1R SCOTE TEST PROCEDURE
FORM 1

METHOD *CC*

VERSION *1R VERSION 20010604*

CONDUCTED FOR
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC

C	V = VALID
	I = INVALID
	N = RESULTS CAN NOT BE INTERPRETED AS REPRESENTATIVE OF OIL PERFORMANCE (NON-REFERENCE OIL) AND SHALL NOT

CC	RO = REFERENCE OIL TEST
	NR = ALL OTHERS TEST

C	WAS THIS TEST RUN UNDER A VALID CALIBRATION? (Y/N)

Test Number		
Test Stand: *CCCCC*	Engine Run *CCCC*	
EOT Time: *HH:MM*	EOT Date: *YYYYMMDD*	
Oil Code: *CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC*		
Formulation/Stand *CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC*		
Alternate Codes: *CCCCCCCCCC*	*CCCCCCCCCC*	*CCCCCCCCCC*

In my opinion *CCCCCCCC* been conducted in accordance with the 1Q Test (Research Report) and the appropriate amendments through the information letter system. The

SUBMITTED BY: *CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC*

Testing Laboratory

Signature Image

Signature

CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC

Typed Name

CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC

Title

1R SCOTE TEST PROCEDURE
FORM 2
TEST REPORT SUMMARY

LAB: *CC*	EOT DATE: *YYYYMMDD*	END TIME: *HH:MM*	METHOD: *CC*
STAND: *CCCCC*	RUN NUMBER: *CCCC*		
FORMULATION/STAND CODE: *CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC*			
OILCODE: *CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC*			

START DATE: *YYYYMMDD*	START TIME: *HH:MM*	TOTAL TEST LENGTH: *S12*	TMC OIL *CCCCCC*
LAB INTERNAL OIL *CCCCCCCCCCCC*		ENGINE SERIAL NUMBER: *CCCCCCCCCCC*	

	CORRECTION EFFECTIVE DATE	WD	TGC	TGF %	TLC	TLHC %	OIL CONSUMPTION g/h	TRANSFORMED OIL CONSUMPTION	EOTOC g/h	TRANSFORMED EOTOC
UNADJUSTED LAB RATING		*S1234.1*	*S12.12*	*S12.12*	*S12.12*	*S12.12*	*S12.1*	*S1.123*	*S12.1*	*S1.123*
INDUSTRY CORRECTION (IF ANY)	*YYYYMMDD*	*S1234.1*	*S12.12*	*S12.12*	*S12.12*	*S12.12*		*S1.123*		*S1.123*
SUBTOTAL		*S1234.1*	*S12.12*	*S12.12*	*S12.12*	*S12.12*		*S1.123*		*S1.123*
LAB SEVERITY ADJUSTMENT (IF ANY)[B]	*YYYYMMDD*	*S1234.1*	*S12.12*	*S12.12*	*S12.12*	*S12.12*		*S1.123*		*S1.123*
TOTAL		*S1234.1*	*S12.12*	*S12.12*	*S12.12*	*S12.12*	*S12.1*	*S1.123*	*S12.1*	*S1.123*

	EFFECTIVE DATE	WD	TGC	TGF %	TLC	TLHC %	OIL CONSUMPTION g/h	TRANSFORMED OIL CONSUMPTION	EOTOC g/h	TRANSFORMED EOTOC
TEST TARGET MEAN[A]	*YYYYMMDD*	*S1234.1*	*S12.12*	*S12.12*	*S12.12*	*S12.12*		*S1.123*		*S1.123*
TEST TARGET STD[A]	*YYYYMMDD*	*S1234.1*	*S12.12*	*S12.12*	*S12.12*	*S12.12*		*S1.123*		*S1.123*
API *CCCCCCCC* PASS LIMIT[B]	*YYYYMMDD*	*S1234.1*	*S12.12*	*S12.12*	*S12.12*	*S12.12*	*S12.1*		*S12.1*	

	REFEREE LAB	WD	TGC	TGF %	TLC	TLHC %				
REFEREE RATINGS[A]	*CC*	*S1234.1*	*S12.12*	*S12.12*	*S12.12*	*S12.12*				

	TOP	INT. 1	OIL	PISTON CROWN	PISTON SKIRT	LINER
RING LOSS OF SIDE CLEARANCE (mm)	*S1.123*	*S1.123*	*S1.123*			
RING END GAP INCREASE (mm)	*S1.123*	*S1.123*	*S1.123*			
IS THE RING STUCK?	*CCC*	*CCC*	*CCC*			
SCUFFED AREA %	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*
AVERAGE WEAR STEP (mm)						*S1.123*
% BORE POLISH						*S123.1*

