

**1R SCOTE TEST PROCEDURE  
FORM 1**

METHOD    *METHOD*  
VERSION   *20020207*

CONDUCTED FOR  
*TSTSPON1*  
*TSTSPON2*

<i>LABVALID</i>	V = VALID
	I = INVALID
	N = RESULTS CAN NOT BE INTERPRETED AS REPRESENTATIVE OF OIL PERFORMANCE (NON-REFERENCE OIL) AND SHALL NOT BE USED FOR MULTIPLE TEST ACCEPTANCE CRITERIA.

<i>TSTOIL</i>	RO = REFERENCE OIL TEST
	NR = ALL OTHER TESTS

<i>CALDFLAG</i>	WAS THIS TEST RUN UNDER A VALID CALIBRATION? (Y/N)
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<i>LABQIA</i>	LAB IS CURRENTLY OPERATING UNDER AN LTMS PRECISION ALARM *
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<i>STANDQIA</i>	STAND IS CURRENTLY OPERATING UNDER AN LTMS PRECISION ALARM *
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\* Check box only if YES

Test Number		
Test Stand: <i>STAND</i>	Engine Run <i>ENRUN</i>	
EOT Time: <i>EOTTIME</i>	EOT Date: <i>DTCOMP</i>	
Oil Code: <i>OILCODE</i>		
Formulation/Stand <i>FORM</i>		
Alternate Codes: <i>ALTCODE1</i>	<i>ALTCODE2</i>	<i>ALTCODE3</i>
SAE Viscosity Grade: <i>SAEVIS</i>		

In my opinion this test    *OPVALID*    been conducted in accordance with the 1R Test Procedure(Research Report) 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

**1R SCOTE TEST PROCEDURE  
FORM 2  
TEST REPORT SUMMARY**

LAB: <i>LAB</i>	EOT DATE: <i>DTCOMP</i>	END TIME: <i>EOTTIME</i>	METHOD: <i>METHOD</i>
STAND: <i>STAND</i>	RUN NUMBER: <i>ENRUN</i>		
FORMULATION/STAND CODE: <i>FORM</i>			
OILCODE: <i>OILCODE</i>			

START DATE: <i>DTSTRT</i>	START TIME: <i>STRTIME</i>	TOTAL TEST LENGTH: <i>TESTLEN</i>	TMC OIL <i>IND</i>
LAB INTERNAL OIL <i>LABOCODE</i>		ENGINE SERIAL NUMBER: <i>ENGSN</i>	

	CORRECTION EFFECTIVE DATE	WD	TGC	TLC	BOTO C g/h	EOTO C g/h	OIL CON. DELTA EOTOC-BOTOC g/h
UNADJUSTED LAB RATING		<i>WD</i>	<i>TGC</i>	<i>TLC</i>	<i>BOTOC</i>	<i>EOTOC</i>	<i>DOC</i>
INDUSTRY CORRECTION (IF ANY)	<i>DATECF</i>	<i>WDCF</i>	<i>TGCCF</i>	<i>TLCCF</i>	<i>BOTOCCF</i>	<i>EOTOCCF</i>	<i>DOCCF</i>
SUBTOTAL		<i>WDCOR</i>	<i>TGCCOR</i>	<i>TLCCOR</i>	<i>BOTOCCOR</i>	<i>EOTOCCOR</i>	<i>DOCCOR</i>
LAB SEVERITY ADJUSTMENT (IF ANY) <sup>B</sup>	<i>DATESA</i>	<i>WDSA</i>	<i>TGCSA</i>	<i>TLCSA</i>	<i>BOTOCSA</i>	<i>EOTOCSA</i>	<i>DOCSA</i>
TOTAL		<i>WDFNL</i>	<i>TGCFNL</i>	<i>TLCFNL</i>	<i>BOTOCFNL</i>	<i>EOTOCFNL</i>	<i>DOCFNL</i>

	EFFECTIVE DATE	WD	TGC	TLC	BOTO C g/h	EOTO C g/h	OIL CON. DELTA EOTOC-BOTOC g/h
TEST TARGET MEAN <sup>A</sup>	<i>EFFDATE</i>	<i>WDM</i>	<i>TGCM</i>	<i>TLCM</i>	<i>BOTOCM</i>	<i>EOTOCM</i>	<i>DOCM</i>
TEST TARGET STD <sup>A</sup>	<i>EFFDATE</i>	<i>WDS</i>	<i>TGCS</i>	<i>TLCS</i>	<i>BOTOCS</i>	<i>EOTOCs</i>	<i>DOCS</i>
API CATEGORY PASS LIMIT <sup>B</sup>	<i>DTCEFF</i>	<i>WDPL</i>	<i>TGCPL</i>	<i>TLCPL</i>	<i>BOTOCPL</i>	<i>EOTOCPL</i>	<i>DOCP</i>

	REFEREE LAB	WD	TGC	TLC	
REFEREE RATINGS <sup>A</sup>	<i>RRLAB</i>	<i>RRWD</i>	<i>RRTGC</i>	<i>RRTL</i>	

	TOP	INT. 1	OIL	PISTON CROWN	PISTON SKIRT	LINER
RING LOSS OF SIDE CLEARANCE (mm)	<i>LSCTOP</i>	<i>LSCINT1</i>	<i>LSCOIL</i>			
RING END GAP INCREASE (mm)	<i>RINGGTI</i>	<i>RINGGI1I</i>	<i>RINGGOI</i>			
IS THE RING STUCK?	<i>STUCKTOP</i>	<i>STUCKIN1</i>	<i>STUCKOIL</i>			
SCUFFED AREA %	<i>SCUFFTOP</i>	<i>SCUFFIN1</i>	<i>SCUFFOIL</i>	<i>SCUFCRON</i>	<i>SCUFSKRT</i>	<i>SCUFFLIN</i>
AVERAGE WEAR STEP (µm)						<i>AWEARST</i>
% BORE POLISH						<i>BOREPOL</i>

Notes: <sup>A</sup>Reference oil tests or as requested by test sponsor  
<sup>B</sup>Non-reference oil tests only

**1R SCOTE TEST PROCEDURE  
FORM 3  
OPERATIONAL SUMMARY**

LAB: <i>LAB</i>	EOT DATE: <i>DTCOMP</i>	END TIME: <i>EOTTIME</i>	METHOD: <i>METHOD</i>
STAND: <i>STAND</i>		RUN NUMBER: <i>ENRUN</i>	
FORMULATION/STAND CODE: <i>FORM</i>			
OILCODE: <i>OILCODE</i>			

