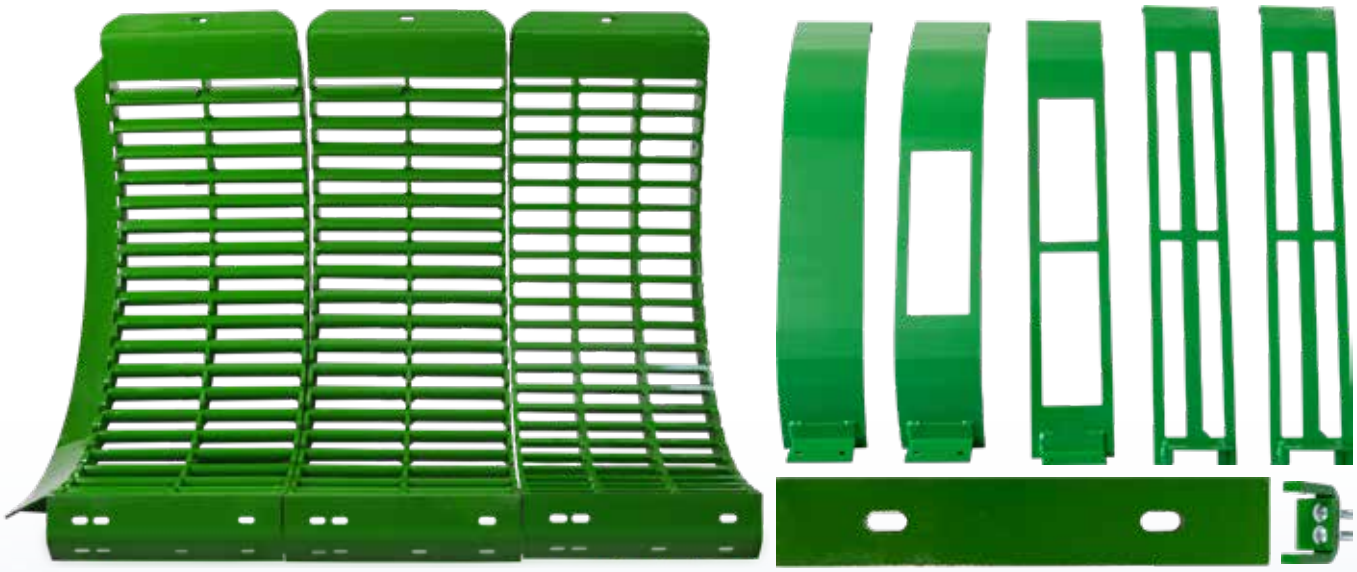
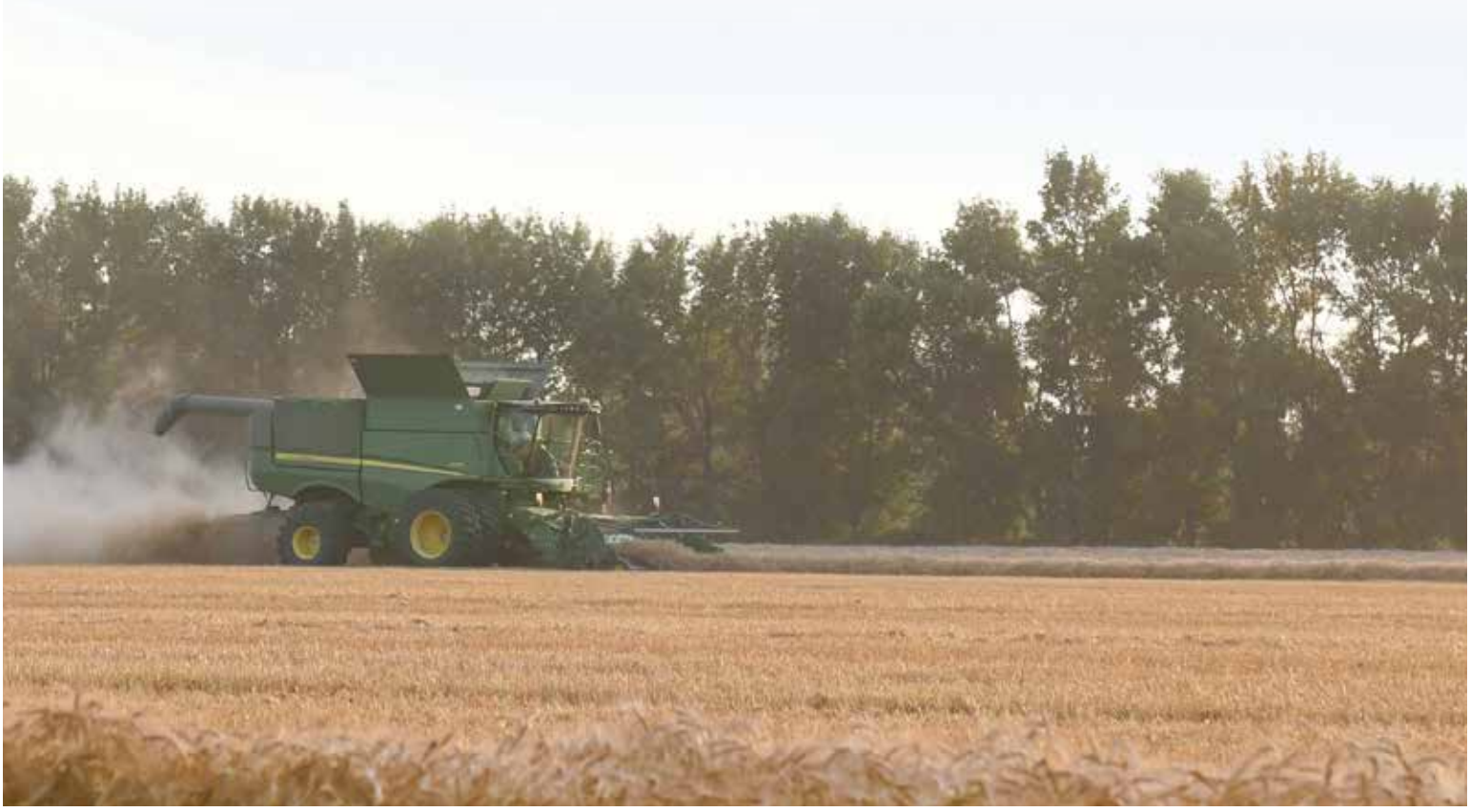
THUNDERSTRUCK™ AG EQUIPMENT

