

Subject: CAMEL MAKE-BREAK ADJUSTMENT	
Model: Camel Max High Dump	Affected Units: All Camel Max High Dump s/n 2635+
Date: 6/13/2023	

Description of Issue: Make-Break assemblies that are not adjusted properly have the potential to mis-align with the Make-Break guide ears when lowering the body. This can result in the Make-Break supports bottoming out on the springs and bending, preventing a proper seal and, in some extreme cases, cause damage to the Make-Break support arms.

Parts Required: Not Applicable

Tools Required:

- C-Clamp x4
- 3/4" Socket
- 3/4" Open End Wrench
- Tape Measure or Make-Break go-no-go Gauge

Instructions: See attached instruction

Notes:

- This bulletin does **not** imply warranty of any kind. All standard warranty considerations still apply.
- Supplemental pages in this communication include images, additional information, and safety warnings.
- Please refer to all safety warnings on page 16 prior to proceeding with service repair.

Questions: Contact Technical Support at 1.800.837.9711 (press 4 & then 1) or service@superproducts.com	
By: Rory Grouse	Title: Service Tech

CENTERING THE CAMEL MAKE-BREAK ASSEMBLY

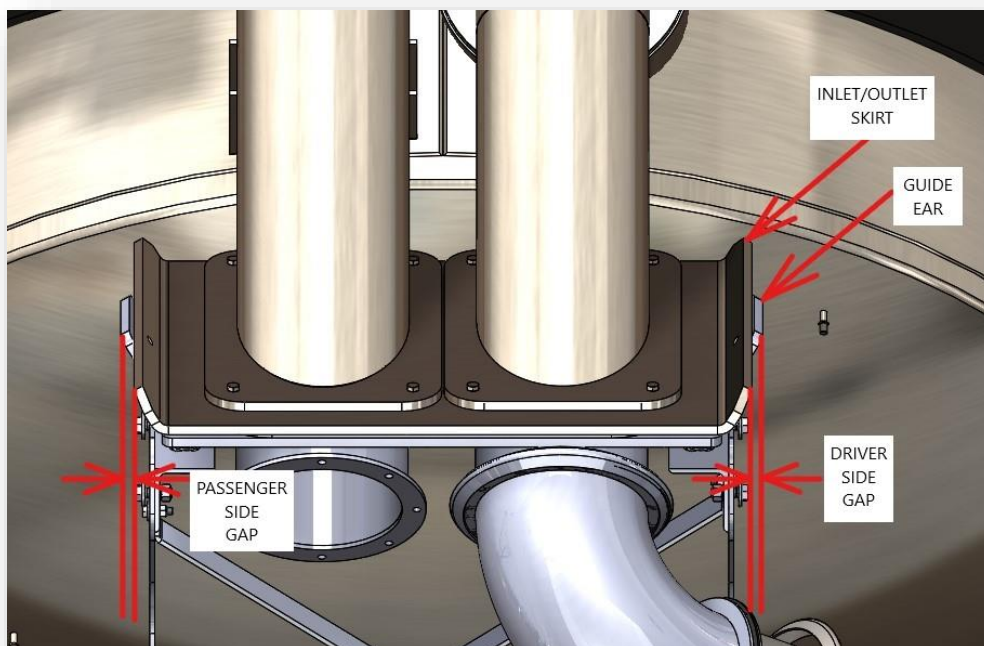
!!MUST BE PERFORMED PRIOR TO SETTING SPRING PRE-LOAD!!

1. With the truck parked on level ground, check the centering of the Body Inlet/Outlet skirt relative to the Make-Break assembly. Lower the body completely onto the Make-Break assembly, compressing the springs to create a good seal between the Inlet/Outlet skirt and the Make-Break gasket. Measure the gap between the Inlet/Outlet skirt and the Make-Break plate guide ears. The skirt should be centered between the guide ears.

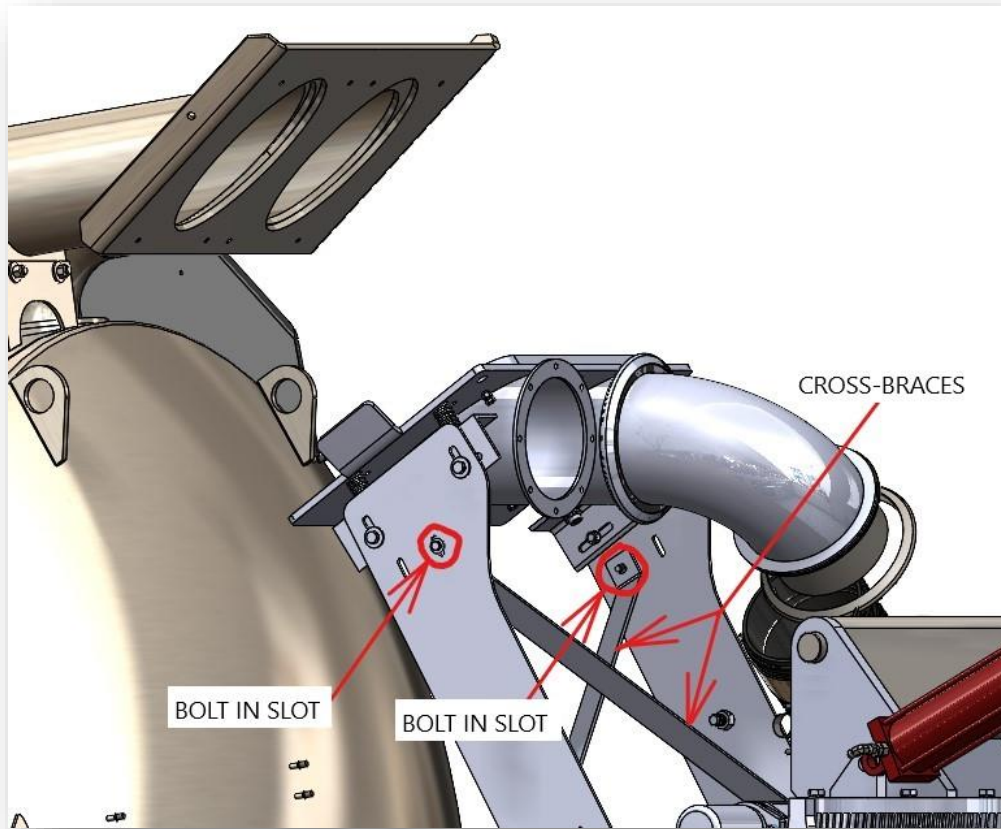
If the measurements of the driver side and passenger side gaps are within $\frac{1}{4}$ " of each other, the Inlet/Outlet skirt is adequately centered over the Make-Break—proceed with checking the Make-Break spring pre-load per "INSTRUCTIONS FOR RE-SETTING CAMEL MAKE-BREAK SPRING PRE-LOAD."

