

Balancing & Blueprinting Questions

Theory

Using the information located in `i:\wellwood\mechanics\blueprinting.html`, the internet, and other sources to answer the following questions.

1. Describe in your own words, the purpose of engine balancing

2. There are eight advantages to balancing an engine. List them below, *in order of importance*:
 - a.

 - b.

 - c.

 - d.

 - e.

 - f.

 - g.

 - h.

3. When balancing, where do you remove weight from the following components:
 - a. Pistons
 - b. Wrist Pins
 - c. Connecting Rods
 - d. Crankshaft
 - e. Flywheel
4. Using your own words, explain the purpose of a “Bob Weight:”
5. Sometimes a crankshaft will need weight added. How is this done?
6. Using your own words, explain what engine blueprinting is
7. When inspecting an engine block, what are two things you should look for, and why?
 - a.
 - b.
8. Using your own words, describe “Align Boring”

9. Why is align boring done?
10. Using your own words, describe "Decking"
11. Why is decking done?
12. When boring an engine, the cylinders are bored *to the size of the piston*. How is the final sizing (clearance) determined and achieved?
13. Using your own words, describe "Rod Re-sizing"
14. Why is rod re-sizing done?
15. Using your own words, describe "CC'ing"
16. Why is CC'ing done?
17. Using your own words, describe "Milling"
18. Why is milling done?

19. When selecting and installing valves, what four things must be checked?
- a.
 - b.
 - c.
 - d.
20. "Degreeing a Camshaft" involves making sure the camshaft is opening and closing the valves at EXACTLY the right time (much more precisely than aligning cam timing marks (Level 1), and also confirms whether or not you have the CORRECT camshaft for your application) . Using your own words, describe *step-by-step* how to degree a camshaft (How do you find exact TDC? How do you measure lift? How do you measure duration?)