

FERTILIZER COULTER

MODEL 2990 SET-UP & PARTS MANUAL

YETTER MANUFACTURING CO.

FOUNDED 1930 Colchester, IL 62326-0358 • 309/776-4111 Toll free 800/447-5777 309/776-3222 (Fax)



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 coulter.

We hope your new Yetter fertilizer coulter 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.

Daalaa		
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
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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.

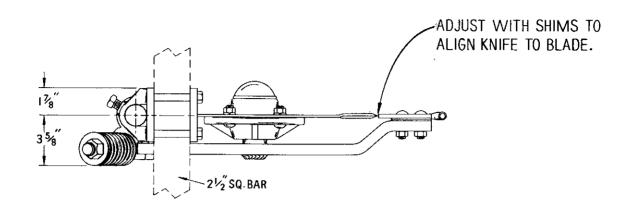


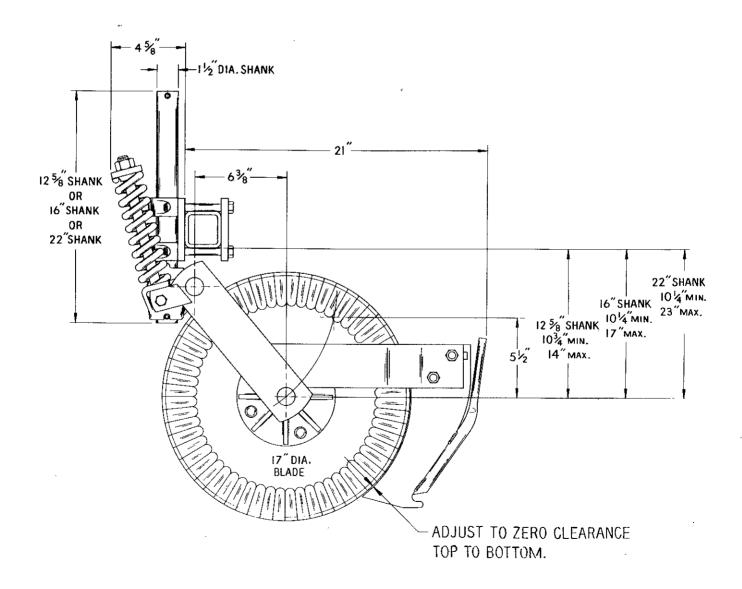
Consult your implement and tractor operator's manual for correct and safe operating practices.

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 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 100 ft./lbs. torque maximum.
- 3. Mount 17" coulter 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. See also page 9.
- 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 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" 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 coulter 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 coulter depth by loosening setscrews in clamp castings. For John Deere 7000 front fold planters there may not be enough up adjustment to operate couter 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 coulter operation. Loosen hydraulic fittings and swivel these hoses up out of the way to provide clearance when coulter flexes up.

 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.

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 coulter to obtain maximum depth.

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

OPERATION

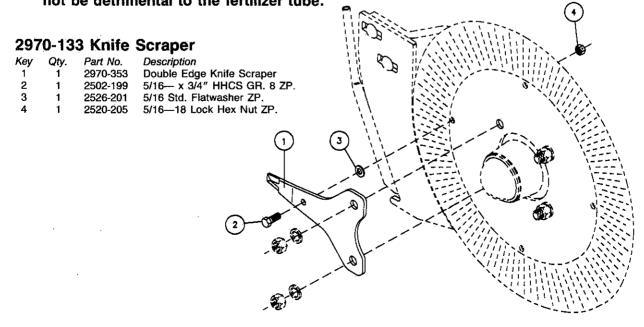
- 1. Set coulter blades to run vertical to the ground. Operating depth and blade wear can be affected if coulter is mounted crooked. If coulters are set-up to not swivel be sure they run straight with the direction of travel.
- 2. After a few hours use, check all bolts and setscrews for tightness.
- 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 ADJUSTMENT IS 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).

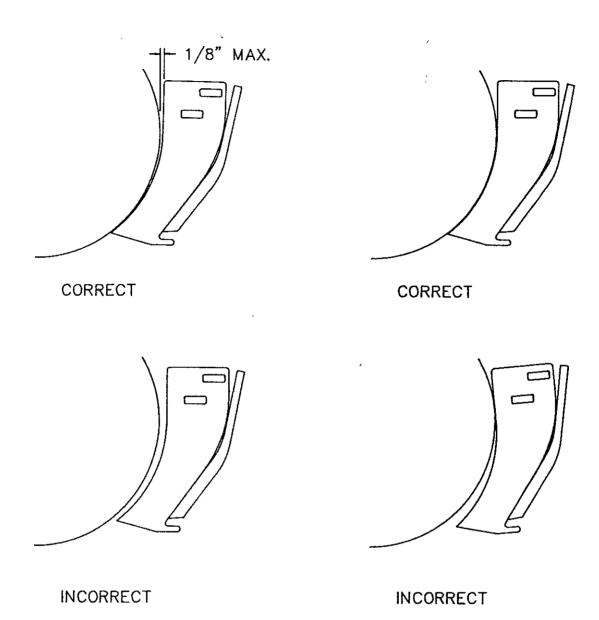
NOTE: A "bump" will appear behind knife scraper, on blade where protected, it must be ground off periodically to maintain correct knife-blade clearance.

