

A5. Report Forms
M11 EGR
LUBRICANT PERFORMANCE TEST

VERSION M11EGR VERSION 20020301

METHOD CCCCCCCC

CONDUCTED FOR:

CC
 CCC

| | |
|---|--|
| C | V = VALID; THE REFERENCE OIL/NON-REFERENCE OIL WAS EVALUATED IN ACCORDANCE WITH THE TEST PROCEDURE. |
| | I = INVALID; THE REFERENCE OIL/NON-REFERENCE OIL WAS NOT EVALUATED IN ACCORDANCE WITH THE TEST PROCEDURE. |
| | N = NOT INTERPRETABLE; THE NON-REFERENCE OIL RESULTS CANNOT BE INTERPRETED AND SHALL NOT BE USED FOR MULTIPLE TEST ACCEPTANCE. |

| | |
|----|-----------------------------|
| CC | NR = Non-Reference Oil Test |
| | RO = Reference Oil Test |

| | | |
|--|--------------------------|--------------------------|
| STAND: CCCCC | ENGINE NO.: CCCCCCCC | ENGINE RUN NO.: CCCC |
| END OF TEST DATE: YYYYMMDD | | END OF TEST TIME: HH:MM |
| OIL CODE: CCC | | |
| FORMULATION/STAND CODE: CC-CCCCCCCCC-C-C-CCCCCC-CC-CC-CCCC | | |
| ALTCODE1: CCCCCCCCCCCCCC | ALTCODE2: CCCCCCCCCCCCCC | ALTCODE3: CCCCCCCCCCCCCC |

In my opinion this test CCCCCCCC been conducted in a valid manner in accordance with the Test Procedure and the appropriate amendments through the information letter system. The remarks included in this report describe the anomalies associated with this test.

SUBMITTED BY CCC

Testing Laboratory

Signature Image

Signature

CC

Typed Name

CC

Typed Name

**M11 EGR LUBRICANT PERFORMANCE TEST
Test Results Summary
Form 4**

| | | |
|---|---------------------------|-----------------------------|
| Laboratory: <i>CC</i> | EOT Date: <i>YYYYMMDD</i> | EOT Time: <i>HH:MM</i> |
| Stand: <i>CCCCC</i> | Engine: <i>CCCCCCCC</i> | Engine Run No.: <i>CCCC</i> |
| Formulation/Stand Code: <i>CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCC</i> | | |
| Oil Code: <i>CC</i> Engine Kit S/N: <i>CCCCCCCCCCCC</i> | | |

| | |
|----------------------------------|-----------------------------|
| DATE TEST STARTED | <i>YYYYMMDD</i> |
| START TIME | <i>HH:MM</i> |
| TEST LENGTH | <i>S1234</i> |
| TMC OIL CODE ^A | <i>CCCCCC</i> |
| LABORATORY OIL CODE | <i>CCCCCCCCCCCCCCCCCCCC</i> |
| SAE VISCOSITY | <i>CCCCCC</i> |
| TGA SOOT % AT 50 h (2.8 minimum) | <i>S123.1</i> |
| TGA SOOT % AT 250 h (8.0 - 9.5) | <i>S123.1</i> |
| AVERAGE TGA SOOT % 0 - 300 h | <i>S123.1</i> |
| TOTAL OIL CONSUMPTION, kg | <i>S12.12</i> |

| | Adjusted Average Crosshead Mass Loss (mg) | Filter Plugging Delta P (kPa) | Average Sludge Rating (merits) | Avg. Top Ring Weight Loss (mg) |
|---|---|-------------------------------------|--------------------------------------|--------------------------------------|
| Original Result | <i>S12.1234</i> | <i>S123</i> | <i>S1.1</i> | <i>S123.1</i> |
| Transformed Result ^B | <i>S12.1234</i> | <i>S12.1234</i> | <i>S1.1234</i> | <i>S123.1234</i> |
| Correction Factor ^B | <i>S12.1234</i> | <i>S1.1234</i> | <i>S1.1234</i> | <i>S1.1234</i> |
| Corrected Transformed Result ^B | <i>S12.1234</i> | <i>S12.1234</i> | <i>S1.1234</i> | <i>S123.1234</i> |
| Severity Adjustment ^B | <i>S12.1234</i> | <i>S1.1234</i> | <i>S1.1234</i> | <i>S1.1234</i> |
| Final Transformed Result ^B | <i>S12.1234</i> | <i>S12.1234</i> | <i>S1.1234</i> | <i>S123.1234</i> |
| Final Result | <i>S123.1</i> | <i>S123</i> | <i>S1.1</i> | <i>S123.1</i> |

LAST STAND REFERENCE RESULTS

| |
|---|
| TEST NUMBER: <i>CCCCC - CCCCCCCC - CCCC</i> |
| OILCODE <i>CC</i> |
| TEST LENGTH <i>S1234</i> |
| TMC OIL CODE <i>CCCCCC</i> |
| EOT DATE <i>YYYYMMDD</i> |
| EOT TIME <i>HH:MM</i> |
| STAND CALIBRATION EXPIRATION DATE <i>YYYYMMDD</i> |
| TGA SOOT % AT 50 h (2.8 minimum) <i>S123.1</i> |
| TGA SOOT % AT 250 h (8.5 - 9.5) <i>S123.1</i> |
| AVERAGE TGA SOOT % 0 - 300 h <i>S123.1</i> |
| TOTAL OIL CONSUMPTION, kg <i>S12.12</i> |

| | Adjusted Average Crosshead Mass Loss (mg) | Filter Plugging Delta P (kPa) | Average Sludge Rating (merits) | Avg. Top Ring Weight Loss (mg) |
|---|---|-------------------------------------|--------------------------------------|--------------------------------------|
| Original Result | <i>S12.1234</i> | <i>S123</i> | <i>S1.1</i> | <i>S123.1</i> |
| Transformed Result ^B | <i>S12.1234</i> | <i>S12.1234</i> | <i>S1.1234</i> | <i>S123.1234</i> |
| Correction Factor ^B | <i>S12.1234</i> | <i>S1.1234</i> | <i>S1.1234</i> | <i>S1.1234</i> |
| Corrected Transformed Result ^B | <i>S12.1234</i> | <i>S12.1234</i> | <i>S1.1234</i> | <i>S123.1234</i> |
| Final Transformed Result ^B | <i>S12.1234</i> | <i>S12.1234</i> | <i>S1.1234</i> | <i>S123.1234</i> |
| Final Result | <i>S123.1</i> | <i>S123</i> | <i>S1.1</i> | <i>S123.1</i> |

