

Installation Instructions



40' No-Till Drill Lock Upgrade

Used with:

- 3N-40P
- 3N-40F



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!

General Information

These instructions explain how to install the 40P and 40F Lock Upgrade Kit.

These instructions apply to:

- | | |
|----------|--------------------------------|
| 196-375A | 40P,40F LOCK UPGRADE 04 |
| 196-382A | 40P,40F LOCK UPGRADE 04 NO MRK |

Manual Update

Refer to the 40' No-Till Drill operator's manual for detailed information on safely operating, adjusting, troubleshooting and maintaining the gauge wheel lock. Refer to the parts manual for part identification.

- | | |
|----------|-------------------|
| 196-286M | Operator's Manual |
| 196-286P | Parts Manual |
| 196-359M | Operator's Manual |
| 196-359P | Parts Manual |

Before You Start

Page 11 and 12 are a detailed listing of parts included in the Lock Upgrade package. Use this list to inventory parts received.

Tools Required

- Welder
- Basic hand tools

Definitions

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.

Assembly Instructions

Swivel Lock Assembly

Refer to Figure 1

1. Remove spring from swivel lock assembly and discard.
2. Disassemble the swivel lock slot link (1) and retain for reuse.
3. Leaving cylinder pinned, pull cylinder out of the way. Use wire to hold hydraulic hoses out of the way for welding purposes.
4. Make sure swivel locks are disengaged from the lock plate.
5. Remove the old swivel lock assembly (2) and discard.

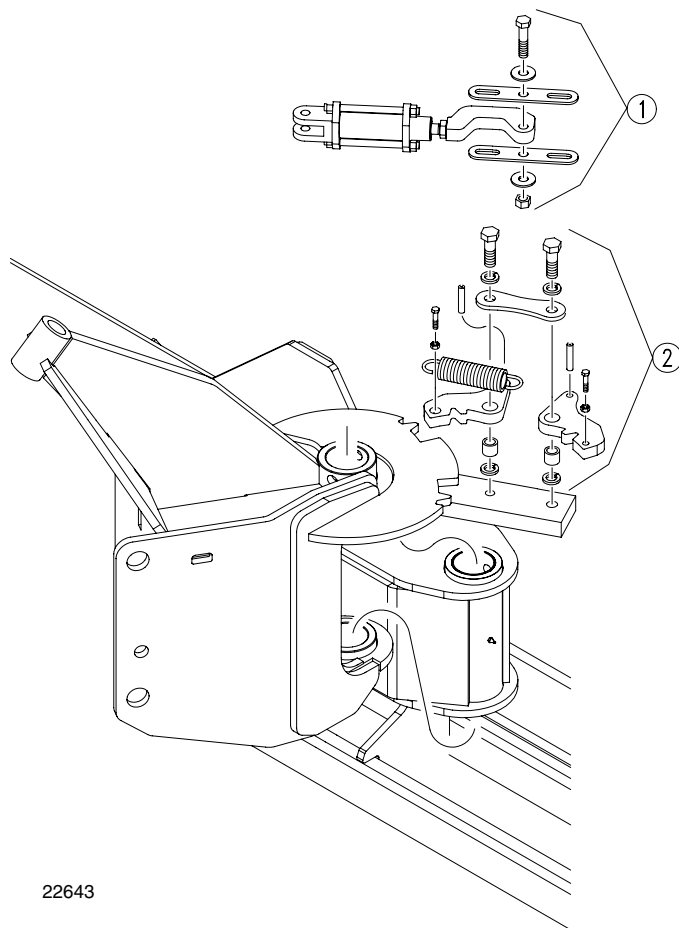


Figure 1
Remove Old Lock Assembly

Refer to Figure 2

6. Use the 7/8" x 1 1/2" bolt (1) to hold the 7/8" round nut (2) to the bottom side of the three hole weld template (3). Place nut so the concave of the template will face away from the center of the gauge wheel swivel as shown.
7. Use the two 7/8" x 2 3/4" bolts (4) through the weld template (3) to hold the round nut (2) firmly against the gauge wheel swivel mount plate. Weld the round nut (2) in place on the mounting plate. Remove the 7/8" bolts (1) and (4) and the weld template (3) after weld has cooled.
8. Use the green spray paint supplied in the kit to touch up the weld area.

