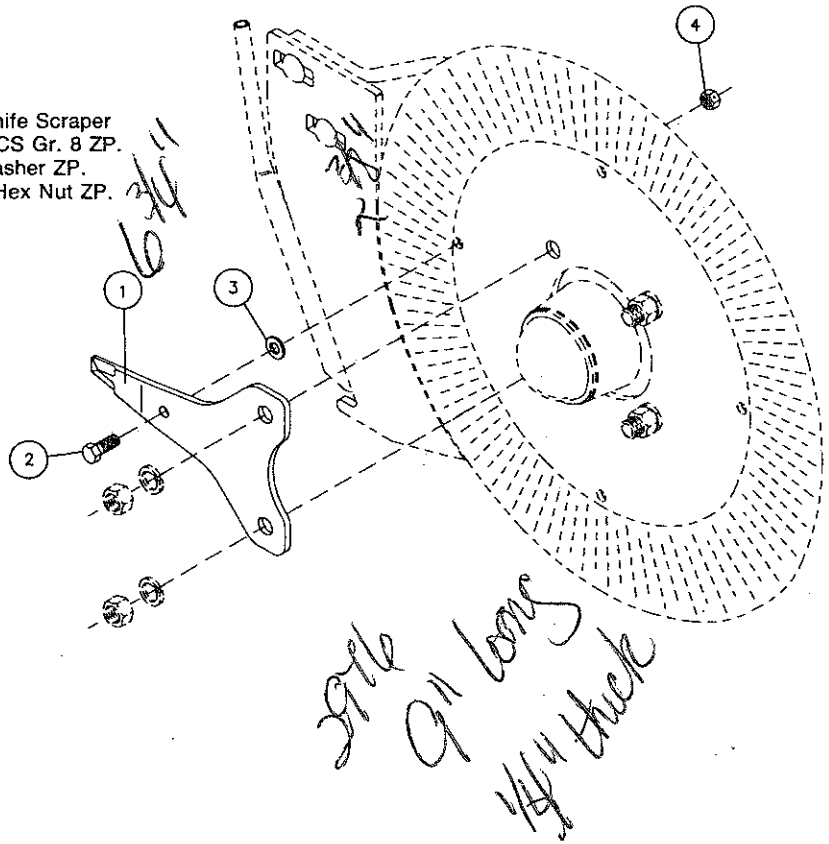
The 3/8 x 1" bolt is adjusted against the top edge of the knife to hold the knife securely in place after adjustment.

*** BLADE MUST BE CENTERED BEFORE ADJUSTING KNIFE.**

KNIFE SCRAPER

2970-133 Knife Scraper

Key	Qty.	Part No.	Description
1	1	2970-353	Double Edge Knife Scraper
2	1	2502-199	5/16-x 3/4 HHCS Gr. 8 ZP.
3	1	2526-201	5/16 Std. Flatwasher ZP.
4	1	2520-205	5/16-18 Lock Hex Nut ZP.



MAINTENANCE

LUBRICATION

Each coulter is equipped with 4 grease zerks. To ensure longevity and reliability of the coulter, the following lubrication schedule should be followed:

1	lower parallel arm zerk	daily
2	pivot casting zerks	daily
1	hub bearings zerk	each season

KNIFE WEAR

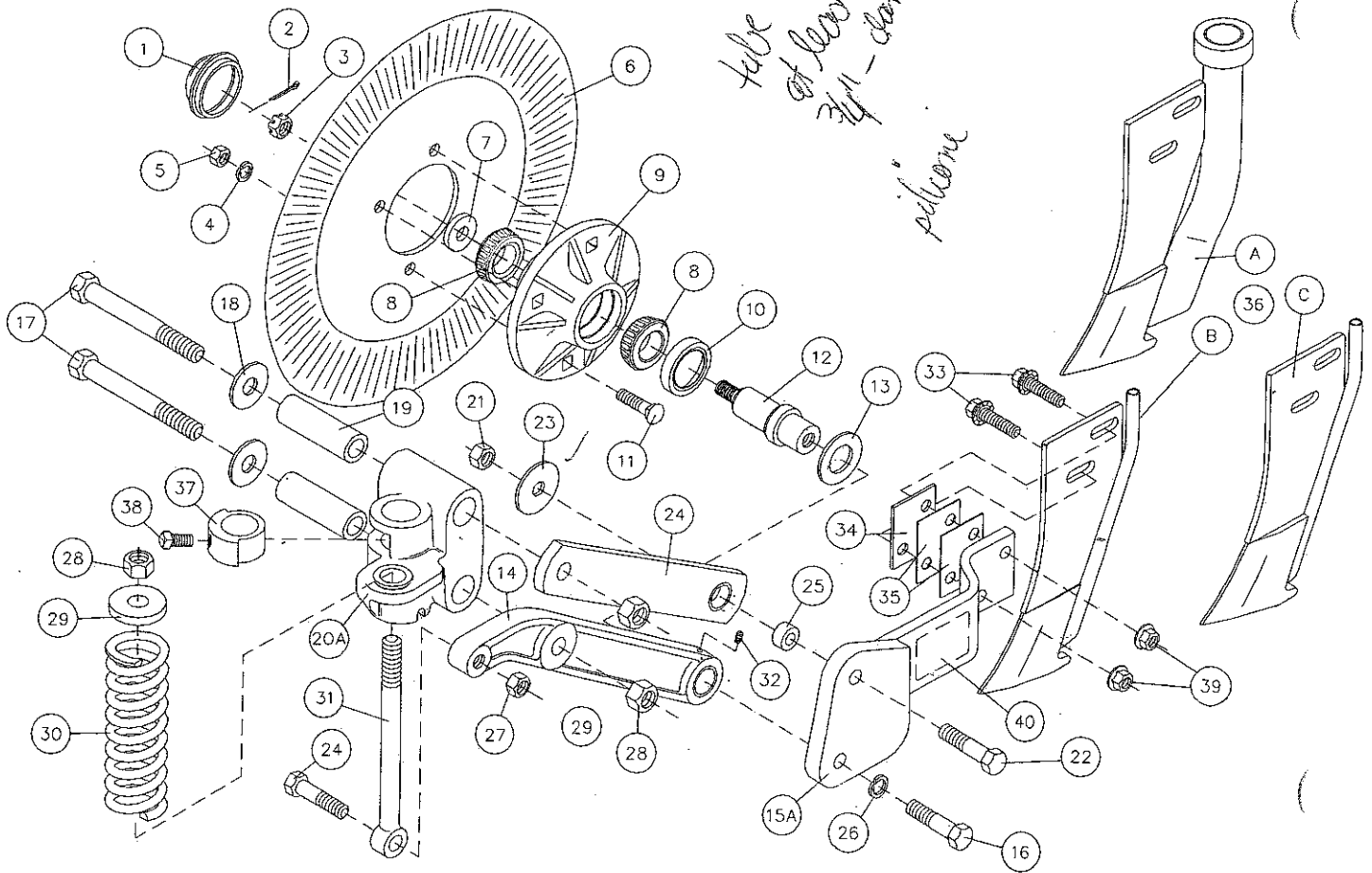
The lower portion of the knife and tube are subject to wear during operation. The rate of wear will depend on a variety of factors and in abrasive soil conditions the wear will be more rapid.

On the dry fertilizer knives with cast tip, if the tube has worn out it is possible to weld on a new tube to further extend the life of the dry fertilizer knife or weld on new wear plates on each side.

Dry fertilizer tube part no. 2975-360.
Wear plate part no. 2975-387.

