



Test Monitoring Center

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Sequence IIIG Information Letter 09-5
Sequence No. 24
October 12 , 2009

ASTM consensus has not been obtained on this information letter. An appropriate ASTM ballot will be issued in order to achieve such consensus.

TO: Sequence III Mailing List

SUBJECT: Engine Build Changes

During the September 11, 2009 Surveillance Panel Conference Call, the panel agreed to:

- 1) Add a tolerance to the bath temperature for cylinder head cleaning.
- 2) Correct the part number for the cylinder head gaskets.
- 3) Delete the requirement to clean cylinder heads with a brush.
- 4) Add a requirement to have the cylinder hone load output and current checked annually by the manufacturer.
- 5) Revise the source of cylinder head bolts.

Sections 9.5.3.1, 9.9.5, 9.9.6 and 9.27 have been revised and Section 9.6.2 has been deleted. The attached changes to Test Method D 7320 are effective the date of this information letter

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Attachments

c: ftp://ftp.astmtmc.cmu.edu/docs/gas/sequenceiii/procedure_and_ils/IIIG/IL09-5.pdf

Distribution: Electronic Mail

Modifies Test Method D7320-08a

as amended by Information Letters 08-1, 08-2, 08-3, 09-1, 09-2, 09-3 and 09-4

9.5.3.1 Clean the block in a heated bath or temperature-controlled automated parts washer before and after honing. Follow these suggested guidelines to ensure there is no rusting of the engine block after this process:

- (1) Use only NAT-50 or PDN-50 soap at a concentration of 7.3 kg of soap per 380 L of water. Change the soap and water solution at least every six months.
- (2) Set the water temperature to (60 ± 10) °C.
- (3) Do not in any manner pre-condition the water that is being used.
- (4) Prior to installing the engine in the parts washer, ensure that all coolant passages are blocked off to prevent cleaning solutions from entering the passages.
- (5) Allow the block to run through the cleaning cycle for a period of (30 to 40) min.
- (6) After the cycle is complete, immediately remove the block from the washer and spray it down with degreasing solvent.
- (7) Wipe cylinder bores out with a lint free towel.
- (8) Spray engine block with a 50:50 mixture of build-up oil and degreasing solvent.
- (9) Do not remove the paint dot from the crankcase area of the block.
- (10) Allow the block to cool to room temperature before honing the block.

Delete Section 9.6.2

9.9.6 Use only the CV-616 honing machine to hone the cylinder walls. See the Sequence IIIG Engine Assembly Manual, Section 2 for all of the proper setup and operational procedures for each specific run on the Sequence IIIG engine block. Have the load output and the current verified by the manufacturer annually.

9.9.5 Use the honing torque plates B-H-J GM 3.8L/3E-R-s_t-HT^{10,1} to pre-stress the engine block for honing. Install the torque plates with the proper hardened washers (supplied with the honing torque plates), single washers on top row and double washers on bottom row, to establish proper bolt depth. Clean the threaded bores for the cylinder head attachment bolts using a bottoming tap before each installation of the torque plates. The torque plates require the use of new head gaskets, SPO Part No. 24503802 left head and 24503801 right head, along with cylinder head, torque-to-yield fasteners, SPO Part No. 25527831 (long). Clean all sealing and thread locking compounds from the fasteners for the torque plate installation. Coat each fastener with build-up oil, and see Section 1 Sheet 7 of the Sequence IIIG Engine Assembly Manual for installation instructions.

9.27 *Cylinder Head Installation*—Use new head gaskets for each application. Do not use any sealers on the cylinder head gaskets. Use new fasteners, available from GM Racing warehouse part 25527831 (long) and 25533811 (short), for each application. Before using the fasteners for cylinder head attachment, remove all pre-coat sealers. Remove thread locking compounds from the threads and underside of the bolt head with a wire wheel or brush. Do not use chemical cleaners to remove these coatings. Coat the threads and underside of the bolt head using non-hardening pliable sealing compound. Tighten the fasteners according to the guidelines in the Sequence IIIG Engine Assembly Manual, Section 5 Sheet 3.

¹The sole source of supply of the apparatus known to the committee at this time is B-H-J Products Inc., 37530 Enterprise Court, Newark, CA 94560.