^A Reference Tests Only

^B Filter Plugging Delta P Value in Transformed Units

**M11 EGR LUBRICANT PERFORMANCE TEST
FORM 5
OPERATIONAL SUMMARY**

| | | | | | |
|-------------------------|---|----------|-----------------|-----------------|--------------|
| Laboratory | <i>CC</i> | EOT Date | <i>YYYYMMDD</i> | EOT Time | <i>HH:MM</i> |
| Test Number | Stand: <i>CCCCC</i> | Engine: | <i>CCCCCCCC</i> | Engine Run No.: | <i>CCCC</i> |
| Formulation/Stand Code: | <i>CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCC</i> | | | | |
| Oil Code: | <i>CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC</i> | | | | |

| | Parameter | Units | QI Threshold | EOT QI ^A | Target | | Average | | Samples ^B | BQD ^C | Over/Under Range ^D |
|---------------------------|------------------------|-------|-----------------------------|---------------------|----------------|------|----------------|----------------|----------------------|------------------|-------------------------------|
| | | | | | | | | | | | |
| Controlled Parameters | Speed | r/min | 0.000 | <i>S12.123</i> | 1800 | 1600 | <i>S123456</i> | <i>S123456</i> | <i>S1234</i> | <i>S1234</i> | <i>S1234</i> |
| | Fuel Flow | kg/h | 0.000 | <i>S12.123</i> | 58.0 | 64.4 | <i>S123.1</i> | <i>S123.1</i> | <i>S1234</i> | <i>S1234</i> | <i>S1234</i> |
| | Coolant Out | °C | 0.000 | <i>S12.123</i> | 65.5 | | <i>S123.1</i> | | <i>S1234</i> | <i>S1234</i> | <i>S1234</i> |
| | Fuel In | °C | 0.000 | <i>S12.123</i> | 40 | | <i>S12.1</i> | | <i>S1234</i> | <i>S1234</i> | <i>S1234</i> |
| | Oil Gallery | °C | 0.000 | <i>S12.123</i> | 115 | | <i>S123.1</i> | | <i>S1234</i> | <i>S1234</i> | <i>S1234</i> |
| | Intake Manifold | °C | 0.000 | <i>S12.123</i> | 80.0 | 65.5 | <i>S12.1</i> | <i>S12.1</i> | <i>S1234</i> | <i>S1234</i> | <i>S1234</i> |
| | Exhaust | kPa | 0.000 | <i>S12.123</i> | 107 | | <i>S123.1</i> | | <i>S1234</i> | <i>S1234</i> | <i>S1234</i> |
| Non-controlled Parameters | Parameter | Units | Typical Values ^E | | Average | | | | | | |
| | Torque | N-m | TBD | TBD | <i>S1234.1</i> | | <i>S1234.1</i> | | | | |
| | Power | kW | TBD | TBD | <i>S123.1</i> | | <i>S123.1</i> | | | | |
| | Intake CO ₂ | % | 0.97 - 1.09 | 0.78 - 0.85 | <i>S1.12</i> | | <i>S1.12</i> | | | | |
| | Blowby | L/min | TBD | | <i>S12.1</i> | | | | | | |
| | Coolant In | °C | TBD | | <i>S123.1</i> | | | | | | |
| | Intake Air | °C | TBD | | <i>S12.1</i> | | | | | | |
| | Pre-Turbine (F) | °C | TBD | | <i>S123.1</i> | | | | | | |
| | Pre-Turbine (R) | °C | TBD | | <i>S123.1</i> | | | | | | |
| | Tailpipe | °C | TBD | | <i>S123.1</i> | | | | | | |
| | Fuel | kPa | TBD | | <i>S1234.1</i> | | | | | | |
| | Oil Gallery | kPa | TBD | | <i>S123.1</i> | | | | | | |
| | Coolant | kPa | 99 - 107 | | <i>S123.1</i> | | | | | | |
| | Intake Manifold | kPa | TBD | | <i>S123.1</i> | | | | | | |
| Crankcase | kPa | TBD | | <i>S1.1</i> | | | | | | | |
| Intake Air | kPa | TBD | | <i>S12.12</i> | | | | | | | |

^A QI values above the threshold are acceptable by the M11 Surveillance Panel. QI values below the threshold may not be considered acceptable based on an engineering review. See the comments section of this report.

^B Total number of data points taken

^C Number of Bad Quality Data points not used in the calculation of the statistical measures

^D Number of points clipped by over/under range limits

^E Typical values determined from reference oil test database

**M11 EGR LUBRICANT PERFORMANCE TEST
FORM 6
CROSSHEAD MASS LOSS SUMMARY**

| | | |
|--|--------------------------|-----------------------------|
| Laboratory <i>CC</i> | EOT Date <i>YYYYMMDD</i> | EOT Time <i>HH:MM</i> |
| Test Number | | |
| STAND: <i>CCCCC</i> | ENGINE: <i>CCCCCCCC</i> | ENGINE RUN NO.: <i>CCCC</i> |
| FORMULATION/STAND CODE: <i>CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCC</i> | | |
| OIL CODE: <i>CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC</i> | | |

