

**Test Method DXXXX for Measurement of the Effects of Automotive Engine Oils on
the Fuel Economy of Passenger Cars and Light Trucks in the Sequence VIG Spark
Ignition Engine
Report Cover Sheet**

Version: VIG VERSION 20260918 Beta

Conducted For:
TSTSPON1
TSTSPON2

LABVALID	V = Valid
	I = Invalid
	N = Results cannot be interpreted (refer to comment section)

TSTOIL	NR = Non-reference Oil Test
	RO = Reference Oil Test

Lab: LAB	Date Completed: DTCOMP	Time Completed: EOTIME	
Test Number			
Test Stand: STAND	Runs On The Stand: STRUN	Engine No. ENGNO	Runs on Engine: ENRU
Oil Code: OILCODE			
Formulation/Stand Code: FORM			
Alternate Codes	ALTCODE1	ALTCODE2	ALTCODE3

In my opinion this test OPVALID been conducted in a valid manner in accordance with the Test Method D8226 and the appropriate amendments through the Information Letter System. The remarks included in the report describe the anomalies associated with this test.

Submitted By:

SUBLAB
Testing Laboratory

SUBSIGIM
Signature

SUBNAME
Typed Name

SUBTITLE
Title

Form 2

Sequence VIG

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^A ACC Conformance Statement is required only for ACC registered tests

Sequence VIG

Form 3

Summary of Test Method

The Sequence VIG is an engine dynamometer test that measures a lubricant's ability to improve the fuel economy of passenger cars and light-duty trucks. The method compares the performance of a test lubricant to the performance of a baseline lubricant over six different stages of operation.

A General Motors 3.6L (LY7) V6, 4-cycle engine is used as the test apparatus. The engine incorporates Dual Overhead Camshafts, 4 Valves / Cylinder, Dual Stage Plenum Induction Manifold, 94x85.6mm Bore & Stroke, with 10.2:1 compression ratio.

The Sequence VIG test incorporates a flush and run type procedure. Each test consists of two 6-stage fuel economy measurements on baseline oil (BL), one at the beginning of the test and one at the end. The test oil is evaluated in between the two baseline runs. The test oil is initially aged during 16 hours of engine operation at 2250 r/min and 120°C oil temperature. After the initial aging, a 6-stage fuel economy measurement is taken. The test oil is then aged an additional 109 hours at an engine speed of 2250 r/min and 120°C oil temperature. Following this final aging, the test oil once again goes through a 6-stage fuel economy measurement. The two fuel economy measurements taken on the baseline oil (BL) and a final value for Fuel Economy Improvement is calculated for the test oil.

Below is a summary of the operation conditions for the aging and 6-stage fuel economy portions of the test.

Fuel Economy Measurement and Aging Condition				
FE Stage	Speed (r/min)	Torque (N-m)	Oil Temp. (°C)	Coolant Temp. (°C)
1	2000	105	100	94
2	2000	105	65	65
3	1500	105	100	94
4	695	20	100	94
5	695	20	35	35
6	695	40	100	94

Aging Stage	Speed (r/min)	Torque (N-m)	Oil Temp. (°C)	Coolant Temp. (°C)
1 & 2	2250	110	120	110

Sequence VIG
Form 4
Test Result Summary
Non-Reference & Reference Oil Tests

Lab: LAB	Date Completed: DTCOMP	Time Completed: EOTTIME
Test Number		
Stand: STAND	Runs On The Stand: STRUN	Engine No. ENGNO
Oil Code: OILCODE	Runs on Engine: ENRUN	
Number of Full Length Tests Since Stand Calibration ^B CALCOUNT		Engine Serial Number: ENGSN
Formulation/Stand Code: FORM		

Test Documentation					
	BL Before 1	BL Before 2	BL Before 3	Test Oil	BL After
Start Date	BLB1SDTE	BLB2SDTE	BLB3SDTE	DTSTRT	BLASTDT
Start Time	BLB1STIM	BLB2STIM	BLB3STIM	STRTIME	BLASTTM
End Date	BLB1EDTE	BLB2EDTE	BLB3EDTE	TODTE	DTCOMP
End Time	BLB1ETIM	BLB2ETIM	BLB3ETIM	TOTIM	EOTTIME
Oil Test Length, hhh:mm	BLB1LEN	BLB2LEN	BLB3LEN	TOLEN	BLATESTL
Calibration Oil Batch	BLOILBT				
Flush Oil Batch	FOOILBT				
Laboratory Oil Code				LABOCODE	
SAE Viscosity Grade				SAEVISC	
TMC Oil Code (Reference Only)				IND	
New Oil Viscosity @ 40 °C, cSt				V40NEW	
New Oil Viscosity @ 100°C, cSt				V100NEW	
EOT Oil Viscosity @ 40 °C, cSt				V40EOT	
EOT Oil Viscosity @ 100°C, cSt				V100EOT	
Total Test Length, hhh:mm	TESTLEN				
Total Engine Hours @ EOT	ENHREND				
Fuel Batch @ Start of Test	FBTIDSOT				
Fuel Batch @ End of Test	FBTIDEOT				
Test Hour During Which Fuel Batch was Changed	FBCHGHR				
Has Engine Previously Run an Oil where Vis < 0W-16?	LT0W16PR				

Overall Results						
	BL Oil				Test Oil	
	Before 1	Before 2	Before 3	After	Phase I	Phase II
Fuel Consumed, Unweighted, kg	TFBL1KG	TFBL2KG	TFBL3KG	TFBLAKG	TFTO1KG	TFTO2KG
Fuel Consumed, weighted, kg	BL1KG	BL2KG	BL3KG	BLAKG	TO1KG	TO2KG
Shift Delta, % ^A	BLSFDT12	BLSFDT23	BLSFDT2A			
Fuel Economy Improvement, %					FEI1	FEI2
FEI Engine Hour Adjustment, %					FEI1EHA	FEI2EHA
FEI Industry Correction Factor, %					FEI1CF	FEI2CF
FEI Severity Adjustment, % (non-reference tests only)					FEI1SA	FEI2SA
FEI Final Result, %					FEI1FNL	FEI2FNL
FEI Sum, sum of FEI1 and FEI2 final results					FEISUM	
Total Oil Consumption, ml					TOTOCON	

^A Calculate Baseline shift % using unweighted fuel consumed values. When a 3rd set of BL Before is used, calculate BL shift after using the BL Before 3 for BL

Lab: LAB		Date Completed: DTCOMP		Time Completed: EOTTIME	
Test Number					
Stand: STAND		Runs On The Stand: STRUN		Engine No. ENGNO	
Oil Code: OILCODE		Runs on Engine: ENRUN			
Formulation/Stand Code: FORM					