CONTROLLED PARAMETERS	OPERATING PARAMETER	QUALITY INDEX THRESHOLD	EOT QUALITY INDEX	PROCESS			TOTAL DATA POINTS		
				UNITS	TARGET	AVERAGE	SAMPLES <sup>A</sup>	BQD <sup>B</sup>	OVER/UNDER RANGE <sup>C</sup>
	ENGINE SPEED	0.00	<i>QRPM</i>	r/min	1800	<i>ARPM</i>	<i>NRPM</i>	<i>BRPM</i>	<i>ORPM</i>
	FUEL FLOW	0.00	<i>QFFLO</i>	g/min	240	<i>AFFLO</i>	<i>NFFLO</i>	<i>BFFLO</i>	<i>OFFLO</i>
	HUMIDITY	0.00	<i>QHUMID</i>	g/kg	17.8	<i>AHUMID</i>	<i>NHUMID</i>	<i>BHUMID</i>	<i>OHUMID</i>
	COOLANT FLOW	0.00	<i>QCOLFLO</i>	L/min	75	<i>ACOLFLO</i>	<i>NCOLFLO</i>	<i>BCOLFLO</i>	<i>OCOLFLO</i>
	<b>TEMPERATURE</b>								
	COOLANT OUT	0.00	<i>QCOLOUT</i>	°C	105	<i>ACOLOUT</i>	<i>NCOLOUT</i>	<i>BCOLOUT</i>	<i>OCOLOUT</i>
	OIL TO MANIFOLD	0.00	<i>QOMANTMP</i>	°C	120	<i>AOMANTMP</i>	<i>NOMANTMP</i>	<i>BOMANTMP</i>	<i>OOMANTMP</i>
	INLET AIR MANIFOLD	0.00	<i>QINAIRT</i>	°C	60	<i>AINAIRT</i>	<i>NINAIRT</i>	<i>BINAIRT</i>	<i>OINAIRT</i>
	FUEL INTO HEAD	0.00	<i>QFUELTMP</i>	°C	42	<i>AFUELTMP</i>	<i>NFUELTMP</i>	<i>BFUELTMP</i>	<i>OFUELTMP</i>
	<b>PRESSURES</b>								
	OIL TO MANIFOLD	0.00	<i>QOMANPR</i>	kPa	415	<i>AOMANPR</i>	<i>NOMANPR</i>	<i>BOMANPR</i>	<i>OOMANPR</i>
	INLET AIR (ABSOLUTE)	0.00	<i>QINAIERP</i>	kPa	292	<i>AINAIERP</i>	<i>NINAIERP</i>	<i>BINAIERP</i>	<i>OINAIERP</i>
	FUEL FROM HEAD	0.00	<i>QFUELPR</i>	kPa	275	<i>AFUELPR</i>	<i>NFUELPR</i>	<i>BFUELPR</i>	<i>OFUELPR</i>
	EXHAUST (ABSOLUTE)	0.00	<i>QEBP</i>	kPa	252	<i>AEBP</i>	<i>NEBP</i>	<i>BEBP</i>	<i>OEBP</i>
NON-CONTROLLED PARAMETERS	OPERATING PARAMETER	PROCESS			TOTAL DATA POINTS				
		UNITS	TYPICAL RANGE <sup>D</sup>	AVERAGE	SAMPLES <sup>A</sup>	BQD <sup>B</sup>	OVER/UNDER RANGE <sup>C</sup>		
	INTAKE AIR FLOW	kg/h	360-410	<i>AAIRFLO</i>					
	POWER	kW	65-70	<i>APWR</i>	<i>NPWR</i>	<i>BPWR</i>	<i>OPWR</i>		
	TORQUE	Nm	330-350	<i>ATORQUE</i>	<i>NTORQUE</i>	<i>BTORQUE</i>	<i>OTORQUE</i>		
	BLOWBY	L/min	20-56	<i>ABLOBY</i>	<i>NBLOBY</i>	<i>BBLOBY</i>	<i>OBLOBY</i>		
	<b>TEMPERATURE</b>								
	COOLANT IN	°C	97-101	<i>ACOLIN</i>	<i>NCOLIN</i>	<i>BCOLIN</i>	<i>OCOLIN</i>		
	COOLANT DELTA T	°C	4-8	<i>ACOLDT</i>	<i>NCOLDT</i>	<i>BCOLDT</i>	<i>OCOLDT</i>		
	OIL COOLER IN	°C	120-124	<i>AOCOOLIN</i>	<i>NOCOOLIN</i>	<i>BOCOOLIN</i>	<i>OOCOOLIN</i>		
	HEATING OIL	°C	165 max.	<i>AHEATOIL</i>	<i>NHEATOIL</i>	<i>BHEATOIL</i>	<i>OHEATOIL</i>		
	EXHAUST	°C	590-620	<i>AEXHTMP</i>	<i>NEXHTMP</i>	<i>BEXHTMP</i>	<i>OEXHTMP</i>		
	<b>PRESSURES</b>								
	CRANKCASE	kPa	0.09-0.3	<i>ACCV</i>	<i>NCCV</i>	<i>BCCV</i>	<i>OCCV</i>		
	COOLANT TO JUG	kPa	64-92	<i>ACOLPR</i>	<i>NCOLPR</i>	<i>BCOLPR</i>	<i>OCOLPR</i>		

- A Total number of data points taken as determined from test length and procedural specified sampling rate.
- B Number of Bad Quality Data points not used in the calculation of the statistical measures.
- C Number of points clipped by over/under range limits of the statistical measures.
- D Gathered from 1Q Matrix Test data.

**1R SCOTE TEST PROCEDURE  
FORM 4  
ASSEMBLY MEASUREMENTS AND PART RECORD**

LAB: <i>LAB</i>	EOT DATE: <i>DTCOMP</i>	END TIME: <i>EOTTIME</i>	METHOD: <i>METHOD</i>
STAND: <i>STAND</i>		RUN NUMBER: <i>ENRUN</i>	
FORMULATION/STAND CODE: <i>FORM</i>			
OILCODE: <i>OILCODE</i>			

ASSEMBLY MEASUREMENTS AND PARTS RECORD	
INJECTOR SETTING ( GO / NO-GO )	<i>INJSET</i>
WAS TIMING INITIALIZED? (YES/NO)	<i>TINIT</i>
PISTON/HEAD CLEARANCE mm	<i>PISTONCL</i>
CAM GEAR BACKLASH mm	<i>CAMLASH</i>
DESIRED FUEL TIMING 'BTC	<i>FUELTIM</i>
INTAKE VALVE OPEN 'ATC	<i>INVALOPN</i>
INJECTOR PLUNGER LIFT mm @ 72°	<i>PLUNLIFT</i>
INTAKE VALVE LIFT mm @ 456°	<i>INLIFT</i>
EXHAUST VALVE LIFT mm @ 247°	<i>EXLIFT</i>

	PART NUMBER	SERIAL NUMBER	DATE CODE	INSPECTION CODE
LINER	<i>LINERPN</i> <sup>A</sup>	<i>LINERSN</i> <sup>B</sup>	<i>LINERDC</i> <sup>A</sup>	
TOP RING	<i>TOPPN</i> <sup>C</sup>	<i>TOPSN</i> <sup>E</sup>		
INTERMEDIATE RING	<i>INTPN</i> <sup>C</sup>	<i>INTSN</i> <sup>E</sup>		
OIL RING	<i>OILPN</i> <sup>C</sup>	<i>OILSN</i> <sup>E</sup>		
PISTON CROWN	<i>CROWNPN</i> <sup>D</sup>	<i>CROWNSN</i> <sup>D</sup>	<i>CROWNDC</i> <sup>F</sup>	<i>CROWNIC</i> <sup>G</sup>
PISTON SKIRT	<i>SKIRTPN</i> <sup>H</sup>	<i>SKIRTSN</i> <sup>I</sup>		
FUEL INJECTOR	<i>NOZZLEPN</i> <sup>J</sup>	<i>NOZZLESN</i> <sup>K</sup>		
ECM EPROM	<i>ECMPN</i> <sup>L</sup>		<i>ECMDC</i>	
PISTON COOLING JET	<i>PTUBEPN</i>	<i>PTUBESN</i>		

<sup>A</sup> On liner O.D.

