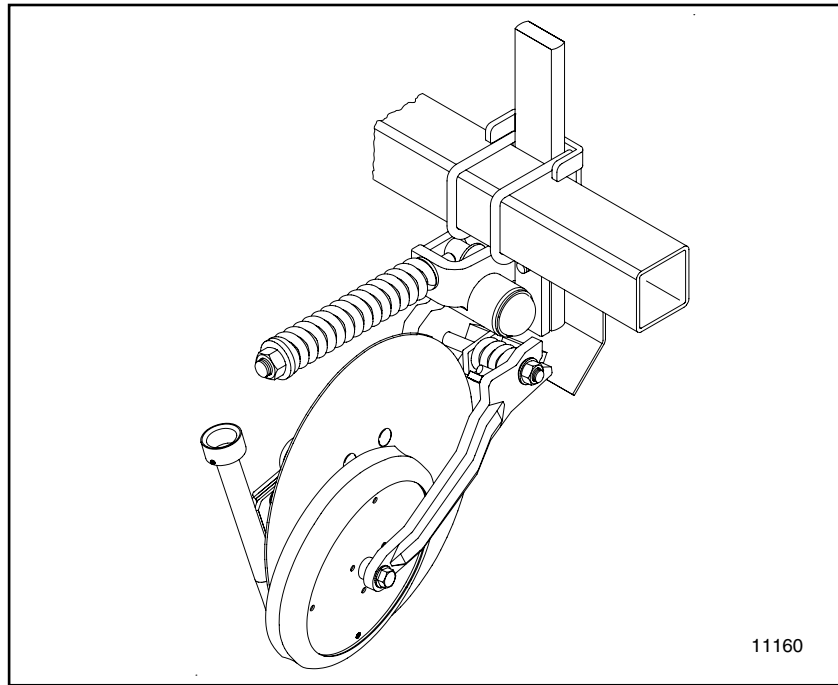

Operator's/Parts Manual
Vantage II



Read the operator's manual entirely. When you see this symbol, the subsequent instructions and warnings are serious - follow without exception. Your life and the lives of others depend on it!



Cover illustration may show optional equipment not supplied with standard unit.



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General Information

Important Notice

Great Plains Manufacturing, Inc. provides this publication “as is” without warranty of any kind, either expressed or implied, while every precaution has been taken in the preparation of this manual, Great Plains Manufacturing, Inc. assumes no responsibility for errors or omissions. Neither is any liability assumed for damages resulting from the use of the information contained herein. Great Plains Manufacturing, Inc. reserves the right to revise and improve its products as it sees fit. This publication describes the state of this product at the time of its publication, and may not reflect the product at all times in the future.

Printed in the United States of America.

For your convenience, record your Model and the Date Purchased on page 4. Have this information before you when calling a Great Plains Authorized Dealer.

This Operator’s Manual applies to the Vantage II Fertilizer Coulter listed below:

204-218L Right Hand Dry Fertilizer Coulter

204-219L Left Hand Dry Fertilizer Coulter

Using this Manual

For your safety and to help in developing a better understanding of your equipment we highly recommend that you read the operator sections of this manual. Reading these sections not only provides valuable training but also familiarizes you with helpful information and its location. The parts sections are for reference only and don’t require cover to cover reading. After reviewing your manual store it in a dry, easily accessible location for future reference.



WARNING

Great Plains denies any responsibility for damage caused to seed due to the improper application of liquid fertilizer or chemical. It is the sole responsibility of the user of liquid fertilizer or chemical for any damage incurred.



Introduction

Great Plains welcomes you to its growing family of new product owners. This **Vantage II Fertilizer Coulter** has been designed with care and built by skilled workers using quality materials. Proper setup, maintenance and safe operating practices will help you get years of satisfactory use from the machine.

Description of Unit

The parts on your **Vantage II Fertilizer Coulter** have been specially designed and should only be replaced with genuine **Great Plains** parts. Therefore, should your **Vantage II Fertilizer Coulter** require replacement parts go to your **Great Plains Dealer**.

Using This Manual

This manual will familiarize you with safety, assembly, operation, adjustments and maintenance. Read this manual and follow the recommendations to help ensure safe and efficient operation.

The information in this manual is current at printing. Some parts may change to assure top performance.

Definitions

The following terms are used throughout this manual.

Right-hand and left-hand as used in this manual are determined by facing the direction the machine will travel while in use unless otherwise stated.

IMPORTANT: A crucial point of information related to the preceding topic. For safe and correct operation, read and follow the directions provided before continuing.

NOTE: Useful information related to the preceding topic.



WARNING

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Important Safety Information

Look for Safety Symbol

The SAFETY ALERT SYMBOL indicates there is a potential hazard to personal safety involved and extra safety precaution must be taken. When you see this symbol, be alert and carefully read the message that follows it. In addition to design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.

Be Aware of Signal Words

Signal words designate a degree or level of hazard seriousness.

DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations, typically for machine components that, for functional purposes, cannot be guarded.

WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.



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Owner Assistance

If you need customer service or repair parts, contact a **Great Plains** dealer. They have trained personnel, repair parts and equipment specially designed for **Great Plains** products.

Your machine's parts were specially designed and should only be replaced with **Great Plains** parts. Always use the model number when ordering parts from your **Great Plains** dealer.

Record your Model and Date Purchased here for quick reference:

Model : _____

Date Purchased: _____

Your **Great Plains** dealer wants you to be satisfied with your new machine. If you do not understand any part of this manual or are not satisfied with the service received, please take the following actions.

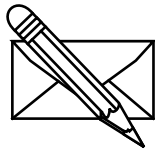
1. Discuss the matter with your dealership service manager. Make sure they are aware of any problems so they can assist you.
2. If you are still unsatisfied, seek out the owner or general manager of the dealership.
3. For further assistance write to:

Product Support

Great Plains Mfg. Inc., Service Department

P.O. Box 5060

Salina, KS 67402-5060



WARNING

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Operating and Assembly Instructions

Most accidents are the result of negligence and carelessness, usually caused by failure of the operator to follow simple but necessary safety precautions. The following safety precautions are suggested to help prevent such accidents. The safe operation of any machinery is a big concern to consumers and manufactures. Your **Vantage II Fertilizer Coulter** has been designed with many built-in safety features. However, no one should operate this product before carefully reading this Operators Manual.

General Operation & Repair

Never allow the Fertilizer Coulter to be operated by anyone who is unfamiliar with the operation of all functions of the unit. All operators should read and thoroughly understand the instructions given in this manual prior to moving the unit.

1. Make sure safety rules are understood before operating machinery or tractor.
2. Never permit any persons other than the operator to ride on the tractor.
3. Never permit any persons to ride on or stand near the drill while it is in operation.
4. Regulate your speed to the field conditions, maintaining complete control at all times.
5. After repairing or adjusting, make sure all tools and parts are removed from the implement before attempting to operate it.
6. Do not grease or oil machine while it is in operation.
7. Loose fitting clothing should not be worn as it may catch in moving parts.
8. Never dismount from a moving tractor.
9. Do not leave the tractor or the implement unattended with the engine running.
10. Do not stand between the tractor and the implement during hitching.
11. Detach and store implements in an area where children normally do not play. Stabilize implements by using suitable supports and block wheels.