Notes: [A] Reference oil tests or as requested by test sponsor
[B]

1R SCOTE TEST PROCEDURE
FORM 3
OPERATIONAL SUMMARY

LAB: *CC*	EOT DATE: *YYYYMMDD*	END TIME: *HH:MM*	METHOD: *CC*
STAND: *CCCCC*		RUN NUMBER: *CCCC*	
FORMULATION/STAND CODE: *CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC*			
OILCODE: *CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC*			

CONTROLLED PARAMETERS

OPERATING PARAMETER	QUALITY INDEX THRESHOLD	EOT QUALITY INDEX	PROCESS			TOTAL DATA POINTS		
			UNITS	TARGET	AVERAGE	SAMPLES [A]	BQD [B]	OVER/UNDER RANGE [C]
ENGINE SPEED	0.00	*S12.123*	r/min	1800	*S1234.1*	*S1234*	*S1234*	*S1234*
FUEL FLOW	0.00	*S12.123*	g/min	240	*S1234.1*	*S1234*	*S1234*	*S1234*
HUMIDITY	0.00	*S12.123*	g/kg	17.8	*S12.1*	*S1234*	*S1234*	*S1234*
COOLANT FLOW	0.00	*S12.123*	L/min	65	*S1234.1*	*S1234*	*S1234*	*S1234*
TEMPERATURE								
COOLANT OUT	0.00	*S12.123*	°C	105	*S12.1*	*S1234*	*S1234*	*S1234*
OIL TO MANIFOLD	0.00	*S12.123*	°C	120	*S123.1*	*S1234*	*S1234*	*S1234*
INLET AIR MANIFOLD	0.00	*S12.123*	°C	85	*S123.1*	*S1234*	*S1234*	*S1234*
FUEL INTO HEAD	0.00	*S12.123*	°C	42	*S123.1*	*S1234*	*S1234*	*S1234*
PRESSURES								
OIL TO MANIFOLD	0.00	*S12.123*	kPa	415	*S123.1*	*S1234*	*S1234*	*S1234*
INLET AIR (ABSOLUTE)	0.00	*S12.123*	kPa	292	*S123.1*	*S1234*	*S1234*	*S1234*
FUEL FROM HEAD	0.00	*S12.123*	kPa	275	*S123.1*	*S1234*	*S1234*	*S1234*
CO_2 % INLET MANIFOLD	0.00	*S12.123*	%	1.55	*S123.1*	*S1234*	*S1234*	*S1234*

NON-CONTROLLED PARAMETERS

OPERATING PARAMETER	PROCESS			TOTAL DATA POINTS		
	UNITS	TYPICAL RANGE [D]	AVERAGE	SAMPLES [A]	BQD [B]	OVER/UNDER RANGE [C]
INTAKE AIR FLOW	kg/h	250-320	*S1234.1*			
POWER	kW	65-70	*S123.1*	*S1234*	*S1234*	*S1234*
TORQUE	Nm	330-350	*S1234.1*	*S1234*	*S1234*	*S1234*
BLOWBY	L/min	20-56	*S123.1*	*S1234*	*S1234*	*S1234*
TEMPERATURE						
COOLANT IN	°C	97-101	*S12.1*	*S1234*	*S1234*	*S1234*
COOLANT DELTA T	°C	4-8	*S12.1*	*S1234*	*S1234*	*S1234*
OIL COOLER IN	°C	120-124	*S123.1*	*S1234*	*S1234*	*S1234*
HEATING OIL	°C	165 max.	*S123.1*	*S1234*	*S1234*	*S1234*
EXHAUST	°C	630-670	*S123.1*	*S1234*	*S1234*	*S1234*
PRESSURES						
CRANKCASE	kPa	0.09-0.3	*S1.12*	*S1234*	*S1234*	*S1234*
COOLANT TO JUG	kPa	64-92	*S12.1*	*S1234*	*S1234*	*S1234*
OIL FILTER DELTA P	kPa		*S12.1*	*S1234*	*S1234*	*S1234*
EXHAUST (ABSOLUTE)	kPa	298	*S123.1*	*S1234*	*S1234*	*S1234*

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: *CC*	EOT DATE: *YYYYMMDD*	END TIME: *HH:MM*	METHOD: *CC*
STAND: *CCCCC*		RUN NUMBER: *CCCC*	
FORMULATION/STAND CODE: *CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC*			
OILCODE: *CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC*			

