

2959 ROW UNIT MOUNTED FERTILIZER COULTER

OPERATOR'S / INSTRUCTION MANUAL W/ PARTS IDENTIFICATION

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YETTER MANUFACTURING CO. FOUNDED 1930

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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 2959 Coulter.

We hope your new Yetter implement 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 six major sections.

Foreword, Safety Precautions, assembly instructions, Operation, parts identification and troubleshooting.

It is important the owner/operator knows the implement model number and serial number. Write the serial and model number in the space provided and use it in all correspondence when referring to the implement.

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 and other 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 that are covered by the warranty policy.



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

YETTER MANUFACTURING CO.

309/776-4111 800/447-5777 309/776-3222 (FAX) Website: <u>www.yetterco.com</u> E-mail: <u>info@yetterco.com</u>

WARRANTY POLICY

Yetter Manufacturing warrants all products manufactured and sold by it against defects in material. This warranty being expressly limited to replacement at the factory of such parts or products as will 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 one year after purchase.

Model Number:_____

Dealer :		

The serial and model numbers are located on the top of the left hitch plate.

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

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 those working with you and for you follow them.

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 the 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.

GENERAL INFORMATION

The 2959 Fertilizer Coulter can be used as a R.H. opener or a L.H. opener, it is recommended that half of the planter is R.H. assemblies and the other half is L.H. assemblies.

NOTE: The 2959 Fertilizer Coulter is NOT recommended for use in rocky conditions as the coulter arm and fertilizer tube are susceptible to bending.

For proper operation of the 2959 coulter, a ¼" NPT "Straight Stream" nozzle or a ¼" NPT Female "Nozzle Body" with orifice plates will be required. Yetter Manufacturing Co. does not supply these parts.

See tip application chart.

BOLT TORQUE

READ THESE INSTRUCTIONS FIRST:

- 1. Improperly tightened bolts will result in damage, breakage, expense, and down time.
- 2. Always replace bolts with the specified grade and type.
- 3. Torque properly before first use of the machine and every 2-4 hours of use until you are sure bolts are staying tight.
- 4. The chart below is a guide for proper torque. Use it unless a specified torque is called out elsewhere in the manual.
- 5. Torque is the force you apply to the wrench handle or the cheater bar, times the length of the handle or bar.
- 6. Use a torque wrench whenever possible.

The following table shows torque in ft. lbs.

BOLT DIA. AND THREADS PER INCH	GRADE 2	GRADE 5 A-325	GRADE 8
1/4	6	10	14
5/16	12	20	30
3/8 -16	25	35	50
7/16 – 14	35	55	80
1/2 - 13	55	85	125
9/16 - 12	75	125	175
5/8 - 11	105	170	235
3/4 - 10	185	305	425
7/8 – 9	170	445	690
1-8	260	670	1030
1 1/8 – 7	365	900	1460
1 1/4 - 7	515	1275	2060
1 3/8 -6	675	1675	2700
1 1/2 - 6	900	2150	3500
1 3/4 - 5	1410	3500	5600

ASSEMBLY INSTRUCTIONS

STEP 1. Attach the 2959-203 fert. coulter faceplate w.a. to the planter unit using 3) $\frac{1}{2}$ -13 x 1 $\frac{1}{2}$ " bolts, flat washers and locknuts. Use the 1 $\frac{3}{4}$ " OD x $\frac{1}{4}$ " thick washer on the lower large slot. On some planter units, this washer may need to be trimmed enough not to interfere with a gusset. Center the bracket on the row unit and tighten the bolts to specification listed on the table on page 4.



STEP 2. Attach the coulter arm 2959-201 to the faceplate using 2) $\frac{1}{2}$ -13 x 2 $\frac{3}{4}$ " bolts, flat washers and lock nuts.



NOTE: The unit-mounted coulter can be assembled as a right hand or left hand coulter assembly.

ASSEMBLY INSTRUCTIONS

STEP 3. Depth settings are in reference to the planter frame being level (front to back) when in planting position. Depth settings are in relationship to the planter disc opener blades being 15" in diameter and the fertilizer coulter blade being 16" in diameter. The coulter blade has 6 adjustment settings in a 2" range, with a maximum operating depth of 4" below the surface.



EXAMPLE: Planting depth is set at 1 $\frac{1}{2}$ " then the coulter placement may be adjusted to 1 $\frac{1}{2}$ " to 3 $\frac{1}{2}$ " below the surface of the ground.