PARTS IDENTIFICATION

2975 Series 17" Fertilizer Coulters Assembly

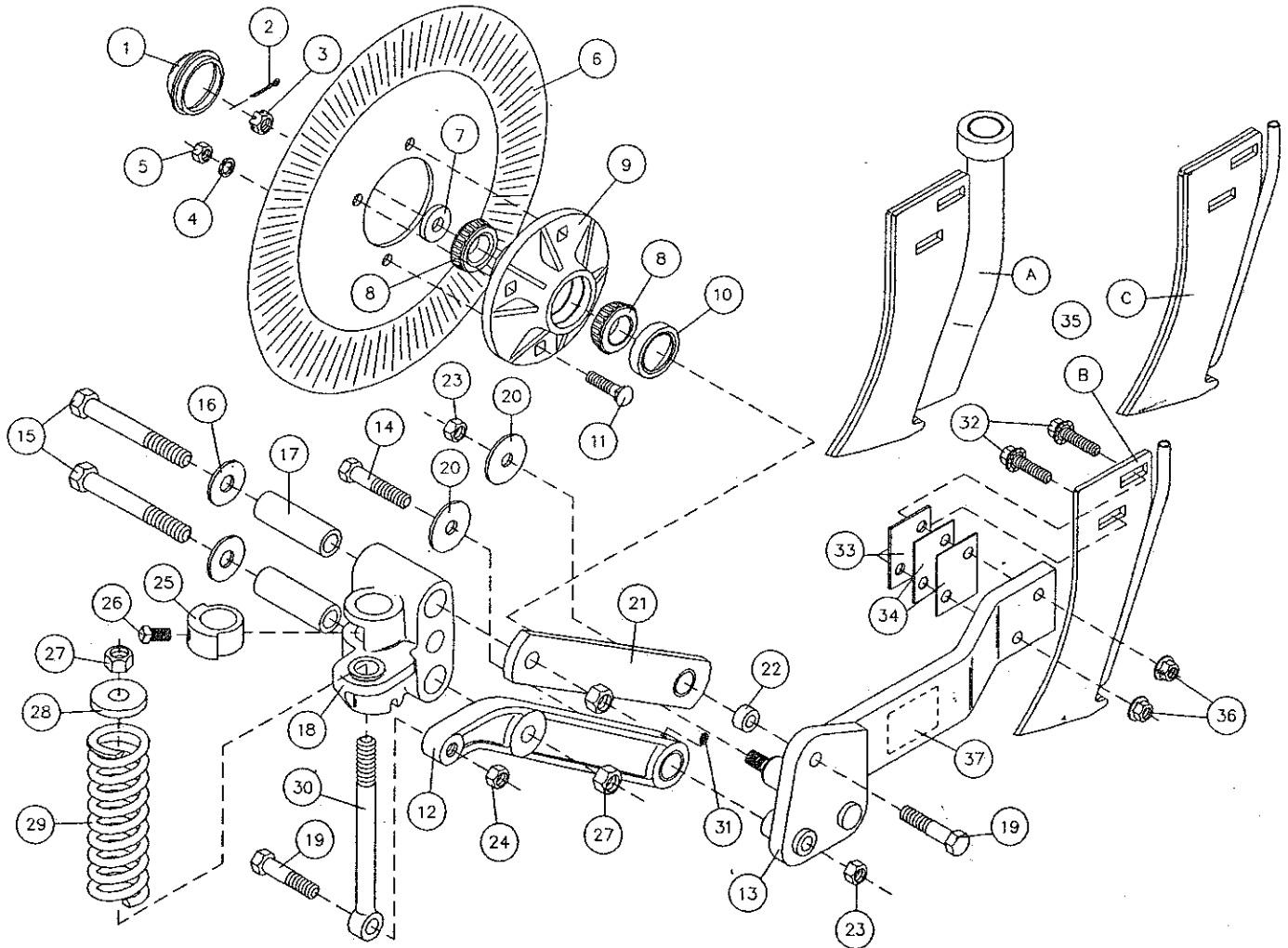


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Key	Qty.	Part No.	Description	Key	Qty.	Part No.	Description
1	1	2570-375	Hub Cap	22	2	2502-393	5/8-11 x 2-1/2" HHCS Gr.5 ZP.
2	1	2531-102	1/8 x 1-1/4" Cotter Pin Blk.	23	1	2527-531	21/32 ID x 2-1/4 OD x 10 Ga. M.B. ZP.
3	1	2520-469	5/8-18 Slotted Hex Nut, Blk.	24	1	2975-111	Upper Parallel Arm Assembly
4	4	2525-352	1/2 Med. Lockwasher ZP.	1	2528-360	1 ID x 1-1/4 OD x 1/2" Brnz. Bush. (Pre-Assem. w/No. 24)	
5	4	2520-352	1/2-13 Hex Nut ZP.	25	1	2570-702	Upper Bushing Carrier
6	1	2571-158	17" Ripple Coulters	26	1	2525-451	5/8 Med. Lockwasher ZP.
7	1	2526-449	5/8 Flatwasher x 1/4" Thk.	27	1	2520-452	5/8-11 Hex Nut ZP.
8	2	2550-027	Cone, LM67048	28	1	2520-515	3/4-10 Lock Hex Nut ZP.
9	1	2900-105	Hub Pressed Assembly	29	1	2555-060	Spring Bushing Casting
10	1	2550-115	Seal, 16069	30	1	2550-744	2-1/2 OD x 7/16 Wire Comp. Spring
11	4	2505-339	1/2-13 x 1-1/2" Car. Blt. Gr.5 ZP.	31	1	2570-705	Push Rod
12	1	2570-700	Spindle, (2975)	32	4	2533-110	1/4-28 Zerk, Straight Self-Tap
13	1	2527-560	1-1/4 ID x 2-1/4 OD x 10 Ga. M.B. ZP.	33	2	2502-345	1/2-13 x 2" Whizlock HHCS Gr.5 ZP.
14	1	2975-110	Lower Parallel Arm Assembly	34	1	2970-319	Knife Shim, 1/8
15A	1	2975-201	Knife Arm W.A. (R.H.) (Shown)	35	3	2970-320	Knife Shim, 16 Ga.
15B	1	2975-202	Knife Arm W.A. (L.H.)	36A	1	2975-116	Dry Fertilizer Knife Ass'y
16	1	2502-321	5/8 x 2-1/2" HHCS Gr.5 ZP.	36B	2	2975-220	Liquid Fertilizer Knife W.A.
17	2	2502-510	3/4-10 x 6" HHCS Gr.5 ZP.	36C	1	2975-219	Suspension Knife W.A.
18	2	2527-532	25/32 ID x 2" OD x 10 Ga. M.B. ZP.	37	1	2975-303	2975 Locking Collar
19	2	2570-704	Pivot Sleeve	38	1	2503-379	5/8-11 x 1" Sq. HCPS Scr. ZP.
20A	1	2975-300	Pivot Casting (2975 R.H.) (Shown)	39	2	2520-361	1/2-13 Flange Whizlock Hex Nut ZP.
20B	1	2975-301	Pivot Casting (2975 L.H.)	40	1	2565-294	Critical Adjustment Decal
21	1	2520-459	5/8-11 Lock Hex Nut ZP.	1	2530-208	Roll Pin	
				1	2531-161	Cotter Pin	For Shank

PARTS IDENTIFICATION

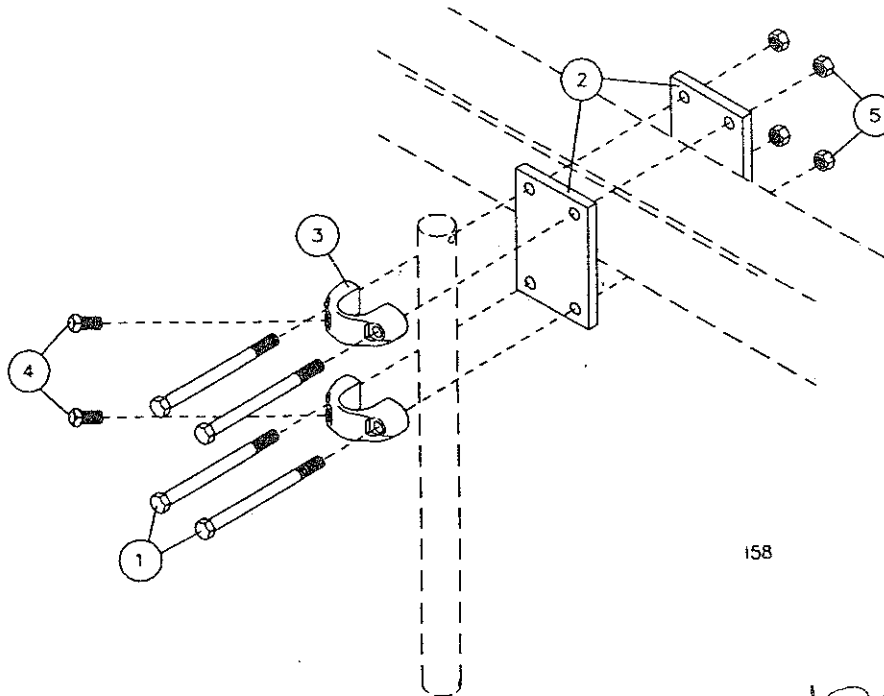
2976 Series 20" Fertilizer Coulter Assembly



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Key	Qty.	Part No.	Description	Key	Qty.	Part No.	Description
1	1	2570-375	Hub Cap	20	2	2527-531	21/32" ID x 2-1/4" OD x 10 Ga. M.B. ZP.
2	1	2531-102	1/8 x 1-1/4" Cotter Pin, Black	21	1	2975-111	Upper Parallel Arm Assembly
3	1	2520-469	5/8—18 Slotted Hex Nut, Black	1	1	2528-360	1 ID x 1-1/4 OD x 1/2" Brnz. Bush. (Pre-Assem. w/No. 21)
4	4	2525-352	1/2 Med. Lockwasher ZP.	22	1	2570-702	Upper Bushing Carrier
5	4	2520-352	1/2—13 Hex Nut ZP.	23	2	2520-459	5/8—11 Lock Hex Nut ZP.
6	1	2571-076-C	20" Ripple Coulter Blade	24	3	2520-452	5/8—11 Hex Nut ZP.
7	1	2526-449	5/8 Flatwasher x 1/4" Thk.	25	1	2975-303	2975 Locking Collar
8	2	2550-027	Cone, #LM67048	26	1	2503-379	5/8—11 x 1" Sw. HCPSS ZP.
9	1	2900-105	Hub Sub—Assembly	27	3	2520-515	3/4—10 Lock Hex Nut ZP.
	2	2550-029	Cup (Pre-Assem w/No. 9)	28	1	2555-060	Spring Bushing Casting
10	1	2550-115	Seal, 16069	29	1	2550-744	2-1/2 OD x 7/16 Wire Comp. Spring
11	4	2505-339	1/2—13 x 1-1/2" Car. Blt. Gr.5 ZP.	30	1	2570-705	Push Rod
12	1	2975-110	Lower Parallel Arm Assembly	31	4	2533-110	1/4—28 Zerk, Straight Self-Tap
	1	2528-361	1-1/4 ID x 1-1/2 OD x 1 Brnz. Bush. (Pre-Assem. w/No. 12)	32	2	2502-345	1/2—13 x 2" Whizlock HHCS Gr.5 ZP.
13	1	2976-200	20" Knife Arm W.A.	33	1	2970-319	Knife Shim, 1/8
14	1	2502-325	5/8 x 11 x 3" HHCS Gr.5 ZP.	34	3	2970-320	Knife Shim, 16 Ga.
15	2	2502-510	3/4—10 x 6" HHCS Gr.5 ZP.	35A	1	2976-202	20" Dry Fertilizer Knife W.A.
16	2	2527-532	25/32 ID x 2" OD x 10 Ga. M.B. ZP.	35B	1	2976-203	20" Liquid Fertilizer Knife W.A.
17	2	2570-704	Pivot Sleeve	35C	1	2976-204	20" Suspension Knife W.A.
18	2	2975-300	Pivot Casting (2975 R.H.)	36	2	2520-361	1/2—13 Flange Whizlock Hex Nut ZP.
19	2	2502-393	5/8—11 x 2-1/2" HHCS Gr.5 ZP.	37	1	2565-294	Critical Adjustment Decal
					1	2530-208	Roll Pin) For Shank
					1	2531-161	Cotter Pin)

PARTS IDENTIFICATION



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2990-154 Clamp Kit, 2-1/2" Sq. Bar

Key	Qty.	Part No.	Description
1	4	2502-368	1/2—13 x 5-1/2" Hex Hd. Capsc. Gr.5 ZP.
2	2	2990-313	Clamp Plate, 2-1/2 Sq. Bars
3	2	2990-360	Clamp Casting, Drilled
4	2	2503-379	5/8—11 x 1" Sq. Hd. Cuppoint Setsc.
5	4	2520-357	1/2—13 Lock Hex Nut ZP.
6	1	2515-690	5/8 OD Vinyl Tube, Cut 1-1/2" (Not Shown)

2990-155 Clamp Kit, 2 x 6 Bar

Key	Qty.	Part No.	Description
1	4	2502-362	1/2—13 x 6" Hex Hd. Capsc. Gr.5 ZP.
2	2	2990-322	Clamp Plate, 2 x 6 Bar
3	2	2990-360	Clamp Casting, Drilled
4	2	2503-379	5/8—11 x 1" Sq. Hd. Cuppoint Setsc.
5	4	2520-357	1/2—13 Lock Hex Nut ZP.

2990-156 Clamp Kit, 4 x 4 Bar

Key	Qty.	Part No.	Description
1	4	2502-371	1/2—13 x 7" Hex Hd. Capsc. Gr.5 ZP.
2	2	2990-314	Clamp Plate, 4" Sq. and 3" Diamond Bar
3	2	2990-360	Clamp Casting, Drilled
4	2	2503-379	5/8—11 x 1" Sq. Hd. Cuppoint Setsc.
5	4	2520-357	1/2—13 Lock Hex Nut ZP.

2990-157 Clamp Kit, 5 x 7 Bar

Key	Qty.	Part No.	Description
1	4	2502-369	1/2—13 x 8" Hex Hd. Capsc. Gr.5 ZP.
2	2	2990-315	Clamp Plate, 5 x 7 or 7 x 7 Bar
3	2	2990-360	Clamp Casting, Drilled
4	2	2503-379	5/8—11 x 1" Sq. Hd. Cuppoint Setsc.
5	4	2520-357	1/2—13 Lock Hex Nut ZP.

NOTE: The 5/8" OD vinyl tube provided in 2990-154, 2990-158, 2990-161, and 2990-163 is required on implements using a 5/8" ID hose.

2990-158 Clamp Kit, 7 x 7 Bar

Key	Qty.	Part No.	Description
1	4	2502-376	1/2—13 x 10" Hex Hd. Capsc. Gr.5 ZP.
2	2	2990-315	Clamp Plate, 5 x 7 or 7 x 7 Bar
3	2	2990-360	Clamp Casting, Drilled
4	2	2503-379	5/8—11 x 1" Sq. Hd. Cuppoint Setsc.
5	4	2520-357	1/2—13 Lock Hex Nut ZP.
6	1	2515-690	5/8 OD Vinyl Tube, Cut 1-1/2" (Not Shown)

2990-161 Clamp Kit, 3 x 7 Bar

Key	Qty.	Part No.	Description
1	4	2502-373	1/2—13 x 6" Hex Hd. Capsc. Gr.5 ZP.
2	2	2990-315	Clamp Plate, 5 x 7, 7 x 7
3	2	2990-360	Clamp Casting, Drilled
4	2	2503-379	5/8—11 x 1" Sq. Hd. Cuppoint Setsc.
5	4	2520-357	1/2—13 Lock Hex Nut ZP.
6	1	2515-690	5/8 OD Vinyl Tube, Cut 1-1/2" (Not Shown)