ASSEMBLY MEASUREMENTS AND PARTS RECORD	
INJECTOR SETTING (GO / NO-GO)	*CCCCC*
WAS TIMING INITIALIZED? (YES/NO)	*CCC*
PISTON/HEAD CLEARANCE mm	*S1.123*
CAM GEAR BACKLASH mm	*S12.12*
DESIRED FUEL TIMING ˚BTC	*S12*
INTAKE VALVE OPEN ˚ATC	*S12*
INJECTOR PLUNGER LIFT mm @ 72˚	*S1.123*
INTAKE VALVE LIFT mm @ 456˚	*S1.123*
EXHAUST VALVE LIFT mm @ 247˚	*S1.123*

	PART NUMBER	SERIAL NUMBER	DATE CODE	INSPECTION CODE
LINER	*CCCCCCCCCCCC* [A]	*CCCCCCCCCCCC* [A]	*CCCCCCCCCCCC* [B]	
TOP RING	*CCCCCCCCCCCC* [C]	*CCCCCCCCCCCC* [E]		
INTERMEDIATE RING	*CCCCCCCCCCCC* [C]	*CCCCCCCCCCCC* [E]		
OIL RING	*CCCCCCCCCCCC* [C]	*CCCCCCCCCCCC* [E]		
PISTON CROWN	*CCCCCCCCCCCC* [D]	*CCCCCCCCCCCC* [D]	*CCCCCCCCCCCC* [B]	*CCCCCCCCCCCC* [G]
PISTON SKIRT	*CCCCCCCCCCCC* [H]	*CCCCCCCCCCCC* [I]		
FUEL INJECTOR	*CCCCCCCCCCCC* [J]	*CCCCCCCCCCCC* [K]		
ECM EPROM	*CCCCCCCCCCCC*		*CCCCCCCCCCCC*	
PISTON COOLING JET	*CCCCCCCCCCCC*	*CCCCCCCCCCCC*		

[A] On liner O.D.

[B] On liner O.D. (NNAN)

[C] On box label

[D] On top of piston

[E] On paper envelope containing the ring

[F] Number below "E" located on piston top

[G] Number above "E" located on piston top

[H] On bottom surface of skirt rim

[I] On bottom surface under pin bore

[J] On top surface of plunger

[K] On top surface of plunger - 6 digits

1R SCOTE TEST PROCEDURE
FORM 5
PISTON RATING SUMMARY

TEST	LAB: *CC*	EOT *YYYYMMDD*	END *HH:MM*	STAND: *CCCCC*	RUN *CCCC*	METHOD: *CC*
FORMULATION/STAND CODE: *CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC*				OILCODE: *CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC*		
TEST *CCCCCCCCCC*	FUEL BATCH: *CCCCCCCCCC*		DATE RATED: *YYYYMMDD*	RATER *CCC*	VERIFIED *CCC*	
LAST STAND REFERENCE INFORMATION	DATE COMPLETED: *YYYYMMDD*		STAND #: *CCCCC*	RUN #: *CCCC*	TMC OIL CODE: *CCCCCC*	

	WD	TGC	TLC	OIL CONSUMPTION g/h	TRANSFOMED OIL CONSUMPTION	EOTOC g/h	TRANSFORMED EOTOC
LAST REF. THIS STAND	*S123.1*	*S12.12*	*S12.12*	*S12.1*	*S1.123*	*S12.1*	*S1.123*
INDUSTRY AVERAGE	*S123.1*	*S12.12*	*S12.12*		*S1.123*		*S1.123*
INDUSTRY STD	*S123.1*	*S12.12*	*S12.12*		*S1.123*		*S1.123*

TOTAL PISTON RATINGS SUMMARY

		GROOVES				LANDS					GROOVE		LANDS							
	DEP. FACTOR	NO. 1		NO. 2		NO. 1		NO. 2		DEP. FACTOR	NO. 3		NO. 3		NO. 4		OIL COOLING		UNDER CROWN	
		A,%	DEM.	A,%	DEM.	A,%	DEM.	A,%	DEM.		A,%	DEM.	A,%	DEM.	A,%	DEM.	A,%	DEM.	A,%	DEM.
CARBON	HC – 1.0	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*		*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*				
	MC – 0.5	*S123*	*S123.12*								*S123*	*S123.12*								
	LC – .25	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*		*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*
	TOTAL	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*		*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*
VARNISH	8 – 9	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*											
	7 – 7.9	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*	7.5	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*
	6 – 6.9	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*											
	5 – 5.9	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*											
	4 – 4.9	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*	4.5	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*
	3 – 3.9	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*											
	2 – 2.9	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*											
	1 – 1.9	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*	1.5	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*
	>0 – 0.9	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*											
	CLEAN	*S123*	0	*S123*	0	*S123*	0	*S123*	0	CLEAN	*S123*	0	*S123*	0	*S123*	0	*S123*	0	*S123*	0
	TOTAL	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*		*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*	*S123*	*S123.12*
RATING		*S123.12*		*S123.12*		*S123.12*		*S123.12*			*S123.12*		*S123.12*		*S123.12*		*S123.12*		*S123.12*	
LOCATION FACTOR		2		3		1		3			20		20		60		0.5		1	
IND RATING		*S123.12*		*S123.12*		*S123.12*		*S123.12*			*S123.12*		*S123.12*		*S123.12*		*S123.12*		*S123.12*	

