

North Montco Technical Career Center

Reading Grid

Name: Joe Student

Session: PM

Date: 10/01/04

Chapter/ASE Area: Chapter 14 Engine Bottom End Construction

Grid: 1 of 4

Main/General Topic: Engine Construction Sub-Heading: Engine Bottom End

<b>A- Details</b>	<b>B - Process</b>	<b>C- Additional Information</b>
<b>List Major Parts - Why Is It There</b>	<b>How/Why Does It Work</b>	<b>Vocabulary Words</b>
1. Cylinder sleeves, also known as cylinder liners, are metal, pipe shaped inserts that fit into the cylinder block.	1. They act as cylinder walls for the piston to slide up and down. They are replaceable on some engine designs.	1. Dry sleeve: A replacement cylinder sleeve that is pressed into a cylinder bore that has been rebored, or machined oversized.
2. Cast iron cylinder block: A very heavy and string block sand cast from cast iron.	2. Nickel is sometimes added tot the iron to improve the strength and wear resistance.	2. Aluminum cylinder block: Lighter block that can resist heat.
3. Four-bolt main bearing caps are used on high-performance engines.	3. Four-bolt main rear: Has 4-cap screws (bolts) holding each main bearing cap.	3. Two-bolt main bearing cap: Uses only 2-bolts to secure each main bearing cap to the engine block.
4. Bearing load strength is the bearings ability to withstand pounding and crushing during engine operation.	4. If the bearing resistance is too low, the bearing can smash, spin or slip, scoring the crankshaft.	4. Bearing conformability: Is the bearings ability to adjust to imperfections on the crankshafts journals surface.

Complete an *Outline Grid*, then fill out 3-*Reading Grid* Sheets When all Grids are complete, fill out a *Summary Worksheet* describing what was covered in the chapter, what material you already knew and any difference's between your and the author's findings.