



# Test Monitoring Center

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Sequence IIIF Information Letter 07-3

Sequence No. 26

December 13, 2007

***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: 1. Additional Rocker Cover Bushing  
2. Correction to Rating Workshop Designation  
3. Calibration of Test Stands under IIIF and IIIG Methods

1. At the November 13, 2007 Sequence III Surveillance Panel meeting, the panel approved the use of a substitute Rocker Cover Bushing. Annex A2.2 has been revised to include this additional Rocker Cover Bushing.
2. Responsibility for the Light Duty Deposit Workshops has changed from the Coordinating Research Council (CRC) to SAE International (SAE). Sections 12.4.3.4, 12.4.3.5, 12.4.3.6 and 12.4.3.7 have been revised to reflect SAE Light Duty Deposit Workshops.
3. Finally, at the November 13, 200 meeting, the panel agreed to include provisions for calibration of stands as both IIIF and IIIG. A new note 12 has been added to include the requirements for dual calibration and subsequent notes renumbered. A new section 10.8.11.1 has been inserted and existing section 10.8.11.1 has been renumbered. The provisions for dual calibration were originally approved by the Sequence III Surveillance Panel during the April 16, 2003 meeting, but were not included in the Test Method.

The attached changes to Test Method D 6984 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/IIIF/IL07-3.pdf](ftp://ftp.astmtmc.cmu.edu/docs/gas/sequenceiii/procedure_and_ils/IIIF/IL07-3.pdf)

Distribution: Electronic Mail

Note 12: *Calibration of a Test Stand as Both Sequence IIIF and IIIG*— A stand can be IIIF calibrated in accordance with this test method and IIIG calibrated in accordance with Test Method D 7320. A stand that was IIIF or IIIG calibrated within the previous year can be calibrated as both a IIIF and IIIG stand. If the stand was not IIIF or IIIG calibrated within the past year, follow the LTMS guidelines for new stand requirements to obtain IIIF or IIIG calibration.

10.8.11.1 If a test stand is calibrated in both the IIIF and IIIG test methods, conduct stand instrumentation calibrations as defined in 10.8.11 every 15 test starts.

10.8.11.2 The intake air-humidity system shall be calibrated no less than every six months.

12.4.3.4 All raters of Sequence IIIF engine pistons shall attend an SAE Light Duty Deposit Rating Workshop every 12 months  $\pm$  30 days and produce data that meets the SAE definitions of Blue, Red, or White for piston deposits. If a rater is unable to meet this requirement, the rater can continue to rate Sequence IIIF pistons during a grace period of 45 days after the completion of the workshop and can follow the procedure described in 12.4.3.5 to generate data that meet the SAE definitions of Blue, Red, or White.

12.4.3.5 A rater who is unable to meet the requirement in 12.4.3.4 can schedule a visit to the TMC to generate data on SAE Light Duty Deposit Rating Workshop pistons and receive an assessment of rating performance compared to data collected at recent workshops. Visits to the TMC will be scheduled based on availability of parts.

12.4.3.6 The TMC will select a minimum of six pistons from a collection of workshop parts for the rater to rate piston deposits. The TMC will provide rating booths and lights, but the rater is responsible for providing any necessary rating aids. The TMC will analyze the data and determine if the requirement in 12.4.3.4 has been met. If the requirement in 12.4.3.4 has not been met, any time remaining in the 45-day grace period is forfeited.

12.4.3.7 A second attempt to generate rating data at the TMC is permitted only after the rater receives training from an experienced industry rater. The experienced industry rater shall verify to the TMC, in writing, that the rater training has taken place. No more than two attempts are permitted between SAE Light Duty Rating Workshops.