- 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.
- 6. 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.



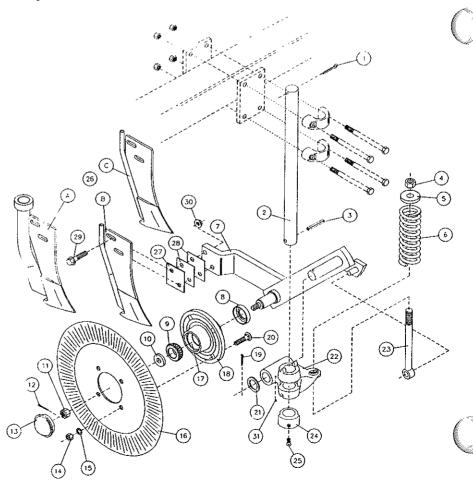
KNIFE ADJUSTMENT

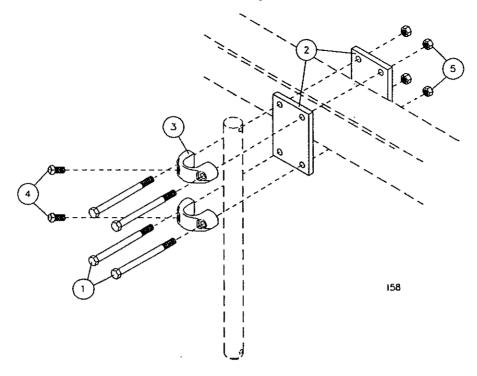


The adjustment of knife clearance to the blade is critical to trouble free operation of the fertilizer coulter.

- 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.

Key	Qty.	Part No.	Description
1	1	2531-161	5/16 x 2-1/2" Cotter Pin ZP.
2	1	2990-310	12-5/8" Shank (Shown)
	1	2990-318	16" Shank
	1	3010-303-BB	Straight Coulter Shank, 22", Black
3	1	2530-208	3/8 x 2-1/2" Roll Pin ZP,
4	1	2520-515	3/4 - 10 Lock Hex Nut ZP
5	1	2555-112	2910 Spring Bushing Casting
6	1	2550-708	7/16 Wire x 2-1/8 O.D. x 1-1/4 I.D. Comp Spring
7	1	2990-220	Arm W.A,
8	1	2550-115	Seal
9	2	2550-027	Cone
10	1	2526-449	5/8 Flatwasher, 11/16 I.D. x 1-3/4 O.D. x 1/4 ± .010
11	1	2520-461	5/8 - 18 Slotted Hex Nut, ZP
12	1	2531-102	1/8 x 1-1/4" Cotter Pin, Black
13	1	2570-375	Hub Cap
14	4	2520-352	1/2 - 13 Hex Nut ZP.
15	4	2525-352	1/2 Med. Lockwasher ZP.
16	1	2571-158	17" Ripple Coulter,157 Ga.
17	2	2550-029	Cup (Pre-Assem. w/ No. 18)
18	1	2900-102	Hub Sub-Assembly
19	1	2531-151	1/4 x 1-3/4 Cotter Pin, Black
20	4	2505-339	1/2 - 13 x 1-1/2" Car. Bolt. Gr.5 ZP.
21	1	2526-561	1-17/64 l.D. x 1-7/8 O.D. x 14 Ga. Mach. Bush.
22	1	2990-311	Coulter Pivot Casting
23	1	2570-705	Pressure Rod
24	1	2910-301-BB	Locking Collar, Black
25	1	2503-379	5/8 - 11 x 1" Sq. Hd. Cuppoint Setscr. ZP.
26A	1	2975-116	Dry Fertilizer Knife W.A.
26B	1	2975-220	Liquid Fertilizer Knife W.A.
26C	1	2975-219	Suspension Knife W.A.
27	1	2970-319	Knife Shim, 1/8
28	3	2970-320	Knife Shim, 16 Ga.
29	2	2502-345	1/2 - 13 x 2" Whizlock HHCS Gr. 5 ZP.
30	2	2520-361	1/2 - 13 Flange Whizlock Hex Nut ZP.





