

Obs	effective_date	info_letter_number	event
1	19980901		Matrix testing begins
2	19990211		Sequence VG Test approved, matrix stands charted and calibrated where applicable
3	19990503	99-1	Information Letter 99-1 issued, adding ring weight loss, bore wear and pin wear measurements; as well as other procedural changes
4	19990615	99-2	Numerous procedure updates as identified in Information Letter 99-2
5	19990830		In conjunction with approval of VG fuel batch 996416, new test targets were published for oils 1006 and 1007
6	19990830		Batch 996416 was approved for qualified testing at 8/13/99 Surveillance Panel meeting.
7	19991025	99-3	Revised Exhaust Backpressure limits for stages I and II to 102 and 106 kPa, respectively
8	19991025	99-3	Deleted rating of Underside of Block sludge and revised report forms and data dictionary accordingly
9	19991025	99-3	Added Section 11 to document stand referencing requirements
10	19991025	99-3	Added Section 16 and Annex A14, which give precision and bias statements
11	19991025	99-3	Updated listing of kit parts given in Sections 7.2 and 7.3 and Annex A5
12	19991025	99-3	Revised the type of oil filter and screen size, Sections 7.4.9 and 8.3.2.2 and A3.8 changed to reflect this
13	19991115		Update reference oil targets for oils 1006 and 1007 (n=10), also revised severity adjustment standard deviation
14	20000215	00-1	Revised Exhaust Backpressure Limits for stages I and II to 104 and 107 kPa, respectively
15	20000215	00-1	Deleted varnish ratings for cam baffles, oil pan, timing chain cover and rear seal housing.
16	20000215	00-1	Revised Form 8 to not allow value to be entered for oil added at cycle 54 and deleted form 7.
17	20000802	00-2	Added Oil Ring Clogging Rating, changed follower pin wear measurement from all 8 cylinders to cylinder 8 only. Changed bore wear measurements from all cylinders to cylinders 1 and 8. Changed from ring weight loss to ring gap increase on cylinders 1 & 8. Added transformation for oil screen clogging. Deleted photos for cam baffles, timing chain cover
18	20000802	00-2	rear seal housing varnish. Report forms and Data dictionary changes, version 20000713
19	20000802	00-2	Deleted 7.1.1, Changed D1744 to D6304. Clarified procedures for bore wear, follower pin
20	20000802	00-2	wear, oil screen clogging and top ring gap increase. Revised stage III rocker cover inlet temp
21	20000802	00-2	Ramp. Deleted ring groove chamfer measurement. Revised dipstick calibration. Revised temperature
22	20010115	01-1	gas. Revised fuel injector flow rates. Added accuracy levels for QI data. Revised Appendix X2.
23	20010115	01-1	Incorporated Information Letters 00-2, 00-3 and 01-1 into D6593. Corrected precision statement
24	20010320	01-2	Deleted requirements to monitor benzene in lab stored fuel and to measure pentane, TBN and vis @100 deg C. Added definition for consensus rating
25	20010727	01-3	

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28	20011114	02-1	Deleted requirement to monitor power Qi and NOx. Implemented recommendations from Light Duty Rating Task Force. Allowed blowby flowrate adjustments during first 48 hours of test
29	20020408	02-3	Replaced references to CRC Manuals 12 and 14 with CRC Manual 20
30	20020515	02-4	Allowed use of power supply for EEC and Lambda sensors, revised calibration frequency for Lambda sensor and dropped requirement to measure bore wear
31	20020801		Initial targets (n=3) for reference oil 1009
32	20020801	02-4	Dropped rating of RAC covers for varnish and added Cam baffle varnish ratings
33	20021023		Target Update (n=5) for reference oil 1009
34	20021025	02-5	Removed remedial statements and made other editorial changes
35	20030128		Target Update (n=10) for reference oil 1006-2
36	20030327	03-1	Removed requirement to include photographs in final report
37	20030515		Target Update (n=10) for reference oil 1009
38	20030905	03-3	Corrected Section 16.1.2.1 and revised Section A7.1 to include ACC Conformance Statement
39	20030905	03-3	Procedure changes to address processes necessary to use Romeo Engines for calibrated testing
40	20040101	03-3	Replaced Aliphatic Napthpha with ASTM D235 Type II, Class C solvent
41	20040105		Target Update (n=20) for reference oil 1006-2
42	20040109	04-1	Increased last non reference oil start date from 171 to 180 days
43	20040109	04-1	Editorial changes to precision statements
44	20040217		Target Update (n=20) for reference oil 1009
45	20040513	04-2	REvised U & L values for MAP and EBP
46	20040513	04-2	Allowed removal of piston staining
47	20040701	04-3	Revised section 12.1.5 to allow ring gap adjustments during 1st 48 hours of test
48	20041103		Target Update (n=30) for reference oil 1006-2
49	20041103		Target Update (n=30) for reference oil 1009
50	20041103		Target Update (n=22) for reference oil 925-3
51	20041214	04-4	Revised section 7.1.1 to require degreasing solvent that meets requirements of D235 for Aromatics, color and flash point and require a Certificate of analysis for each batch
52	20050101		Revised standard deviation for severity adjustment calculation for all parameters
53	20050601	05-1	Deleted ring gap increase and follower pin wear, clarified Oil screen rating, updated precision statement, added limits for lost test data, editorial changes
54	20050719	05-2	Approved fuel batch TA1921LS15, with correction factors for AES, RAC, AEV and APV
55	20050726	05-3	Changed fuel batch designation from TA1921LS15 to TF2221LS20
56	20050912		First Occurence of New Fuel Batch
57	20051110	05-4	Change in AFR sensor location and use of additional AFR device

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58	20051110	05-4	Added requirements for Raters to attend ASTM Workshop annually
59	20060616	06-1	Allowed camshafts to be used for as many as for tests
60	20061107	06-2	Changes to rater calibration requirements
61	20071110	07-1	Updated industry correction factors for AES, RAC, AEV, APV for reference tests only.
62	20071114	07-1	Updated industry correction factors for AES, RAC, AEV, APV for non reference oil tests
63	20071114	07-1	Changed oversight of Deposit workshops from CRC to SAE
64	20080213	08-1	Revised cam baffle cleaning method
65	20080213	08-1	Additional throttle body
66	20080305	08-2	Closed loop AFR control
67	20080515	08-3	Added follower pin wear and ring gap increase measurements
68	20090603	09-1	Fuel Batch XC2721NX10 approved with correction factors for AEV and APV
69	20090603	09-1	Added requirement to report all results on tests run to completion, regardless of validity
70	20091001	09-2	Updated AEV and APV correction factors for fuel batch XC2721NX10
71	20100707	10-1	Clarified what non reference oil tests count towards a stand calibration period.