

# Installation Manual

## John Deere 45 Loader Sub-Frame Mounts by L&M Concepts, LLC

**Applicable Models:** John Deere 2013+ X700 “Signature Series” Garden Tractor. *All Wheel Steering (AWS) and 2 Wheel Steering models (2WS).*



2023 X739 with the AWS Sub-Frame Mounts and John Deere 45 Loader

*“Enjoy Your New Capabilities”*

## 2013+ X700 45 Loader Sub-Frame Mount Installation Instructions

### AWS Kit includes:

- 1 – Left Side AWS X700 Loader Mount
- 1 – Right Side Standard X700 Mount
- 3 – 40mm bolt/nuts for AWS Mount
- 4 – 40mm bolt/nuts for Standard Mount

### 2WS Kit includes:

- 1 – Left Side Standard X700 Mount
- 1 – Right Side Standard X700 Mount
- 8 – 40mm bolt/nuts

### Tools needed

- Ratchet – a longer handle is better. A flex head will ease assembly
- 16mm and 18mm Sockets
- 16mm and 18mm wrenches
- Optional: 1/2" Impact driver and 1/2" sockets. This will speed installation.
- Recommended: Torque wrench. To tighten mount fasteners to 100lb-ft.
- Power Drill and 1/8" and 15/32" drill bits if drilling is required (review install notes)

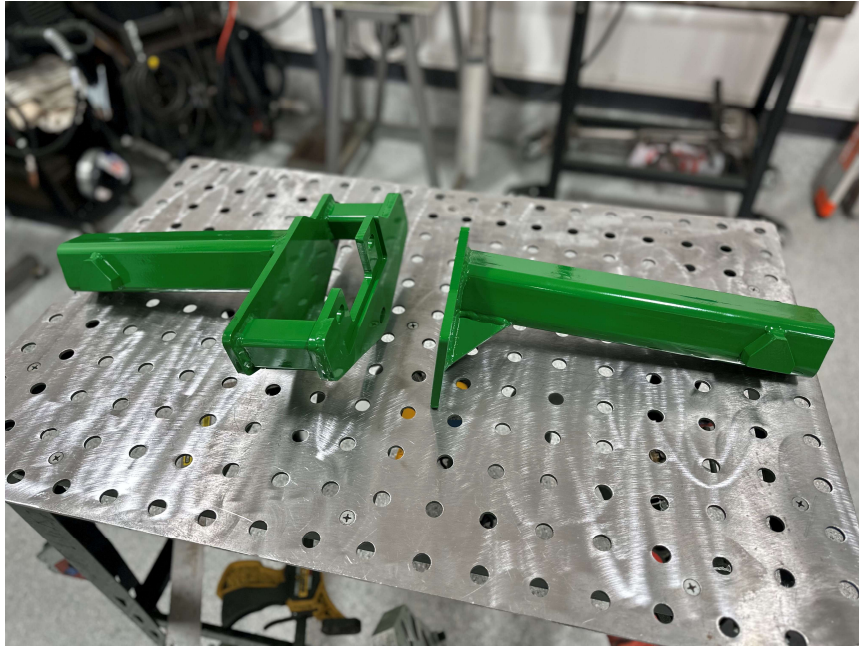
### Preparation

- Remove mower deck
- Optional: Raise front or rear of tractor to give additional ground clearance. Not required, but it will give you easier access.
- Review the John Deere 45 Loader [Users Manual](#) (see link) for **setup, installation, removal, operation** and **maintenance** of your loader.
- Read full Installation Instructions thoroughly
- Take pictures before you disassemble anything to aid in reassembly.
- If you have any questions, please email us at: [sales@landmconcepts.com](mailto:sales@landmconcepts.com)

