
Update Manual

7' & 10' End Wheel No-Till
Clutch Linkage

Great Plains
Manufacturing, Inc.

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General Information

Important Notice

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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 Number and the Date Purchased in the spaces provided below. Have this information before you when calling Great Plains Manufacturing, Inc.

This Operator's Manual applies to No-Till Drill Clutch Linkage Update Kit for:

Description	36' Drill
7' Seed Clutch Update	152-151A
7' Fert. NG Clutch Update	152-152A
10' Seed Clutch Update	152-154A
10' Fert. & NG Clutch Update	152-155A

Owner's Information

Name: _____

Phone _____

Address _____

Model Number _____

City _____ State _____ Zip _____

Date Purchased _____

Phone _____

Name of Dealership _____

Dealer's Name _____

Address _____

City _____ State _____ Zip _____

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Introduction

This manual has been prepared to instruct you in the safe and efficient operation of your Clutch Linkage Update Kit. Read and follow all instructions and safety precautions carefully.

The parts on your Clutch Linkage Update Kit have been specially designed and should only be replaced with genuine Great Plains parts. Therefore, should your Clutch Linkage Update Kit require replacement parts go to your Great Plains Dealer.

The right hand and left hand as used throughout this manual is determined by facing in the direction the machine will travel when in use unless otherwise stated.



The SAFETY ALERT SYMBOL indicates that there is a potential hazard to personal safety involved and extra safety precautions 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.

Watch for the following safety notations throughout your Operators Manual:



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.



WARNING!

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



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.

NOTE: Indicates a special point of information which requires your attention.

IMPORTANT: Indicates additional information is provided that is necessary to prevent possible damage to the equipment only.

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 lo-

cation. The parts sections are for reference only and don't require cover to cover reading. After reviewing the manuals store them in a dry, easily accessible location for your future reference.

Section 1 Safety Rules

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 manufacturers. Your Clutch Linkage Update Kit have been designed with many built-in safety features. However, no one should operate this product before carefully reading this Operators Manual.




General Operation & Repair




1. **DO NOT** exceed 20 mph transport speed.
2. Areas of this drill can be dangerous and can cause bodily harm if not properly used or guarded. Stay away from

equipment when it is in operation!

3. Before working on, servicing or making adjustments on the drill, ALWAYS disengage power, shut off engine, make sure all moving parts have stopped, and all pressure in the system is relieved.
4. Escaping fluid under pressure can have sufficient force to penetrate the skin. Check all hydraulic lines and hoses before applying pressure. Fluid escaping from a very small hole can be almost invisible. Use paper or cardboard, not body parts, to check for suspected leaks. If injured, seek medical assistance from a doctor that is familiar with this kind of injury. Foreign fluids in the tissue must be surgically removed within a few hours or gangrene will result.

Torque Values Chart for Common Bolt Sizes

Bolt Size (Inches)	Bolt Head Identification					
						
	N · m ²	ft-lb ³	N · m	ft-lb	N · m	ft-lb
1/4" - 20	7.4	5.6	11	8	16	12
1/4" - 28	8.5	6	13	10	18	14
5/16" - 18	15	11	24	17	33	25
5/16" - 24	17	13	26	19	37	27
3/8" - 16	27	20	42	31	59	44
3/8" - 24	31	22	47	35	67	49
7/16" - 14	43	32	67	49	95	70
7/16" - 20	49	36	75	55	105	78
1/2" - 13	66	49	105	76	145	105
1/2" - 20	75	55	115	85	165	120
9/16" - 12	95	70	150	110	210	155
9/16" - 18	105	79	165	120	235	170
5/8" - 11	130	97	205	150	285	210
5/8" - 18	150	110	230	170	325	240
3/4" - 10	235	170	360	265	510	375
3/4" - 16	260	190	405	295	570	420
7/8" - 9	225	165	585	430	820	605
7/8" - 14	250	185	640	475	905	670
1" - 8	340	250	875	645	1230	910
1" - 12	370	275	955	705	1350	995
1-1/8" - 7	480	355	1080	795	1750	1290
1 1/8" - 12	540	395	1210	890	1960	1440
1 1/4" - 7	680	500	1520	1120	2460	1820
1 1/4" - 12	750	555	1680	1240	2730	2010
	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

