



These instructions provide details for unpacking and setting up the model 1085 and 1285 Forage Harvesters. They should be retained by the dealer.

The model 1085 and 1285 Forage Harvesters are shipped in a partially assembled condition. The following common component completing parts are NOT attached to the main unit:

- Axles, wheels and tires
- Tongue
- Hitchjack
- Front bearing stand, main drive shaft and guard
- Telescoping PTO drive
- Crop processor (installation is covered in Crop Processor Operator's Manual)(if ordered)

Procedures established in these set-up instructions are given in a step-by-step manner, with various parts of the assembly process listed in such a way as to make it possible for one set-up person (with appropriate tools and equipment) to do the sequence without having to remove parts in order to make other component attachments. The instructions are divided into two topics: Common Components, and Accessory Components. Accessory components, such as a tripod or horizontal extensions, are also referenced in the spout and controls mounting procedures, to help avoid unnecessary removal and replacement steps during initial set-up.

Unless otherwise noted, the standard fastening procedure is to secure two parts with a cap screw, lock washer and nut. A part with a mounting slot should be secured with a flat washer against the slotted surface. Attaching hardware that will require installation in the path of the cut crop should always be installed with the head of the screw on the side of the part that will be in contact with the material.

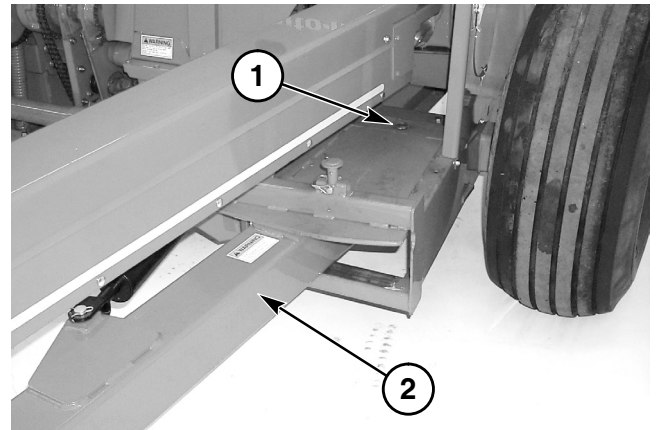
## Dealer Set-up Instructions for 1085 & 1285

**NOTE:** Remove all components that are attached or banded to the harvester frame or included in the toolbox. The spout and cap assembly is shipped attached to the harvester frame and **MUST** be removed before setting up the unit.

### COMMON COMPONENTS

#### Step 1: Tongue (Fig. 1)

Before the tongue is attached to the main frame, grease the pivot surfaces. Then, slide the tongue into the main frame and fasten it with the pivot pin and a 1/4 x 2" cotter pin (from toolbox).



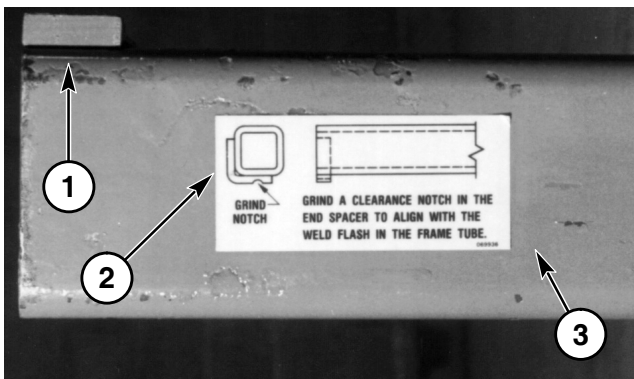
1 - Pivot Pin Secured with 1/4 x 2" Cotter Pin  
2 - Tongue

Fig. 1

#### Step 2: Axles, Wheels and Tires (Figs. 2, 3 & 4)

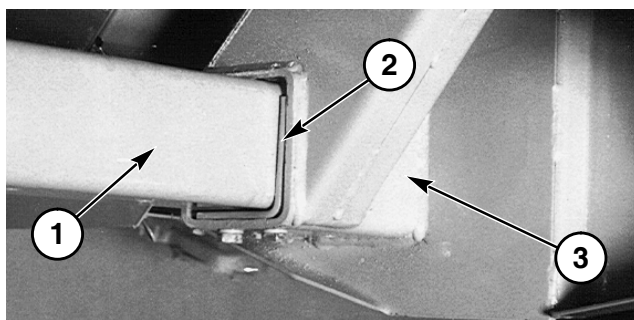
Mounting procedures for the single axles or the tandem axle assemblies are essentially the same.