Computed Averages							
Oil	Stage	BSFC kg/kW-h	BSFC C.V. %	Stage Length h	Nominal Power kW	Weight Factor	Weighted Fuel Consumed kg
BL Before Test Oil 1	1	BFCARB1A	BFCCRB1A	0.5	21.99	0.300	WFC_RB1A
	2	BFCARB2A	BFCCRB2A	0.5	21.99	0.032	WFC_RB2A
	3	BFCARB3A	BFCCRB3A	0.5	16.49	0.310	WFC_RB3A
	4	BFCARB4A	BFCCRB4A	0.5	1.46	0.174	WFC_RB4A
	5	BFCARB5A	BFCCRB5A	0.5	1.46	0.011	WFC_RB5A
	6	BFCARB6A	BFCCRB6A	0.5	2.91	0.172	WFC_RB6A
Total Fuel Consumed							BL1KG

Computed Averages							
Oil	Stage	BSFC kg/kW-h	BSFC C.V. %	Stage Length h	Nominal Power kW	Weight Factor	Weighted Fuel Consumed kg
BL Before Test Oil 2	1	BFCARC1A	BFCCRC1A	0.5	21.99	0.300	WFC_RC1A
	2	BFCARC2A	BFCCRC2A	0.5	21.99	0.032	WFC_RC2A
	3	BFCARC3A	BFCCRC3A	0.5	16.49	0.310	WFC_RC3A
	4	BFCARC4A	BFCCRC4A	0.5	1.46	0.174	WFC_RC4A
	5	BFCARC5A	BFCCRC5A	0.5	1.46	0.011	WFC_RC5A
	6	BFCARC6A	BFCCRC6A	0.5	2.91	0.172	WFC_RC6A
Total Fuel Consumed							BL2KG

Lab: LAB		Date Completed: DTCOMP		Time Completed: EOTTIME	
Test Number					
Stand: STAND	Runs On The Stand: STRUN		Engine No. ENGNO	Runs on Engine: ENRUN	
Oil Code: OILCODE					
Formulation/Stand Code: FORM					

Computed Averages							
Oil	Stage	BSFC kg/kW-h	BSFC C.V. %	Stage Length h	Nominal Power kW	Weight Factor	Weighted Fuel Consumed kg
BL Before Test Oil 3	1	BFCARF1A	BFCCRF1A	0.5	21.99	0.300	WFC_RF1A
	2	BFCARF2A	BFCCRF2A	0.5	21.99	0.032	WFC_RF2A
	3	BFCARF3A	BFCCRF3A	0.5	16.49	0.310	WFC_RF3A
	4	BFCARF4A	BFCCRF4A	0.5	1.46	0.174	WFC_RF4A
	5	BFCARF5A	BFCCRF5A	0.5	1.46	0.011	WFC_RF5A
	6	BFCARF6A	BFCCRF6A	0.5	2.91	0.172	WFC_RF6A
Total Fuel Consumed							BL3KG

Computed Averages							
Oil	Stage	BSFC kg/kW-h	BSFC C.V. %	Stage Length h	Nominal Power kW	Weight Factor	Weighted Fuel Consumed kg
Test Oil Phase I	1	BFCARD1A	BFCCRD1A	0.5	21.99	0.300	WFC_RD1A
	2	BFCARD2A	BFCCRD2A	0.5	21.99	0.032	WFC_RD2A
	3	BFCARD3A	BFCCRD3A	0.5	16.49	0.310	WFC_RD3A
	4	BFCARD4A	BFCCRD4A	0.5	1.46	0.174	WFC_RD4A
	5	BFCARD5A	BFCCRD5A	0.5	1.46	0.011	WFC_RD5A
	6	BFCARD6A	BFCCRD6A	0.5	2.91	0.172	WFC_RD6A
Total Fuel Consumed							TO1KG

Lab: LAB		Date Completed: DTCOMP		Time Completed: EOTTIME	
Test Number					
Stand: STAND		Runs On The Stand: STRUN		Engine No. ENGNO	
Runs on Engine: ENRUN		Oil Code: OILCODE			
Formulation/Stand Code: FORM					

Computed Averages							
Oil	Stage	BSFC kg/kW-h	BSFC C.V. %	Stage Length h	Nominal Power kW	Weight Factor	Weighted Fuel Consumed kg
Test Oil Phase II	1	BFCARE1A	BFCCRE1A	0.5	21.99	0.300	WFC_RE1A
	2	BFCARE2A	BFCCRE2A	0.5	21.99	0.032	WFC_RE2A
	3	BFCARE3A	BFCCRE3A	0.5	16.49	0.310	WFC_RE3A
	4	BFCARE4A	BFCCRE4A	0.5	1.46	0.174	WFC_RE4A
	5	BFCARE5A	BFCCRE5A	0.5	1.46	0.011	WFC_RE5A
	6	BFCARE6A	BFCCRE6A	0.5	2.91	0.172	WFC_RE6A
Total Fuel Consumed							TO2KG

Computed Averages							
Oil	Stage	BSFC kg/kW-h	BSFC C.V. %	Stage Length h	Nominal Power kW	Weight Factor	Weighted Fuel Consumed kg
BL After Test Oil	1	BFCARA1A	BFCCRA1A	0.5	21.99	0.300	WFC_RA1A
	2	BFCARA2A	BFCCRA2A	0.5	21.99	0.032	WFC_RA2A
	3	BFCARA3A	BFCCRA3A	0.5	16.49	0.310	WFC_RA3A
	4	BFCARA4A	BFCCRA4A	0.5	1.46	0.174	WFC_RA4A
	5	BFCARA5A	BFCCRA5A	0.5	1.46	0.011	WFC_RA5A
	6	BFCARA6A	BFCCRA6A	0.5	2.91	0.172	WFC_RA6A
Total Fuel Consumed							BLAKG

Sequence VIG
Form 8
General Parameter Listing

Lab: LAB	Date Completed: DTCOMP	Time Completed: EOTIME	
Test Number			
Stand: STAND	Runs On The Stand: STRUN	Engine No. ENGNO	Runs on Engine: ENRUN
Oil Code: OILCODE			
Formulation/Stand Code: FORM			