Bolt Size (Metric)	Bolt Head Identification					
						
	N · m	ft-lb	N · m	ft-lb	N · m	ft-lb
	4	3	6	5	9	7
	7	5	11	8	15	11
	17	12	26	19	36	27
	18	13	28	21	39	29
	33	24	52	39	72	53
	39	29	61	45	85	62
	58	42	91	67	125	93
	60	44	95	70	130	97
	90	66	105	77	145	105
	92	68	145	105	200	150
	99	73	155	115	215	160
	145	105	225	165	315	230
	155	115	240	180	335	245
	195	145	310	230	405	300
	220	165	350	260	485	355
	280	205	440	325	610	450
	310	230	650	480	900	665
	480	355	760	560	1050	780
	525	390	830	610	1150	845
	960	705	1510	1120	2100	1550
	1060	785	1680	1240	2320	1710
	1730	1270	2650	1950	3660	2700
	1880	1380	2960	2190	4100	3220

¹ in-tpi = nominal thread dia. in inches-threads per inch

² N · m = newton-meters

³ ft-lb = foot pounds

⁴ mm x pitch = nominal thread dia. in millimeters x thread pitch

Before You Start

Read and understand the owners manual for your Clutch Linkage Update Kit. A basic understanding of how the kit works will aid in the assembly, setup and operation of your drill.

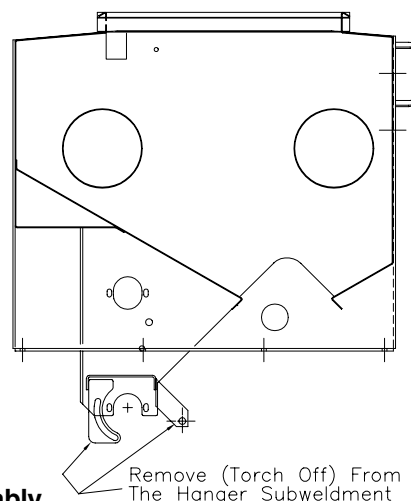
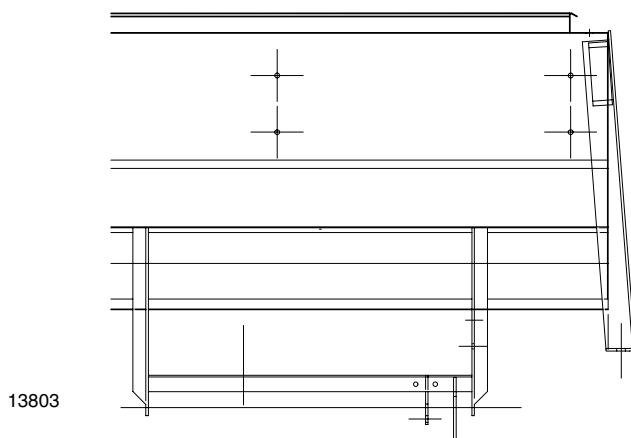
Before attempting to assemble the Clutch Linkage Update Kit, use the following as a checklist. Having all the needed parts and equipment readily at hand will speed up your assembly task and will make the job as safe as possible.

- Check for all kit components and hardware.
- If a bolt, pin or other component has been removed, or if you are unsure about where it is used, refer to the parts section of this manual to identify it.