**NOTE:** Before the axle extensions can be installed, a notch to match the inside weld flash location may have to be ground into the end spacer of both axle extensions. A decal displaying this information is provided on the extension.



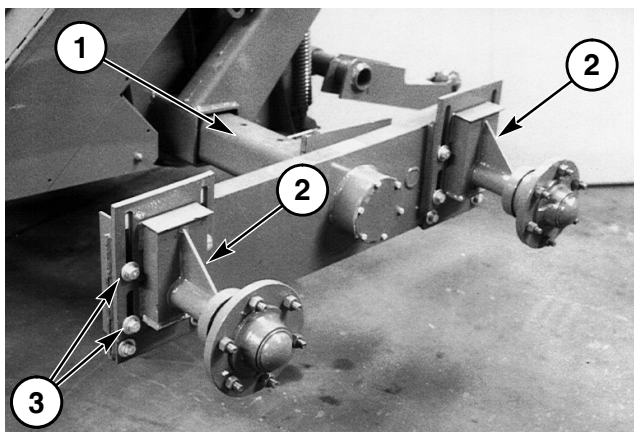
- 1 - End Spacer
- 2 - Notch Grinding Decal
- 3 - Axle Extension

Fig. 2



- 1 - Axle Extension
- 2 - Angled Axle Spacer Secured with (Two Each) 1/2 x 3/4" Cap Screw and Lock Washer
- 3 - Harvester Frame Axle

Fig. 3



- 1 - Axle Extension
- 2 - Gusset (At Top of Spindle)
- 3 - Spindle Height Adjustment Bolts

Fig. 4

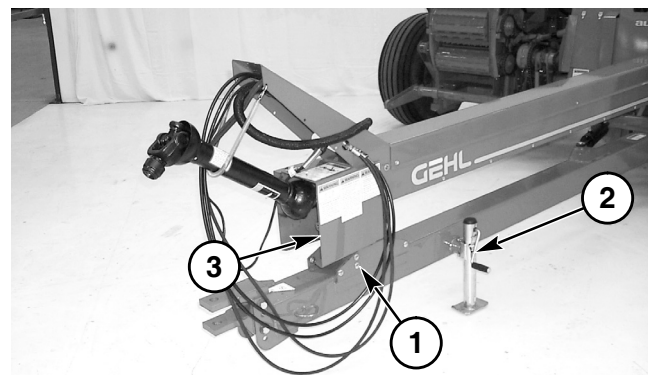
To install the axle extensions, carefully raise and properly block the main frame off the floor a sufficient amount to provide clearance to insert the axles with mounted wheels and tires. BE SURE when the tires are mounted that the valve stems face out. The wheels should be installed and secured with 90 lb-ft (125 Nm)

torque. All axle extensions MUST be installed with one end spacer facing down. The tandem axle spindle assemblies have gussets on their top sides, which MUST be installed facing up. For single and tandem axle assemblies, BE SURE to install assembly labeled "Left" on the left side of the harvester. Before an axle extension can be inserted into the harvester frame tube on either side, the angled axle spacers MUST be temporarily removed and then replaced after the extensions are inserted. After the spacers are secured, the extensions should be secured with (one each) 1/2 x 6" cap screw, lock washer and nut.

**NOTE:** Refer to the Adjustments section of the Care & Maintenance chapter of the harvester Operator's Manual for spindle height and wheel positioning details if an attachment is being mounted as part of this set-up and assembly procedure.

### Step 3: Jack (Fig. 5)

Attach the jack (located under shielding between blower and cylinder) to the mating hub on the tongue. Swing the jack down and lock it in the "Supporting" position with the lock pin provided. Block the wheels in the front and back on both sides of the harvester, and adjust the jack to level the tongue.



- 1 - Stand Secured to Tongue with (Twelve Each) 1/2 x 1" Carriage Bolts and Flanged Lock Nuts
- 2 - Jack Secured to Tongue with Lock Pin
- 3 - Side Shield on Both Sides of Bearing Stand

Fig. 5

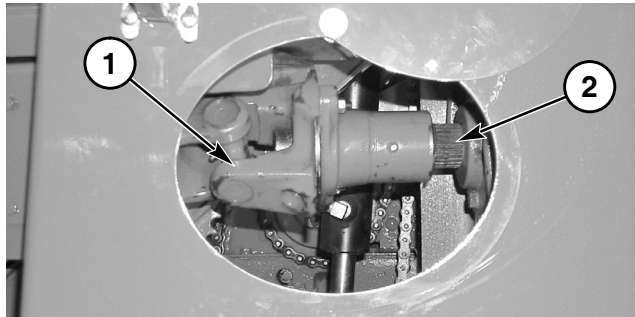
### Step 4: Front Bearing Stand, Main Drive and Guards (Figs. 5 thru 8)

**NOTE:** The following mounting procedure is best accomplished by two people.

First, lay the components beside the tongue and align them with regard to their appropriate direction and position of attachment.