<sup>B</sup> On liner O.D. (NNNN)

<sup>C</sup> On box label

<sup>D</sup> On top of piston

<sup>E</sup> On paper envelope containing the ring

<sup>F</sup> Number below "E" located on piston top

<sup>G</sup> Number above "E" located on piston top

<sup>H</sup> On bottom surface of skirt rim

<sup>I</sup> On bottom surface under pin bore

<sup>J</sup> On top surface of plunger

<sup>K</sup> On top surface of plunger - 6 digits

<sup>L</sup> On ECAT software

**1R SCOTE TEST PROCEDURE**

**FORM 5**

**PISTON RATING SUMMARY**

<b>TEST IDENTIFICATION</b>	LAB: LAB	EOT DATE: DTCOMP	END TIME: EOTIME	STAND: STAND	RUN #: ENRUN	METHOD: METHOD
FORMULATION/STAND CODE: FORM	OILCODE: OILCODE					
TEST FUEL: TESTFUEL	FUEL BATCH: FUELBTID	DATE RATED: DTRATE	RATER INITIALS: RINIT	VERIFIED BY: VRINIT		
<b>LAST STAND REFERENCE INFORMATION</b>	DATE COMPLETED: LRDTCOMP	STAND #: STAND	RUN #: LRENUN	TMC OIL CODE: LIND		
	WD	TGC	TLC	BOTOC g/h	EOTOC g/h	
LAST REF. THIS STAND	LRWD	LRTGC	LRTLCT	LRBOTOC	LREOTOC	
INDUSTRY AVERAGE	LRAWD	LRATGC	LRATLCT	LRABTOC	LRAETOC	
INDUSTRY STD	LRSWD	LRSTGC	LRSTLCT	LRSBTOC	LRSETOC	

**TOTAL PISTON RATINGS SUMMARY**

	GROOVES								LANDS				DEP. FACTOR	GROOVE				LANDS				OIL COOLING GALLERY		UNDER CROWN	
	NO. 1		NO. 2		NO. 1		NO. 2		NO. 3		NO. 3			NO. 4		A, % DEM.		A, % DEM.		A, % DEM.		A, % DEM.			
	A, %	DEM.	A, %	DEM.	A, %	DEM.	A, %	DEM.	A, %	DEM.	A, %	DEM.		A, %	DEM.	A, %	DEM.	A, %	DEM.	A, %	DEM.	A, %	DEM.		
C A R B O N	HC - 1.0	G1HCA	G1HCD	G2HCA	G2HCD	L1HCA	L1HCD	L2HCA	L2HCD																
	MC - 0.5	G1MCA	G1MCD							G3HCA	G3HCD	L3HCA	L3HCD	L4HCA	L4HCD										
	LC - .25	G1LCA	G1LCD	G2LCA	G2LCD	L1LCA	L1LCD	L2LCA	L2LCD	G3MCA	G3MCD														
	TOTAL	G1ACTOT	G1DCTOT	G2ACTOT	G2DCTOT	L1ACTOT	L1DCTOT	L2ACTOT	L2DCTOT	G3ACTOT	G3DCTOT	L3ACTOT	L3DCTOT	L4ACTOT	L4DCTOT	OGACTOT	OGDCTOT	UCACTOT	UCDCTOT						
V A R I A T I O N	8 - 9	G1V9A	G1V9D	G2V9A	G2V9D	L1V9A	L1V9D	L2V9A	L2V9D	7.5															
	7 - 7.9	G1V8A	G1V8D	G2V8A	G2V8D	L1V8A	L1V8D	L2V8A	L2V8D		G3V75A	G3V75D	L3V75A	L3V75D	L4V75A	L4V75D	OGV75A	OGV75D	UCV75A	UCV75D					
	6 - 6.9	G1V7A	G1V7D	G2V7A	G2V7D	L1V7A	L1V7D	L2V7A	L2V7D																
	5 - 5.9	G1V6A	G1V6D	G2V6A	G2V6D	L1V6A	L1V6D	L2V6A	L2V6D	4.5															
	4 - 4.9	G1V5A	G1V5D	G2V5A	G2V5D	L1V5A	L1V5D	L2V5A	L2V5D		G3V45A	G3V45D	L3V45A	L3V45D	L4V45A	L4V45D	OGV45A	OGV45D	UCV45A	UCV45D					
	3 - 3.9	G1V4A	G1V4D	G2V4A	G2V4D	L1V4A	L1V4D	L2V4A	L2V4D																
	2 - 2.9	G1V3A	G1V3D	G2V3A	G2V3D	L1V3A	L1V3D	L2V3A	L2V3D	1.5															
	1 - 1.9	G1V2A	G1V2D	G2V2A	G2V2D	L1V2A	L1V2D	L2V2A	L2V2D		G3V15A	G3V15D	L3V15A	L3V15D	L4V15A	L4V15D	OGV15A	OGV15D	UCV15A	UCV15D					
>0 - 0.9	G1V1A	G1V1D	G2V1A	G2V1D	L1V1A	L1V1D	L2V1A	L2V1D																	
CLEAN	G1VCLNA	0	G2VCLNA	0	L1VCLNA	0	L2VCLNA	0	CLEAN	G3VCLNA	0	L3VCLNA	0	L4VCLNA	0	OGVCLNA	0	UCVCLNA	0						
TOTAL	G1AVTOT	G1DVTOT	G2AVTOT	G2DVTOT	L1AVTOT	L1DVTOT	L2AVTOT	L2DVTOT	G3AVTOT	G3DVTOT	L3AVTOT	L3DVTOT	L4AVTOT	L4DVTOT	OGAVTOT	OGDVTOT	UCAVTOT	UCDVTOT							
RATING	G1UWD		G2UWD		L1UWD		L2UWD		G3UWD		L3UWD		L4UWD		OGUWD		UCUWD								
LOCATION FACTOR	2		3		1		3		20		20		60		0.5		1								
IND RATING	G1WD		G2WD		L1WD		L2WD		G3WD		L3WD		L4WD		OGWD		UCWD								
WD:	WD		TLHC %:		TLHC		TGF %:		TGF		IGF %:		IGF		TLFC %:		TLFC								
UNWEIGHTED:	UWD		TLC:		TLC		TGC:		TGC		IGC:		IGC		UNDERCROWN CARBON:		UCC								

1R SCOTE TEST PROCEDURE  
Form 5A

LAB: <i>LAB</i>	EOT DATE: <i>DTCOMP</i>	END TIME: <i>EOTTIME</i>	METHOD: <i>METHOD</i>
STAND: <i>STAND</i>	RUN NUMBER: <i>ENRUN</i>		
FORMULATION/STAND CODE: <i>FORM</i>			
OILCODE: <i>OILCODE</i>			