WARNING

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12. If a hydraulic leak develops, correct it immediately. Escaping hydraulic oil can have extremely high pressure. A stream of high pressure oil may easily penetrate the skin as with modern needle-less vaccination equipment - but with the exception that hydraulic fluid may cause blood poisoning. It is imperative that the connections are tight and that all lines and pipes are in good condition. If an injury is caused by the escaping hydraulic fluid, see doctor at once!
13. Use a piece of cardboard or wood to detect leaks of hydraulic oil under pressure.
14. Be sure to relieve all hydraulic pressure before disconnecting any lines or pipes between the implement and the tractor hydraulic system. Keep all guards and shields in place.

Assembly Instructions

Your Vantage II Fertilizer Coulter comes to you completely assembled. Follow the instructions below for mounting.

Refer to Figure 1

1. Remove the pre-assembled front shield (1) from the coulter mount (2) by removing the 3/4" hex bolt (3) and 3/4" lock washer (4).
2. Assemble the mounting shank (5), purchased separately, and the front shield (1) to the coulter mount (2) using 3/4" hex bolts (3) and 3/4" lock washers (4).
3. Mount clamp brackets (purchased separately) with mounting shank (5) to the tool bar. Adjust vertically and align with furrow unit as desired. The blade is angled in relationship to the planter path. Mounting position is dictated by the distance between the fertilizer tube and the seed furrow.
4. Some planters require extension brackets to use the Vantage II Fertilizer Coulter. See pages 14-21 for a list of available brackets.

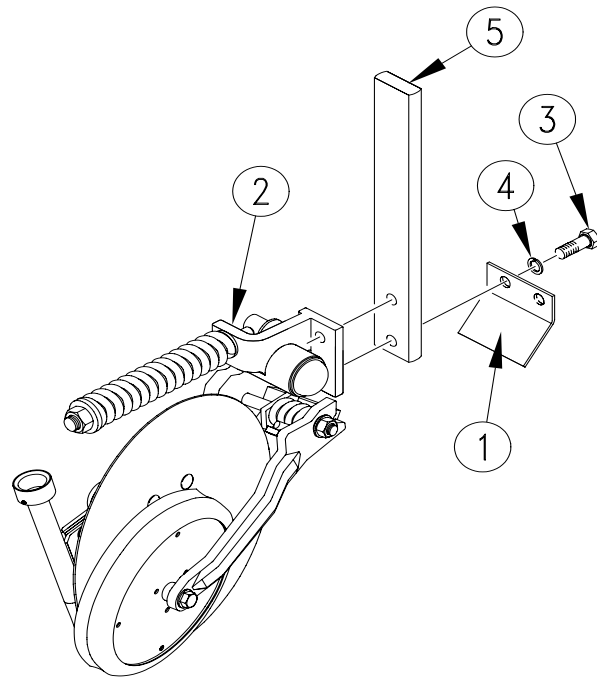


Figure 1
Assembly

20100

WARNING

Great Plains denies any responsibility for damage caused to seed due to the improper application of liquid fertilizer or chemical. It is the sole responsibility of the user of liquid fertilizer or chemical for any damage incurred.



Adjustments

Spring Adjustments

No down pressure spring adjustment is necessary on this unit. Initial operating force to move coulter upwards is 428 pounds. The preload has proved to be more than adequate for most No-Till conditions. The torsion spring on the wheel arm requires no adjustment. This spring applies adequate down pressure to the wheel. This controls the soil from being pushed away from the coulter blade, leaving the furrow as narrow as possible.



CAUTION

Any attempt to make coulter force greater than factory setting, may contribute to premature failure of parts and warranty shall be null and void.

Fertilizer Tube Adjustment

Adjustments are made by starting with all three fertilizer tube mounting bolts tightened the same amount, compressing the rubber slightly.

To move the fertilizer tube assembly toward the coulter blade you can either loosen the front bolt or tighten the two rear bolts evenly. To tilt the bottom of the tube toward the coulter blade, you can either tighten the bottom rear bolt or loosen the top rear bolt.

The desired running distance between the coulter blade and fertilizer tube assembly is from 1/16" to 1/8".



WARNING

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Maintenance and Lubrication

Maintenance

Proper servicing and adjustment is the key to the long life of any farm implement. With careful and systematic inspection, you can avoid costly maintenance, time and repair.

After using your Fertilizer Coulter for several hours, check all bolts to be sure they are tight.

1. Listed below are the items you need to lubricate every 20 hours of operation. Use a heavy duty multipurpose grease:
 - a. Grease zerk on hub.
 - b. Grease zerk on mounting casting

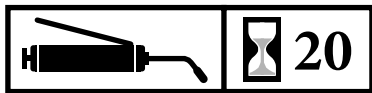
Storage

Clean the Fertilizer Coulter as necessary.

1. Lubricate zerks as indicated in the following illustrations.
2. Store the Fertilizer Coulter inside if possible for longer Fertilizer Coulter life.

Lubrication

Lubrication Symbols

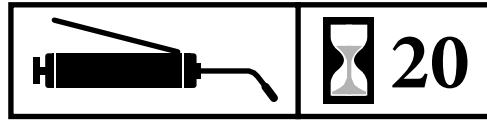
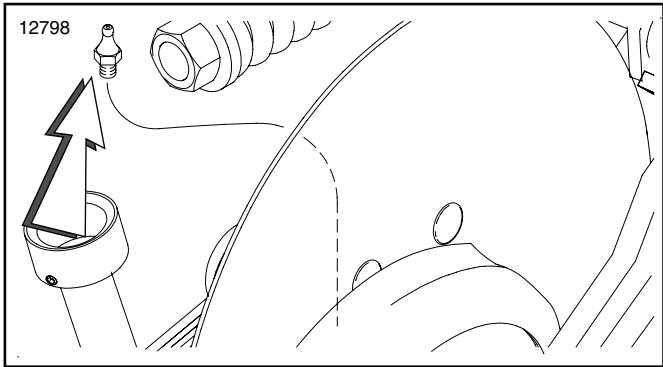


Lubrication is required every 20 hours of operation.



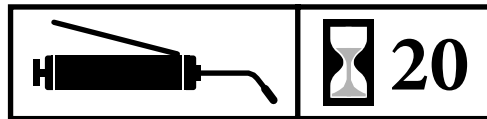
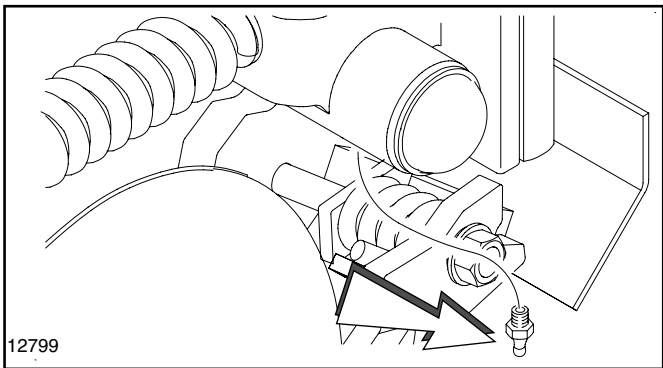
WARNING