Next, raise the entire main drive assembly and rest it on top of the tongue. Then raise the back end of the drive

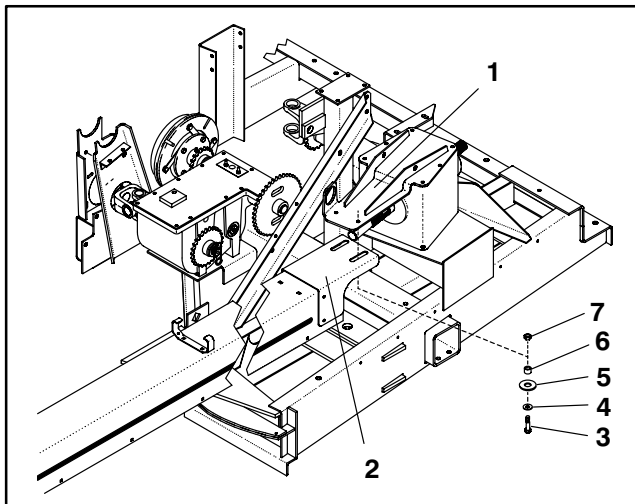
and slide the splined shaft onto the main bevel gearbox shaft. Raise the front end of the drive and place the front bearing stand over the tongue while aligning the (twelve) stand mounting holes with the holes in the tongue. Secure the stand to the tongue with (twelve) each 1/2 x 1" carriage bolts and flanged lock nuts.



1 - Back End of Main Drive Line  
2 - Gearbox Shaft

Fig. 6

Install shield bracket (at the back end of PTO shaft cover) to PTO shield support with supplied hardware. The hardware is pre-installed on the shield support on the transmission. Secure hardware. See Figure 7.



1 - PTO Shield Support on Transmission  
2 - Shield Bracket  
3 - 3/8 x 1-1/2" Cap Screw (Two)  
4 - 3/8" Flat Washer (Two)  
5 - 5/8" Flat Washer (Two) - Must Be Free to Move  
6 - Sleeve (Two)  
7 - 3/8" Nylon Insert Lock Nut (Two)

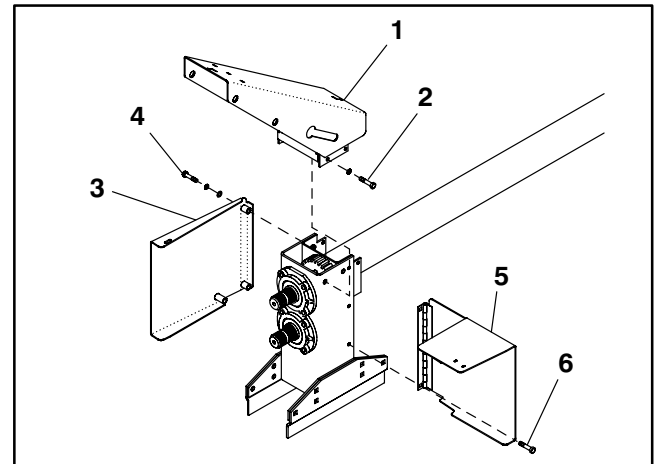
Fig. 7

It may be necessary to install the front bearing stand guards and hose and PTO storage support. See Figure 8.

## Step 5: Telescoping PTO Drive (Fig. 9)

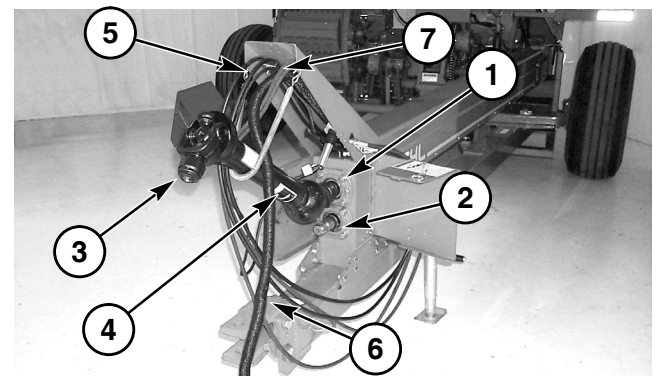
Both the 1-3/8" and 1-3/4" telescoping PTO drives have spring-loaded locking couplers on both ends of the

drives. Clean and lightly grease the splines on the main drive PTO shaft, the reversing PTO drive shaft and the yoke of the telescoping drive. Depress the safety lock ring and slide the yoke onto the main drive PTO shaft. Move the yoke back and forth until the safety lock ring pops forward and locks into the groove in the PTO shaft. Make sure that the telescoping PTO drives are installed with the outer PTO drive guards towards the tractor.