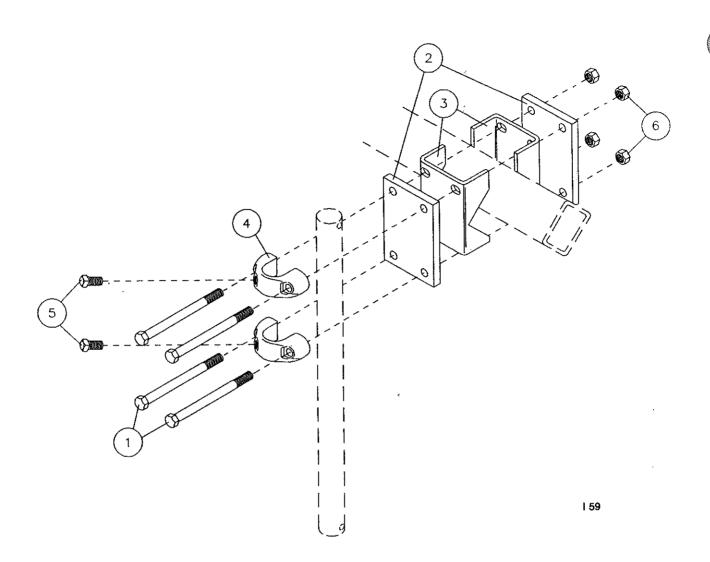
299	0-15	4 Clamp	Kit, 2-1/2 Sq. Bar	299	0-15	5 Clamp	Kit, 2 x 6 Bar
Key	Qty.	Part No.	Description	Key	Qty.	Part No.	Description
1	4	2502-368	1/2-13 x 5-1/2" Hex Hd. Capsc. Gr.5 ZP.	1	4	2502-362	1/2-13 x 6" Hex Hd. Capsc. Gr.5 ZP.
2	2	2990-313	Clamp Plate, 2-1/2 Sq. Bars		2	2990-322	Clamp Plate, 2 x 6 Bar
3	2	2990-360	Clamp Casting, Drilled		2	2990-360	Clamp Casting, Drilled
4	2	2503-379	5/8—11 x 1" Sq. Hd. Cuppoint Setsc.		2	2503-379	5/8—11 x 1" Sq. Hd. Cuppoint Setsc.
5	4	2520-357	1/2—13 Hex Lock Nut ZP.		4	2520-357	1/2—13 Hex Lock Nut ZP.

299	0-15	6 Clamp	Kit, 4 x 4 Bar	299	0-157	⁷ Clamp	Kit, 5 x 7 Bar
Kev	Qtv.	Part No.	Description	Key	Qty.		Description
1	4		1/2-13 x 7" Hex Hd. Capsc. Gr.5 ZP.	1	4		1/2-13 x 8" Hex Hd. Capsc. Gr.5 ZP.
•	ż		Clamp Plate, 4" Sq. and 3" Diamond Bar		2		Clamp Plate, 5 x 7 or 7 x 7 Bar
	2	2990-360	Clamp Casting, Drilled		2		Clamp Casting, Drilled
	2		5/8—11 x 1" Sq. Hd. Cuppoint Setsc.		2		5/8—11 x 1" Sq. Hd. Cuppoint Setsc.
	4		1/2—13 Hex Lock Nut ZP.		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.

299	0-15	8 Clamp	Kit, 7 x 7 Bar	299	0-16	1 Clamp	Kit, 3 x 7 Bar
Key	Qty.	Part No.	Description	Key	Qty.	Part No.	Description
1	4	2502-376	1/2—13 x 10" Hex Hd. Capsc. Gr.5 ZP.		4	2502-373	1/213 x 6" Hex Hd. Capsc. Gr.5 ZP.
	2	2990-315	Clamp Plate, 5 x 7 or 7 x 7 Bar		2	2990-315	Clamp Plate, 5 x 7, 7 x 7
	2	2990-360	Clamp Casting, Drilled		₋ 2	2990-360	Clamp Casting, Drilled
	2	2503-379	5/8-11 x 1" Sq. Hd. Cuppoint Setsc.		2	2503-379	5/8—11 x 1" Sq. Hd. Cuppoint Setsc.
	4	2520-357	1/2—13 Hex Lock Nut ZP.		4	2520-357	1/2—13 Hex Lock Nut ZP.
	1	2515-690	5/8 OD Vinyl Tube, Cut 1-1/2" (Not Shown)	1	2515-690	5/8 OD Vinyl Tube, Cut 1-1/2" (Not Shown)