Copperhead CONCAVE Systems

INSTALLATION MANUAL
JOHN DEERE STS/S SERIES





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JOHN DEERE CHECKLIST

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INSTALLING YOUR CONCAVES

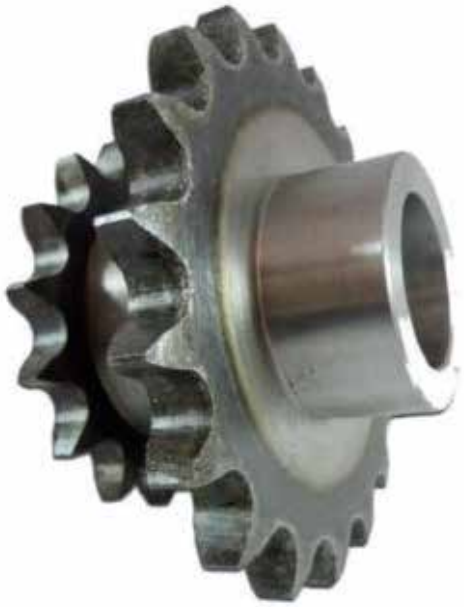
You can find instructions for installing your concaves in your machine manual, they install just like the factory concaves. Please read the full instructions before completing install. It is useful to leave the #3 concave out of the machine while installing disrupter bars. We recommend installing the #1 and #3 sections, leveling your concaves, then completing the install with the final #2 section.

LEVELING YOUR CONCAVES

You **MUST** level your concaves when installing any concave system.
We recommend following the instructions in your platform owner's manual.

JOHN DEERE STS/S - FEEDER HOUSE SPROCKET

1. We recommend you change your feeder house sprocket. STS and S-Series, combines run the feeder house sprocket too fast and cause further grain damage, by cracking it before it even gets to the concaves.
2. We recommend you change your sprocket to a 15-21 tooth sprocket (John Deere Parts #AXE10874) from the stock 21-26 tooth sprocket.
3. For corn, run the 15-21 sprocket. We recommend you start on the 15 tooth sprocket.
4. For soybeans and/or wheat, you may need to run the 21-26 sprocket on either the 21 or the 26 tooth.
5. Always run the feeder house sprocket as slow as you can to get the job done, without starving the combine.