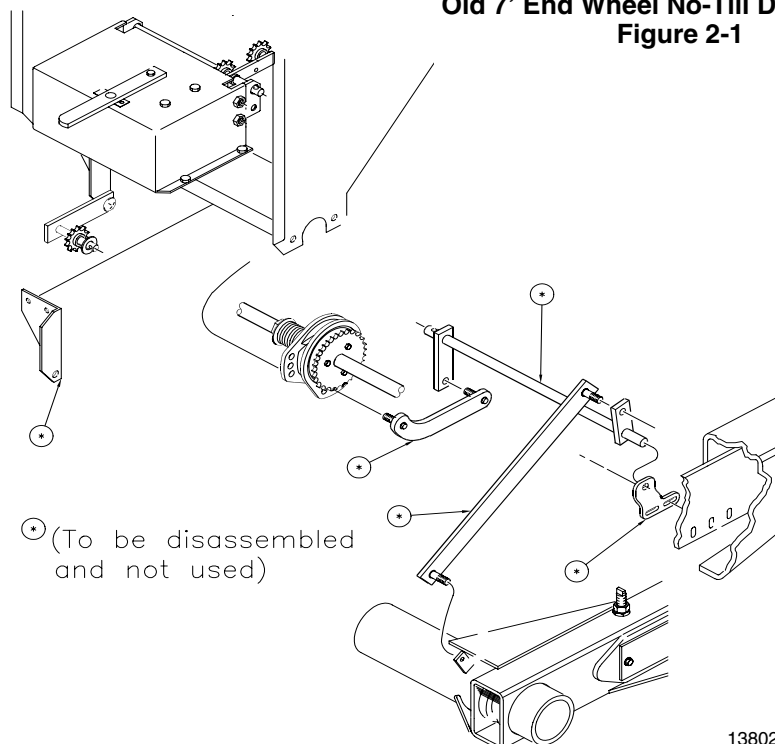
Old 7' End Wheel No-Till Clutch Linkage Disassembly

Refer to Figure 2-1:

Start by disassembling the clutch linkage. Unbolt the clutch shaft from the shaft supports, but leave the clutch assembly together. Refer to Figure 2-1 for what will not be used. After all the linkage is disassembled, torch off the clutch mounting tab and the clutch lever bracket from the hanger sub-weldment.



Old 7' End Wheel No-Till Disassembly
Figure 2-1



Parts Not Used
Figure 2-2

New 7' End Wheel No-Till Clutch Linkage Assembly

Refer to Figure 2-1:

Sliding the inside retaining washers (#22) and the pivot bushing (#8) onto the clutch rod weldment (#21). Then insert this assembly into the clutch rod support (#3) and add the pivot tube (#9), push arm (#5), outside retaining washers (#22) and cotter pins (#23) as shown. Fasten the clutch rod support (#3) to the hanger using 5/16"-18 x 1" bolts (#13), 5/16" washers & nuts, (#14,18,19) and a 3/8" x 1 1/4" bolt (#12) and 3/8" hardware (#16,21).

NOTE: The push arm (#5) must be in line with the arm on the clutch rod (#2).