RATEWSIM

**1R SCOTE TEST PROCEDURE  
FORM 6  
SUPPLEMENTAL PISTON DEPOSITS (GROOVE SIDES AND RINGS)**

LAB: LAB			EOT DATE: <i>DTCOMP</i>				END TIME: <i>EOTTIME</i>				METHOD: <i>METHOD</i>				
STAND: <i>STAND</i>						RUN NUMBER: <i>ENRUN</i>									
FORMULATION/STAND CODE: <i>FORM</i>															
OILCODE: <i>OILCODE</i>															
DEPOSIT TYPE		CARBON			VARNISH										
		HC	MC	LC	8 - 9	7 - 7.9	6 - 6.9	5 - 5.9	4 - 4.9	3 - 3.9	2 - 2.9	1 - 1.9	>0 -	CLEAN	
GROOVE TOP AND BOTTOM	1	T	<i>G1THCA</i>	<i>G1TMCA</i>	<i>G1TLCA</i>	<i>G1T9A</i>	<i>G1T8A</i>	<i>G1T7A</i>	<i>G1T6A</i>	<i>G1T5A</i>	<i>G1T4A</i>	<i>G1T3A</i>	<i>G1T2A</i>	<i>G1T1A</i>	<i>G1TCLNA</i>
		B	<i>G1BHCA</i>	<i>G1BMCA</i>	<i>G1BLCA</i>	<i>G1B9A</i>	<i>G1B8A</i>	<i>G1B7A</i>	<i>G1B6A</i>	<i>G1B5A</i>	<i>G1B4A</i>	<i>G1B3A</i>	<i>G1B2A</i>	<i>G1B1A</i>	<i>G1BCLNA</i>
	2	T	<i>G2THCA</i>	<i>G2TMCA</i>	<i>G2TLCA</i>	<i>G2T9A</i>	<i>G2T8A</i>	<i>G2T7A</i>	<i>G2T6A</i>	<i>G2T5A</i>	<i>G2T4A</i>	<i>G2T3A</i>	<i>G2T2A</i>	<i>G2T1A</i>	<i>G2TCLNA</i>
		B	<i>G2BHCA</i>	<i>G2BMCA</i>	<i>G2BLCA</i>	<i>G2B9A</i>	<i>G2B8A</i>	<i>G2B7A</i>	<i>G2B6A</i>	<i>G2B5A</i>	<i>G2B4A</i>	<i>G2B3A</i>	<i>G2B2A</i>	<i>G2B1A</i>	<i>G2BCLNA</i>
	3	T	<i>G3THCA</i>	<i>G3TMCA</i>	<i>G3TLCA</i>	<i>G3T9A</i>	<i>G3T8A</i>	<i>G3T7A</i>	<i>G3T6A</i>	<i>G3T5A</i>	<i>G3T4A</i>	<i>G3T3A</i>	<i>G3T2A</i>	<i>G3T1A</i>	<i>G3TCLNA</i>
		B	<i>G3BHCA</i>	<i>G3BMCA</i>	<i>G3BLCA</i>	<i>G3B9A</i>	<i>G3B8A</i>	<i>G3B7A</i>	<i>G3B6A</i>	<i>G3B5A</i>	<i>G3B4A</i>	<i>G3B3A</i>	<i>G3B2A</i>	<i>G3B1A</i>	<i>G3BCLNA</i>
TOP BOTTOM AND BACK OF RINGS	1	T	<i>R1THCA</i>	<i>R1TMCA</i>	<i>R1TLCA</i>	<i>R1T9A</i>	<i>R1T8A</i>	<i>R1T7A</i>	<i>R1T6A</i>	<i>R1T5A</i>	<i>R1T4A</i>	<i>R1T3A</i>	<i>R1T2A</i>	<i>R1T1A</i>	<i>R1TCLNA</i>
		B	<i>R1BHCA</i>	<i>R1BMCA</i>	<i>R1BLCA</i>	<i>R1B9A</i>	<i>R1B8A</i>	<i>R1B7A</i>	<i>R1B6A</i>	<i>R1B5A</i>	<i>R1B4A</i>	<i>R1B3A</i>	<i>R1B2A</i>	<i>R1B1A</i>	<i>R1BCLNA</i>
		BK	<i>R1BKHCA</i>	<i>R1BKMCA</i>	<i>R1BKLC</i>	<i>R1BK9A</i>	<i>R1BK8A</i>	<i>R1BK7A</i>	<i>R1BK6A</i>	<i>R1BK5A</i>	<i>R1BK4A</i>	<i>R1BK3A</i>	<i>R1BK2A</i>	<i>R1BK1A</i>	<i>R1BKCLNA</i>
	2	T	<i>R2THCA</i>	<i>R2TMCA</i>	<i>R2TLCA</i>	<i>R2T9A</i>	<i>R2T8A</i>	<i>R2T7A</i>	<i>R2T6A</i>	<i>R2T5A</i>	<i>R2T4A</i>	<i>R2T3A</i>	<i>R2T2A</i>	<i>R2T1A</i>	<i>R2TCLNA</i>
		B	<i>R2BHCA</i>	<i>R2BMCA</i>	<i>R2BLCA</i>	<i>R2B9A</i>	<i>R2B8A</i>	<i>R2B7A</i>	<i>R2B6A</i>	<i>R2B5A</i>	<i>R2B4A</i>	<i>R2B3A</i>	<i>R2B2A</i>	<i>R2B1A</i>	<i>R2BCLNA</i>
		BK	<i>R2BKHCA</i>	<i>R2BKMCA</i>	<i>R2BKLC</i>	<i>R2BK9A</i>	<i>R2BK8A</i>	<i>R2BK7A</i>	<i>R2BK6A</i>	<i>R2BK5A</i>	<i>R2BK4A</i>	<i>R2BK3A</i>	<i>R2BK2A</i>	<i>R2BK1A</i>	<i>R2BKCLNA</i>
	3	T	<i>R3THCA</i>	<i>R3TMCA</i>	<i>R3TLCA</i>	<i>R3T9A</i>	<i>R3T8A</i>	<i>R3T7A</i>	<i>R3T6A</i>	<i>R3T5A</i>	<i>R3T4A</i>	<i>R3T3A</i>	<i>R3T2A</i>	<i>R3T1A</i>	<i>R3TCLNA</i>
		B	<i>R3BHCA</i>	<i>R3BMCA</i>	<i>R3BLCA</i>	<i>R3B9A</i>	<i>R3B8A</i>	<i>R3B7A</i>	<i>R3B6A</i>	<i>R3B5A</i>	<i>R3B4A</i>	<i>R3B3A</i>	<i>R3B2A</i>	<i>R3B1A</i>	<i>R3BCLNA</i>
		BK	<i>R3BKHCA</i>	<i>R3BKMCA</i>	<i>R3BKLC</i>	<i>R3BK9A</i>	<i>R3BK8A</i>	<i>R3BK7A</i>	<i>R3BK6A</i>	<i>R3BK5A</i>	<i>R3BK4A</i>	<i>R3BK3A</i>	<i>R3BK2A</i>	<i>R3BK1A</i>	<i>R3BKCLNA</i>
ADDITIONAL DEPOSIT & CONDITION RATINGS															
PISTON CROWN		<i>CROWNAD</i>													
PISTON SKIRT		<i>SKIRTAD</i>													
RINGS		<i>RINGSAD</i>													
LINER		<i>LINERAD</i>													

**1R SCOTE TEST PROCEDURE  
FORM 6A  
REFEREE RATING**

<b>TEST IDENTIFICATION</b>																			
LAB:	LAB				EOT DATE:	DTCOMP				END TIME:	EOTTIME				METHOD:	METHOD			
STAND:	STAND				RUN #:	ENRUN													
FORMULATION/STAND CODE:					FORM														
OILCODE:					OILCODE														
<b>REFEREE RATING INFORMATION</b>																			
COMPANY:	RRLAB				RATING NUMBER:	RRNO				DATE RATED:	RRDATE				RATER:	RRINIT			

