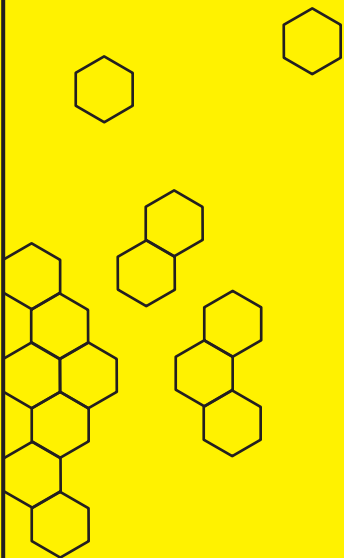


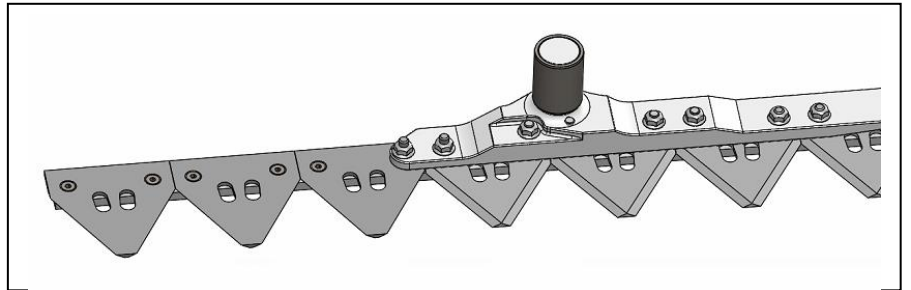
AirFLEX



200 Series

FLEX Header

Knife Overlap Rebuild Instructions



Problem: Knife overlap broke on the LH knife

Probably Cause:

- Rock or hard material hit overlap and caused the overlap to bend and eventually would break overtime.
- Overlap guard(s) bent up or down and fatigue failure occurred on knife back from repeated bending every stroke of the knife.
- Goosenecks/knifeheads not properly installed and putting too much down pressure on overlap while operating.
- Overlap sickle section bolts possible too long (replaced at one time) and then interfered with guards.

Parts needed to fix

- 1 x HB#100779 Knife Connector Bar
- 8 x HB#61712 M6 x 25mm CL10.9 Bolt
- 8 x HB#61713 M6 Flange Nut

Tools Required

- M10 wrenches and sockets
- ¼" or 3/8" drive ratchet
- Grinder with zip disk installed or hacksaw with metal blade installed
- T-20 Torx bit or wrench
- Anti-seize
- ¼" or 3/8" Torque Wrench
- Hammer or rubber mallet.
- 15/16" socket (1/2" drive)
- ½" drive extension
- ½" drive strong arm
- ½" drive torque wrench
- Red Loctite (High Strength)
- 3/8" electric impact

How to Fix:

1. Stroke knife so both goosenecks are as far apart from each other as possible.
2. Remove center featherplate and remove LH gooseneck mounting bolts.

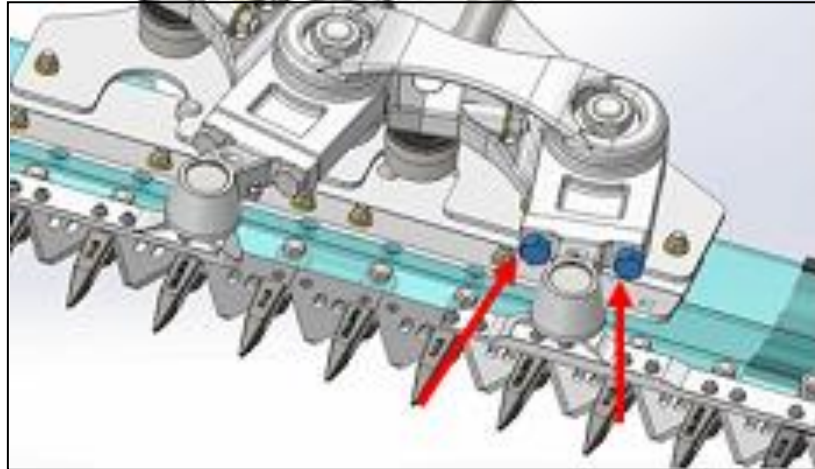


Figure 1: Remove LH gooseneck mounting bolts.

3. Slide LH knife down toward LH end to expose all overlap bolts.
4. Remove broken overlap section. Typically if the overlap breaks at the end of the LH knifehead, the broken overlap knife back section can be reused at the end of the knife.

