

## Engine Alignment

By Lee Dahlen

Engine alignment is an often overlooked, but essential part of general maintenance, especially when rebuilds of engine or transmission have been performed. To do this properly, you will need a set of "Feeler Gauges" straight style as if to adjust valves, a hammer, ball peen and even a brass hammer would be best if you can get one.



With a scribe, blade etc. draw a line across the two halves of the coupler to make "Timing marks"

2a) Disconnect the two halves and separate them.

2b) Get your base alignment correct with the eyeball. Also make sure the shaft is as close to the middle of the shaft log hole as possible, do this by feeling the play in the shaft, as, if the shaft is sitting on the bottom of the log, undo wear and tear on the stuffing box, and noise will prevail. If this is correct then when you go to step 3 you will actually have to "lift" the shaft a minor amount to mate the halves.

3) Without using the bolts, slide the shaft and reconnect the two halves lining up the marks you made.. While keeping pressure from behind. Tap the coupler from behind with a hammer. NOT HARD just firm.

4) Using a .003" ( Three one thousandths of an inch) feeler gauge, run it all the way around the "Seam" where the two couplers join. The feeler gauge should not drop in between the two halves if the alignment is correct. If it drops in the sides, your side to side is out, Bottom, then either lower the front or raise the back. you get the idea. Remember there are 2 adjustments for each mount. Side and top/bottom.

5) When making adjustments, make only ONE adjustment at a time, tighten it down completely. then recheck. Never make two adjustments, because if you have to backtrack, then you won't have a clue as to how to get back to "Ground zero".

After you make each adjustment, redo steps 1-4. This is a long tedious process, but the payoff is no vibration once you get it right. Plan on taking 1/2 to 1 full day to do this correctly as it is a slow process. After you do this, you should repeat the process after 20 hours, (it will go much quicker as you will only have to make minor adjustments.) and then repeat once a year after relaunching and running an hour or so (again to reshape the hull).