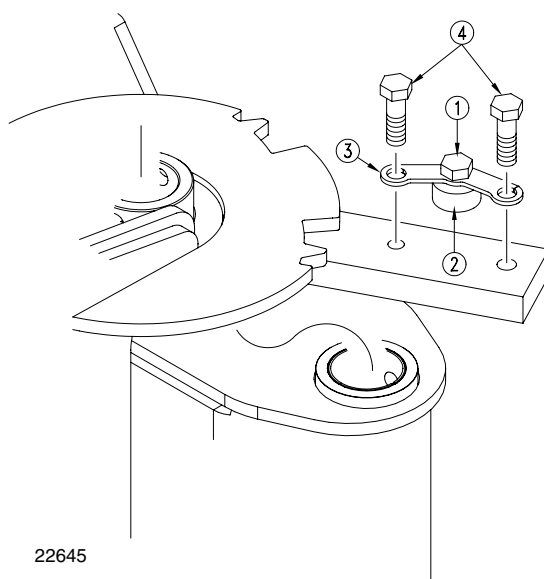


Figure 2
Weld Round Nut

Refer to Figure 3

9. Press the 1/2" x 2 1/2" spiral pins (1) into the swivel lock lugs. Press until equal amounts of pin extend out on both sides of the lug.
10. Attach the long tube (2) to two of the lugs using 3/8" x 2" bolts, 3/8" flat washers and 3/8" lock washers. Orientate the tubes so they will be located towards the center of the wing when installed on the drill.
11. Insert one of the short tube (3) into one of the spring anchor angles (4). Attach the angles to the lug using 3/8" x 1" bolts, 3/8" flat washers and 3/8" lock washers. Orientate the angles so they will be located towards the outside of the wing when installed on the drill.

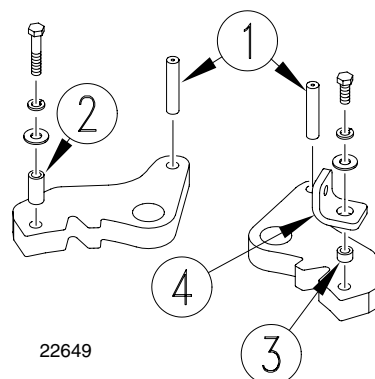


Figure 3
Install Pins and Angle

Refer to Figure 4

12. Remove the cotter pin (1) from the castle nut (2) on the bottom of the gauge wheel pivot pin and loosen castle nut.
13. Loosen the pin locking bolt (3) and insert the slotted tab hose loop (4) behind the head of the bolt and retighten bolt.
14. Retighten castle nut (2) and reinsert the cotter pin (1).
15. Route the hoses going to the lift cylinder and caster swivel lock cylinder through the hose loop.

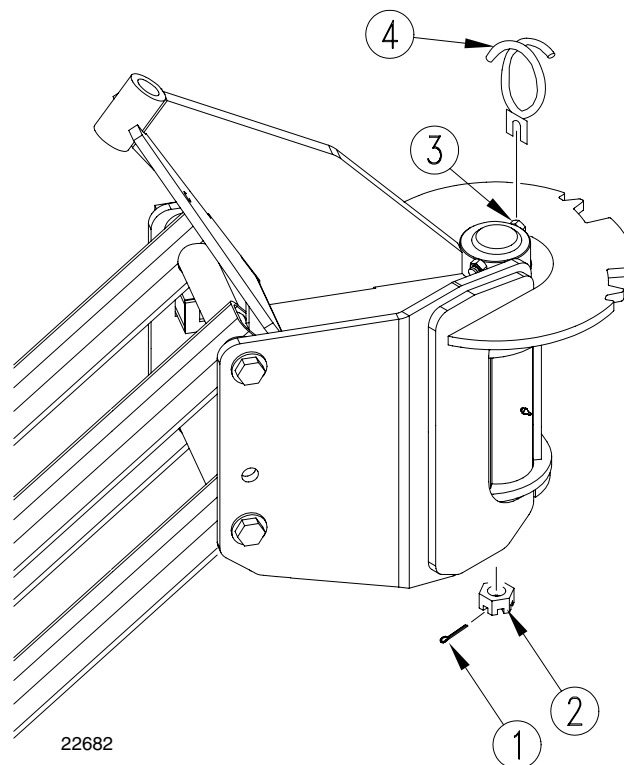


Figure 4
Hose Loop

Refer to Figure 5

NOTE: Left-hand side is shown, right-hand side will be reversed.

16. Insert the 1 1/4" round tubes (1) into the swivel lock lugs (2). Place lugs on the mounting plates, centering round tubes over the threaded holes. Be sure and orient the lugs so the lug with the anchor angles are facing away from the center of the wing as shown.
17. Place the swivel lock spreader links (3) over the lugs and secure in place with 7/8" x 2 3/4" bolts and 7/8" lock washers through the outside holes. Place the 7/8" x 1 1/2" bolt and 7/8" lock washer through the center hole into the round nut previously welded in place.
18. Release the cylinder hoses.
19. Reassemble the swivel lock link removed in step 2 on page two.
20. Slide one end of the spring (6) over the long tube installed in step 9 above and hook the other end into the eye bolt (7). Insert the end of eye bolt into the anchor angle installed in step 11 on page 3. Thread on a 3/8" nut and tighten nut until you run out of threads.