<b>TOTAL PISTON RATINGS SUMMARY</b>																											
DEP. FACTOR	GROOVES				LANDS				DEP. FACTOR	GROOVES				LANDS				OIL COOLING		UNDER CROWN							
	NO. 1		NO. 2		NO. 1		NO. 2			NO. 3		NO. 3		NO. 4		A, %	DEM.	A, %	DEM.								
	A, %	DEM.	A, %	DEM.	A, %	DEM.	A, %	DEM.		A, %	DEM.	A, %	DEM.	A, %	DEM.	A, %	DEM.	A, %	DEM.								
C A R B O N	HC-1.0	RRG1HCA	RRG1HCD	RRG2HCA	RRG2HCD	RRL1HCA	RRL1HCD	RRL2HCA	RRL2HCD		RRG3HCA	RRG3HCD	RRL3HCA	RRL3HCD	RRL4HCA	RRL4HCD											
	MC-0.5	RRG1MCA	RRG1MCD								RRG3MCA	RRG3MCD															
	LC-.25	RRG1LCA	RRG1LCD	RRG2LCA	RRG2LCD	RRL1LCA	RRL1LCD	RRL2LCA	RRL2LCD		RRG3LCA	RRG3LCD	RRL3LCA	RRL3LCD	RRL4LCA	RRL4LCD	RROGLCA	RROGLCD	RRUCLCA	RRUCLCD							
	TOTAL	RG1ACTOT	RG1DCTOT	RG2ACTOT	RG2DCTOT	RL1ACTOT	RL1DCTOT	RL2ACTOT	RL2DCTOT		RG3ACTOT	RG3DCTOT	RL3ACTOT	RL3DCTOT	RL4ACTOT	RL4DCTOT	ROGACTOT	ROGDCTOT	RUCACTOT	RUCDCTOT							
V A R N I S H	8 - 9	RRG1V9A	RRG1V9D	RRG2V9A	RRG2V9D	RRL1V9A	RRL1V9D	RRL2V9A	RRL2V9D	7.5																	
	7 - 7.9	RRG1V8A	RRG1V8D	RRG2V8A	RRG2V8D	RRL1V8A	RRL1V8D	RRL2V8A	RRL2V8D		RRG3V75A	RRG3V75D	RRL3V75A	RRL3V75D	RRL4V75A	RRL4V75D	RROGV75A	RROGV75D	RRUCV75A	RRUCV75D							
	6 - 6.9	RRG1V7A	RRG1V7D	RRG2V7A	RRG2V7D	RRL1V7A	RRL1V7D	RRL2V7A	RRL2V7D																		
	5 - 5.9	RRG1V6A	RRG1V6D	RRG2V6A	RRG2V6D	RRL1V6A	RRL1V6D	RRL2V6A	RRL2V6D	4.5																	
	4 - 4.9	RRG1V5A	RRG1V5D	RRG2V5A	RRG2V5D	RRL1V5A	RRL1V5D	RRL2V5A	RRL2V5D		RRG3V45A	RRG3V45D	RRL3V45A	RRL3V45D	RRL4V45A	RRL4V45D	RROGV45A	RROGV45D	RRUCV45A	RRUCV45D							
	3 - 3.9	RRG1V4A	RRG1V4D	RRG2V4A	RRG2V4D	RRL1V4A	RRL1V4D	RRL2V4A	RRL2V4D																		
	2 - 2.9	RRG1V3A	RRG1V3D	RRG2V3A	RRG2V3D	RRL1V3A	RRL1V3D	RRL2V3A	RRL2V3D	1.5																	
	1 - 1.9	RRG1V2A	RRG1V2D	RRG2V2A	RRG2V2D	RRL1V2A	RRL1V2D	RRL2V2A	RRL2V2D		RRG3V15A	RRG3V15D	RRL3V15A	RRL3V15D	RRL4V15A	RRL4V15D	RROGV15A	RROGV15D	RRUCV15A	RRUCV15D							
	>0 - 0.9	RRG1V1A	RRG1V1D	RRG2V1A	RRG2V1D	RRL1V1A	RRL1V1D	RRL2V1A	RRL2V1D																		
CLEAN	RRG1VCLA	0	RRG2VCLA	0	RRL1VCLA	0	RRL2VCLA	0		RRG3VCLA	0	RRL3VCLA	0	RRL4VCLA	0	RROGVCLA	0	RRUCVCLA	0								
TOTAL	RG1AVTOT	RG1DVTOT	RG2AVTOT	RG2DVTOT	RL1AVTOT	RL1DVTOT	RL2AVTOT	RL2DVTOT		RG3AVTOT	RG3DVTOT	RL3AVTOT	RL3DVTOT	RL4AVTOT	RL4DVTOT	ROGAVTOT	ROGDVTOT	RUCAVTOT	RUCDVTOT								
RATING	RRG1UWD		RRG2UWD		RRL1UWD		RRL2UWD			RRG3UWD		RRL3UWD		RRL4UWD		RROGUWD		RRUCUWD									
LOCATION FACTOR	2		3		1		3			20		20		60		0.5		1									
IND RATING	RRG1WD		RRG2WD		RRL1WD		RRL2WD			RRG3WD		RRL3WD		RRL4WD		RROGWD		RRUCWD									
WD:	RRWD			TLHC %:			RRTLHC			TGF %:			RRTGF			IGF %:			RRIGF			TLFC %:			RRTLFC		
UNWEIGHTED:	RRUWD			TLC:			RRTLCL			TGC:			RRTGC			IGC:			RRIGC			UNDERCROWN CARBON:			RRUCC		



**1R SCOTE TEST PROCEDURE**

**FORM 7**

**OIL ANALYSIS DATA**

<b>TEST IDENTIFICATION</b>			
LAB: LAB	EOT DATE: DTCOMP	END TIME: EOTTIME	METHOD: METHOD
STAND: STAND	RUN NUMBER: ENRUN		
FORMULATION/STAND CODE: FORM			
OILCODE: OILCODE			
TEST FUEL: TESTFUEL	FUEL BATCH: FUELBTID		