1 - Hose and PTO Storage Support  
2 - 3/8 x 1-1/4" Cap Screws and 3/8" Lock Washers (Four Each)  
3 - Right PTO Shield  
4 - 3/8 x 1" Cap Screws and 3/8" Lock Washers and Flat Washers (Three Each)  
5 - Left PTO Shield  
6 - 3/8 x 1" Cap Screws (Three) (use thread-locking compound)

Fig. 8



1 - Main Drive PTO Shaft  
2 - Reversing Shaft (for Knife Sharpener Operation)  
3 - PTO Locking Coupler (Both Ends)  
4 - PTO Hitch Pin Alignment Decal  
5 - Lift Cylinder or Tongue Control Cylinder Hoses Secured to Right Side of Front Bearing Stand  
6 - Wiring Harness Secured with Clamp to Either Hose Clamp  
7 - Lift Cylinder or Tongue Control Cylinder Hoses Secured to Left Side of Front Bearing Stand

Fig. 9

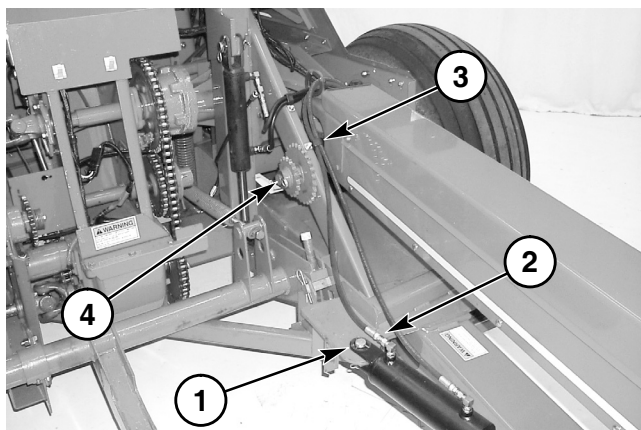
## Step 6: Tongue Control Cylinder & Hoses (Figs. 9, 10 & 11)

**IMPORTANT:** When routing the hydraulic hoses inside the hose top cover, the tongue should be swung out to the maximum left (opposite of transport) position to assure an ample amount of hose will be available at the rear of the drive line.

The tongue swing cylinder is wired to the attachment lift cylinder for shipping. To install the tongue controls, proceed as follows:

1. Properly position and secure the cylinder to the tongue and harvester frame with the clevis pins and retaining clips provided in the cylinder. One of these pins may be wired to the base machine.

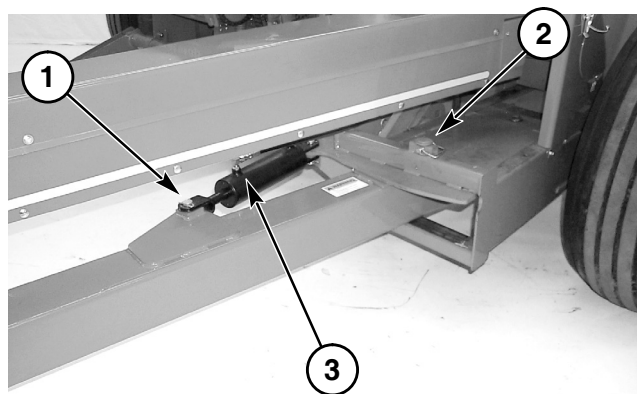
**IMPORTANT:** The rod end of the cylinder *MUST* be attached to the harvester tongue. The cylinder ports *MUST* face upwards.



- 1 - Tongue Control Cylinder Base End Attached to Harvester Frame with Cylinder Pin
- 2 - Fitting of Tongue Control Cylinder Angled and Facing Rear of Harvester
- 3 - Hose Clamp
- 4 - Length-of-Cut Sprocket Storage

Fig. 10

2. Remove the top cover from the main drive line shield. Uncoil the hoses from their shipping position. Route hoses along the main drive line shield and up under the hose holder on top of the front bearing stand. Anchor the hoses to the hose holder with the double hose clamp. Reinstall the top cover onto the main drive line shield after the wiring harness and all of the hoses are installed.