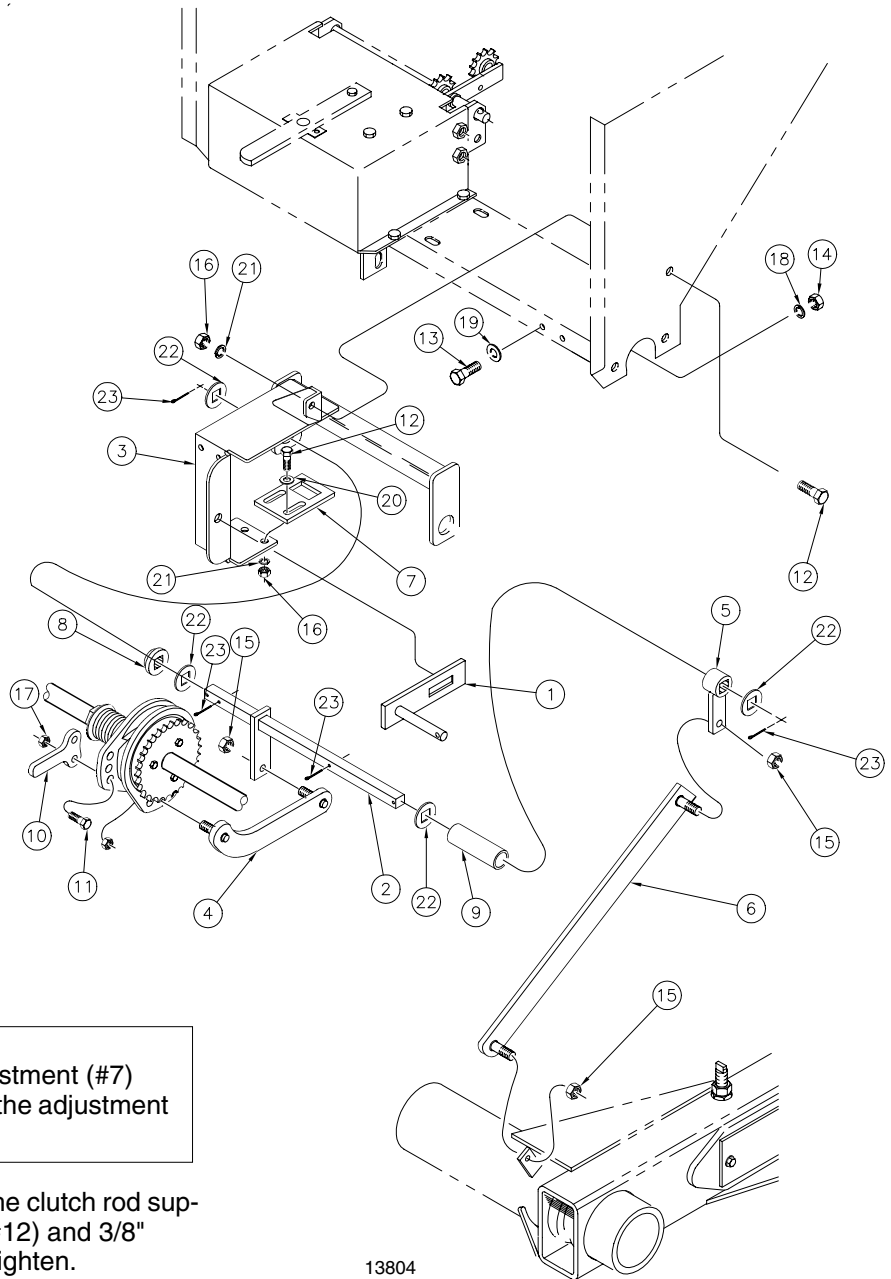
Attach the clutch arm (#6) to the mount tab on the gauge wheel and the clutch rod push arm (#5) using 3/8"-16 lock nuts (#15).

Fasten the clutch tab (#10) to the clutch slide plate using 3/8"-16 x 1" bolts (#11) with 3/8"-16 Nylock nuts (#17).

NOTE: Assemble the clutch tab adjustment (#7) with the ear of the clutch tab (#10) in the adjustment slot.

Add the clutch tab adjustment (#7) to the clutch rod support (#3) using 3/8"-16 x 1 1/4" bolts (#12) and 3/8" hardware (#16,20,21) but do not fully tighten.

Attach the link pull arm (#4) to the clutch and to the clutch rod (#2) with a 3/8"-16 Nylock nut (#15). Adjust the tab plate (#7) to correctly engage/disengage the clutch assembly during normal field operations. This can be done by raising and lowering the hydraulics and carefully watching the engaging/disengaging of the clutch. After it is adjusted, tighten the adjustment plate (#7) in place.



New 7' End Wheel No-Till Clutch Linkage Assembly
Figure 2-3

Before You Start

Read and understand the owners manual for your Clutch Linkage Update Kit. A basic understanding of how the kit works will aid in the assembly, setup and operation of your drill.