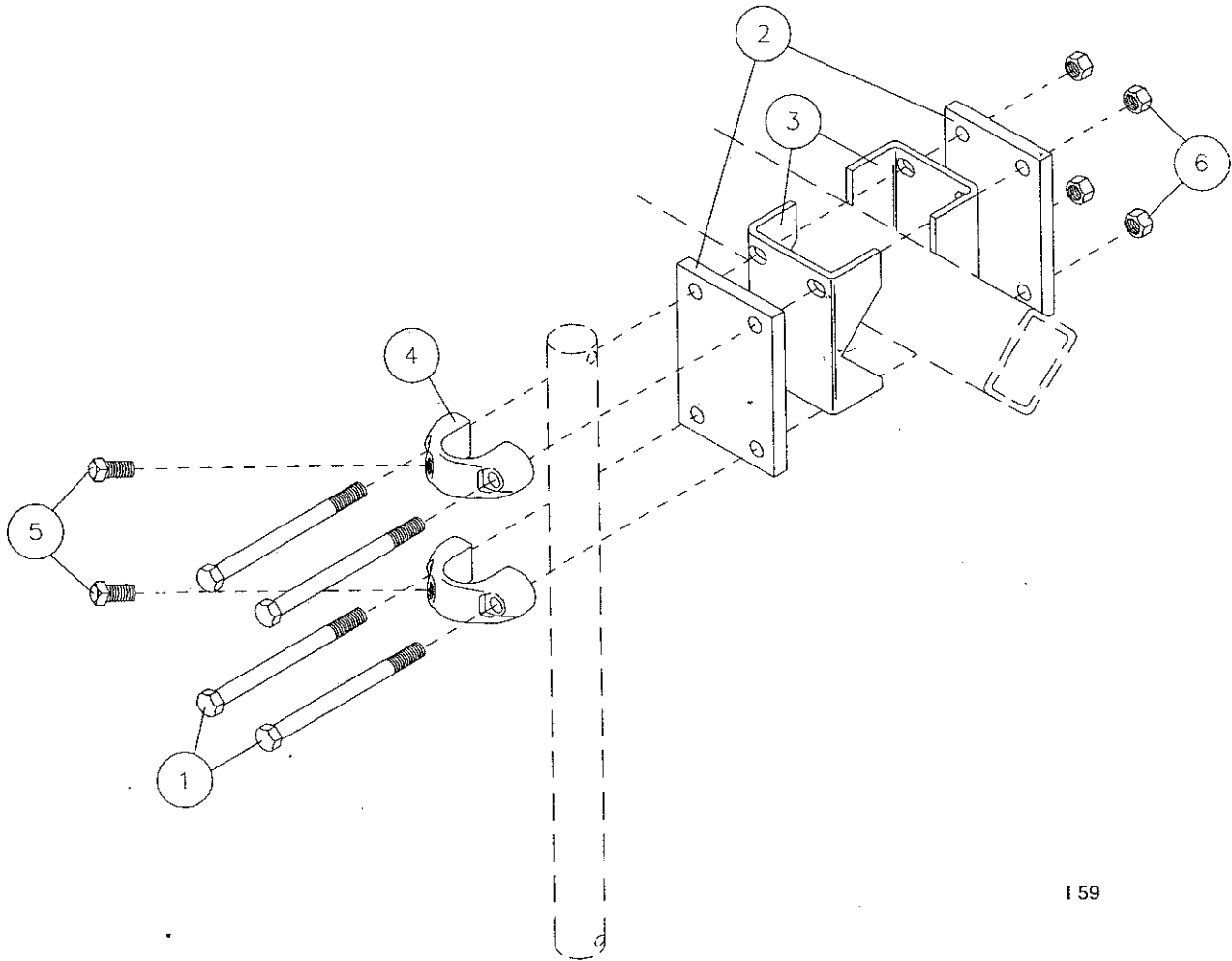
2990-163 Clamp Kit, 3 x 3 Bar

Key	Qty.	Part No.	Description
1	4	2502-373	1/2—13 x 6" Hex Hd. Capsc. Gr.5 ZP.
2	2	2990-339	Clamp Plate, 3" Sq. Bar
3	2	2990-360	Clamp Casting, Drilled
4	2	2503-379	5/8—11 x 1" Sq. Hd. Cuppoint Setsc.
5	4	2520-357	1/2—13 Lock Hex Nut ZP.
6	1	2515-690	5/8 OD Vinyl Tube, Cut 1-1/2" (Not Shown)

2990-171 Clamp Kit, 3 x 4 Bar

Key	Qty.	Part No.	Description
1	4	2502-373	1/2—13 x 6" Hex Hd. Capsc. Gr.5 ZP.
2	2	2990-314	Clamp Plate, 4" Sq. and 3" Diamond Bar
3	2	2990-314	Clamp Casting, Drilled
4	2	2503-379	5/8—11 x 1" Sq. Hd. Cuppoint Setsc.
5	4	2520-357	1/2—13 Lock Hex Nut ZP.

PARTS IDENTIFICATION



159

2990-159 Clamp Kit, 3" Diamond Bar

Key	Qty.	Part No.	Description
1	4	2502-369	1/2—13 x 8" Hex Hd. Capsc. Gr.5 ZP.
2	2	2990-314	Clamp Plate, 4" Sq. or 3" Diamond
3	2	2970-326	Adaptor, 3" Diamond Bar
4	2	2990-360	Clamp Casting, Drilled
5	2	2503-379	5/8—11 x 1" Sq. Hd. Cuppoint Setsc.
6	4	2520-352	1/2—13 Lock Hex Nut ZP.

2990-160 Clamp Kit, 3-1/2" Diamond Bar

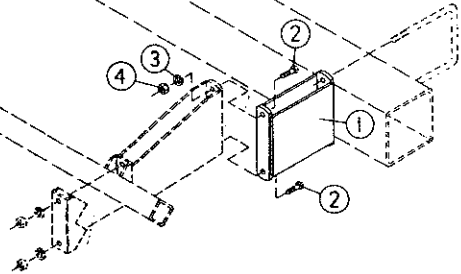
Key	Qty.	Part No.	Description
1	4	2502-374	1/2—13 x 9" Hex Hd. Capsc. Gr.5 ZP.
2	2	2990-316	Clamp Plate, 3-1/2" Diamond Bar
3	2	2970-327	Adaptor, 3-1/2" Diamond Bar
4	2	2990-360	Clamp Casting, Drilled
5	2	2503-379	5/8—11 x 1" Sq. Hd. Cuppoint Setsc.
6	4	2520-352	1/2—13 Lock Hex Nut ZP.

PARTS IDENTIFICATION

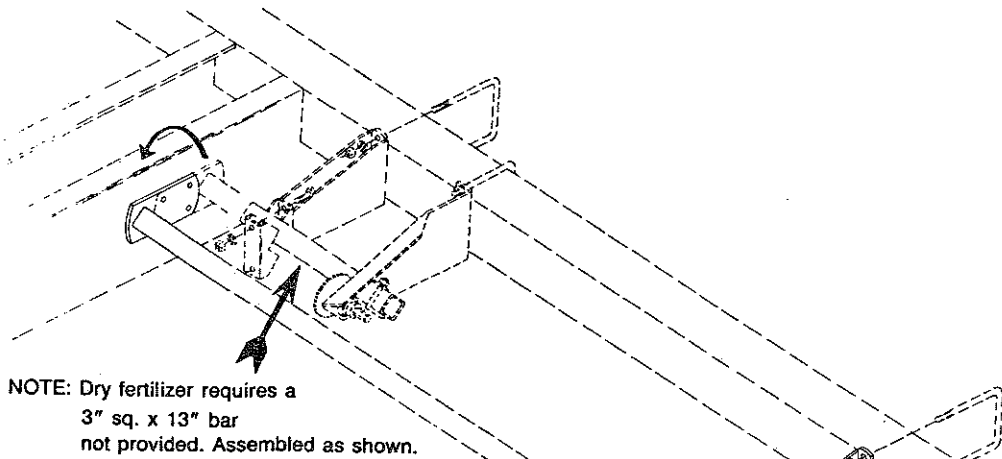
FOR WHITE 5100 SERIES LIQUID FERTILIZER

2970-162 10" Extension Bracket

Key	Qty.	Part No.	Description
1	1	2970-222	10" Extension Brkt. W.A.
2	2	2502-331	5/8—11 x 1-3/4" Hex Hd. Capsc. Gr.5 ZP.
3	2	2525-451	5/8 Med. Lockwasher Gr.5 ZP.
4	2	2520-452	5/8—11 Hex Nut ZP.

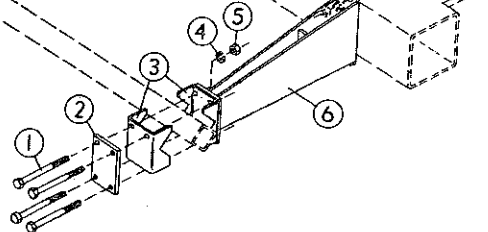


FOR WHITE 5100 SERIES LIQUID FERTILIZER



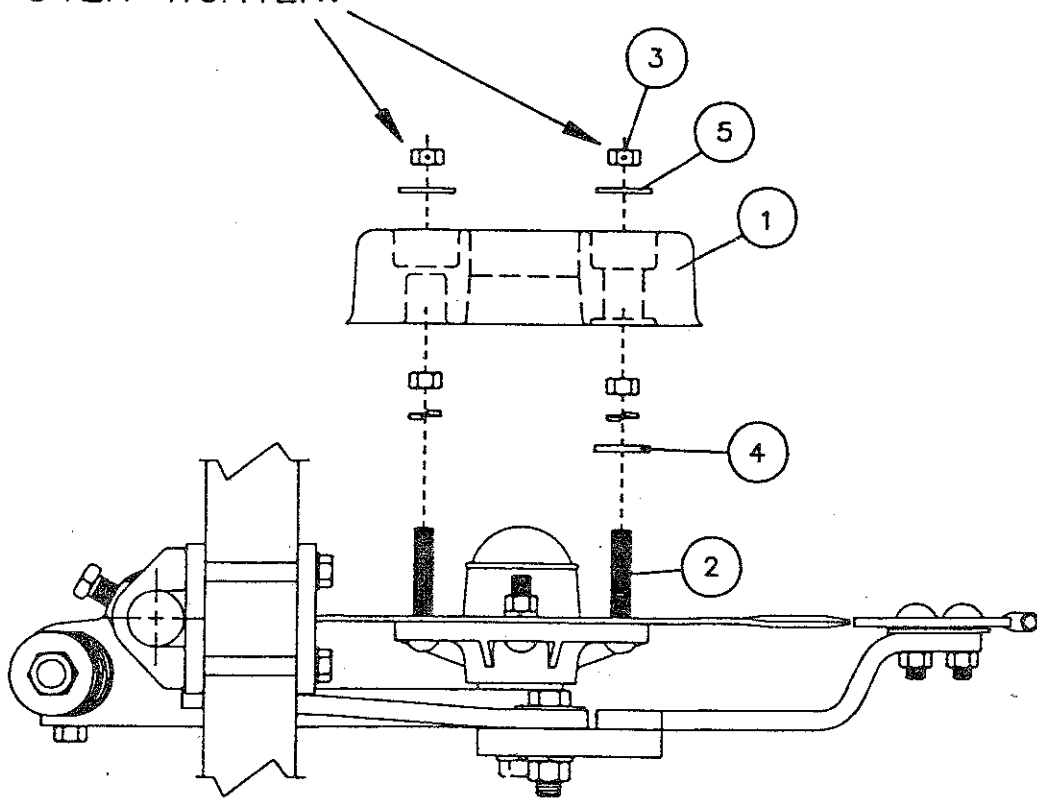
2970-163 Front Bar Mount Arm Assembly for Dry Fertilizer

Key	Qty.	Part No.	Description
1	4	2502-371	1/2—13 x 7" HHCS Gr.5 ZP.
2	1	2990-314	Clamp Plate, 4" Sq., 3" Diamond
3	2	2970-326	Adaptor, 3" Sq. Diamond Bar
4	4	2525-352	1/2 Med. Lockwasher ZP.
5	4	2520-352	1/2—13 Hex Nut ZP.
6	1	2970-225	Front Bar Mount Arm, 3 x 3 Diamond



PARTS IDENTIFICATION

DO NOT OVER TIGHTEN.



2975-120 Gauge Wheel Kit

Key	Qty.	Part No.	Description
1	1	2515-560	Gauge Wheel, 9 x 2-1/2" (See Below)
	1	2515-561	Gauge Wheel, 11" x 2-1/2" (See Below)
2	2	2505-330	1/2—13 x 3" Shaker Scrn. Bit. Gr.5 ZP.
3	2	2520-357	1/2—13 Lock Hex Nut ZP.
4	1	2527-330	1/2 ID x 1-1/2 OD x 7 Ga. M.B. ZP.
5	2	2527-340	1/2 ID x 1-1/2 OD x 10 Ga. M.B. ZP.