- 1 - Rod End of Cylinder Attached to Tongue with Cylinder Pin
- 2 - Transport Pin and Lock Pin
- 3 - Cylinder Ports *MUST* Face Upwards

Fig. 11

## Step 7: Spout, Cap and Controls (Figs. 12 & 14)



### CAUTION

For personal safety, because of the weight and awkwardness of the spout (and extensions), it is best that at least two people perform the spout-mounting procedures.

**NOTE:** If the harvester is to be set up with mounted vertical and/or horizontal extensions, install any extension before installing spout. Refer to instruction sheets provided with extension kits for assembly.

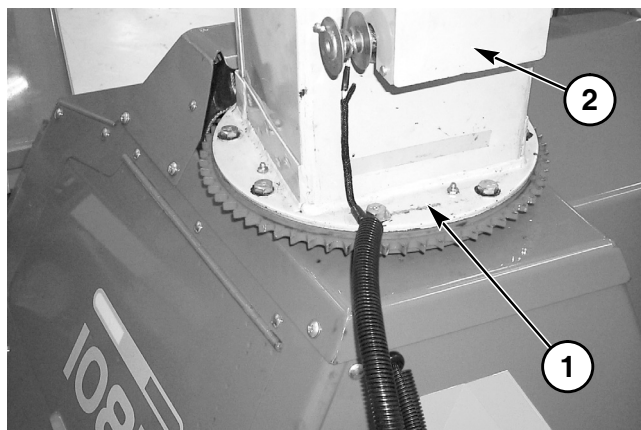
Remove plate, hose holder and wire clamp from top of outlet. Discard the hardware and plate, but save wire clamp on harness.

Remove the spout and its shipping hardware from the harvester frame. Discard the shipping hardware. Spout is fully assembled.

Carefully raise and properly support the spout in the "Rear Delivery" position on top of the blower outlet adapter plate. Line up grease holes in outlet with holes in adapter plate (grease fittings located over clamps). Install eight 1/2 x 2" cap screws through the spout and outlet adapter. Secure each cap screw with a lock nut.

To install cap motor harness, remove left harness clamp from bottom of cap motor. Feed enough harness through clamp to plug in, then reinstall clamp in same position. Use other clamp on harness to fasten harness parallel to left side of machine on the rear left spout 1/2" mounting bolt.

**NOTE:** Check that the spout is not binding before proceeding. If necessary, readjust the clamps and spacers. At this time, also adjust the tripod brace and arm (where applicable) to find the proper alignment for the spout (and tripod) that best enables turning the spout with the least amount of resistance.



- 1 - Spout Flange Secured to Adapter Plate with (Eight Each) 1/2 x 2" Cap Screws and Lock Nuts
- 2 - Cap Control Motor (Factory-installed) on Back of Blower Outlet

Fig. 12

## Step 8: Tongue Harness (Figs. 9, 10 & 13)

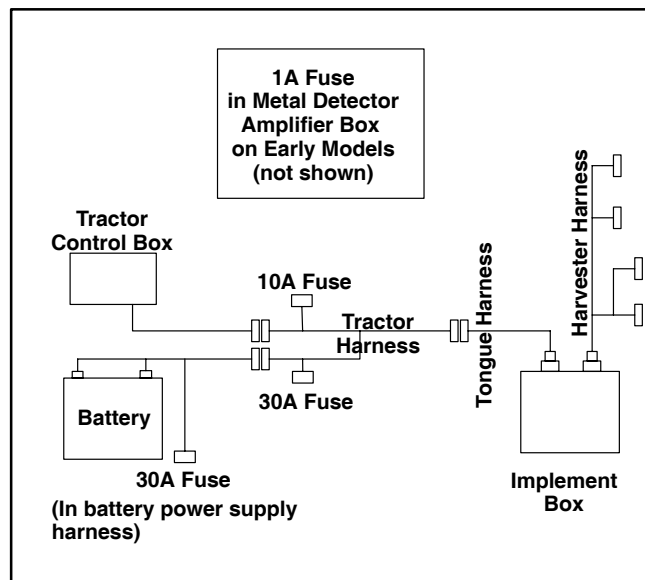


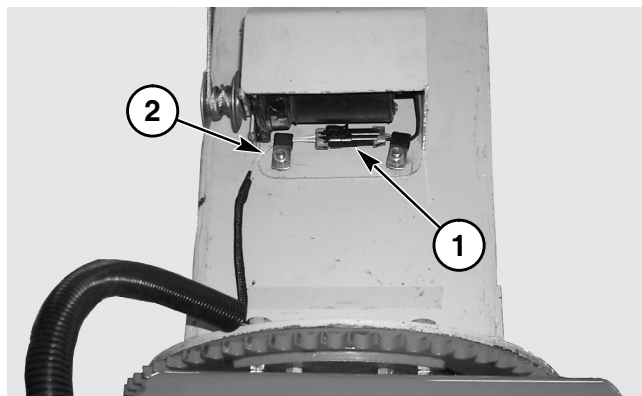
Fig. 13

The tongue harness connects the tractor-mounted control box to the harvester-mounted electrical components. The following information describes routing, plug connections and clamp locations for the wiring

harness and power leads. Refer to Fig. 13 and the wiring diagrams provided in the Service section of the Care & Maintenance chapter for additional identifications and proceed as follows:

**IMPORTANT:** When routing the tongue harness or the hydraulic hoses inside the hose top cover, the tongue should be swung out to the maximum left position to assure that an ample amount of harness and hoses are available at the rear end of the drive line.

Begin by routing the tongue harness inside the hose top cover on top of the main drive line. Pass the connector directly underneath the sloped portion of the front bearing stand. Allow enough harness to extend to the tractor-mounted connector, while keeping the harness above the telescoping PTO drive.



- 1 - Harness Connected to Cap Motor
- 2 - Harness Routed through Clamp

Fig. 14

The wiring harness should be routed on the right side of the stand. Install two 1-1/4" size wire clamps around the harness and fasten it to the top inside surface of the front bearing stand with (two each) 5/16 x 1" carriage bolts, lock washers and nuts.

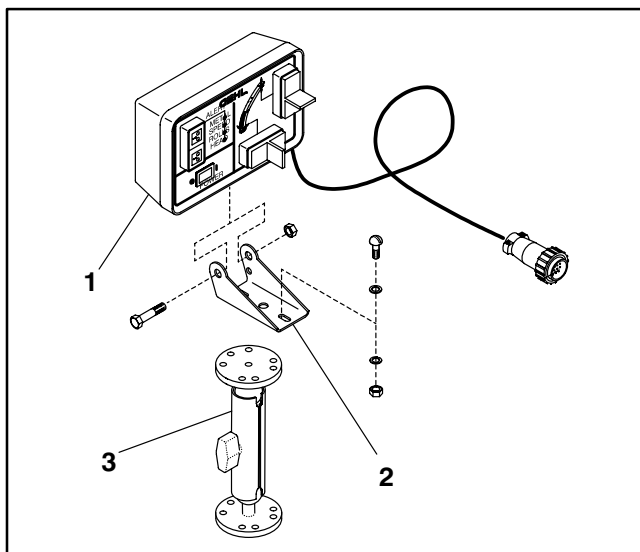
**IMPORTANT:** Do NOT install any hoses between the top of the harness and the underneath slope of the front bearing stand. The weight of the hoses could damage the wire harness. In addition, do NOT clamp the tongue harness to any portion of the tractor. This will damage the harness if the tractor moves away from a parked harvester with the wiring harness still attached. ONLY use the electrical connector to attach the tongue harness to the tractor connector. For additional details, refer to the Control Box Mounting & Wiring step.

Store the excess implement harness inside the hose top cover. Reinstall the top cover after all of the hoses and the wiring harness are installed.

## Step 9: Control Box Mounting & Wiring (Figs. 15 & 16)

Refer to Fig. 15 for a typical installation of a control box. Use your own judgement to select a conveniently reached mounting location on your particular tractor. Proceed as follows:

1. Fasten the mounting bracket to the control box using a 5/16 x 2" cap screw and a 5/16" lock nut. Attach the mounting bracket to the ram-mount, securing with (two each) #12-24 x 3/4" round head machine screws, #12 flat washers, #12 lock washers and #12-24 nuts.



1 - Control Box and Harness  
2 - Control Box Mounting Bracket  
3 - Ram Mount

Fig. 15

**NOTE:** The base of the ram-mount can be secured in a location that is comfortable for viewing by the operator while chopping.

**IMPORTANT:** Be sure to avoid sharp metal corners and objects and pinch points along the path of the harness, which could damage insulation and cause a short circuit.

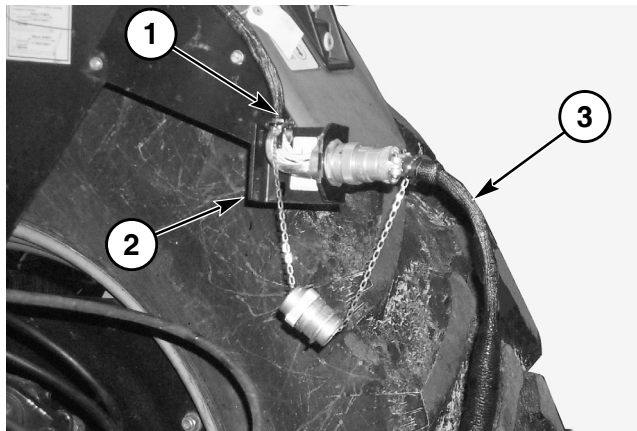
The unit comes with a tractor harness that plugs into the control box in the cab, plugs into the tongue harness, and plugs into the battery power supply harness. A battery power supply harness is provided to maintain proper voltage levels for operating the harvester.