## Identify your Kit

There are two Different Versions of the Sub-Frame Kits

### All Wheel Steering Kit



*Figure 1: AWS Mounts (AWS Mount on Left, Standard Mount on the Right)*

### 2 Wheel Steering Kit



*Figure 2: 2WS Mounts*

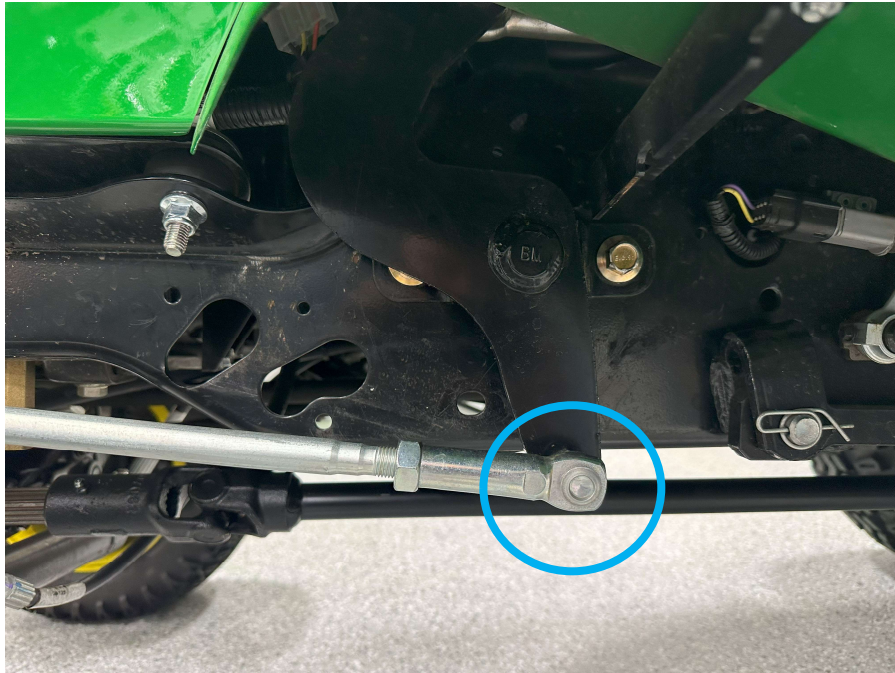


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**Note:** Your mounts may look different than in the pictures within this manual, but the installation is the same.

**Step 1)**

On left side of tractor, identify and remove the AWS linkage bolt from AWS pivot arm

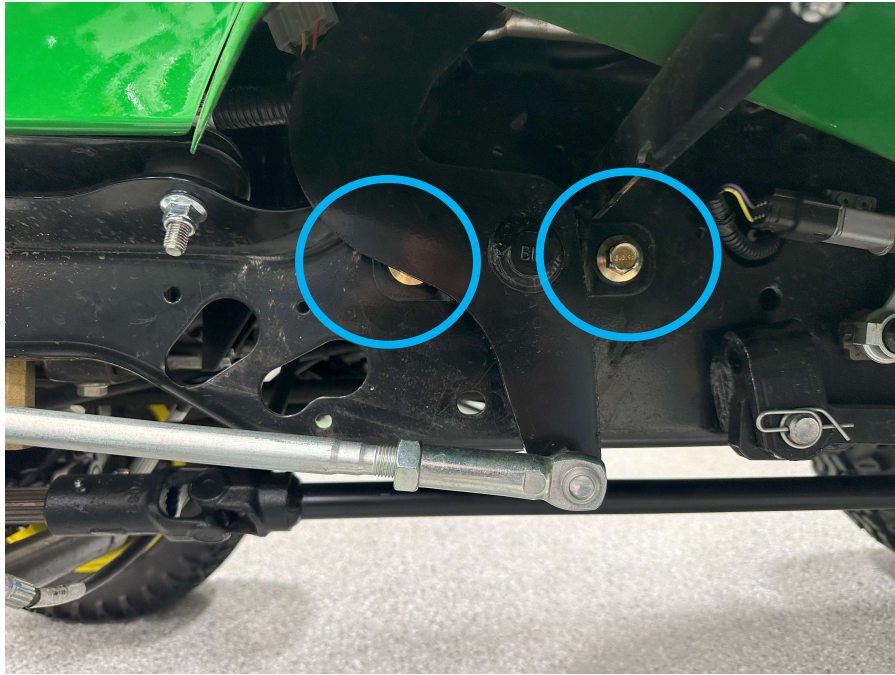


*Figure 3: AWS linkage*

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**Step 2)**

Remove 2 bolts/nuts from AWS linkage bracket. This hardware will be replaced with longer hardware provided with the kit.