15-21 TOOTH DRIVE SPROKET - JD #AXE10874

JOHN DEERE STS/S-SERIES DISTRUPTORS

1. First, locate and mark positions for lugs . Do this prior to removing grates. Then drop down grates to install spacer bars. See Figure 1.01 for recommended locations.
2. The disruptor lugs install up from the bottom of the grate. Top “L” shaped plate with bolts. Install this plate down through the seperator from the inside of the grate. Be sure the small portion of the “L” is down in between the grate frame and the points of the grate fingers see Figure 1.02. **Torque to 35 Ft. Lbs.**
3. While grates are still installed place the disruptor lug up through the grate and turn the rotor over by hand to be sure the disruptor clears all tines. The tines can pass by the disruptor through the middle or on either side. #1 lug and #5 lug will be in the same position, #2 and #6 will be in the same position (#2 and #6 may need a shorter leg on the lug). *Two shortened lugs have been included in your installation kit.* #3 and #7 lug will also be the same. See Figure 1.03 & 1.04 for proper placement within the grates.
4. Once position of lugs are marked on the seperator grate, remove the two bolts that hold up the second grate to the frame. Remove the top section of the grate to give you access. From this position you can install the #1, #2 and #3 lugs.
5. Bolt up the second grate and move to the opposite side of the combine. Remove the two bolts that hold up the second grate and remove the top section for access. From this position you can now install #5 and 6 on the front grate and #4 and 7 on the back of the second grate. Be sure to double check clearance of the tines on the rotor.
6. Re-install all separator grates and hand turn the rotor again to verify clearance of all tines.

**** Make sure the disruptor lugs are slid tight up agains the seperator bar. The grain travels from right to left in the machine and will force the lugs up against that bar. This ensures they do not come loose while operating. Again, slide the lug up to the “drivers side” of the seperator grate****

JOHN DEERE STS/S-SERIES DISTRUPTORS

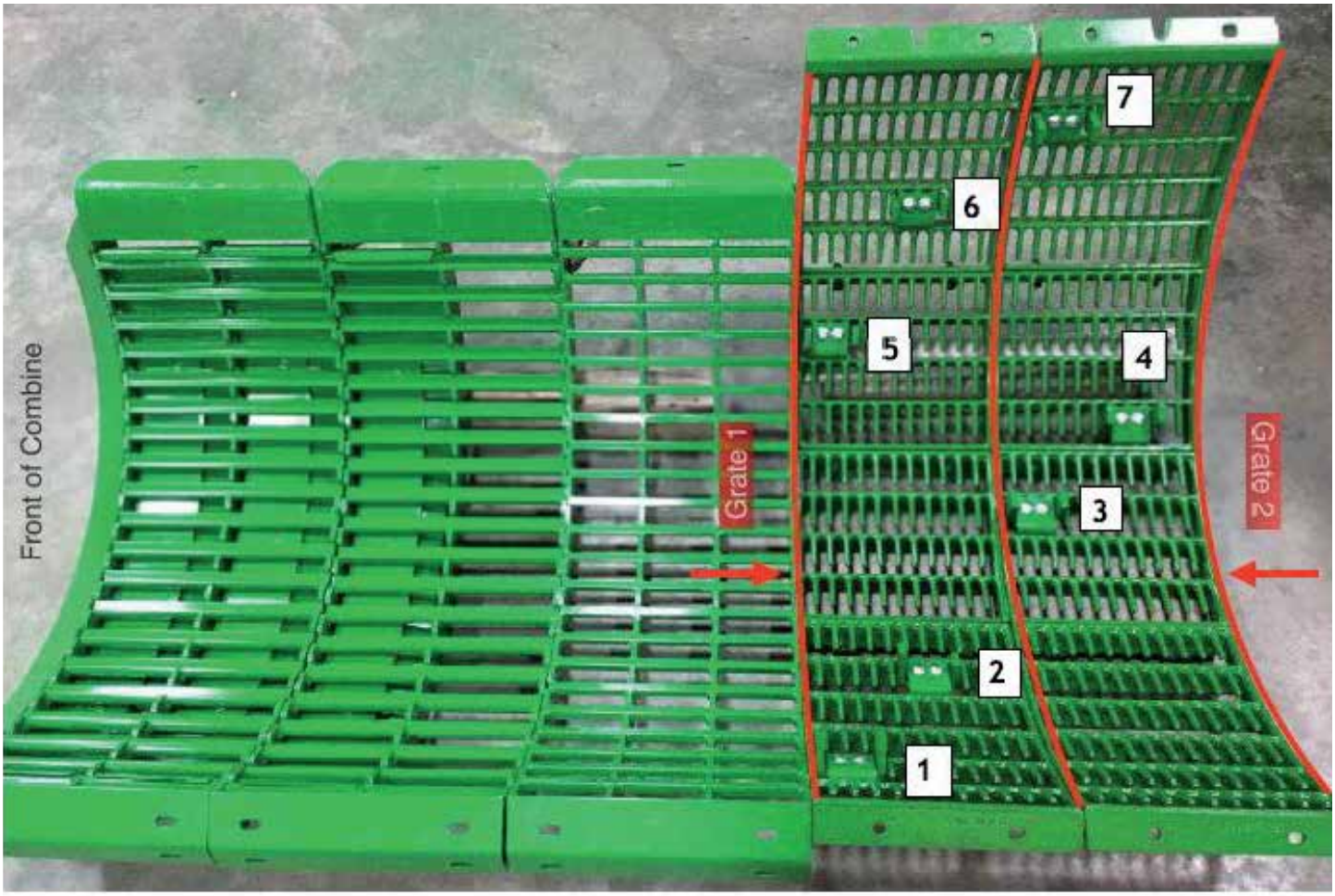
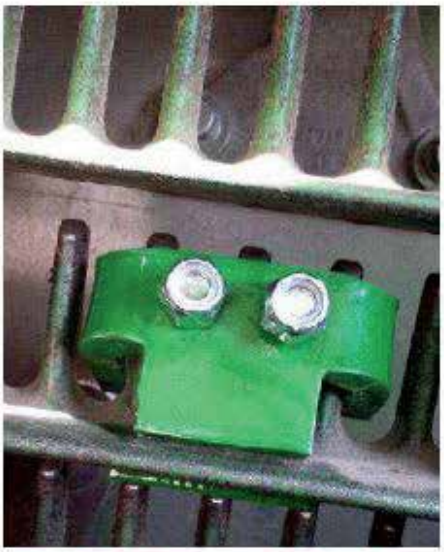