The tractor's 3-pin power outlet is not recommended for operating the harvester. Some of the problems include:

- wires that are too small to maintain correct operating voltage.
- the high current contact pin may not be in the same position on all tractors.
- the tractor fuse rating may be too low or too high.

**IMPORTANT:** Before plugging the power supply harness plug into the tractor harness connector for the first time, **BE SURE** to have the power switch in the "ON" position, but **DO NOT** have the tongue harness connected to the control box. If the black (-) or red (+) power supply harness wires are incorrectly connected, the power indicator light on the control box will not light up green.

1. Make the proper red (+) and black (-) ring terminal power supply harness connections to the tractor battery. The harvester controls will **NOT** always operate as desired if the control box wires are attached anywhere else except at the battery. The battery **MUST** provide 12 volts D.C. The tractor **MUST** have a negative (-) ground. Route the harness plug to the control box.
2. After the power wiring connection is properly made and tested, turn the control box power switch to "OFF." Then select a convenient path to route the tractor harness from the control box to the back of the tractor.
3. Attach the tractor harness mounting bracket using field-supplied holes in the back of the tractor. Secure the bracket with (two each) 3/8 x 1" cap screws, flat washers, lock washers and nuts. The bracket **MUST** be securely mounted so that the electrical connection is near the center of the tractor, parallel to the ground and facing straight back toward the harvester.



- 1 - Control Tractor Harness on Tractor
- 2 - Control Tractor Harness Connector Secured in Harness Mounting Bracket Secured with (Two Each) 3/8 x 1" Cap Screws, Flat Washers, Lock Washers and Nuts (As Required) (Bracket Can Be Secured with a Single Cap Screw, Provided Anchoring Surface Is Rigid)
- 3 - Harvester Tongue Harness

**Fig. 16**

4. Remove the special nut and lock washer from the tractor harness connector and retain these parts. Then insert the tractor harness connector into the hole in the mounting bracket. Carefully tighten the special nut and lock washer to secure the tractor harness connector.
5. Route the tongue harness to the tractor harness and connect the two 18-pin plugs.

## ACCESSORY COMPONENTS

**NOTE:** *The following components are customer-selected accessories which may be dealer-installed during the regular set-up and assembly procedures, or customer-performed procedures.*

### Step A: Tripod Kit (Fig. 17)

The tripod kit is required with the 3-1/2-ft or 5-1/2-ft horizontal spout extension packages. It is also required when more than 2 feet of vertical extensions are going to be installed. It is also available whenever additional spout support is desired. Refer to instruction sheet provided with kit.

### Step B: Vertical Extensions (Fig. 17)

The spout can be extended vertically for up to four feet (1220 mm). Extension sections are available in 6-inch (152 mm), 1-foot (305 mm), or 2-foot (610 mm) segments.

A set of (eight each) 1/2 x 1-1/4" cap screws and lock nuts is provided with each extension for attaching that extension. Additionally, a wire clamp is provided to restrain the cap motor power harness. Additional cap motor harness length is stored under shielding.