| LOCATION | SERIAL NO. | PRETEST MASS (g) | EOT MASS (g) | MASS LOSS (mg) |
|----------|--------------|------------------|------------------|----------------|
| 1E | <i>CCCCC</i> | <i>S123.1234</i> | <i>S123.1234</i> | <i>S12.1</i> |
| 1I | <i>CCCCC</i> | <i>S123.1234</i> | <i>S123.1234</i> | <i>S12.1</i> |
| 2I | <i>CCCCC</i> | <i>S123.1234</i> | <i>S123.1234</i> | <i>S12.1</i> |
| 2E | <i>CCCCC</i> | <i>S123.1234</i> | <i>S123.1234</i> | <i>S12.1</i> |
| 3E | <i>CCCCC</i> | <i>S123.1234</i> | <i>S123.1234</i> | <i>S12.1</i> |
| 3I | <i>CCCCC</i> | <i>S123.1234</i> | <i>S123.1234</i> | <i>S12.1</i> |
| 4I | <i>CCCCC</i> | <i>S123.1234</i> | <i>S123.1234</i> | <i>S12.1</i> |
| 4E | <i>CCCCC</i> | <i>S123.1234</i> | <i>S123.1234</i> | <i>S12.1</i> |
| 5E | <i>CCCCC</i> | <i>S123.1234</i> | <i>S123.1234</i> | <i>S12.1</i> |
| 5I | <i>CCCCC</i> | <i>S123.1234</i> | <i>S123.1234</i> | <i>S12.1</i> |
| 6I | <i>CCCCC</i> | <i>S123.1234</i> | <i>S123.1234</i> | <i>S12.1</i> |
| 6E | <i>CCCCC</i> | <i>S123.1234</i> | <i>S123.1234</i> | <i>S12.1</i> |

| INTAKE/EXHAUST SUMMARY | INTAKE | | EXHAUST | |
|---|-----------------|------------------|-----------------|------------------|
| | As Measured | Outlier Screened | As Measured | Outlier Screened |
| Average Crosshead Mass Loss (mg) | <i>S12.12</i> | <i>S12.12</i> | <i>S12.12</i> | <i>S12.12</i> |
| Minimum Crosshead Mass Loss (mg) | <i>S12.1</i> | <i>S12.1</i> | <i>S12.1</i> | <i>S12.1</i> |
| Maximum Crosshead Mass Loss (mg) | <i>S12.1</i> | <i>S12.1</i> | <i>S12.1</i> | <i>S12.1</i> |
| Standard Deviation (mg) | <i>S12.12</i> | <i>S12.12</i> | <i>S12.12</i> | <i>S12.12</i> |
| Outlier Crossheads Locations ^A | <i>CCCCCCCC</i> | | <i>CCCCCCCC</i> | |

^A Location Designation. Example: 3E

| Overall Summary | As Measured | Outlier Screened | Adjusted to X.X% Soot |
|----------------------------------|---------------|------------------|-----------------------|
| Average Crosshead Mass Loss (mg) | <i>S12.12</i> | <i>S12.12</i> | <i>S12.1234</i> |
| Minimum Crosshead Mass Loss (mg) | <i>S12.1</i> | <i>S12.1</i> | |
| Maximum Crosshead Mass Loss (mg) | <i>S12.1</i> | <i>S12.1</i> | |
| Standard Deviation (mg) | <i>S12.12</i> | <i>S12.12</i> | |

**M11 EGR LUBRICANT PERFORMANCE TEST
FORM 7
OIL FILTER DELTA PRESSURE PLOT**

| | | |
|---|--------------------------|-----------------------------|
| Laboratory <i>CC</i> | EOT Date <i>YYYYMMDD</i> | EOT Time <i>HH:MM</i> |
| Test Number | | |
| STAND: <i>CCCCC</i> | ENGINE: <i>CCCCCCCC</i> | ENGINE RUN NO.: <i>CCCC</i> |
| FORMULATION/STAND CODE: <i>CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCCC</i> | | |
| OIL CODE: <i>CC</i> | | |

OIL FILTER DELTA PRESSURE vs TEST HOURS

OIL FILTER DELTA P (kPa)



TEST HOURS

**M11 EGR LUBRICANT PERFORMANCE TEST
FORM 8
SLUDGE RATING SUMMARY**

| | | |
|--|---------------------------|-----------------------------|
| Laboratory: <i>CC</i> | EOT Date: <i>YYYYMMDD</i> | EOT Time: <i>HH:MM</i> |
| TEST NUMBER | | |
| STAND: <i>CCCCC</i> | ENGINE: <i>CCCCCCCC</i> | ENGINE RUN NO.: <i>CCCC</i> |
| FORMULATION/STAND CODE: <i>CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCC</i> | | |
| OIL CODE: <i>CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC</i> | | |

SLUDGE RATING SUMMARY

| Sludge Depth | Valve Cover % of Area | Valve Cover Volume Factor | Oil Pan % of Area | Oil Pan Volume Factor |
|--------------|--------------------------|------------------------------|----------------------|--------------------------|
| 1/4A | <i>S12</i> | <i>S1.12</i> | <i>S12</i> | <i>S1.12</i> |
| 1/2A | <i>S12</i> | <i>S1.12</i> | <i>S12</i> | <i>S1.12</i> |
| 3/4A | <i>S12</i> | <i>S1.12</i> | <i>S12</i> | <i>S1.12</i> |
| A | <i>S12</i> | <i>S1.12</i> | <i>S12</i> | <i>S1.12</i> |
| AB | <i>S12</i> | <i>S1.12</i> | <i>S12</i> | <i>S1.12</i> |
| B | <i>S12</i> | <i>S1.12</i> | <i>S12</i> | <i>S1.12</i> |
| BC | <i>S12</i> | <i>S1.12</i> | <i>S12</i> | <i>S1.12</i> |
| C | <i>S12</i> | <i>S1.12</i> | <i>S12</i> | <i>S1.12</i> |
| D | <i>S12</i> | <i>S1.12</i> | <i>S12</i> | <i>S1.12</i> |
| E | <i>S12</i> | <i>S1.12</i> | <i>S12</i> | <i>S1.12</i> |
| F | <i>S12</i> | <i>S1.12</i> | <i>S12</i> | <i>S1.12</i> |
| G | <i>S12</i> | <i>S1.12</i> | <i>S12</i> | <i>S1.12</i> |
| H | <i>S12</i> | <i>S1.12</i> | <i>S12</i> | <i>S1.12</i> |
| I | <i>S12</i> | <i>S1.12</i> | <i>S12</i> | <i>S1.12</i> |
| J | <i>S12</i> | <i>S1.12</i> | <i>S12</i> | <i>S1.12</i> |
| | Total Volume Factor: | <i>S12.12</i> | Total Volume Factor: | <i>S12.12</i> |
| | MERIT RATING: | <i>S12.12</i> | MERIT RATING: | <i>S12.12</i> |
| | Average Sludge Rating: | | <i>S1.1</i> | |

