



Installation Instructions for Loup Shaft Monitor Kit

Before Getting Started

Before you begin installation of your Loup Shaft Monitor Kit, read and understand these instructions. Ensure all parts and tools in the kit are accounted for. All hand and specialty tools for installation are provided at owner's expense. Please retain these installation instructions for future reference and parts ordering information.

Please read and understand all safety instructions in your drill operator manual before proceeding. Refer to the operator manual for detailed information on operating, adjusting, troubleshooting, and maintaining the drill.

This kit is compatible with:

- All BD7600 Box Drill models and row spacings.
- Most 1995 and later, 2-section and 3-section box drills with 5/8 inch square main seed box meter drive shafts. If in doubt, contact your dealer with the drill serial number to confirm compatibility.
- Many pre-1995 drills with 5/8 inch square main seed box meter drive shafts. If in doubt, contact your dealer with the drill serial number to confirm compatibility.

 **NOTE:** This kit is also compatible with current single-box drills. Only one sensor would be used. The system ignores disconnected channels.

To check for compatibility, in one drill box inspect the shaft passing through the main seed box feeder cups. Verify that it is square (not hexagonal) and is 5/8 inch (15.9 mm) on a side.

Special installation instructions for drill model 3S-5000 with 6-inch row spacing begin on page 11. Special instructions for drill models 2S-2600, 3S-3000, and 3S-4000 with 6-inch row spacing begin on page 13.

Identify Feeder Cup Type

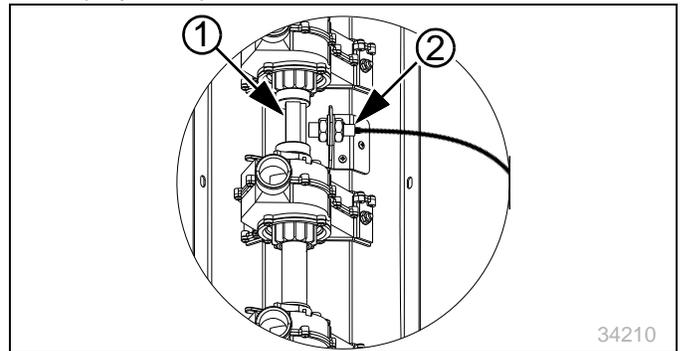
Determine whether the drill has large, small, or BD7600 feeder cups.

- **Large** cups, used on most drills still in production, have a 1-3/4 inch flute width, and an approximate external width of 2 inches at the side walls.
- **Small** cups, used on older drill designs have a 1-1/4 inch flute width, and an approximate external width of 1-1/2 inch at the side walls.
- **BD7600** feeder cups, used on all BD7600 models and row spacings.

General Information

These instructions explain how to install a Loup Shaft Monitor Kit. The kit adds a sensor (1) to the main seed box meter drive shaft (2) of each drill box, electrical harnesses, and an in-cab console.

The kit is compatible with bare shafts, or shafts inside round polymer spacer tubes between meters.



In operation, when the main seed box shaft of any drill box stops rotating for more than 20 seconds, an alarm sounds on the in-cab console.

One kit updates one entire drill:

Kits	Kit Description
116-282A	LOUP SHAFT MONITOR 2-Section Kit
116-283A	LOUP SHAFT MONITOR 3-Section Kit
116-322A	LOUP SHAFT MONITOR 2-Section Kit
116-323A	LOUP SHAFT MONITOR 3-Section Kit

Refer to page 19 for a detailed list of parts included in these kits. Use this list to inventory parts received.

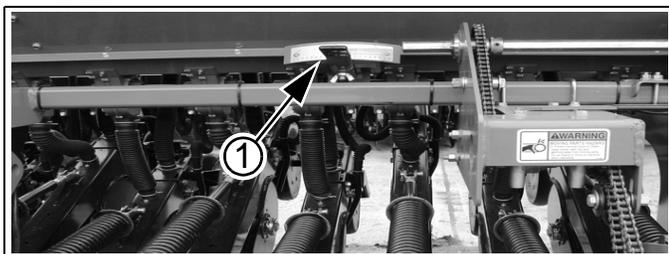
 **NOTE:** These kits fit many different drill models. Depending on your drill model, you may have left-over parts.

Tools Required

- Calibration crank and calibration instructions for your drill model.
- Basic hand tools, including drill and tap wrench.
- 3/16 inch (#12, 4.8 mm) drill bit.
- 3/16 inch drift punch.
- 1/4-20 tap, and #7 drill bit (or 5.1 mm).
- Three customer-provisioned 1/4 inch (6.3 mm) fasteners for installing the in-cab console.
- A knife or saw capable of cutting hard polymer plastic.

Prepare the Drill

1. Move the drill to a suitable location with adequate lighting, ample room to unfold the drill, and a level, debris-free work surface.
2. If you have a folding drill, unfold the drill. Refer to the drill operator manual for instructions.
3. Raise the drill or configure the drill so the meter drive shaft can be rotated while the drill is stationary.
4. Install all locks and supports necessary to support the drill during installation. Add additional blocking whenever necessary. Ensure your drill will remain stable during installation.
5. Shut off the tractor, set the parking brake, and remove the key.
6. Set the seed rate handles (1) for all main seed boxes to 50.



Identify Mounting Positions

Gaps with lock collars generally provide exposed shaft faces.

Installation requires an exposed shaft face, it is necessary to remove the polymer spacer tube and install lock collars. See “**Polymer Tube Magnet Mounting**” on page 3.

 Smaller row spacings may require trimming the magnet length. The magnet cannot be less than 1-3/4 inches (4.4 cm).

1. Select one new magnet. Do not remove the release backing at this time. Use magnet to ensure sufficient space is available in selected mounting location.
2. On each main seed box, identify locations between cups with the following characteristics:
 - closest to drill center,
 - on wing boxes, cups closest to the center box section,
 - not obstructed to the front by a seed rate handle, and
 - adequate exposed surface on the drive shaft to place the magnet, or adequate length of polymer tube to be removed for magnet mounting.

For BD7600 models, additional considerations:

- directly across from the sensor mounting bracket with adequate length of shaft to place the magnet.

 Select a location with a wide space between feeder cups whenever possible, while still selecting a location closest to the center of the center section of the drill.

3. Tag each identified location with a short length of tape on the seed box.

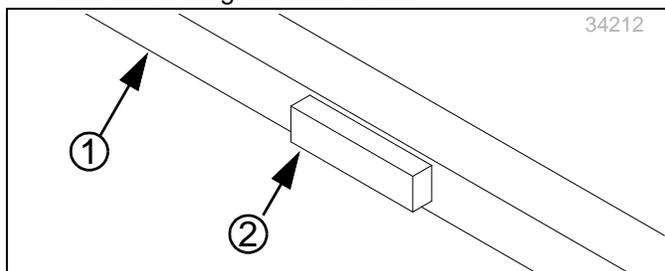
Install the Magnet

There are two separate methods to install the magnet on the shaft. Choose the most appropriate method for your drill and/or row spacing. All BD7600 models will use the Magnet Surface Mounting method.

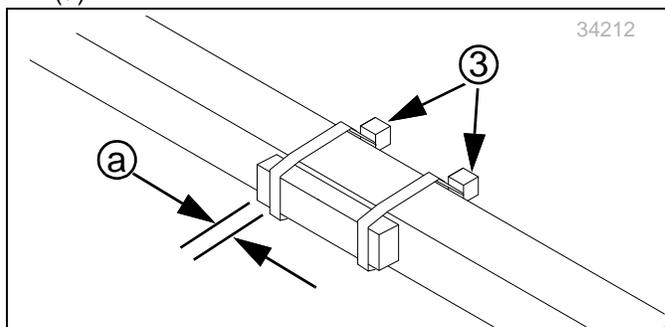
Shaft Surface Magnet Mounting

If the location has a polymer tube over the shaft, refer to section “**Polymer Tube Magnet Mounting**” on page 3.

1. Degrease and dry the shaft (1).
2. Using the calibration crank or other means, rotate the shaft so two faces are at vertical, and two faces are horizontal.
3. Select one magnet. Do not remove the release backing. Ensure correct fit of magnet (2) on shaft (1) face. If necessary, trim as required, keeping the magnet length longer than the minimum length of 1-3/4 inches (4.4 cm).
4. Remove the release backing film. Aligning with the shaft center-line and to the extent possible, in the center of the cup-to-cup gap, apply the adhesive side of the magnet to the shaft.



5. Using two zip ties, position the zip ties so each end of the magnet is exposed by at least 1/4 inch (6 mm) (a).



6. Tighten each zip tie, so the ratchet end of the zip tie (3) will be on the shaft face opposite the magnet. Trim excess.

7. Repeat steps for each box drill section.

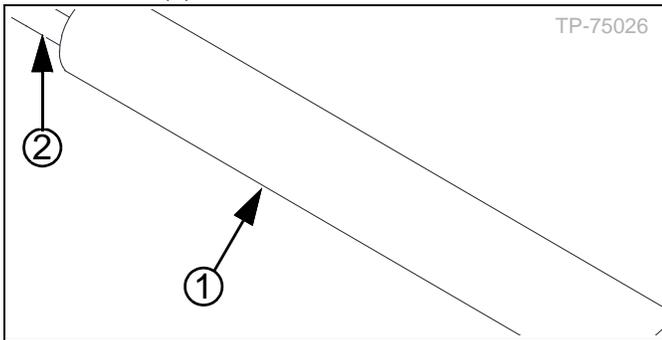
Once all magnets have been installed, continue with installation instructions in section “**Sensor Mount**” on page 3.

Polymer Tube Magnet Mounting

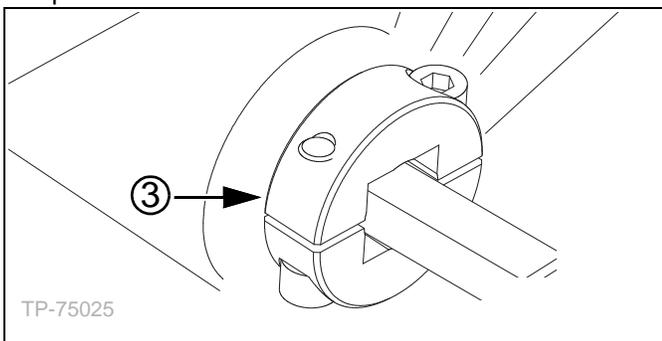
If the magnet location has a bare shaft, refer to section “**Shaft Surface Magnet Mounting**” on page 2.