NOTE: 9" diameter gauge wheel for 4" fertilizer placement depth*
 11" diameter gauge wheel for 3" fertilizer placement depth*

*Fertilizer placement depths are approximate depending on soil conditions.

TROUBLE SHOOTING

<i>Problem</i>	<i>Cause</i>	<i>Remedy</i>
Setting coulter	Planter not set correctly	Ensure that <i>in operation</i> the planter frame is at correct height (20"-22") and level the toolbar (See opposite page)
Trash plugging	Excessive knife-blade clearance	Check and adjust knife blade clearance, see page 9 Install knife scraper no. 2970-133
	Knife not correctly aligned behind blade	Use shims to align knife behind the blade
Blade not penetrating	Insufficient coulter spring pressure	Tighten coulter spring locknut down 1" further
	Coulter incorrectly installed	Adjust height of coulter by sliding shank down
Spring not deflecting	Excessive spring pressure	Back off coulter spring locknut to 1/8" of thread exposed Order 2550-745 spring, for lighter spring pressure
Fertilizer too deep	Spring not deflecting	Back off coulter spring locknut to 1/8" of thread exposed
	Coulter incorrectly installed	Adjust height of coulter by sliding shank up
	Lack of depth control	Install gauge wheel kit part no. 2975-120
	Planter frame too low	Raise planter frame to correct height
Fertilizer too shallow	Blade not penetrating	Tighten coulter spring locknut down 1" further
	Coulter incorrectly installed	Adjust height of coulter by sliding shank down
	Incorrect depth control	Use alternative gauge wheel (2975-120 kit)
Fertilizer will not flow	Plugged fertilizer tubes	Check for plugged fertilizer tube openings on knife Check for plugged fertilizer delivery tubes on planter
Blade not rotating properly	Loose soil	Coulter works best in firmer soil conditions

PLANTER HEIGHT ADJUSTMENT

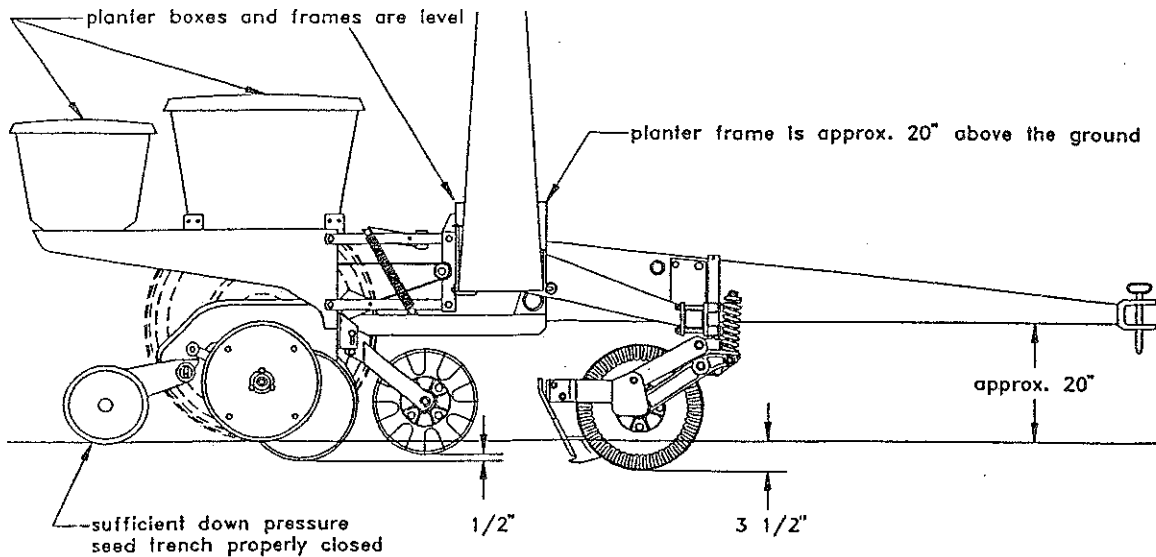


FIGURE A. (Correct)

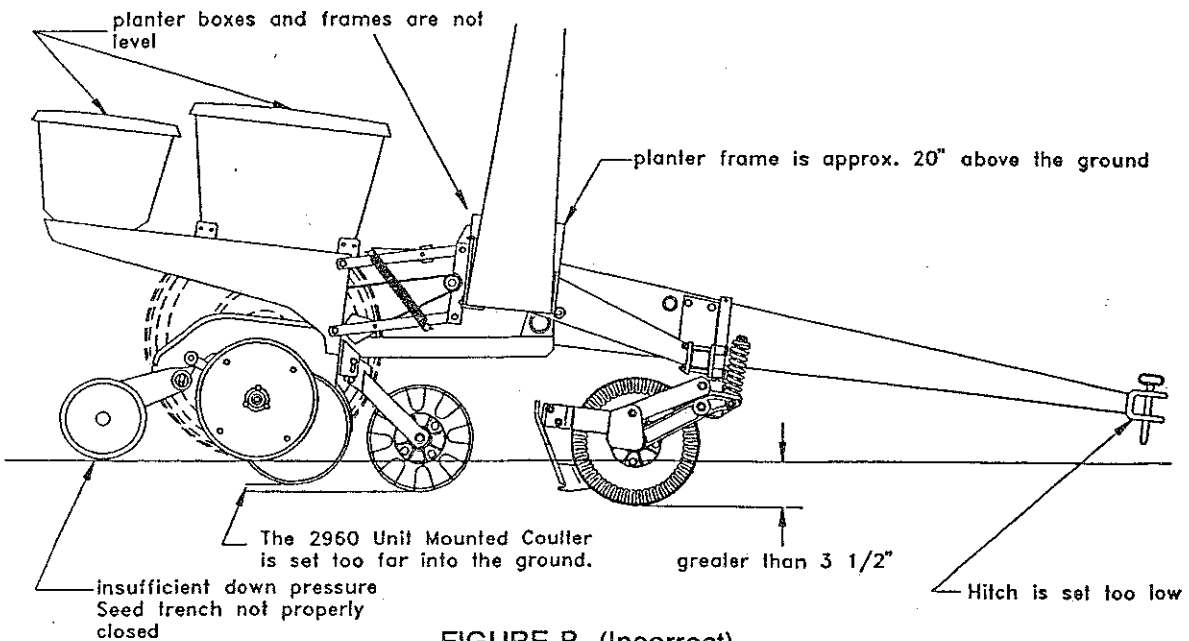


FIGURE B. (Incorrect)

Figure A. - The planter hitch and frame are both 20" off the ground. To ensure this, visually check to see that the planter boxes are level and that the planter unit parallel arms are also parallel with the ground. **When using planter attachments located in front of the planter unit, this setting is very important.**

Figure B. - The planter hitch is set too low while the planter frame remains at 20" off the ground! Notice from the illustration that the fertilizer coulters is running below desired depth.

NOTE - Both illustrations are strictly for reference only. They are intended to show that proper adjustment of the hitch height is critical. Consult your planter operator's manual for the proper height adjustment of the hitch.

Our name Is getting known

Just a few years ago, Yetter products were sold primarily to the Midwest only. Then we embarked on a program of expansion and moved into the East, the South, the West, and now north into Canada. We're even getting orders from as far away as Australia and Africa.

So, when you buy Yetter products . . . you're buying a name that's recognized. A name that's known and respected. A name that's become a part of American agriculture and has become synonymous with quality and satisfaction in the field of conservation tillage.

Thank you

YETTER MANUFACTURING CO.

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309/776-3222 (Fax)

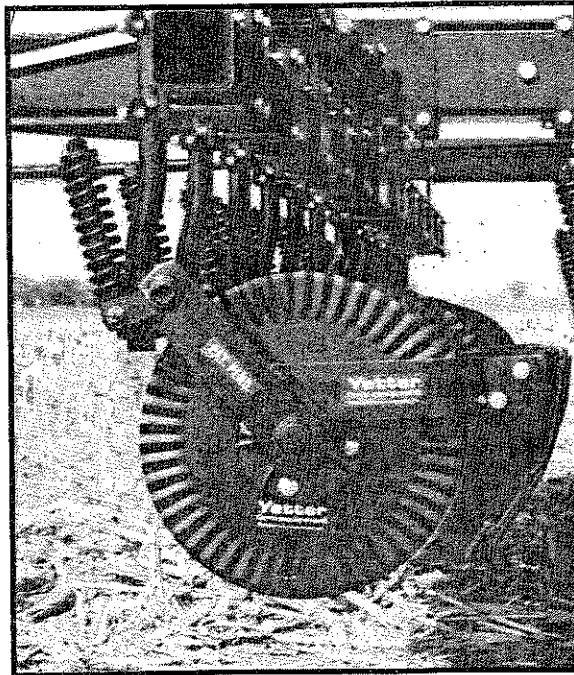


Yetter
... for land's sake

FERTILIZER COULTER

MODEL 2990

SET-UP & PARTS MANUAL



YETTER MANUFACTURING CO.
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Toll free 800/447-5777
309/776-3222 (Fax)

Yetter

FOREWORD

You've just joined an exclusive but rapidly growing club.


For our part, we want to welcome you to the group and thank you for buying a Yetter fertilizer coultter.

We hope your new Yetter fertilizer coultter will help you achieve both increased productivity and increased efficiency so that you may generate more profit.

This operator's manual has been designed into four major sections.

Foreword, Safety Precautions, Installation, and Operation.

Throughout the manual references may be made to left side and right side. These terms are used as viewed from the operator's seat facing the front of the tractor.

 This **SAFETY ALERT SYMBOL** indicates important safety messages in the manual. When you see this symbol, be alert to the possibility of **PERSONAL INJURY** and carefully read the message that follows.

The word **NOTE** is used to convey information that is out of context with the manual text. It contains special information such as specifications, techniques, reference information of a supplementary nature.

The word **IMPORTANT** is used in the text when immediate damage will occur to the machine due to improper technique or oper-


ation. Important will apply to the same information as specified by note only of an immediate and urgent nature.

It is the responsibility of the user to read the operator's manual and comply with the safe and correct operating procedure and to lubricate and maintain the product according to the maintenance schedule in the operator's manual.

The user is responsible for inspecting his machine and for having parts repaired or replaced when continued use of the product would cause damage or excessive wear to the other parts.

It is the user's responsibility to deliver his machine to the Yetter dealer who sold him the product for service or replacement of defective parts which are covered by the warranty policy.

IMPORTANT! When raising 3 pt. toolbars watch tractor tire clearance. **EXAMPLE:** In most cases 3 pt. hitch type planters require a cat. 2 or cat. 3 quickhitch coupler to offset toolbar away from tractor tires.

 If you are unable to understand or follow the instructions provided in this publication, consult your local Yetter dealer or contact:

YETTER MANUFACTURING CO.
309/776-4111
309/776-3222 (Fax)

WARRANTY POLICY

Yetter Manufacturing warrants all products manufactured and sold by it against defect in material. This warranty being expressly limited to replacement at the factory of such parts or products as shall appear to be defective after inspection. This warranty does not obligate the Company to bear cost of labor in replacement of parts. It is the policy of the company to make improvements without incurring obligations to add them to any unit already sold. No warranty is made or authorized to be made, other than herein set forth. This warranty is in effect for 1 year after purchase.

Dealer _____

Yetter Manufacturing warrants its own products only and cannot be responsible for damage to equipment on which mounted.