**M11 EGR LUBRICANT PERFORMANCE TEST
FORM 9
ROD BEARING MASS LOSS**

| | | | | | |
|--|-------|----------|----------|-----------------|-------|
| Laboratory | CC | EOT Date | YYYYMMDD | EOT Time | HH:MM |
| Test Number | | | | | |
| STAND: | CCCCC | ENGINE: | CCCCCCCC | ENGINE RUN NO.: | CCCC |
| FORMULATION/STAND CODE: CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCCC | | | | | |
| OIL CODE: CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC | | | | | |

| CYLINDER NUMBER | BEARING LOCATION | PRE-TEST MASS (g) | POST-TEST MASS (g) | MASS LOSS (mg) |
|-----------------|------------------|-------------------|--------------------|----------------|
| 1 | UPPER | S123.1234 | S123.1234 | S123.1 |
| | LOWER | S123.1234 | S123.1234 | S123.1 |
| 2 | UPPER | S123.1234 | S123.1234 | S123.1 |
| | LOWER | S123.1234 | S123.1234 | S123.1 |
| 3 | UPPER | S123.1234 | S123.1234 | S123.1 |
| | LOWER | S123.1234 | S123.1234 | S123.1 |
| 4 | UPPER | S123.1234 | S123.1234 | S123.1 |
| | LOWER | S123.1234 | S123.1234 | S123.1 |
| 5 | UPPER | S123.1234 | S123.1234 | S123.1 |
| | LOWER | S123.1234 | S123.1234 | S123.1 |
| 6 | UPPER | S123.1234 | S123.1234 | S123.1 |
| | LOWER | S123.1234 | S123.1234 | S123.1 |

| | BEARING MASS LOSS |
|-------------------------|-------------------|
| AVERAGE (mg) | S123.1 |
| MINIMUM (mg) | S123.1 |
| MAXIMUM (mg) | S123.1 |
| STANDARD DEVIATION (mg) | S1.12 |

**M11 EGR LUBRICANT PERFORMANCE TEST
FORM 11
PISTON 1 DEPOSIT RATINGS**

| | | |
|--|--------------------------|-----------------------------|
| Laboratory <i>CC</i> | EOT Date <i>YYYYMMDD</i> | EOT Time <i>HH:MM</i> |
| TEST NUMBER | | |
| STAND: <i>CCCCC</i> | ENGINE: <i>CCCCCCCC</i> | ENGINE RUN NO.: <i>CCCC</i> |
| FORMULATION/STAND CODE: <i>CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCC</i> | | |
| OILCODE: <i>CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC</i> | | |

| DEP. FACTOR | GROOVES | | | | LANDS | | | | DEP FACTOR | GROOVES | | LANDS | | | | OIL COOLING GALLERY (2) | | UNDER CROWN (1) | | |
|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------------------|----------------------|-----------------|---------------|--|
| | 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. | |
| CARBON | | | | | | | | | | | | | | | | | | | | |
| HC-1.0 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | | | | |
| MC-0.5 | <i>S12</i> | <i>S12.12</i> | | | | | | | | <i>S12</i> | <i>S12.12</i> | | | | | | | | | |
| LC-.25 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> | |
| TOTAL | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> | |
| VARNISH | | | | | | | | | | | | | | | | | | | | |
| 8 - 9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | 7.5 | | | | | | | | | | | |
| 7 - 7.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> | |
| 6 - 6.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | | | | | | | | | | | |
| 5 - 5.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | 4.5 | | | | | | | | | | | |
| 4 - 4.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> | |
| 3 - 3.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | | | | | | | | | | | |
| 2 - 2.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | 1.5 | | | | | | | | | | | |
| 1 - 1.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> | |
| > 0 - 0.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | | | | | | | | | | | |
| TOTAL | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> | |
| Rating | <i>S12.12</i> | | <i>S12.12</i> | | <i>S12.12</i> | | <i>S12.12</i> | | | <i>S12.12</i> | | <i>S12.12</i> | | <i>S12.12</i> | | <i>S123.12</i> | | <i>S1.123</i> | | |
| TGC % | | | | | | | | | UNWEIGHTED DEP. | | | | T.L. CARBON | | | | T.L. FLAKED CARBON % | | | |
| <i>S12.12</i> | | | | | | | | | <i>S12.123</i> | | | | <i>S12.12</i> | | | | <i>S123.12</i> | | | |