299	10-16	3 Clamp	Kit, 3 x 3 Bar	000	A 47	4 ()	Vit 2 v 4 Don
Key	Qty.	Part No.	Description	299	IU- I 7	ı Cıamp	Kit, 3 x 4 Bar
1	4	2502-373	1/2—13 x 6" Hex Hd. Capsc. Gr.5 ZP.	Key	Qty.	Part No.	Description
	2	2990-339	Clamp Plate, 3" Sq. Bar	1	4	2502-373	1/2—13 x 6" Hex Hd. Capsc. Gr.5 ZP.
	2	2990-360	Clamp Casting, Drilled		2	2990-314	Clamp Plate, 4" Sq. and 3" Diamond Bar
	2	2503-379	5/8—11 x 1" Sq. Hd. Cuppoint Setsc.		2	2990-360	Clamp Casting, Drilled
	4	2520-357	1/2—13 Hex Lock Nut ZP.		2	2503-379	5/8—11 x 1" Sq. Hd. Cuppoint Setsc.
	1	2515-690	5/8 OD Vinyl Tube, Cut 1-1/2 (Not Shown)		4	2520-357	1/2-13 Hex Lock Nut ZP.

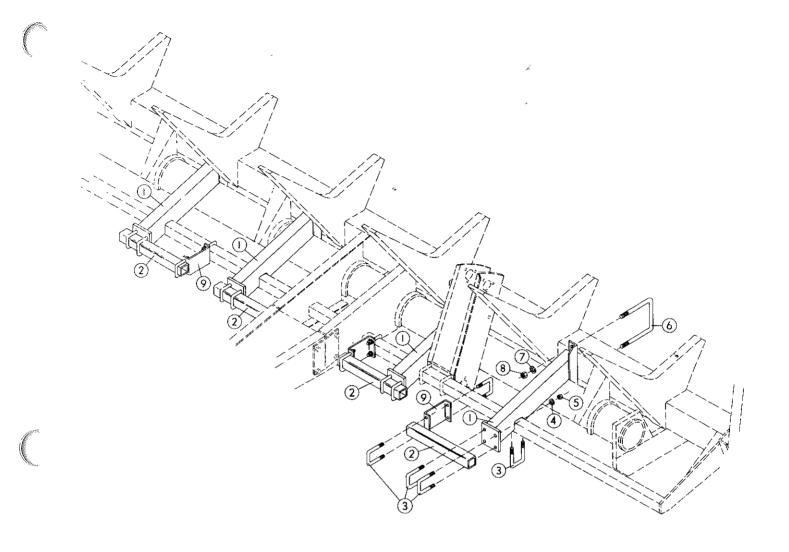


2990-159 Clamp Kit, 3" Diamond Bar

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

	V . V	o olullip	1(1t) 0 1/2 Diametra
Key	Qty.	Part No.	Description
1	4	2502-374	
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	2520-357	1/2-13 Hex Lock Nut Zp.

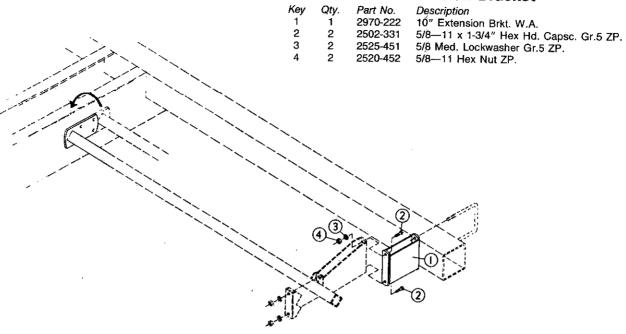


2970-164 Extension Bar Bracket, 10-3/4" (7 x 7 Bar) 2970-165 Extension Bar Bracket, 10-3/4" (5 x 7 Bar)

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"

FOR WHITE 5100 SERIES LIQUID FERTILIZER

2970-162 10" Extension Bracket



FOR WHITE 5100 SERIES DRY FERTILIZER

2970-163 Front Bar Mount Arm Assembly for Dry Fertilizer

	Key 1 2 3 4 5	Oty. 4 1 2 4 4	Part No. 2502-371 2990-314 2970-326 2525-352 2520-352	Description 1/2—13 x 7" HHCS Gr.5 ZP. Clamp Plate, 4" Sq., 3" Diamond Adaptor, 3" Sq. Diamond Bar 1/2 Med. Lockwasher ZP. 1/2—13 Hex Nut ZP.
	6	1	2970-225	Front Bar Mount Arm, 3 x 3 Diamond
NOTE DE COMME				
NOTE: Dry fertilizer requires 3" sq. x 13" bar	а		\	
not provided. Assemb	led as	shown.	0	

TROUBLESHOOTING

Problem	Cause	Remedy
Setting Coulter	Planter not set correctly	Ensure that in operation 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

YETTER MANUFACTURING CO.

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