16 Hour Aging

	Spec	Average	Max	Min
1. Speed, r/min	2250 ±5	ARPM16H	XRPM16H	IRPM16H
2. Torque, N-m	110 ±0.10	ALD16H	XLD16H	ILD16H
3. Oil Gallery Temperature, °C	120 ±2	AOGT16H	XOGT16H	IOGT16H
4. Coolant Inlet Temperature, °C	110 ±2	ACINT16H	XCINT16H	ICINT16H
5. Oil Circulation Temperature, °C	Record	ASMPT16H	XSMPT16H	ISMPT16H
6. Coolant Out Temperature, °C	Record	ACOT16H	XCOT16H	ICOT16H
7. Intake Air Temperature, °C	29 ±2	AINAT16H	XINAT16H	IINAT16H
8. Fuel to Flowmeter Temperature, °C	26 ±2	AFTMM16H	XFTMM16H	IFTMM16H
9. Fuel to Fuel Rail Temperature, °C	22 ±2	AFTFR16H	XFTFR16H	IFTFR16H
10. Load Cell Temperature, °C	Record	ALCT16H	XLCT16H	ILCT16H
11. Oil Heater Temperature, °C	205 max	AHEAT16H	XHEAT16H	IHEAT16H
12. Intake Air Pressure, kPa	0.05 ±0.02	AINAP16H	XINAP16H	IINAP16H
13. Fuel to Flowmeter Pressure, kPa	110±10	AFPM16H	XFP16H	IFPM16H
14. Fuel to Fuel Rail Pressure, kPa	405±10	AFPFR16H	XFPFR16H	IFPFR16H
15. Intake Manifold Pressure, kPa abs.	Record	AINTV16H	XINTV16H	IINTV16H
16. Exhaust Back Pressure, kPa abs.	105 ±0.20	AEXBP16H	XEXBP16H	IEXBP16H
17. Engine Oil Pressure, kPa	Record	AOGP16H	XOGP16H	IOGP16H
18. Coolant Flow, L/min	80 ±4	AMCF16H	XMCF16H	IMCF16H
19. Fuel Flow, kg/h	Record	AFFLO16H	XFFLO16H	IFFLO16H
20. Intake Air Humidity, grains/kg	11.4±0.8	AINAH16H	XINAH16H	IINAH16H
21. Air/Fuel Ratio	Record	AAFR16H	XAFR16H	IAFR16H
22. Crankcase Pressure, kPa	0.00 ±0.25	ACCV16H	XCCV16H	ICCV16H

Sequence VIG
Form 9
General Parameter Listing

Lab: LAB	Date Completed: DTCOMP	Time Completed: EOTTIME	
Test Number			
Stand: STAND	Runs On The Stand: STRUN	Engine No. ENGNO	Runs on Engine: ENRUN
Oil Code: OILCODE			
Formulation/Stand Code: FORM			

109 Hour Aging

	Spec	Average	Max	Min
1. Speed, r/min	2250 ± 5	ARPM109H	XRPM109H	IRPM109H
2. Torque, N-m	110 ±0.10	ALD109H	XLD109H	ILD109H
3. Oil Gallery Temperature, °C	120±2	AOGT109H	XOGT109H	IOGT109H
4. Coolant Inlet Temperature, °C	110 ±2	ACINT109	XCINT109	ICINT109
5. Oil Circulation Temperature, °C	Record	ASMPT109	XSMPT109	ISMPT109
6. Coolant Out Temperature, °C	Record	ACOT109H	XCOT109H	ICOT109H
7. Intake Air Temperature, °C	29 ±2	AINAT109	XINAT109	IINAT109
8. Fuel to Flowmeter Temperature, °C	26 ±2	AFTMM109	XFTMM109	IFTMM109
9. Fuel to Fuel Rail Temperature, °C	22 ±2	AFTFR109	XFTFR109	IFTFR109
10. Load Cell Temperature, °C	Record	ALCT109H	XLCT109H	ILCT109H
11. Oil Heater Temperature, °C	205 max	AHEAT109	XHEAT109	IHEAT109
12. Intake Air Pressure, kPa	0.05 ±0.02	AINAP109	XINAP109	IINAP109
13. Fuel to Flowmeter Pressure, kPa	110±10	AFPM109	XFPMM109	IFPMM109
14. Fuel to Fuel Rail Pressure, kPa	405±10	AFPFR109	XFPFR109	IFPFR109
15. Intake Manifold Pressure, kPa abs.	Record	AINTV109	XINTV109	IINTV109
16. Exhaust Back Pressure, kPa abs.	105 ± 0.20	AEXBP109	XEXBP109	IEXBP109
17. Engine Oil Pressure, kPa	Record	AOGP109H	XOGP109H	IOGP109H
18. Coolant Flow, L/min	80±4	AMCF109H	XMCF109H	IMCF109H
19. Fuel Flow, kg/h	Record	AFFLO109	XFFLO109	IFFLO109
20. Intake Air Humidity, grains/kg	11.4 ±0.8	AINAH109	XINAH109	IINAH109
21. Air/Fuel Ratio	Record	AAFR109H	XAFR109H	IAFR109H
22. Crankcase Pressure, kPa	0.00 ±0.25	ACCV109H	XCCV109H	ICCV109H

Sequence VIG
Form 10
General Parameter Summary

Lab: LAB	Date Completed: DTCOMP	Time Completed: EOTTIME	
Test Number			
Stand: STAND	Runs On The Stand: STRUN	Engine No. ENGNO	Runs on Engine: ENRUN
Oil Code: OILCODE			
Formulation/Stand Code: FORM			

BL Before Test Oil 1

General Parameters

		Stage Average					
	Spec	1	2	3	4	5	6
1. Oil Circulation Temperature, °C	Record	OCT_R	OCT_R	OCT_R	OCT_R	OCT_R	OCT_R
2. Coolant Out Temperature, °C	Record	COT_R	COT_R	COT_R	COT_R	COT_R	COT_R
3. Fuel to Flowmeter Temp., °C	26±2	FFT_RI	FFT_RI	FFT_RI	FFT_RI	FFT_RI	FFT_RI
4. Load Cell Power Supply Temp., °C	Record	LPSTR	LPSTR	LPSTR	LPSTR	LPSTR	LPSTR
5. Load Cell Temperature, °C	Record	LCT_R	LCT_R	LCT_R	LCT_R	LCT_R	LCT_R
6. Delta Load Cell Temperature, °C ^A	≤ 12	LCTDR	LCTDR	LCTDR	LCTDR	LCTDR	LCTDR
7. Oil Heater Temperature, °C	205 max	OHT_R	OHT_R	OHT_R	OHT_R	OHT_R	OHT_R
8. Intake Air Pressure, kPa	0.05 ± .02	IAP_RI	IAP_RI	IAP_RI	IAP_RI	IAP_RI	IAP_RI
9. Fuel to Flowmeter Pressure, kPa	110±10	FFP_RI	FFP_RI	FFP_RI	FFP_RI	FFP_RI	FFP_RI
10. Fuel to Fuel Rail Pressure, kPa	405±10	FFRPR	FFRPR	FFRPR	FFRPR	FFRPR	FFRPR
11. Intake Manifold Pressure, kPa abs.	Record	IMP_RI	IMP_RI	IMP_RI	IMP_RI	IMP_RI	IMP_RI
12. Engine Oil Pressure, kPa	Record	EOP_R	EOP_R	EOP_R	EOP_R	EOP_R	EOP_R
13. Coolant Flow, L/min	80 ± 4	CFLOR	CFLOR	CFLOR	CFLOR	CFLOR	CFLOR
14. Intake Air Humidity, grains/kg	11.4 ± 0.8	IAH_RI	IAH_RI	IAH_RI	IAH_RI	IAH_RI	IAH_RI
15. Crankcase Pressure, kPa	0.00 ± 0.25	CCV_R	CCV_R	CCV_R	CCV_R	CCV_R	CCV_R
16. Barometric Pressure, kPa	Record	BAP_R	BAP_R	BAP_R	BAP_R	BAP_R	BAP_R

^A Difference between the maximum stage average reading of the entire test and the individual stage average readings