YETTER MODEL 2990 FERTILIZER COULTER

BASIC FERTILIZER COULTER BOX

2990-101 Coulter Assembly

CLAMPS

2990-154 Clamp Kit 2-1/2 Sq. Bar
2990-155 Clamp Kit 2 x 6 Bar
2990-156 Clamp Kit 4 x 4 Bar
2990-157 Clamp Kit 5 x 7 Bar
2990-158 Clamp Kit 7 x 7 Bar
2990-159 Clamp Kit 3" Diamond Bar
2990-160 Clamp Kit 3-1/2 Diamond Bar
2990-161 Clamp Kit 3 x 7 Bar
2990-162 Clamp Kit, 2-1/2" Sq. Bar, 1/2" Spacer
2990-163 Clamp Kit, 3" Sq. Bar
2990-171 Clamp Kit, 3 x 4 Bar

SHANKS

2990-310 Shank 12-5/8"
2990-318 Shank 16"
3010-303-BB Shank 22"
2990-328 Shank 26"
2990-350 Shank, 27-1/8"
3011-302-BB Shank 22" Long, 5" Offset
2990-208 Shank 12-5/8" Long, 3" Offset

FERTILIZER KNIVES

2975-116 Dry Fertilizer Knife
2975-220 Liquid Fertilizer Knife
2975-219 Suspension Fertilizer Knife

OPTIONAL EQUIPMENT

2970-133 Knife Scraper

SAFETY

A brief description of signal words that may be used in this manual:

CAUTION: Used as a general reminder of good safety practices or to direct attention to unsafe practices.

WARNING: Denotes a specific potential hazard.

DANGER: Denotes the most serious specific potential hazard.

SAFETY PRECAUTIONS

You can make your farm a safer place to live and work if you observe the safety precautions given. Study these precautions carefully and insist that they be followed by those working with you and for you.

Finally, remember this: an accident is usually caused by someone's carelessness, neglect or oversight.



Never clean, lubricate or adjust a machine that is in motion. Always lower or block the implement before performing service.

If machine must be serviced in the raised position, jack or block it up to prevent it from accidentally falling and injuring someone.

Do not allow riders on the tractor or implement.

Use speeds and caution dictated by the terrain being traversed. Do not operate on any slope steep enough to cause tipping or loss of control.

Be sure all personnel are clear of the immediate area before operating.

Read and understand the operator's manual and require all other persons who will operate the equipment to do the same.

Be familiar with all tractor and implement controls and be prepared to stop engine and implements quickly in an emergency.

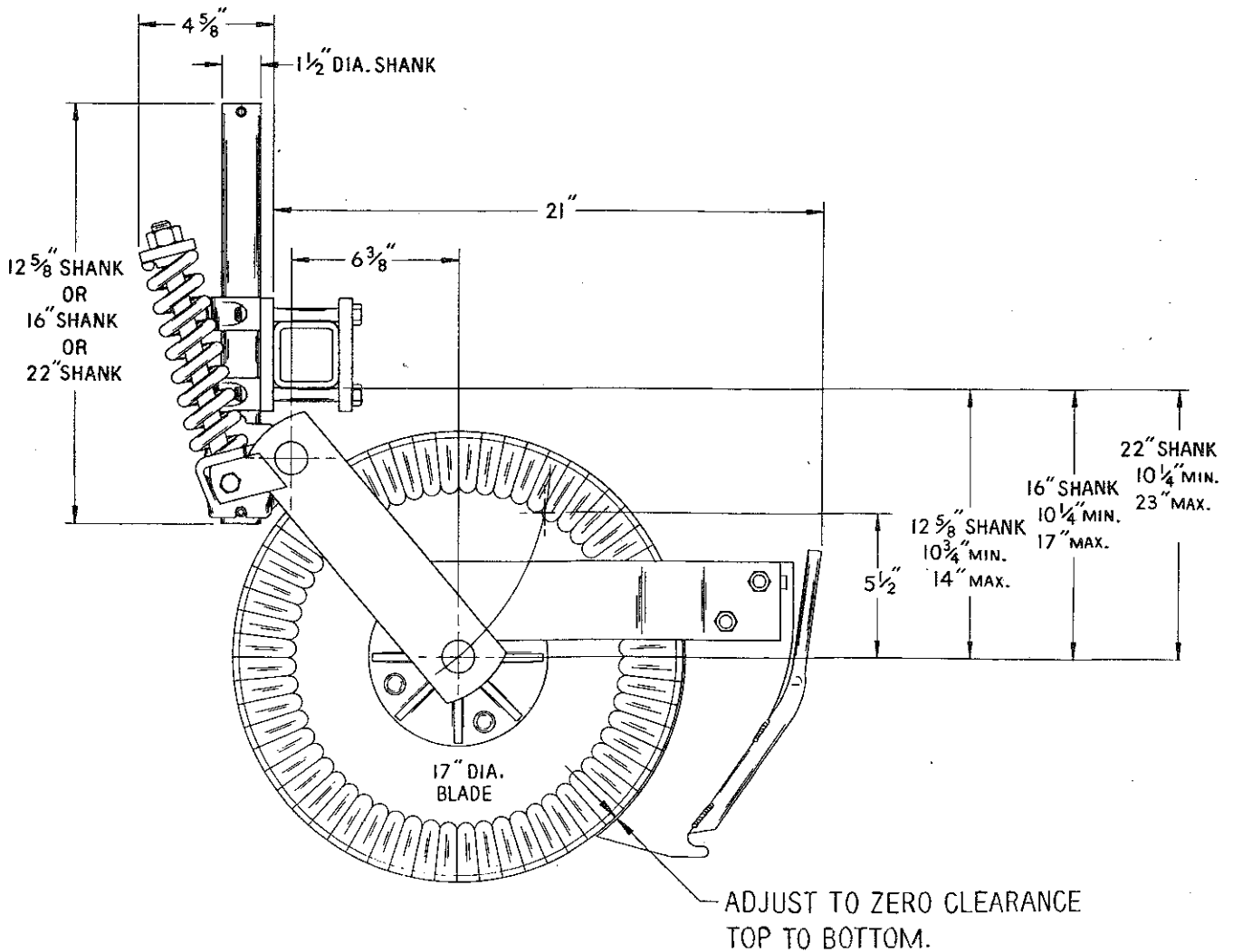
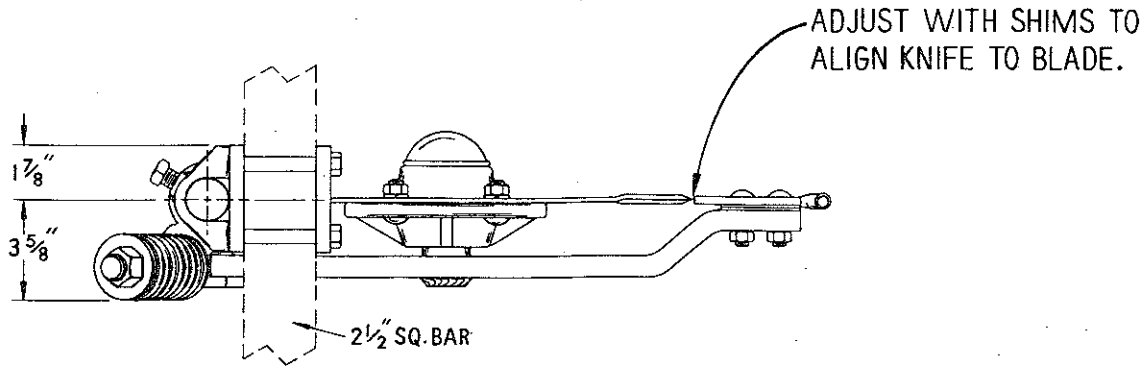


Consult your implement and tractor operator's manual for correct and safe operating practices.

Beware of towed implement width and allow safe clearance.

FAILURE TO HEED MAY RESULT IN PERSONAL INJURY OR DEATH.

YETTER MODEL 2990 LIQUID FERTILIZER COULTER



INSTALLATION

1. Assemble 3/8 x 2-1/2 roll pin into hole at end of 1-1/2 dia. shank, leaving approximately equal amount protruding out each side.
2. Insert lock collar into pivot casting and slide shank up through casting and lock collar. If you wish to lock coulters from pivoting, slide roll pin into slots in casting. If you wish to let coulters pivot, do not align roll pin with casting slots, but slide shank up till roll pin contacts casting surface. Install and tighten 5/8 x 1 setscrew in lock collar to 100 ft./lbs. torque maximum.
3. Mount 17" coulters blade loosely to hub using (4) 1/2 x 1-1/2 carriage bolts, lockwashers, and nuts.
4. Mount fertilizer knife to rear support arm using (2) 1/2 x 2 Gr.5 whizlock bolts, and whizlock nuts. Place shims between knife and support arm as required to align knife point with blade.
5. Center blade on hub by rotating blade and watching clearance between knife and blade. Slide blade on hub as required until clearance varies no more than 1/8" when blade is rotated one complete revolution. Tighten (4) 1/2" locknuts. If blade wobble is excessive, check for burrs on hub mounting surface and remove if necessary.
6. Adjust knife clearance to blade **as close as possible**. The high point of the blade should **just** clear the knife as blade is rotated. Be sure blade rotates freely then tighten (2) 1/2" nuts. Re-check clearance by rotating blade one full revolution after all bolts are tight.
7. Assemble clamp components loosely to planter front bar as shown in parts view of appropriate clamp. The clamp setscrew must mount away from spring, see page 11.
8. Position coulters clamps either toward the inside or outside of the planter openers on each side of the planter to equalize draft. Tighten (4) 1/2" bolts in clamps.
9. Install coulters on planter by inserting shank up through clamps and tightening 5/8 x 1 setscrews.
10. Install 5/16 x 2-1/2 cotter pins in all vertical 1-1/2 dia. shanks. This cotter pin prevents loss of coulters should the clamp setscrews work loose. Cotter pin can be installed between clamp castings or on top, above top casting depending on shank.
11. Set coulters depth by loosening setscrews in clamp castings. For John Deere 7000 front fold planters there may not be enough up adjustment to operate coulters at proper depth, (not more than hub deep). Not all toolbars on John Deere planters operate at the same height. If necessary, cut off top of 1-1/2 dia. shank to allow proper adjustment.
12. On John Deere 7000 front fold planters there are (2) hoses that may interfere with coulters operation. Loosen hydraulic fittings and swivel these hoses up out of the way to provide clearance when coulters flexes up.

13. If you have elected to let coulter swivel, set lock collar to allow swivel in one or both directions as required.

If you have elected to hold coulter rigid, set coulter straight with the direction of travel.

14. Set front spring tension by adjusting 3/4" locknuts until 3/4" of threads are exposed above the nut. This should provide adequate down-pressure for most conditions. If additional pressure is required the nut may be tightened down further. NOTE: This will reduce vertical movement of coulter.
15. Grease 2 fittings on each coulter before operation and weekly thereafter. The hub bearings should be greased only a few times each season.
16. NEVER mount coulters under planter drive shaft to allow coulter blades to contact shaft when obstacle is struck. Coulters must be mounted so blade can always flex up and clear drive shaft.

NOTE: Dry fertilizer must be free of chunks greater than 1/4" in size to prevent plugging. Yetter recommends using screened fertilizer or running fertilizer through screen when hoppers are filled. Clean hoppers thoroughly at the beginning of season to prevent plugging problems.

The rubber dry fertilizer tube may appear to be 'stretched' when the planter is in the transport position. This does not affect operation of the planter and should not be detrimental to the fertilizer tube.

OPERATION

GENERAL

Yetter Model 2990 fertilizer coulters are designed to apply fertilizer 3" to 5" deep. See your fertilizer dealer for recommended depth and distance away from row for your particular fertilizer. A popular placement setting is 2" below and 2" away from the seed. High deposit rates require the fertilizer to be placed farther away from the row to avoid crop "burn."

Yetter Model 2990 fertilizer coulter can be set up to swivel or not swivel as required. By not allowing the coulter to swivel, the distance between seed and fertilizer varies less when planting on contour.

When mounting Model 2990 coulters on 3-point or 2-point hitch planters, the coulters should be set up to swivel, particularly if a 4-wheel drive tractor is used. This reduces the side load on the coulter during operation.

For proper operation, the planter frame must operate level. Many planters have been found to operate tongue low. Adjust planter tongue or turn over tractor drawbar to raise the planter tongue for maximum fertilizer placement depth.

In hard no-till conditions the desired operating depth may not be possible. Tighten spring nut to maintain depth if spring is flexing rather than lower coulter to obtain maximum depth.