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Hub

Type of Lubrication: Heavy duty multipurpose grease



Swivel Mounting Casting

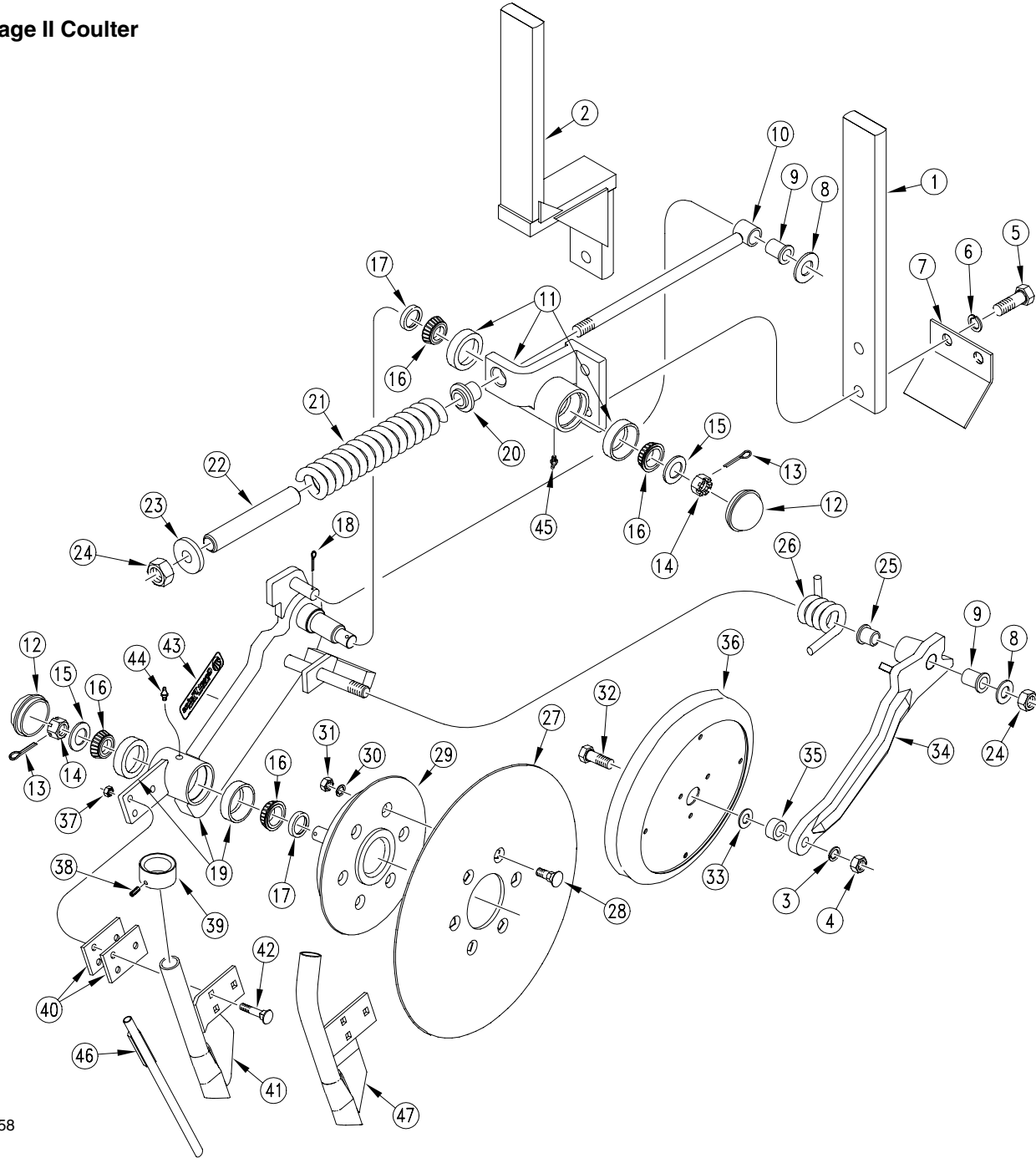
Type of Lubrication: Heavy duty multipurpose grease