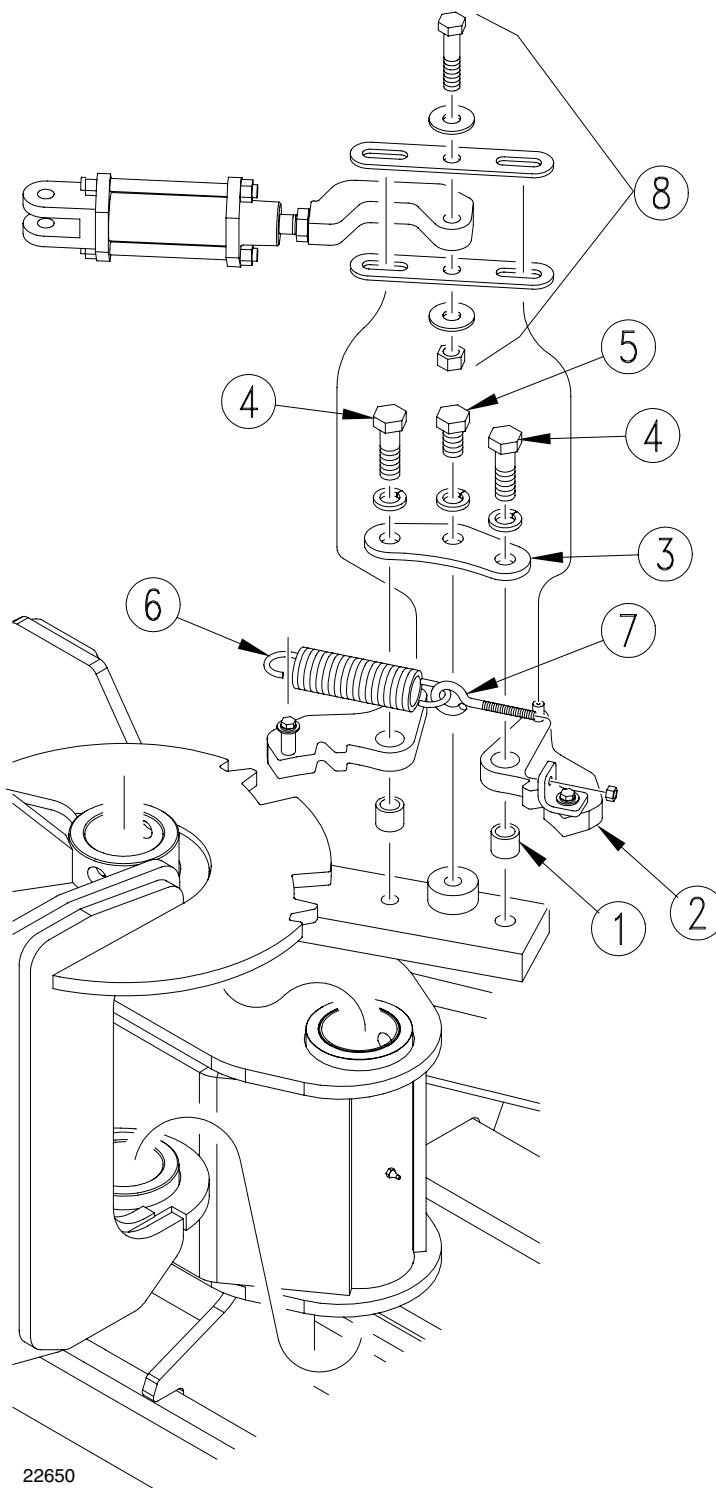


Figure 5
Install New Lock Assembly

Toolbar Lock Arm Assembly

Refer to Figure 6

1. With the drill in the folded position remove and discard the bolt, washers and nut from the toolbar lock arm weldment. Remove and discard the lock latch assembly.
2. Remove and keep for reuse the two pins and their flat washers from the toolbar lock arm weldment. Discard the toolbar lock arm weldment.

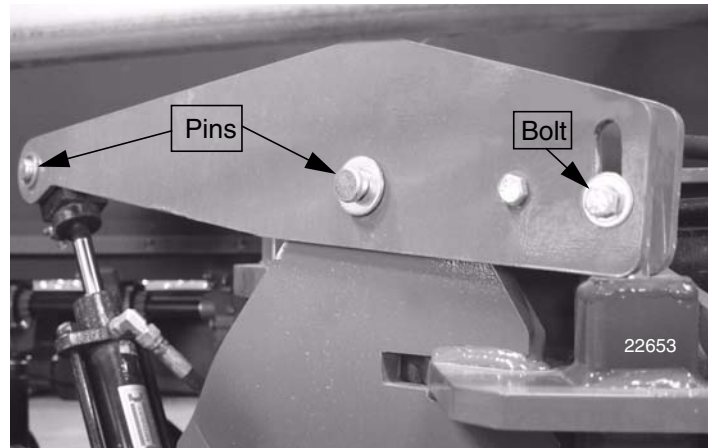


Figure 6
Remove Old Lock Arm Assembly

Refer to Figure 7

3. Insert the new lock latch into the tube to check for freedom of travel. Insert latch with the tapered side facing towards the front of the drill. Push the latch all the way up until the bottom of the latch is flush with the bottom of the tube. If it does not go all the way freely without binding it will be necessary to enlarge the opening in the top of the tube with a file or die grinder.