Planter weight may limit operating depth in hard conditions, particularly with mounted or semi-mounted planters. Be sure planter has enough weight to keep drive wheels on the ground during operation or plant population can be drastically affected.

OPERATION

1. Set coulter blades to run vertical to the ground. Operating depth and blade wear can be affected if coulter is mounted crooked. If coulters are set-up to not swivel be sure they run straight with the direction of travel.

2. After a few hours use, check all bolts and setscrews for tightness.

3. After a few days use, check coulter hubs for loose bearings. There should be no end play in the hub bearings to allow it to wobble. If necessary, remove hub cap and cotter pin, adjust slotted nut to remove wobble, re-insert cotter pin and replace hub cap.

4. **KNIFE WEAR** can be significant, depending on ground conditions. The knife material is abrasion resisting steel plate, heat treated to approximately 42 Rockwell "C" hardness. Hard surface weld is applied to the knife in the areas of high wear to help extend life.

5. **KNIFE ADJUSTMENT** can be critical. Adjust knife-blade clearance regularly, see page 9.

An optional knife scraper Part 2970-133 is available to reduce the frequency of adjustment on the fertilizer coulter knife. In addition this allows better operation in tough conditions such as freshly disced soils with abundant trash in the top four inches of loose soil (see below).

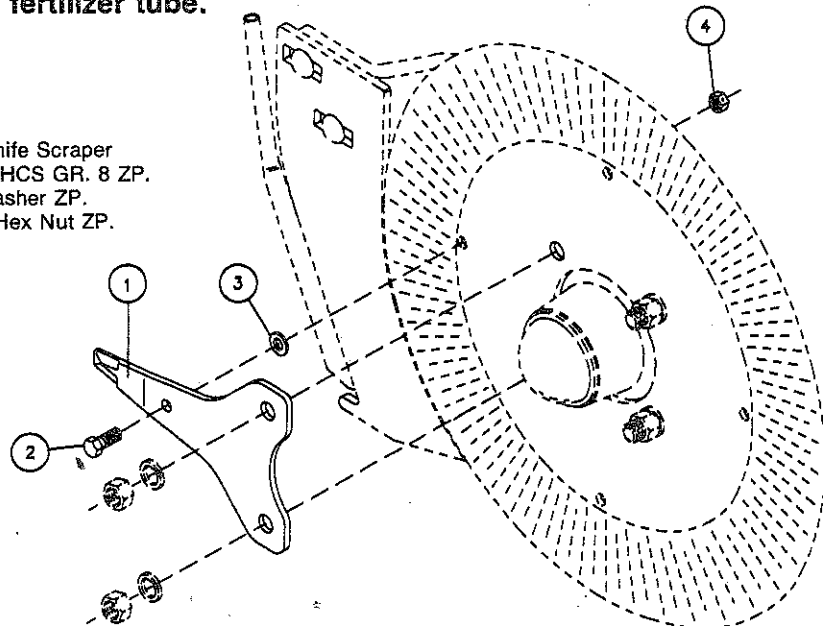
6. **BLADE WEAR** can affect operation in loose trash conditions. If knife adjustment does not stop plugging problems, it may be necessary to replace blade.

7. **Dry fertilizer must be free of chunks greater than 1/4" in size to prevent plugging. Yetter recommends using screened fertilizer or running fertilizer through screen when hoppers are filled. Clean hoppers thoroughly at the beginning of season to prevent plugging problems.**

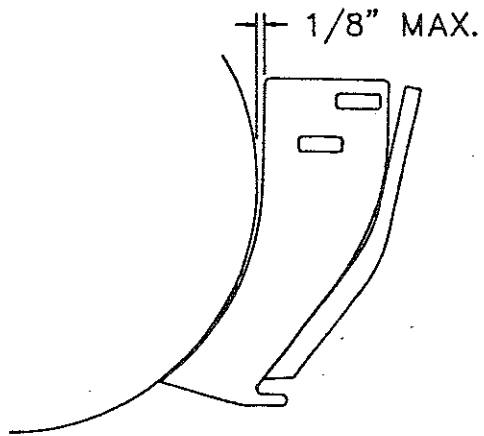
NOTE: The rubber dry fertilizer tube may appear to be 'stretched' when the planter is in the transport position. This does not affect operation of the planter and should not be detrimental to the fertilizer tube.

2970-133 Knife Scraper

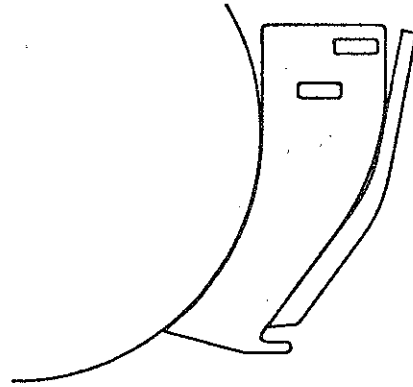
Key	Qty.	Part No.	Description
1	1	2970-353	Double Edge Knife Scraper
2	1	2502-199	5/16" x 3/4" HHCS GR. 8 ZP.
3	1	2526-201	5/16 Std. Flatwasher ZP.
4	1	2520-205	5/16-18 Lock Hex Nut ZP.



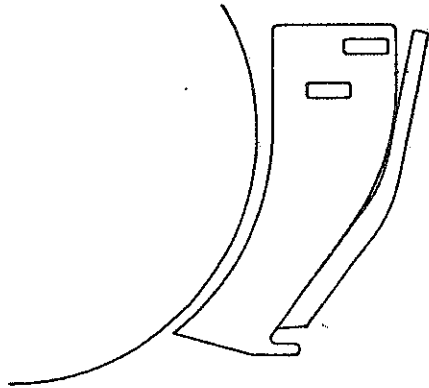
KNIFE ADJUSTMENT



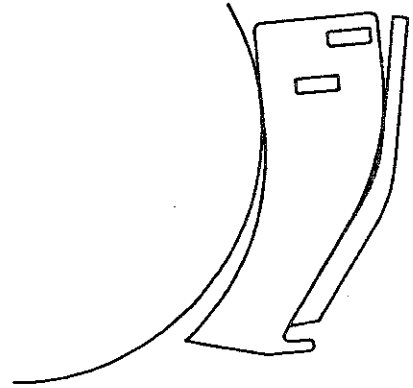
CORRECT



CORRECT



INCORRECT



INCORRECT

The adjustment of knife clearance to the blade is critical to trouble free operation of the fertilizer couler.

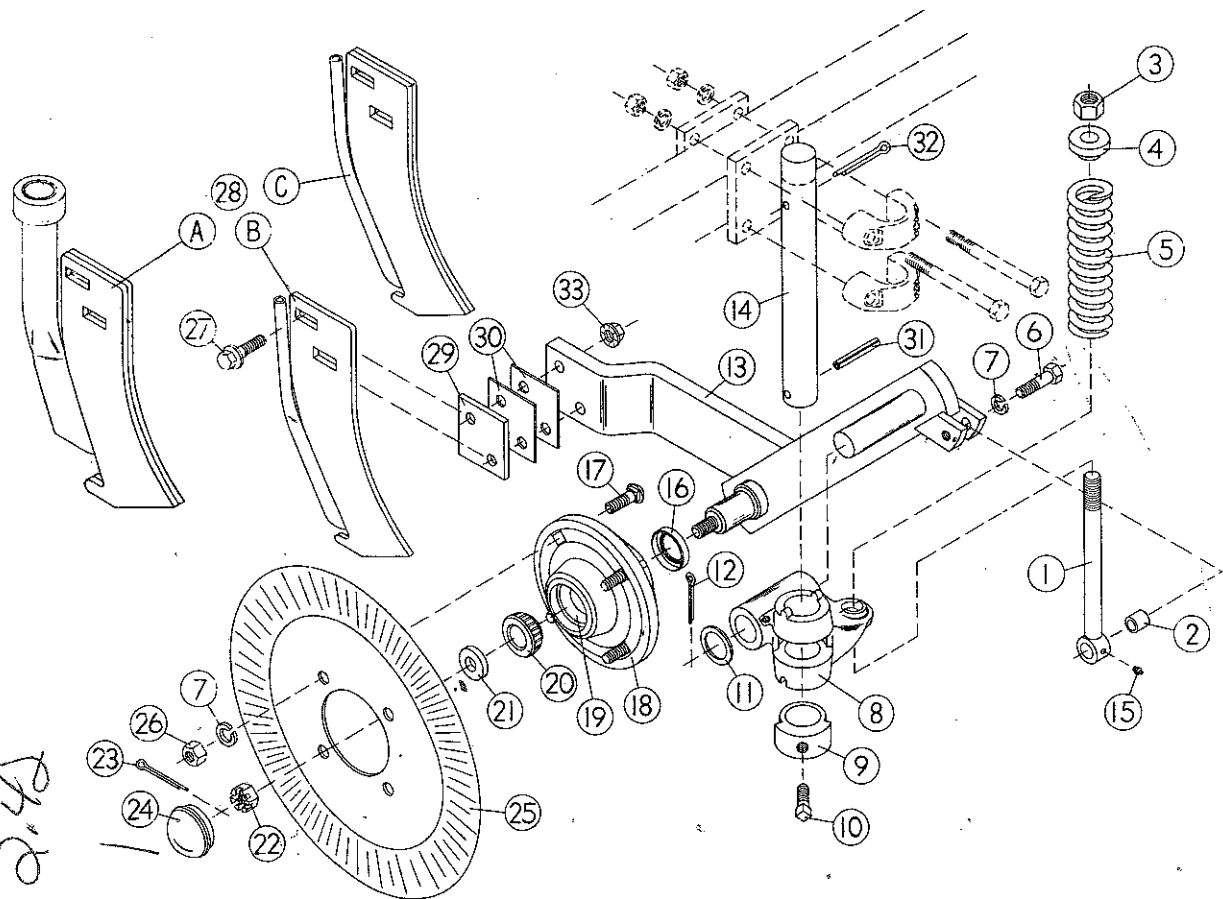
1. The disc blade must run concentric. Adjust by loosening 4 hub nuts and centering the blade.
2. Set knife to rub slightly on blade, especially at bottom of knife. See illustrations above. Tighten whizlock nuts securely.

PARTS IDENTIFICATION

Key	Qty.	Part No.	Description
1	1	2990-103	Pressure Rod Assembly (incl. no. 15)
2	1	2990-309	Pressure Rod Bushing
3	1	2520-515	3/4—10 Lock Hex Nut ZP.
4	1	2555-112	2910 Spring Bushing Casting
5	1	2550-708	7/16 Wire x 2-1/8 O.D. x 1-1/4 I.D. Comp Spring
6	1	2502-317	1/2—13 x 1-3/4" Hex Hd. Capsc. Gr.5 ZP.
7	5	2525-352	1/2 Med. Lockwasher ZP.
8	1	2990-311	Coulter Pivot Casting
9	1	2910-301- BB	Locking Collar, Black
10	1	2503-379	5/8—11 x 1" Sq. Hd. Cuppoint Setscr. ZP.
11	1	2526-561	1-17/64 I.D. x 1-7/8 O.D. x 14 Ga. Mach. Bush.
12	1	2531-151	1/4 x 1-3/4 Cotter Pin, Black
13	1	2990-200	Arm W.A.
14	1	2990-310	12-5/8" Shank (Shown)
	1	2990-318	16" Shank
	1	3010-303-BB	Straight Coulter Shank, 22", Black
15	3	2533-110	1/4—28 Straight Self-Tap Grease Zerk
16	1	2550-115	Seal
17	4	2505-339	1/2—13 x 1-1/2" Car. Bolt. Gr.5 ZP.
18	1	2900-102	Hub Sub-Assembly
19	2	2550-029	Cup (Pre-Assem. w/No. 18)
20	2	2550-027	Cone <i>Bebrum</i>
21	1	2526-449	5/8 Flatwasher, 11/16 I.D. x 1-3/4 O.D. x 1/4 ± .010
22	1	2520-461	5/8—18 Slotted Hex Nut, ZP.
23	1	2531-102	1/8 x 1-1/4" Cotter Pin, Black
24	1	2570-375	Hub Cap
25	1	2571-158	17" Ripple Coulter, .157 Ga.
26	4	2520-352	1/2—13 Hex Nut ZP.
27	2	2502-345	1/2—13 x 2" Whizlock HHCS Gr.5 ZP.
28A	1	2975-116	Dry Fertilizer Knife W.A.
28B	1	2975-220	Liquid Fertilizer Knife W.A.
28C	1	2975-219	Suspension Knife W.A.
29	1	2970-319	Knife Shim, 1/8
30	3	2970-320	Knife Whim, 16 Ga.
31	1	2530-208	3/8 x 2-1/2" Roll Pin ZP.
32	1	2531-161	5/16 x 2-1/2" Cotter Pin ZP.
33	2	2520-361	1/2—13 Flange Whizlock Hex Nut ZP.

