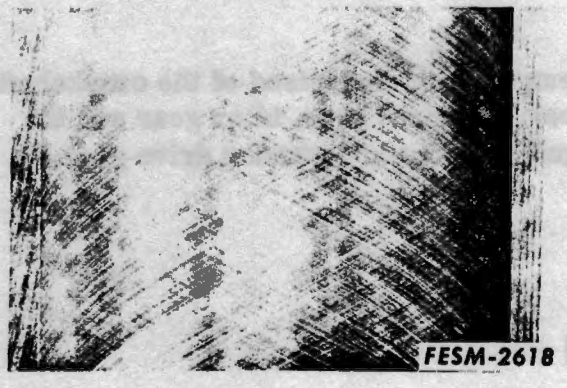
Re-Boring

When re-boring cylinders, all crankshaft bearing caps must be in place and torqued to specifications to avoid possible distortion of bores in final assembly. If all bores require the same correction, to save time bore the cylinder having the greatest amount of wear and taper first. If this cylinder cleans up to the smallest desired oversize, you can be sure that the remaining, smaller cylinder bores will clean up to the same size. Oversize pistons furnished for service are .020 in. and .040 in. oversize. No attempt should be made to cut down oversize pistons to fit cylinder bores.

To center the boring machine on each cylinder, follow closely the instructions of the boring machine manufacturer.

NOTE: If the crankshaft has not been removed, be sure the crankshaft is out of the way of the boring cutter when boring each cylinder.



Use a good single point boring bar with a sharp tool and bore all cylinders the same size, to within .002 to .001 in. of the desired finished oversize to permit finishing honing operations.

Honing

For best results, hone the cylinders to the finished size. This operation must remove all boring tool marks. Final finish should be in the range of 20 to 35 micro-inches. If you have no means for measuring the finish, the use of about 120 grit stones will produce approximately the correct finish.

Cylinders that are too smooth will retard run-in and may result in ring scuffing. When cylinders are too rough, rapid ring wear will result. A rigid type wet hone is preferred for the final sizing operation, but a spring hone of the glaze-breaking type may be used if the other is not available. Spring hones should be equipped with 220 grit stones and stock removal should not exceed 0.003 in. This type of hone should be dipped into SAE 10 or 20 lubricating oil before beginning the operation. Dull or dirty stones cut unevenly and generate excessive heat. Keep honing equipment sharp and clean. When finished honing, pass the hone through the entire cylinder bore at a rate of 60 cycles per minute or as necessary to provide a 30 degree (relative to the top of the sleeve) cross-hatch pattern on cylinder walls. This will insure maximum ring life and minimum oil consumption.