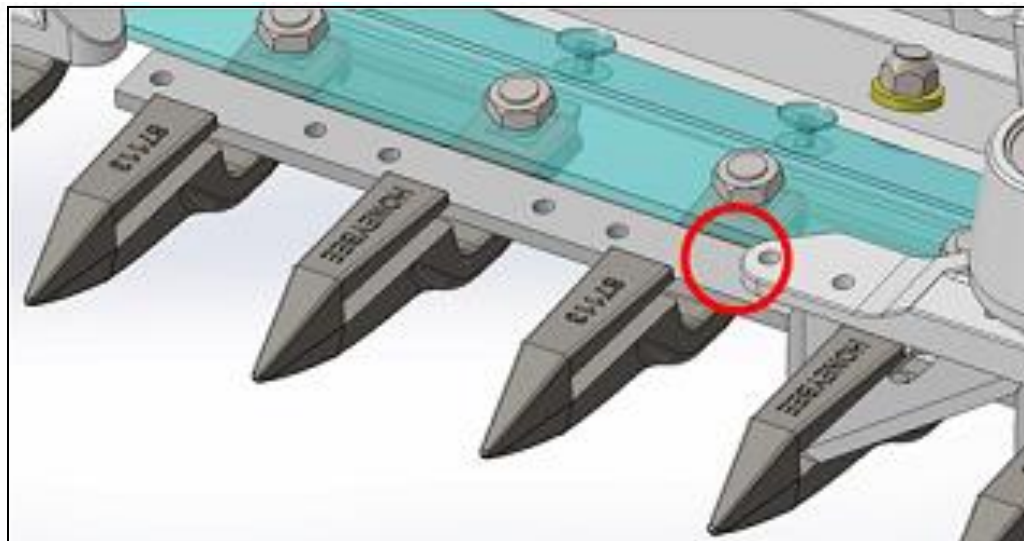


Figure 2: Image showing where knife overlap can break and then broken knife back section can be reused.

5. Remove all sickle section bolts and knifehead sickle section bolts until the end of the metal reinforcement straps.

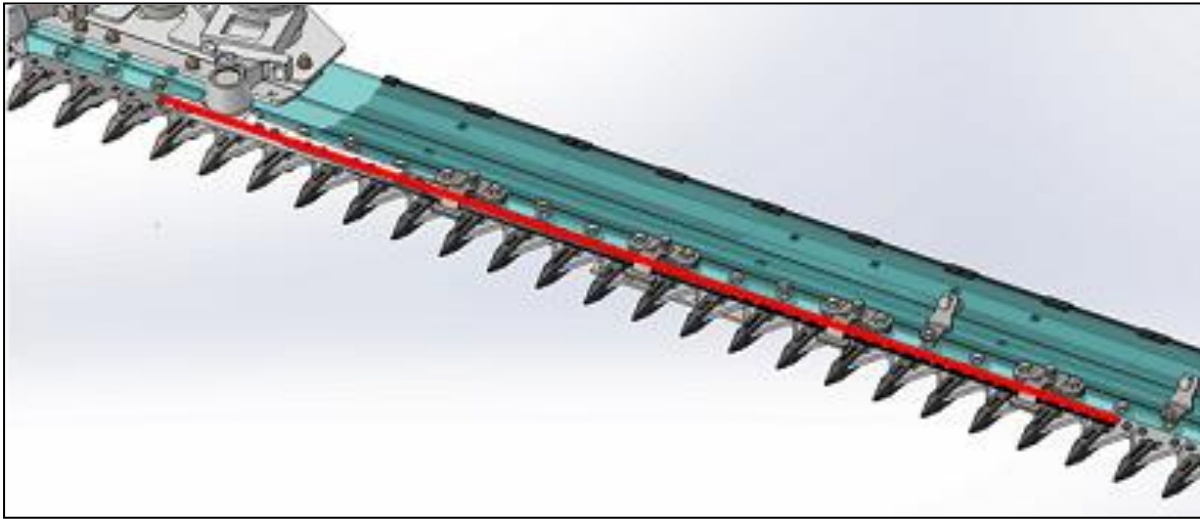


Figure 3: Image showing removing all bolts until the end of the black reinforcement straps (all bolts along Red line).

6. Shift knifeback with sections attached toward knife drive paddle (overlap area). Make sure there are 5 open bolt holes after the end of the LH knifehead. Trim off end of knifeback so there is a $\frac{1}{4}$ " of knifeback left between center of last sickle section hole and end of knifeback. See below.