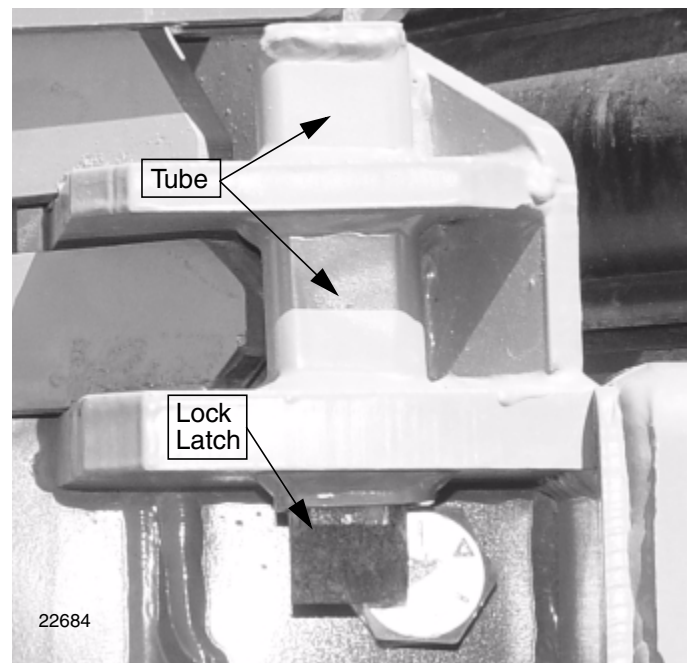


Figure 7
Lock Latch

6 Lock Upgrade

Refer to Figure 8

4. Install the new toolbar lock arm weldment using the pins and washers removed in step 2 on page 5.

NOTE: If weldment does not move freely it will be necessary to loosen the 3/8" bolt and lock nut just enough to allow for free travel of weldment.

5. **Insert the new lock latch from the bottom making sure the tapered side is facing towards the front of the drill.**
6. Add the 3/4" flat washer, 3/4" hex nut and 3/4" jam nut. Thread the nuts on until there are a few threads coming out of the top of the jam nut.
7. Work the spring into place between the jam nut and the top of the open jaw of the toolbar lock arm weldment.

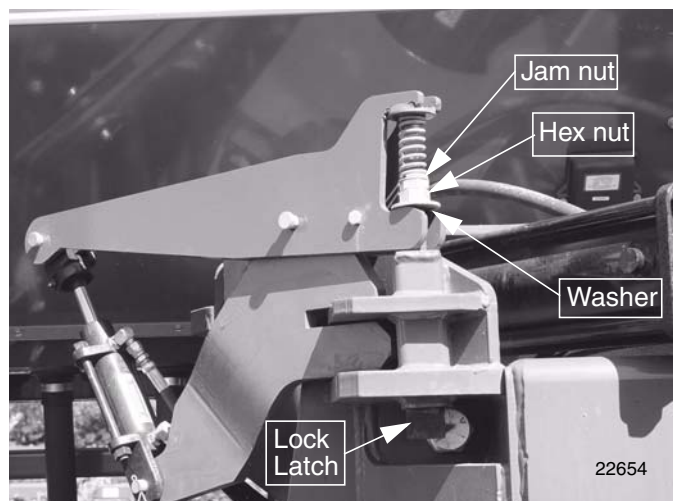


Figure 8
Install New Lock Arm Assembly

Refer to Figure 9

8. Set the nuts so there will be 1/8" of the lock latch visible below the bottom surface of the lock mount tube when the lock is in the up position (cylinder retracted).

NOTE: This is a starting point and may need to be adjusted per individual drill.

Adjust the lock so it clears the toolbar jug when up, but engages as deep as possible into the toolbar lug when down.

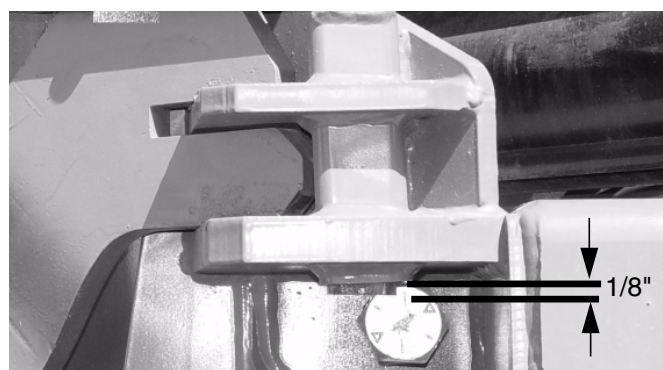


Figure 9
Set Lock Latch

Hydraulic Hoses

1. With drill unfolded, disconnect the hydraulic hoses from the selector valve going to the marker sequence valve and discard.
2. Disconnect the hoses which are coming from the tractor to the selector valve and connect them to the sequence valve. Do not unclamp hoses from drill frame.
3. Attach the two new 336" hoses to the selector valve at the two ports where the hoses coming from the tractor were located. Use the following procedure for routing the hoses along the frame to the tractor.
 - a. Starting at the selector valve route the two hoses next to the hoses coming from the Veris Drive.
 - b. Leave the same amount of slack in the new hoses as there is in the other hoses.
 - c. Loosen the first clamp, remove the old hoses and place the new hoses under clamp and re-tighten clamp.