! WARNING

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Parts

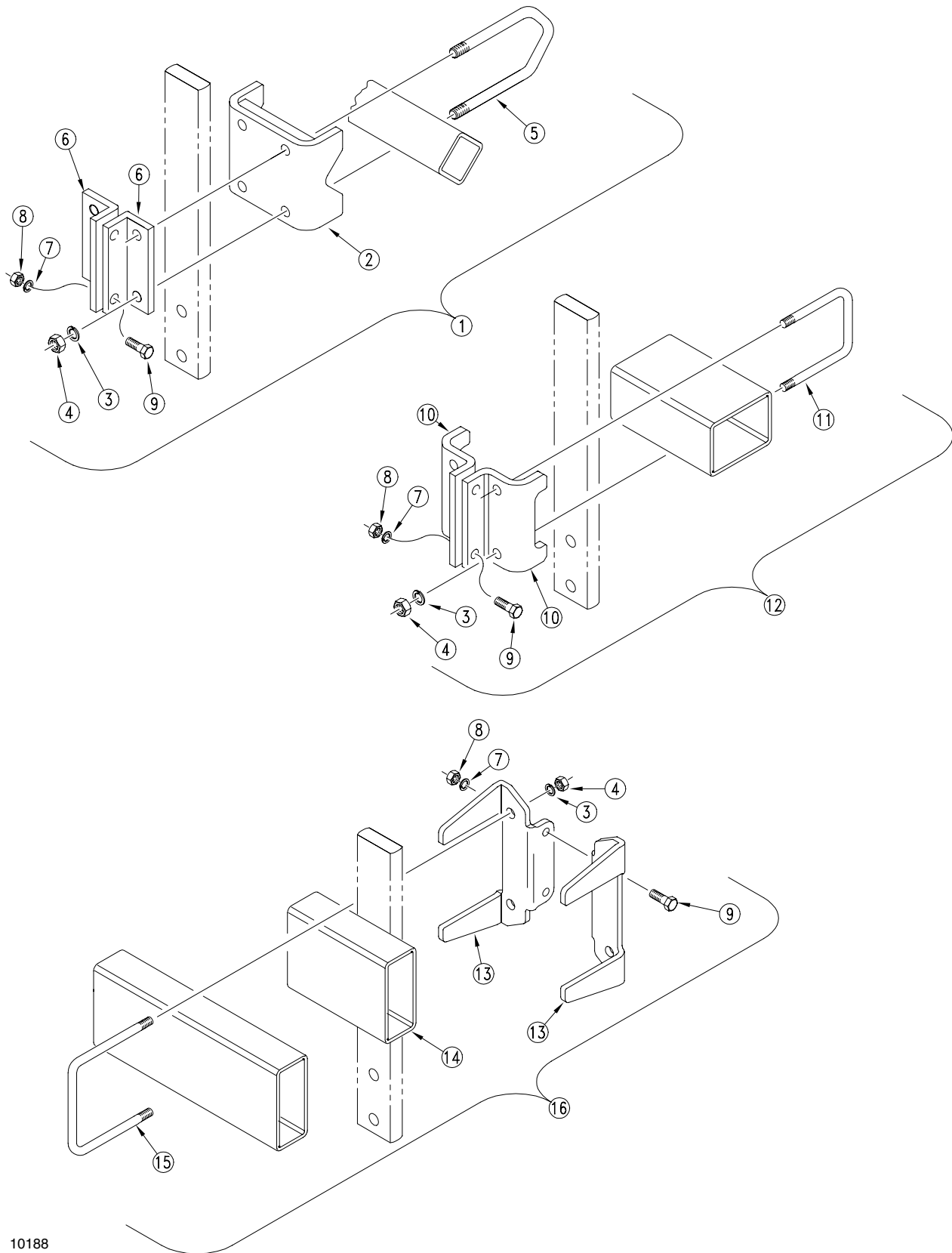
Vantage II Coulter



11158

Ref.	Part No.	Description	
1.	807-124C	21 FB ANGLED COULTER SHANK	
2.	820-181C	VANII 5IN OFFSET FLAT SHANK RH	Shown. White Planters.
	820-182C	VANII 5IN OFFSET FLAT SHANK LH	
3.	804-022C	WASHER LOCK SPRING 5/8 PLT	
4.	803-021C	NUT HEX 5/8-11 PLT	
5.	802-064C	HHCS 3/4-10X2 GR5	
6.	804-023C	WASHER LOCK SPRING 3/4 PLT	
7.	204-154D	FRONT SHIELD	
8.	804-025C	WASHER FLAT 3/4 SAE PLT	
9.	817-051C	SWING ARM BUSHING	
10.	204-209H	BLADE SPRING ROD WELDMENT	
11.	204-233V	COULTER PIVOT RH SUB-ASSY	Shown.
	204-235V	COULTER PIVOT LH SUB-ASSY	
12.	200-001D	HUB GREASE CAP	
13.	805-017C	PIN COTTER 3/16 X 1 3/4 PLT	
14.	803-029C	NUT HEX SLOTTED 7/8-14 PLT	
15.	804-055C	WASHER SPINDLE - 7/8	
16.	822-021C	BEARING CONE LM-67048	
17.	816-009C	OIL SEAL DOUBLE LIP	
18.	805-063C	PIN COTTER 3/32 X 1 LOpfNG	
19.	204-234V	BLADE ARM RH SUB-ASSY	Shown.
	204-236V	BLADE ARM LH SUB-ASSY	
20.	817-029C	BUSHING COULTER CASTING	
21.	807-074C	SPRING 2.25 OD X .5 COIL	
22.	204-107D	SPRING ROD SLEEVE 1 1/8 OD	
23.	812-031C	CASTING COULTER SPRING WASHER	
24.	803-025C	NUT HEX 3/4-10 PLT NYLOCK	
25.	817-084C	PARALLEL ARM PIVOT BUSHING	
26.	807-089C	TORSION SPRING 3/8WIRE RH	Shown
	807-090C	TORSION SPRING 3/8WIRE LH	
27.	820-093C	SINGLE BEVEL 18 COULTER BLADE	
28.	802-354C	PLOW 1/2-13X1 1/2 GR5	
29.	204-145D	COULTER HUB	
30.	804-015C	WASHER LOCK SPRING 1/2 PLT	
31.	803-020C	NUT HEX 1/2-13 PLT	
32.	802-281C	HHCS 5/8-11X2 3/4 GR5	
33.	804-019C	WASHER FLAT 5/8 USS PLT	
34.	204-141D	WIPER WHEEL ARM RH	Shown.
	204-142D	WIPER WHEEL ARM LH	
35.	204-153D	WIPER WHEEL SPACER	
36.	198-057S	2X13 DEPTH WHEEL ASSY	
37.	803-013C	NUT LOCK 3/8-16 PLT	
38.	801-015C	SCREW SET SCKT HD 1/4-20X1/2	
39.	204-268D	DRY FERTILIZER TUBE COLLAR	
40.	816-134C	RUBBER PAD	
41.	820-124C	DRY FERTILIZER TUBE-RH	Shown.
	820-125C	DRY FERTILIZER TUBE-LH	
42.	802-406C	RHSNB 3/8-16X1 3/4 SS	
43.	838-482C	DECAL GP PLANTING COMPONENTS	
44.	800-001C	GREASE ZERK STRAIGHT 1/4-28	
45.	800-073C	GREASE ZERK 1/4-28 X 90-DEG	
46.	890-580C	VANTAGE II LIQUID INSERT	
47.	204-412H	VAN II RH DRY DROP TUBE WLD	Shown.
	204-413H	VAN II LH DRY DROP TUBE WLD	