WD: *S1234.1*	TLHC %: *S12.12*	TGF %: *S12.12*	IGF %: *S12*	TLFC %: *S123456*
UNWEIGHTED: *S1234.1*	TLC: *S12.12*	TGC: *S12.12*	IGC: *S12.12*	UNDERCROWN CARBON: *S123.12*

1R SCOTE TEST PROCEDURE
Form 5A

LAB: *CC*	EOT DATE: *YYYYMMDD*	END TIME: *HH:MM*	METHOD: *CC*
STAND: *CCCCC*		RUN NUMBER: *CCCC*	
FORMULATION/STAND CODE: *CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC*			
OILCODE: *CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC*			

*CCCCCCCCCCCCCCCCCCCC

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

LAB: *CC*	EOT DATE: *YYYYMMDD*	END TIME: *HH:MM*	METHOD: *CC*
STAND: *CCCCC*		RUN NUMBER: *CCCC*	
FORMULATION/STAND CODE: *CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC*			
OILCODE: *CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC*			

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	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*
		B	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*
	2	T	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*
		B	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*
	3	T	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*
		B	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*
TOP BOTTOM AND BACK OF RINGS	1	T	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*
		B	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*
		BK	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*
	2	T	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*
		B	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*
		BK	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*
	3	T	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*
		B	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*
		BK	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*

ADDITIONAL DEPOSIT & CONDITION RATINGS	
PISTON CROWN	*CCCCCCCCCCCCCCCCCCCC

1R SCOTE TEST PROCEDURE
FORM 6A
REFEREE RATING

TEST IDENTIFICATION							
LAB:	CC	EOT DATE:	YYYYMMDD	END TIME:	HH:MM	METHOD:	CC
STAND:	CCCCC	RUN #:	CCCC				
FORMULATION/STAND CODE:	CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC						
OILCODE:	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC						

REFEREE RATING INFORMATION							
COMPANY:	CC	RATING NUMBER:	CCCCCCCCCC	DATE RATED:	YYYYMMDD	RATER:	CCC

TOTAL PISTON RATINGS SUMMARY

	DEP. FACTOR	GROOVES NO. 1 A,%	GROOVES NO. 1 DEM.	GROOVES NO. 2 A,%	GROOVES NO. 2 DEM.	LANDS NO. 1 A,%	LANDS NO. 1 DEM.	LANDS NO. 2 A,%	LANDS NO. 2 DEM.	DEP. FACTOR	GROOVES NO. 3 A,%	GROOVES NO. 3 DEM.	LANDS NO. 3 A,%	LANDS NO. 3 DEM.	LANDS NO. 4 A,%	LANDS NO. 4 DEM.	OIL COOLING A,%	OIL COOLING DEM.	UNDER CROWN A,%	UNDER CROWN DEM.
CARBON	HC-1.0	S123	S123.12	S123	S123.12	S123	S123.12	S123	S123.12		S123	S123.12	S123	S123.12	S123	S123.12				
	MC-0.5	S123	S123.12								S123	S123.12								
	LC-.25	S123	S123.12	S123	S123.12	S123	S123.12	S123	S123.12		S123	S123.12	S123	S123.12	S123	S123.12	S123	S123.12	S123	S123.12
	TOTAL	S123	S123.12	S123	S123.12	S123	S123.12	S123	S123.12		S123	S123.12	S123	S123.12	S123	S123.12	S123	S123.12	S123	S123.12
VARNISH	8 – 9	S123	S123.12	S123	S123.12	S123	S123.12	S123	S123.12	7.5	S123	S123.12	S123	S123.12	S123	S123.12	S123	S123.12	S123	S123.12
	7 – 7.9	S123	S123.12	S123	S123.12	S123	S123.12	S123	S123.12											
	6 – 6.9	S123	S123.12	S123	S123.12	S123	S123.12	S123	S123.12											
	5 – 5.9	S123	S123.12	S123	S123.12	S123	S123.12	S123	S123.12	4.5	S123	S123.12	S123	S123.12	S123	S123.12	S123	S123.12	S123	S123.12
	4 – 4.9	S123	S123.12	S123	S123.12	S123	S123.12	S123	S123.12											
	3 – 3.9	S123	S123.12	S123	S123.12	S123	S123.12	S123	S123.12											
	2 – 2.9	S123	S123.12	S123	S123.12	S123	S123.12	S123	S123.12	1.5	S123	S123.12	S123	S123.12	S123	S123.12	S123	S123.12	S123	S123.12
	1 – 1.9	S123	S123.12	S123	S123.12	S123	S123.12	S123	S123.12											
	>0 – 0.9	S123	S123.12	S123	S123.12	S123	S123.12	S123	S123.12											
	CLEAN	S123	0	S123	0	S123	0	S123	0		S123	0	S123	0	S123	0	S123	0	S123	0
	TOTAL	S123	S123.12	S123	S123.12	S123	S123.12	S123	S123.12		S123	S123.12	S123	S123.12	S123	S123.12	S123	S123.12	S123	S123.12
RATING		S123.12		S123.12		S123.12		S123.12			S123.12		S123.12		S123.12		S123.12		S123.12	
LOCATION FACTOR		2		3		1		3			20		20		60		0.5		1	
IND RATING		S123.12		S123.12		S123.12		S123.12			S123.12		S123.12		S123.12		S123.12		S123.12	