### Step C: Horizontal Extensions (Fig. 17)

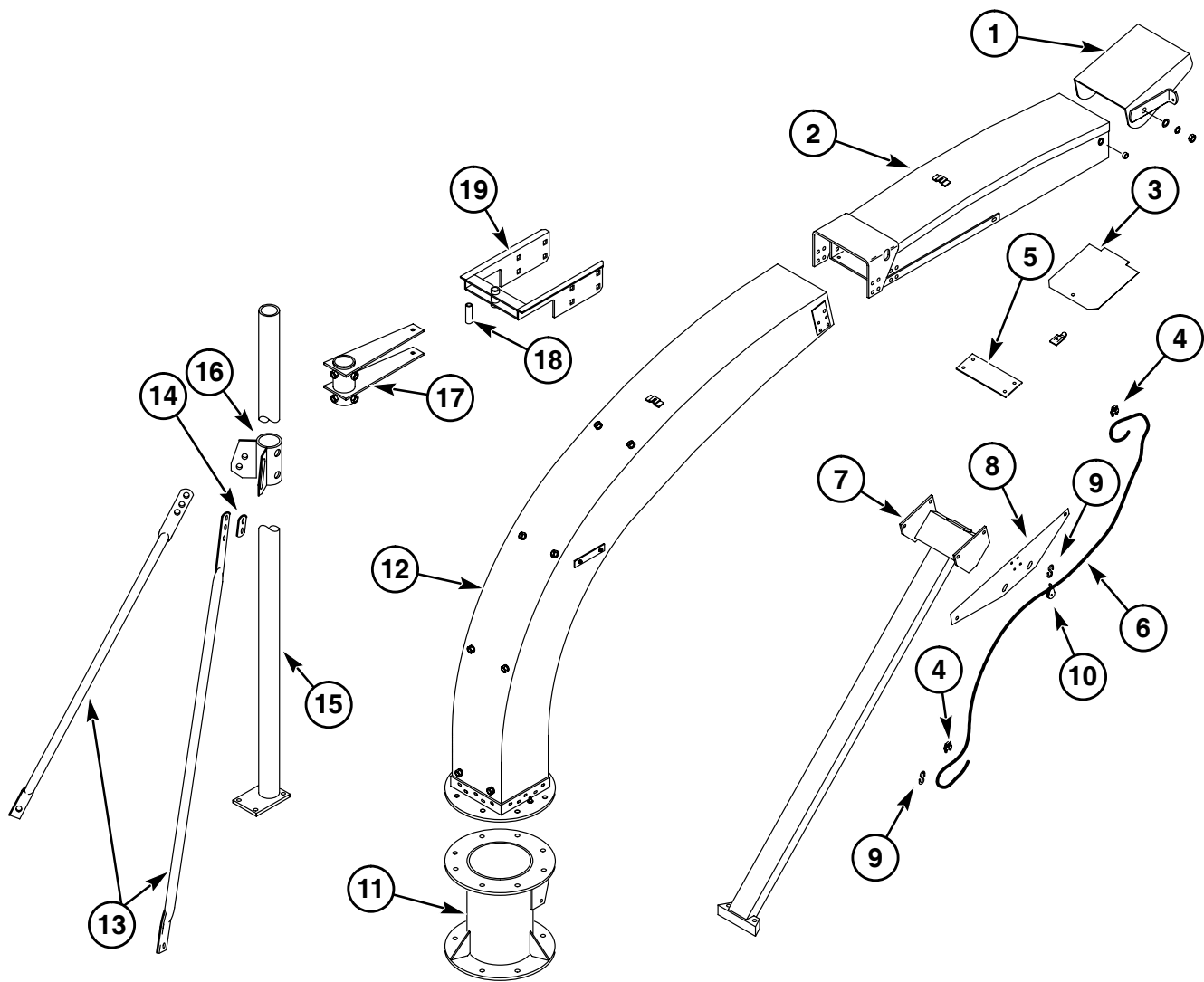
Mounting procedures for either the 3-1/2-ft or 5-1/2-ft horizontal spout extension packages are the same. Refer to instruction sheets provided with extension kits. Refer to the tripod kit mounting procedures after the extension is attached to the spout.

### Step D: Additional Tractor Control Box Wiring Kit

The optional additional tractor control box wiring kit is available for adapting the same control box to a second tractor. The kit contains a ram mounting system, an instruction card, a tractor harness (toward harvester), a harness mounting bracket, and a battery power supply harness. Refer to Control Box Mounting & Wiring step for comparable installation details.

### Step E: Safety Chain

**NOTE:** *Route and anchor an accessory 30,000 pound rated safety chain kit as shown in Transporting section of the Operation chapter of the Harvester Operator's Manual.*



- |   |  |
|---|--|
| 1 - Existing Cap and Attaching Hardware                       | 10 - Pulley  |
| 2 - Accessory 3-1/2-ft or 5-1/2-ft Horizontal Spout Extension | 11 - Accessory 6 inch, 1- or 2-ft Vertical Spout Extension |
| 3 - Cleanout Cover  | 12 - Existing Spout  |
| 4 - Wire Rope Clamp   | 13 - Tripod Braces (Two)                                   |
| 5 - Extension Tie Plate                                       | 14 - Tripod Brace Clamp                                    |
| 6 - Cable   | 15 - Tripod  |
| 7 - Spout Extension Brace                                     | 16 - Tripod Bracket  |
| 8 - Horizontal Extension Bracket (One of Two)                 | 17 - Tripod Arm  |
| 9 - S-Hook  | 18 - Spacer for Spout Bracket                              |
|   | 19 - Spout Pivot Bracket                                   |

**Fig. 17: Spout Extensions & Tripod**