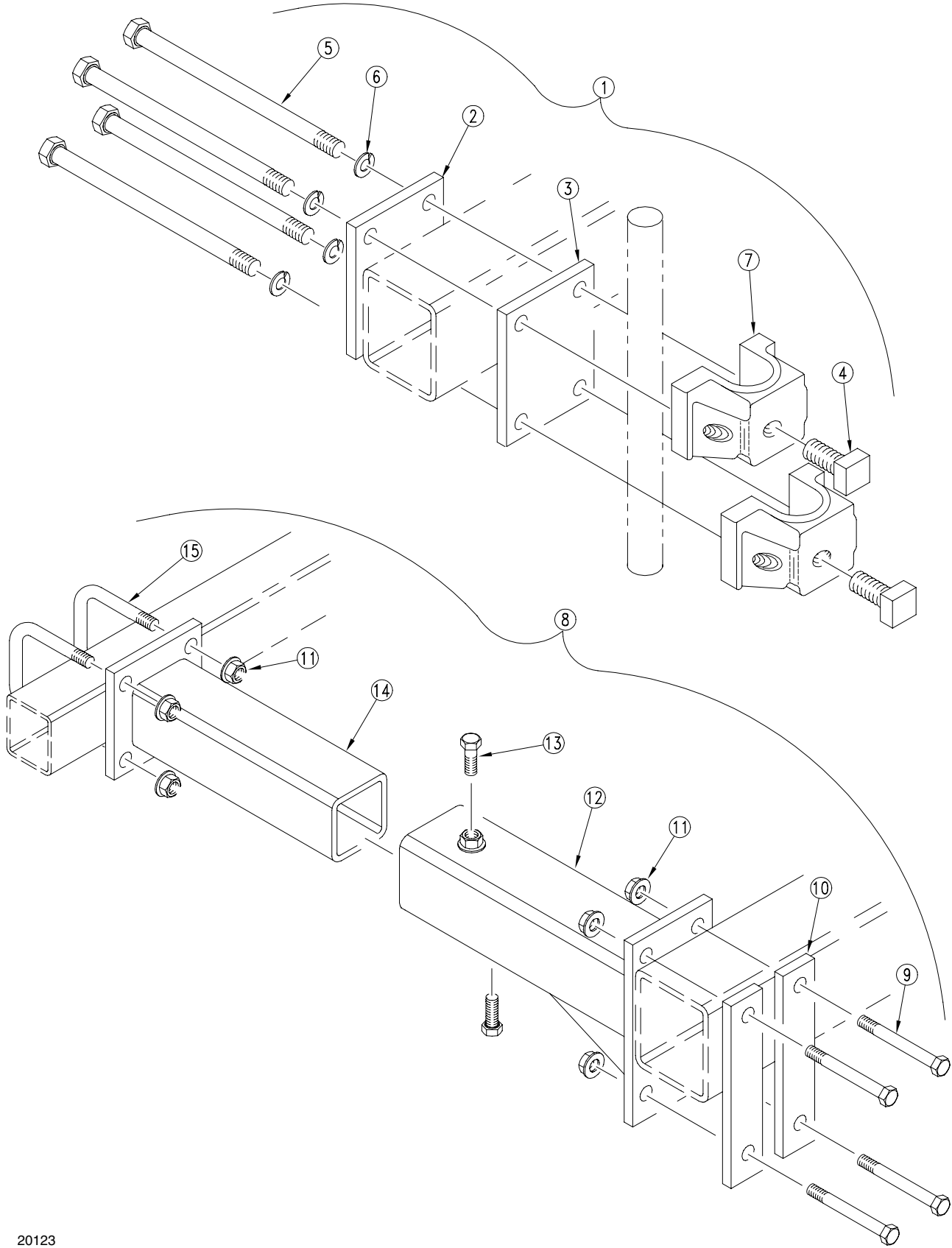
Rectangular Tubing Clamps Kit



10188

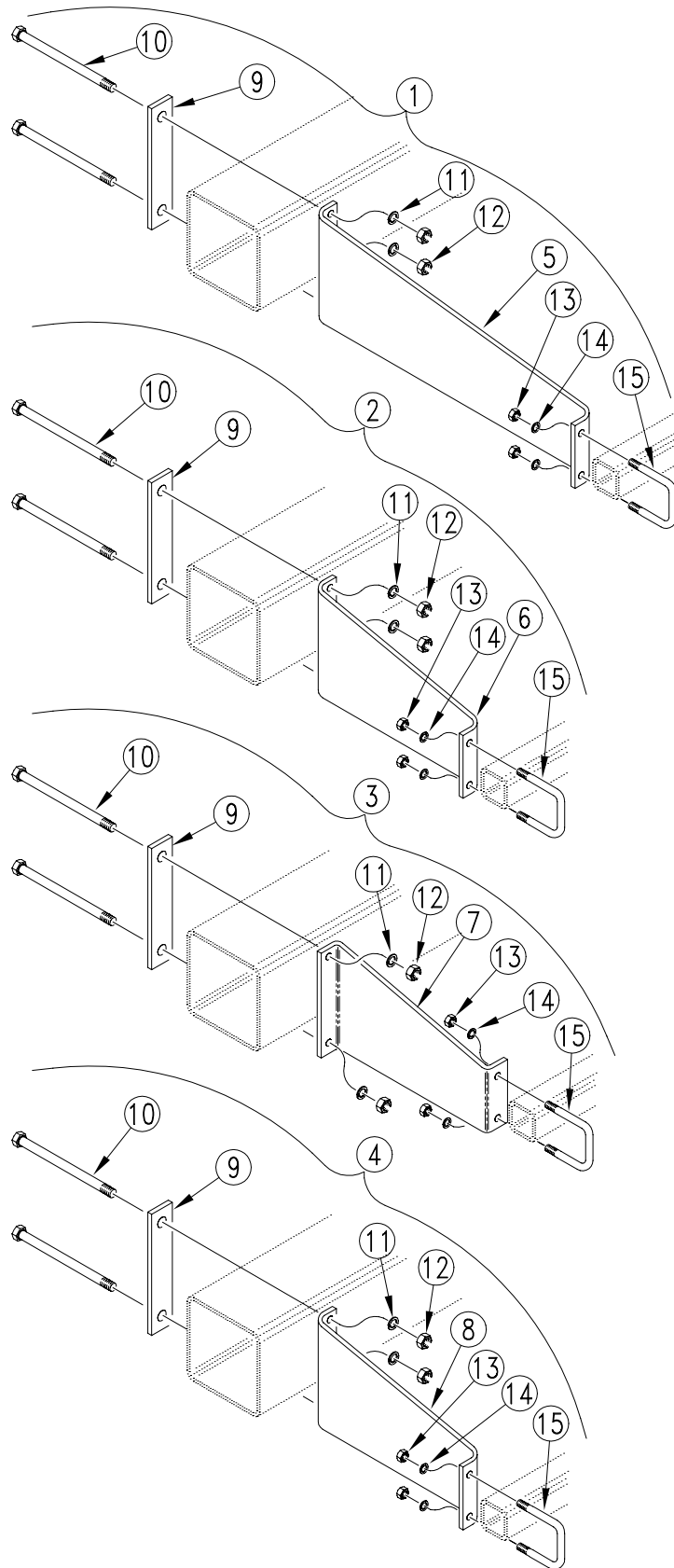
Ref.	Part No.	Description	
1.	204-225K	3 DIA BAR CLAMP KIT	
	204-226K	3 1/2 DIA BAR CLAMP KIT	
2.	204-212H	3DIA BAR CLAMP WELDMENT	
	204-213H	3 1/2 DIA BAR CLAMP WELDMENT	
3.	804-022C	WASHER LOCK SPRING 5/8 PLT	
4.	803-021C	NUT HEX 5/8-11 PLT	
5.	806-085C	U-BOLT 5/8-11 X3 7/8 3 CORNER	
	806-086C	U-BOLT 5/8-11 X 4 17/32 3 CORNER	
6.	204-192D	3 DIAMOND SPLIT CLAMP	
	204-193D	3.5 DIAMOND SPLIT CLAMP	
7.	804-015C	WASHER LOCK SPRING 1/2 PLT	
8.	803-020C	NUT HEX 1/2-13 PLT	
9.	802-091C	HHCS 1/2-13X1 1/2 GR5	
10.	204-185D	2.5 SPLIT BAR CLAMP	
	204-186D	3 SPLIT BAR CLAMP	
	204-187D	4 SPLIT BAR CLAMP	
	204-188D	6 SPLIT BAR CLAMP	
	204-189D	7 SPLIT BAR CLAMP	
11.	806-078C	U-BOLT 5/8-11 X 2 17/32 X 5	Use with 204-220K.
	806-079C	U-BOLT 5/8-11 X 3 1/32 X 5 1/2	Use with 204-221K.
	806-080C	U-BOLT 5/8-11 X 4 1/32 X 6 1/2	Use with 204-222K.
	806-081C	U-BOLT 5/8-11 X 4 1/32 X 8 1/2	Use with 204-227K.
	806-075C	U-BOLT 5/8-11 X 6 1/16 X 4 1/4	Use with 204-223K.
	806-083C	U-BOLT 5/8-11 X 7 1/32 X 7 1/2	Use with 204-228K.
	806-084C	U-BOLT 5/8-11 X 7 1/32 X 9 1/2	Use with 204-224K.
	806-085C	U-BOLT 5/8-11 X3 7/8 3 CORNER	Use with 204-225K.
	806-086C	U-BOLT 5/8-11 X 4 17/32 3 CORNER	Use with 204-226K.
	806-016C	U-BOLT 5/8-11 X 6 1/32 X 5 3/8	Use with 204-341K.
	806-105C	U-BOLT 5/8-11 X 4 1/32 X 6	Use with 204-244K.
	806-116C	U-BOLT 5/8-11 X 6 1/32 X 6 1/2	Use with 204-356K.
	806-131C	U-BOLT 5/8-11 X 7 1/32 X 6	Use with 204-243K.
12.	204-220K	2 1/2 SQ BAR CLAMP KIT	
	204-221K	3 SQ BAR CLAMP KIT	
	204-222K	4 SQ BAR CLAMP KIT	
	204-223K	2W X 6H CLAMP KIT	
	204-224K	7 SQ BAR CLAMP KIT	
	204-225K	3 DIA BAR CLAMP KIT	
	204-226K	3 1/2 DIA BAR CLAMP KIT	
	204-227K	6W X 4H CLAMP KIT	
	204-228K	7X 5 CLAMP KIT	
	204-243K	3W X 7H CLAMP KIT FLAT BAR	
	204-244K	3W X 4H CLAMP KIT FLAT BAR	
	204-341K	CLAMP KIT 3 W X 6 H FLAT SHANK	
	204-356K	CLAMP KIT 4W X 6H FLAT SHANK	
13.	204-190D	6 SPLIT BAR CLAMP 3EXTENSION	
14.	204-191D	6 X 3 EXTENSION TUBE	
15.	806-039C	U-BOLT 5/8-11 X 6 1/32 X 7 3/4	
16.	204-239K	3 EXTENSION CLAMP KIT FOR 2X6	

