

PHT X9-11 kit for JD X9 1100 Combines

Installation Instructions

Tools Needed: Ratchet, 13 mm socket and wrench, cordless drill, 5/16" drill bit, pliers, sharpie marker, & silicone sealer

*Also helpful, magnetic tray to hold hardware, light duty cordless impact, flashlight, extendable magnet to fish dropped hardware from auger trough.

1. Observe normal closed position of combine hopper covers to see if there are any gaps between covers and grain tank because combines often come from the factory with some gaps. This is done to confirm if a gap is observed after kit installation, whether it is the normal closed position or the result of the kit installation.
2. Open combine hopper covers, and access hopper from engine compartment. Front and rear extensions are identical using the same hardware and installation process.
3. (Figure #1) Remove center fiberglass folding panel by removing nuts and washers that hold factory vinyl flaps to fiberglass panel brackets. Remove cotter pin and washer, (retain cotter pin and washer), from upper linkage and unhook upper linkage from fiberglass panel. Remove vinyl flaps from fiberglass panel bolts and pull out the metal inserts from vinyl flaps. Put the metal insert back on the fiberglass panel bolts along with washer and nuts for safekeeping. Remove hinge nuts, bolts, and spacer (retain for installation of PHT frame) and set aside the fiberglass folding panel.

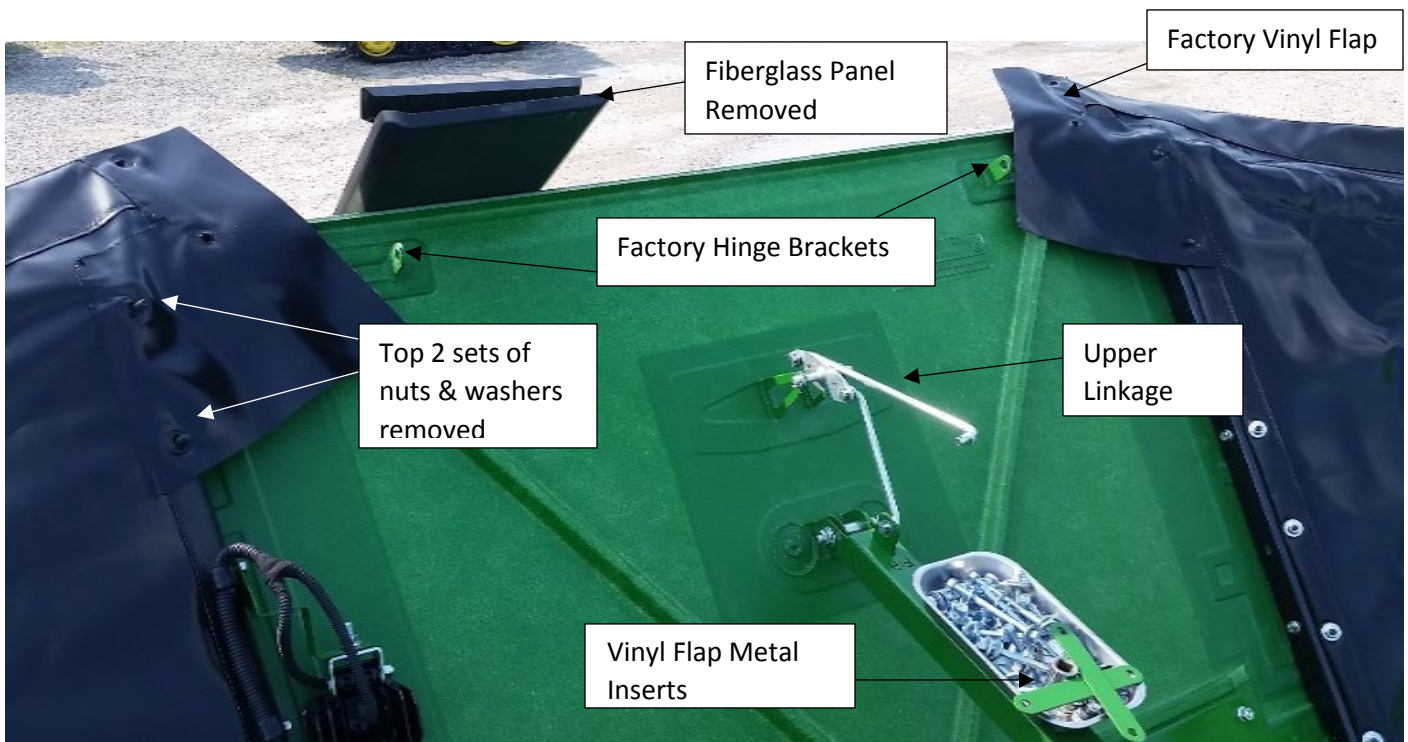
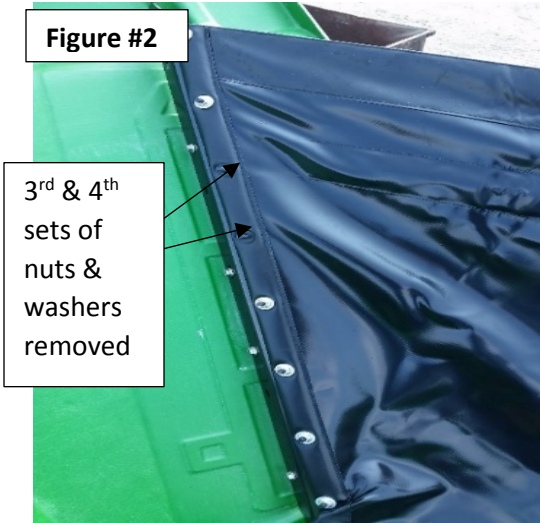
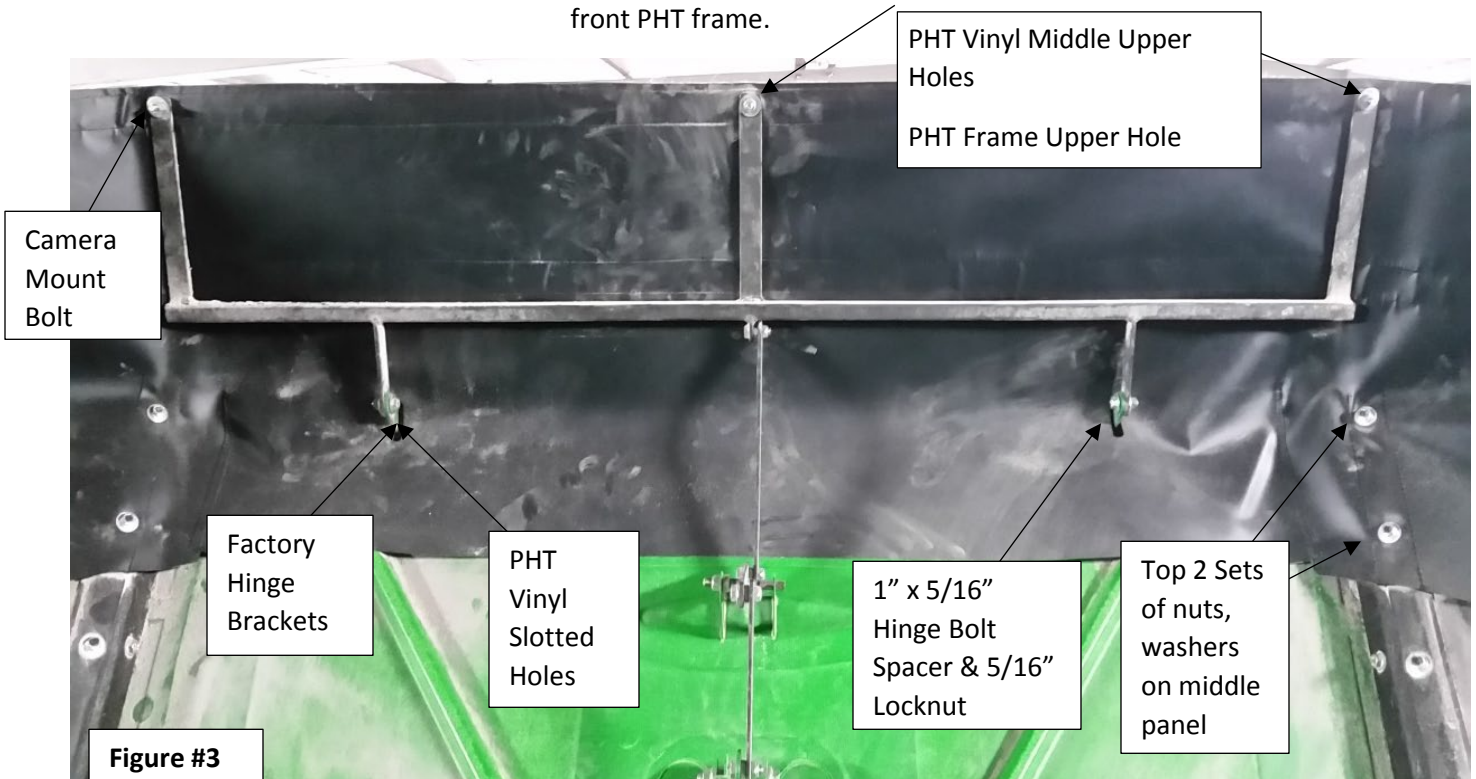