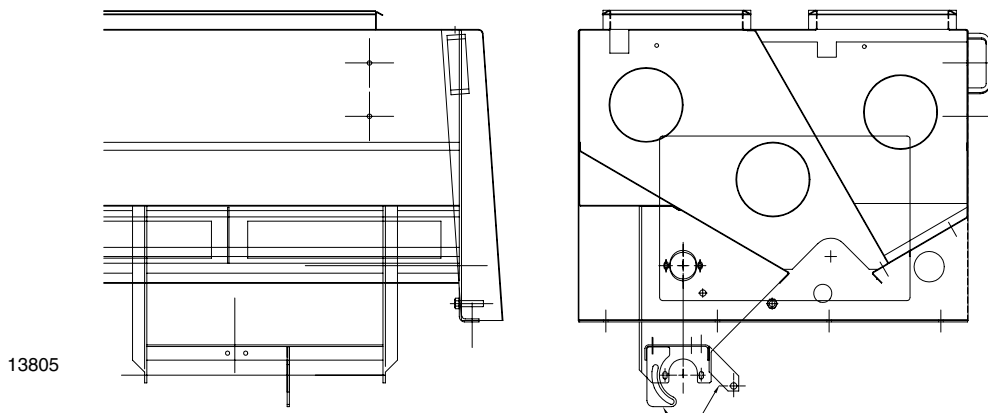
Before attempting to assemble the Clutch Linkage Update Kit, use the following as a checklist. Having all the needed parts and equipment readily at hand will speed up your assembly task and will make the job as safe as possible.

- Check for all kit components and hardware.
- If a bolt, pin or other component has been removed, or if you are unsure about where it is used, refer to the parts section of this manual to identify it.

Old 10' End Wheel No-Till Clutch Linkage Disassembly

Refer to Figure 2-4:

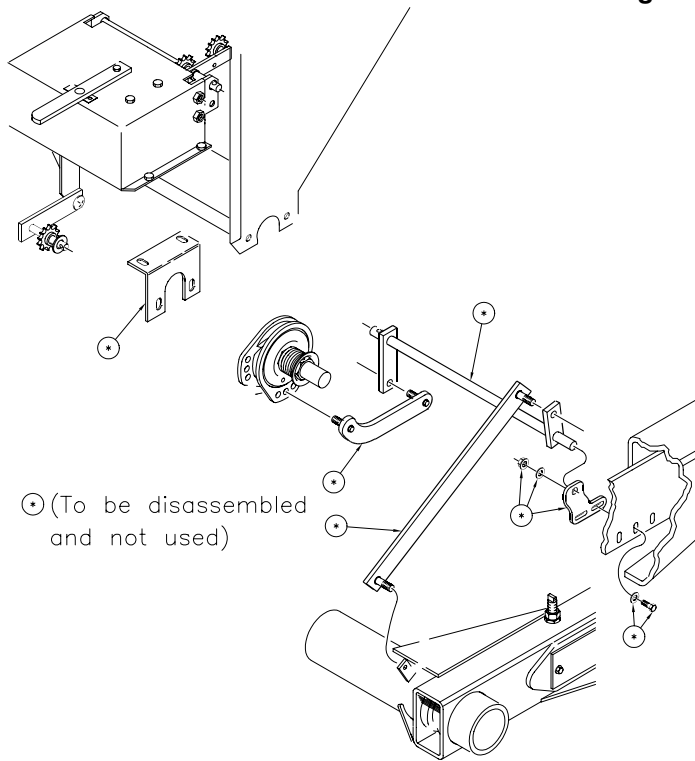
Start by disassembling the clutch linkage. Unbolt the clutch shaft from the shaft supports, but leave the clutch assembly together. Refer to Figure 2-5 for what will not be used. After all the linkage is disassembled, torch off the clutch mounting tab and the clutch lever bracket from the hanger sub-weldment.



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**Old 10' End Wheel No-Till Disassembly
Figure 2-4**

Remove (torch off) From
The Hanger Subweldment



⊙ (To be disassembled and not used)

**Parts Not Used
Figure 2-5**

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New 10' End Wheel No-Till Clutch Linkage Assembly

Refer to Figure 2-6:

Attach the clutch mounting plate (#8) to the bottom of the hanger sub-weldment using the existing hardware that fastens the gearbox on. Then fasten the clutch rod support (#5) to the hanger using 5/16"-18 x 1" bolts (#13), 5/16" washers, & nuts. (#14,18,22). Pre-assemble the clutch rod weldment (#4), and inside cotter pin (#23). Slide the inside retaining washers (#21) & pivot bushing (#7) onto the clutch rod. Insert this assembly into the hole of the mounting plate (#8) and rod supports (#5). Hold this in place with a retaining washer (#21) and cotter pin (#23). Slip the clutch rod spacer (#9) over the outside end of the clutch rod and through the support plate. Retain it in place with the rod push arm, (#2) retaining washer (#21) and cotter pin (#23).