NOTE: Do not loosen more than one clamp at a time as it is difficult to get the hoses back in place with the necessary amount of slack to allow for wing folding.

- d. Route the hoses to the next clamp down the line from the selector valve and loosen clamp and place hoses under clamp. Retighten clamp.
- e. Continue with this procedure down the length of the drill frame and tongue until you reach the last clamp. Remember to leave the same amount of slack that is in the other hoses and to work one clamp at a time.

NOTE: Transfer the quick couplers from the hoses being removed to the new hoses.

Refer to Figure 10

4. Connect the two 168" hoses to the selector valve at the two ports where the hoses going to the sequence valve were located.

IMPORTANT: Connect the hose labeled "P" to the port directly in-line with the port for the hose going to the base end of the lock cylinders.

5. Route the hoses to the Veris drive using the same routing procedure described above.
6. Connect the hose labeled "P" to the pressure side of the Veris system.

NOTE: Run Veris drive before activating the swivel lock cylinders to remove air from the system. Bleed the lock cylinders as per instructions in the operator's manual.

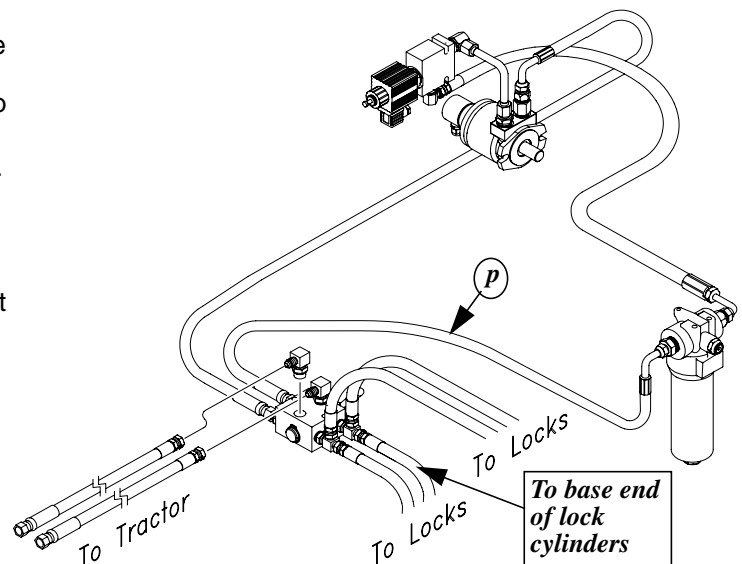


Figure 10
Veris Hoses

22651

Depth Control Assembly

Refer to Figure 11

1. Remove bolts which attach the depth control valve to the mounting bracket and save bolts for reuse. Pull depth control valve out of the way. There is no need to disconnect the hydraulic lines going to the valve.

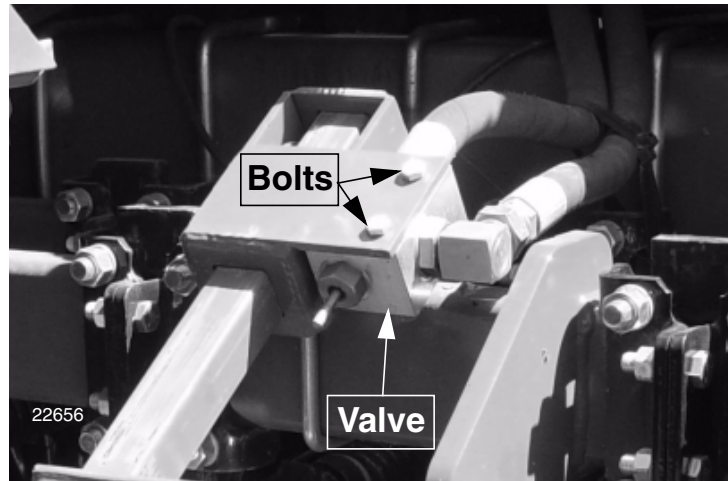


Figure 11
Remove Depth Control Valve

Refer to Figure 12

2. Remove the stroke control assembly keeping the adjusting knob, paddle weldment, pivot bolt and the two U-bolts for reuse.