**M11 EGR LUBRICANT PERFORMANCE TEST
FORM 12
PISTON 2 DEPOSIT RATINGS**

| | | |
|--|--------------------------|-----------------------------|
| Laboratory <i>CC</i> | EOT Date <i>YYYYMMDD</i> | EOT Time <i>HH:MM</i> |
| TEST NUMBER | | |
| STAND: <i>CCCC</i> | ENGINE: <i>CCCCCCCC</i> | ENGINE RUN NO.: <i>CCCC</i> |
| FORMULATION/STAND CODE: <i>CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCC</i> | | |
| OILCODE: <i>CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC</i> | | |

| DEP. FACTOR | GROOVES | | | | LANDS | | | | DEP FACTOR | GROOVES | | | | LANDS | | | | OIL COOLING GALLERY (2) | | UNDER CROWN (1) | |
|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|------------|-----------------|---------------|---------------|---------------|---------------|---------------|----------------------|----------------|-------------------------|---------------|-----------------|--|
| | 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. | | |
| CARBON | | | | | | | | | | | | | | | | | | | | | |
| HC-1.0 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | | | | | |
| MC-0.5 | <i>S12</i> | <i>S12.12</i> | | | | | | | | <i>S12</i> | <i>S12.12</i> | | | | | | | | | | |
| LC-.25 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> | | |
| TOTAL | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> | | |
| VARNISH | | | | | | | | | | | | | | | | | | | | | |
| 8 - 9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | 7.5 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> | | |
| 7 - 7.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> | | |
| 6 - 6.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> | | |
| 5 - 5.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | 4.5 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> | | |
| 4 - 4.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> | | |
| 3 - 3.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> | | |
| 2 - 2.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | 1.5 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> | | |
| 1 - 1.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> | | |
| >0 - 0.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> | | |
| TOTAL | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> | | |
| Rating | <i>S12.12</i> | | <i>S12.12</i> | | <i>S12.12</i> | | <i>S12.12</i> | | | <i>S12.12</i> | | <i>S12.12</i> | | <i>S12.12</i> | | <i>S123.12</i> | | <i>S1.123</i> | | | |
| TGC % | | | | | | | | | | UNWEIGHTED DEP. | | | T.L. CARBON | | | T.L. FLAKED CARBON % | | | | | |
| <i>S12.12</i> | | | | | | | | | | <i>S12.123</i> | | | <i>S12.12</i> | | | <i>S123.12</i> | | | | | |

**M11 EGR LUBRICANT PERFORMANCE TEST
FORM 13
PISTON 3 DEPOSIT RATINGS**

| | | |
|--|--------------------------|-----------------------------|
| Laboratory <i>CC</i> | EOT Date <i>YYYYMMDD</i> | EOT Time <i>HH:MM</i> |
| TEST NUMBER | | |
| STAND: <i>CCCCC</i> | ENGINE: <i>CCCCCCCC</i> | ENGINE RUN NO.: <i>CCCC</i> |
| FORMULATION/STAND CODE: <i>CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCC</i> | | |
| OILCODE: <i>CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC</i> | | |

| DEP. FACTOR | GROOVES | | | | LANDS | | | | DEP FACTOR | GROOVES | | | | LANDS | | | | OIL COOLING GALLERY (2) | | UNDER CROWN (1) | |
|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|------------|-----------------|---------------|---------------|---------------|----------------------|---------------|----------------|----------------|-------------------------|---------------|-----------------|--|
| | 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. | | |
| CARBON | | | | | | | | | | | | | | | | | | | | | |
| HC-1.0 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | | | | | |
| MC-0.5 | <i>S12</i> | <i>S12.12</i> | | | | | | | | <i>S12</i> | <i>S12.12</i> | | | | | | | | | | |
| LC-.25 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> | | |
| TOTAL | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> | | |
| VARNISH | | | | | | | | | | | | | | | | | | | | | |
| 8 - 9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | 7.5 | | | | | | | | | | | | |
| 7 - 7.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> | | |
| 6 - 6.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | | | | | | | | | | | | |
| 5 - 5.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | 4.5 | | | | | | | | | | | | |
| 4 - 4.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> | | |
| 3 - 3.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | | | | | | | | | | | | |
| 2 - 2.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | 1.5 | | | | | | | | | | | | |
| 1 - 1.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> | | |
| >0 - 0.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | | | | | | | | | | | | |
| TOTAL | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> | | |
| Rating | <i>S12.12</i> | | <i>S12.12</i> | | <i>S12.12</i> | | <i>S12.12</i> | | | <i>S12.12</i> | | <i>S12.12</i> | | <i>S12.12</i> | | <i>S123.12</i> | | <i>S1.123</i> | | | |
| TGC % | | | | | | | | | | UNWEIGHTED DEP. | | T.L. CARBON | | T.L. FLAKED CARBON % | | | | | | | |
| <i>S12.12</i> | | | | | | | | | | <i>S12.123</i> | | <i>S12.12</i> | | <i>S123.12</i> | | | | | | | |

**M11 EGR LUBRICANT PERFORMANCE TEST
FORM 14
PISTON 4 DEPOSIT RATINGS**

| | | |
|--|--------------------------|-----------------------------|
| Laboratory <i>CC</i> | EOT Date <i>YYYYMMDD</i> | EOT Time <i>HH:MM</i> |
| TEST NUMBER | | |
| STAND: <i>CCCCC</i> | ENGINE: <i>CCCCCCCC</i> | ENGINE RUN NO.: <i>CCCC</i> |
| FORMULATION/STAND CODE: <i>CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCC</i> | | |
| OILCODE: <i>CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC</i> | | |

| DEP. FACTOR | GROOVES | | | | LANDS | | | | DEP FACTOR | GROOVES | | LANDS | | | | OIL COOLING GALLERY (2) | | UNDER CROWN (1) | |
|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|------------|-----------------|---------------|---------------|---------------|---------------|---------------|-------------------------|----------------|-----------------|---------------|
| | 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. |
| CARBON | | | | | | | | | | | | | | | | | | | |
| HC-1.0 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | | | |
| MC-0.5 | <i>S12</i> | <i>S12.12</i> | | | | | | | | <i>S12</i> | <i>S12.12</i> | | | | | | | | |
| LC-.25 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> |
| TOTAL | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> |
| VARNISH | | | | | | | | | | | | | | | | | | | |
| 8 - 9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | 7.5 | | | | | | | | | | |
| 7 - 7.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> |
| 6 - 6.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | | | | | | | | | | |
| 5 - 5.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | 4.5 | | | | | | | | | | |
| 4 - 4.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> |
| 3 - 3.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | | | | | | | | | | |
| 2 - 2.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | 1.5 | | | | | | | | | | |
| 1 - 1.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> |
| >0 - 0.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | | | | | | | | | | |
| TOTAL | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> |
| Rating | <i>S12.12</i> | | <i>S12.12</i> | | <i>S12.12</i> | | <i>S12.12</i> | | | <i>S12.12</i> | | <i>S12.12</i> | | <i>S12.12</i> | | <i>S123.12</i> | | <i>S1.123</i> | |
| TGC % | | | | | | | | | | UNWEIGHTED DEP. | | T.L. CARBON | | | | T.L. FLAKED CARBON % | | | |
| <i>S12.12</i> | | | | | | | | | | <i>S12.123</i> | | <i>S12.12</i> | | | | <i>S123.12</i> | | | |