Figure #1

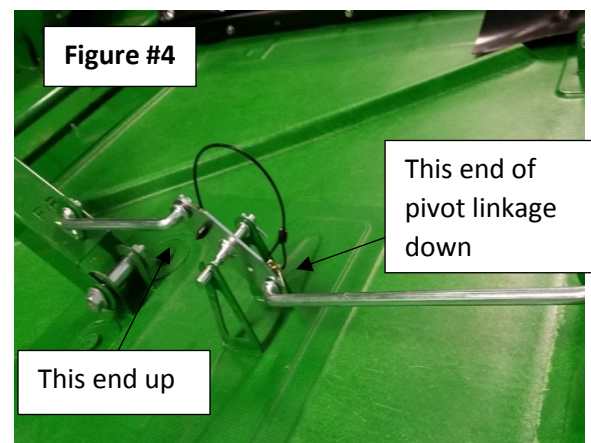
- Remove the top two sets of nuts and washers (Figure #1) from each side of middle panel where vinyl mounts to middle panel. Remove 3rd and 4th set of nuts and washers (figure #2) where factory vinyl mounts to sides.



- Locate the slotted holes in the mid-section of the PHT vinyl (horizontal strapping on outside) and put it over the factory hinge brackets. (Figure #3) Mount the PHT frame, (vertical brackets flush with outside of square tubing), on the factory hinge brackets using the hinge bolts, spacers, and nuts taken from the factory fiberglass panel hinges. Attached upper link of the folding mechanism to the PHT frame with washer and cotter pin. If the metal frame is leaning out some, that is normal. Match the lower middle grommets to the factory bolts where nuts and washers were removed. Reinstall nuts and washers. Match the upper middle grommets to the PHT frame upper holes and mount using 1" x 5/16" bolts with washers inside and outside and nut. **UPDATE, INSTALL CENTER UPPER FRAME BOLT WITH EXCESS THREADS ON THE OUTSIDE OR CUT OFF EXCESS THREADS ON THE INSIDE, MORE INFO ON LAST PAGE.** Reinstall grain tank camera to top left side bolt on front PHT frame.

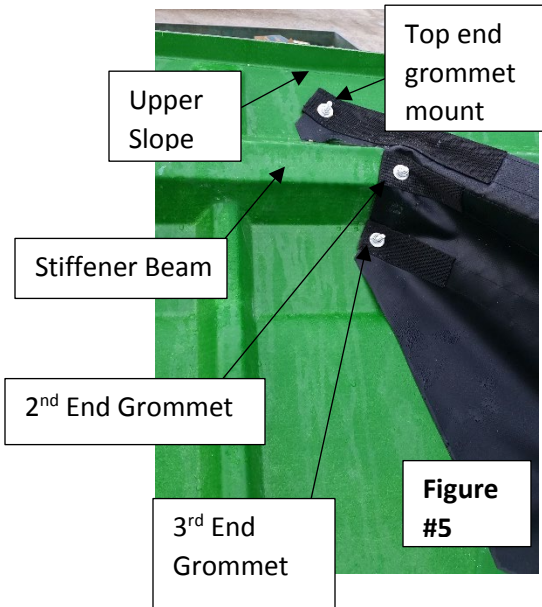


- Make sure folding mechanism is positioned as shown in figure #4, with pivot linkage end connected to upper/long linkage positioned down closest to fiberglass panel, and pivot linkage end connected to the lower/short linkage positioned up away from the fiberglass panel.
- Match the 2 lower-end grommets to the side cover factory bolts, where the nuts and washers were removed (figure #2), then reinstall washers and nuts. Figure #5, **All end-mounting bolts are installed with threaded ends on the inside, washers with silicone on the outside, washers and nuts on the inside.**