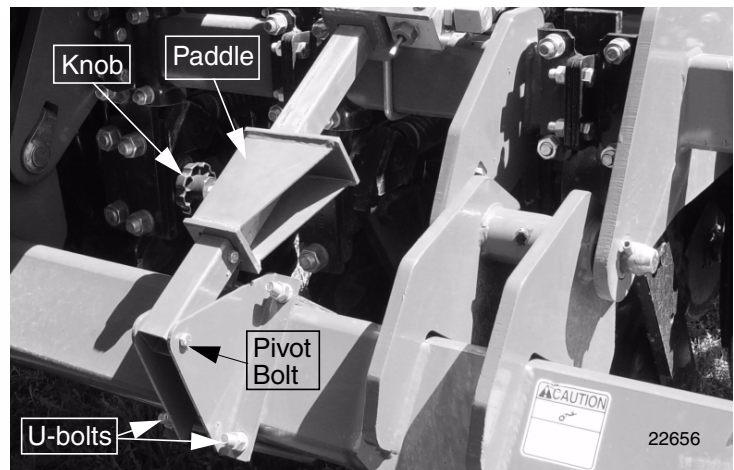


Figure 12
Remove Old Assembly

Refer to Figure 13

3. Assemble the new depth control as shown.

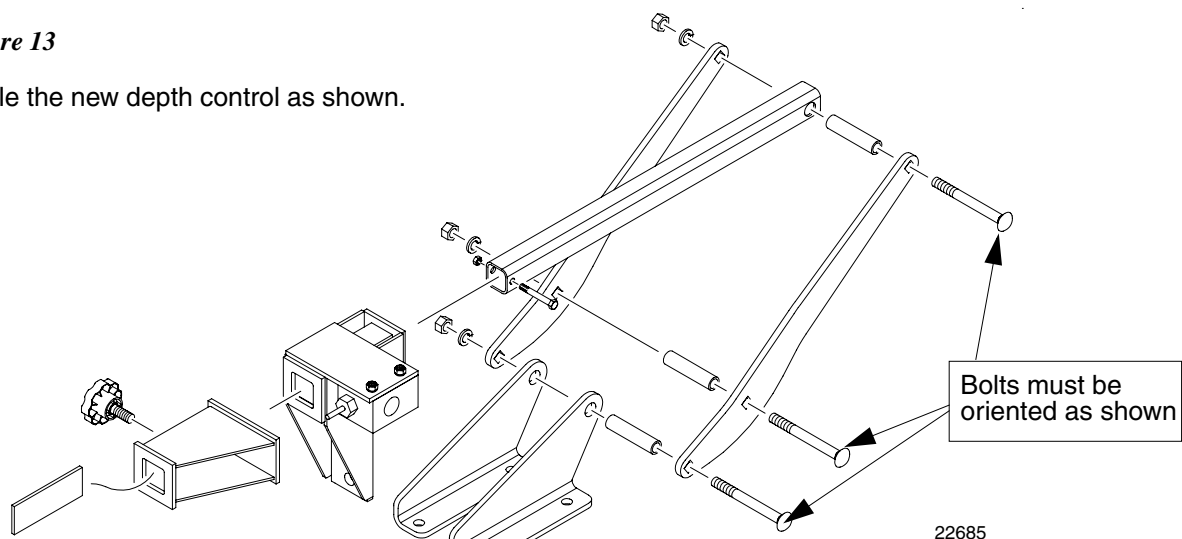


Figure 13
Depth Control Assembly

Refer to Figure 14

4. Install the new depth control assembly in place of the old assembly reusing the hardware removed in the previous steps.

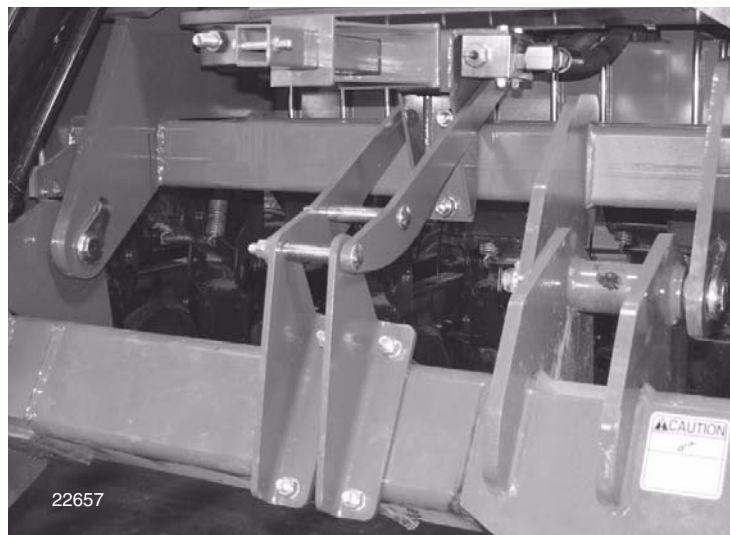


Figure 14
Install New Assembly

Refer to Figure 15

5. Insert the spacer bar inside the paddle weldment trapping it between the slide tube and knob screw before placing paddle on slide tube.