Extension Brackets



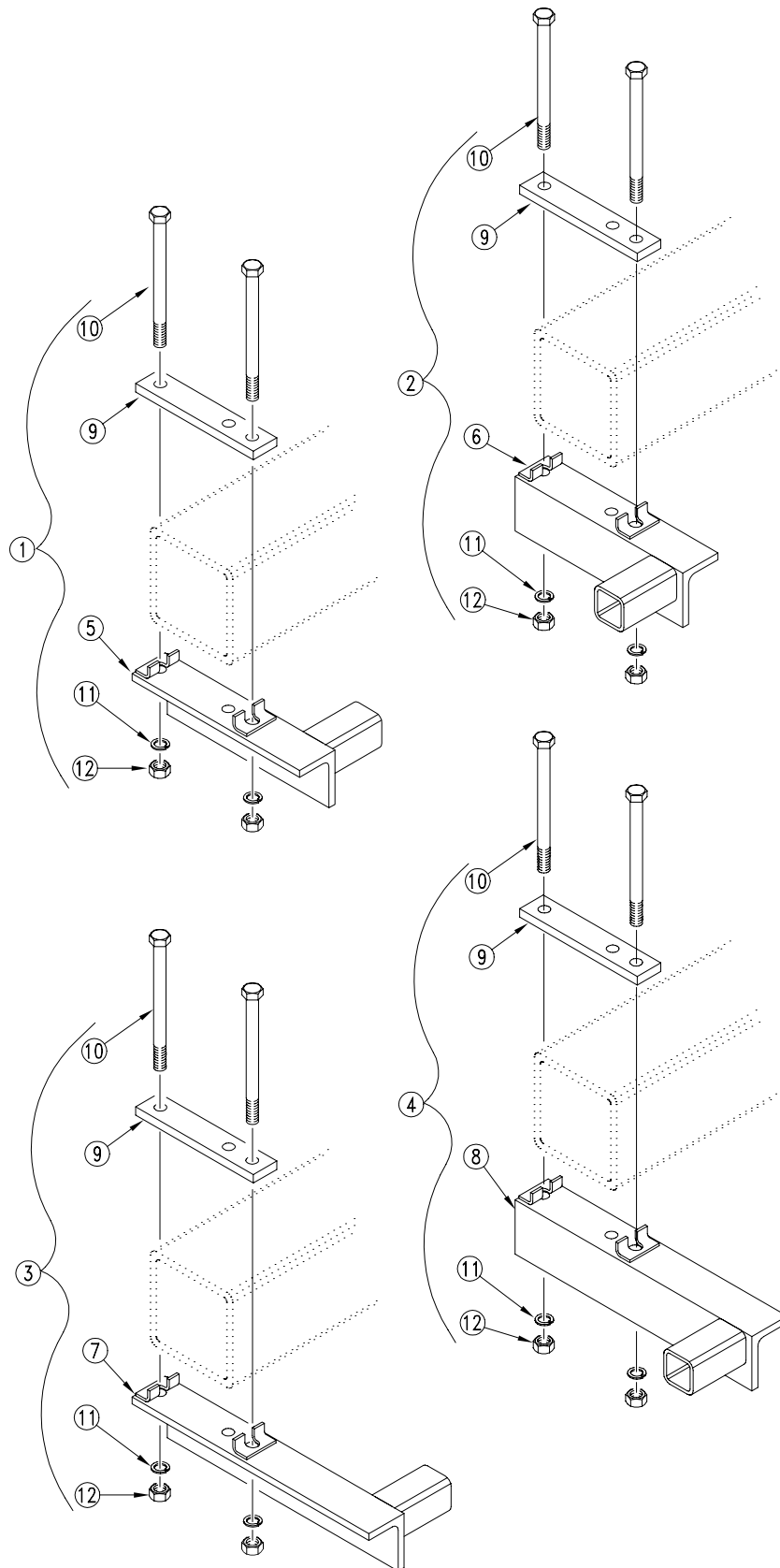
Ref.	Part No.	Description
1.	204-423A	7X7 MAINFRAME CLAMP KIT
2.	204-279D	7X7 MAINFRAME MOUNT BACK BAR
3.	204-278D	7X7 MAINFRAME MOUNT CLAMP
4.	801-040C	SCREW SQ HD 5/8-11 X 1 CUP PT
5.	802-048C	HHCS 1/2-13X9 1/2 GR5
6.	804-015C	WASHER LOCK SPRING 1/2 PLT
7.	204-072D	CLAMP SHANK 1 1/2 DIA
8.	204-372K	TELESCOPING BRACKET KIT
9.	802-105C	HHCS 5/8-11X9 GR5
10.	204-033D	FRONT BAR-BACK STRAP
11.	803-196C	NUT HEX FLANGE 5/8-11 PLT
12.	204-381H	TELESCOPING BRACKET BACK ARM
13.	802-051C	HHCS 5/8-11X1 1/2 GR5
14.	204-382H	TELESCOPING BRACKET FRONT ARM
15.	806-124C	U-BOLT 5/8-11 X 4 1/32 X 7 3/8

Extension Brackets



Ref.	Part No.	Description
1.	204-364K	26 EXTENSION BRACKET
2.	204-363K	14 5/8 EXTENSION BRACKET
3.	204-358K	IH 950 EXTENSION KIT 15 1/2 L
4.	204-357K	IH 950 EXTENSION KIT 15 1/2 R
5.	204-112D	EXTENSION BRKT 26 (2 1/2 X 7)
6.	204-123D	EXT. BRKT IH800/900 3PT 14 5/8
7.	204-239D	EXTENSION BRACKET IH 950 L
8.	204-240D	EXTENSION BRACKET IH 950 R
9.	204-033D	FRONT BAR-BACK STRAP
10.	802-105C	HHCS 5/8-11X9 GR5
11.	804-022C	WASHER LOCK SPRING 5/8 PLT
12.	803-021C	NUT HEX 5/8-11 PLT
13.	803-020C	NUT HEX 1/2-13 PLT
14.	804-015C	WASHER LOCK SPRING 1/2 PLT
15.	806-010C	U-BOLT 1/2-13 X 2 1/2 X 3 1/2