WD:	S1234.1	TLHC %:	S12.12	TGF %:	S12.12	IGF %:	S12	TLFC %:	S123456
UNWEIGHTED:	S1234.1	TLC:	S12.12	TGC:	S12.12	IGC:	S12.12	UNDERCROWN CARBON:	S123.12

1R SCOTE TEST PROCEDURE
FORM 7

TEST IDENTIFICATION			
LAB: *CC*	EOT DATE: *YYYYMMDD*	END TIME: *HH:MM*	METHOD: *CC*
STAND: *CCCCC*		RUN NUMBER: *CCCC*	
FORMULATION/STAND CODE: *CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC*			
OILCODE: *CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC*			
TEST FUEL: *CCCCCCCCCC*		FUEL BATCH: *CCCCCCCCCC*	

OIL ANALYSIS	NEW	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*
VISC @ 100°C	*S123.12*	*S123.12*			*S123.12*			*S123.12*			*S123.12*		*S123.12*		*S123.12*
VISC @ 40°C	*S123.12*	*S123.12*			*S123.12*			*S123.12*			*S123.12*		*S123.12*		*S123.12*
TBN D4739	*S123.12*	*S123.12*			*S123.12*			*S123.12*			*S123.12*		*S123.12*		*S123.12*
TAN D664	*S123.12*	*S123.12*			*S123.12*			*S123.12*			*S123.12*		*S123.12*		*S123.12*
TGA Soot %	*S123.1*	*S123.1*			*S123.1*			*S123.1*			*S123.1*		*S123.1*		*S123.1*
WEAR METALS (ppm)															
Fe	*S123*	*S123*			*S123*			*S123*			*S123*		*S123*		*S123*
Al	*S123*	*S123*			*S123*			*S123*			*S123*		*S123*		*S123*
Si	*S123*	*S123*			*S123*			*S123*			*S123*		*S123*		*S123*
Cu	*S123*	*S123*			*S123*			*S123*			*S123*		*S123*		*S123*
Cr	*S123*	*S123*			*S123*			*S123*			*S123*		*S123*		*S123*
Pb	*S123*	*S123*			*S123*			*S123*			*S123*		*S123*		*S123*
FUEL DILUTION %		*S12.1*									*S12.1*				*S12.1*
IR O_2	*S1234.123*	*S1234.123*			*S1234.123*			*S1234.123*			*S1234.123*		*S1234.123*		*S1234.123*
BLOWBY (L/min)		*S123.1*	*S123.1*	*S123.1*	*S123.1*	*S123.1*	*S123.1*	*S123.1*	*S123.1*	*S123.1*	*S123.1*	*S123.1*	*S123.1*	*S123.1*	*S123.1*
Oil Consumption g/h for hrs ending		*S12.1*	*S12.1*	*S12.1*	*S12.1*	*S12.1*	*S12.1*	*S12.1*	*S12.1*	*S12.1*	*S12.1*	*S12.1*	*S12.1*	*S12.1*	*S12.1*
Oil Consumption r[2]		*S1.12*	*S1.12*	*S1.12*	*S1.12*	*S1.12*	*S1.12*	*S1.12*	*S1.12*	*S1.12*	*S1.12*	*S1.12*	*S1.12*	*S1.12*	*S1.12*
FUEL POSITION (mm)		*S12.1*						*S12.1*			*S12.1*				*S12.1*