*Figure 4: AWS Mechanism Fasteners*

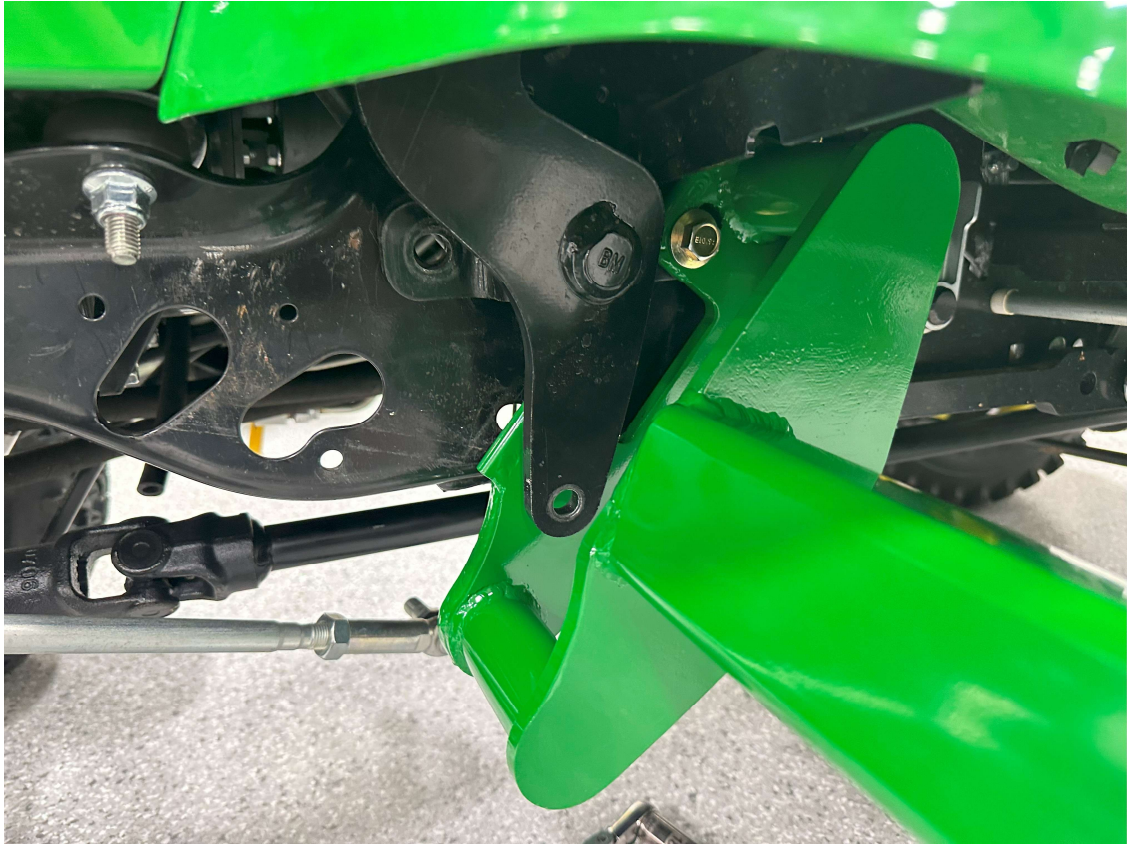


*Figure 5: AWS Mechanism hardware and linkages removed*

**Step 3)**

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Install rear most bolt (long) through AWS loader mount and frame. Loosely attach nut to keep mount in place. Move rear wheel to expose hole on front of AWS linkage bracket. (This can easily be done by just grabbing both sides of rear wheel and turning in or out as needed to expose hole)



*Figure 6: Initial mounting of AWS Mount*

**Step 4)**

Pivot loader mount and Install bolt through front hole in loader mount, AWS bracket and frame. Loosely attach with nut. If necessary, move rear wheel to expose bottom hole and install long bolt through AWS loader mount and frame. Loosely



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attach with nut.