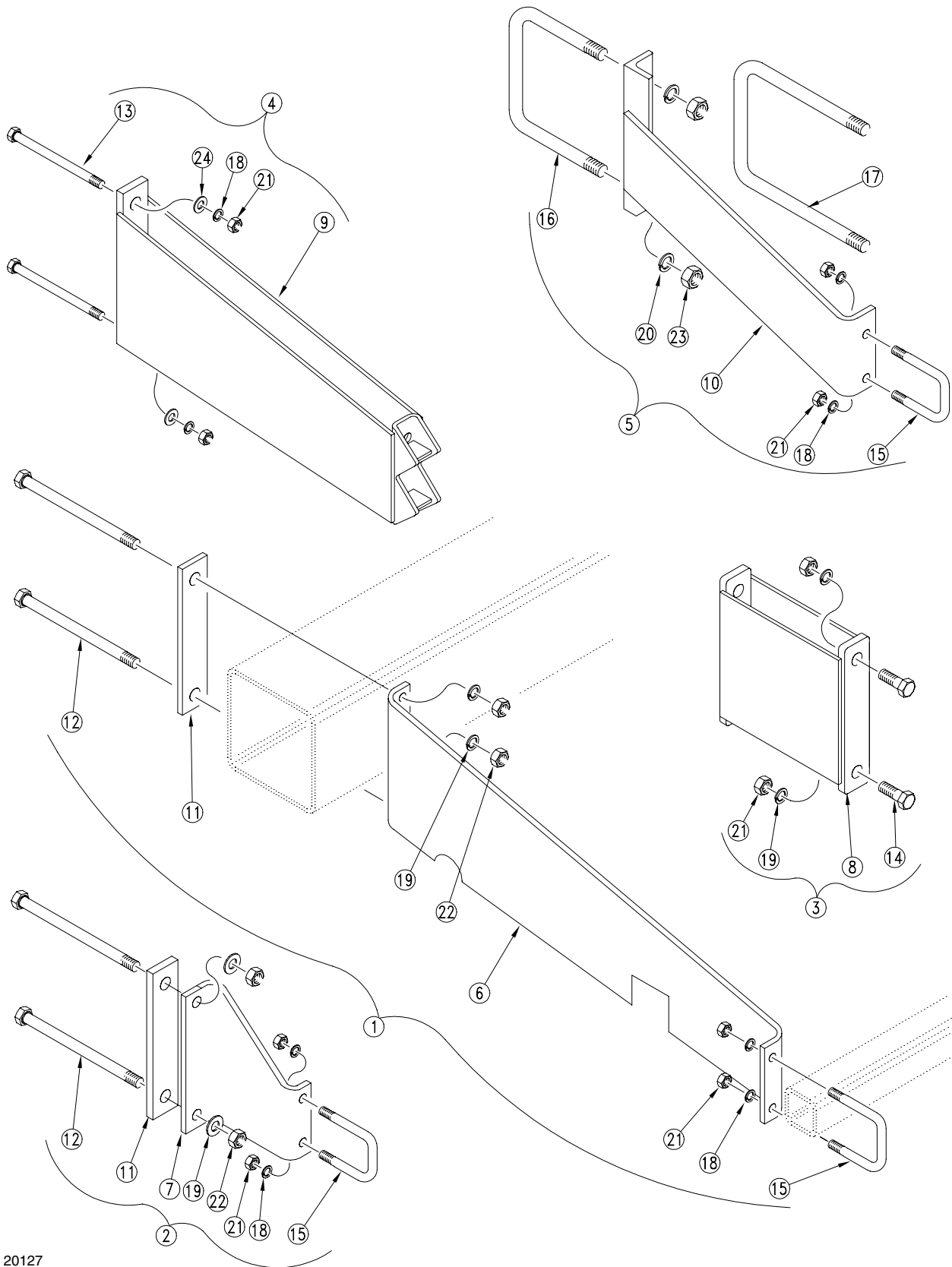
Extension Brackets



20125

Ref.	Part No.	Description
1.	204-351K	COULTER EXT. KIT LEFT SHORT
2.	204-352K	COULTER EXT. KIT RIGHT SHORT
3.	204-353K	COULTER EXT. KIT LEFT LONG
4.	204-354K	COULTER EXT. KIT RIGHT LONG
5.	890-543C	COULTER EXTENSION LEFT
6.	890-542C	COULTER EXTENSION RIGHT
7.	890-547C	COULTER EXTENSION LEFT LONG
8.	890-548C	COULTER EXTENSION RIGHT LONG
9.	204-236D	COULTER EXT. TOP SUPPORT
10.	802-164C	HHCS 3/4-10X9 GR5
11.	804-023C	WASHER LOCK SPRING 3/4 PLT
12.	803-027C	NUT HEX 3/4-10 PLT

