

## FORD NEW HOLLAND INSTALLATION INSTRUCTIONS

3-POINT HITCH KIT PART NO. 86070394 (FOR TRACTORS WITH A PTO)

PART NO. 86070393 (FOR TRACTORS WITH-OUT A PTO)

TRACTORS 9280, 9480, 9680 and 9880

### **APPROXIMATE INSTALLATION TIME - 10 TO 12 HOURS**

The 3-Point Hitch Kit is designed to mount on Ford Versatile 9080 series tractors. It allows the tractor to utilize 2 and 3-point attached implements, increasing the versatility of the tractor. The hitch is classified as a Category IV Narrow (Cat IVN), but can be converted to accept Category III Wide (Cat IIIW) implements. The following chart gives dimensions for Cat IIIW and Cat IVN hitches:

| CATEGORY             | IIIW/IVN        |
|----------------------|-----------------|
| Upper Link Pin Dia   | 1.75 in.(45 mm) |
| Lift Link Pin Dia.   | 2.00 (51 mm)    |
| Width at hitch point | 36.18 (919 mm)  |



FIGURE 1

Reprinted

This procedure assumes a Cat IVN installation. To convert from Cat IVN to Cat III, the top link and lower links will be reversed. See your Operator's Manual for a detailed description of conversion procedures.

Once installed, the 3-point hitch can be controlled from the cab by a combination of switches and potentiometers. The lift rate is controlled by adjusting the flow control at the remote valve.

For a detailed description of the 3-point hitch controls, see your Operator's Manual.

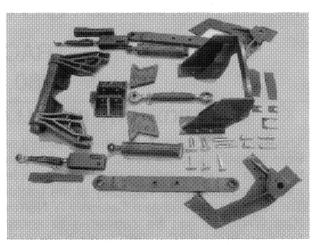
#### SAFETY

According to National Safety Council statistics, many people die or suffer serious injury each year as a result of needless farm accidents. Don't become a statistic.

Develop safe work habits. Put SAFETY FIRST in all work procedures.

The 3-Point hitch kits consist of the following:

| Qty.                            | Part No.               | Description                    |
|---------------------------------|------------------------|--------------------------------|
| 1                               | V55488                 | Bracket, Upper                 |
| 1<br>1                          | V18160<br>V18161       | Swayblock, RH<br>Swayblock, LH |
|                                 | V55539                 | Upper Link                     |
| 2                               | V55540                 | Lift Link                      |
| 2                               | V55541                 | Lower Link                     |
| 1<br>2<br>1<br>2<br>1<br>2<br>1 | V70091                 | Bracket                        |
| 1                               | V70092                 | Bracket                        |
| 2                               | 9703812                | Hydraulic Cylinder             |
| 1                               | 86000321<br>V18171     | Drawbar Cage<br>Pin            |
| 2                               | V49567                 | Hose                           |
| 4                               | V55507                 | Shim                           |
| 2                               | V55635                 | Pin                            |
| 1                               | V55637                 | Pin                            |
| 4<br>2<br>2<br>2<br>2<br>1      | . V55639               | Pin                            |
| 2                               | V55640                 | Pin                            |
| 2                               | V55644                 | Pin                            |
| 2                               | V55922<br>V56343       | Plate<br>Bracket               |
|                                 | V56380                 | Shim                           |
| 3                               | . V63954               | Stud - Bolt                    |
| 1                               | V90365                 | Body - Valve                   |
| 2                               | V100198                | Hose                           |
| 2                               | . V100199              | Hose                           |
| 1                               | V100200                | Hose                           |
| 1                               | 86000623               | Valve Cover                    |
| 4<br>3<br>2<br>2<br>1<br>1<br>1 | . 86000624<br>86050318 | Hose                           |
| 17                              | 529070                 | Tie Strap                      |
|                                 | . V77578               | Wire Assy.                     |
| 1<br>1                          | V92356                 | Controller                     |
| 1                               | V93021                 | Kit, Seal                      |
| 1                               | . V94629               | Wire Assy.                     |
| 1                               | V96069                 | Light                          |
| 1                               | 9706934                | Plate, Switch                  |
| 1                               | . 9706935              | Decal, Plate                   |