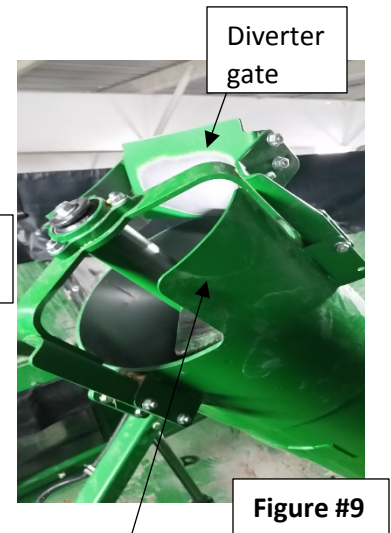
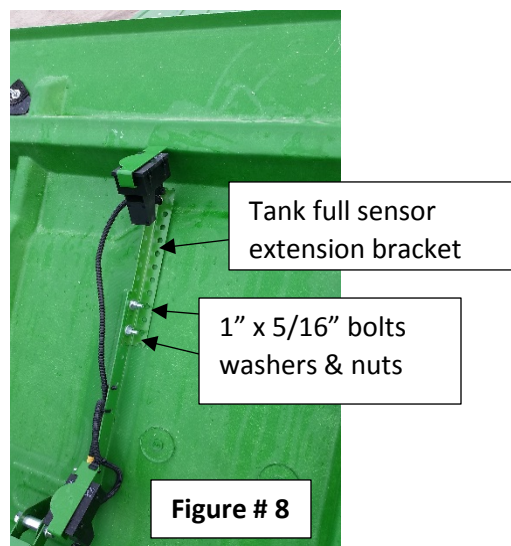
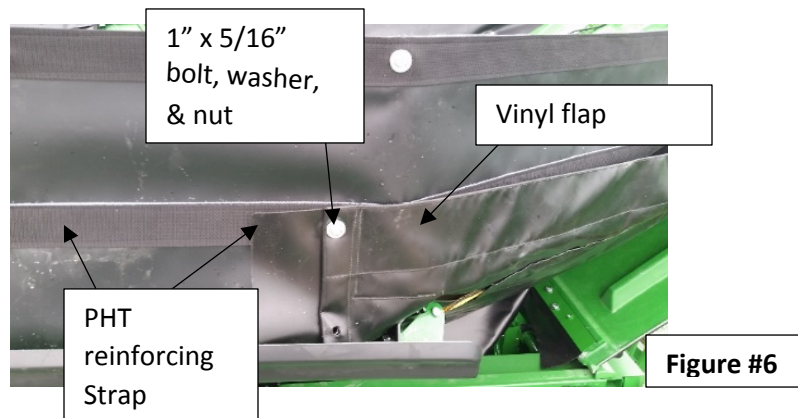
inside. Mount top end grommet to upper slope of side covers by pulling vinyl tight and holding it to the sides at the grommet, then pull backward if installing front vinyl (forward if rear vinyl) until there is a finger thickness gap between grommet and side, mark grommet location with sharpie marker or drill bit through grommet. Then drill 5/16" hole through side and mount using 1 1/2" x 5/16" bolt, washers, and nut then tighten. Mount the 2nd end grommet to middle of stiffener beam. Drill 5/16" hole through stiffener beam to the outside. (Run drill in and out to clear debris from hole) Install 4" x 5/16" bolt, washers, and nut then tighten, but do not overtighten because stiffener beam fiberglass is thin. Mount 3rd end grommet to side just below the 2nd end grommet location by drilling hole through side, installing 1 1/2" x 5/16" bolt with washers and nuts, then tighten. Repeat step #7 for the other end of the vinyl panel.

8. Mount factory vinyl flaps to PHT vinyl as shown in figure #6, by holding the vinyl flap up so that top hole in flap is located in the middle of PHT reinforcing strap. Drill a 5/16" hole through PHT reinforcing strap, and install 1" x 5/16" bolt, washers outside and inside with nut then tighten.
9. Remove sample slide from grain tank. Figure #7



10. Figure #8, remove grain tank full sensor and mount extension bracket to top end of the factory bracket using 2) 1" x 5/16" bolts, washers and nuts. Relocate grain tank full sensor to extension bracket and use zip ties to secure wiring. (not done yet in picture)

11. **Double check all kit hardware locations for tightness. If new combine installation, check factory folding arms for hardware tightness also.**



Auger tube extension cut back for more rear fill

Tips:

1. Procedure for first time folding grain tank after kit installation. The grain tank close button both starts and stops the closing process. As you are closing grain tank, stop and start a few times to get feel for button responsiveness, then stop when about 2/3-3/4 closed. Either have somebody standing on engine compartment watching or be looking through the cab window into grain tank, to see if there is clearance between the left rear PHT frame/vinyl and the left rear grain tank folding arms (unloading auger side of grain tank), clearance will be close. If clearance looks good, continue to carefully “start-stop” the closing process, looking and/or listening to see if grain tank is closing smoothly, nothing catching.
2. One prototype operator reported that the grain tank filled heavy to the front and to the left side. In that case, the diverter gate, figure #9, was tilted almost parallel with the auger tube. Adjust gate so it is more vertical, this should allow more right side and rear fill. If more rear filling is desired, cutting back the extension on the augers backside figure #9 may help.

For more installation help, call Gilles at 765-348-9201

2022 update

It has come to my attention that the center top frame bolt threads can catch on the factory folding arm when folded down. To resolve this issue, install the center bolt with the excess threads on the outside or cut off excess threads on the inside as shown in picture below.