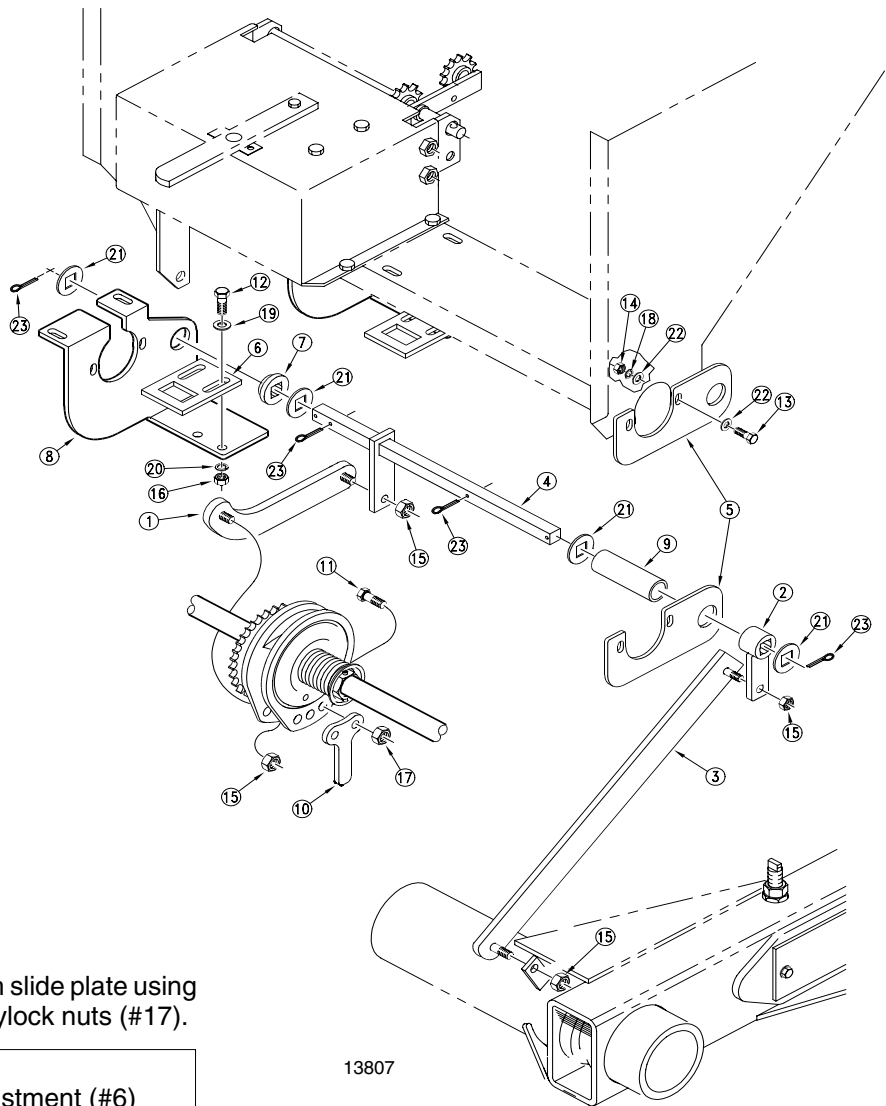
NOTE: The push arm (#2) must be in line with the arm on the clutch rod (#4).

Fasten the clutch tab (#10) to the clutch slide plate using 3/8"-16 x 1" bolts (#11) with 3/8"-16 Nylock nuts (#17).