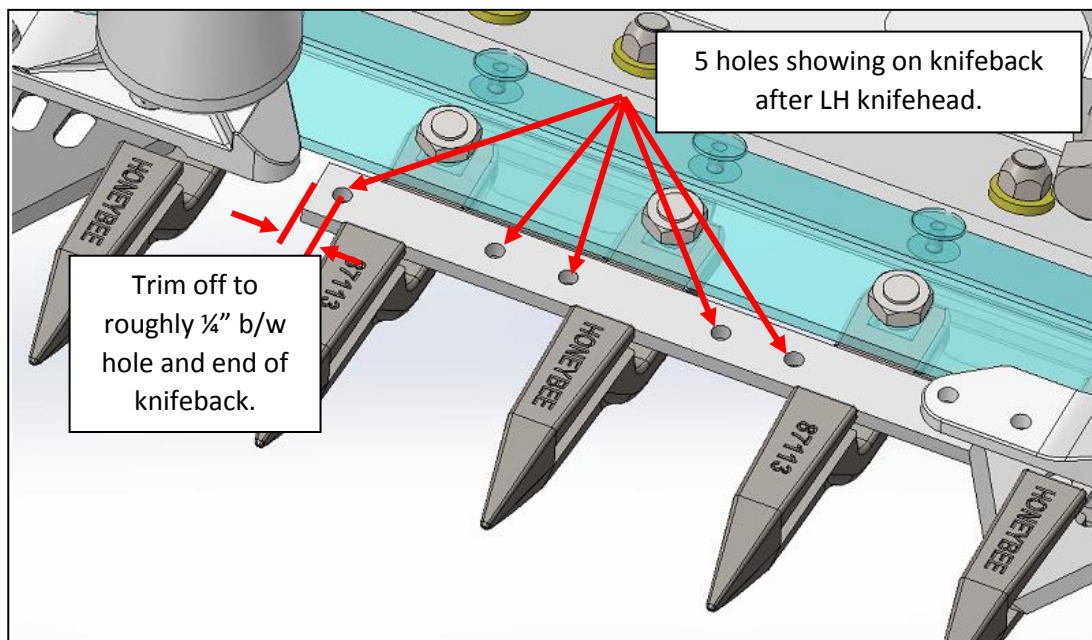


Figure 4: Image showing trimming of knifeback and 5 holes showing (removal of overlap guards may be necessary to trim knifeback).

7. Install overlap sickle sections and re-install all sickle section bolts. Make sure to add anti-seize to bolt that threads into knifehead. This bolt should be torque to 8.3 ft-lbs.
8. Remove the last sickle section on the end of the LH knife and trim off so there is 7/8" of knifeback between the end of the knifeback and middle of the second last sickle section bolt hole.

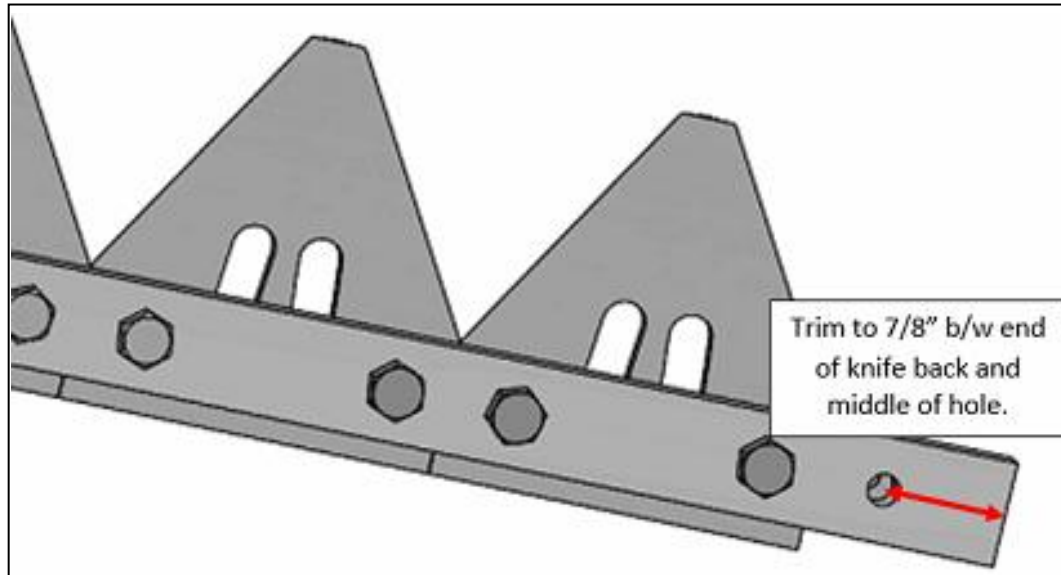


Figure 5: Image showing trimming end of LH knife to add onto it.