**FIGURE 2** 

| 1   9701029   Controller     1   9706434   Wire Harness     4   9824331   Spring     2   9848710   Knob     2   86000538   Switch     5   V5575   Klik Pin     6   V12011   Lock Washer     6   V12037   Nut     1   325059   Connector     1   325059   Connector     1   325059   Connector     1   325059   Contector     1   325059   Connector     2   V18173   Spacer     2   V18790   Cotter Pin     6   V19104   Spring Pin     2   76351   Elbow     4   247780   Nut     2   V32804   Elbow     2   V43403   Lock Nut     4   V43765   Screw, Flange     2   V50632   Bolt     2   V50672   Groove Pin     4   V50632   Bolt     2   V56007   Bushing |
|---|
| 2   86000538   SWitch     5   V5575   Klik Pin     6   V12037   Nut     1   325059   Connector     1   325059   Connector     1   325059   Cotter Pin     6   V18173   Spacer     2   V18790   Cotter Pin     6   V19104   Spring Pin     2   76351   Elbow     4   247780   Nut     2   V3804   Elbow     2   V3804   Lock Nut     4   V43765   Screw, Flange     2   V50572   Groove Pin     4   V50632   Bolt     2   V55661   Bushing     1   V56007   Bushing     1   V56008   Bushing     1   V84384   Adaptor     1   V84384   Adaptor     1   V84384   Adaptor     1   V84381   Connector     2   9804263   Screw     2   9804263   Screw               |
| 2   86000538   SWitch     5   V5575   Klik Pin     6   V12037   Nut     1   325059   Connector     1   325059   Connector     1   325059   Cotter Pin     6   V18173   Spacer     2   V18790   Cotter Pin     6   V19104   Spring Pin     2   76351   Elbow     4   247780   Nut     2   V3804   Elbow     2   V3804   Lock Nut     4   V43765   Screw, Flange     2   V50572   Groove Pin     4   V50632   Bolt     2   V55661   Bushing     1   V56007   Bushing     1   V56008   Bushing     1   V84384   Adaptor     1   V84384   Adaptor     1   V84384   Adaptor     1   V84381   Connector     2   9804263   Screw     2   9804263   Screw               |
| 2   86000538   SWitch     5   V5575   Klik Pin     6   V12037   Nut     1   325059   Connector     1   325059   Connector     1   325059   Cotter Pin     6   V18173   Spacer     2   V18790   Cotter Pin     6   V19104   Spring Pin     2   76351   Elbow     4   247780   Nut     2   V3804   Elbow     2   V3804   Lock Nut     4   V43765   Screw, Flange     2   V50572   Groove Pin     4   V50632   Bolt     2   V55661   Bushing     1   V56007   Bushing     1   V56008   Bushing     1   V84384   Adaptor     1   V84384   Adaptor     1   V84384   Adaptor     1   V84381   Connector     2   9804263   Screw     2   9804263   Screw               |
| 0   V12037   Nut     1   325059   Connector     1   |
| 0   V12037   Nut     1   325059   Connector     1   |
| 4   V18173   Spacer     2   V18790   Cotter Pin     6   V19104   Spring Pin     2   76351   Elbow     4   247780   Nut     2   V32804   Elbow     4   247780   Nut     2   V32804   Elbow     2   V43403   Lock Nut     4   V43765   Screw, Flange     2    128996     4   V50632   Bolt     2    128996     4   V50632   Bolt     2    V55661     2   V56007   Bushing     1   V56007   Bushing     2    V56008   Bushing     1   V84384   Adaptor     1   V84384   Adaptor     1   V84380   Nut     20   804263   Screw     2   9804263   Screw     38 (26)*   V43430   Nut     20 (18)*   V4314   Washer   |
| 4   V18173   Spacer     2   V18790   Cotter Pin     6   V19104   Spring Pin     2   76351   Elbow     4   247780   Nut     2   V32804   Elbow     4   247780   Nut     2   V32804   Elbow     2   V43403   Lock Nut     4   V43765   Screw, Flange     2    128996     4   V50632   Bolt     2    128996     4   V50632   Bolt     2    V55661     2   V56007   Bushing     1   V56007   Bushing     2    V56008   Bushing     1   V84384   Adaptor     1   V84384   Adaptor     1   V84380   Nut     20   804263   Screw     2   9804263   Screw     38 (26)*   V43430   Nut     20 (18)*   V4314   Washer   |