**M11 EGR LUBRICANT PERFORMANCE TEST
FORM 15
PISTON 5 DEPOSIT RATINGS**

| | | |
|--|--------------------------|-----------------------------|
| Laboratory <i>CC</i> | EOT Date <i>YYYYMMDD</i> | EOT Time <i>HH:MM</i> |
| TEST NUMBER | | |
| STAND: <i>CCCCC</i> | ENGINE: <i>CCCCCCCC</i> | ENGINE RUN NO.: <i>CCCC</i> |
| FORMULATION/STAND CODE: <i>CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCC</i> | | |
| OILCODE: <i>CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC</i> | | |

| DEP. FACTOR | GROOVES | | | | LANDS | | | | DEP FACTOR | GROOVES | | LANDS | | | | OIL COOLING GALLERY (2) | | UNDER CROWN (1) | |
|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|------------|-----------------|---------------|---------------|---------------|---------------|---------------|-------------------------|----------------|-----------------|---------------|
| | 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. |
| CARBON | | | | | | | | | | | | | | | | | | | |
| HC-1.0 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | | | |
| MC-0.5 | <i>S12</i> | <i>S12.12</i> | | | | | | | | <i>S12</i> | <i>S12.12</i> | | | | | | | | |
| LC-.25 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> |
| TOTAL | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> |
| VARNISH | | | | | | | | | | | | | | | | | | | |
| 8 - 9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | 7.5 | | | | | | | | | | |
| 7 - 7.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> |
| 6 - 6.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | | | | | | | | | | |
| 5 - 5.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | 4.5 | | | | | | | | | | |
| 4 - 4.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> |
| 3 - 3.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | | | | | | | | | | |
| 2 - 2.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | 1.5 | | | | | | | | | | |
| 1 - 1.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> |
| >0 - 0.9 | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | | | | | | | | | | |
| TOTAL | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S12</i> | <i>S12.12</i> | <i>S123</i> | <i>S123.12</i> | <i>S12</i> | <i>S1.123</i> |
| Rating | <i>S12.12</i> | | <i>S12.12</i> | | <i>S12.12</i> | | <i>S12.12</i> | | | <i>S12.12</i> | | <i>S12.12</i> | | <i>S12.12</i> | | <i>S123.12</i> | | <i>S1.123</i> | |
| TGC % | | | | | | | | | | UNWEIGHTED DEP. | | T.L. CARBON | | | | T.L. FLAKED CARBON % | | | |
| <i>S12.12</i> | | | | | | | | | | <i>S12.123</i> | | <i>S12.12</i> | | | | <i>S123.12</i> | | | |

**M11 EGR LUBRICANT PERFORMANCE TEST
FORM 16
PISTON 6 DEPOSIT RATINGS**

| | | | | | |
|---|-------|----------|----------|-----------------|-------|
| Laboratory | CC | EOT Date | YYYYMMDD | EOT Time | HH:MM |
| TEST NUMBER | | | | | |
| STAND: | CCCCC | ENGINE: | CCCCCCCC | ENGINE RUN NO.: | CCCC |
| FORMULATION/STAND CODE: CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCC | | | | | |
| OILCODE: CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC | | | | | |

| DEP. FACTOR | GROOVES | | | | LANDS | | | | DEP FACTOR | GROOVES | | GROOVES | | OIL COOLING GALLERY (2) | | UNDER CROWN (1) | | | |
|-------------|---------|--------|--------|--------|--------|--------|--------|--------|------------|-----------------|--------|-------------|--------|-------------------------|--------|-----------------|---------|--------|--------|
| | NO. 1 | | NO. 2 | | NO. 1 | | NO. 2 | | | NO. 3 | | NO. 3 | | NO. 4 | | NO. 3 | | NO. 4 | |
| | A, % | DEM. | A, % | DEM. | A, % | DEM. | A, % | DEM. | | A, % | DEM. | A, % | DEM. | A, % | DEM. | A, % | DEM. | A, % | DEM. |
| CARBON | | | | | | | | | | | | | | | | | | | |
| HC-1.0 | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | | | | |
| MC-0.5 | S12 | S12.12 | | | | | | | | S12 | S12.12 | | | | | | | | |
| LC-.25 | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | S123 | S123.12 | S12 | S1.123 |
| TOTAL | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | S123 | S123.12 | S12 | S1.123 |
| VARNISH | | | | | | | | | | | | | | | | | | | |
| 8 - 9 | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | 7.5 | | | | | | | | | | |
| 7 - 7.9 | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | S123 | S123.12 | S12 | S1.123 |
| 6 - 6.9 | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | | | | | | | | | | | |
| 5 - 5.9 | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | 4.5 | | | | | | | | | | |
| 4 - 4.9 | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | S123 | S123.12 | S12 | S1.123 |
| 3 - 3.9 | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | | | | | | | | | | | |
| 2 - 2.9 | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | 1.5 | | | | | | | | | | |
| 1 - 1.9 | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | S123 | S123.12 | S12 | S1.123 |
| >0 - 0.9 | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | | | | | | | | | | | |
| TOTAL | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | | S12 | S12.12 | S12 | S12.12 | S12 | S12.12 | S123 | S123.12 | S12 | S1.123 |
| Rating | S12.12 | | S12.12 | | S12.12 | | S12.12 | | | S12.12 | | S12.12 | | S12.12 | | S123.12 | | S1.123 | |
| TGC % | | | | | | | | | | UNWEIGHTED DEP. | | T.L. CARBON | | T.L. FLAKED CARBON % | | | | | |
| S12.12 | | | | | | | | | | S12.123 | | S12.12 | | S123.12 | | | | | |