If the skirt is not centered, --i.e., the difference in gap measurements is greater than $\frac{1}{4}$ "—the Make-Break will require re-centering.

If the centering difference is greater than $\frac{1}{4}$ ", the chance of the Inlet/Outlet skirt contacting the Make-Break guide ears and bending the support arms when the body is lowered will be increased—especially when the truck is not parked on even, level ground.

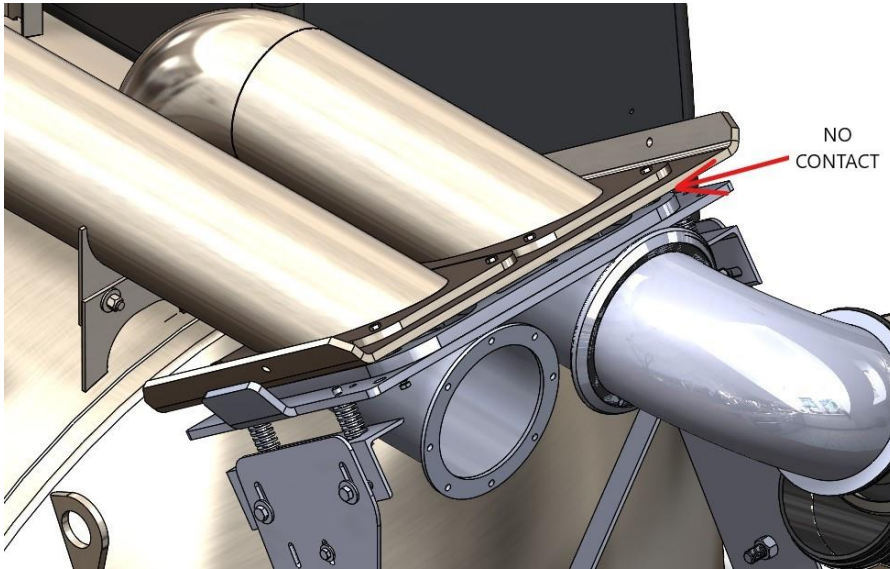


2. To re-center the Make-Break assembly, start by lifting the body up to move the Inlet/Outlet skirt away from the Make-Break, then loosen **ONLY** the upper bolts of the power frame cross-braces:

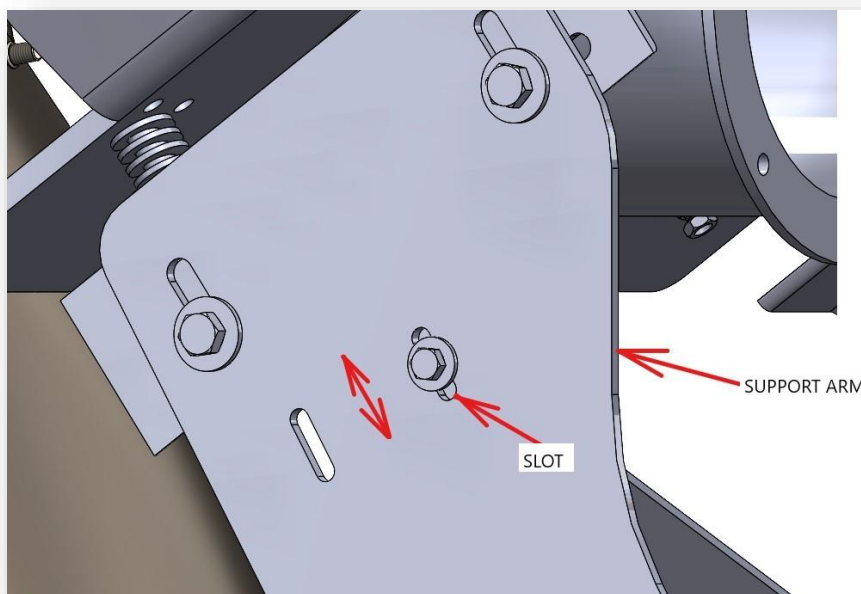


With the upper cross-brace bolts loosened, the Make-Break assembly is now free to move side-to-side so that the centering of the Make-Break assembly may be adjusted.

3. To adjust centering of the Make-Break, lower the body down so that it comes close to the Make-Break assembly, but do not contact the Make-Break assembly—i.e., do not contact the gasket.