Sequence VIG
Form 11
General Parameter Summary

Lab LAB	Date Completed: DTCOMP	Time Completed: EOTIME	
Test Number			
Stand: STAND	Runs On The Stand: STRUN	Engine No. ENGNO	Runs on Engine: ENRUN
Oil Code: OILCODE			
Formulation/Stand Code: FORM			

BL Before Test Oil 2

General Parameters

		Stage Average					
	Spec	1	2	3	4	5	6
1. Oil Circulation Temperature, °C	Record	OCT_R	OCT_R	OCT_R	OCT_R	OCT_R	OCT_R
2. Coolant Out Temperature, °C	Record	COT_R	COT_R	COT_R	COT_R	COT_R	COT_R
3. Fuel to Flowmeter Temp., °C	26±2	FFT_R	FFT_R	FFT_R	FFT_R	FFT_R	FFT_R
4. Load Cell Power Supply Temp., °C	Record	LPSTR	LPSTR	LPSTR	LPSTR	LPSTR	LPSTR
5. Load Cell Temperature, °C	Record	LCT_R	LCT_R	LCT_R	LCT_R	LCT_R	LCT_R
6. Delta Load Cell Temperature, °C ^A	< 12	LCTDR	LCTDR	LCTDR	LCTDR	LCTDR	LCTDR
7. Oil Heater Temperature, °C	205 max	OHT_R	OHT_R	OHT_R	OHT_R	OHT_R	OHT_R
8. Intake Air Pressure, kPa	0.05 ± .02	IAP_R	IAP_R	IAP_R	IAP_R	IAP_R	IAP_R
9. Fuel to Flowmeter Pressure, kPa	110±10	FFP_R	FFP_R	FFP_R	FFP_R	FFP_R	FFP_R
10. Fuel to Fuel Rail Pressure, kPa	405±10	FFRPR	FFRPR	FFRPR	FFRPR	FFRPR	FFRPR
11. Intake Manifold Pressure, kPa abs.	Record	IMP_R	IMP_R	IMP_R	IMP_R	IMP_R	IMP_R
12. Engine Oil Pressure, kPa	Record	EOP_R	EOP_R	EOP_R	EOP_R	EOP_R	EOP_R
13. Coolant Flow, L/min	80 ± 4	CFLOR	CFLOR	CFLOR	CFLOR	CFLOR	CFLOR
14. Intake Air Humidity, grains/kg	11.4 ± 0.8	IAH_R	IAH_R	IAH_R	IAH_R	IAH_R	IAH_R
15. Crankcase Pressure, kPa	0.00 ± 0.25	CCV_R	CCV_R	CCV_R	CCV_R	CCV_R	CCV_R
16. Barometric Pressure, kPa	Record	BAP_R	BAP_R	BAP_R	BAP_R	BAP_R	BAP_R

^A Difference between the maximum stage average reading of the entire test and the individual stage average readings

Sequence VIG
Form 12
General Parameter Summary

Lab: LAB	Date Completed: DTCOMP	Time Completed: EOTTIME	
Test Number			
Stand: STAND	Runs On The Stand: STRUN	Engine No. ENGNO	Runs on Engine: ENRUN
Oil Code: OILCODE			
Formulation/Stand Code: FORM			

BL Before Test Oil 3

General Parameters

		Stage Average					
	Spec	1	2	3	4	5	6
1. Oil Circulation Temperature, °C	Record	OCT_R	OCT_R	OCT_R	OCT_R	OCT_R	OCT_R
2. Coolant Out Temperature, °C	Record	COT_R	COT_R	COT_R	COT_R	COT_R	COT_R
3. Fuel to Flowmeter Temp., °C	26±2	FFT_R	FFT_R	FFT_R	FFT_R	FFT_R	FFT_R
4. Load Cell Power Supply Temp., °C	Record	LPSTR	LPSTR	LPSTR	LPSTR	LPSTR	LPSTR
5. Load Cell Temperature, °C	Record	LCT_R	LCT_R	LCT_R	LCT_R	LCT_R	LCT_R
6. Delta Load Cell Temperature, °C ^A	≤ 12	LCTDR	LCTDR	LCTDR	LCTDR	LCTDR	LCTDR
7. Oil Heater Temperature, °C	205 max	OHT_R	OHT_R	OHT_R	OHT_R	OHT_R	OHT_R
8. Intake Air Pressure, kPa	0.05 ± .02	IAP_R	IAP_R	IAP_R	IAP_R	IAP_R	IAP_R
9. Fuel to Flowmeter Pressure, kPa	110±10	FFP_R	FFP_R	FFP_R	FFP_R	FFP_R	FFP_R
10. Fuel to Fuel Rail Pressure, kPa	405±10	FFRPR	FFRPR	FFRPR	FFRPR	FFRPR	FFRPR
11. Intake Manifold Pressure, kPa abs.	Record	IMP_R	IMP_R	IMP_R	IMP_R	IMP_R	IMP_R
12. Engine Oil Pressure, kPa	Record	EOP_R	EOP_R	EOP_R	EOP_R	EOP_R	EOP_R
13. Coolant Flow, L/min	80 ± 4	CFLOR	CFLOR	CFLOR	CFLOR	CFLOR	CFLOR
14. Intake Air Humidity, grains/kg	11.4 ± 0.8	IAH_R	IAH_R	IAH_R	IAH_R	IAH_R	IAH_R
15. Crankcase Pressure, kPa	0.00 ± 0.25	CCV_R	CCV_R	CCV_R	CCV_R	CCV_R	CCV_R
16. Barometric Pressure, kPa	Record	BAP_R	BAP_R	BAP_R	BAP_R	BAP_R	BAP_R

^A Difference between the maximum stage average reading of the entire test and the individual stage

Sequence VIG
Form 13
General Parameter Summary

Lab: LAB	Date Completed: DTCOMP	Time Completed: EOTTIME
Test Number		
Stand: STAND	Runs On The Stand: STRUN	Engine No. ENGNO
Runs on Engine: ENRUN		
Oil Code: OILCODE		
Formulation/Stand Code: FORM		