If your drill has a polymer spacing tube, it will be necessary to remove the polymer spacing tube and install split lock collar on each side of the shaft directly against the feeder cup assembly. The split lock collar will prevent the feeder cup assemblies from shifting.

1. Degrease and dry the polymer spacing tube (1) and the shaft (2).

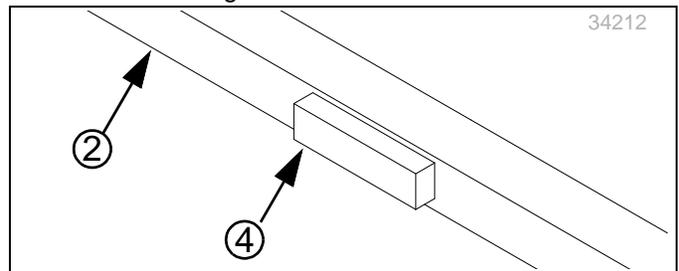


2. Completely cut away the polymer spacing tube (1), to expose the shaft between two feeder cup assemblies.
3. Install one split lock collar (3) at each end of the exposed shaft. Each split lock collar should be secured flush against the feeder cup assemblies to prevent movement.

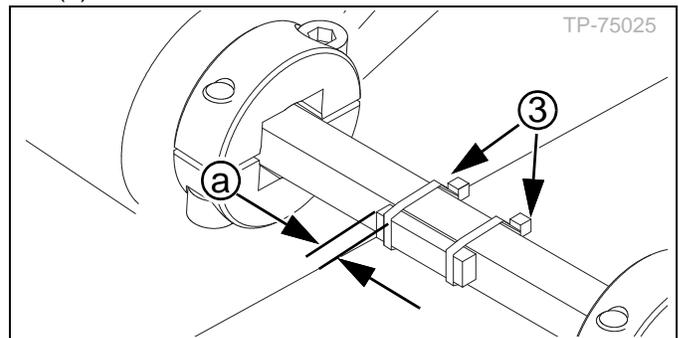


4. Using the calibration crank or other means, rotate the shaft so that two faces are vertical, and two faces are horizontal.
5. Select one magnet. Do not remove the release backing. Ensure correct fit of magnet (4) on shaft (2) face. If necessary, trim as required, without trimming the magnet length shorter than the minimum length of 1-3/4 inches (4.4 cm).
6. Remove the release backing film. Aligning with the shaft center-line (and to the extent possible, in the

center of the cup-to-cup gap), apply the adhesive side of the magnet to the shaft.



7. Using two zip ties (5), position the zip ties so each end of the magnet is exposed by at least 1/4 inch (6 mm) (a).



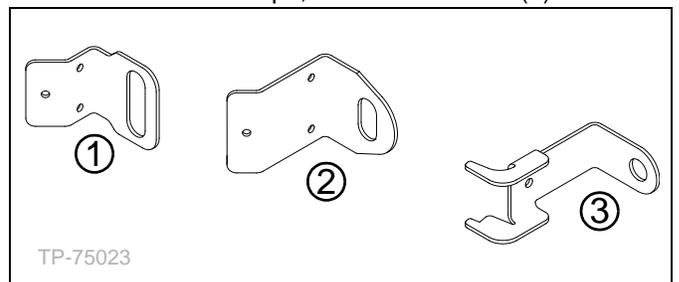
8. Tighten each zip tie, so the ratchet end of the zip tie (3) will be on the shaft face opposite the magnet. Trim excess.
9. Repeat steps for each box drill section.

Sensor Mount

Select Sensor Mount (116-282A or 116-283A)

Select sensor mount based on the type of feeder cups on your drill:

- **Large** feeder cups, mount 116-019D (1)
- **Small** feeder cups, mount 116-020D (2)
- **BD7600** feeder cups, mount 195-873D (3)

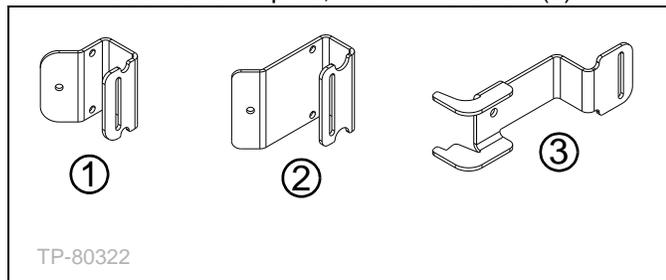


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Select Sensor Mount (116-322A or 116-323A)

Select sensor mount based on the type of feeder cups on your drill:

- **Large** feeder cups, mount 116-374D (1)
- **Small** feeder cups, mount 116-376D (2)
- **BD7600** feeder cups, mount 116-378D (3)



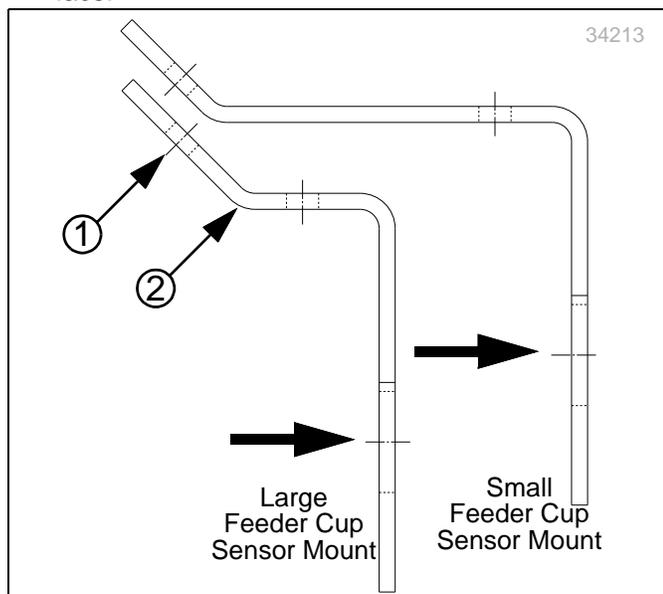
If your drill is not a BD7600 and has 6-inch row spacing see “**3S-5000 Drills with 6-inch Row Spacing**” on page 11 or “**2S-2600, 3S-3000, 3S-4000 Drills with 6-inch Row Spacing**” on page 13.

Install Sensor Mount

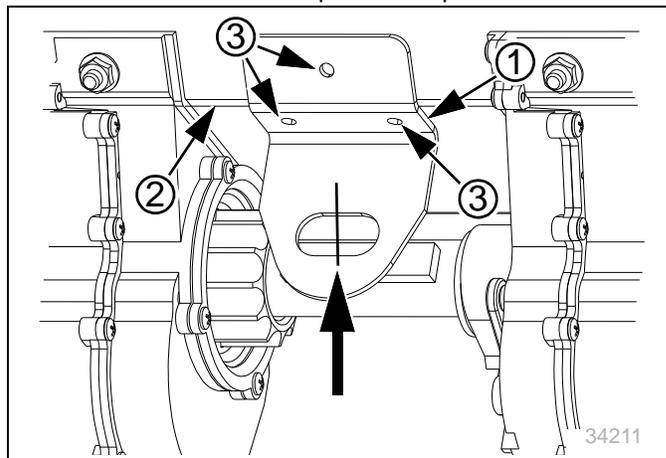
If you have a BD7600 Box Drill, see “**Drills with BD7600 Feeder Cups**” on page 5.

Drills with Large and Small Feeder Cups (116-282A or 116-283A)

1. With the short break (1) of the mount forward and up, and the break (2) aligned on the break of the seed box, position the center of the slotted hole over the center of the magnet previously mounted on shaft face.



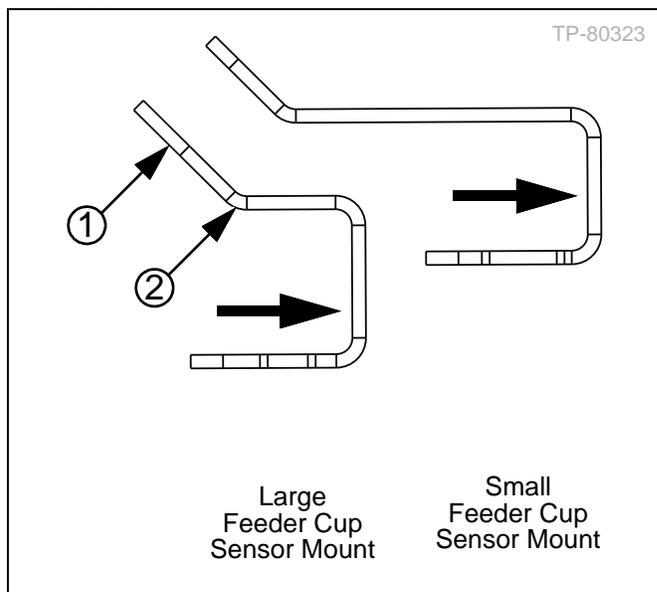
2. Mark the positions of the three small holes (3) on the seed box wall. Center-punch the positions.