| 4   V18173   Spacer     2   V18790   Cotter Pin     6   V19104   Spring Pin     2   76351   Elbow     4   247780   Nut     2   V32804   Elbow     4   247780   Nut     2   V32804   Elbow     2   V43403   Lock Nut     4   V43765   Screw, Flange     2    128996     4   V50632   Bolt     2    128996     4   V50632   Bolt     2    V55661     2   V56007   Bushing     1   V56007   Bushing     2    V56008   Bushing     1   V84384   Adaptor     1   V84384   Adaptor     1   V84380   Nut     20   804263   Screw     2   9804263   Screw     38 (26)*   V43430   Nut     20 (18)*   V4314   Washer   |
| 2   76351   ElDOW     4   247780   Nut     2   V32804   Elbow     2   V32804   Elbow     2   V43403   Lock Nut     4   V43765   Screw, Flange     2   128996   Union Tee     2   V50572   Groove Pin     4   V50632   Bolt     2   V55661   Bushing     1   V55957   Pin     1   V56007   Bushing     2   V56008   Bushing     1   V84384   Adaptor     1   V84384   Connector     2   9804263   Screw     2   9804263   Screw     4   86050300   Nut     38 (26)*   V43430   Nut     20 (18)*   V44314   Washer     12   382101+   Bolt     4   S9110ZDS   Screw     2   V12862   Washer     18   V43184   Capscrew  |
| 2   76351   ElDOW     4   247780   Nut     2   V32804   Elbow     2   V32804   Elbow     2   V43403   Lock Nut     4   V43765   Screw, Flange     2   128996   Union Tee     2   V50572   Groove Pin     4   V50632   Bolt     2   V55661   Bushing     1   V55957   Pin     1   V56007   Bushing     2   V56008   Bushing     1   V84384   Adaptor     1   V84384   Connector     2   9804263   Screw     2   9804263   Screw     4   86050300   Nut     38 (26)*   V43430   Nut     20 (18)*   V44314   Washer     12   382101+   Bolt     4   S9110ZDS   Screw     2   V12862   Washer     18   V43184   Capscrew  |
| 4   247780   Nut     2   V32804   Elbow     2   V43403   Lock Nut     4   V43765   Screw, Flange     2   128996   Union Tee     2   V50572   Groove Pin     4   V50632   Bolt     2   V55661   Bushing     1   V56007   Bushing     2   V56008   Bushing     1   V56008   Bushing     1   V84384   Adaptor     1   V84481   Connector     2   9804263   Screw     2   9804263   Screw     4   86050300   Nut     38 (26)*   V43430   Nut     2   382101+   Bolt     4   SS9110ZDS   Screw     2   V12862   Washer     12   382101+   Bolt     4   V13309   Washer     18   V43184   Capscrew  |
| 2   V43403   Lock Nut     4   V43765   Screw, Flange     2  |
| 2   V50572   Groove Pin     4   V50632   Bolt     2   V55661   Bushing     1   V55957   Pin     1   V56007   Bushing     2   V56008   Bushing     1   V56008   Bushing     1   V84384   Adaptor     1   V84384   Connector     2   9804263   Screw     2   9804263   Screw     4   86050300   Nut     28 (26)*   V43430   Nut     20 (18)*   V44314   Washer     12   382101+   Bolt     4    SS9110ZDS   Screw     2   V12862   Washer     4   V13309   Washer     18    Capscrew  |
| 2   V50572   Groove Pin     4   V50632   Bolt     2   V55661   Bushing     1   V55957   Pin     1   V56007   Bushing     2   V56008   Bushing     1   V56008   Bushing     1   V84384   Adaptor     1   V84384   Connector     2   9804263   Screw     2   9804263   Screw     4   86050300   Nut     28 (26)*   V43430   Nut     20 (18)*   V44314   Washer     12   382101+   Bolt     4    SS9110ZDS   Screw     2   V12862   Washer     4   V13309   Washer     18    Capscrew  |
| 2   V50572   Groove Pin     4   V50632   Bolt     2   V55661   Bushing     1   V55957   Pin     1   V56007   Bushing     2   V56008   Bushing     1   V56008   Bushing     1   V84384   Adaptor     1   V84384   Connector     2   9804263   Screw     2   9804263   Screw     4   86050300   Nut     28 (26)*   V43430   Nut     20 (18)*   V44314   Washer     12   382101+   Bolt     4    SS9110ZDS   Screw     2   V12862   Washer     4   V13309   Washer     18    Capscrew  |