Test Oil Phase I
General Parameters

		Stage Average					
	Spec	1	2	3	4	5	6
1. Oil Circulation Temperature, °C	Record	OCT_R	OCT_R	OCT_R	OCT_R	OCT_R	OCT_R
2. Coolant Out Temperature, °C	Record	COT_R	COT_R	COT_R	COT_R	COT_R	COT_R
3. Fuel to Flowmeter Temp., °C	26±2	FFT_RI	FFT_RI	FFT_RI	FFT_RI	FFT_RI	FFT_RI
4. Load Cell Power Supply Temp., °C	Record	LPSTR	LPSTR	LPSTR	LPSTR	LPSTR	LPSTR
5. Load Cell Temperature, °C	Record	LCT_R	LCT_R	LCT_R	LCT_R	LCT_R	LCT_R
6. Delta Load Cell Temperature, °C ^A	<u>≤ 12</u>	LCTDR	LCTDR	LCTDR	LCTDR	LCTDR	LCTDR
7. Oil Heater Temperature, °C	205 max	OHT_R	OHT_R	OHT_R	OHT_R	OHT_R	OHT_R
8. Intake Air Pressure, kPa	0.05 ± .02	IAP_RI	IAP_RI	IAP_RI	IAP_RI	IAP_RI	IAP_RI
9. Fuel to Flowmeter Pressure, kPa	110±10	FFP_RI	FFP_RI	FFP_RI	FFP_RI	FFP_RI	FFP_RI
10. Fuel to Fuel Rail Pressure, kP	405±10	FFRPR	FFRPR	FFRPR	FFRPR	FFRPR	FFRPR
11. Intake Manifold Pressure, kPa abs.	Record	IMP_RI	IMP_RI	IMP_RI	IMP_RI	IMP_RI	IMP_RI
12. Engine Oil Pressure, kPa	Record	EOP_R	EOP_R	EOP_R	EOP_R	EOP_R	EOP_R
13. Coolant Flow, L/min	80 ± 4	CFLOR	CFLOR	CFLOR	CFLOR	CFLOR	CFLOR
14. Intake Air Humidity, grains/kg	11.4 ± 0.8	IAH_RI	IAH_RI	IAH_RI	IAH_RI	IAH_RI	IAH_RI
15. Crankcase Pressure, kPa	0.00 ± 0.25	CCV_R	CCV_R	CCV_R	CCV_R	CCV_R	CCV_R
16. Barometric Pressure, kPa	Record	BAP_R	BAP_R	BAP_R	BAP_R	BAP_R	BAP_R

^A Difference between the maximum stage average reading of the entire test and the individual

Sequence VIG
Form 14
General Parameter Summary

Lab: LAB	Date Completed: DTCOMP	Time Completed: EOTTIME
Test Number		
Stand: STAND	Runs On The Stand: STRUN	Engine No. ENGNO
Runs on Engine: ENRUN		
Oil Code: OILCODE		
Formulation/Stand Code: FORM		

Test Oil Phase II
General Parameters

		Stage Average					
	Spec	1	2	3	4	5	6
1. Oil Circulation Temperature, °C	Record	OCT_R	OCT_R	OCT_R	OCT_R	OCT_R	OCT_R
2. Coolant Out Temperature, °C	Record	COT_R	COT_R	COT_R	COT_R	COT_R	COT_R
3. Fuel to Flowmeter Temp., °C	26±2	FFT_RE	FFT_RE	FFT_RE	FFT_RE	FFT_RE	FFT_RE
4. Load Cell Power Supply Temp., °C	Record	LPSTRI	LPSTRI	LPSTRI	LPSTRI	LPSTRI	LPSTRI
5. Load Cell Temperature, °C	Record	LCT_RI	LCT_RI	LCT_RI	LCT_RI	LCT_RI	LCT_RI
6. Delta Load Cell Temperature, °C ^A	≤ 12	LCTDR	LCTDR	LCTDR	LCTDR	LCTDR	LCTDR
7. Oil Heater Temperature, °C	205 max	OHT_R	OHT_R	OHT_R	OHT_R	OHT_R	OHT_R
8. Intake Air Pressure, kPa	0.05 ± .02	IAP_RE	IAP_RE	IAP_RE	IAP_RE	IAP_RE	IAP_RE
9. Fuel to Flowmeter Pressure, kPa	110±10	FFP_RE	FFP_RE	FFP_RE	FFP_RE	FFP_RE	FFP_RE
10. Fuel to Fuel Rail Pressure, kPa	405±10	FFRPRI	FFRPRI	FFRPRI	FFRPRI	FFRPRI	FFRPRI
11. Intake Manifold Pressure, kPa abs.	Record	IMP_RI	IMP_RI	IMP_RI	IMP_RI	IMP_RI	IMP_RI
12. Engine Oil Pressure, kPa	Record	EOP_RI	EOP_RI	EOP_RI	EOP_RI	EOP_RI	EOP_RI
13. Coolant Flow, L/min	80 ± 4	CFLOR	CFLOR	CFLOR	CFLOR	CFLOR	CFLOR
14. Intake Air Humidity, grains/kg	11.4 ± 0.8	IAH_RI	IAH_RI	IAH_RI	IAH_RI	IAH_RI	IAH_RI
15. Crankcase Pressure, kPa	0.00 ± 0.25	CCV_R	CCV_R	CCV_R	CCV_R	CCV_R	CCV_R
16. Barometric Pressure, kPa	Record	BAP_RI	BAP_RI	BAP_RI	BAP_RI	BAP_RI	BAP_RI

^A Difference between the maximum stage average reading of the entire test and the individual

Sequence VIG
Form 15
General Parameter Summary

Lab: LAB	Date Completed: DTCOMP	Time Completed: EOTTIME
Test Number		
Stand: STAND	Runs On The Stand: STRUN	Engine No. ENGNO
Runs on Engine: ENRUN		
Oil Code: OILCODE		
Formulation/Stand Code: FORM		

BL After Test Oil Phase

General Parameters

		Stage Average					
	Spec	1	2	3	4	5	6
1. Oil Circulation Temperature, °C	Record	OCT_R	OCT_R	OCT_R	OCT_R	OCT_R	OCT_R
2. Coolant Out Temperature, °C	Record	COT_R	COT_R	COT_R	COT_R	COT_R	COT_R
3. Fuel to Flowmeter Temp., °C	26±2	FFT_R/	FFT_R/	FFT_R/	FFT_R/	FFT_R/	FFT_R/
4. Load Cell Power Supply Temp., °C	Record	LPSTR	LPSTR	LPSTR	LPSTR	LPSTR	LPSTR
5. Load Cell Temperature, °C	Record	LCT_R	LCT_R	LCT_R	LCT_R	LCT_R	LCT_R
6. Delta Load Cell Temperature, °C ^A	< 12	LCTDR	LCTDR	LCTDR	LCTDR	LCTDR	LCTDR
7. Oil Heater Temperature, °C	205 max	OHT_R	OHT_R	OHT_R	OHT_R	OHT_R	OHT_R
8. Intake Air Pressure, kPa	0.05 ± .02	IAP_R/	IAP_R/	IAP_R/	IAP_R/	IAP_R/	IAP_R/
9. Fuel to Flowmeter Pressure, kPa	110±10	FFP_R/	FFP_R/	FFP_R/	FFP_R/	FFP_R/	FFP_R/
10. Fuel to Fuel Rail Pressure, kPa	405±10	FFRPR	FFRPR	FFRPR	FFRPR	FFRPR	FFRPR
11. Intake Manifold Pressure, kPa abs.	Record	IMP_R	IMP_R	IMP_R	IMP_R	IMP_R	IMP_R
12. Engine Oil Pressure, kPa	Record	EOP_R	EOP_R	EOP_R	EOP_R	EOP_R	EOP_R
13. Coolant Flow, L/min	80 ± 4	CFLOR	CFLOR	CFLOR	CFLOR	CFLOR	CFLOR
14. Intake Air Humidity, grains/kg	11.4 ± 0.8	IAH_R	IAH_R	IAH_R	IAH_R	IAH_R	IAH_R
15. Crankcase Pressure, kPa	0.00 ± 0.25	CCV_R	CCV_R	CCV_R	CCV_R	CCV_R	CCV_R
16. Barometric Pressure, kPa	Record	BAP_R	BAP_R	BAP_R	BAP_R	BAP_R	BAP_R

