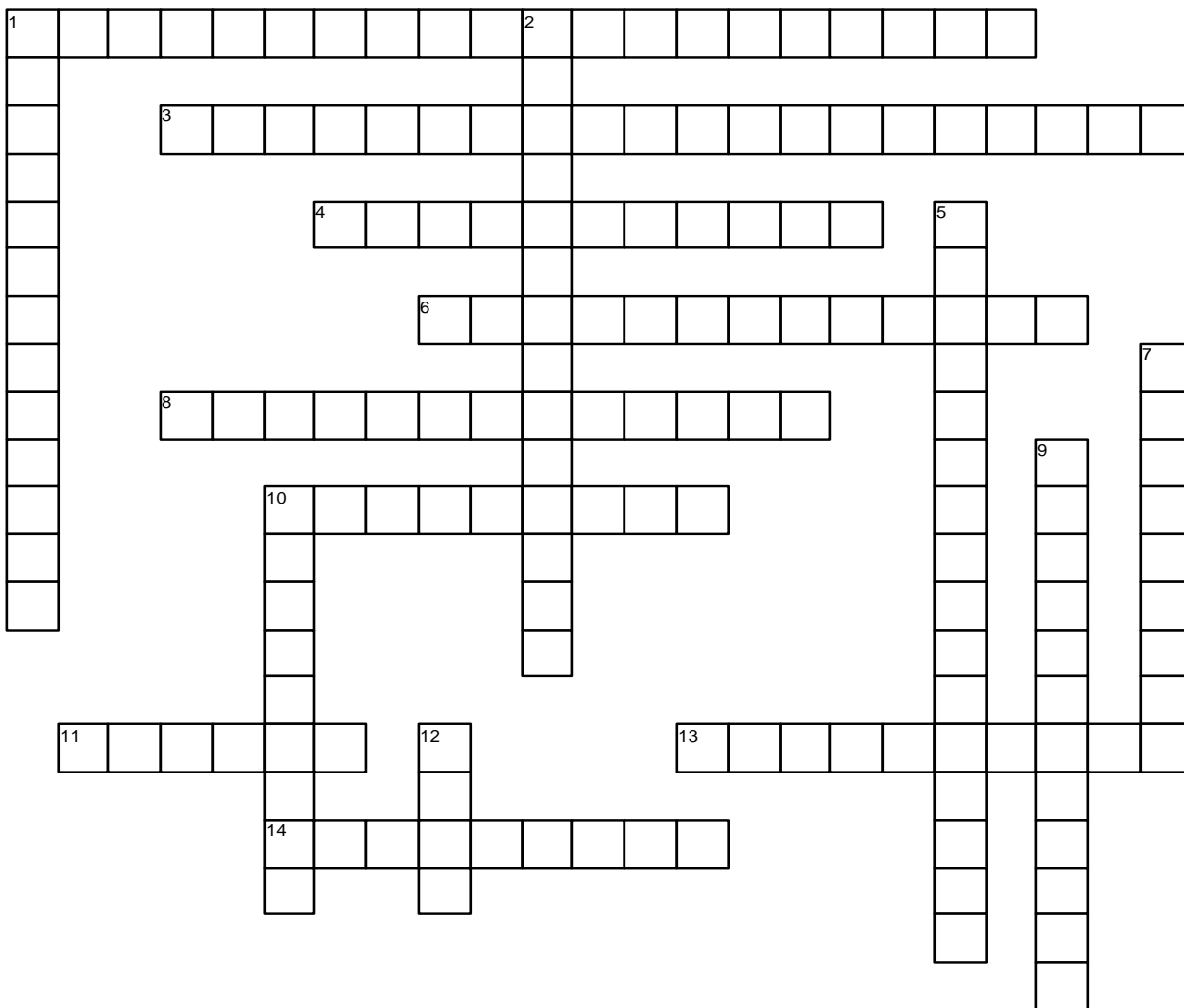


# Crankshafts, Balance Shafts, And Bearings

## Chapter 31



<http://jameshalderman.com>

### ACROSS

- 1 The crank throw is offset from the \_\_\_\_\_.
- 3 A crankshaft that has counterweights on both sides of each connecting rod journal is called \_\_\_\_\_.
- 4 A balancer usually consists of a cast-iron \_\_\_\_\_ mounted to a cast-iron hub with an elastomer sleeve.
- 6 \_\_\_\_\_ is measured in microinches; and the smaller the number, the smoother the surface.
- 8 A \_\_\_\_\_ supports the thrust loads and maintains the front-to-rear position of the crankshaft in the block.
- 10 The flange between the splayed crankpin journals is sometimes called a \_\_\_\_\_.
- 11 A \_\_\_\_\_ crankshaft is machined from a solid piece of forged steel.
- 13 The angle between the crankpins on the crankshaft throws is called a \_\_\_\_\_.
- 14 Another name for the rod bearing journals are the \_\_\_\_\_.

### DOWN

- 1 \_\_\_\_\_ is where only the outer portion of the crankshaft journal surface is hardened.
- 2 Crankshafts are balanced by \_\_\_\_\_, which are cast, forged, or machined as part of the crankshaft.
- 5 When pistons move up and down in the cylinders they create a \_\_\_\_\_, which is a strong low-frequency vibration.
- 7 The inertia ring size is selected to control the \_\_\_\_\_ of the crankshaft vibrations for each specific engine model.
- 9 When the bearing is installed, each end of the bearing shell is slightly above the parting surface. When the bearing cap is tightened, the ends of the two bearing shell touch and are forced together. This force is called \_\_\_\_\_.
- 10 When back-and-forth deflections occur at the same vibration \_\_\_\_\_ as that of another engine part, the parts will vibrate together.
- 12 On a V-8 engine, each group of four inline cylinders is called a \_\_\_\_\_.