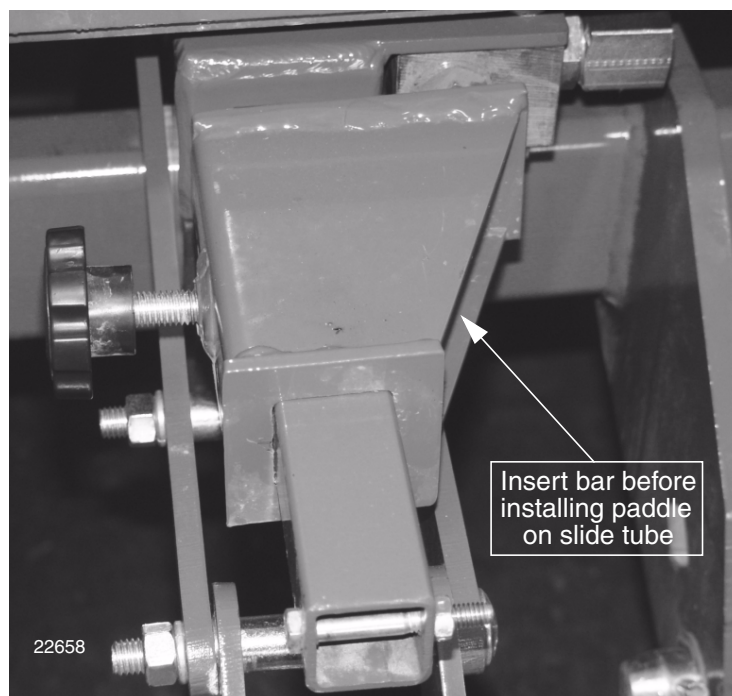


Figure 15
Insert Bar in Paddle

Hose Guide

Refer to Figure 16

Install hose guides on each wing between the clutch mounting frames and under the hydraulic hoses as shown.

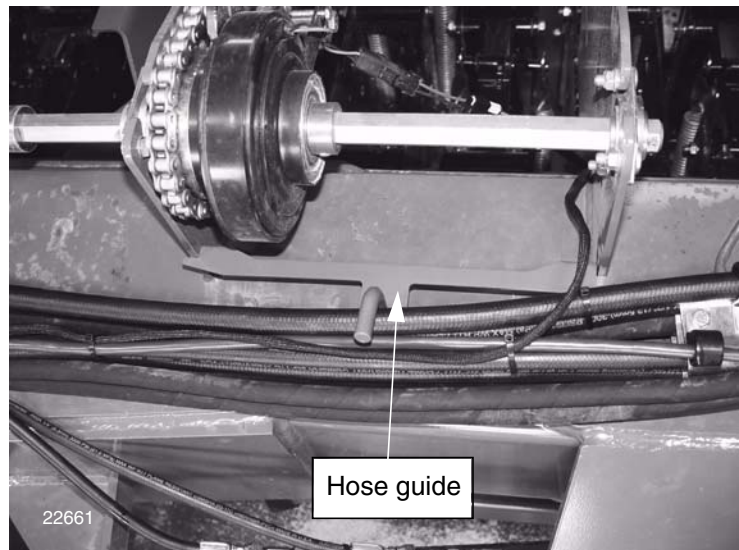


Figure 16
Install Hose Guide

196-375A 40P, 40F Lock Upgrade 04

Your kit includes:

Qty.	Part No.	Part Description
2	123-320D	BOX MOUNTING TUBE
2	160-019H	HOSE LOOP 2 5/8 WITH TAB OPENCURL
2	196-377H	TOOLB LOCK ARM WELDM
1	196-378M	MANUAL 40P 2003,04 LOCK UP
2	196-380H	HOSE GUIDE 40P CLUTCH
1	196-381H	DEPTH VALVE MOUNT
4	196-856D	GW SWIVEL LOCK LUG
2	196-859D	GW SWIVEL LOCK SPREADER LINK
2	196-888D	NUT RND 7/8-9 2.25 OD 1.03 LG
2	196-889D	SPRING ANCHOR ANGLE
4	196-891D	TUBE RND 1 1/4OD X 3/16 X 1.05
2	196-896D	TOOLBAR LOCK BAR
1	196-897D	GW SWIVEL 3 HOLE FIELD WELD PLT
2	196-904D	DEPTH STOP CURVED LINK PLATE
1	196-905D	DEPTH STOP SLIDE TUBE
3	196-906D	TUBE RND CREW 3/4 OD X 12G X 3.25
2	196-907D	DEPTH STOP TUBE BRACKET
1	196-911D	BAR FLT HR 3/16 X 1 3/4 X 4.86
2	402-037D	SLEEVE IDLER PIVOT
2	802-017C	HHCS 3/8-16 X 1 GR5
2	802-143C	HHCS 3/8-16 X 2 GR5
4	802-275C	HHCS 7/8-9 X 2 3/4 GR8
2	802-382C	HHCS 3/8-16 X 2 1/4 GR5
3	802-463C	RHSNB 1/2-13 X 5 GR5
2	802-622C	HHCS 7/8-9 X 1 1/2 GR5
2	802-674C	CLOSED EYE BOLT 3/8-16 X 4 1/2
2	803-013C	NUT LOCK 3/8-16 PLT
2	803-014C	NUT HEX 3/8-16 PLT
3	803-020C	NUT HEX 1/2-13 PLT
2	803-021C	NUT HEX 5/8-11 PLT
2	803-027C	NUT HEX 3/4-10 PLT
2	803-048C	NUT HEX JAM 3/4-10 PLT
4	804-011C	WASHER FLAT 3/8 USS PLT
4	804-013C	WASHER LOCK SPRING 3/8 PLT
3	804-015C	WASHER LOCK SPRING 1/2 PLT
2	804-022C	WASHER LOCK SPRING 5/8 PLT
2	804-024C	WASHER FLAT 3/4 USS PLT
6	804-037C	WASHER LOCK SPRING 7/8 PLT
4	805-037C	PIN SPIROL 1/2 X 2 1/2 PLAIN
1	806-019C	U-BOLT 5/8-11 X 4 1/32 X 3 3/8
2	807-007C	SPRING LEVER
2	807-113C	SPRING EXT 1 7/8OD X 8 3/8 X .25W
2	811-063C	EL 3/4MJIC 3/4MORB
2	811-088C	AD 3/4MORB 3/4MJIC
2	811-249C	TE 9/16MJIC 9/16MJIC 3/4MO
1	821-001C	PAINT GP GREEN SPRAY CAN
2	841-056C	HH1/2R1 336 3/4MORB 3/4FJI
2	VER-2M3K	HH 1/2 M3K 3/4F JIC 3/4F JIC 90 X 168