9. Reuse broken overlap knifeback on end of knife. If broken overlap section is too short or damaged too much you can use another connector bar (HB#100779) instead and it will need to be trimmed to fit. If a longer piece of knifeback is required you may purchase the longer knifeback sections from HoneyBee parts department. Trim one end of reused knifeback to the end of the last sickle section and reinstall all bolts. Use connector bar and longer bolts.

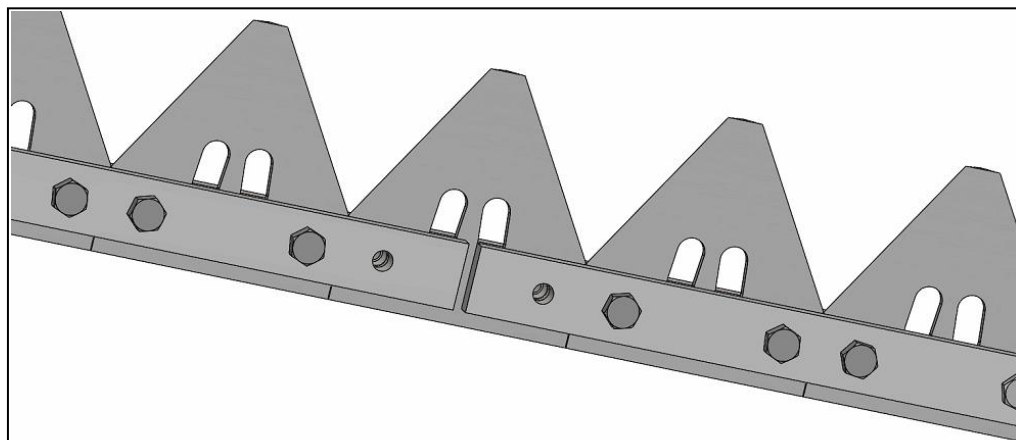
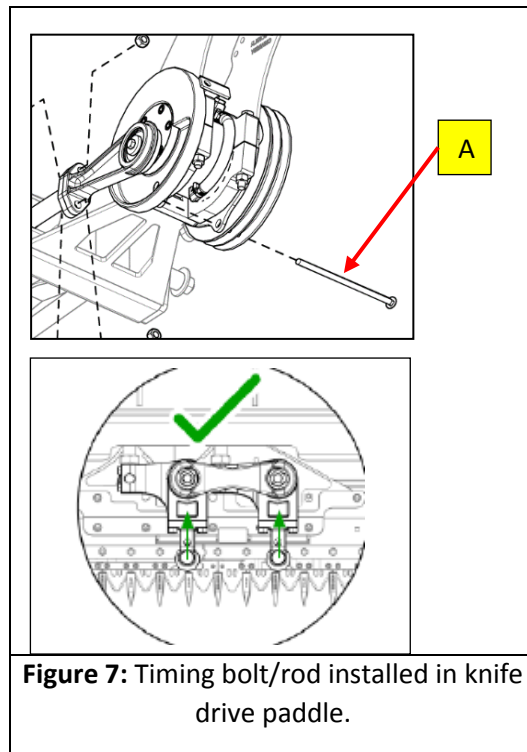
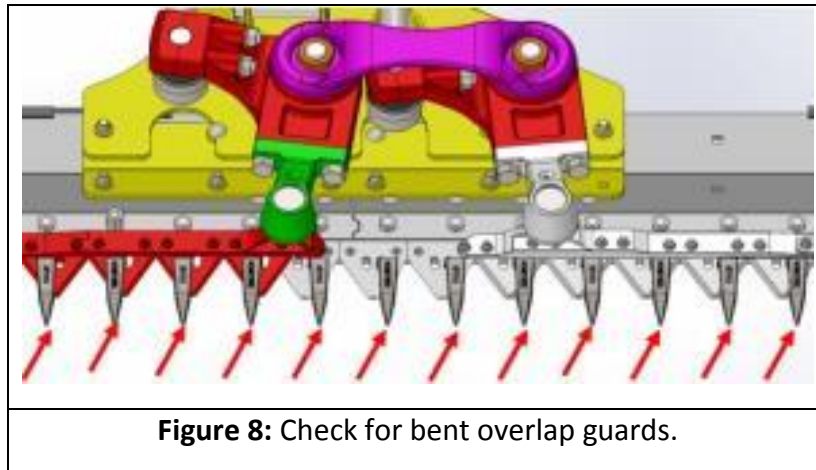


Figure 6: Image showing trimming and installing end of knife.