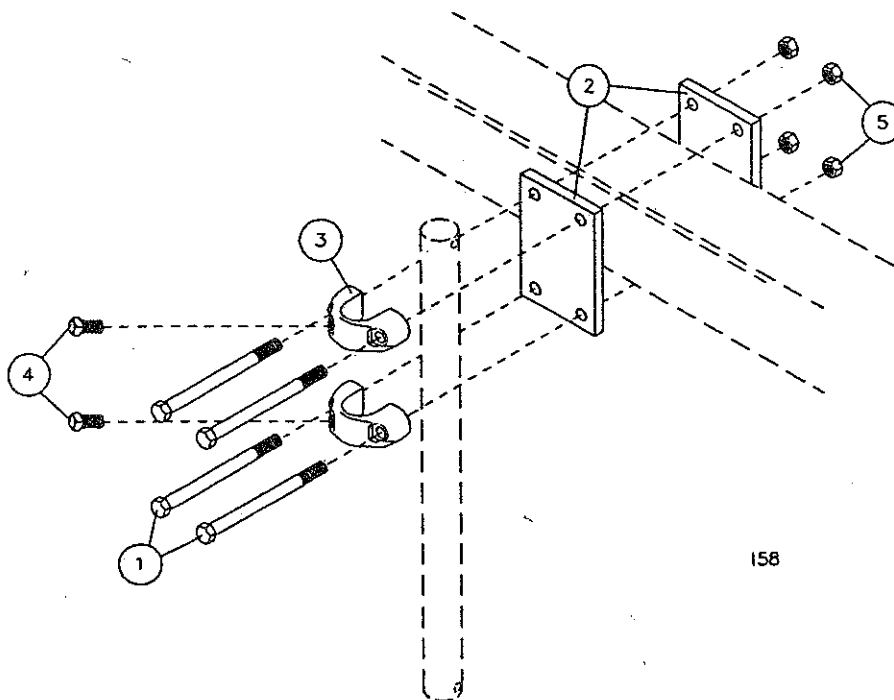
*2550-708
h.d. Spring*

*2990-220-Old #
2502-317
2990-309
2990-103
2570-158*



2570

PARTS IDENTIFICATION



158

2990-154 Clamp Kit, 2-1/2 Sq. Bar

Key	Qty.	Part No.	Description
1	4	2502-368	1/2—13 x 5-1/2" Hex Hd. Capsc. Gr.5 ZP.
2	2	2990-313	Clamp Plate, 2-1/2 Sq. Bars
3	2	2990-360	Clamp Casting, Drilled
4	2	2503-379	5/8—11 x 1" Sq. Hd. Cuppoint Setsc.
5	4	2520-357	1/2—13 Hex Lock Nut ZP.

2990-155 Clamp Kit, 2 x 6 Bar

Key	Qty.	Part No.	Description
1	4	2502-362	1/2—13 x 6" Hex Hd. Capsc. Gr.5 ZP.
2	2	2990-322	Clamp Plate, 2 x 6 Bar
2	2	2990-360	Clamp Casting, Drilled
2	2	2503-379	5/8—11 x 1" Sq. Hd. Cuppoint Setsc.
4	4	2520-357	1/2—13 Hex Lock Nut ZP.

2990-156 Clamp Kit, 4 x 4 Bar

Key	Qty.	Part No.	Description
1	4	2502-371	1/2—13 x 7" Hex Hd. Capsc. Gr.5 ZP.
2	2	2990-314	Clamp Plate, 4" Sq. and 3" Diamond Bar
2	2	2990-360	Clamp Casting, Drilled
2	2	2503-379	5/8—11 x 1" Sq. Hd. Cuppoint Setsc.
4	4	2520-357	1/2—13 Hex Lock Nut ZP.

2990-157 Clamp Kit, 5 x 7 Bar

Key	Qty.	Part No.	Description
1	4	2502-369	1/2—13 x 8" Hex Hd. Capsc. Gr.5 ZP.
2	2	2990-315	Clamp Plate, 5 x 7 or 7 x 7 Bar
2	2	2990-360	Clamp Casting, Drilled
2	2	2503-379	5/8—11 x 1" Sq. Hd. Cuppoint Setsc.
4	4	2520-357	1/2—13 Hex Lock Nut ZP.

NOTE: The 5/8" OD vinyl tube provided in 2990-158, 2990-161, and 2990-163 is required on implements using a 5/8" ID hose.

2990-158 Clamp Kit, 7 x 7 Bar

Key	Qty.	Part No.	Description
1	4	2502-376	1/2—13 x 10" Hex Hd. Capsc. Gr.5 ZP.
2	2	2990-315	Clamp Plate, 5 x 7 or 7 x 7 Bar
2	2	2990-360	Clamp Casting, Drilled
2	2	2503-379	5/8—11 x 1" Sq. Hd. Cuppoint Setsc.
4	4	2520-357	1/2—13 Hex Lock Nut ZP.
1	1	2515-690	5/8 OD Vinyl Tube, Cut 1-1/2" (Not Shown)

2990-161 Clamp Kit, 3 x 7 Bar

Key	Qty.	Part No.	Description
1	4	2502-373	1/2—13 x 6" Hex Hd. Capsc. Gr.5 ZP.
2	2	2990-315	Clamp Plate, 5 x 7, 7 x 7
2	2	2990-360	Clamp Casting, Drilled
2	2	2503-379	5/8—11 x 1" Sq. Hd. Cuppoint Setsc.
4	4	2520-357	1/2—13 Hex Lock Nut ZP.
1	1	2515-690	5/8 OD Vinyl Tube, Cut 1-1/2" (Not Shown)

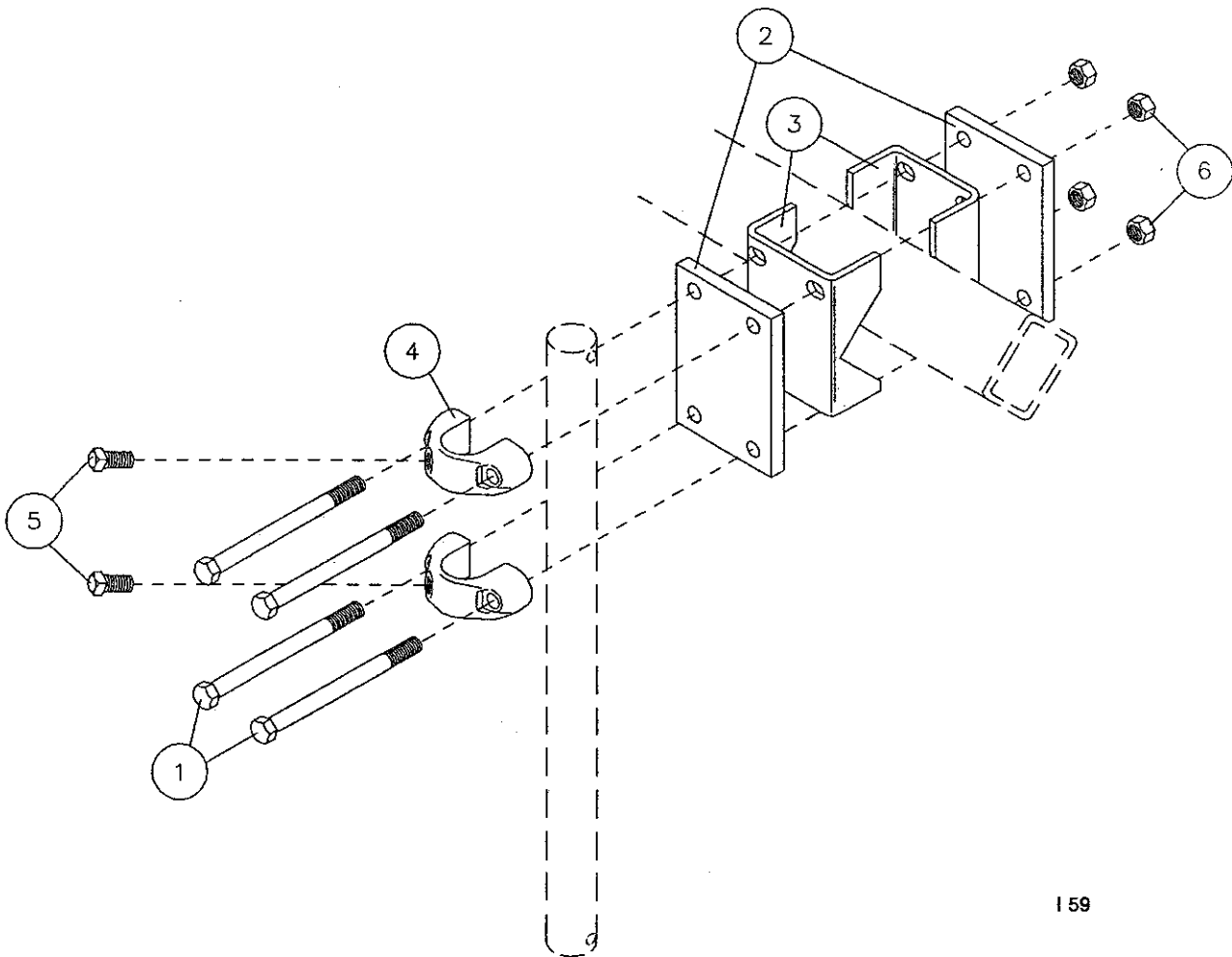
2990-163 Clamp Kit, 3 x 3 Bar

Key	Qty.	Part No.	Description
1	4	2502-373	1/2—13 x 6" Hex Hd. Capsc. Gr.5 ZP.
2	2	2990-339	Clamp Plate, 3" Sq. Bar
2	2	2990-360	Clamp Casting, Drilled
2	2	2503-379	5/8—11 x 1" Sq. Hd. Cuppoint Setsc.
4	4	2520-357	1/2—13 Hex Lock Nut ZP.
1	1	2515-690	5/8 OD Vinyl Tube, Cut 1-1/2" (Not Shown)

2990-171 Clamp Kit, 3 x 4 Bar

Key	Qty.	Part No.	Description
1	4	2502-373	1/2—13 x 6" Hex Hd. Capsc. Gr.5 ZP.
2	2	2990-314	Clamp Plate, 4" Sq. and 3" Diamond Bar
2	2	2990-360	Clamp Casting, Drilled
2	2	2503-379	5/8—11 x 1" Sq. Hd. Cuppoint Setsc.
4	4	2520-357	1/2—13 Hex Lock Nut ZP.

