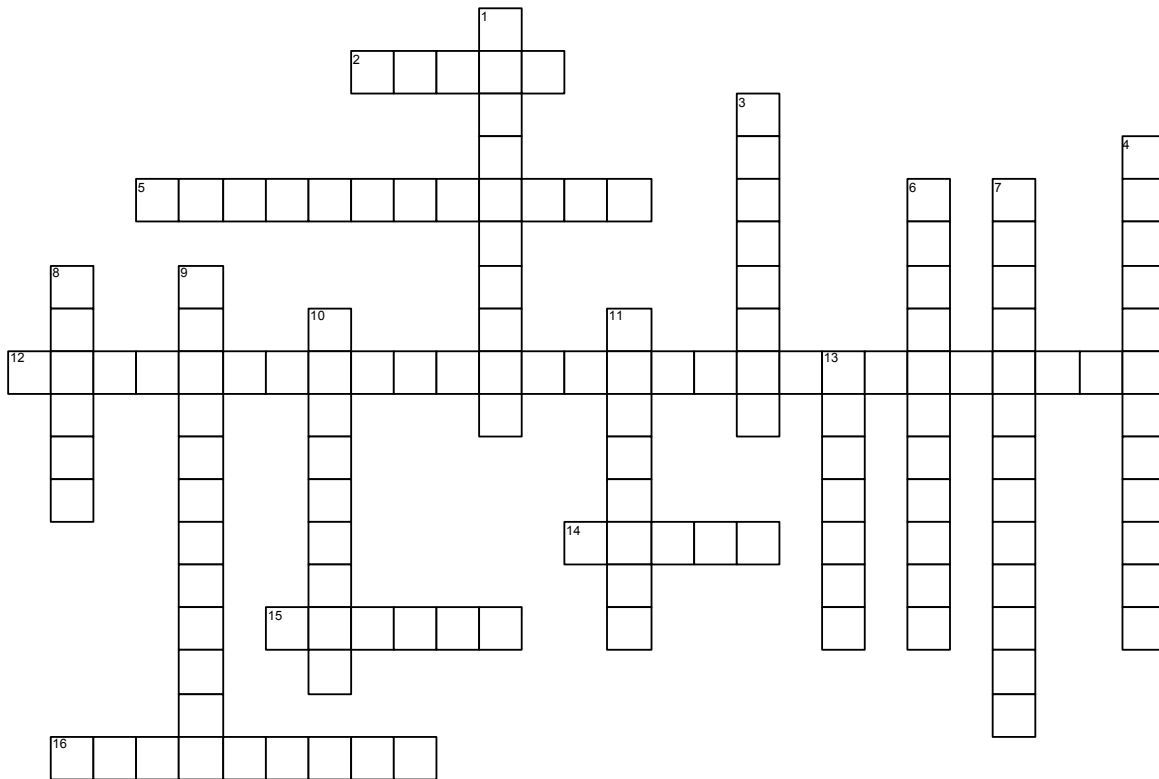


# Pistons, Rings, And Connecting Rods

## Chapter 33



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### ACROSS

- 2 The outside diameter of the lands is about 0.02 to 0.04 in. smaller than the \_\_\_\_ diameter.
- 5 A \_\_\_\_\_ design piston is shorter on the two sides that are not thrust surfaces.
- 12 The connecting rod is connected to a part of the crankshaft called a \_\_\_\_\_.
- 14 The width of the grooves, the width of the \_\_\_\_\_ between the ring grooves, and the number of rings are major factors in determining minimum piston height.
- 15 The \_\_\_\_\_ forms a movable bottom to the combustion chamber.
- 16 A method of expansion control was devised using a \_\_\_\_\_ piston skirt.

### DOWN

- 1 Another name for the connecting rod bearing journal is the \_\_\_\_\_.
- 3 Another name for a piston pin is the \_\_\_\_\_.
- 4 \_\_\_\_\_-\_\_\_\_\_ piston pins are free to "float" in the connecting rod and the piston.
- 6 \_\_\_\_\_ seal the small space between the piston and the cylinder wall, keeping the pressure above the piston.
- 7 To add strength, the silicon content is increased to about 16%, and the resulting piston is called a \_\_\_\_\_ piston.
- 8 A ring gap that is too great will allow excessive \_\_\_\_\_.
- 9 If an engine is designed not to have the pistons hitting the valves, if the timing belt or chain breaks, the engine is called \_\_\_\_\_.
- 10 The piston is attached to the connecting rod with a \_\_\_\_\_.
- 11 Most pistons have horizontal separation slots that acts as \_\_\_\_\_.
- 13 Piston ring \_\_\_\_\_ are located between the piston head and skirt.