OIL ANALYSIS	NEW	TST_H036	TST_H072	TST_H108	TST_H144	TST_H180	TST_H216	TST_H252	TST_H288	TST_H324	TST_H360	TST_H396	TST_H432	TST_H468	TST_H504
VISC @ 100°C	V100NEW	V100H036			V100H144			V100H252			V100H360		V100H432		V100H504
VISC @ 40°C	V40_NEW	V40_H036			V40_H144			V40_H252			V40_H360		V40_H432		V40_H504
TBN D4739	TBN_NEW	TBN_H036			TBN_H144			TBN_H252			TBN_H360		TBN_H432		TBN_H504
TAN D664	TAN_NEW	TAN_H036			TAN_H144			TAN_H252			TAN_H360		TAN_H432		TAN_H504
TGA Soot %	TGA_NEW	TGA_H036			TGA_H144			TGA_H252			TGA_H360		TGA_H432		TGA_H504
<b>WEAR METALS (ppm)</b>															
Fe	FEWMNEW	FEWMH036			FEWMH144			FEWMH252			FEWMH360		FEWMH432		FEWMH504
Al	ALWMNEW	ALWMH036			ALWMH144			ALWMH252			ALWMH360		ALWMH432		ALWMH504
Si	SIWMNEW	SIWMH036			SIWMH144			SIWMH252			SIWMH360		SIWMH432		SIWMH504
Cu	CUWMNEW	CUWMH036			CUWMH144			CUWMH252			CUWMH360		CUWMH432		CUWMH504
Cr	CRWMNEW	CRWMH036			CRWMH144			CRWMH252			CRWMH360		CRWMH432		CRWMH504
Pb	PBWMNEW	PBWMH036			PBWMH144			PBWMH252			PBWMH360		PBWMH432		PBWMH504
FUEL DILUTION %		FDILH036									FDILH360				FDILH504
IR O <sub>2</sub>		IRO2H036			IRO2H144			IRO2H252			IRO2H360		IRO2H432		IRO2H504
BLOWBY (L/min)		BLBYH036	BLBYH072	BLBYH108	BLBYH144	BLBYH180	BLBYH216	BLBYH252	BLBYH288	BLBYH324	BLBYH360	BLBYH396	BLBYH432	BLBYH468	BLBYH504
Oil Consumption g/h for hrs ending		OCONH036	OCONH072	OCONH108	OCONH144	OCONH180	OCONH216	OCONH252	OCONH288	OCONH324	OCONH360	OCONH396	OCONH432	OCONH468	OCONH504
Oil Consumption r <sup>2</sup>		OCRRH036	OCRRH072	OCRRH108	OCRRH144	OCRRH180	OCRRH216	OCRRH252	OCRRH288	OCRRH324	OCRRH360	OCRRH396	OCRRH432	OCRRH468	OCRRH504
FUEL POSITION (mm)		FPOSH036						FPOSH252			FPOSH360				FPOSH504

**NOTE:**

- (1) Total Oil In System 5800 ± 50 grams.
- (2) Refill oil scale cart to full level every 36 hours. Take oil samples, as shown, before adding oil.



**1R SCOTE TEST PROCEDURES  
FORM 9  
RING MEASUREMENTS**

LAB: <i>LAB</i>	EOT DATE: <i>DTCOMP</i>	END TIME: <i>EOTTIME</i>	METHOD: <i>METHOD</i>
STAND: <i>STAND</i>		RUN NUMBER: <i>ENRUN</i>	
FORMULATION/STAND CODE: <i>FORM</i>			
OILCODE: <i>OILCODE</i>			

ALL RING MEASUREMENTS ARE MADE USING METRIC FEELER GAGES

RING GAPS (mm)	1Y4014 TOP	1Y4013 INTERMEDIATE	1Y4012 OIL
<b>SPECIFICATIONS</b>	0.350mm - 0.550mm	0.754mm - 0.906mm	0.400mm - 0.750mm
PRE-TEST	<i>RINGGTE</i>	<i>RINGGI1E</i>	<i>RINGGOE</i>
POST-TEST	<i>RINGGTO</i>	<i>RINGGI1O</i>	<i>RINGGOO</i>
INCREASE	<i>RINGGTI</i>	<i>RINGGI1I</i>	<i>RINGGOI</i>

RING SIDE CLEARANCE*		A	B	C	D	AVG.	MIN.	SPECIFICATION
<b>TOP</b>	PRE-TEST	<i>SIDETPE1</i>	<i>SIDETPE2</i>	<i>SIDETPE3</i>	<i>SIDETPE4</i>	<i>ASIDETPE</i>	<i>ISIDETPE</i>	0.090mm - 0.127mm
	POST-TEST	<i>SIDETPO1</i>	<i>SIDETPO2</i>	<i>SIDETPO3</i>	<i>SIDETPO4</i>	<i>ASIDETPO</i>	<i>ISIDETPO</i>	
	LSC	<i>LSCT1</i>	<i>LSCT2</i>	<i>LSCT3</i>	<i>LSCT4</i>	<i>LSCTOP</i>	<i>ILSCT</i>	
<b>INT.</b>	PRE-TEST	<i>SIDE1PE1</i>	<i>SIDE1PE2</i>	<i>SIDE1PE3</i>	<i>SIDE1PE4</i>	<i>ASIDE1PE</i>	<i>ISIDE1PE</i>	0.060mm - 0.110mm
	POST-TEST	<i>SIDE1PO1</i>	<i>SIDE1PO2</i>	<i>SIDE1PO3</i>	<i>SIDE1PO4</i>	<i>ASIDE1PO</i>	<i>ISIDE1PO</i>	
	LSC	<i>LSCI1</i>	<i>LSCI2</i>	<i>LSCI3</i>	<i>LSCI4</i>	<i>LSCINT1</i>	<i>ILSCINT</i>	
<b>OIL</b>	PRE-TEST	<i>SIDEOPE1</i>	<i>SIDEOPE2</i>	<i>SIDEOPE3</i>	<i>SIDEOPE4</i>	<i>ASIDEOPE</i>	<i>ISIDEOPE</i>	0.030mm - 0.080mm
	POST-TEST	<i>SIDEOP01</i>	<i>SIDEOP02</i>	<i>SIDEOP03</i>	<i>SIDEOP04</i>	<i>ASIDEOP0</i>	<i>ISIDEOP0</i>	
	LSC	<i>LSCO1</i>	<i>LSCO2</i>	<i>LSCO3</i>	<i>LSCO4</i>	<i>LSCOIL</i>	<i>ILSCO</i>	

\* NOTES:

1. WRITE "STUCK" IN PLACE OF DIMENSION WHEN APPLICABLE
2. WRITE "<0.03 mm" FOR CLEARANCE WHEN APPLICABLE.
3. WRITE ">" BEFORE CALCULATED DECREASE OR AVERAGE DECREASE VALUES THAT INCORPORATE A "<0.03 mm" IN CALCULATION.
- 4 LSC = LOSS OF SIDE CLEARANCE
5. MIN: OIL RING MINIMUM SIDE CLEARANCE IS MEASURED 360° AROUND PISTON.

**1R SCOTE TEST PROCEDURE  
FORM 10  
LINER MEASUREMENTS**

LAB: <i>LAB</i>	EOT DATE: <i>DTCOMP</i>	END TIME: <i>EOTTIME</i>	METHOD: <i>METHOD</i>
STAND: <i>STAND</i>		RUN NUMBER: <i>ENRUN</i>	
FORMULATION/STAND CODE: <i>FORM</i>			
OILCODE: <i>OILCODE</i>			

<b>LINER SURFACE FINISH (µm)</b>			
DISTANCE FROM TOP	TRANSVERSE	LONGITUDINAL	AVERAGE
130 mm	<i>BBLFINT1</i>	<i>BBLFINL1</i>	<i>BBLFINA1</i>
50 mm	<i>BBLFINT2</i>	<i>BBLFINL2</i>	<i>BBLFINA2</i>
25 mm	<i>BBLFINT3</i>	<i>BBLFINL3</i>	<i>BBLFINA3</i>
TOTAL AVERAGE (Spec: 0.4 - 0.8 µm)			<i>BBLFIN</i>

<b>% LINER BORE POLISH - GRID (ADD T/AT VALUES FROM GRID)</b>	
THRUST	<i>BOREPT</i>
ANTI-THRUST	<i>BOREPAT</i>
TOTAL	<i>BOREPOL</i>