| 4   V50632   Bolt     2   V55661   Bushing     1   V55957   Pin     1   V56007   Bushing     2   V56008   Bushing     1   V84384   Adaptor     1   V84481   Connector     2   9804263   Screw     4   86050300   Nut     38 (26)*   V44314   Washer     12   382101+   Bolt     4   SS9110ZDS   Screw     2   V12862   Washer     18    V43184   Capscrew     8   E601117S72   Nut  |
| 1 V84364 Connector   1 V84481 Connector   2 9804263 Screw   4 86050300 Nut   38 (26)* V43430 Nut   20 (18)* V43430 Nut   20 (18)* V43430 Screw   4  SS9110ZDS Screw   2 V12862 Washer   12  Screw   2 V12862 Washer   18  Capscrew   8 E60117S72 Nut  |
| 1 V84364 Connector   1 V84481 Connector   2 9804263 Screw   4 86050300 Nut   38 (26)* V43430 Nut   20 (18)* V43430 Nut   20 (18)* V43430 Screw   4  SS9110ZDS Screw   2 V12862 Washer   12  Screw   2 V12862 Washer   18  Capscrew   8 E60117S72 Nut  |
| 1 V84364 Connector   1 V84481 Connector   2 9804263 Screw   4 86050300 Nut   38 (26)* V43430 Nut   20 (18)* V43430 Nut   20 (18)* V43430 Screw   4  SS9110ZDS Screw   2 V12862 Washer   12  Screw   2 V12862 Washer   18  Capscrew   8 E60117S72 Nut  |
| 1 V84364 Connector   1 V84481 Connector   2 9804263 Screw   4 86050300 Nut   38 (26)* V43430 Nut   20 (18)* V43430 Nut   20 (18)* V43430 Screw   4  SS9110ZDS Screw   2 V12862 Washer   12  Screw   2 V12862 Washer   18  Capscrew   8 E60117S72 Nut  |
| 1 V84364 Connector   1 V84481 Connector   2 9804263 Screw   4 86050300 Nut   38 (26)* V43430 Nut   20 (18)* V43430 Nut   20 (18)* V43430 Screw   4  SS9110ZDS Screw   2 V12862 Washer   12  Screw   2 V12862 Washer   18  Capscrew   8 E60117S72 Nut  |
| 2     9804263     Screw       4     86050300     Nut       38 (26)*     V43430     Nut       20 (18)*     V4314     Washer       12     382101+     Bolt       4      SS9110ZDS     Screw       2     V12862     Washer       18      V43184     Capscrew       8     E601117S72     Nut  |
| 2     9804263     Screw       4     86050300     Nut       38 (26)*     V43430     Nut       20 (18)*     V4314     Washer       12     382101+     Bolt       4      SS9110ZDS     Screw       2     V12862     Washer       18      V43184     Capscrew       8     E601117S72     Nut  |
| 2 V12862 Washer<br>4 V13309 Washer<br>18 V43184 Capscrew<br>8 E600117S72 Nut  |
| 2 V12862 Washer<br>4 V13309 Washer<br>18 V43184 Capscrew<br>8 E600117S72 Nut  |
| 2 V12862 Washer<br>4 V13309 Washer<br>18 V43184 Capscrew<br>8 E600117S72 Nut  |
| 2 V12862 Washer<br>4 V13309 Washer<br>18 V43184 Capscrew<br>8 E600117S72 Nut  |
| 2 V12862 Washer<br>4 V13309 Washer<br>18 V43184 Capscrew<br>8 E600117S72 Nut  |
| 18 V43184 Capscrew  |
| 18 V43184 Capscrew  |
| 8 E620117S72 Nut  |
| 8 V44125 Screw<br>1 86050252 Washer   |
| 1 86050252 Washer   |
|   |
| 1 86050252 Washer<br>2 V48976 <sup>++</sup> Bracket<br>1 V55505 <sup>++</sup> Bracket   |
| 2 V48976 <sup>++</sup> Bracket<br>1 V55505 <sup>++</sup> Bracket<br>2 V103250 <sup>++</sup> Spacer<br>6 SS1940ZDS <sup>++</sup> Capscrew  |
| 6 SS1940ZDS <sup>++</sup> Capscrew  |
| 8 V44253 <sup>++</sup> Washer   |
| 8 87630 <sup>++</sup> Capscrew  |
| 1 V57212 Decal  |
| 1 V57213 Decal<br>2 V57214 Decal  |
| 2 V57215 Decal  |
| 1 V57216 Decal  |
| 1 41895300 Installation Instructions  |
| 1 Rockshaft consisting of:  |
| 1 SS15043ZDS Capscrew   |
| 1 V18135 Plate  |
| 4 V43139 Capscrew   |
| 3 V43650 Screw  |
| 4 V43864 Lock Washer  |
| 1 V43940 Set Screw<br>1 (9) V44253 <sup>++</sup> Washer   |
| 1 (9) V44253 <sup>++</sup> Washer<br>2 V44458 Capscrew  |
| 2 V55265 Lift Arm   |
| 1 V66832 End Cap  |
| 1 V66833 Housing  |
| 1 V66834 Bracket  |
| 1 V66835 Hub<br>1 V66836 Disc   |
| 1 V66836 Disc<br>1 V66837 Bearing   |
| 1 V69619 Rockshaft  |
| 1 V84382 O-ring   |
| 1 V96102 Feedback Potentiometer   |
| 1 V69620 Housing  |
| 2 V18126 Bushing  |
| * Quantity required with PTO option shown in ( ).   |