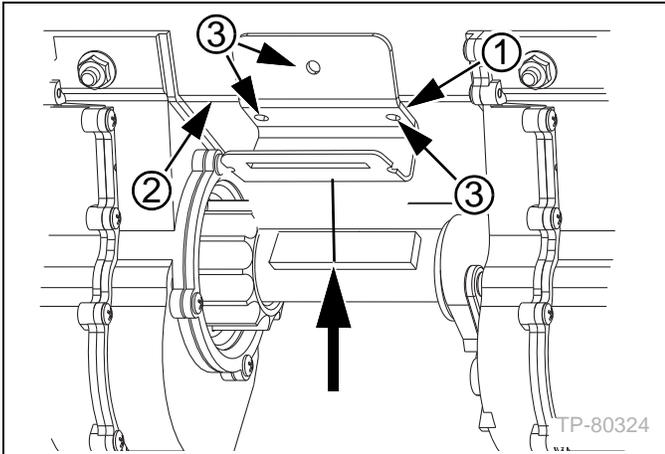
3. Drill 3/16 inch (#12, 4.8 mm) holes into the seed box wall at each marked position.
4. Select three of the self-tapping screws and secure the sensor mount into the seed box wall aligned with the three punched holes. The slotted-hole break of the mount, and the short break of the mount up and to the front.
5. Repeat steps for each box drill section.

Drills with Large and Small Feeder Cups (116-322A or 116-323A)

1. With the short break (1) of the mount forward and up, and the break (2) aligned on the break of the seed box, position the center of the slotted hole over the center of the magnet previously mounted on shaft face.



2. Mark the positions of the three small holes (3) on the seed box wall. Center-punch the positions.



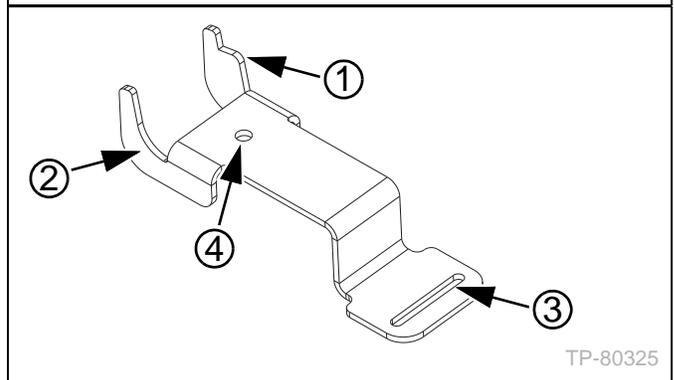
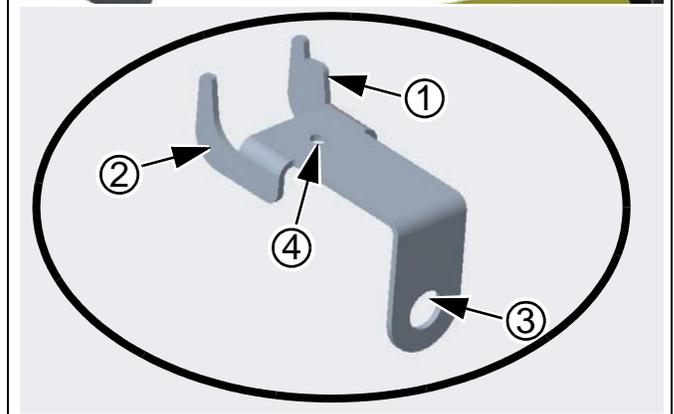
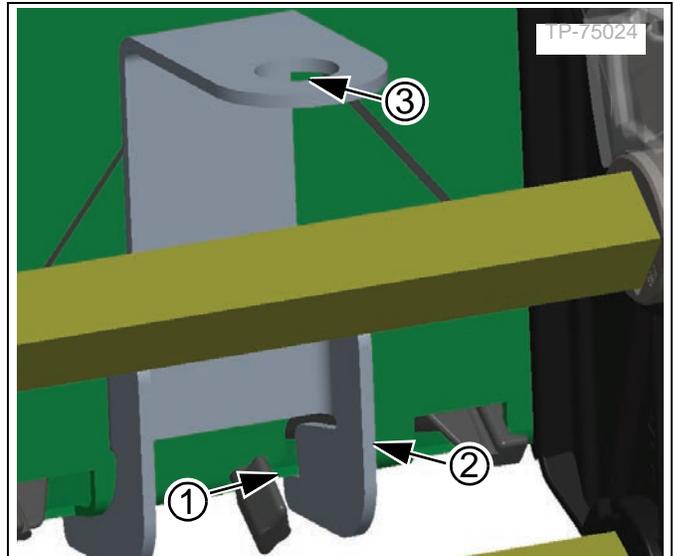
3. Drill 3/16th inch (#12, 4.8mm) holes into the seed box wall at each marked position.
4. Select three of the self-tapping screws and secure the sensor mount into the seed box wall aligned with the three punched holes. The slotted-hole break of the mount, and the short break of the mount up and to the front.
5. Repeat steps for each box drill section.

Once all sensor mounts have been installed, continue with installation instructions in section “Install Sensors” on page 6.

Drills with BD7600 Feeder Cups

If your drill is any other drill model other than the BD7600, see “Drills with Large and Small Feeder Cups (116-282A or 116-283A)” on page 4 or has 6-inch row spacing see “3S-5000 Drills with 6-inch Row Spacing” on page 11 or “2S-2600, 3S-3000, 3S-4000 Drills with 6-inch Row Spacing” on page 13.

1. With the short break (1) of the mount rearward and up, and break (2) aligned on the break of the seed tray, the slotted hole (3) positioned over the center of the magnet previously mounted on the shaft face.



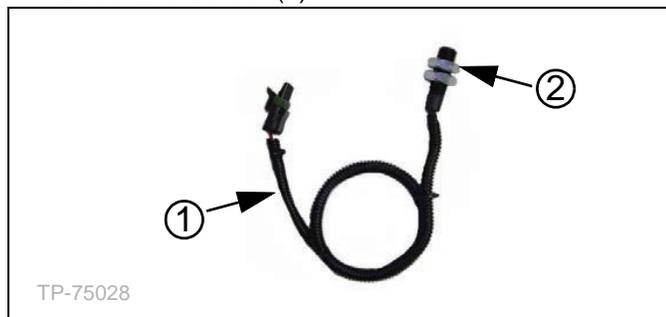
Loup Shaft Monitor Kit

- 📖 The mount is custom-notched to fit snugly against the seed tray.
- 2. Mark the position of the single small hole (4) on the seed tray. Center-punch the position.
- 3. Select one of the self-tapping screws and secure the sensor mount into the rear of the seed tray with the punched hole.
- 4. Repeat steps for each box drill section.

Install Sensors

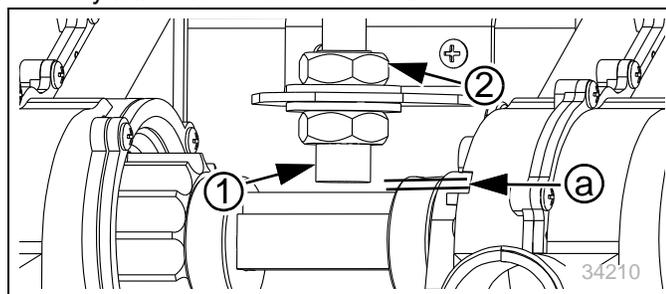
Install Sensors (116-282A and 116-283A)

1. Select one sensor (1).



2. The sensor may include a bracket not used in this installation. Remove the bracket and do not reuse.
3. If two plastic jam nuts (2) are pre-installed on the sensor remove and save one jam nut. Or select two plastic jam nuts and thread one jam nut on the sensor.
4. Insert the flat faced end of the sensor through the slotted hole in the mount. Thread the second jam nut onto the sensor.
5. Ensure the drive shaft is rotated so the magnet face is parallel to the sensor face.
6. Adjust the jam nuts so that the gap (a) between the sensor (1) face and the magnet face is 1/8 inch (3.2 mm).

📖 **NOTE:** If the gap is too small, the edge of the magnet, or the cable ties, may strike the sensor as the shaft rotates. If the gap is too large, the sensor may fail to detect shaft rotation.

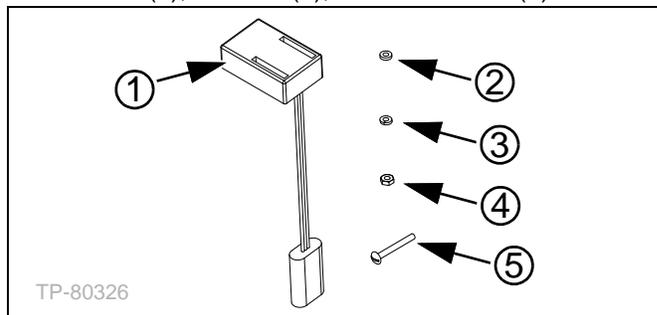


7. Rotate the shaft to verify clearance. Set the seed rate handle to 0 and check clearance again. Set the seed rate handle to 100 and check clearance.

8. Tighten the jam nuts. Do not over-tighten.
9. Repeat steps for each box drill section.

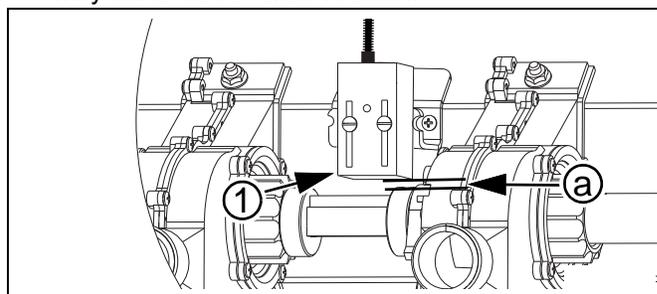
Install Sensors (116-322A and 116-323A)

1. Select one sensor (1), one washer (2), one lock washer (3), one nut (4), and one screw (5).



2. Ensure the drive shaft is rotated so the magnet face is near the sensor bracket mount.
3. Attach the sensor to the bracket with hardware from step one, keeping the face of the sensor parallel to the magnet. The LED light should be on the side of the sensor away from the bracket.
4. Adjust the sensor so that the gap (a) between the sensor (1) face and the magnet face is 1/8 inch (3.2mm).

📖 **NOTE:** If the gap is too small, the edge of the magnet, or the cable ties, may strike the sensor as the shaft rotates. If the gap is too large, the sensor may fail to detect shaft rotation.



5. Tighten hardware. Do not over tighten.
6. Rotate the drive shaft to verify clearance. Set the seed rate handle to 0 and check clearance again. Set the seed rate handle to 100 and check clearance.
7. Repeat steps for each box drill section.