Existing Note 12 renumbered as Note 13

Existing Note 13 renumbered as Note 14

Existing Note 14 renumbered as Note 15

**TABLE A2.2 Parts to be Replaced As Needed**

Part Description	Part Number
ADAPTER, BLOWBY BREATHER TUBE	OHT3F-040-1
ADAPTER, OIL FILTER	OHT3F-035-1
Adapter, Oil Filter, with External Bypass	OHT3F-080-1
Adapter, Throttle Body, Air Inlet	OHT3F-001-2
Balancer, Harmonic (24507058 or 12563265) (1997-2003)	24507058
Bearing, Balance Shaft Front (part of 24502388)	SKF6205-2ZNRJEM
Block, Engine Assembly	24506028
Bolt, Connecting Rod	12568069
Bolt, Counter Balance Gear	24501367
Bolt, Counter Balance Shaft retainer	24500055
Bolt, Harmonic Balancer	24504736
Bolt, Oil Filter Adapter	24504713
Bolt, Oil Pan (24502791 or 24508626) (1997-2003)	24508626
Bolt, Oil Suction Tube	24505570
Bolt, Rocker Cover W / Washer (25534748 or 24502164) (1997-2003)	24502164
Bolt, Screw Camshaft Sensor	25526395
Bolt, Screw, Oil Gearotor, Cover	25519242
Bolt, Stud Type, Front Cover & Crankshaft Sensor (long)	24504718
Bolt, Stud Type, Front Cover & Crankshaft Sensor (short)	24504717
Bolt, Upper Intake Long	24505205
Bolt, Upper Intake Short	24506498
Bolt, Upper Intake, Stud	24502453
BRACKET, BREATHER TUBE	OHT3F-041-1
BREATHER TUBE, S.S. MATERIAL	OHT3F-075-1
Bushing, Balance Shaft Rear	24503193
BUSHING, ROCKER COVER	OHT3F-028-1
BUSHING, ROCKER COVER	OHT3F-028-2
CONNECTOR, MODIFIED FOR LENGTH, GM PN 24502883	OHT3F-039-2
COVER, FRONT, IMPREGNATED	OHT3G-085-1
COVER, Rear, crankshaft rear seal housing	OHT3G-088-1
Cover, Oil Gearotor	25521935
Cover, Rocker Arm Valve Cover Left Side Plastic	12590366
Crankshaft	34502168
DIP STICK, METRIC, EXTENDED LENGTH	OHT3G-064-1
FITTING, OIL FILTER ADAPTER	OHT3F-043-1
FLYWHEEL, MANUAL, MODIFIED P.N. 24503285	OHT3F-020-2
GASKET, EXHAUST, END PLATE	OHT3F-009-1
GASKET, EXHAUST, FLANGE, METAL	OHT3F-018-1
Gasket, Manifold, Upper Intake	89017556
GASKET, OIL COOLER, PKG. OF 50	OHT3F-074-1
GASKET, OIL FILTER, PKG. OF 50	OHT3F-062-1
Gear, Balanceshaft Drive	24504792
Gear, Balanceshaft Driven	24503524
Gear, Counter Balance Drive	24504792
Gear, Counter Balance Shaft	24503524
Grommet, Rocker Arm Valve cover bolt	25534749
HARNESS, COIL PACK SEGMENT	3F022-2
HARNESS, FUEL INJECTOR SEGMENT	3F022-1
HARNESS, WIRING, DYNO W/ OHT3F-056-1 SENSOR	OHT3F-022-1
HOUSING, ASSEMBLY, BYPASS VALVE	OHT3F-084-1
Injector, Fuel	17120601
Key, Crankshaft	25534912 or 12563282
Magnet, Camshaft Position Sensor	10456195
MANIFOLD, CAST IRON	OHT3F-003-0
MANIFOLD, EXHAUST, WATER COOLED ASSY (ONE BANK)	OHT3F-003-1
ASSEMBLY INCLUDES:	
1 EA. RUNNER, EXHAUST MANIFOLD	OHT3F-004-1
1 EA. PLATE, REAR, EXHAUST MANIFOLD	OHT3F-005-1
1 EA. ELBOW, EXHAUST, MODIFIED	OHT3F-005A-1
1 EA. PLATE, FRONT, EXHAUST MANIFOLD	OHT3F-006-1
2 EA. GASKET, EXHAUST, END PLATE	OHT3F-009-1
1 EA. GASKET, EXHAUST, FLANGE, METAL	OHT3F-018-1
Manifold, Lower Intake	24505728
Manifold, Upper Intake	17096162
METER, BLOWBY	RX-116169-A1 REV N
Module, Assembly, Coil Pack	1103948
MOUNT FRONT ENGINE W/ BOLT PATTERN FOR COIL PACK	OHT3F-026-1
MOUNT, REAR ENGINE HOUSING W/AIR STARTER, MUFFLER & SHIM PACK	OHT3F-025-1
ASSEMBLY INCLUDES:	
STARTER, AIR	3F025-03
MUFFLER, STARTER, AIR	3F025-04
SHIM PACK, STARTER, AIR	3F025-05
MUFFLER, STARTER, AIR	3F025-04
Nut, Throttle Body Fuel Rail Retainer	24506469
Nut, Throttle body Retainer	24506469
OIL FILTER HOUSING ASSEMBLY, NO BYPASS, IMPREGNATED	OHT3G-080-1
OUTLET, COOLANT	OHT3F-034-1