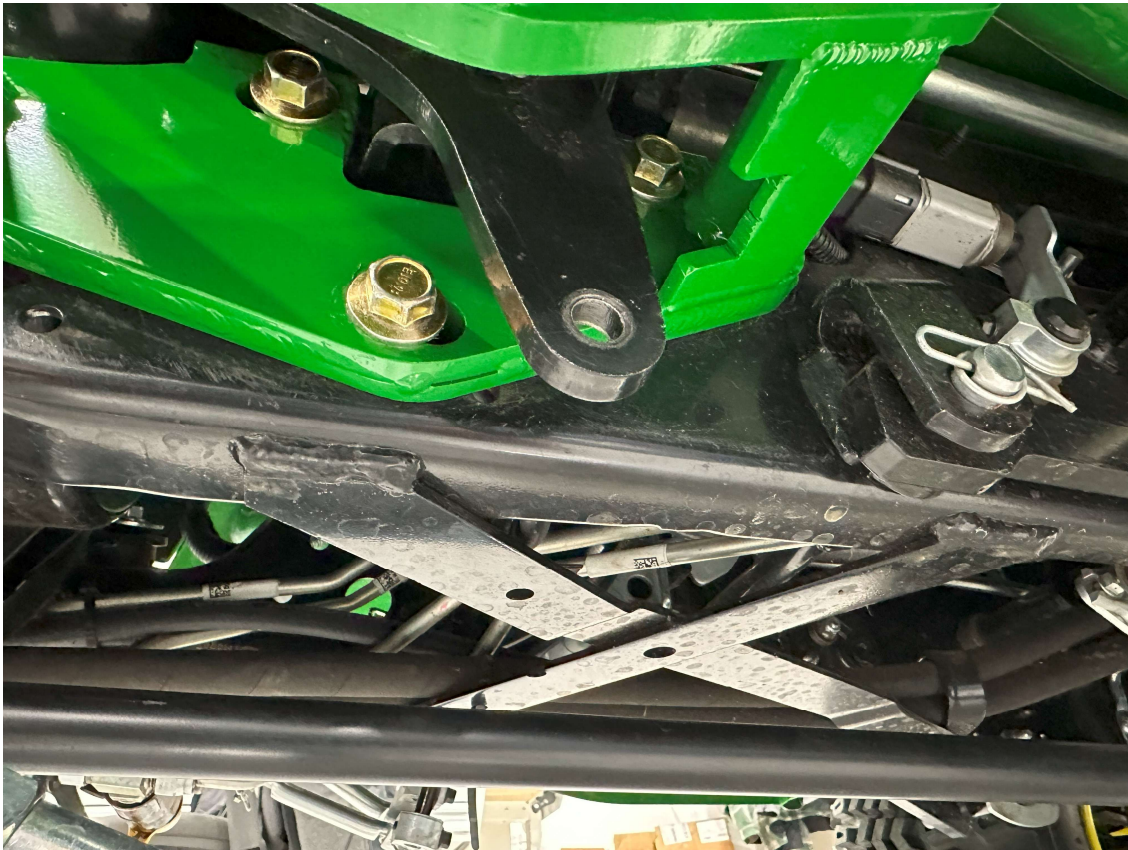


Figure 7: AWS Mount mounted

**Note:** *The following steps may help with tightening fasteners.*

Use 18mm socket and flex head ratchet to tighten nuts from the **inside** of frame. Use a 16mm ratcheting wrench on the bolt to hold it in place (it is difficult to get to the nuts with a wrench in the inside of the frame). It is best to alternate tightening of the three bolts to help with AWS loader mount. The mount will self-align with the factory AWS mechanism bracket.

Tighten 3 nuts to 100-140 lb-ft. If you don't have a torque wrench, get them as tight as possible with a long ratchet. They are grade 10.9 bolts/nuts which are very strong (it would be difficult to overtighten them.) It is very important that these fasteners are tight, so the mounts do not move when using the loader.

**Step 5)**

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Reinstall the AWS linkage arm and install the nut. Torque to 25 lb-ft or reasonably tight by feel. You may have to move rear wheel again to align the hole in the pivot arm to the linkage.



*Figure 8: AWS mount installed*



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**Step 6)**

**Note:** Begin at this step for 2-wheel steering tractors. Follow the right-side instructions for the left-side mount.

Move to right side of tractor and identify mounting holes.