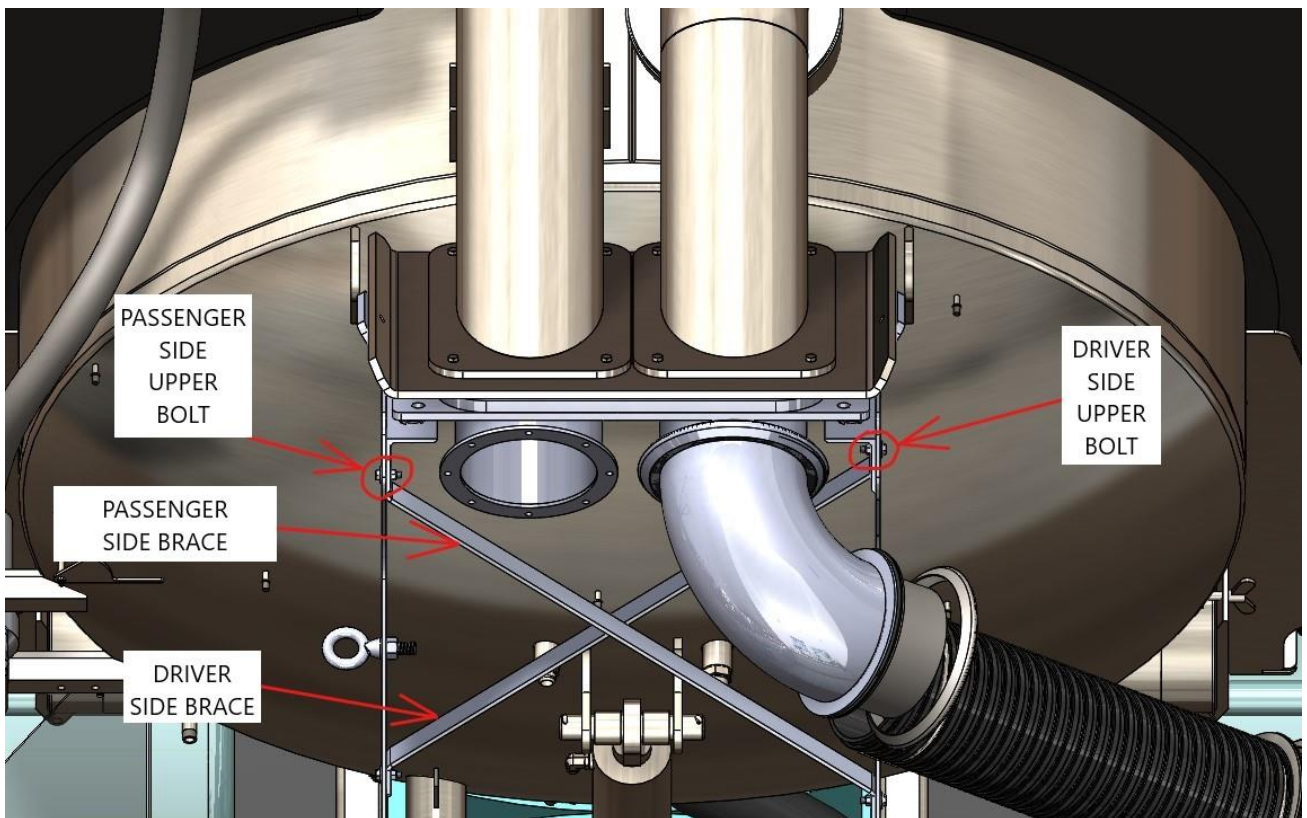


With the Inlet/Outlet skirt near the Make-Break assembly, adjust the side-to-side centering of the Make-Break assembly relative to the Inlet/Outlet skirt. As the Make-Break assembly is adjusted to center, the cross-brace bolts will slide up and down in the slot of the adjacent support arm:

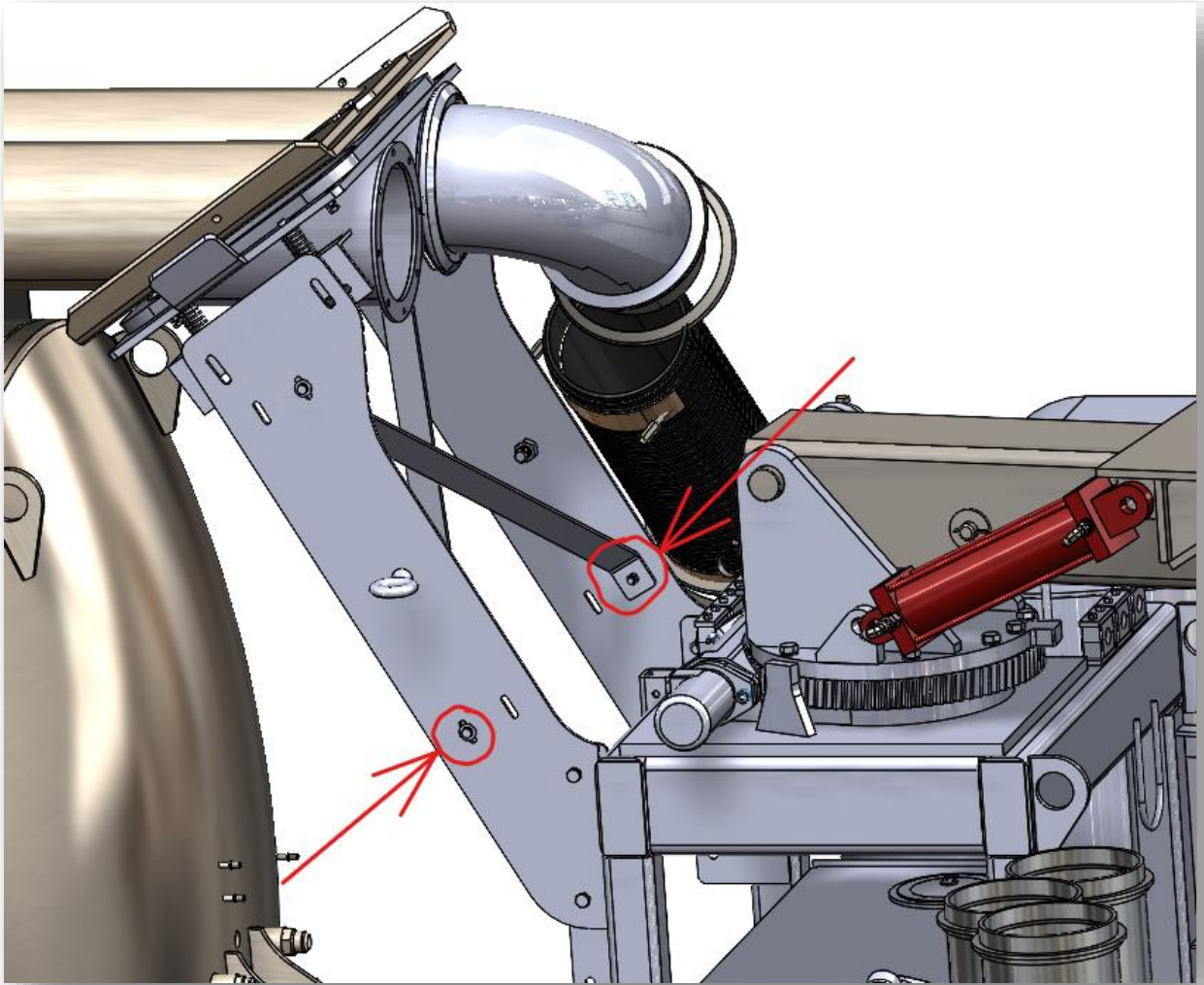


Adjustment of the cross-braces is as follows:

- a. Sliding the Passenger Side brace UP in its slotted hole, while sliding the Driver Side brace DOWN in its corresponding slotted hole will force the Make-Break assembly towards the Driver Side of the truck.
- b. Sliding the Passenger Side brace DOWN in its slotted hole, while sliding the Driver Side brace UP in its corresponding slotted hole will force the Make-Break assembly toward the Passenger Side of the truck.