<b>LINER BORE MEASUREMENT (137.154mm minimum)</b>				
<b>BEFORE TEST - DIAMETER (DIAL BORE GAGE)</b>				
BORE HEIGHT	LONGITUDINAL	TRANSVERSE	OUT OF ROUND (0.038 mm max)	
250 mm	<i>BBLONG1</i>	<i>BBTRAN1</i>	<i>OOR1</i>	
210 mm	<i>BBLONG2</i>	<i>BBTRAN2</i>	<i>OOR2</i>	
170 mm	<i>BBLONG3</i>	<i>BBTRAN3</i>	<i>OOR3</i>	
130 mm	<i>BBLONG4</i>	<i>BBTRAN4</i>	<i>OOR4</i>	
50 mm	<i>BBLONG5</i>	<i>BBTRAN5</i>	<i>OOR5</i>	
25 mm	<i>BBLONG6</i>	<i>BBTRAN6</i>	<i>OOR6</i>	
15 mm	<i>BBLONG7</i>	<i>BBTRAN7</i>	<i>OOR7</i>	
TAPER (0.050 max)	<i>TAPRLONG</i>	<i>TAPRTRAN</i>		
<b>AFTER TEST - (SURFACE PROFILE)</b>				
	LONGITUDINAL µm		TRANSVERSE µm	
	FRONT	REAR	T	AT
WEAR STEP @ 13 mm	<i>AWEARLF</i>	<i>AWEARLR</i>	<i>AWEARTT</i>	<i>AWEARTAT</i>

**1R SCOTE TEST PROCEDURE  
FORM 11  
CHARACTERISTICS OF THE DATA ACQUISITION SYSTEM**

LAB: <i>LAB</i>	EOT DATE: <i>DTCOMP</i>	END TIME: <i>EOTTIME</i>	METHOD: <i>METHOD</i>
STAND: <i>STAND</i>		RUN NUMBER: <i>ENRUN</i>	
FORMULATION/STAND CODE: <i>FORM</i>			
OILCODE: <i>OILCODE</i>			

PARAMETER (1)	SENSING DEVICE (2)	CALIBRATION FREQUENCY (3)	RECORD DEVICE (4)	OBSERVATION FREQUENCY (5)	RECORD FREQUENCY (6)	LOG FREQUENCY (7)	SYSTEM RESPONSE (8)
<b>OPERATION CONDITIONS</b>							
ENGINE SPEED (r/min)	<i>RPMSENS</i>	<i>RPMCALF</i>	<i>RPMRECD</i>	<i>RPMOBSF</i>	<i>RPMRECF</i>	<i>RPMLOGF</i>	<i>RPMYSYSR</i>
ENGINE POWER (kW)	<i>PWRSENS</i>	<i>PWRCALF</i>	<i>PWRRECD</i>	<i>PWROBSF</i>	<i>PWRRECF</i>	<i>PWRLOGF</i>	<i>PWRYSYSR</i>
FUEL FLOW (g/min)	<i>FFLOSENS</i>	<i>FFLOCALF</i>	<i>FFLORECD</i>	<i>FFLOBSF</i>	<i>FFLORECF</i>	<i>FFLOLOGF</i>	<i>FFLOYSYSR</i>
HUMIDITY (g/kg)	<i>HUMSENS</i>	<i>HUMCALF</i>	<i>HUMRECD</i>	<i>HUMOBSF</i>	<i>HUMRECF</i>	<i>HUMLOGF</i>	<i>HUMYSYSR</i>
<b>TEMPERATURES ( °C )</b>							
COOLANT OUT	<i>COTSENS</i>	<i>COTCALF</i>	<i>COTRECD</i>	<i>COTOBSF</i>	<i>COTRECF</i>	<i>COTLOGF</i>	<i>COTYSYSR</i>
COOLANT IN	<i>CONSENS</i>	<i>CONCALF</i>	<i>CONRECD</i>	<i>CONOBSF</i>	<i>CONRECF</i>	<i>CONLOGF</i>	<i>CONYSYSR</i>
OIL TO MANIFOLD	<i>OBRSSENS</i>	<i>OBRCALF</i>	<i>OBGRECD</i>	<i>OBGOBSF</i>	<i>OBGRECF</i>	<i>OBGLOGF</i>	<i>OBGYSYSR</i>
OIL COOLER IN	<i>OCOLSENS</i>	<i>OCOLCALF</i>	<i>OCOLRECD</i>	<i>OCOLOBSF</i>	<i>OCOLRECF</i>	<i>OCOLLOGF</i>	<i>OCOLYSYSR</i>
INLET AIR	<i>AIRSENS</i>	<i>AIRCALF</i>	<i>AIRRECD</i>	<i>AIRTOBSF</i>	<i>AIRRECF</i>	<i>AIRLOGF</i>	<i>AIRYSYSR</i>
EXHAUST	<i>EXTSENS</i>	<i>EXTCALF</i>	<i>EXTRECD</i>	<i>EXTOBSF</i>	<i>EXTRECF</i>	<i>EXTLOGF</i>	<i>EXTSYSR</i>
FUEL TO HEAD	<i>FUELSENS</i>	<i>FUELCALF</i>	<i>FUELRECD</i>	<i>FUELOBSF</i>	<i>FUELRECF</i>	<i>FUELLOGF</i>	<i>FUELSYSR</i>
<b>PRESSURES (kPa)</b>							
OIL TO MANIFOLD	<i>OBRSSENS</i>	<i>OBRCALF</i>	<i>OBPRECD</i>	<i>OBROBSF</i>	<i>OBPRECF</i>	<i>OBPLOGF</i>	<i>OBPSYSR</i>
INLET AIR	<i>AIRPSENS</i>	<i>AIRPCALF</i>	<i>AIRPRECD</i>	<i>AIRPOBSF</i>	<i>AIRPRECF</i>	<i>AIRPLOGF</i>	<i>AIRPSYSR</i>
EXHAUST	<i>EXPSSENS</i>	<i>EXPCALF</i>	<i>EXPRECD</i>	<i>EXPOBSF</i>	<i>EXPRECF</i>	<i>EXPLOGF</i>	<i>EXPSYSR</i>
FUEL FROM HEAD	<i>FFILSENS</i>	<i>FFILCALF</i>	<i>FFILRECD</i>	<i>FFILOBSF</i>	<i>FFILRECF</i>	<i>FFILLOGF</i>	<i>FFILSYSR</i>
CRANKCASE	<i>CCVSENS</i>	<i>CCVCALF</i>	<i>CCVRECD</i>	<i>CCVOBSF</i>	<i>CCVRECF</i>	<i>CCVLOGF</i>	<i>CCVYSYSR</i>
<b>FLOWS (L/min)</b>							
BLOWBY	<i>BLBYSSENS</i>	<i>BLBYCALF</i>	<i>BLBYRECD</i>	<i>BLBYOBSF</i>	<i>BLBYRECF</i>	<i>BLBYLOGF</i>	<i>BLBYSYSR</i>
COOLANT FLOW	<i>CFLWSENS</i>	<i>CFLWCALF</i>	<i>CFLWRECD</i>	<i>CFLWOBSF</i>	<i>CFLWRECF</i>	<i>CFLWLOGF</i>	<i>CFLWYSYSR</i>