STEP 4. Attach the 2959-200 Injection tube holder to the coulter arm on the same side that the coulter hub is assembled using 2) $3/8-16 \times 1 \frac{1}{2}$ " bolts and lock nuts. Insert the 8" pipe nipple and coupler into the tube holder and attach a hose to the fertilizer tube and tighten hose clamps (NOT SUPPLIED).



ASSEMBLY INSTRUCTIONS

STEP 5. At the pipe coupler install the appropriate nozzle (not supplied) according to the liquid fertilizer application rate. Nozzles can be ordered through your nearest implement dealer or fertilizer equipment dealer. See the tip application chart in this manual.



STEP 6. Attach the coulter blade to the arm/hub assembly using 4) $\frac{1}{2}$ -13 x 1 $\frac{1}{2}$ " carriage bolts, lock washers and hex nuts.



OPERATION PRECAUTIONS

STOP

Read this before using the Yetter product.

- MACHINE OPERATION

IMPORTANT: failure to properly set the planter frame height and levelness can result in less than successful operation of the planter and the Yetter product and may result in <u>damaged equipment</u>. All operators should read and thoroughly understand the instructions given prior to using the Yetter product.

NOTE: **DO NOT** use this product if the planter is not adjusted properly!

Leveling the planter:

With the planter lowered to proper operating height (Usually 20"-22"). **Read the planter operator's manual for recommended setting**. Check to be sure the toolbar and row unit parallel arms are level fore and aft. <u>Re-</u> <u>check</u> when the planter is in the <u>field</u> and has been <u>fully loaded</u> with seed, fertilizer, granular chemicals, etc. Also, a field check with a bubble level on the frame should be made of the hitch height to ensure level operation front to back.

It is important for the planter to operate level laterally. Tire pressure must be maintained at pressures specified by the manufacturer.

Field and actual planting conditions change and will dictate planter frame heights. You must ensure that the row unit parallel arms are approximately parallel with the ground.

IMPORTANT: For proper operation of the planter attachments and row units, it is imperative that the planter toolbars and row unit parallel arms be level side-to-side and front-to-rear. The toolbar frame should operate at a 20"-22" height from the *planting surface*. Check the manufacturer's operator's manual for instructions on how to adjust the frame height and levelness.

PLANTER ADJUSTMENT





TROUBLESHOOTING				
<u>Cause</u>				
Insufficient down pressure				

Problem Row unit floats out of soil	Cause Insufficient down pressure	<u>Solution</u> Increase the tension of the planter unit down force springs
	Planter frame not level for and aft	Level the frame at 20" frame height while in planting position
	Soil too hard/compacted	May have to use a tillage implement to loosen soil
	2959 fertilizer coulter blade adjusted too deep	Raise the coulters. Coulters could hold planter out of ground if set too deep
Planter pulls to one side	Not an equal number of RH and LH coulter assemblies	Assemble equal number of RH and LH coulter assemblies
Damage/Breakage of blade shaft coulter arm and or blade	Turning with blades in ground	Avoid this
	Extreme soil conditions such as very tight soil or heavy rocks, especially combined with: A: speed is too fast B: blades too deep C: turning with blades in ground	Avoid whenever possible otherwise: A: reduce speed B: run blades only deep enough to place fertilizer C: do not turn with blades in ground
Bending or breakage of fertilizer tube	Tube/nozzle adjusted too low	Raise nozzle to a minimum ½" above soil
	Heavy rock conditions	Install 2959-104 spring loaded injection kit
Fertilizer splatter	Nozzle not aligned with furrow	Ensure each nozzle is directly behind and centered on the coulter blade furrow
	Liquid pressure is too high (PSI) pounds per square inch	Recommended PSI is 20 to 30. Adjust and recalibrate system for different pressure setting.