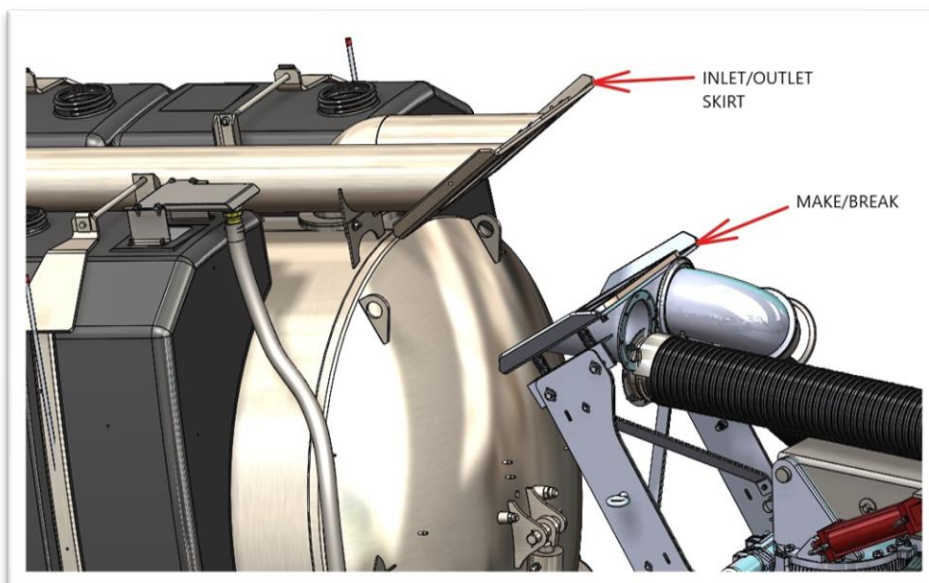
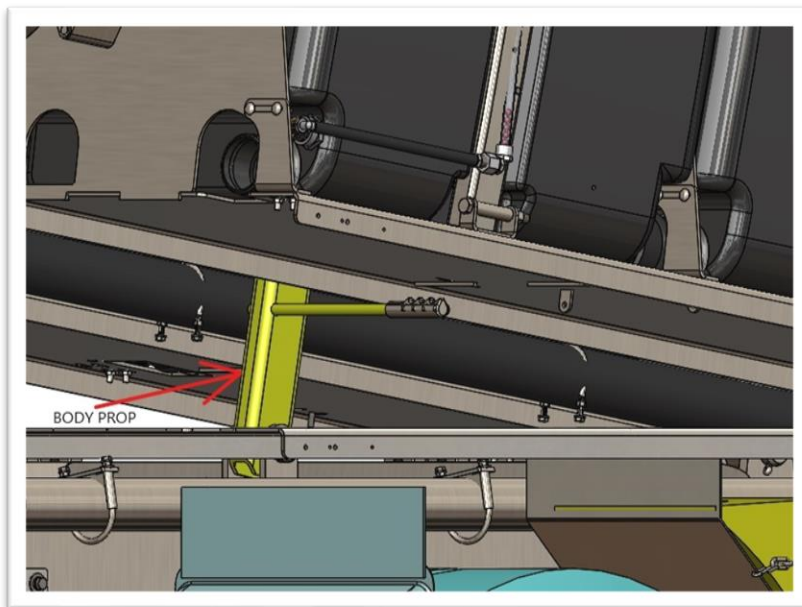
- c. If either brace is moved to the limits of the upper slots in the support arms, and the Make-Break assembly is still not centered, it may be necessary to loosen the lower bolt of the brace so the Make-Break assembly can be further adjusted. The lower bolts of the braces are also located in slots to permit additional adjustment of the cross-braces.



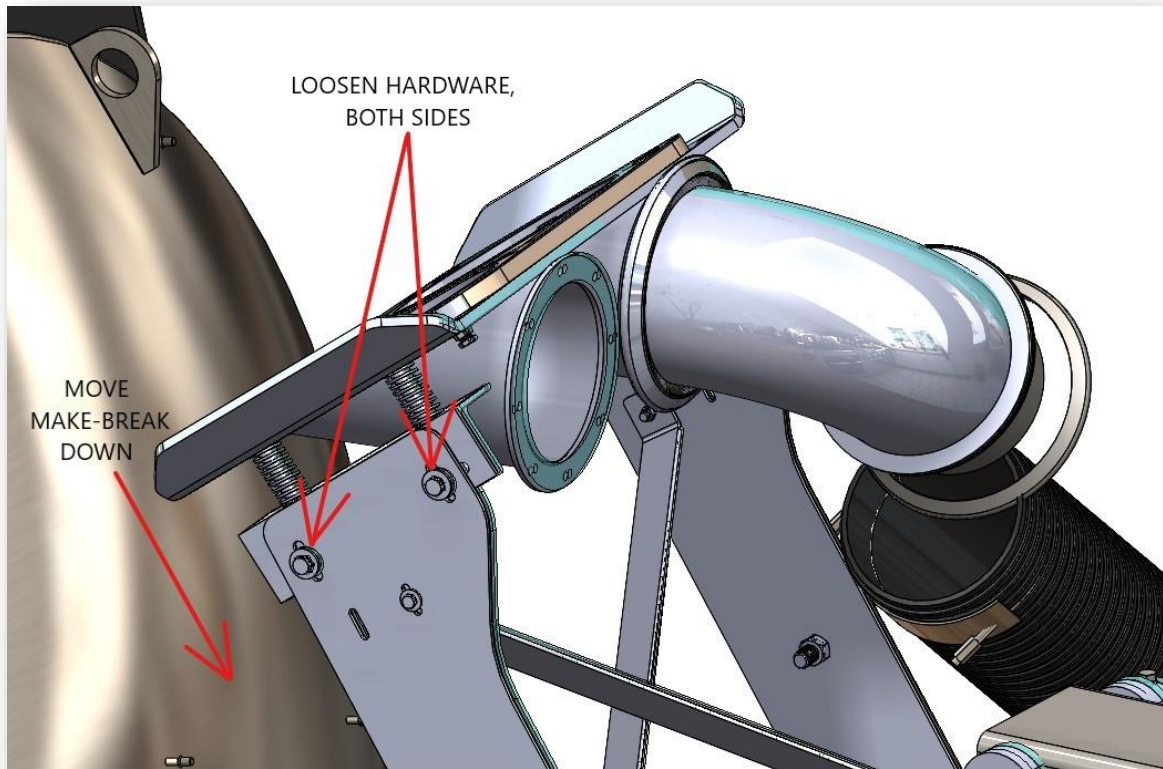
- D. After centering the Make-Break, tighten the cross-brace bolts: lower bolts first (if required), then the upper bolts. After centering of the Make-Break is completed, the spring pre-load of the Make-Break assembly must be checked and/or adjusted. See "INSTRUCTIONS FOR RE-SETTING CAMEL MAKE-BREAK SPRING PRE-LOAD."