Part Description	Part Number
PAN, IIF TEST, NICKEL PLATED	OHT3F-073-1
PCM, SPECIAL	OHT3F-021-1
PCV, DUMMY	OHT3F-002-1
Pin, Cylinder Head Locating	25536320
Pin, Front Cover Lower	25536323
Pin, Front Cover Upper	24501162
Pin, Transmission Locating	12338076
PLATE, EGR BLOCKOFF	OHT3F-024-1
PLATE, FRONT, EXHAUST MANIFOLD	OHT3F-006-1
PLATE, REAR, EXHAUST MANIFOLD	OHT3F-005-1
PLATE, WATER PUMP HOUSING	OHT3F-031-1
Plug, Auto Hex, Socket, (Main Oil Gallery Block Off)	444777
PLUG, DIP STICK	OHT3F-065-1
PLUG, DRAIN, MODIFIED	OHT3F-063-1
Pump, Oil, Gearoter Set	24505433
Rail, Fuel	17098211
Rail, Fuel Injector	17120601
REAMER, DIP STICK AND DIP STICK HOLE PLUG	OHT3F-071-1
Regulator, Fuel Pressure, on Rail	17113346
Retainer, Counter Balance, Timing Chain Oiler	24500374
Retainer, Rocker arm (replace after 6 tests)	24502278
RUNNER, EXHAUST MANIFOLD	OHT3F-004-1
Screen, Oil pump (w/suction pipe)	24505569
Seal, oil pan drain plug (o ring)	3536966
Sensor, Camshaft Position	10456148
Sensor, MAF	24503983
Sensor, Mass Air Flow (2 Bolt, Use with Throttle Body 24507235)	24503983
Sensor, Mass Air Flow (3 Bolt, Use with Throttle Body 24507230)	24504302
SENSOR, MODIFIED COOLANT TEMPERATURE	OHT3F-056-1
Shaft Assembly, Counter Balance	24502388 or 24506557
Shield, Crankshaft Position Sensor	24506440
SHIM PACK, STARTER, AIR	3F025-05
SHIM, STEEL, .005 in. THICK, 10 PER PKG.	OHT3F-072-005
SHIM, STEEL, .010 in. THICK, 10 PER PKG.	OHT3F-072-010
SHIM, STEEL, .015 in. THICK, 10 PER PKG.	OHT3F-072-015
SHIM, STEEL, .020 in. THICK, 10 PER PKG.	OHT3F-072-020
SHIM, STEEL, .031 in. THICK, 10 PER PKG.	OHT3F-072-031
SLEEVE, VALVE STEM PROTECTORS (PKG. OF 100)	OHT3F-070-1
SPROCKET, CRANKSHAFT, SPECIAL 2 PC	OHT3F-036-1
STARTER, AIR	3F025-03
Stud, front cover (2)	24504717
Stud, front cover (2)	24504718
Support, throttle body	24504697
Throttle Body (2 Bolt Mass Air Flow Sensor)	24507235
Throttle Body (3 Bolt Mass Air Flow Sensor)	24504302
TOOL, CAMSHAFT BUSHING INSTALLATION	OHT3F-019-2
TOOL, OIL PUMP PRIMER	OHT3F-038-1
Tube, throttle body to fuel pressure regulator	24505671