Install Harnesses

Installation Tips

- Before securing harnesses with zip ties and clips, uncoil and route the harnesses across the drill and to the hitch to ensure the harnesses are correctly oriented and have sufficient length.
- Install harnesses clear of sharp edges, machine heat, moving parts and pinch points, such as chains, sprockets, and rotating shafts.
- Allow slack at hinge points, or route the harness so it passes through the hinge axis.
- Take advantage of holes and open tubes on the drill. However, avoid routing through a tube if a mated connector set would end up inside the tube.
- Evaluate routing and attachment points. Ample zip ties and clamps are provided for most situations.
- The clips can also be used around hydraulic hoses, and the harnesses secured to the clips with ties.
- Leave a little slack between attachment points. A harness stretched tight could be damaged by normal temperature swings.
- Where there is an extended run of unsupported harness, make sure each end of the sag is supported by a cable tie, and not by a connector, and that there are no connections in the sag.
- Where excess harness exists, such as on two-point drills, plan a location for coiling and securing the excess. Selecting a location near the hitch provides flexibility if any later troubleshooting is required.
- If an accessory hitch is used (such as a Great Plains CPH, PFH or SSH), but is not permanently connected, locate the extension-to-harness connection at the drill 3-point hitch.

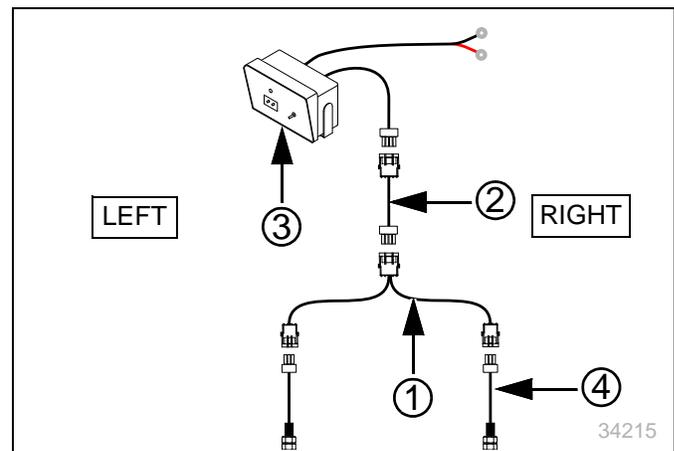
Two-Channel Shaft Monitor Kits

Review the “Installation Tips”.

116-282A

Gather and identify the following parts:

- **2-Shaft Harness (1)** - a harness consisting of two 20 ft (6.1 m) leads marked LEFT and RIGHT with 3-pin connectors.
 - **In-Cab Harness (2)** - a 20 ft (6.1m) harness with a 4 pin connector.
 - **In-cab Console (3)** - Shaft Monitor in-cab console.
1. Route the 2-shaft harness (1) with leads labeled LEFT and RIGHT across the drill, using care that the leads labeled LEFT and RIGHT are routed to the correct seed boxes.



2. Route the 2-shaft harness (1) leads through available holes and near attachment points for zip ties and connect each lead to the correct LEFT or RIGHT shaft sensor.
3. Place the in-cab console (3) in the tractor cab. Route the 2-shaft harness (1) to in-cab harness (2) and mate.
4. Connect the in-cab harness (2) to the in-cab console (3).
5. Once completed, refer to the section, “**Secure Harnesses**” on page 10 .

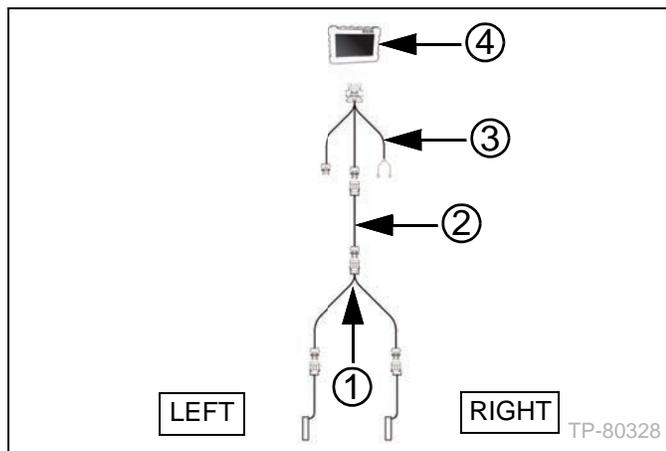
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116-322A

Gather and identify the following parts:

- **2-Shaft Harness (1)** - a harness consisting of two leads marked LEFT and RIGHT
- **Tongue Extension Harness (2)** - an extension harness 14 ft (4.3m) long
- **In-Cab Harness (3)** - a harness with connectors for GPS/Radar, two power connectors, 13 ft (4m) extension, and connector for In-Cab Monitor.
- **In-Cab Monitor (4)** - Elite Mini XT

1. Route the 2-shaft harness (1) with leads labeled LEFT and RIGHT across the drill, using care that the leads labelled LEFT and RIGHT are routed to the correct seed boxes.



And extension harness (not shown) may be used to add and additional 25' (7.6m) from the 2-Shaft harness. You may identify the harness by its length. If you use this harness, you will simply mate the extension harness between the 2-Shaft harness and the Tongue Extension harness, along the tongue.

2. Route the 2-Shaft harness (1) leads through available holes and near attachment points for zip ties and connect each lead to the correct LEFT or RIGHT shaft sensor.
3. Route the Tongue Extension (2) harness down the tongue and mate with the 2-Shaft harness (1).
4. Route the In-Cab harness (4) from the Tongue Extension harness (3) into the tractor cab. Mate the In-Cab harness (3) to the Tongue Extension harness (2).
5. Place the In-Cab Monitor (4) inside the cab, and connect to the In-Cab harness (3).
6. Once completed, refer to the section, "**Secure Harnesses**" on page 10 .

Three-Channel Shaft Monitor Kits

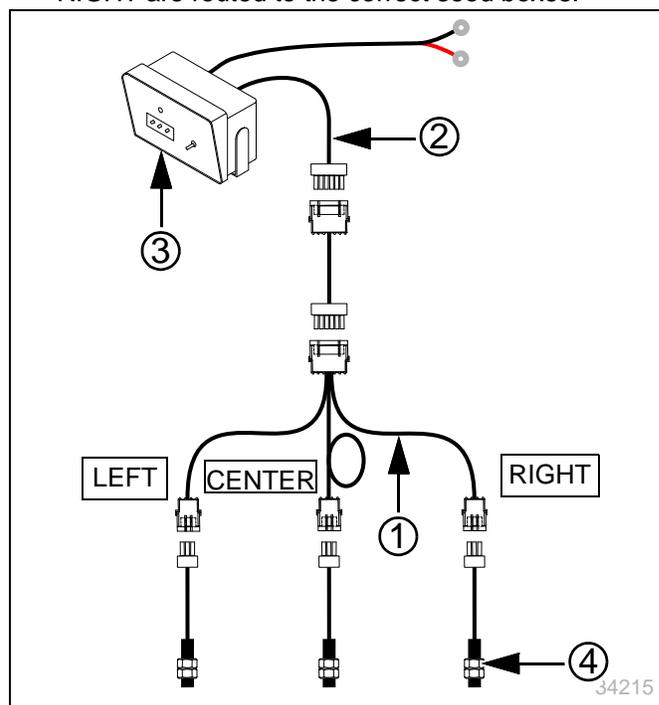
Review the "Installation Tips".

116-283A

Gather and identify the following parts:

- **3-Shaft Harness (1)** - a harness consisting of three 20 ft (6.1 m) leads marked LEFT, CENTER, and RIGHT with 3-pin connectors
- **In-Cab Harness (2)** - a 20 ft (6.1m) harness with a 6-pin connector.
- **In-cab Console (3)** - Shaft Monitor in-cab console

1. Route the 3-shaft harness (1) with leads labeled LEFT, CENTER, and RIGHT across the drill, using care that the leads labeled LEFT, CENTER, and RIGHT are routed to the correct seed boxes.



An extension harness (not shown) may be used to add an additional 30 ft (9.1 m) from the 3-shaft harness. You may identify the harness by its length. If this harness is used, you will simply mate this harness between the in-cab harness and the 3-shaft harness along the tongue or accessory hitch.

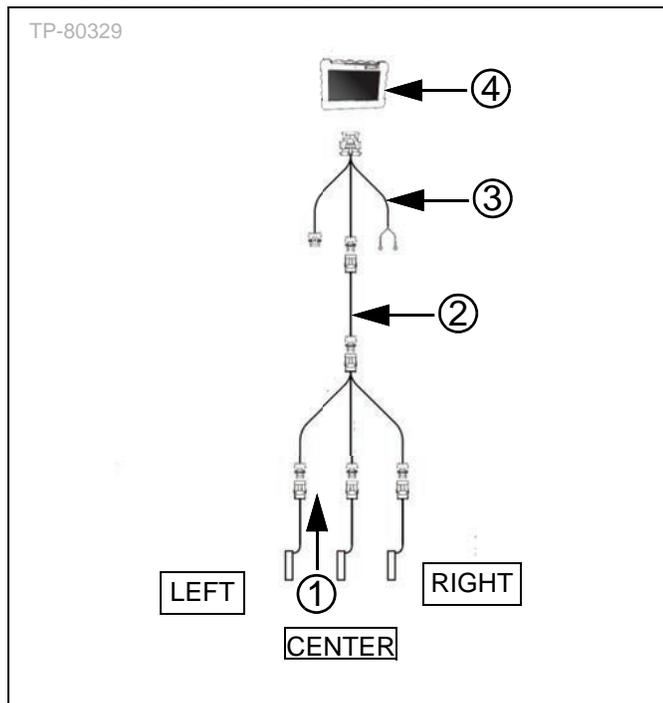
2. Route the 3-shaft harness (1) leads through available holes and near attachment points for zip ties and connect each lead to the correct LEFT, CENTER, and RIGHT shaft sensor.
3. Place the in-cab console (3) in the tractor cab. Route the 3-shaft harness (1) to in-cab harness (2) and mate.
4. Connect the in-cab harness to the in-cab console (3).