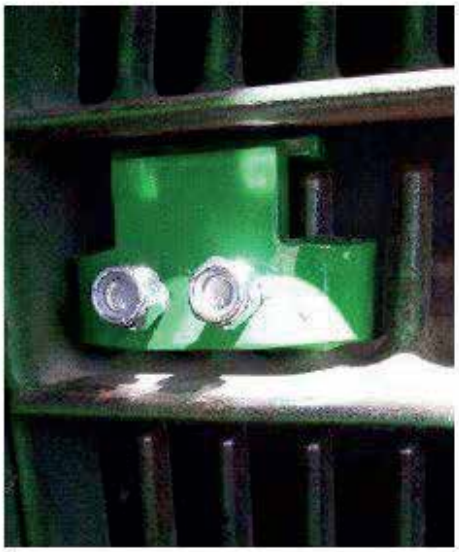
Figure 1.01

Figure 1.02



INCORRECTLY INSTALLED

Figure 1.03



CORRECTLY INSTALLED

Figure 1.04

JOHN DEERE STS/S-SERIES SPACER BARS

- Spacer Bars are required for the proper clearance of the Disruptor Lugs
- They space your grates down 1/2 inch and they replace your pipe bushings.
- Installing a separator grate spacer kit onto your machine will help reduce rotor loss as it increases the separator surface.

STS / S660 AND S670 SERIES SPACER BARS

- Drop the #1, 3 and 4 grate down and install the spacer bars between the frame and the separator grate as shown in Figure 1.02.
- The #2 grate spacers can be installed during the disruptor installation, and should be installed the same way.
- Install 8 spacer bars, one on each grate, on each side of the machine.

S680 & S690 SPACER BARS

- Drop the #1 and 3 grate down, install spacer bars between the frame and the separator grate.
- The #2 grate spacers can be installed during the disruptor installation and should be installed the same way
- 6 spacer bars only for this series combine.