196-382A 40P, 40F Lock Upgrade 04 No Mrk

Your kit includes:

Qty.	Part No.	Part Description
2	VER-25390	HH1/2M3K 3/4FJIC 3/4FJIC90
2	123-320D	BOX MOUNTING TUBE
2	160-019H	HOSE LOOP 2 5/8 W TAB OPEN
2	196-377H	TOOLB LOCK ARM WELDM
1	196-378M	MANUAL 40P 2003.04 LOCK UP
2	196-380H	HOSE GUIDE 40P CLUTCH
1	196-381H	DEPTH VALVE MOUNT
4	196-856D	GW SWIVEL LOCK LUG
2	196-859D	GW SWIVEL LOCK SPREADER LI
1	196-862D	SELECTOR VALVE MOUNT STRAP
2	196-888D	NUT RND 7/8-9 2.25 OD 1.03
2	196-889D	SPRING ANCHOR ANGLE
4	196-891D	TUBE RND 1 1/4ODX3/16X1.05
2	196-896D	TOOLBAR LOCK BAR
1	196-897D	GW SWIVEL 3HOLE FIELD WE
2	196-904D	DEPTH STOP CURVED LINK PLA
1	196-905D	DEPTH STOP SLIDE TUBE
3	196-906D	TUBE RND CREW 3/4ODX12GX3.
2	196-907D	DEPTH STOP TUBE BRACKET
1	196-911D	BAR FLT HR 3/16X1 3/4X4.88
2	402-037D	SLEEVE IDLER PIVOT
6	800-082C	CABLE TIE .31X21.5 6DIA 12
4	802-017C	HHCS 3/8-16X1 GR5
2	802-024C	HHCS 3/8-16X3 GR5
2	802-143C	HHCS 3/8-16X2 GR5
4	802-275C	HHCS 7/8-9X2 3/4 GR8
2	802-382C	HHCS 3/8-16X2 1/4 GR5
3	802-463C	RHSNB 1/2-13X5 GR5
2	802-622C	HHCS 7/8-9X1 1/2 GR5
2	802-674C	CLOSED EYE BOLT 3/8-16X4
2	803-013C	NUT LOCK 3/8-16 PLT
6	803-014C	NUT HEX 3/8-16 PLT
3	803-020C	NUT HEX 1/2-13 PLT
2	803-021C	NUT HEX 5/8-11 PLT
2	803-027C	NUT HEX 3/4-10 PLT
2	803-048C	NUT HEX JAM 3/4-10 PLT
6	804-011C	WASHER FLAT 3/8 USS PLT
8	804-013C	WASHER LOCK SPRING 3/8 PLT
3	804-015C	WASHER LOCK SPRING 1/2 PLT
2	804-022C	WASHER LOCK SPRING 5/8 PLT
2	804-024C	WASHER FLAT 3/4 USS PLT
6	804-037C	WASHER LOCK SPRING 7/8 PLT
4	805-037C	PIN SPIROL 1/2X2 1/2 PLAIN
1	806-019C	U-BOLT 5/8-11 X 4 1/32 X 3
2	807-007C	SPRING LEVER
2	807-113C	SPRING EXT 1 7/8ODX8 3/8X.
1	810-274C	DOUBLE SELECTOR VALVE 3/4F
2	811-063C	EL 3/4MJIC 3/4MORB
2	811-088C	AD 3/4MORB 3/4MJIC
2	811-249C	TE 9/16MJIC 9/16MJIC 3/4MO
2	816-480C	HOSE WRAP 3.0-4.5 X 24LG V
1	821-002C	PAINT GP BLACK SPRAY CAN
2	841-056C	HH1/2R1 336 3/4MORB 3/4FJI