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 PROCEDURE
FORM 8
DOWNTIME SUMMARY

LAB: *CC*	EOT DATE: *YYYYMMDD*	END TIME: *HH:MM*	METHOD: *CC*
STAND: *CCCCC*		RUN NUMBER: *CCCC*	
FORMULATION/STAND CODE: *CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC*			
OILCODE: *CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC*			

Number of Downtime Occurrences		*S12*	
TEST HOURS	**DATE**	**DOWNTIME**	**REASONS**
HHH:MM	*YYYYMMDD*	*HHH:MM*	*CCCCCCCCCCCCCCCCCCCC

1R SCOTE TEST PROCEDURES
FORM 9
RING MEASUREMENTS

LAB: *CC*	EOT DATE: *YYYYMMDD*	END TIME: *HH:MM*	METHOD: *CC*
STAND: *CCCCC*		RUN NUMBER: *CCCC*	
FORMULATION/STAND CODE: *CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC*			
OILCODE: *CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC*			

ALL RING MEASUREMENTS ARE MADE USING METRIC FEELER GAGES

RING GAPS (mm)	**1Y4014 TOP**	**1Y4013 INTERMEDIATE**	**1Y4012 OIL**
SPECIFICATIONS	0.350mm – 0.550mm	0.754mm – 0.906mm	0.400mm – 0.750mm
PRE-TEST	*S1.123*	*S1.123*	*S1.123*
POST-TEST	*S1.123*	*S1.123*	*S1.123*
INCREASE	*S1.123*	*S1.123*	*S1.123*

RING SIDE CLEARANCE*		**A**	**B**	**C**	**D**	**AVG.**	**MIN.**	**SPECIFICATION**
TOP	PRE-TEST	*S12.123*	*S12.123*	*S12.123*	*S12.123*	*S12.123*	*S1.123*	0.090mm – 0.127mm
	POST-TEST	*S12.123*	*S12.123*	*S12.123*	*S12.123*	*S12.123*	*S1.123*	
	LSC	*S12.123*	*S12.123*	*S12.123*	*S12.123*	*S1.123*	*S12.123*	
INT.	PRE-TEST	*S12.123*	*S12.123*	*S12.123*	*S12.123*	*S12.123*	*S1.123*	0.060mm – 0.110mm
	POST-TEST	*S12.123*	*S12.123*	*S12.123*	*S12.123*	*S12.123*	*S1.123*	
	LSC	*S12.123*	*S12.123*	*S12.123*	*S12.123*	*S1.123*	*S12.123*	
OIL	PRE-TEST	*S12.123*	*S12.123*	*S12.123*	*S12.123*	*S12.123*	*S1.123*	0.030mm – 0.080mm
	POST-TEST	*S12.123*	*S12.123*	*S12.123*	*S12.123*	*S12.123*	*S1.123*	
	LSC	*S12.123*	*S12.123*	*S12.123*	*S12.123*	*S1.123*	*S12.123*	

* 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: *CC*	EOT DATE: *YYYYMMDD*	END TIME: *HH:MM*	METHOD: *CC*
STAND: *CCCCC*		RUN NUMBER: *CCCC*	
FORMULATION/STAND CODE: *CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC*			
OILCODE: *CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC*			

LINER SURFACE FINISH (µm)			
DISTANCE FROM TOP	TRANSVERSE	LONGITUDINAL	AVERAGE
130 mm	*S1.12*	*S1.12*	*S1.12*
50 mm	*S1.12*	*S1.12*	*S1.12*
25 mm	*S1.12*	*S1.12*	*S1.12*
		TOTAL AVERAGE (Spec: 0.4 – 0.8 µm)	*S1.12*

