

# GrainGage Chamber Installation



The following instructions are for removing the installed chambers on a HarvestMaster Classic GrainGage and installing new ones. This process provides instructions for either installing 3-liter chambers in place of 1.5-liter chambers, or 1.5-liter chambers in place of 3-liter chambers. Keep track of all hardware removed as it will be used during reassembly.

Typically this process takes about forty minutes. For ease of installation, have the following tools on hand:

- #1 Phillips screwdriver
- Small common screwdriver
- 7/16" standard socket with ratchet handle (recommended) or 7/16" combination wrench
- Three-inch extension for ratchet
- 5/32" Allen wrench
- 242 Loctite

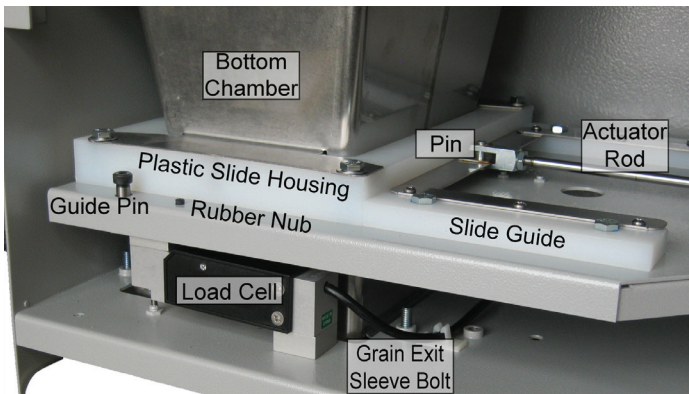
## Removing the Existing Chambers

To remove the existing chambers, follow these steps:

1. Remove the GrainGage door.

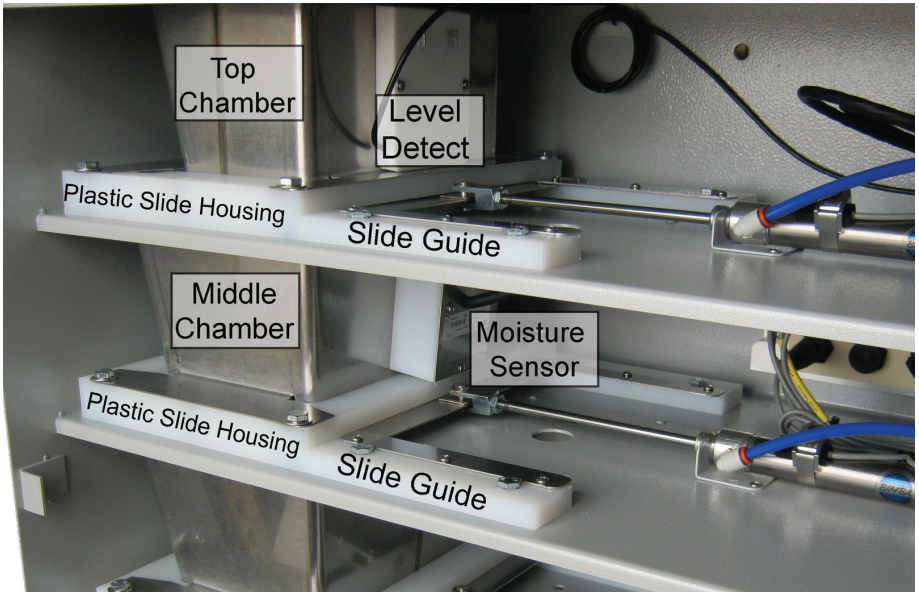
**CAUTION: Be careful not to put weight on the bottom chamber or the weigh pan. This may damage the load cells.**

2. Back out the four 7/16" bolts that hold the grain exit sleeve to the bottom of the grain gage until the top of each screw is level with the top of the insert.
3. Remove the left guide pin from the weigh pan.



4. Starting with the top level gate, slide the three pneumatic actuator rods to the right until the pin connecting the actuator rod and the gate is directly over the access hole on the bottom of the shelf.
5. Using the common screwdriver, remove the E-rings from the actuator pin assemblies. Be careful not to lose the E-rings when removing.
6. Remove the pins from the actuators and push all the gates closed.

7. Remove the outer slide guide on the bottom level.
8. Remove the three 7/16" bolts holding down the bottom plastic slide housing. Hold the chamber up against the underside of the middle base and remove the plastic slide housing. Be careful not to damage the rubber nub on the weigh pan. Remove the chamber.
9. Using a Phillips screwdriver, remove the two screws holding the level detect sensor to the hopper on the top shelf. Rotate the sensor out of the way toward the back right corner.



10. Remove the side screws from the moisture sensor on the middle level using a Phillips screwdriver. Slide the moisture sensor out and place it out of the way.
11. Remove the 7/16" bolts from both slide guides on the top and middle levels, and remove the guides.
12. Remove the three 7/16" bolts from the plastic slide housing on both levels.
13. If removing 1.5 L chambers, remove the 7/16" bolts on either side of both chambers.
14. Lift the middle chamber up toward the top of the GrainGage and remove the middle level plastic slide housing from the shelf. Pull the chamber down and remove from the Grain-Gage.
15. To remove the top chamber, repeat the previous step (substituting top for middle).

## Installing the New Chambers

Note: Use 242 Loctite when reinstalling 7/16" bolts.

To install the new chambers, follow these steps:

1. Slide the top level chamber into place in the entrance gasket at the top of the Graingage.
2. Lift the top chamber up toward the top of the GrainGage and push the plastic slide housing into place beneath the chamber. Make sure chamber seats into housing before tightening bolts. If installing 1.5 L chambers, install 7/16" bolts on either side of both chambers. Also ensure bottom gaskets are properly installed on 1.5 L chambers.
3. Repeat steps 1 and 2 to insert the middle chamber.

**CAUTION: Be careful not to put weight on the bottom chamber or the weigh pan. This may damage the load cells.**

4. Insert the three 7/16" bolts into the holes on the plastic slide housing on each level and tighten them.
5. Place the plastic slide guides in place (use the inner holes for 1.5 L chamber and the outer holes for 3 L chamber). Insert the 7/16" bolts into the holes and tighten them. Do this for both levels.

Note: Do not over-tighten the slide guide bolts.

6. Slide the pneumatic actuator rods for the middle and top gate to the left until the hole for the pin is directly above the access hole. Slide gate to meet actuator rod end and replace pin, going up through hole. Snap E-ring back into place.

**CAUTION: Do not over-tighten the sensor screws. Do not use Loctite.**

7. Slide the moisture sensor into place. Insert the screws into the side holes on the moisture sensor and tighten them securely. (Moisture sensor screws are longer than the level detect sensor screws.)
8. Rotate the level detect sensor into place. Insert screws and tighten securely.
9. Replace the bottom chamber, plastic slide housing with slide, outer slide guide, actuator pin, E-ring, and grain exit sleeve. Tighten all bolts.
10. Replace the GrainGage door.



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