Without PTO option only (Kit #86070393).
With PTO option only (Kit #86070394).

#### ASSEMBLY PREPARATIONS

- 1. Prepare a clear work area with a firm, level surface.
- 2. Carry out the assembly in an area that is large enough to accommodate the tractor and contains adequate lighting.
- 3. Maintain a clean work area. Always wipe up any fluid spills that could be hazardous to footing.
- 4. At least two persons should be available for installing the 3-point hitch. The assembly instructions are based on this assumption.
- 5. Provide a hoist for lifting parts. Hoist equipment of at least 1/4 ton (225 kg) capacity is required for lifting and aligning the rockshaft assembly and drawbar cage.
- 6. Always use the proper tools required to ensure personal safety and to prevent damage to equipment.
- Do not attempt any assembly procedures while the engine is running. Shut off the engine, remove the key from the keyswitch, set the park brake, apply the articulation lock and chock wheels before starting work.

#### ASSEMBLY

The direction left and right are determined by standing at the drawbar facing the tractor engine.

#### PREASSEMBLY

- 1. Select a level area large enough for the tractor.
- 2. Open all cartons of parts and assemblies and inspect all parts for possible damage during shipping.

NOTE: Do not mix contents of packages. Keep all items from each package separate from each other to ensure easy identification of components.

- 3. Clean paint and dirt off all mating surfaces. Lubricate all grease fittings and all bearing surfaces, ball swivels and pins.
- Ensure the interior of all hydraulic fittings are kept clean. Ensure caps and plugs are installed on all valves and hoses, or that openings are taped over.
- 5. Ensure that the tractor is shut off with the park brake and articulation lock engaged.

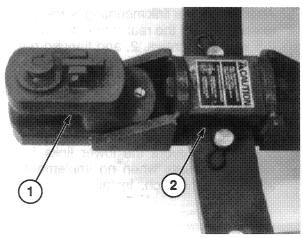
#### **Recommended Tools and Equipment**

- 1. Hoist of 1/4 ton (225 kg) capacity
- 2. 3/4 in. impact wrench

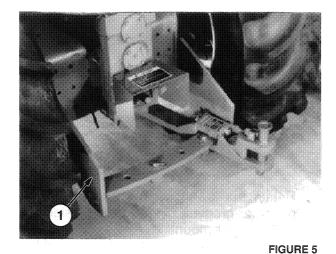
#### **MECHANICAL INSTALLATION**

1. Remove the drawbar clevis, 1, and the wear block bridge plate, 2, allowing the drawbar to hang on its front pin.

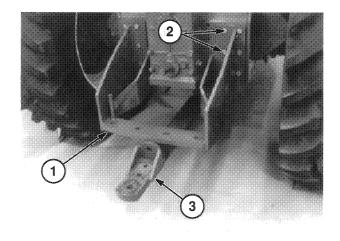
2. Remove the tractor drawbar cage, 1. There are 8 bolts on each side of the drawbar cage holding it to the rear frame. Discard the drawbar cage. Retain the drawbar and hardware for installation of the 3-point hitch drawbar cage.



**FIGURE 4** 



- Install the 3-point hitch drawbar cage, 1, with twelve M20 X 2.5 X 60 capscrews, 2, and flange nuts. Torque nuts to 358 ft. lbs. (485 N·m). Install the drawbar, 3, to the new drawbar cage. Torque clevis and bridge hardware to 706 ft. lbs. (960 N·m.)
- Detach the rear support bracket for the hydraulic couplers and trailer connector. It should not be necessary to disconnect hoses and wiring. Move the support bracket out of the way.



**FIGURE 6** 



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