% LINER BORE POLISH – GRID (ADD T/AT VALUES FROM GRID)	
THRUST	*S123.1*
ANTI-THRUST	*S123.1*
TOTAL	*S123.1*

LINER BORE MEASUREMENT (137.154mm minimum)			
BEFORE TEST – DIAMETER (DIAL BORE GAGE)			
BORE HEIGHT	**LONGITUDINAL**	**TRANSVERSE**	**OUT OF ROUND** (0.038 mm max)
250 mm	*S123.123*	*S123.123*	*S1.123*
210 mm	*S123.123*	*S123.123*	*S1.123*
170 mm	*S123.123*	*S123.123*	*S1.123*
130 mm	*S123.123*	*S123.123*	*S1.123*
50 mm	*S123.123*	*S123.123*	*S1.123*
25 mm	*S123.123*	*S123.123*	*S1.123*
15 mm	*S123.123*	*S123.123*	*S1.123*
TAPER (0.050 max)	*S123.123*	*S123.123*	

AFTER TEST – (SURFACE PROFILE)				
	LONGITUDINAL		**TRANSVERSE**	
	FRONT	**REAR**	**T**	**AT**
WEAR STEP @ 13 mm	*S1.123*	*S1.123*	*S1.123*	*S1.123*

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

LAB: *CC*	EOT DATE: *YYYYMMDD*	END TIME: *HH:MM*	METHOD: *CC*
STAND: *CCCCC*		RUN NUMBER: *CCCC*	
FORMULATION/STAND CODE: *CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC*			
OILCODE: *CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC*			

PARAMETER (1)	SENSING DEVICE (2)	CALIBRATION FREQUENCY (3)	RECORD DEVICE (4)	OBSERVATION FREQUENCY (5)	RECORD FREQUENCY (6)	LOG FREQUENCY (7)	SYSTEM RESPONSE (8)
OPERATION CONDITIONS							
ENGINE SPEED (r/min)	*cccccccccccccccc*	*ccccccccccccc*	*cccccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*cccccccc*
ENGINE POWER (kW)	*cccccccccccccccc*	*ccccccccccccc*	*cccccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*cccccccc*
FUEL FLOW (g/min)	*cccccccccccccccc*	*ccccccccccccc*	*cccccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*cccccccc*
HUMIDITY (g/kg)	*cccccccccccccccc*	*ccccccccccccc*	*cccccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*cccccccc*
TEMPERATURES (°C)							
COOLANT OUT	*cccccccccccccccc*	*ccccccccccccc*	*cccccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*cccccccc*
COOLANT IN	*cccccccccccccccc*	*ccccccccccccc*	*cccccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*cccccccc*
OIL TO MANIFOLD	*cccccccccccccccc*	*ccccccccccccc*	*cccccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*cccccccc*
OIL COOLER IN	*cccccccccccccccc*	*ccccccccccccc*	*cccccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*cccccccc*
INLET AIR	*cccccccccccccccc*	*ccccccccccccc*	*cccccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*cccccccc*
EXHAUST	*cccccccccccccccc*	*ccccccccccccc*	*cccccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*cccccccc*
FUEL TO HEAD	*cccccccccccccccc*	*ccccccccccccc*	*cccccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*cccccccc*
PRESSURES (kPa)							
OIL TO MANIFOLD	*cccccccccccccccc*	*ccccccccccccc*	*cccccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*cccccccc*
INLET AIR	*cccccccccccccccc*	*ccccccccccccc*	*cccccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*cccccccc*
EXHAUST	*cccccccccccccccc*	*ccccccccccccc*	*cccccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*cccccccc*
FUEL FROM HEAD	*cccccccccccccccc*	*ccccccccccccc*	*cccccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*cccccccc*
CRANKCASE	*cccccccccccccccc*	*ccccccccccccc*	*cccccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*cccccccc*
FLOWS (L/min)							
BLOWBY	*cccccccccccccccc*	*ccccccccccccc*	*cccccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*cccccccc*
COOLANT FLOW	*cccccccccccccccc*	*ccccccccccccc*	*cccccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*ccccccccccccc*	*cccccccc*

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 REATINED 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 13
TORQUE AND EXHAUST TEMPERATURE HISTORY