116-323A

Gather and identify the following parts:

- **3-Shaft Harness** (1) A harness consisting of three leads labelled LEFT, CENTER, and RIGHT.
- **Tongue Extension Harness** (2) An extension harness 14 ft (4.3m) long
- **In-Cab Harness** (3) A harness with connectors for GPS/Radar, two power connectors, 13 ft (4m) extension, and connector for the In-Cab Monitor.
- **In-Cab Monitor** (4) - Elite XT Mini

1. Route the 3-Shaft harness (1) with leads labelled LEFT, CENTER, and RIGHT across the drill, using care that the leads LEFT, CENTER, and RIGHT are routed to the correct seed boxes.



 An extension harness (not shown) may be used to add an additional 30 ft (9.1m) from the 3-shaft harness. You may identify this harness by its length. If this harness is used, you will simply mate the harness between the Tongue Extension harness and the 3-Shaft harness along the tongue or accessory hitch.

2. Route the 3-Shaft harness (1) leads through available holes and near attachment points for zip ties and connect each lead to the correct LEFT, CENTER, and RIGHT shaft sensor.
3. Route the Tongue Extension (2) harness along the tongue and mate with 3-Shaft harness (1).
4. Route In-Cab harness (3) from tractor cab to Tongue Extension Harness (2) and mate.
5. Place In-Cab monitor (4) inside tractor cab and connect to In-Cab harness (3).

Secure Harnesses

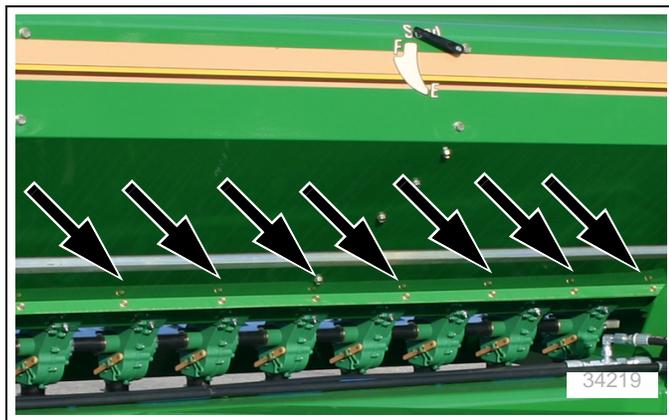
WARNING

Machine Damage Risk

Install harnesses clear of sharp edges, machine heat, moving parts and pinch points, such as chains, sprockets, and rotating shafts. Leave a little slack between attachment points. A harness stretched tight could be damaged by normal temperature swings.

It may be necessary to temporarily disconnect a harness in order to guide the harness into the correct position to secure with clips and zip ties. Remember to reconnect the harnesses before moving on to the next section.

1. Used hose clips to secure the sensor leads to the flange that joins each seed box to its tray. Allocate them for equal clip spacing on each box.
2. At each desired support point, remove the existing bolts and nuts. Save the nuts.



3. Guide harness through clips and secure with 1/4-20 X 3/4 GR5 bolts and retained nuts.
4. Starting at the inner-most clips, secure the harness along its route, leaving a little slack, and more at the pivots, to secure the harness in place.

Install In-Cab Console

DANGER

Road Hazard

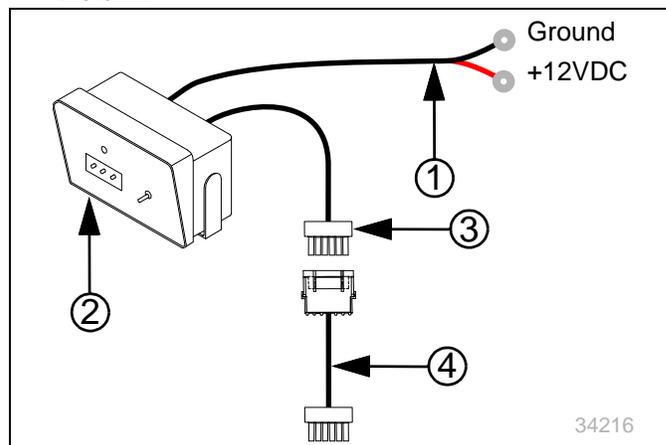
Do not install the in-cab console in a location which will block the view of the road or components of towed implements. Obstructing your view may cause an accident resulting in serious injury or death.

Determine a suitable location for the in-cab console in the tractor cab. Avoid placing the console where it interferes with the view of the road or blocks the view of important components of towed implements.

The location needs to be suitable for attaching the included mount. The necessary 1/4 inch fasteners are not provided in the kits, as requirements vary considerably based on your mounting location. You may want to attach the mount to any existing mount. The mount can be removed and used as a template. It will be necessary to make your own mounting holes.

116-282A and 116-283A

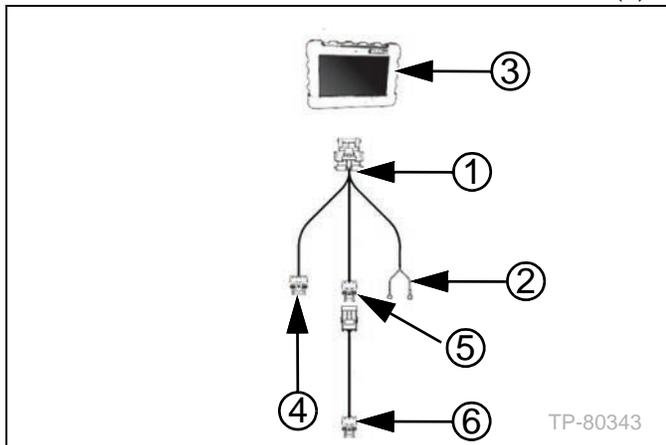
1. Route the power leads (1) to a 12VDC power source. Red is positive. Black is ground. Do not make any connections to the power source.
2. Make a note in the “**Hitching**” section of your drill operator manual. Add “**Shaft Monitor**” to the checklist of electrical connections to be made.
3. Route the console harness lead (3) out of the tractor cab, to the hitch. When the drill is hitched, connect the console harness lead to the in-cab harness on the drill.



4. Return to the 12VDC power source. Make sure to connect the red lead (positive) to the power source, then followed by the black lead (ground).

116-322A and 116-323A

1. Route the power leads (1) to a 12VDC power source. Red is positive. Black is ground. Do not make any connections to the power source.
 2. Connect the in-cab harness (2) to the in-cab monitor (3)
 3. Connect the GPS/Radar lead (4), if you are going to use this functionality.
-  The shaft monitor will function without the GPS/Radar lead being plugged in.
4. Make a note in the **“Hitching”** section of your drill operator manual. Add “Shaft Monitor” to the checklist of electrical connections to be made.
 5. Route the harness lead (5) out of the tractor cab, to the hitch. When the drill is hitched, connect the monitor harness lead to the harness on the drill (6).



6. Return to the 12VDC power source. Make sure to connect the red lead (positive) to the power source, followed by the black lead (ground).

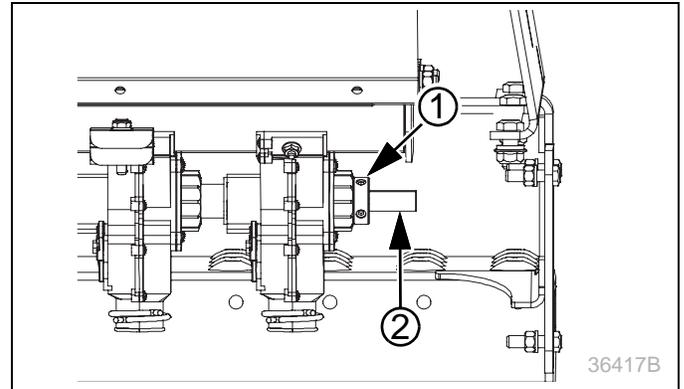
Installation has been completed. Basic operating instructions can be found in the section **“Operation”** on page 15.

Special Installation Instructions 3S-5000 Drills with 6-inch Row Spacing

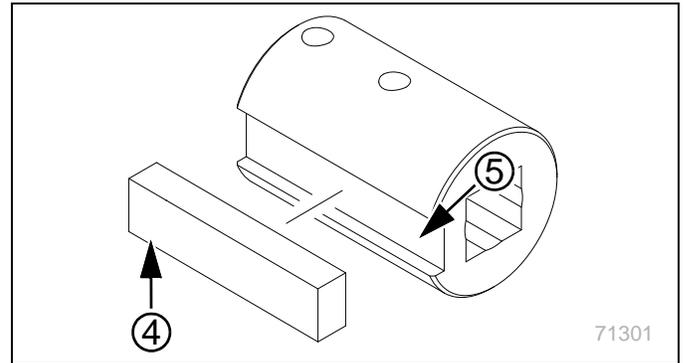
Optional for 7-1/2 inch and 10-inch Row Spacings

Left and Right Side Seed Boxes

1. Loosen and remove the existing lock collar (1) from either the left or right side box shaft closest to the center box. The lock collar and set screws will not be re-used.



2. Degrease and dry the shaft (2).
3. Select a magnet (4) and lock collar (5). Before removing the release backing, ensure the magnet fits in the milled slot on the lock collar from the kit. If necessary, trim as required, keeping the magnet length longer than the minimum length of 1-3/4 inches (4.4 cm).