^A Difference between the maximum stage average reading of the entire test and the individual

Sequence VIG
Form 16
Critical Parameter Summary

Lab: LAB	Date Completed: DTCOMP	Time Completed: EOTTIME	
Test Number			
Stand: STAND	Runs On The Stand: STRUN	Engine No. ENGNO	Runs on Engine: ENRUN
Oil Code: OILCODE			
Formulation/Stand Code: FORM			

Stage 1 Average

	Spec	BL Before Test Oil 1	BL Before Test Oil 2	BL Before Test Oil 3	Test Oil Phase I	Test Oil Phase II	BL After Test Oil
Speed, r/min	2000±5	RPM_RB	RPM_RC	RPM_RF	RPM_RD	RPM_RE	RPM_RA
Torque, N-m	105±0.10	LOADRE	LOADRC	LOADRF	LOADRI	LOADRE	LOADRA
Oil Gallery Temperature, °C	100±2	OGT_RB	OGT_RC	OGT_RF	OGT_RD	OGT_RE	OGT_RA
Coolant Inlet Temperature, °C	94±2	CINTRB	CINTRC	CINTRF	CINTRD	CINTRE	CINTR
Intake Air Temperature, °C	29±2	IAT_RB1	IAT_RC1	IAT_RF1	IAT_RD1	IAT_RE1	IAT_RA1
Fuel to Fuel Rail Temperature, °C	22±2	FRT_RB	FRT_RC	FRT_RF	FRT_RD	FRT_RE	FRT_RA
Exhaust Back Pressure, kPa abs.	105±0.17	EBP_RB	EBP_RC	EBP_RF	EBP_RD	EBP_RE	EBP_RA
Fuel Flow, kg/h	Record	FCR_RB	FCR_RC	FCR_RF	FCR_RD	FCR_RE	FCR_RA
Air/Fuel Ratio	14.00–15.00	AFR_RB	AFR_RC	AFR_RF	AFR_RD	AFR_RE	AFR_RA
Delta AFR ^A	≤ .50	AFRDRB	AFRDRC	AFRDRF	AFRDRE	AFRDRE	AFRDRA
BSFC, kg/Kw-h	Record	BFCARB	BFCARC	BFCARF	BFCARD	BFCARE	BFCARA
BSFC, Standard Deviation	Record	BFCSRB	BFCSRC	BFCSRF	BFCSRD	BFCSRE	BFCSRA
BSFC C.V., %	Record	BFCCRB	BFCCRC	BFCCRF	BFCCRD	BFCCRE	BFCCRA

Stage 2 Average

	Spec	BL Before Test Oil 1	BL Before Test Oil 2	BL Before Test Oil 3	Test Oil Phase I	Test Oil Phase II	BL After Test Oil
Speed, r/min	2000±5	RPM_RB	RPM_RC	RPM_RF	RPM_RD	RPM_RE	RPM_RA
Torque, N-m	105±0.10	LOADRE	LOADRC	LOADRF	LOADRI	LOADRE	LOADRA
Oil Gallery Temperature, °C	65±2	OGT_RB	OGT_RC	OGT_RF	OGT_RD	OGT_RE	OGT_RA
Coolant Inlet Temperature, °C	65±2	CINTRB	CINTRC	CINTRF	CINTRD	CINTRE	CINTR
Intake Air Temperature, °C	29±2	IAT_RB2	IAT_RC2	IAT_RF2	IAT_RD2	IAT_RE2	IAT_RA2
Fuel to Fuel Rail Temperature, °C	22±2	FRT_RB	FRT_RC	FRT_RF	FRT_RD	FRT_RE	FRT_RA
Exhaust Back Pressure, kPa abs.	105±0.17	EBP_RB	EBP_RC	EBP_RF	EBP_RD	EBP_RE	EBP_RA
Fuel Flow, kg/h	Record	FCR_RB	FCR_RC	FCR_RF	FCR_RD	FCR_RE	FCR_RA
Air/Fuel Ratio	14.00–15.00	AFR_RB	AFR_RC	AFR_RF	AFR_RD	AFR_RE	AFR_RA
Delta AFR ^A	≤ .50	AFRDRB	AFRDRC	AFRDRF	AFRDRE	AFRDRE	AFRDRA
BSFC, kg/Kw-h	Record	BFCARB	BFCARC	BFCARF	BFCARD	BFCARE	BFCARA
BSFC, Standard Deviation	Record	BFCSRB	BFCSRC	BFCSRF	BFCSRD	BFCSRE	BFCSRA
BSFC C.V., %	Record	BFCCRB	BFCCRC	BFCCRF	BFCCRD	BFCCRE	BFCCRA

^A Difference between the maximum stage average reading of the entire test and the individual stage average readings.

Sequence VIG
Form 17
Critical Parameter Summary

Lab: LAB	Date Completed: DTCOMP	Time Completed: EOTTIME	
Test Number			
Stand: STAND	Runs On The Stand: STRUN	Engine No. ENGNO	Runs on Engine: ENRUN
Oil Code: OILCODE			
Formulation/Stand Code: FORM			

Stage 3 Average

	Spec	BL Before Test Oil 1	BL Before Test Oil 2	BL Before Test Oil 3	Test Oil Phase I	Test Oil Phase II	BL After Test Oil
Speed, r/min	1500±5	RPM RB	RPM RC	RPM RF	RPM RD	RPM RE	RPM RA
Torque, N-m	105±0.10	LOADRE	LOADRC	LOADRF	LOADRI	LOADRE	LOADRA
Oil Gallery Temperature, °C	100±2	OGT RB	OGT RC	OGT RF	OGT RD	OGT RE	OGT RA
Coolant Inlet Temperature, °C	94±2	CINTRB	CINTRC	CINTRF	CINTRD	CINTRE	CINTR A
Intake Air Temperature, °C	29±2	IAT RB	IAT RC	IAT RF	IAT RD	IAT RE	IAT RA
Fuel to Fuel Rail Temperature, °C	22±2	FRT RB	FRT RC	FRT RF	FRT RD	FRT RE	FRT RA
Exhaust Back Pressure, kPa abs.	105±0.17	EBP RB	EBP RC	EBP RF	EBP RD	EBP RE	EBP RA
Fuel Flow, kg/h	Record	FCR RB	FCR RC	FCR RF	FCR RD	FCR RE	FCR RA
Air/Fuel Ratio	14.00–15.00	AFR RB	AFR RC	AFR RF	AFR RD	AFR RE	AFR RA
Delta AFR ^A	≤ .50	AFRDRB	AFRDRC	AFRDRF	AFRDRI	AFRDRE	AFRDRA
BSFC, kg/Kw-h	Record	BFCARB	BFCARC	BFCARF	BFCARD	BFCARE	BFCARA
BSFC, Standard Deviation	Record	BFCSRB	BFCSRC	BFCSRF	BFCSR D	BFCSRE	BFCSRA
BSFC C.V., %	Record	BFCCRB	BFCCRC	BFCCRF	BFCCRD	BFCCRE	BFCCRA