**LEGEND:**

- (1) OPERATING PARAMETER
- (2) THE TYPE OF DEVICE USED TO MEASURE TEMPERATURE, PRESSURE, OR FLOW
- (3) FREQUENCY AT WHICH THE MEASUREMENT SYSTEM IS CALIBRATED
- (4) THE TYPE OF DEVICE WHERE DATA IS RECORDED
  - LG - HANDLOG SHEET
  - DL - AUTOMATIC DATA LOGGER
  - SC - STRIP CHART RECORDER
  - C/M - COMPUTER, USING MANUAL DATA ENTRY
  - C/D - COMPUTER, USING DIRECT I/O ENTRY

- (5) DATA AREA OBSERVED BUT ONLY RECORDED IF OFF SPEC.
- (6) DATA ARE RECORDED BUT ARE NOT RETAINED AT EOT
- (7) DATA ARE LOGGED AS PERMANENT RECORD, NOTE SPECIFY IF:
  - SS - SNAPSHOT TAKEN AT SPECIFIED FREQUENCY
  - AG/X - AVERAGE OF X DATA POINTS AT SPECIFIED FREQUENCY
- (8) TIME FOR THE OUTPUT TO REACH 63.2% OF FINAL VALUE FOR STEP CHANGE AT INPUT

**1R SCOTE TEST PROCEDURE  
FORM 12  
ENGINE OPERATIONAL DATA PLOTS**

LAB: <i>LAB</i>	EOT DATE: <i>DTCOMP</i>	END TIME: <i>EOTTIME</i>	METHOD: <i>METHOD</i>
STAND: <i>STAND</i>		RUN NUMBER: <i>ENRUN</i>	
FORMULATION/STAND CODE: <i>FORM</i>			
OILCODE: <i>OILCODE</i>			

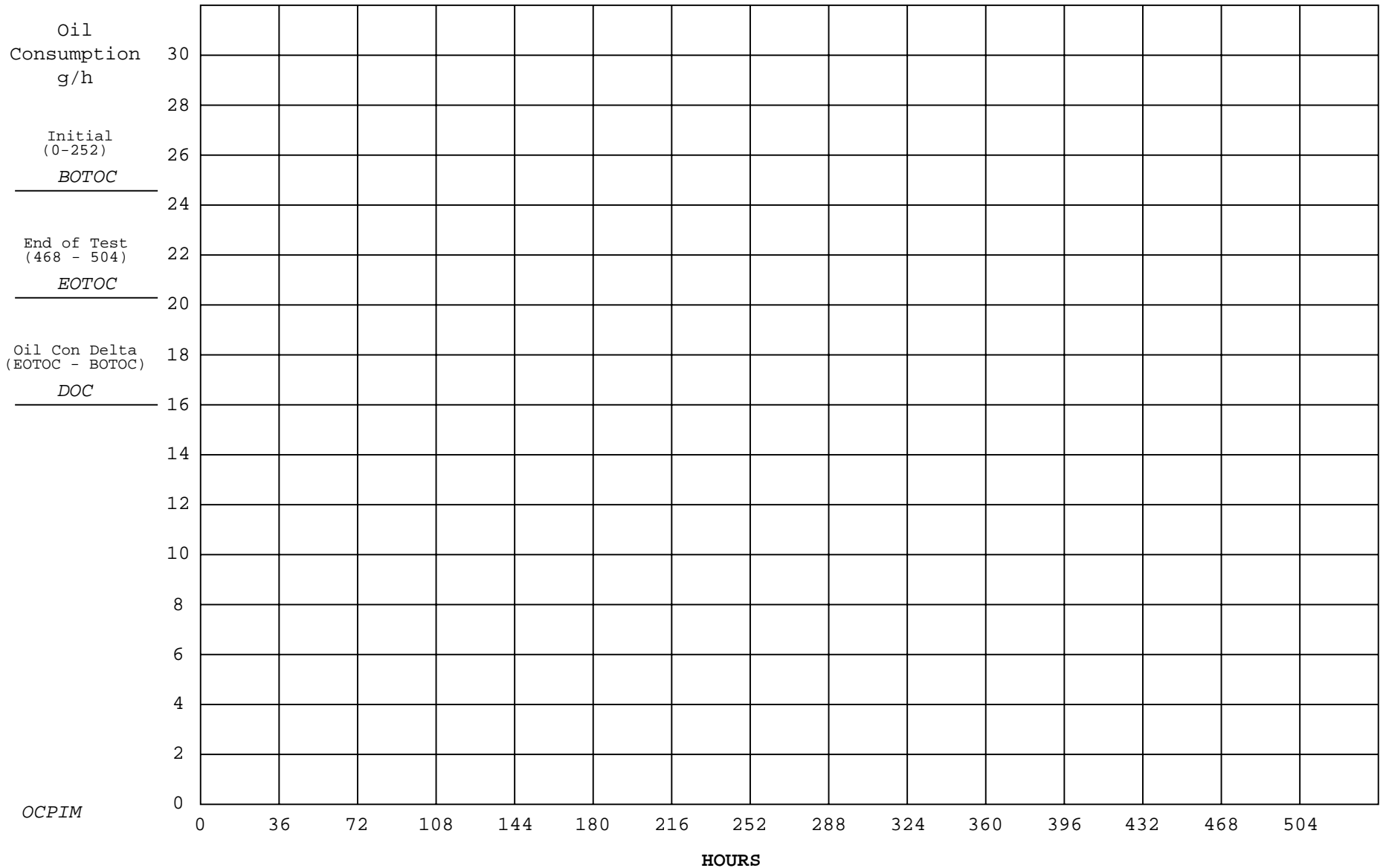


1R SCOTE TEST PROCEDURE

FORM 14

OIL CONSUMPTION

LAB: <i>LAB</i>	EOT DATE: <i>DTCOMP</i>	END TIME: <i>EOTTIME</i>	METHOD: <i>METHOD</i>
STAND: <i>STAND</i>		RUN NUMBER: <i>ENRUN</i>	
FORMULATION/STAND CODE: <i>FORM</i>			
OILCODE: <i>OILCODE</i>			





**1R SCOTE TEST PROCEDURE**  
**Form 15**  
**PISTON, RING AND LINER PHOTOGRAPHS**

LAB: <i>LAB</i>	EOT DATE: <i>DTCOMP</i>	END TIME: <i>EOTTIME</i>	METHOD: <i>METHOD</i>
STAND: <i>STAND</i>	RUN NUMBER: <i>ENRUN</i>		
FORMULATION/STAND CODE: <i>FORM</i>			
OILCODE: <i>OILCODE</i>			

*PRLIM*



1R SCOTE TEST PROCEDURE

Form 17

FUEL BATCH ANALYSIS

LAB: <i>LAB</i>	EOT DATE: <i>DTCOMP</i>	END TIME: <i>EOTTIME</i>	METHOD: <i>METHOD</i>
STAND: <i>STAND</i>		RUN NUMBER: <i>ENRUN</i>	
FORMULATION/STAND CODE: <i>FORM</i>			
OILCODE: <i>OILCODE</i>			

FUE LIM

1R SCOTE TEST PROCEDURE  
Form 18  
TMC CONTROL CHART ANALYSIS  
(Reference Oil Tests Only)

LAB: <i>LAB</i>	EOT DATE: <i>DTCOMP</i>	END TIME: <i>EOTTIME</i>	METHOD: <i>METHOD</i>
STAND: <i>STAND</i>		RUN NUMBER: <i>ENRUN</i>	
FORMULATION/STAND CODE: <i>FORM</i>			
OILCODE: <i>OILCODE</i>			

CCHIM