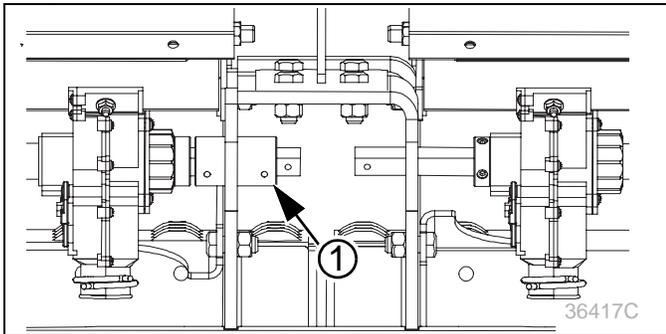
4. Remove the release backing and position the magnet (4) in the milled slot on the split lock collar (5). Press firmly along the length of the magnet to allow greatest contact between split lock collar and magnet.
5. Wrap zip ties around the lock collar and over each end of the magnet.
6. Position the zip ties so that the ends of the magnet are exposed by about 1/4 inch (6 mm).
7. Position the ratchet end of each zip tie opposite the magnet. Tighten the zip ties and trim any excess.

Loup Shaft Monitor Kit

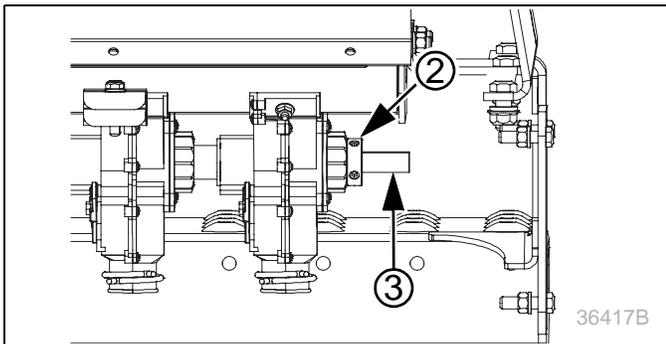
8. Install the new lock collar in place of removed lock collar from step 1. Firmly secure with set screws.
9. Repeat steps for both right and left boxes and then proceed to Center Seed Box instructions in next section.

Center Seed Box

1. Locate the shaft coupling (1) at the center box. Use a drift punch to remove the roll pins and slide the coupler over and onto the left shaft. Save the roll pins.

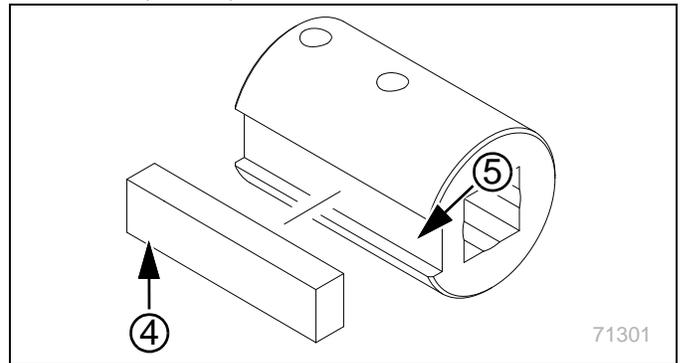


2. Loosen and remove the existing lock collar (2) from either the left or right side box shaft closest to the center box. The lock collar and set screws will not be re-used.



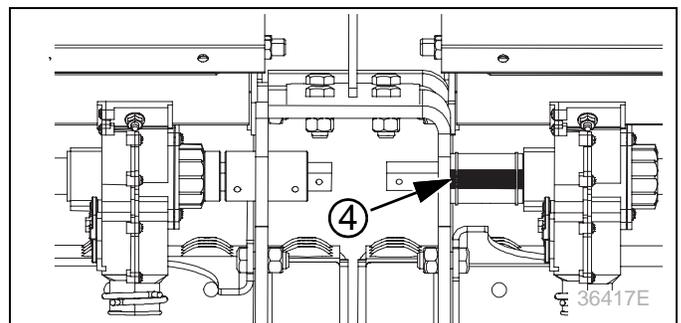
3. Degrease and dry the shaft (3).
4. Select a magnet (4) and lock collar (5). Before removing the release backing, check that the magnet fits in the milled slot on the lock collar from the kit. If necessary, trim as required, keeping the magnet

length longer than the minimum length of 1-3/4 inches (4.4 cm).



5. Remove the release backing and position the magnet (4) in the milled slot on the lock collar (5). Press firmly along the length of the magnet to allow greatest contact between lock collar and magnet.
6. Wrap zip ties around the lock collar and over each end of the magnet.
7. Position the zip ties so that the ends of the magnet are exposed by about 1/4 inch (6 mm).
8. Position the ratchet end of each zip tie opposite the magnet (4). Tighten the zip ties and trim any excess.
9. Install the new lock collar on the right-hand shaft of the center box. Firmly secure with set screws.
10. Slide the shaft coupling (1) back into position to secure both shafts and re-insert the roll pins.

A slotted lock collar (4) can also be installed at the inside or outside end of a box if there is enough available box space to mount the bracket and sensor.

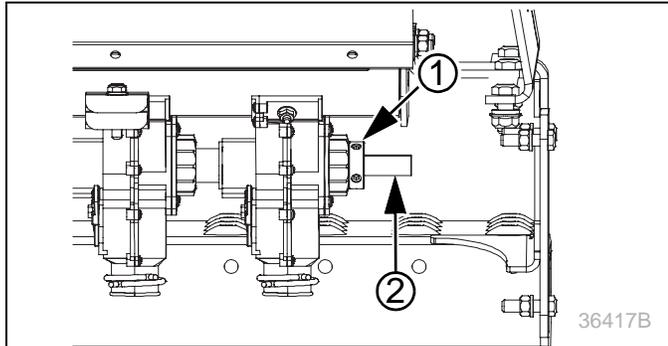


To install mounts and sensors, see “Install Sensor Mount” on page 4, and “Install Sensors” on page 6.

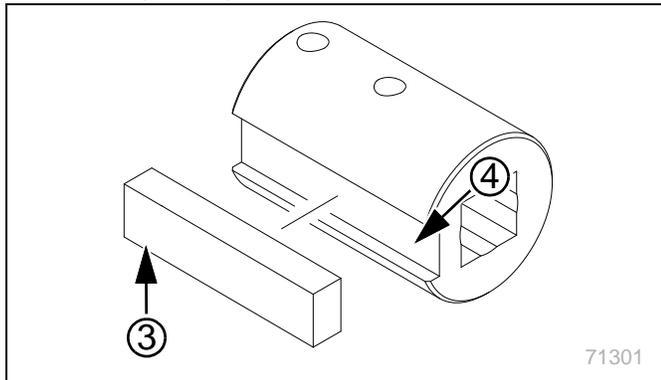
2S-2600, 3S-3000, 3S-4000 Drills with 6-inch Row Spacing

Install Lock Collars and Magnets

1. Loosen and remove the existing lock collar (1) from either the left or right side box shaft closest to the center box. The lock collar and set screws will not be re-used.



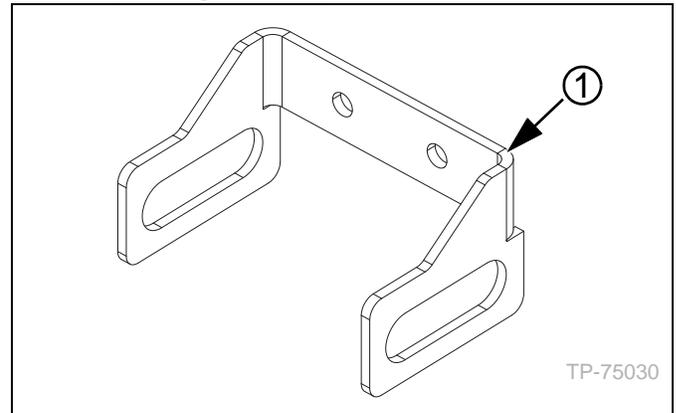
2. Degrease and dry the shaft (2).
3. Select a magnet (3) and lock collar (4). Before removing the release backing, check that the magnet fits in the milled slot on the lock collar from the kit. If necessary, trim as required, keeping the magnet length longer than the minimum length of 1-3/4 inches (4.4 cm).



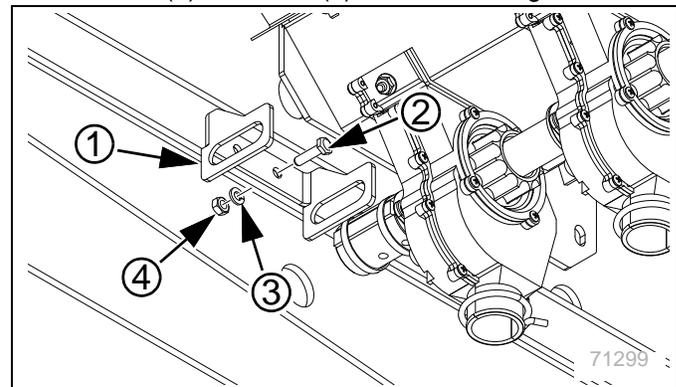
4. Remove the release backing and position the magnet (3) in the milled slot on the lock collar (4). Press firmly along the length of the magnet to allow greatest contact between split lock collar and magnet.
5. Wrap zip ties around the lock collar and over each end of the magnet.
6. Position the zip ties so that the ends of the magnet are exposed by about 1/4 inch (6 mm).
7. Position the ratchet end of each zip tie opposite the magnet. Tighten the zip ties and trim any excess.
8. Install the new lock collar (4) in place of removed lock collar (1) from step 1. Firmly secure with set screws.
9. Repeat steps for each box drill section.

Install Mounts and Sensors 116-283A and 116-284A

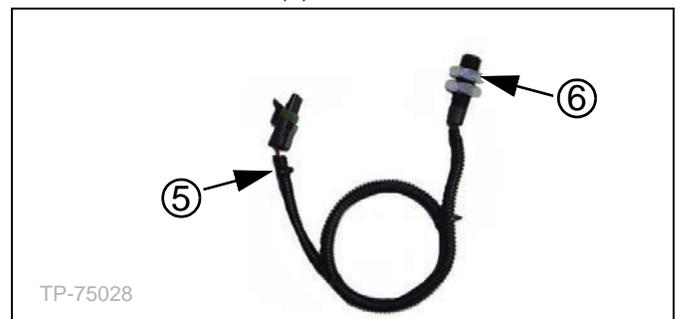
1. Select bracket 116-362D (1) and two 1/4 x 1 inch bolts, locking washers, and nuts.