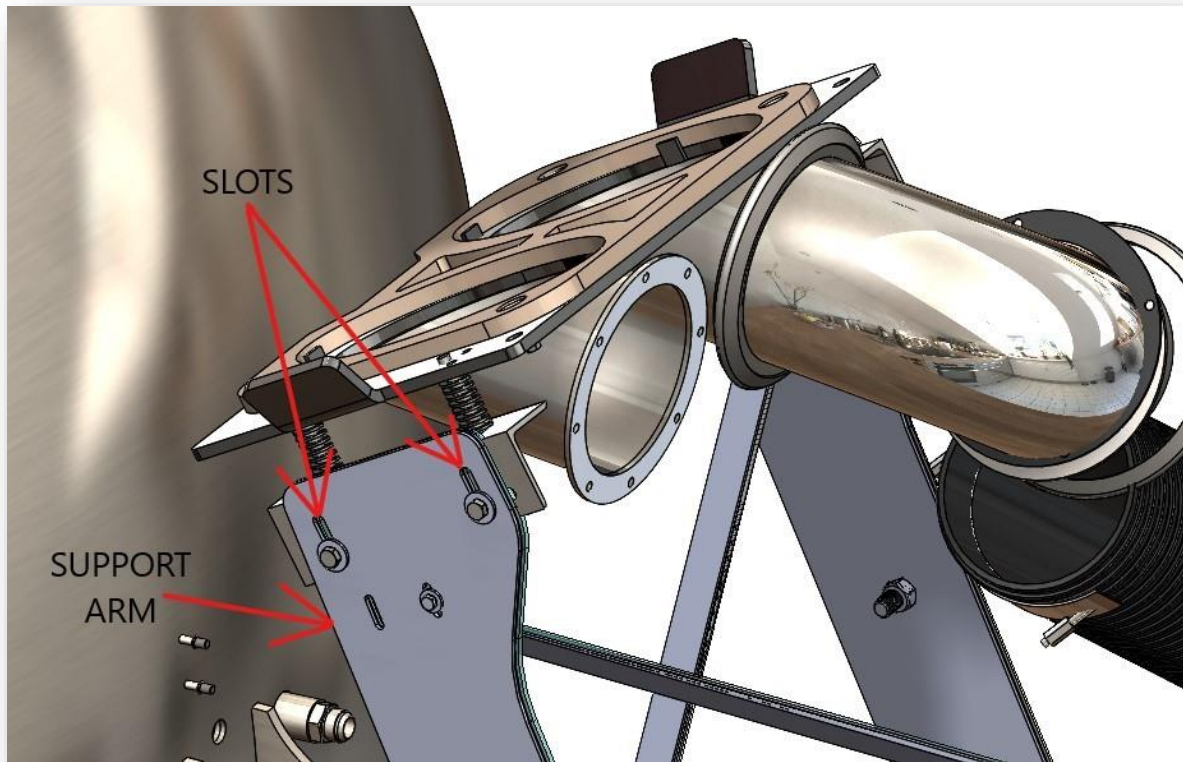
INSTRUCTIONS FOR RE-SETTING CAMEL MAKE-BREAK SPRING PRE-LOAD

1. Check the centering of the Body Inlet/Outlet skirt relative to the Make-Break assembly.
The skirt should be evenly centered between the guide ears on the gasket plate of the make-break assembly.
2. After confirming that the inlet-outlet skirt and make-break assembly are centered, raise the Body so that the connection between the make-break and the body inlet/outlet skirt is broken and the skirt is clear of the make-break and deploy the body prop.



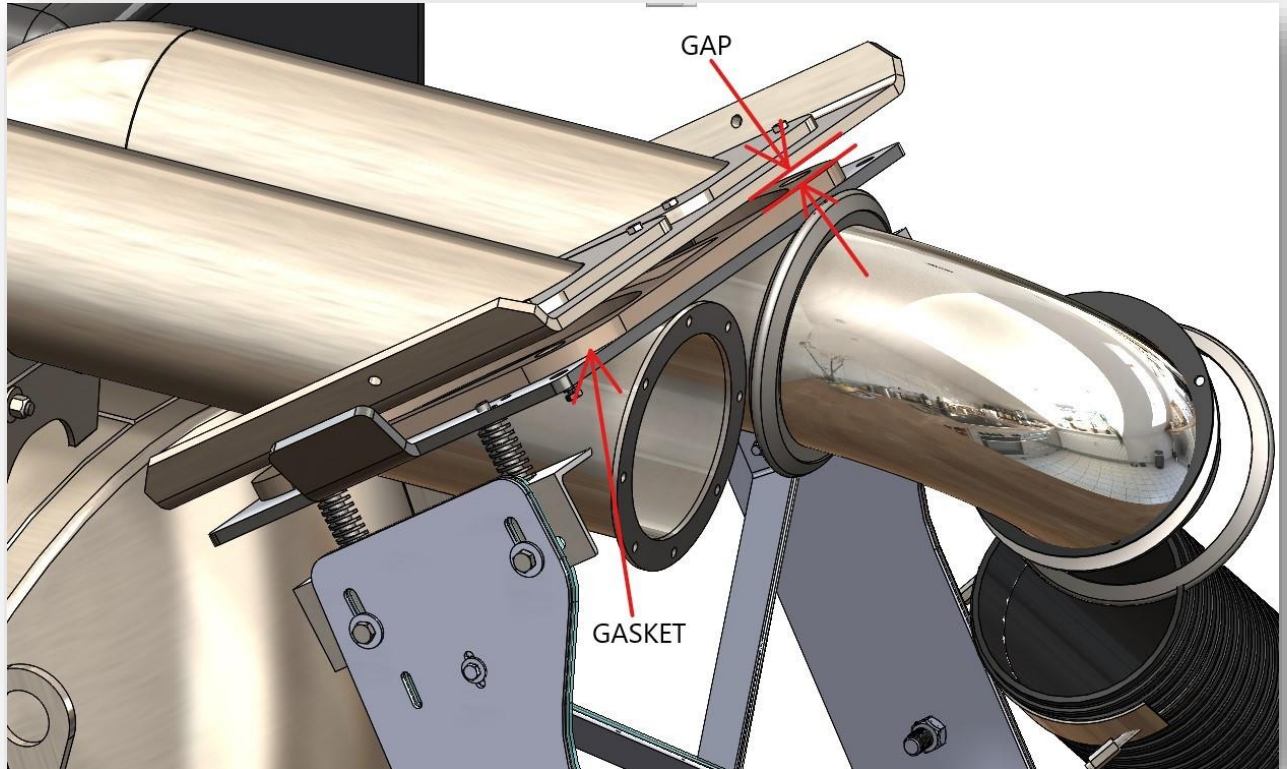
3. Loosen the hardware that holds the make-break assembly into position, and then slide the make-break assembly as far down as possible. The hardware should only be loosened enough for the make-break to slide down the slots in the support arms.