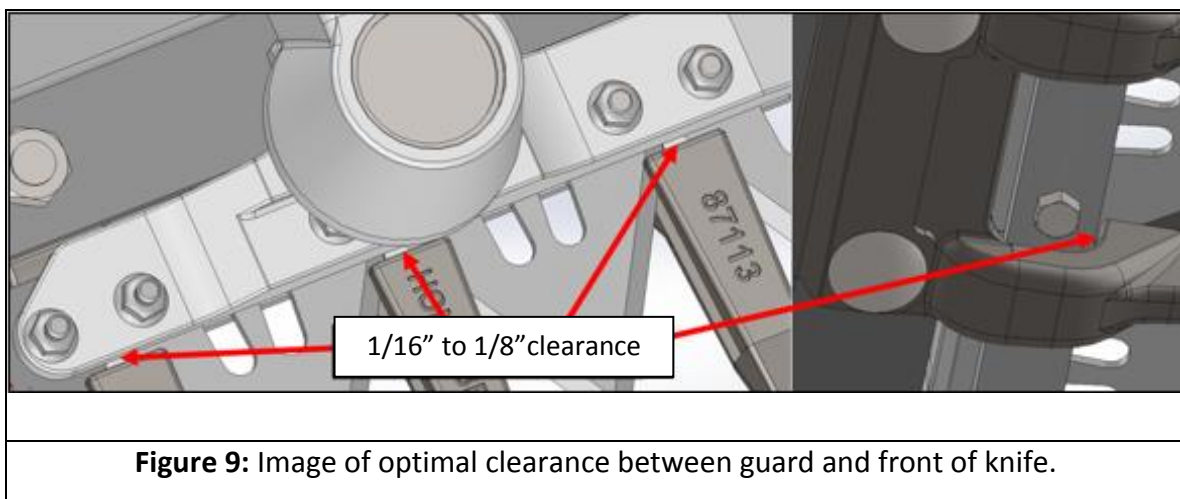
10. After LH knife is fully assembled, at this time we need to reinstall the LH gooseneck back onto the bell crank housing and optimize the vertical location of the RH and LH knife. Put Red Loctite (High Strength) onto gooseneck mounting bolts and lightly tighten them into bell crank housing.
11. Ensure timing rod or bolt (Item A in figure 7) is installed in drive paddle pulleys so bell cranks are parallel to one another.



12. Before final assembly of RH and LH knife check the knife overlap area for any bent guards near the knife drive area. If any of these guards that are near the overlap area are bent it can put excessive loading/forces into the overlap section and can possibly make the overlap fail prematurely. Either bend the guards as straight as possible or replace them, see Figure 8.



13. Start by re-installing the shims between the gooseneck and bell crank. Lightly tighten once shims are installed. Watch for clearance between the knife assembly (knife head on top and knife back on bottom). Install enough shims so that the clearance between the knife assembly (knife head on top and knife back on bottom) and the center guards (HB#87113) is roughly 1-16" to 1/8". Figure 9. Also recheck RH side as well to make sure it is optimized.



14. Make sure to optimize clearance with shims for both RH and LH knife.
15. Before the gooseneck mounting bolts are tightened we need to set the vertical position of both knives.

16. Start with the LH knife and insert a 0.030" feeler gauge between the center guard (right in front of LH gooseneck) and the bottom of the sickle section. We install this shim in this area to make sure the LH knife does not have too much down pressure onto the guard. Figure 10.