**M11 EGR LUBRICANT PERFORMANCE TEST
FORM 17
RING MASS LOSS SUMMARY**

| | | |
|--|--------------------------|-----------------------------|
| Laboratory <i>CC</i> | EOT Date <i>YYYYMMDD</i> | EOT Time <i>HH:MM</i> |
| TEST NUMBER | | |
| STAND: <i>CCCCC</i> | ENGINE: <i>CCCCCCCC</i> | ENGINE RUN NO.: <i>CCCC</i> |
| FORMULATION/STAND CODE: <i>CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCC</i> | | |
| OILCODE: <i>CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC</i> | | |

| CYLINDER | TOP RING | | | SECOND RING | | | OIL RING | | |
|--------------------------|-----------------|-----------------|-------------------|-----------------|-----------------|-------------------|-----------------|-----------------|-------------------|
| | MASS (g) | | MASS LOSS (mg) | MASS (g) | | MASS LOSS (mg) | MASS (g) | | MASS LOSS (mg) |
| | PRETEST | EOT | | PRETEST | EOT | | PRETEST | EOT | |
| 1 | <i>S12.1234</i> | <i>S12.1234</i> | <i>S123.1</i> | <i>S12.1234</i> | <i>S12.1234</i> | <i>S123.1</i> | <i>S12.1234</i> | <i>S12.1234</i> | <i>S123.1</i> |
| 2 | <i>S12.1234</i> | <i>S12.1234</i> | <i>S123.1</i> | <i>S12.1234</i> | <i>S12.1234</i> | <i>S123.1</i> | <i>S12.1234</i> | <i>S12.1234</i> | <i>S123.1</i> |
| 3 | <i>S12.1234</i> | <i>S12.1234</i> | <i>S123.1</i> | <i>S12.1234</i> | <i>S12.1234</i> | <i>S123.1</i> | <i>S12.1234</i> | <i>S12.1234</i> | <i>S123.1</i> |
| 4 | <i>S12.1234</i> | <i>S12.1234</i> | <i>S123.1</i> | <i>S12.1234</i> | <i>S12.1234</i> | <i>S123.1</i> | <i>S12.1234</i> | <i>S12.1234</i> | <i>S123.1</i> |
| 5 | <i>S12.1234</i> | <i>S12.1234</i> | <i>S123.1</i> | <i>S12.1234</i> | <i>S12.1234</i> | <i>S123.1</i> | <i>S12.1234</i> | <i>S12.1234</i> | <i>S123.1</i> |
| 6 | <i>S12.1234</i> | <i>S12.1234</i> | <i>S123.1</i> | <i>S12.1234</i> | <i>S12.1234</i> | <i>S123.1</i> | <i>S12.1234</i> | <i>S12.1234</i> | <i>S123.1</i> |
| AVERAGE MASS LOSS (mg) | | | <i>S123.1</i> | | | <i>S123.1</i> | | | <i>S123.1</i> |
| STD. DEV. MASS LOSS (mg) | | | <i>S12.12</i> | | | <i>S12.12</i> | | | <i>S12.12</i> |
| MAXIMUM MASS LOSS (mg) | | | <i>S123.1</i> | | | <i>S123.1</i> | | | <i>S123.1</i> |
| MINIMUM MASS LOSS (mg) | | | <i>S123.1</i> | | | <i>S123.1</i> | | | <i>S123.1</i> |

**M11 EGR LUBRICANT PERFORMANCE TEST
FORM 19
TEST FUEL ANALYSIS (LAST BATCH)**

| | | |
|--|--------------------------|-----------------------------|
| Laboratory <i>CC</i> | EOT Date <i>YYYYMMDD</i> | EOT Time <i>HH:MM</i> |
| TEST NUMBER | | |
| STAND: <i>CCCCC</i> | ENGINE: <i>CCCCCCCC</i> | ENGINE RUN NO.: <i>CCCC</i> |
| FORMULATION/STAND CODE: <i>CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCC</i> | | |
| OILCODE: <i>CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC</i> | | |

| FUEL SUPPLIER | FUEL BATCH IDENTIFIER |
|-----------------------------|-------------------------|
| <i>CCCCCCCCCCCCCCCCCCCC</i> | <i>CCCCCCCCCCCCCCCC</i> |

| Measurement | Specifications | Analysis | | Test Method |
|-----------------------------------|----------------|---------------|--------------|------------------------|
| | | NEW | EOT | |
| Total Sulfur, % Weight | 0.04 - 0.05 | <i>SI.12</i> | <i>SI.12</i> | D 2662 |
| Gravity, °API | 34.5 - 36.5 | <i>SI.1</i> | <i>SI.1</i> | D 1298 |
| Hydrocarbon Composition | | | | |
| Aromatics % Volume | 28 - 33 | <i>SI.1</i> | | D 1319 |
| Olefin | Report | <i>SI2.1</i> | | D 1319 |
| Cetane Index | Report | <i>SI.1</i> | | D 4737 |
| Cetane Number | 42 - 48 | <i>SI.1</i> | | D 613 |
| Copper Strip Corrosion | 1 Maximum | <i>SI23</i> | | D 130 |
| Flash Point, °C | 54 Maximum | <i>SI23</i> | | D 93 |
| Pour Point, °C | -18 Maximum | <i>SI23</i> | | D 97 |
| Carbon Residue on 10% Residuum, % | 0.35 Maximum | <i>SI.12</i> | | D 524 (10% Bottoms) |
| Water & Sediment, % Volume | 0.05 Maximum | <i>SI2.12</i> | | D 2709 |
| Viscosity, cSt @ 40 °C | 2.4 - 3.0 | <i>SI.1</i> | | D 445 |
| Total Acid Number | 0.05 Maximum | <i>SI.123</i> | | D 664 |
| Strong Acid Number | 0.00 Maximum | <i>SI.1</i> | | D 664 |
| Accelerated Stability | tbd | <i>SI.1</i> | | D 2274 |
| Saturates, % | Report | <i>SI2.1</i> | | D 1319 |
| Cloud Point, °C | Report | <i>SI23</i> | | D 2500 |
| Distillation, °C | | | | |
| IBP | Report | <i>SI234</i> | | D 86 |
| 10% | Report | <i>SI234</i> | | D 86 |
| 50% | Report | <i>SI234</i> | | D 86 |
| 90% | 282 - 338 | <i>SI234</i> | | D 86 |
| EP | Report | <i>SI234</i> | | D 86 |