2. Locate the two holes on the channel near the end of the feeder cup shaft. Install the bracket (1) as shown below. Secure with two 1/4 x 1 inch bolts (2), lock washers (3), and nuts (4). Do not over-tighten.



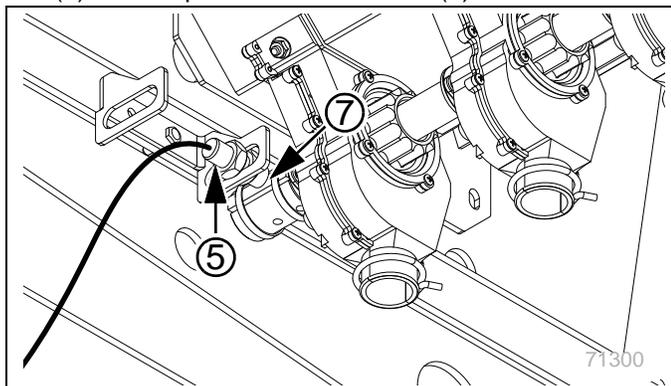
3. Select one sensor (5).



4. The sensor (5) may include a bracket not used in this installation. Remove the bracket and do not reuse.
5. If two plastic jam nuts (6) are pre-installed on the sensor remove and save one jam nut. Or select two plastic jam nuts and thread one jam nut on the sensor.
6. Insert the flat faced end of the sensor through the slotted hole in the mount (1). Thread the second jam nut onto the sensor (5).

Loup Shaft Monitor Kit

- Check that the drive shaft is rotated so the magnet (7) face is parallel to the sensor (5) face.



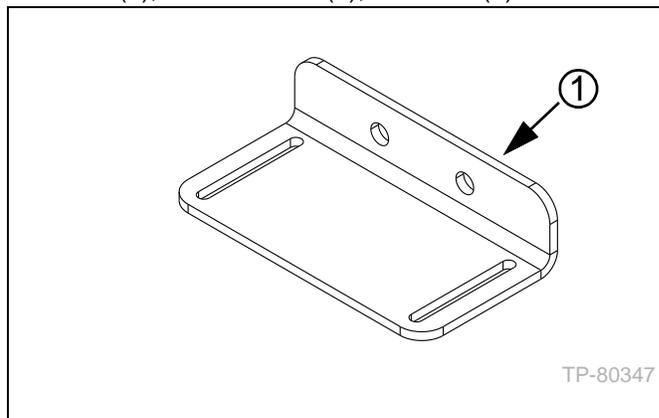
- Adjust the jam nuts so the gap between the sensor face and the magnet face is 1/8 inch (3.2 mm).

NOTE: If the gap is too small, the edge of the magnet, or the cable ties, may strike the sensor as the shaft rotates. If the gap is too large, the sensor may fail to detect shaft rotation.

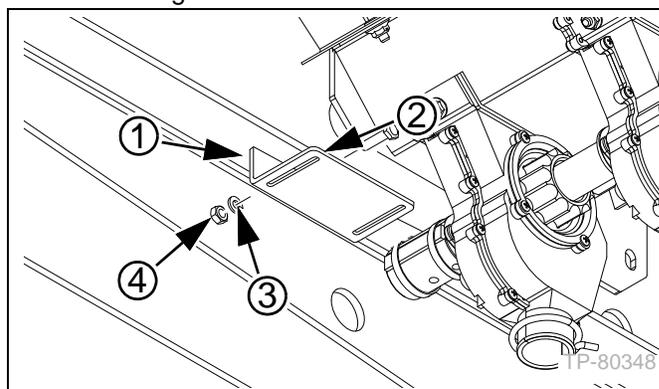
- Rotate the shaft to verify clearance. Set the seed rate handle to 0 and check clearance again. Set the seed rate handle to 100 and check clearance.
- Tighten the jam nuts. Do not over-tighten.
- Repeat steps for each box drill section.
- Continue to the section “Install Harnesses” on page 7, then “Install In-Cab Console” on page 10.

Install Mounts and Sensors 116-322A and 116-323A

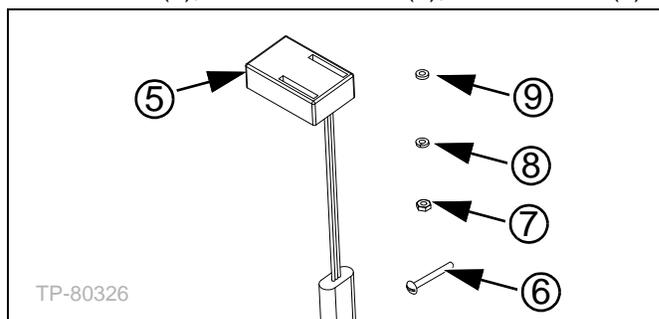
- Select bracket 116-377D (1) and two 1/4 x 1 inch bolts (2), lock washers (3), and nuts (4).



- Locate the two holes on the channel near the end of the feeder cup shaft. Install the bracket as shown below. Secure with the hardware selected earlier. Do not over tighten.

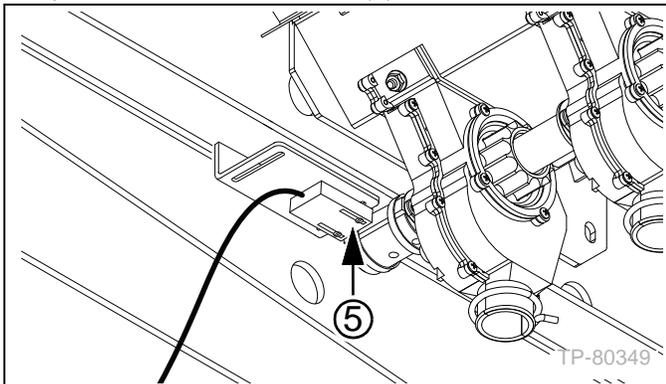


- Select one sensor (5), two screws (6), two lock washers (7), two flat washers (8), and two nuts (9).



- Attach the sensor to the bracket. Do not overtighten hardware. Be sure to keep the side of the sensor with the LED light away from the bracket, so that it is visible.

- Rotate the drive shaft so that the magnet face is parallel to the sensor face (5).

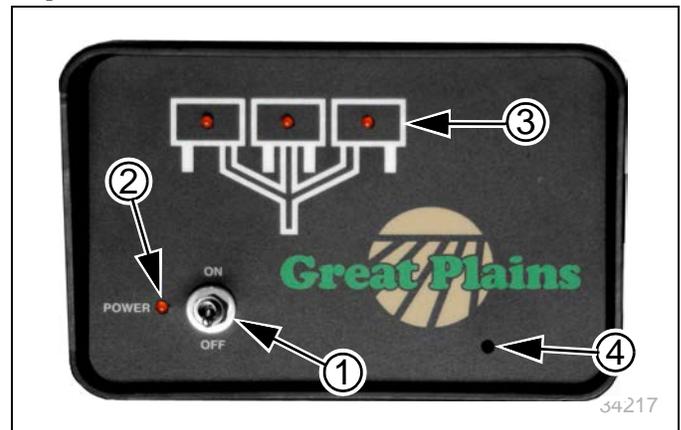


- Adjust the sensor so that the gap between the sensor face and the magnet is 1/8 inch (3.2mm).

NOTE: If the gap is too small, the edge of the magnet, or the cable ties, may strike the sensor as the shaft rotates. If the gap is too large, the sensor may fail to detect shaft rotation.

- Rotate the shaft to verify clearance. Set the seed rate handle to 0 and check clearance. Set the seed rate handle to 100 and check clearance.
- Check the sensor hardware to make sure it is tight. Do not over-tighten.
- Repeat steps for each box drill section.
- Continue to the section “Install Harnesses” on page 7, then “Install In-Cab Console” on page 10.

Operation



116-282A/116-283A

An in-cab console for a 3-section kit is shown.

In-Cab Console Panel Elements

- Power Switch** - This mechanical switch controls 12VDC power to the shaft monitor system.
- Power Indicator** - This LED illuminates when 12VDC is available and the switch (1) is toggled to ON.
- Status Indicators** - With the system active, one or more of these LEDs illuminate whenever shaft rotation has not been detected for 20 seconds.
- Audio Portal** - When Status Indicators first illuminate, an audible tone is emitted at this portal, for 20 seconds.

Normal Operation

If the harness, or one of more sensor leads, are not connected, the system ignores the disconnected channels, and does NOT generate an alarm at power-on.

An alarm when the system powers on is normal. It serves as a verification that the sensors have been detected.

During operation, if a shaft alarm occurs, be aware that the affected seed box has not been planting for 20 seconds.

- Connect the in-cab console power leads to 12VDC power source and the electrical harnesses when hitching.
- Toggle the power switch (1) to ON.
 - The power indicator (2) illuminates.
 - If the drill is not in motion with shafts rotating the status indicators (3) illuminate.
 - The alarm tone (4) sounds for 20 seconds.
- The power switch is normally toggled to ON for planting. If field turns take more than 20 seconds, an alarm sounds. Toggle the power switch to OFF to avoid nuisance alarms.

Loup Shaft Monitor Kit

During planting operations, if a shaft alarm occurs, be aware that the affected seed box has not been planting for 20 seconds. The affected channel will illuminate, identifying the location of the stopped shaft. It will be necessary to resolve the issue which prevented the shaft rotation before resuming planting operations. Please refer to the “**Troubleshooting**” section of the drill operator manual for guidance.