Stage 4 Average

	Spec	BL Before Test Oil 1	BL Before Test Oil 2	BL Before Test Oil 3	Test Oil Phase I	Test Oil Phase II	BL After Test Oil
Speed, r/min	695±5	RPM RB	RPM RC	RPM RF	RPM RD	RPM RE	RPM RA
Torque, N-m	20±0.10	LOADRE	LOADRC	LOADRF	LOADRI	LOADRE	LOADRA
Oil Gallery Temperature, °C	100±2	OGT RB	OGT RC	OGT RF	OGT RD	OGT RE	OGT RA
Coolant Inlet Temperature, °C	94±2	CINTRB	CINTRC	CINTRF	CINTRD	CINTRE	CINTR A
Intake Air Temperature, °C	29±2	IAT RB	IAT RC	IAT RF	IAT RD	IAT RE	IAT RA
Fuel to Fuel Rail Temperature, °C	22±2	FRT RB	FRT RC	FRT RF	FRT RD	FRT RE	FRT RA
Exhaust Back Pressure, kPa abs.	104±0.17	EBP RB	EBP RC	EBP RF	EBP RD	EBP RE	EBP RA
Fuel Flow, kg/h	Record	FCR RB	FCR RC	FCR RF	FCR RD	FCR RE	FCR RA
Air/Fuel Ratio	14.00–15.00	AFR RB	AFR RC	AFR RF	AFR RD	AFR RE	AFR RA
Delta AFR ^A	≤ .50	AFRDRB	AFRDRC	AFRDRF	AFRDRI	AFRDRE	AFRDRA
BSFC, kg/Kw-h	Record	BFCARB	BFCARC	BFCARF	BFCARD	BFCARE	BFCARA
BSFC, Standard Deviation	Record	BFCSRB	BFCSRC	BFCSRF	BFCSR D	BFCSRE	BFCSRA
BSFC C.V., %	Record	BFCCRB	BFCCRC	BFCCRF	BFCCRD	BFCCRE	BFCCRA

^A Difference between the maximum stage average reading of the entire test and the individual stage average readings.

Sequence VIG
Form 18
Critical Parameter Summary

Lab: LAB	Date Completed: DTCOMP	Time Completed: EOTTIME
Test Number		
Stand: STAND	Runs On The Stand: STRUN	Engine No. ENGNO
Oil Code: OILCODE		
Formulation/Stand Code: FORM		

Stage 5 Average

	Spec	BL Before Test Oil 1	BL Before Test Oil 2	BL Before Test Oil 3	Test Oil Phase I	Test Oil Phase II	BL After Test Oil
Speed, r/min	695±5	RPM_RB	RPM_RC	RPM_RF	RPM_RD	RPM_RE	RPM_RA
Torque, N-m	20±0.10	LOADRB	LOADRC	LOADRF	LOADRD	LOADRE	LOADRA
Oil Gallery Temperature, °C	35±2	OGT_RB	OGT_RC	OGT_RF	OGT_RD	OGT_RE	OGT_RA
Coolant Inlet Temperature, °C	35±2	CINTRB	CINTRC	CINTRF	CINTRD	CINTRE	CINTRA
Intake Air Temperature, °C	29±2	IAT_RB	IAT_RC	IAT_RF	IAT_RD	IAT_RE	IAT_RA
Fuel to Fuel Rail Temperature, °C	22±2	FRT_RB	FRT_RC	FRT_RF	FRT_RD	FRT_RE	FRT_RA
Exhaust Back Pressure, kPa abs.	104±0.17	EBP_RB	EBP_RC	EBP_RF	EBP_RD	EBP_RE	EBP_RA
Fuel Flow, kg/h	Record	FCR_RB	FCR_RC	FCR_RF	FCR_RD	FCR_RE	FCR_RA
Air/Fuel Ratio	14.00–15.00	AFR_RB	AFR_RC	AFR_RF	AFR_RD	AFR_RE	AFR_RA
Delta AFR ^A	≤ .50	AFDRB	AFDRC	AFDRF	AFDRD	AFDRE	AFDRA
BSFC, kg/Kw-h	Record	BFCARB	BFCARC	BFCARF	BFCARD	BFCARE	BFCARA
BSFC, Standard Deviation	Record	BFCSRB	BFCSRC	BFCSRF	BFCSRD	BFCSRE	BFCSRA
BSFC C.V., %	Record	BFCCRB	BFCCRC	BFCCRF	BFCCRD	BFCCRE	BFCCRA

Stage 6 Average

	Spec	BL Before Test Oil 1	BL Before Test Oil 2	BL Before Test Oil 3	Test Oil Phase I	Test Oil Phase II	BL After Test Oil
Speed, r/min	695±5	RPM_RB	RPM_RC	RPM_RF	RPM_RD	RPM_RE	RPM_RA
Torque, N-m	40±0.10	LOADRB	LOADRC	LOADRF	LOADRD	LOADRE	LOADRA
Oil Gallery Temperature, °C	100±2	OGT_RB	OGT_RC	OGT_RF	OGT_RD	OGT_RE	OGT_RA
Coolant Inlet Temperature, °C	94±2	CINTRB	CINTRC	CINTRF	CINTRD	CINTRE	CINTRA
Intake Air Temperature, °C	29±2	IAT_RB	IAT_RC	IAT_RF	IAT_RD	IAT_RE	IAT_RA
Fuel to Fuel Rail Temperature, °C	22±2	FRT_RB	FRT_RC	FRT_RF	FRT_RD	FRT_RE	FRT_RA
Exhaust Back Pressure, kPa abs.	104±0.17	EBP_RB	EBP_RC	EBP_RF	EBP_RD	EBP_RE	EBP_RA
Fuel Flow, kg/h	Record	FCR_RB	FCR_RC	FCR_RF	FCR_RD	FCR_RE	FCR_RA
Air/Fuel Ratio	14.00–15.00	AFR_RB	AFR_RC	AFR_RF	AFR_RD	AFR_RE	AFR_RA
Delta AFR ^A	≤ .50	AFDRB	AFDRC	AFDRF	AFDRD	AFDRE	AFDRA
BSFC, kg/Kw-h	Record	BFCARB	BFCARC	BFCARF	BFCARD	BFCARE	BFCARA
BSFC, Standard Deviation	Record	BFCSRB	BFCSRC	BFCSRF	BFCSRD	BFCSRE	BFCSRA
BSFC C.V., %	Record	BFCCRB	BFCCRC	BFCCRF	BFCCRD	BFCCRE	BFCCRA

^A Difference between the maximum stage average reading of the entire test and the individual stage average readings.