**M11 EGR LUBRICANT PERFORMANCE TEST
FORM 20
INJECTOR ADJUSTING SCREW MASS LOSS**

| | | |
|--|--------------------------|-----------------------------|
| Laboratory <i>CC</i> | EOT Date <i>YYYYMMDD</i> | EOT Time <i>HH:MM</i> |
| TEST NUMBER | | |
| STAND: <i>CCCCC</i> | ENGINE: <i>CCCCCCCC</i> | ENGINE RUN NO.: <i>CCCC</i> |
| FORMULATION/STAND CODE: <i>CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCC</i> | | |
| OILCODE: <i>CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC</i> | | |

| SCREW # | PRE-TEST MASS, g | POST-TEST MASS, g | MASS LOSS, mg |
|---------|------------------|-------------------|---------------|
| 1 | <i>S12.1234</i> | <i>S12.1234</i> | <i>S123.1</i> |
| 2 | <i>S12.1234</i> | <i>S12.1234</i> | <i>S123.1</i> |
| 3 | <i>S12.1234</i> | <i>S12.1234</i> | <i>S123.1</i> |
| 4 | <i>S12.1234</i> | <i>S12.1234</i> | <i>S123.1</i> |
| 5 | <i>S12.1234</i> | <i>S12.1234</i> | <i>S123.1</i> |
| 6 | <i>S12.1234</i> | <i>S12.1234</i> | <i>S123.1</i> |
| TOTAL | | | <i>S123.1</i> |
| AVERAGE | | | <i>S123.1</i> |

**M11 EGR LUBRICANT PERFORMANCE TEST
FORM 22
CHARACTERISTICS OF THE DATA ACQUISITION SYSTEM**

| | | | | | |
|-------------------------|--------------------------------------|----------|----------|-----------------|-------|
| Laboratory | CC | EOT Date | YYYYMMDD | EOT Time | HH:MM |
| TEST NUMBER | | | | | |
| STAND: | CCCCC | ENGINE: | CCCCCCCC | ENGINE RUN NO.: | CCCC |
| FORMULATION/STAND CODE: | CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCC | | | | |
| OIL CODE: | CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC | | | | |

| PARAMETER (1) | SENSING DEVICE (2) | CALIBRATION FREQUENCY (3) | RECORD DEVICE (4) | OBSERVATION FREQUENCY (5) | RECORD FREQUENCY (6) | LOG FREQUENCY (7) | SYSTEM RESPONSE (8) |
|--------------------|--------------------------|---------------------------------|-------------------------|---------------------------------|----------------------------|-------------------------|---------------------------|
| Temperature | | | | | | | |
| Oil Gallery | CCCCCCCC | CCCCCCCC | CCC | CCCCCCCC | CCCCCCCC | CCCCCCCC | CCCCCCCC |
| Fuel In | CCCCCCCC | CCCCCCCC | CCC | CCCCCCCC | CCCCCCCC | CCCCCCCC | CCCCCCCC |
| Intake Air | CCCCCCCC | CCCCCCCC | CCC | CCCCCCCC | CCCCCCCC | CCCCCCCC | CCCCCCCC |
| Intake Man. | CCCCCCCC | CCCCCCCC | CCC | CCCCCCCC | CCCCCCCC | CCCCCCCC | CCCCCCCC |
| Pre-Turb. | CCCCCCCC | CCCCCCCC | CCC | CCCCCCCC | CCCCCCCC | CCCCCCCC | CCCCCCCC |
| Cool. Out | CCCCCCCC | CCCCCCCC | CCC | CCCCCCCC | CCCCCCCC | CCCCCCCC | CCCCCCCC |
| Pressure | | | | | | | |
| Inlet Air | CCCCCCCC | CCCCCCCC | CCC | CCCCCCCC | CCCCCCCC | CCCCCCCC | CCCCCCCC |
| Exhaust | CCCCCCCC | CCCCCCCC | CCC | CCCCCCCC | CCCCCCCC | CCCCCCCC | CCCCCCCC |
| Oil Gallery | CCCCCCCC | CCCCCCCC | CCC | CCCCCCCC | CCCCCCCC | CCCCCCCC | CCCCCCCC |
| Other | | | | | | | |
| Fuel Flow | CCCCCCCC | CCCCCCCC | CCC | CCCCCCCC | CCCCCCCC | CCCCCCCC | CCCCCCCC |
| Speed | CCCCCCCC | CCCCCCCC | CCC | CCCCCCCC | CCCCCCCC | CCCCCCCC | CCCCCCCC |
| Load | CCCCCCCC | CCCCCCCC | CCC | CCCCCCCC | CCCCCCCC | CCCCCCCC | 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
DL - AUTOMATIC DATA LOGGER
C/D - COMPUTER, USING DIRECT I/O ENTRY
- (5) DATA ARE OBSERVED BUT ONLY IF RECORDED 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 IN SECONDS FOR THE OUTPUT TO REACH 63.2% OF FINAL VALUE FOR STEP CHANGE AT INPUT