LIQUID FERTILIZER APPLICATION RATE AND PRESSURE CHART

				SALLONS PE	R ACRE (US	ING WATER)	
	LIQUID PRESSURE IN	CAPACITY 1	4 MPH H2O	5 MPH H2O	5.5 MPH H20	6 MPH H2O	7 MPH H20	8 MPH H20
TIP #	PSI	GPM						
111 11	20	0.11	5,45	4.36	3.96	3.63	3.11	2.72
	25	0.12	5.94	4.75	4.32	3.96	3.39	2.97
#00015	30	0.13	6.44	5.15	4.68	4.29	3.68	3.22
	40	0.15	7.43	5.94	5.40	4.95	4.24	3.71
	50	0.17	8.42	6.73	6.12	5.61	4.81	4.21
	60 0.18	0.18	8.91	7.13	6.48	5.94	5.09	4.46
	20	0,14	6.93	15.54	5.04	4.62	3.96	3.47
	25	0.16	7.92	6.34	5.76	5.28	4.53	3.96
#0002	30	0.17	8.42	6.73	6.12	5.61	4.81	4.21
ICCOL	40	0.20	9.90	7.92	7.20	6.60	5.66	4.95
	50	0.23	11.39	9.11	8.28	7.59	6.51	5.69
	60	0.25	12.38	9.90	9.00	8.25	7.07	6.19
	20	0.21	10.40	8.32	7.56	6.93	5.94	5.20
	25	0.24	11.88	9.50	8.64	7.92	6.79	5.94
#0003	30	0.26	12.87	10.30	9.36	8.58	7.35	6.44
	40	0.30	14.85	11.88	10.80	9.90	8.49	7.43
	50	0.34	16.83	13.46	12.24	11.22	9.62	8.42
	60	0.37	18.32	14.65	13.32	12.21	10.47	9.16
	20	0.28	13.86	11.09	10.08	9.24	7.92	6.93
	25	0.32	15.84	12.67	11.52	10.56	9.05	7.92
#0004	30	0.35	17.33	13.86	12.60	11.55	9.90	8.66
	40	0.40	19.80	15.84	14 40	13.20	11.31	9.90
	50	0.45	22.28	17.82	16 20	14.85	12 73	11 14
	60	0.49	24.26	19.40	17.64	16.17	13.86	12 13
	20	0.35	17.33	13.86	12.60	11.55	9.90	8.66
	25	0.40	19.80	15.84	14.40	13.20	11.31	9,90
¥0005	30	0.43	21.29	17.03	15.48	14.19	12.16	10.64
	40	0.50	24.75	19.80	18.00	16.50	14.14	12.38
	50	0.56	27.72	22.18	20.16	18.48	15.84	13.86
	60	0.61	30.20	24.16	21.96	20.13	17.25	15.10
51 90	20	0.42	20.79	16.63	15.12	13.86	11.88	10.40
	25	0.47	23.27	18.61	16.92	15.51	13.29	11.63
#0006	30	0.52	25.74	20.59	18.72	17.16	14.71	12.87
	40	0.60	29.70	23.76	21.60	19.80	16.97	14.85
	50	0.67	33.17	26.53	24.12	22.11	18.95	16.58
	60	0.74	36.63	29.30	26.64	24.42	20.93	18.32
1.225	20	0.57	28.22	22.57	20.52	18.81	16.12	14.11
	25	0.63	31.19	24.95	22.68	20.79	17.82	15.59
#0008	30	0.69	34.16	27.32	24.84	22.77	19.52	17.08
	40	0.80	39.60	31.68	28.80	26.40	22.63	19.80
	50	0.89	44.06	35.24	32.04	29.37	25.17	22.03
	60	0.98	48.51	38.81	35.28	32 34	27.72	24.26
	20	0.71	35.15	28.12	25.56	23.43	20.08	17.57
	25	0.79	39.11	31.28	28.44	26.07	22.35	19.55
#0010	30	0.87	43.07	34 45	31.32	28.71	24.61	21.53
	40	1.00	49.50	39.60	36.00	33.00	28.29	24.75
	50	1.12	55.44	44.35	40.32	36.96	31.68	27.72
	60	1,23	60,89	48 71	44.28	40.59	34 79	30 44
#0015	20	1.06	52 47	41 98	38.16	34.98	29.98	26.24
	25	1 19	58.91	47 12	42.84	39.27	33.66	20.24
	30	1.30	64.35	51 48	46.80	42 90	36.77	32 18
	40	1.50	74 25	59.40	54.00	49.50	42.43	37 13
	50	1.68	83.16	66 53	60.48	55.44	47.52	11 59
	60	1.81	89.60	71.68	65.16	59.73	51 20	44.80
				71.00	00.10	00.10	01.20	00
	ACING	10" X 3 3	15" X 2 0	18" X 1 66	20" ¥ 1.5	26" Y 92	20" V 70	40" X 7

TABLES ARE BASED ON 30" NOZZLE SPACING

GPA (Por Nozzlo)	=	5940 X GPM		SOLUTION FACTOR
			GPM = GALLON PER ACRE GPM = GALLON PER MINUTES	32% = H20/1.15
			MPH = MILES PER HOUR	
			W = WIDTH	

This table is a reference only. Please calibrate your equipment to insure proper rate of application. The information contained in this issue is offered in good faith by Yetter Mfg. Co. to further the understanding of liquid fertilizer application.

However, the use of the information provided is beyond the control of Yetter Mfg. Co. and in no case shall Yetter Mfg. Co. or any seller of its products be responsible for any damages that may occur from the use of this information.