Sequence VIG
Form 19
Downtime And Other Comments

Lab LAB	Date Completed: DTCOMP	Time Completed: EOTTIME
Test Number		
Stand: STAND	Runs On The Stand: STRUN	Engine No. ENGNO
Oil Code: OILCODE		
Formulation/Stand Code: FORM		

Number of Downtime Occurrences			DWNOCR	
Test Hours	Date	Downtime	Reasons	
DOWNR001	DDATR001	DTIMR001	DREAR001	
DOWNR002	DDATR002	DTIMR002	DREAR002	
DOWNR003	DDATR003	DTIMR003	DREAR003	
DOWNR004	DDATR004	DTIMR004	DREAR004	
DOWNR005	DDATR005	DTIMR005	DREAR005	
DOWNR006	DDATR006	DTIMR006	DREAR006	
DOWNR007	DDATR007	DTIMR007	DREAR007	
DOWNR008	DDATR008	DTIMR008	DREAR008	
DOWNR009	DDATR009	DTIMR009	DREAR009	
DOWNR010	DDATR010	DTIMR010	DREAR010	
DOWNR011	DDATR011	DTIMR011	DREAR011	
DOWNR012	DDATR012	DTIMR012	DREAR012	
DOWNR013	DDATR013	DTIMR013	DREAR013	
DOWNR014	DDATR014	DTIMR014	DREAR014	
Total Downtime		TOTLDOWN		

Other Comments		
Number of Comment Lines	TOTCOM	
OCOMR001		
OCOMR002		
OCOMR003		
OCOMR004		
OCOMR005		
OCOMR006		
OCOMR007		
OCOMR008		
OCOMR009		
OCOMR010		
OCOMR011		
OCOMR012		
OCOMR013		
OCOMR014		
OCOMR015		

**Sequence VIG
Form 19A
Downtime and Other Comments**

Lab: LAB	Date Completed: DTCOMP	Time Completed: EOTTIME
Test Number		
Stand: STAND	Runs On The Stand: STRUN	Engine No. ENGNO
Oil Code: OILCODE		
Formulation/Stand Code: FORM		

Number of Downtime Occurrences			DWNOCR	
Test Hours	Date	Downtime	Reasons	
DOWNR01	DDATR015	DTIMR015	DREAR015	
DOWNR01	DDATR016	DTIMR016	DREAR016	
DOWNR01	DDATR017	DTIMR017	DREAR017	
DOWNR01	DDATR018	DTIMR018	DREAR018	
DOWNR01	DDATR019	DTIMR019	DREAR019	
DOWNR01	DDATR020	DTIMR020	DREAR020	
DOWNR01	DDATR021	DTIMR021	DREAR021	
DOWNR01	DDATR022	DTIMR022	DREAR022	
DOWNR01	DDATR023	DTIMR023	DREAR023	
DOWNR01	DDATR024	DTIMR024	DREAR024	
DOWNR01	DDATR025	DTIMR025	DREAR025	
DOWNR01	DDATR026	DTIMR026	DREAR026	
DOWNR01	DDATR027	DTIMR027	DREAR027	
DOWNR01	DDATR028	DTIMR028	DREAR028	
Total Downtime		TOTLDOWN		

Other Comments		
Number of Comment Lines	TOTCOM	
OCOMR016		
OCOMR017		
OCOMR018		
OCOMR019		
OCOMR020		
OCOMR021		
OCOMR022		
OCOMR023		
OCOMR024		
OCOMR025		
OCOMR026		
OCOMR027		
OCOMR028		
OCOMR029		
OCOMR030		

**Sequence VIG
Form 19B
Downtime And Other Comments**

Lab:LAB	Date Completed:DTCOMP	Time Completed:EOTTIME
Test Number		
Stand:STAND	Runs On The Stand:STRUN	Engine No.ENGNO
Runs on Engine:ENRUN		
Oil Code:OILCODE		
Formulation/Stand Code:FORM		

Number of Downtime Occurrences			DWNOCR	
Test Hours	Date	Downtime	Reasons	
DOWNR02	DDATR029	DTIMR029	DREAR029	
DOWNR03	DDATR030	DTIMR030	DREAR030	
DOWNR03	DDATR031	DTIMR031	DREAR031	
DOWNR03	DDATR032	DTIMR032	DREAR032	
DOWNR03	DDATR033	DTIMR033	DREAR033	
DOWNR03	DDATR034	DTIMR034	DREAR034	
DOWNR03	DDATR035	DTIMR035	DREAR035	
DOWNR03	DDATR036	DTIMR036	DREAR036	
DOWNR03	DDATR037	DTIMR037	DREAR037	
DOWNR03	DDATR038	DTIMR038	DREAR038	
DOWNR03	DDATR039	DTIMR039	DREAR039	
DOWNR04	DDATR040	DTIMR040	DREAR040	
DOWNR04	DDATR041	DTIMR041	DREAR041	
DOWNR04	DDATR042	DTIMR042	DREAR042	
Total Downtime		TOTLDOWN		

Other Comments		
Number of Comment Lines	TOTCOM	
OCOMR031		
OCOMR032		
OCOMR033		
OCOMR034		
OCOMR035		
OCOMR036		
OCOMR037		
OCOMR038		
OCOMR039		
OCOMR040		
OCOMR041		
OCOMR042		
OCOMR043		
OCOMR044		
OCOMR045		

Sequence VIG
Form 20
American Chemistry Council Code of Practice
Test Laboratory Conformance Statement

Test Laboratory	SUBLAB				
Test Sponsor	TSTSPON1				
Formulation / Stand Code	FORM				
Test Number	TESTNUM				
Start Date	DTSTRT	Start Time	STRTIME	Time Zone	TZONE

Declarations

- No. 1 All requirements of the ACC Code of Practice for which the test laboratory is responsible were met in the conduct of this test. Yes YESRQM No NORQMI*
- No. 2 The laboratory ran this test for the full duration following all procedural requirements; and all operational validity requirements of the latest version of the applicable test procedure (ASTM or other), including all updates issued by the organization responsible for the test, were met.
Yes YESFULL No NOFULL *
- If the response to this Declaration is “No”, does the test engineer consider the deviations from operational validity requirements that occurred to be beyond the control of the laboratory? Yes YESNODI* No NONODEC
- No 3. A deviation occurred for one of the test parameters identified by the organization responsible for the test as being a special case. Yes YESDEV* No NODEV
(This currently applies only to specific deviations identified in the ASTM Information Letter System)

Check The Appropriate Conclusion

INCLUDE	Operational review of this test indicates that the results should be included in the Multiple Test Acceptance Criteria calculations.
DONOTINC	*Operational review of this test indicates that the results should not be included in the Multiple Test Acceptance Criteria calculations.

Note: Supporting comments are required for all responses identified with an asterisk.

Comments
ACCCOMM1
ACCCOMM2
ACCCOMM3
ACCCOMM4

_____ SUBSIGIM Signature	_____ SUBDATE Date
_____ SUBNAME Typed Name	_____ SUBTITLE Title