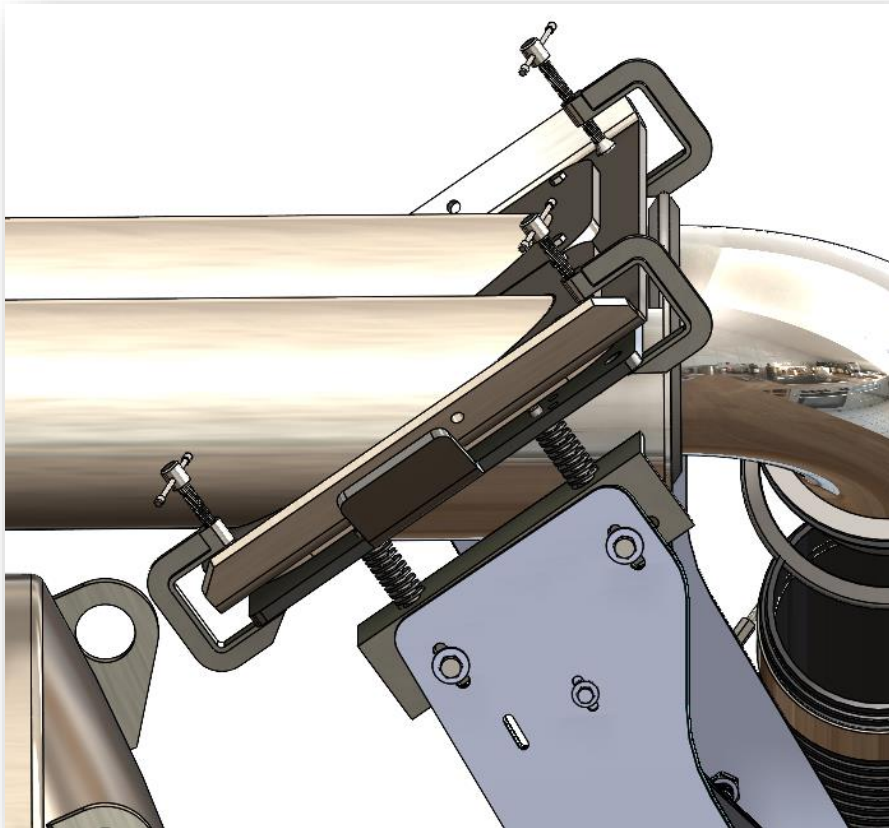
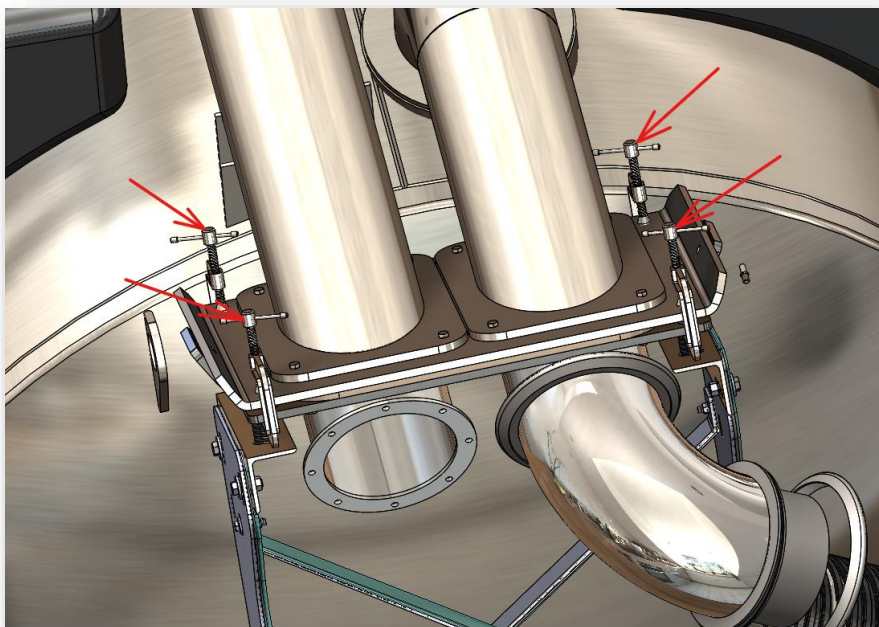


4. After sliding the make-break assembly down, disengage the body prop, then lower the body down completely. With the body completely lowered, there should be clearance between the make-break gasket and the inlet/outlet skirt.