PARTS IDENTIFICATION



159

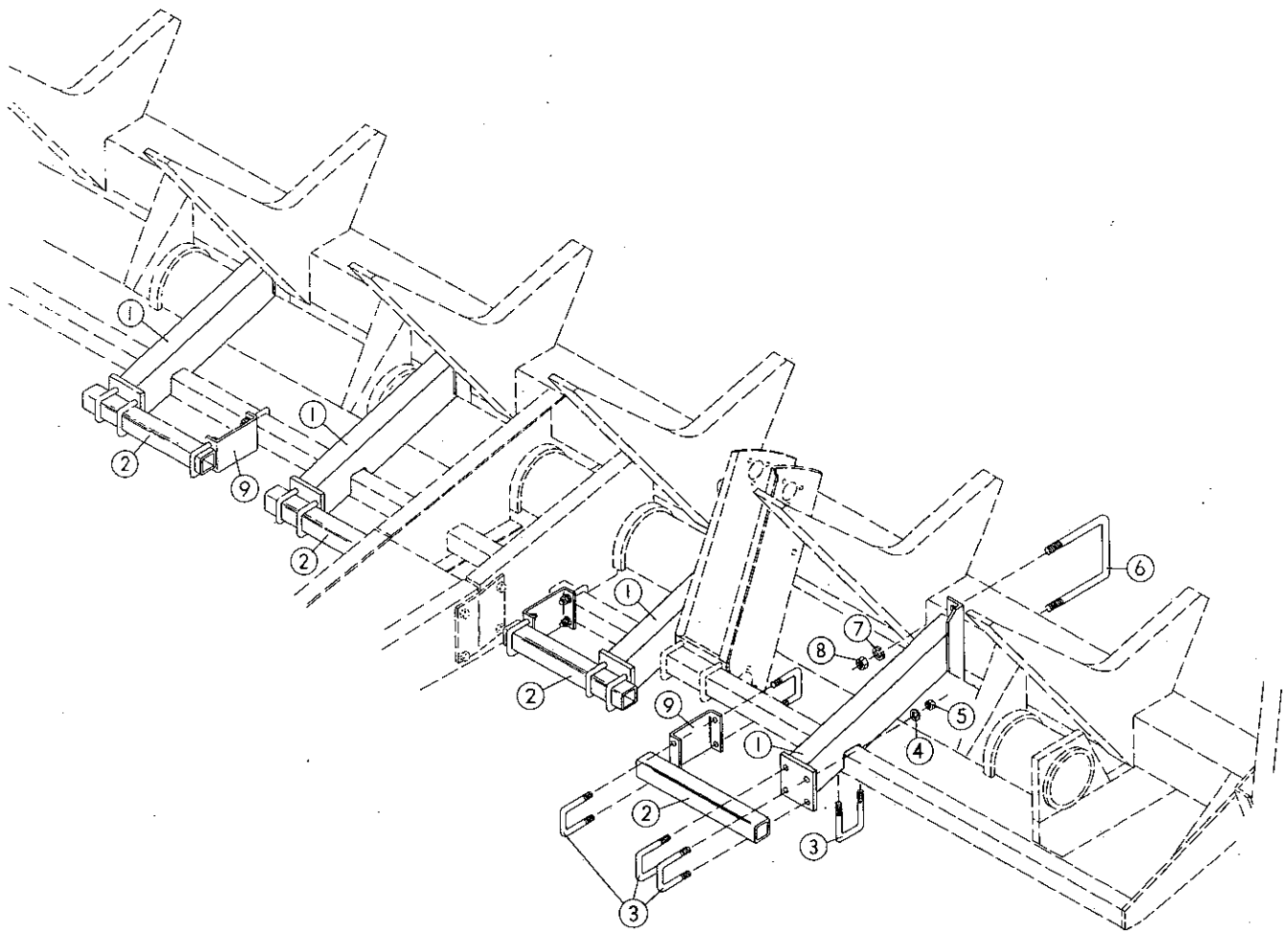
2990-159 Clamp Kit, 3" Diamond Bar

Key	Qty.	Part No.	Description
1	4	2502-369	1/2—13 x 8" Hex Hd. Capsc. Gr.5 ZP.
2	2	2990-314	Clamp Plate, 4" Sq. or 3" Diamond
3	2	2970-326	Adaptor, 3" Diamond Bar
4	2	2990-360	Clamp Casting, Drilled
5	2	2503-379	5/8—11 x 1" Sq. Hd. Cuppoint Setcr.
6	4	2520-357	1/2—13 Hex Lock Nut ZP.

2990-160 Clamp Kit, 3-1/2" Diamond Bar

Key	Qty.	Part No.	Description
1	4	2502-374	1/2—13 x 9" Hex Hd. Capsc. Gr.5 ZP.
2	2	2990-316	Clamp Plate, 3-1/2" Diamond Bar
3	2	2970-327	Adaptor, 3-1/2" Diamond Bar
4	2	2990-360	Clamp Casting, Drilled
5	2	2503-379	5/8—11 x 1" Sq. Hd. Cuppoint Setscr.
6	4	2520-357	1/2—13 Hex Lock Nut Zp.

PARTS IDENTIFICATION



2970-164 Extension Bar Bracket, 10-3/4" (7 x 7 Bar)
2970-165 Extension Bar Bracket, 10-3/4" (5 x 7 Bar)

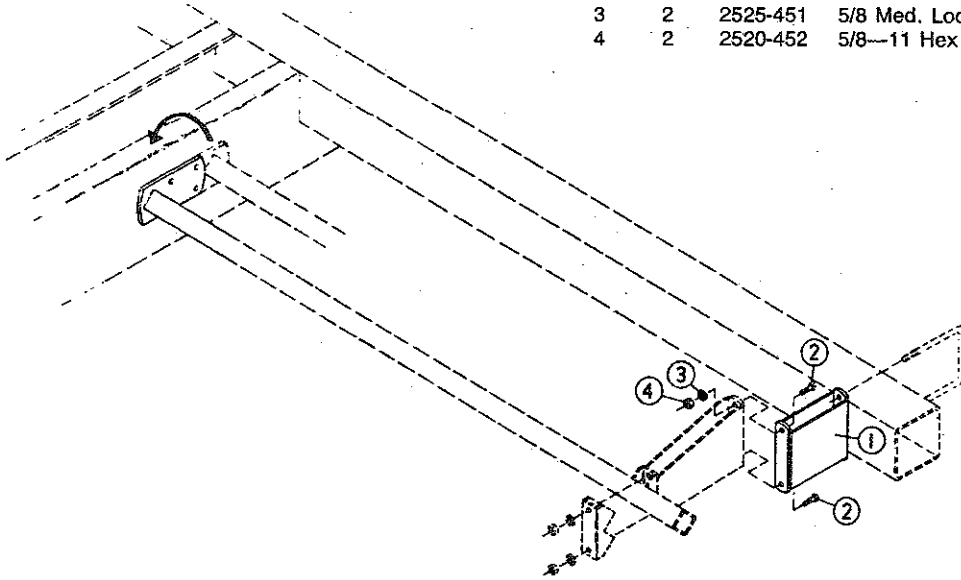
Key	Qty.	Part No.	Description
1	1	2970-229	Extension Bar Brkt., W.A., 10-3/3"
2	1	2970-368	Extension Bar, 2-1/2" Sq. x 28"
3	5	2570-568	1/2 x 2-1/2 x 3-1/2 U-Bolt ZP.
4	6	2525-352	1/2 Med. Lockwasher ZP.
5	6	2520-352	1/2—13 Hex Nut ZP.
6	1	2570-477	3/4 x 7 x U-Bolt ZP. (5 x 7 Bar)
	1	2570-478	3/4 x 7 x 9 U-Bolt ZP. (7 x 7 Bar)
7	2	2525-501	3/4 Med. Lockwasher ZP.
8	2	2520-504	3/4—10 Hex Nut ZP.
9	1	2970-367	Extension Bar Brace, 8-1/4"

PARTS IDENTIFICATION

FOR WHITE 5100 SERIES LIQUID FERTILIZER

2970-162 10" Extension Bracket

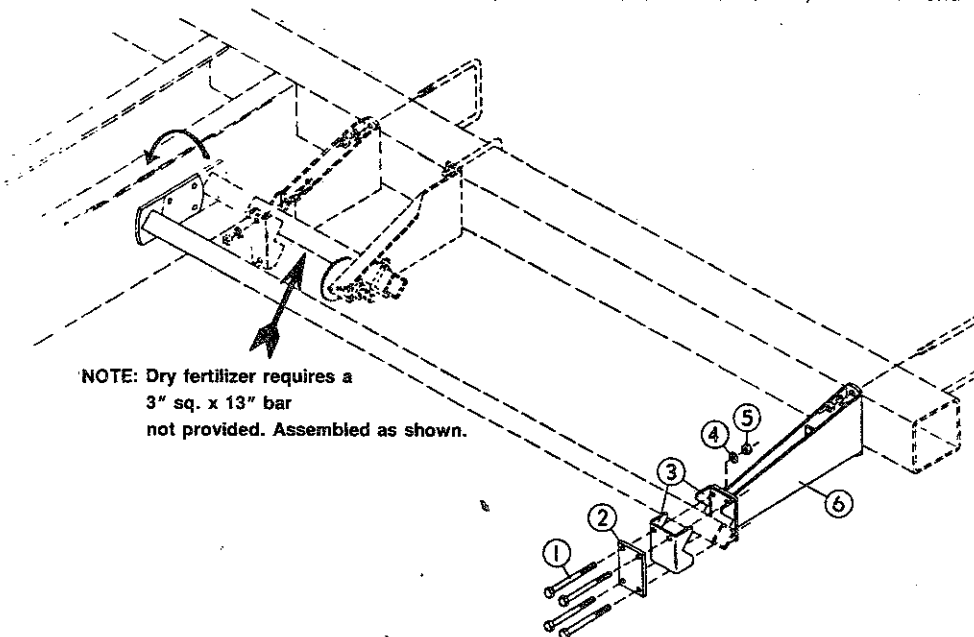
Key	Qty.	Part No.	Description
1	1	2970-222	10" Extension Brkt. W.A.
2	2	2502-331	5/8—11 x 1-3/4" Hex Hd. Capsc. Gr.5 ZP.
3	2	2525-451	5/8 Med. Lockwasher Gr.5 ZP.
4	2	2520-452	5/8—11 Hex Nut ZP.



FOR WHITE 5100 SERIES DRY FERTILIZER

2970-163 Front Bar Mount Arm Assembly for Dry Fertilizer

Key	Qty.	Part No.	Description
1	4	2502-371	1/2—13 x 7" HHCS Gr.5 ZP.
2	1	2990-314	Clamp Plate, 4" Sq., 3" Diamond
3	2	2970-326	Adaptor, 3" Sq. Diamond Bar
4	4	2525-352	1/2 Med. Lockwasher ZP.
5	4	2520-352	1/2—13 Hex Nut ZP.
6	1	2970-225	Front Bar Mount Arm, 3 x 3 Diamond



NOTE: Dry fertilizer requires a 3" sq. x 13" bar not provided. Assembled as shown.

TROUBLESHOOTING

<i>Problem</i>	<i>Cause</i>	<i>Remedy</i>
Setting Coulter	Planter not set correctly	Ensure that <i>in operation</i> the planter frame is at correct height (20"-22") and level the toolbar.
Trash Plugging	Excessive knife-blade clearance	Check and adjust knife blade clearance, see page 9 Install knife scraper no. 2970-133
	Knife not correctly aligned behind blade	Use shims to align knife behind the blade
Blade Not Penetrating	Insufficient coulter spring pressure	Tighten coulter spring locknut down 1" further
	Coulter incorrectly installed	Adjust height of coulter by sliding shank down
Spring Not Deflecting	Excessive spring pressure	Back off coulter spring locknut to 1/8" of thread exposed
Fertilizer Too Deep	Spring not deflecting	Back off coulter spring locknut to 1/8" of thread exposed
	Coulter incorrectly installed	Adjust height of coulter by sliding shank up
	Planter frame too low	Raise planter frame to correct height
Fertilizer Too Shallow	Blade not penetrating	Tighten coulter spring locknut down 1" further
	Coulter incorrectly installed	Adjust height of coulter by sliding shank down
Fertilizer Will Not Flow	Plugged fertilizer tubes	Check for plugged fertilizer tube openings on knife
		Check for plugged fertilizer delivery tubes on planter
Blade not rotating properly	Loose soil	Coulter works best in firmer soil conditions

Our name Is getting known

Just a few years ago, Yetter products were sold primarily to the Midwest only. Then we embarked on a program of expansion and moved into the East, the South, the West, and now north into Canada. We're even getting orders from as far away as Australia and Africa.

So, when you buy Yetter products . . . you're buying a name that's recognized. A name that's known and respected. A name that's become a part of American agriculture and has become synonymous with quality and satisfaction in the field of conservation tillage.

Thank you

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