NOTE: Assemble the clutch tab adjustment (#6) with the ear of the clutch tab (#10) in the adjustment slot.

Add the clutch tab adjustment (#6) to the clutch mounting plate (#8) using 3/8"-16 x 1 1/4" bolts (#12) and 3/8" hardware (#16,19,20) but do not fully tighten.

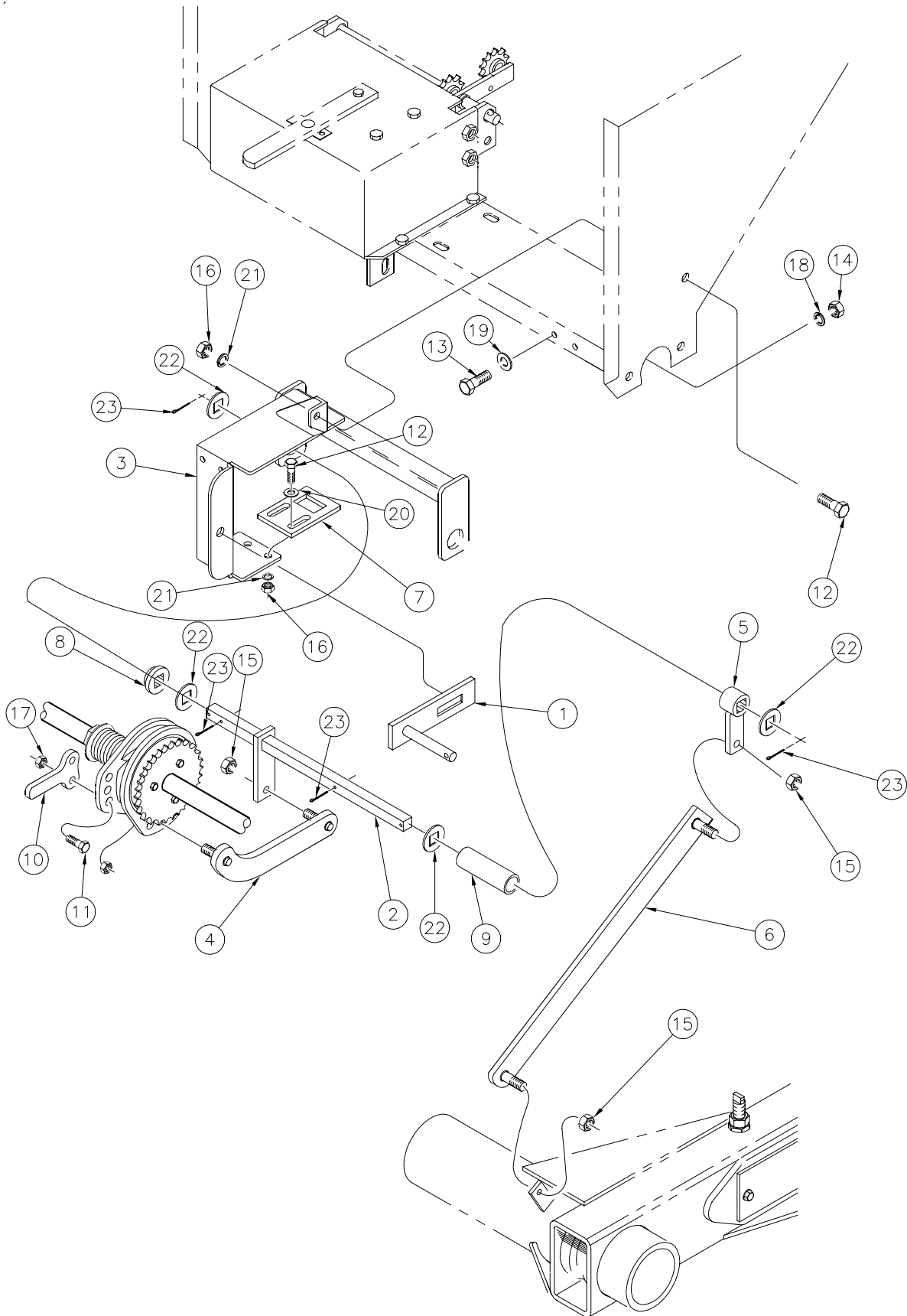
Attach the link pull arm (#1) to the clutch and to the clutch rod (#4) with a 3/8"-16 Nylock nut (#17). Adjust the tab plate (#6) to correctly engage/disengage the clutch assembly during normal field operations. This can be done by raising and lowering the hydraulics and carefully watching the engaging/disengaging of the clutch. After it is adjusted, tighten the adjustment plate (#6) in place.