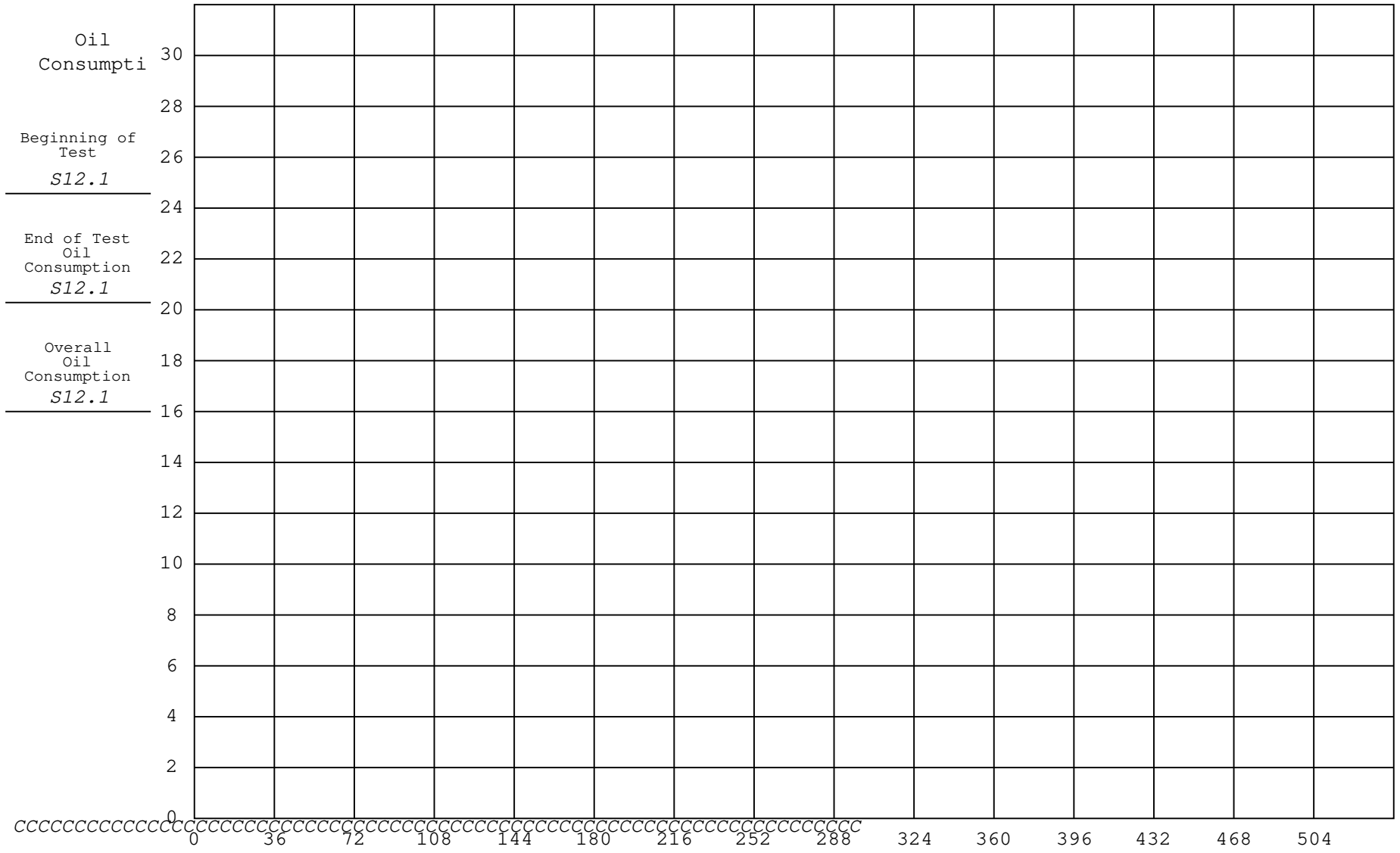
LAB: *CC*	EOT DATE: *YYYYMMDD*	END TIME: *HH:MM*	METHOD: *CC*
STAND: *CCCCC*		RUN NUMBER: *CCCC*	
FORMULATION/STAND CODE: *CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC*			
OILCODE: *CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC*			

Data From Last 10 Tests

Test No.	1	2	3	4	5	6	7	8	9	10
Avg. Exh Temp.	*S123.1*									
Avg.Eng.Torque	*S123.1*									

1R SCOTE TEST PROCEDURE
FORM 14

LAB: *CC*	EOT DATE: *YYYYMMDD*	END TIME: *HH:MM*	METHOD: *CC*
STAND: *CCCCC*		RUN NUMBER: *CCCC*	
FORMULATION/STAND CODE: *CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC*			
OILCODE: *CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC*			


Oil Consumpti
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
Beginning of Test
S12.1
End of Test Oil Consumption
S12.1
Overall Oil Consumption
S12.1
CCCCCCCCCCCCCCCCCCCC

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

LAB: *CC*	EOT DATE: *YYYYMMDD*	END TIME: *HH:MM*	METHOD: *CC*
STAND: *CCCCC*		RUN NUMBER: *CCCC*	
FORMULATION/STAND CODE: *CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC*			
OILCODE: *CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC*			

ccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccc

Refer to Appendix A14 for example of Photo