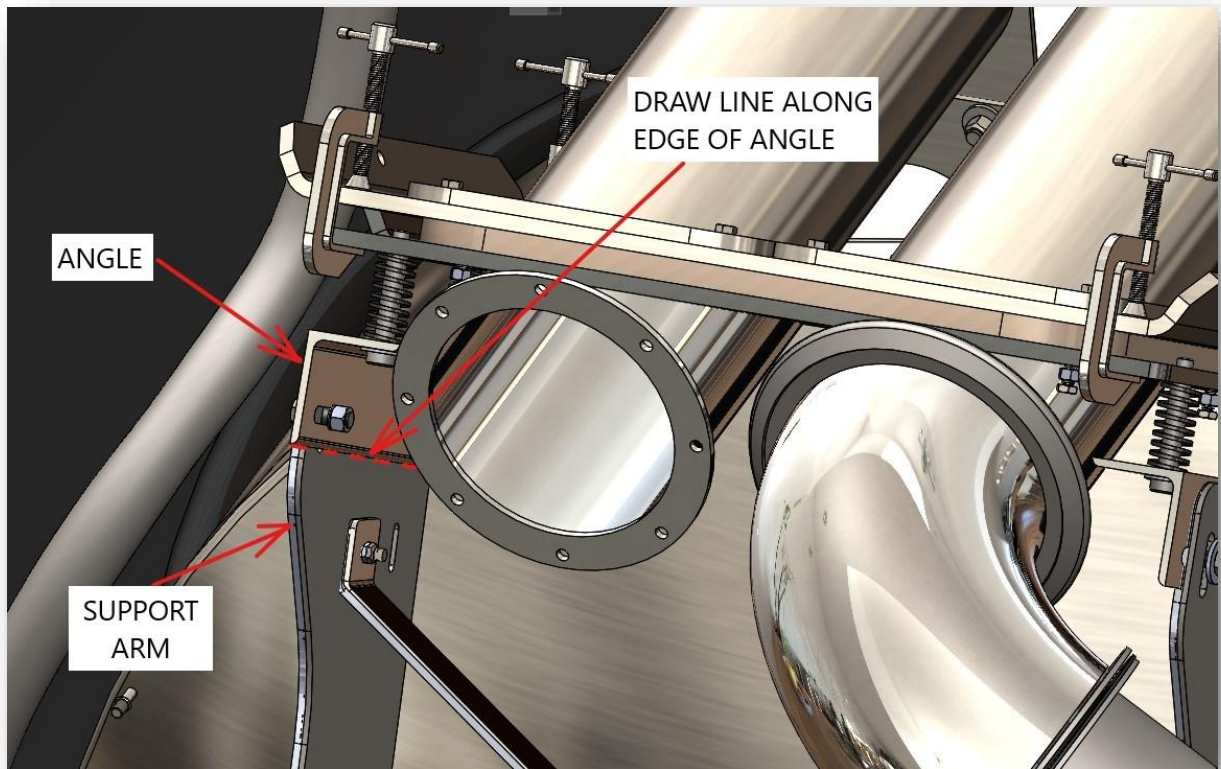
If there is no gap between the make-break gasket and the inlet/outlet skirt, go to Steps 9b & 9c.



5. With the body remaining down, the make-break assembly must now be slid upwards in the support arm slots towards the inlet/outlet skirt. Clamp the make break assembly against the inlet/outlet skirt using a large c-clamp at each corner of the inlet-outlet skirt. Ensure that the skirt is fully seated against the gasket, but avoid compressing the connection beyond what is required to maintain full contact between the gasket and the inlet/outlet skirt.

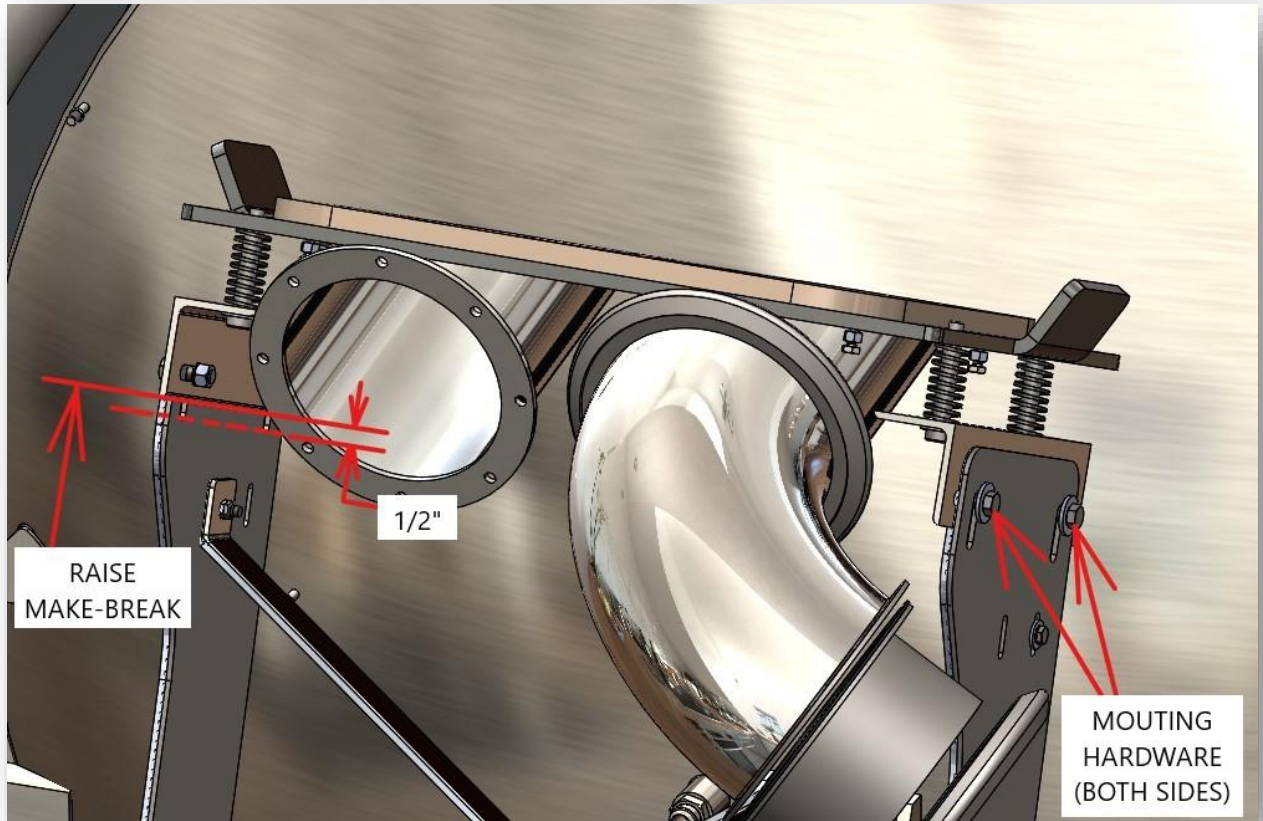


6. Once the make-break and inlet/outlet skirt have been clamped together, draw a line on the inside face of the support arm along the lower edge of the make-break assembly mounting bracket angle. Repeat for the opposite side of the make-break.