**New 10' End Wheel No-Till Clutch Linkage Assembly
Figure 2-6**

Notes:

Section 3 7' EWNT Clutch Linkage Update Assembly



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Section 3 7' EWNT Clutch Linkage Update Assembly

Ref.	Part No.	Part Description
1.	123-832H	Slotted Idler Arm 1/2" x 2 13/16"
2.	152-143H	7' Clutch Rod
3.	152-144H	7' Clutch Rod Support
4.	152-145H	7' Clutch Link Pull Arm
5.	152-147H	7' & 10' Clutch Rod Push Arm
6.	152-149H	7' & 10' Clutch Arm Seed Only
	152-148H	7' & 10' Clutch Arm Fertilizer, NG
7.	152-305D	7' & 10' Clutch Tab Adjust
8.	152-306D	Clutch Rod Pivot Bushing
9.	152-308D	Clutch Rod Spacer
10.	152-262D	Clutch Engage Arm
11.	802-017C	Bolt, Hex Head 3/8"-16 x 1" Long
12.	802-079C	Bolt, Hex Head 3/8"-16 x 1 1/4" Long
13.	802-159C	Bolt, Hex Head 5/16"-18 x 1" Long
14.	803-008C	Nut, Hex 5/16"-18
15.	803-013C	Nut, Lock 3/8"-16
16.	803-014C	Nut, Hex 3/8"-16
17.	803-078C	Nut, Lock 3/8"-16 Nylon Insert
18.	804-009C	Washer, Lock Spring 5/16"
19.	804-010C	Washer, Flat 5/16" USS
20.	804-012C	Washer, Flat 3/8" SAE
21.	804-013C	Washer, Lock Spring 3/8"
22.	804-031C	Washer, Retaining
23.	805-019C	Pin, Cotter 5/32" x 1" Long

Section 3 10' EWNT Clutch Linkage Update Assembly

Ref.	Part No.	Part Description
1.	152-146H	10' Clutch Link Pull Arm
2.	152-147H	7' & 10' Clutch Rod Push Arm
3.	152-149H	7' & 10' Clutch Arm Seed Only
	152-148H	7' & 10' Clutch Arm Fertilizer & Native Grass
4.	152-150H	10' Clutch Rod
5.	152-297D	10' Clutch Rod Support Mount
6.	152-305D	7' & 10' Clutch Tab Adjust
7.	152-306D	Clutch Rod Pivot Bushing
8.	152-307D	10' Clutch Tab Adj Mount
9.	152-308D	Clutch Rod Spacer
10.	152-262D	Clutch Engage Arm
11.	802-017C	Bolt, Hex Head 3/8"-16 x 1" Long
12.	802-079C	Bolt, Hex Head 3/8"-16 x 1 1/4" Long
13.	802-159C	Bolt, Hex Head 5/16"-18 x 1" Long
14.	803-008C	Nut, Hex 5/16"-18
15.	803-013C	Nut, Lock 3/8"-16
16.	803-014C	Nut, Hex 3/8"-16
17.	803-078C	Nut, Lock 3/8"-16 Nylon Insert
18.	804-009C	Washer, Lock Spring 5/16"
19.	804-012C	Washer, Flat 3/8" SAE
20.	804-013C	Washer, Lock Spring 3/8"
21.	804-031C	Washer, Retaining
22.	804-036C	Washer, Flat 5/16" SAE
23.	805-019C	Pin, Cotter 5/32" x 1" Long

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