SPACER BARS
Figure 2.01

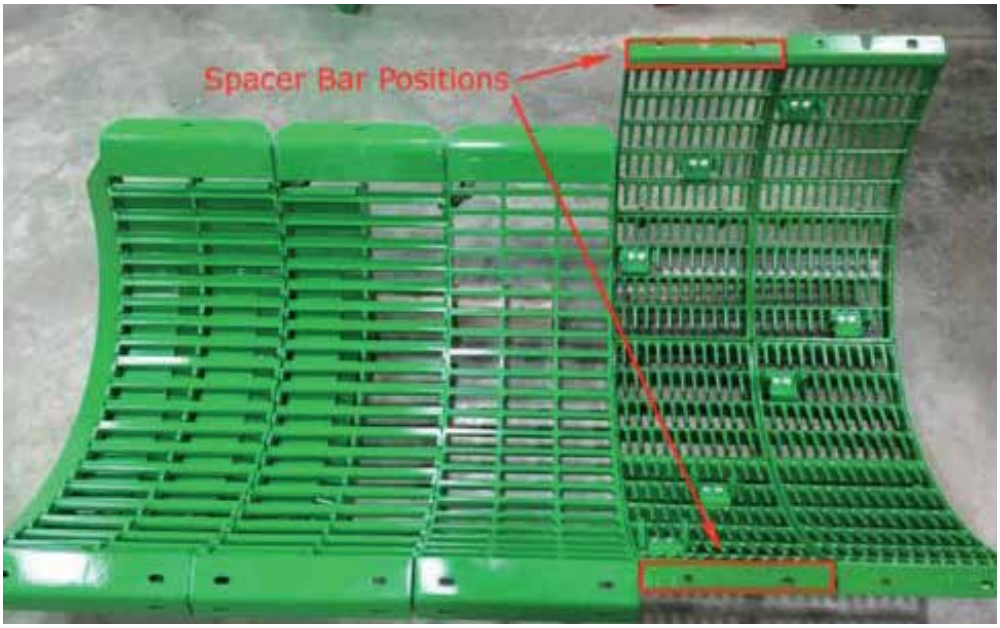


Figure 2.02

INSTALLING COVER PLATES

1. Attach the “U” bolts to the coverplate using 2 - 13mm lock nuts. Finger tight is fine for now.
2. Attach the latch plates to the concaves in the first, second and third positions using the 10mm bolts. The 3rd plate may be left off if only harvesting corn and soybeans.
3. Attach handles to the latch plate using 13mm bolt and nut. Tighten to snug, but leave room for the handle to move freely.
4. Hook the coverplate over the last bar on the opposite side of the concave and close the latch over the “U” bolt on the near side. Tighten the 13mm nuts down on the “U” bolt until the cover is tight but still allows the latch to pivot out. Insert the pin through the handle plate and close the safety latch.

NOTES

If the 2nd section of your Concave does not have the welded bar latch base, use the supplied 2 piece latch base.

STEP 1 - Coverplate

STEP 2 - Latch Plate

STEP 3 - Coverplates installed

TNT COVER PLATES

COVER PLATE SETTINGS

CROP	COVER PLATE 1	COVER PLATE 2	COVER PLATE 3	COVER PLATE 4
Corn	1 Hole	2 Hole	None	None
Soybeans	1 Hole	2 Hole	Strip	None
Canola	1 Hole	2 Hole	Strip	Strip
Oats	1 Hole	2 Hole	Strip	None
Barley	1 Hole	2 Hole	Strip	Strip
Milo/Sorgum, Maise	1 Hole	2 Hole	Strip	Strip
Rice	Closed	1 Hole	2 Hole	Strip
Edible Beans	1 Hole	2 Hole	None	None
Wheat	1 Hole	2 Hole	Strip	Strip
Rye Grass	1 Hole	2 Hole	Strip	Strip
Hard Wheat	Closed	Hard Thresh	1 Hole	2 Hole
Lentils	1 Hole	2 Hole	Strip	None
Peas	1 Hole	2 hole	None	None
Flax	Closed	Hard Thresh	1 Hole	2 Hole

COMBINE SETTINGS

CROP	CONCAVE	ROTOR SPEED	FAN SPEED	CHAFFER	SIEVE
Corn	28-32	250-280	900-1000	18-20	10-12
Soybeans	14-18	400-650	900-1100	14-18	6-12
Canola	16-24	400-650	900-1100	12-16	8-12
Oats	16-20	600-800	600-850	12-16	6-10
Barley	8-14	600-800	1100-1200	14-16	6-10
Milo/Sorgum, Maise	18-22	450-750	1100-1250	12-16	8-12
Rice	16-20	600-800	1050-1200	14-20	6-10
Edible Beans	26-30	250-350	1100-1300	13-18	6-10
Wheat	8-12	700-850	900-1100	14-20	6-10
Rye Grass	8-12	700-850	1000-1200	14-20	6-10
Hard Wheat	4-8	800-950	900-1100	12-16	4-8
Lentils	20-24	400-600	1100-1200	14-18	6-8
Peas	20-24	350-550	950-1100	16-20	6-8
Flax	4-8	800-1000	1100-1200	12-16	4-8