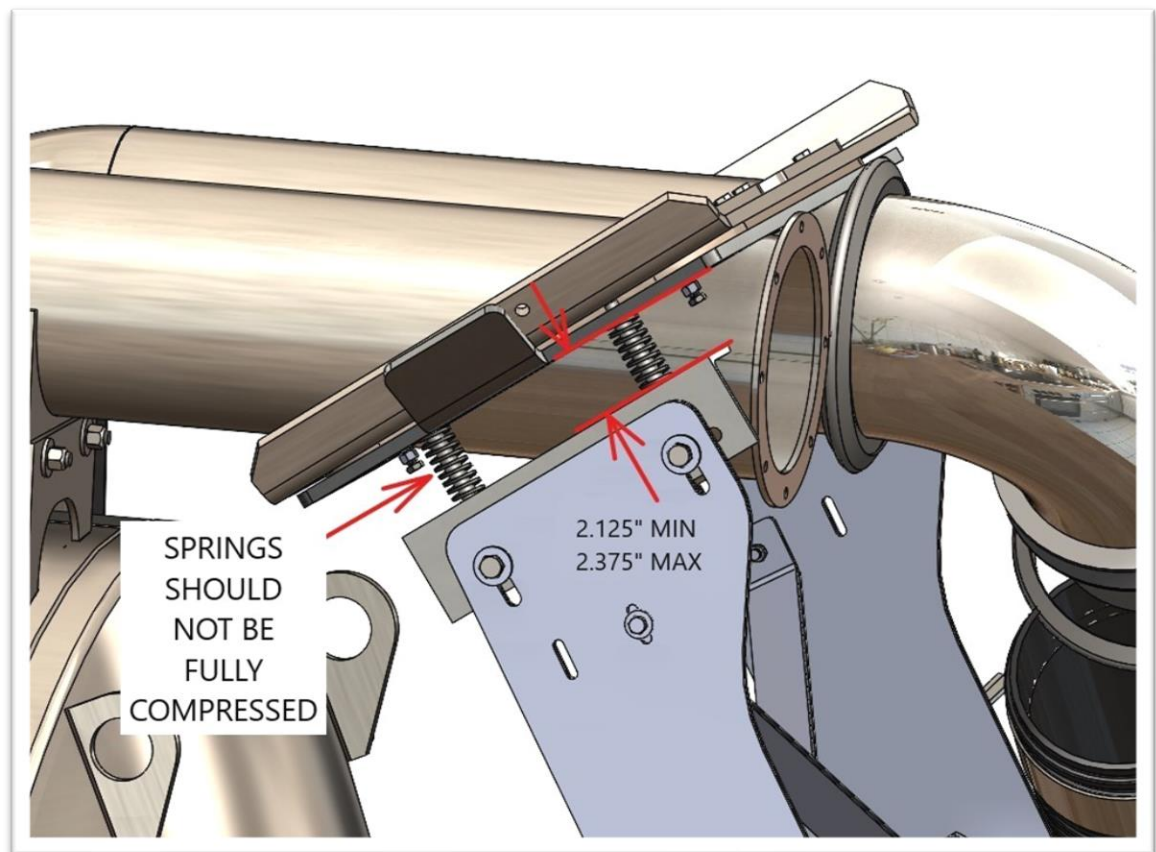


7. After drawing a line on the inside of each support arm, remove the c-clamps. After removing the c-clamps, raise the body and deploy the safety prop.

8. After raising the body, the make-break assembly should be raised $\frac{1}{2}$ " above the lines that were drawn on the inside face of the support arms. Draw a second line $\frac{1}{2}$ " above each of the lines drawn in Step 6. Raise the make-break assembly up to the $\frac{1}{2}$ " spaced lines, then tighten the mounting hardware.



9. Raising the make-break assembly $\frac{1}{2}$ " will produce the required pre-loading of the make-break springs and result in proper sealing between the inlet/outlet skirt and the make-break gasket. To check if the required pre-load has been realized with the previous adjustments, once again disengage the body prop so that the body may be lowered completely down.
 - a. While lowering the body, observe the moment of contact between the make-break and the inlet/outlet skirt. The skirt should contact the make-break gasket evenly, and the skirt should be relatively centered across the make-break gasket. If the skirt significantly favors contacting one side of the gasket before the opposite side, adjust the make-break assembly mounting hardware so that the make-break gasket is parallel with the inlet/outlet skirt. Observe the amount of compression present in the make-break springs. The springs should not be fully compressed—i.e. "bottomed out". Visible clearance between the spring coils should be observed.



- b. Once the body is completely lowered, measure the space between the mounting angle and the underside of the gasket mounting plate. This space—the "preload measurement"—should measure between 2.125" (2-1/8") and 2.375" (2-3/8") on both the driver side and the curb side of the make-break. If the preload measurement is between 2.125" and 2.375", then adequate spring preload has been applied.

- c. MEASUREMENT <2.125" (2-1/8") If the preload measurement is less than 2.125", then too much pre-load has been applied to the make-break springs. Reduce the spring pre-load by raising the make-break assembly enough so that the preload measurement falls within the 2.125" to 2.375" range.

Raise up the body and deploy the body prop. Loosen the mounting hardware, raise the make-break assembly, then re-torque the mounting hardware. Disengage the body prop and once again fully lower the body and take the verify that the preload measurement is between 2.125" and 2.375".

- d. MEASUREMENT >2.375" (2-3/8") If the measurement is more than 2.375", then there is not adequate pre-load applied to the make-break springs. The pre-load must be increased by raising the make-break assembly enough so that the preload measurement falls within the 2.125" to 2.375" range.

10. Raise the body and deploy the body prop. Loosen the mounting hardware, lower the make-break assembly, then re-torque the mounting hardware. Disengage the body prop and once again fully lower the body and take the verify that the preload measurement is between 2.125" and 2.375".

IMPORTANT EQUIPMENT MAINTENANCE SAFETY INSTRUCTIONS:

WARNING

To avoid death or serious injury from component failure, keep equipment in good operating condition by performing proper service, repairs, and maintenance.

Before Performing Service, Repairs & Maintenance on the Equipment:

- **Wear safety glasses, protective gloves**, and follow all **safety procedures** described in the product operator's manual when performing service, repairs, and maintenance on the equipment.
- **Securely place** the debris body, tailgate, and boom in lowered position or **securely block up** with support props.
- **Stop engine & PTO**, engage parking brake, lower implement, allow all moving parts to stop and **remove key** before dismounting from truck.
- Allow all **components to cool** before servicing or performing maintenance. **Avoid contact** with hot hydraulic oil tanks, pumps, motors, valves, and hose connection surfaces underneath equipment.

 **WARNING Cancer and Reproductive Harm** www.P65Warnings.ca.gov

 **WARNING Battery posts, terminals and related accessories contain lead** and lead compounds, chemicals known to the state of California to cause cancer and birth defects or other reproductive harm. Wash Hands after handling.