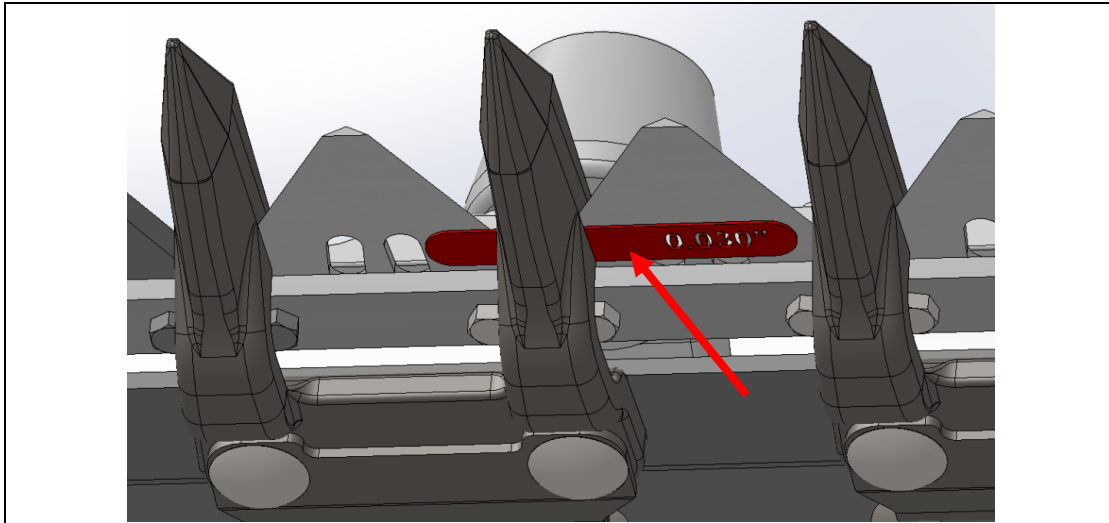


Figure 10: Image showing feeler gauge between guard and LH knife.

17. With 0.030" feeler gauge installed, press with light hand pressure down onto top of LH gooseneck (will lightly pinch 0.030" feeler gauge between sickle section and guard) and tighten mounting bolts to 170 ft-lbs. Remove feeler gauge after tightening.

NOTE: This process may not work every time as when you tighten the two main mounting bolts it actually twists the gooseneck slightly downward onto the shim putting pressure between the sickle section and guard. There should not be too much down pressure of the LH knife down onto the center guards. So, if you need to set without a feeler gauge try to make sure there is hardly any down pressure of the LH knife down onto the center guards. This process can be confirmed by checking cutting system temperature in this area after running the header for 5-10 minutes.

18. Install the RH gooseneck onto the bell crank. Take the 0.050" feeler gauge and place between LH knife and RH knife head. Figure 11.

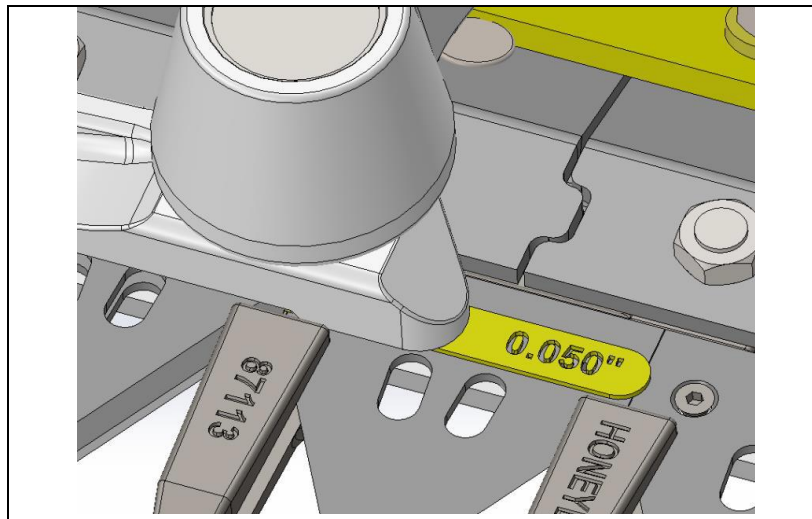


Figure 11: Image showing feeler gauge between both knives

19. With 0.050" feeler gauge installed, press with light hand pressure down onto top of RH gooseneck (will lightly pinch 0.050" feeler gauge between RH/LH knife assemblies) and tighten mounting bolts to 170 ft-lbs. Remove gauge after tightening.
20. Now with everything tightened, remove timing pin/rod on knife drive pulleys and stroke the knife by hand (pull on knife drive belt) and inspect the RH and LH knife for any tight spots.
 - a. Make sure the RH or LH knife is not interfering with the front/rear of the center guards. If significant interference is present check out the shimming.
 - b. Also make sure the top and bottom of the LH/RH sickle sections are not interfering with the center guards through the whole range of travel. If significant interference is present between the sickle sections recheck shimming. Also check for any bent up/down guards.
21. Make sure gooseneck grease zerks are installed.
22. Once you starting running the header after everything is installed, check guards and knifeheads for excessive heat build-up.