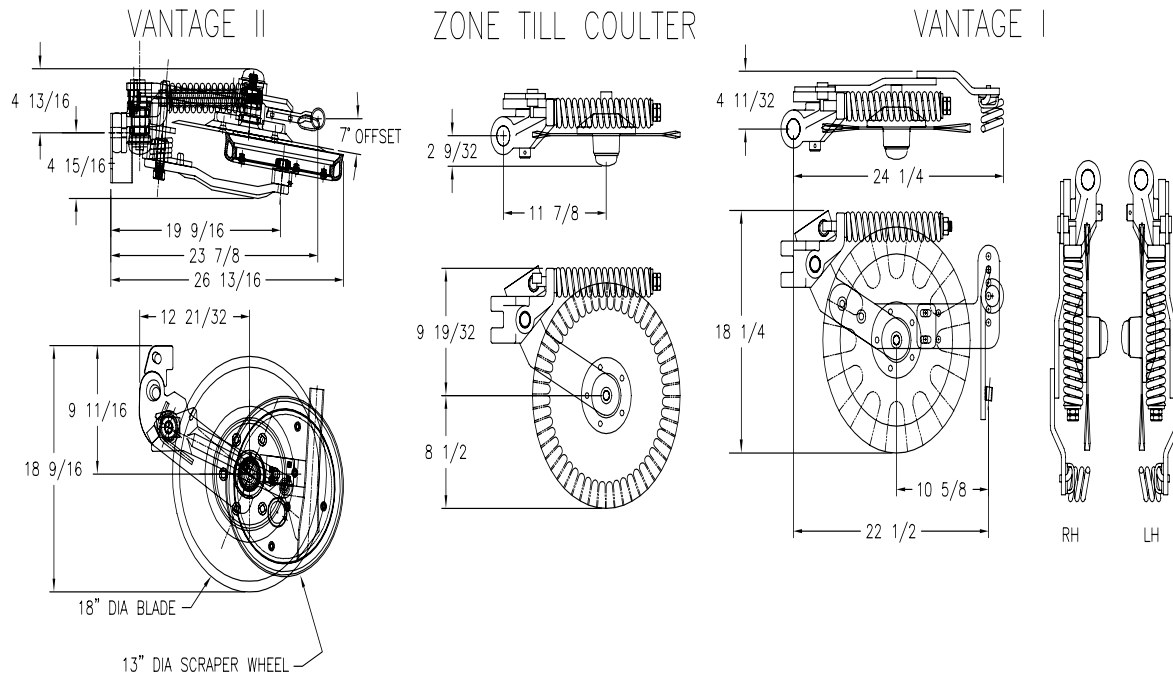
Extension Brackets



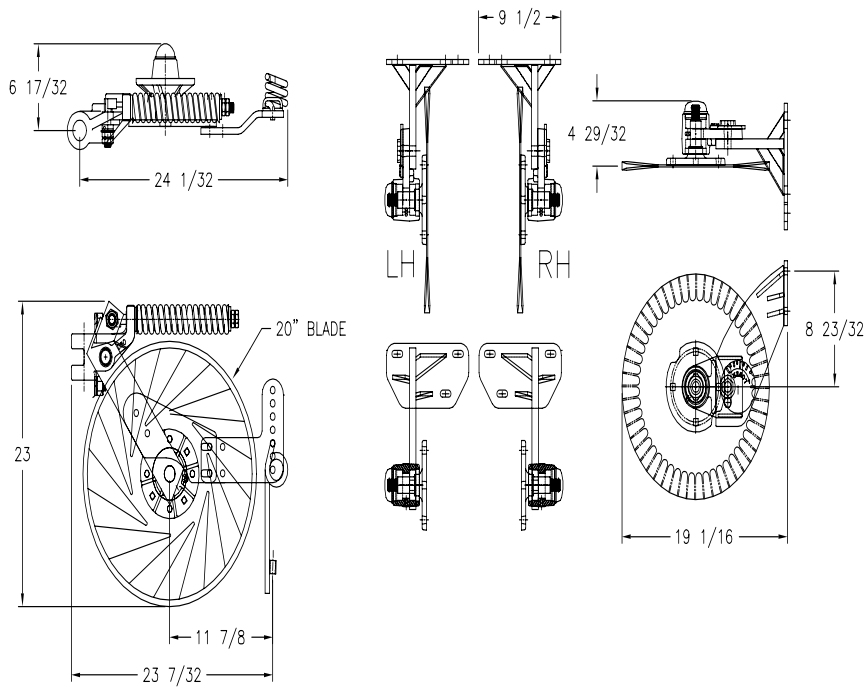
20127

Ref.	Part No.	Description
1.	204-365K	31 1/2 EXTENSION BRACKET
2.	204-430S	9 1/2 EXTENSION BUNDLE
3.	204-038K	EXT. BRKT X 10
4.	204-039K	EXT. BRKT 3 DIA. BAR
5.	204-031K	FRONT BAR REINFORCEMENT BRKT
6.	204-082H	EXTENSION BRACKET 31 9/16 JD
7.	204-023D	SPACER PLT 7 TO 2 1/2 SQ 9 1/2
8.	204-044H	10 EXT. BRKT
9.	204-058H	EXT. BRKT. DRY FERT 3 DIA
10.	204-029H	FRONT BAR BRKT 18
11.	204-033D	FRONT BAR-BACK STRAP
12.	802-105C	HHCS 5/8-11X9 GR5
13.	802-260C	HHCS 1/2-13X7 GR5
14.	802-053C	HHCS 5/8-11X1 3/4 GR5
15.	806-010C	U-BOLT 1/2-13 X 2 1/2 X 3 1/2
16.	806-055C	U-BOLT 3/4-10 X 7 1/32 X 6 1/2
17.	806-050C	U-BOLT 3/4-10 X 7 X 8 1/2
18.	804-015C	WASHER LOCK SPRING 1/2 PLT
19.	804-022C	WASHER LOCK SPRING 5/8 PLT
20.	804-023C	WASHER LOCK SPRING 3/4 PLT
21.	803-020C	NUT HEX 1/2-13 PLT
22.	803-021C	NUT HEX 5/8-11 PLT
23.	803-027C	NUT HEX 3/4-10 PLT
24.	804-017C	WASHER FLAT 1/2 USS PLT

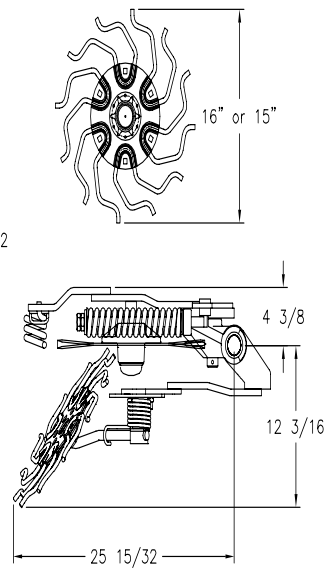
Specifications



VANTAGE I 20" W/FERTILIZER UNIT MOUNT COULTER



TERRA TINE™ ROW CLEANER



20120



Appendix

Torque Values Chart

Bolt Size (Inches)	Bolt Head Identification						Bolt Size (Metric)	Bolt Head Identification					
	Grade 2		Grade 5		Grade 8			Class 5.8		Class 8.8		Class 10.9	
	N · m ²	ft-lb ³	N · m	ft-lb	N · m	ft-lb		N · m	ft-lb	N · m	ft-lb	N · m	ft-lb
in-tpi ¹							mm x pitch ⁴						
1/4" - 20	7.4	5.6	11	8	16	12	M 5 X 0.8	4	3	6	5	9	7
1/4" - 28	8.5	6	13	10	18	14	M 6 X 1	7	5	11	8	15	11
5/16" - 18	15	11	24	17	33	25	M 8 X 1.25	17	12	26	19	36	27
5/16" - 24	17	13	26	19	37	27	M 8 X 1	18	13	28	21	39	29
3/8" - 16	27	20	42	31	59	44	M10 X 1.5	33	24	52	39	72	53
3/8" - 24	31	22	47	35	67	49	M10 X 0.75	39	29	61	45	85	62
7/16" - 14	43	32	67	49	95	70	M12 X 1.75	58	42	91	67	125	93
7/16" - 20	49	36	75	55	105	78	M12 X 1.5	60	44	95	70	130	97
1/2" - 13	66	49	105	76	145	105	M12 X 1	90	66	105	77	145	105
1/2" - 20	75	55	115	85	165	120	M14 X 2	92	68	145	105	200	150
9/16" - 12	95	70	150	110	210	155	M14 X 1.5	99	73	155	115	215	160
9/16" - 18	105	79	165	120	235	170	M16 X 2	145	105	225	165	315	230
5/8" - 11	130	97	205	150	285	210	M16 X 1.5	155	115	240	180	335	245
5/8" - 18	150	110	230	170	325	240	M18 X 2.5	195	145	310	230	405	300
3/4" - 10	235	170	360	265	510	375	M18 X 1.5	220	165	350	260	485	355
3/4" - 16	260	190	405	295	570	420	M20 X 2.5	280	205	440	325	610	450
7/8" - 9	225	165	585	430	820	605	M20 X 1.5	310	230	650	480	900	665
7/8" - 14	250	185	640	475	905	670	M24 X 3	480	355	760	560	1050	780
1" - 8	340	250	875	645	1230	910	M24 X 2	525	390	830	610	1150	845
1" - 12	370	275	955	705	1350	995	M30 X 3.5	960	705	1510	1120	2100	1550
1-1/8" - 7	480	355	1080	795	1750	1290	M30 X 2	1060	785	1680	1240	2320	1710
1 1/8" - 12	540	395	1210	890	1960	1440	M36 X 3.5	1730	1270	2650	1950	3660	2700
1 1/4" - 7	680	500	1520	1120	2460	1820	M36 X 2	1880	1380	2960	2190	4100	3220
1 1/4" - 12	750	555	1680	1240	2730	2010							
1 3/8" - 6	890	655	1990	1470	3230	2380							
1 3/8" - 12	1010	745	2270	1670	3680	2710							
1 1/2" - 6	1180	870	2640	1950	4290	3160							
1 1/2" - 12	1330	980	2970	2190	4820	3560							

Torque tolerance + 0%, -15% of torquing values. Unless otherwise specified use torque values listed above.

¹ in-tpi = nominal thread diameter in inches-threads per inch

² N · m = newton-meters

³ ft-lb = foot pounds

⁴ mm x pitch = nominal thread diameter in millimeters x thread pitch

Warranty

Great Plains Manufacturing, Incorporated warrants to the original purchaser that this seeding equipment will be free from defects in material and workmanship for a period of one year from the date of original purchase when used as intended and under normal service and conditions for personal use; 90 days for commercial or rental purposes. This Warranty is limited to the replacement of any defective part by Great Plains Manufacturing, Incorporated and the installation by the dealer of any such replacement part. Great Plains reserves the right to inspect any equipment or part which are claimed to have been defective in material or workmanship.

This Warranty does not apply to any part or product which in Great Plains' judgement shall have been misused or damaged by accident or lack of normal maintenance or care, or which has been repaired or altered in a way which adversely affects its performance or reliability, or which has been used for a purpose for which the product is not designed. This Warranty shall not apply if the product is towed at a speed in excess of 20 miles per hour.

Claims under this Warranty must be made to the dealer which originally sold the product and all warranty adjustments must be made through such dealer. Great Plains reserves the right to make changes in materials or design of the product at any time without notice.

This Warranty shall not be interpreted to render Great Plains liable for damages of any kind, direct, consequential, or contingent, to property. Furthermore, Great Plains shall not be liable for damages resulting from any cause beyond its reasonable control. This Warranty does not extend to loss of crops, losses caused by harvest delays or any expense or loss for labor, supplies, rental machinery or for any other reason.

No other warranty of any kind whatsoever, express or implied, is made with respect to this sale; and all implied warranties of merchantability and fitness for a particular purpose which exceed the obligations set forth in this written warranty are hereby disclaimed and excluded from this sale.

This Warranty is not valid unless registered with Great Plains Manufacturing, Incorporated within 10 days from the date of original purchase.

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