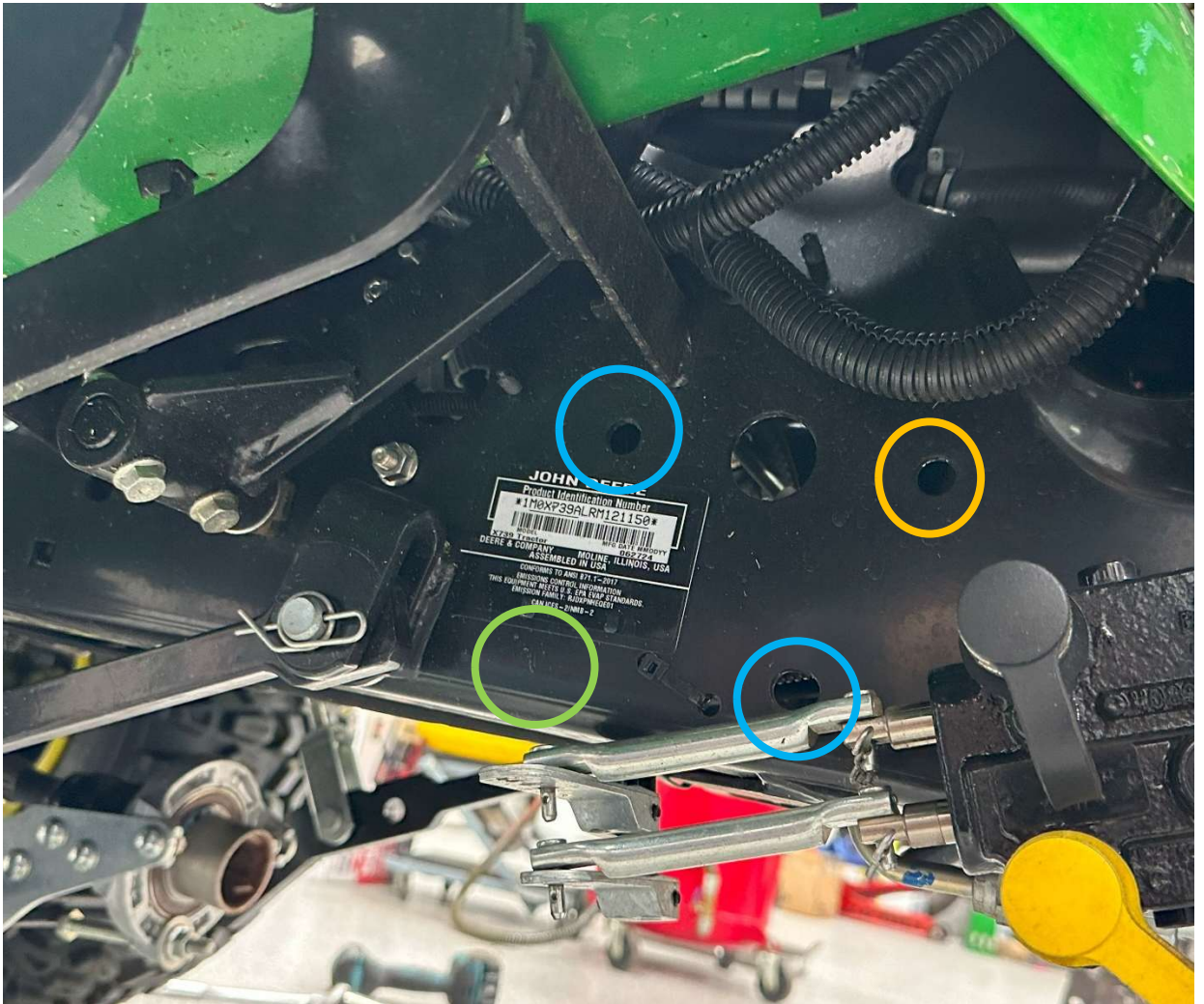


Figure 9: Mounting Holes

1. Blue Holes (Required) – All 2013+ tractors have these holes
2. Orange Hole (Required) - 2018 (2017?) and newer tractor frames all seem to have this hole. 2013-2016 do not have this hole and it will need to be drilled.
3. Green Hole (Optional) – 2013+ tractors would need to be drilled.

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**Note:** Take a picture of the VIN tag because it will be covered by the AWS Loader Mount after installation. There should also be a VIN tag above the front left wheel on the frame. There is usually a small one above the left front tire on the frame.

**Step 7)**

Skip to Step 9 if you already have the hole identified in Orange and/or do not want the optional hole identified in Green.

Install loader mount with the holes marked in Blue. Use a center punch to mark and identify location of hole for bolt circled in orange. (note: the hole is factory drilled and the bolt is already installed in the picture below). If desired, mark and drill hole at location marked in Green.



Figure 10: 2WS Mount Hole Drilling

**Step 8)**

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**NOTE: Be very careful when drilling.** Make absolutely sure there is nothing on the backside of the frame that could be hit with the drill bit.

Remove mount and drill holes identified in Step 7.

Start with a small drill bit (~1/8") and finish with a 15/32" drill bit. For the hole in Orange, you will need to drill 1/8" hole from the outside using the mark from step 7. You can drill the hole larger with the 15/32" bit from the inside or the outside of the frame.

### **Step 9)**

Install loader mount with 3 bolts and nuts (4<sup>th</sup> is optional if you drilled the hole in Step 7 or 8). Loosely attach nuts until all are installed. Initially tighten all nuts until all bolts/nuts are flush and then torque to 100-140 lb-ft. Start with the lower bolts and finish with the upper bolts.

The following will aid installation of the bolts/nuts.

Utilize a 16mm wrench to hold the nuts on the inside of the frame. Utilize a ratchet and 18mm socket on the outside and tighten the bolt while holding the nut with the wrench on the inside. You may have to remove the hydraulic linkages (circled in pink below) if they are in the way of installing the bolt nearest the linkages (lower bolt circled in Blue). When installing the linkages, use the holes that keep the linkages as straight as possible with the hydraulic valve plungers.



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*Figure 11: 2WS Mount Installed*

**Step 10)**

Installation is complete. Install loader and “Enjoy Your New Capabilities!”