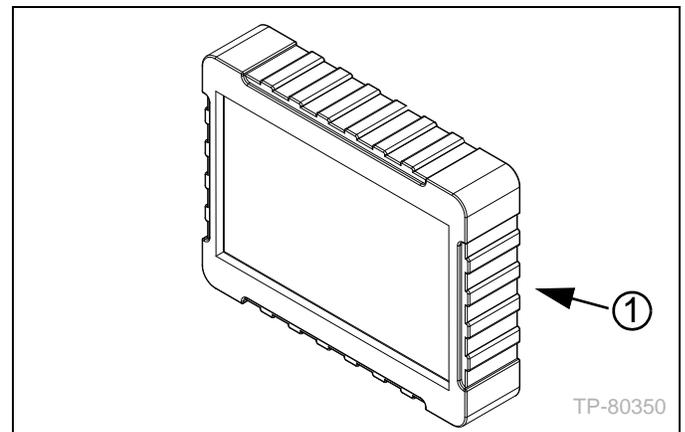
Operation 116-322A/116-323A

- 📖 The Loup Elite Mini Drill monitor is utilized solely as a Shaft Monitor in this kit. For more information regarding other use cases, look at the Loup Elite Mini manual or Contact Loup electronics.
- 📖 The screens shown are for a two section monitor setup.
- 📖 The Elite Mini monitor used in this kit has many functions. For the purposes of this kit, it is utilized solely as a shaft monitor. For further information regarding the Elite Mini, Contact Loup Electronics or read the Elite Mini Manual provided by Loup.

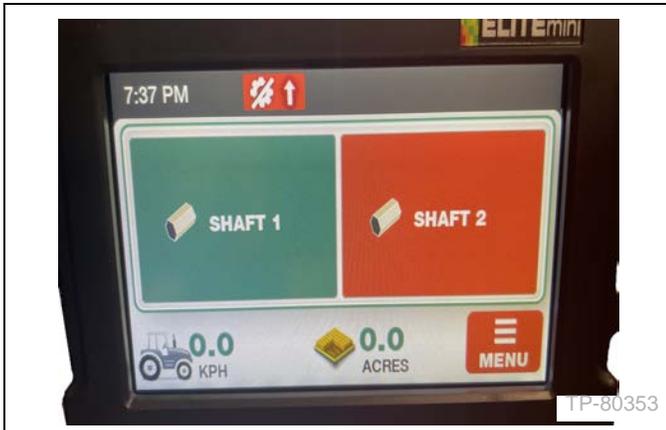
In-Cab Console Screen Elements

If the harness, or one or more sensor leads, are not connected, the system ignores the disconnected channels, and does NOT generate an alarm at power-on.

During operation, if a shaft alarm occurs, be aware that the affected seed box has not been planting for 20 seconds.



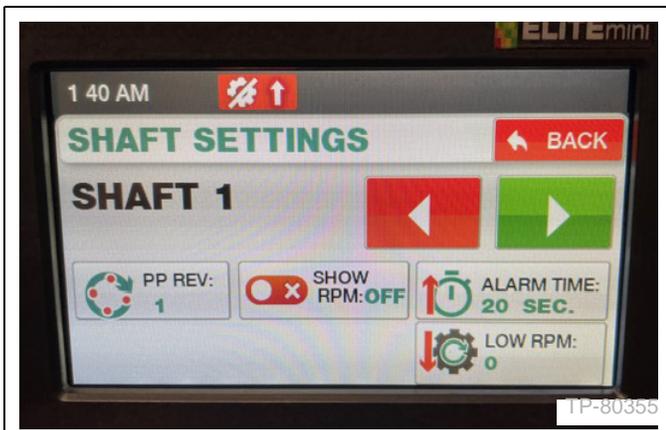
1. Power on the in cab monitor. The switch (1) is located on the back of the monitor.
 - The monitor screen will load, and present the home screen.



- The home screen will display each shaft. The shaft be colored red if the shafts are not turning. (Shaft 2 in example)
 - Drive shafts turning and in use will display green in that sections box. (Shaft 1 in Example)
 - An alarm will sound for 20 seconds if any shaft stops turning. This alarm length may be changed in the monitor settings.
2. If you desire to change alarm length, Tap the menu hot key.



3. To access Shaft settings, tap the Shaft settings button.



Loup Shaft Monitor Kit Troubleshooting

Symptom	Cause	Remedy
Power LED does not illuminate	Power lead fuse blown due to system fault	Inspect harnesses for damage (shorts). Disconnect harness at hitch. Replace 3 Amp fuse. If fuse blows again, console or harness may be faulty.
	Power lead fuse blown due to tractor fault	Check that power source is 12 Volts DC.
	Power lead not connected, severed, or power circuit open between leads and tractor battery	Inspect console power leads. Connect console leads directly to a battery to verify system.
	Polarity reversed at power lead connection	Swap power leads to correct terminal.
	Monitor fault	Replace or repair console.
All Status Indicator LEDs do not illuminate	Harness disconnected at hitch, extension harness or sensors	Check harness connections.
	Harness fuse blown	Inspect harnesses for damage (shorts). Disconnect harness at hitch. Replace 3 Amp fuse. If fuse blows again, console or harness may be faulty.
	Harness fuse blown	Console lead was connected to a 4-pin or 6-pin weatherpack connector on the drill that was NOT the sensor extension harness or shaft harness.
One Status Indicator never illuminates	Sensor not connected	Check sensor lead.
	Harness damaged	Check continuity of harness lines.
	Sensor failed	Swap sensor from another seed box and test.
No Status Indicator ever turns off	Shafts are not turning	Check drill drive system.
	Sensors not correctly installed	Check for 1/8 inch gap at sensors.
One Status Indicator never turns off	Shaft is not turning	Check section drive system.
	Sensor has shifted out of magnet range	Check for 1/8 inch gap at sensor.

Wiring Schematics

116-282A / 116-283A

Color	6-Pin Harness	4-Pin Harness	Sensor Lead
Black	B: Ground	B: Ground	B: Ground
Blue	E: RIGHT Signal	E: RIGHT Signal	-
Brown	D: CENTER Signal	-	-
Green	C: LEFT Signal	C: LEFT Signal	-
Red	A: +12VDC	A: +12VDC	A: +12VDC
White	-	-	C: Signal

116-322A / 116-323A

Color	3-Pin Harness 2 Section	3-Pin Harness 3 Section	Sensor Lead
Black	B: Ground	B: Ground	B: Ground
Blue			
Brown			
Green	C: Signal	C: Signal	C : Signal
Red			
White	A : +12VDC	A : +12VDC	A : +12VDC

Loup Shaft Monitor Kit Contents**116-282A / 116-283A**

Part Number	Part Description	Quantity in Kit	
		2-Section Kit (116-282A)	3-Section Kit (116-283A)
116-284M	Loup Shaft Monitor Kit Installation Instructions (this manual)	1	1
116-019D	Large Cup Shaft Sensor Mount	2	3
116-020D	Small Cup Shaft Sensor Mount	2	3
195-873D	BD7600 Cup Shaft Sensor Mount	2	3
116-362D	Hall Effect Bracket Mount	2	3
823-403C	In-Cab Console Bundle for 3-Section Kit		1
	3-Shaft Harness		1
	Shaft Sensors		3
	Magnets		3
	Cable Ties		6
	Plastic Jam Nuts		6
833-595C	Extension Harness for 3-Section Kit	-	1
823-402C	In-Cab Console Bundle for 2-Section Kit	1	
	2-Shaft Harness	1	
	Shaft Sensors	2	
	Magnets	2	
	Cable Ties	4	
	Plastic Jam Nuts	4	
833-596C	Extension Harness for 2-Section Kit	1	-
116-011S	Split Lock Collar Assembly	4	6
116-035D	Lock Collar with Milled Slot	2	3
891-507C	Split Lock Collar Half	8	12
801-156C	HFS 10-16 X 5/8 Self Drill	6	9
801-199C	SCR Self Tap #10 X 3/4	6	9
801-035C	Screw Set 5/16-18 SKT KP X	4	6
802-005C	HHCS 1/4-20 X 1 GR5	4	6
802-257C	HFSS 1/4-20 X 3/4 GR5	10	15
843-307C	HSHCS 1/4-28 X 7/8	8	12
804-006C	Washer Lock Spring 1/4 PLT	4	6
803-006C	Nut Hex 1/4-20 PLT	4	6
800-052C	Hose Clips 5/8 I.D.	15	15
800-112C	Cable Ties	20	20

Loup Shaft Monitor Kit

116-322A / 116-323A

Part Number	Part Description	Quantity in Kit	
		2-Section Kit (116-322A)	3-Section Kit (116-323A)
116-284M	Loup Shaft Monitor Kit Installation Instructions (this manual)	1	1
116-374D	Large Cup Shaft Sensor Mount	2	3
116-376D	Small Cup Shaft Sensor Mount	2	3
116-378D	BD7600 Cup Shaft Sensor Mount	2	3
116-377D	Sensor Bracket 6 Inch Spacing	2	3
843-626C	In-Cab Console Bundle for 3-Section Kit		1
	3-Shaft Harness		1
	Shaft Sensors		3
	Magnets		3
	Cable Ties		6
	Monitor Harness		1
	Extension Harness		1
	Ram Mount		1
843-625C	In-Cab Console Bundle for 2-Section Kit		1
	2-Shaft Harness		1
	Shaft Sensors		2
	Magnets		2
	Cable Ties		4
	Monitor Harness		1
	Extension Harness		1
	Ram Mount		1
116-011S	Split Lock Collar Assembly	4	6
116-035D	Monitor Shaft Collar	2	1
800-052C	Hose Clip 5/8 I.D.	1	15
800-112C	Cable Tie .19X7.25 1.75D 50	20	20
801-035C	Set Screw 5/16-18 SKT KP X	4	6
801-067C	Screw RD HD 8-32 x 1 1/2 LG	4	6
801-156C	HFS 10-16 x 5/8 SELF-DRILL	6	9
801-199C	SCR SELF TAP #10 x 3/4	6	9
802-005C	HHCS 1/4-20x1 GR5	4	6
802-257C	HFSS 1/4-20x3/4 GR5	15	1
803-006C	NUT HEX 1/4-20 PLT	4	1
803-064C	NUT HEX 8-32	4	6
804-006C	WASHER LOCK SPRING 1/4 PLT	4	6
804-043C	WASHER LOCK #8	4	6
804-088C	WASHER FLAT #8 SAE PLT	4	6
843-060C	HARNESS, EXT, 3PIN WP, 25'	1	
843-055C	HARNESS, EXT, 3PIN WP, 30'		1



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