

## Generating Set Functional Test Report

In accordance with ISO 8528 - 6 2005

PLANT NUMBER:

E9870/1

CE:

No

RATED OUTPUT	KVA	<u>105</u>	RATING CLASSIFICATION	<u>PRP</u>	
	KW	<u>84</u>			
	PHASE	<u>3</u>			
	VOLTS	<u>415/240</u>		PERFORMANCE CLASS	<u>G1</u>
	AMPS	<u>146</u>		(AS DEFINED BY ISO 8528-1)	
	HZ	<u>50</u>			
	RPM	<u>1500</u>			
GOVERNOR TYPE	<u>Mechanical</u>	COOLING METHOD	<u>WATERCOOLED</u>		

ENGINE MAKE	<u>Perkins</u>	BUILD NUMBER	<u>VBS1439</u>
ENGINE MODEL	<u>1006TG2A</u>	SERIAL NUMBER	<u>Ud18218u</u>
ALTERNATOR MAKE	<u>Mecc Alte</u>		
ALTERNATOR MODEL	<u>ECP 34-2S/4</u>	SERIAL NUMBER	<u>0001387024</u>
CONTROL PANEL(S)	<u>Autostar</u>	SERIAL NUMBER(S)	
SWITCHGEAR		SERIAL NUMBER(S)	

### LOAD TEST RESULTS (AT UNITY POWER FACTOR)

LOAD TYPE	LOAD %	HZ	VOLTS	AMPS	KW	ENGINE TEMP DEG C	OIL TEMP DEG C	OIL PRESS BAR
load acceptance	<u>60%</u>	<u>51.3</u>	<u>415</u>	<u>70</u>	<u>50</u>	<u>-</u>	<u>-</u>	<u>5.2</u>
standby/ prime+10%	<u>110%</u>	<u>50.0</u>	<u>415</u>	<u>129</u>	<u>92</u>	<u>82</u>	<u>-</u>	<u>4.2</u>

GENERATING SET ENCLOSURE MECHANICAL PROTECTION

IP

AVERAGE SOUND PRESSURE LEVEL (DBA AT 1 M)

(UNITS WITH ACOUSTIC CANOPIES ONLY & MEASURED UNDER TEST BAY CONDITIONS AT 75% LOAD IN ACCORDANCE WITH ISO8528-10)

AMBIENT TEST CONDITIONS		FUEL/OIL USED	
ALTITUDE (M)	<u>Sea Level</u>	FUEL SPEC	<u>BS2869A2</u>
BAROMETRIC PRESSURE (kpa)	<u>101.8</u>	DENSITY	<u>0.84 kg/l</u>
TEMPERATURE (Deg c)	<u>7</u>	CALORIFIC VALUE	<u>42.5 MJ/kg</u>
HUMIDITY (%)	<u>87</u>	LUB OIL SPEC	<u>Multigrade</u>

### WIRING DIAGRAMS:

ENGINE	<u>08-152300</u>	CONTROL PANEL(S)	<u>10-170300</u>
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TESTED BY

H. W. L.

DATE 18/09/2010

**Generating Set Functional Test Report**  
In accordance with ISO 8528 - 6 2005

PLANT NUMBER:

E9870/2

CE:

No

RATED OUTPUT	KVA	<u>105</u>	RATING CLASSIFICATION	<u>PRP</u>	
	KW	<u>84</u>			
	PHASE	<u>3</u>			
	VOLTS	<u>415/240</u>		PERFORMANCE CLASS	<u>G1</u>
	AMPS	<u>146</u>		(AS DEFINED BY ISO 8528-1)	
	HZ	<u>50</u>			
	RPM	<u>1500</u>			
GOVERNOR TYPE	<u>Mechanical</u>	COOLING METHOD	<u>WATERCOOLED</u>		

ENGINE MAKE	<u>Perkins</u>	BUILD NUMBER	<u>VBS1439</u>
ENGINE MODEL	<u>1006TG2A</u>	SERIAL NUMBER	<u>UA182174</u>
ALTERNATOR MAKE	<u>Mecc Alte</u>	-----	
ALTERNATOR MODEL	<u>ECP 34-2S/4</u>	SERIAL NUMBER	<u>A1091080</u>
CONTROL PANEL(S)	<u>Autostart</u>	SERIAL NUMBER(S)	
SWITCHGEAR		SERIAL NUMBER(S)	

**LOAD TEST RESULTS (AT UNITY POWER FACTOR)**

LOAD TYPE	LOAD %	HZ	VOLTS	AMPS	KW	ENGINE TEMP DEG C	OIL TEMP DEG C	OIL PRESS BAR
load acceptance	<u>60%</u>	<u>51.4</u>	<u>415</u>	<u>70</u>	<u>50</u>	<u>-</u>	<u>-</u>	<u>5.0</u>
standby/ prime+10%	<u>110%</u>	<u>50.0</u>	<u>415</u>	<u>129</u>	<u>92</u>	<u>83</u>	<u>-</u>	<u>4.2</u>

GENERATING SET ENCLOSURE MECHANICAL PROTECTION

IP

AVERAGE SOUND PRESSURE LEVEL (DBA AT 1 M)

(UNITS WITH ACOUSTIC CANOPIES ONLY & MEASURED UNDER TEST BAY CONDITIONS AT 75% LOAD IN ACCORDANCE WITH ISO 8528-10)

AMBIENT TEST CONDITIONS		FUEL/OIL USED	
ALTITUDE (M)	<u>Sea Level</u>	FUEL SPEC	<u>BS2869A2</u>
BAROMETRIC PRESSURE (kpa)	<u>101.8</u>	DENSITY	<u>0.84 kg/l</u>
TEMPERATURE (Deg c)	<u>7</u>	CALORIFIC VALUE	<u>42.5 MJ/kg</u>
HUMIDITY (%)	<u>87</u>	LUB OIL SPEC	<u>Multigrade</u>

**WIRING DIAGRAMS:**

ENGINE	<u>08-152300</u>	CONTROL PANEL(S)	<u>10-170300</u>
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TESTED BY

H. Wal

DATE 18/09/2010

**Generating Set Functional Test Report**  
In accordance with ISO 8528 - 6 2005

PLANT NUMBER:

E9870/3

CE:

No

RATED OUTPUT	KVA	<u>105</u>	RATING CLASSIFICATION	<u>PRP</u>	
	KW	<u>84</u>			
	PHASE	<u>3</u>			
	VOLTS	<u>415/240</u>		PERFORMANCE CLASS	<u>G1</u>
	AMPS	<u>146</u>		(AS DEFINED BY ISO 8528-1)	
	HZ	<u>50</u>			
	RPM	<u>1500</u>			
GOVERNOR TYPE	<u>Mechanical</u>		COOLING METHOD	<u>WATERCOOLED</u>	

ENGINE MAKE	<u>Perkins</u>	BUILD NUMBER	<u>VBS1439</u>
ENGINE MODEL	<u>1006TG2A</u>	SERIAL NUMBER	<u>09182164</u>
ALTERNATOR MAKE	<u>Mecc Alte</u>		
ALTERNATOR MODEL	<u>ECP 34-2S/4</u>	SERIAL NUMBER	<u>0001387029</u>
CONTROL PANEL(S)	<u>Autostar</u>	SERIAL NUMBER(S)	
SWITCHGEAR		SERIAL NUMBER(S)	

**LOAD TEST RESULTS (AT UNITY POWER FACTOR)**

LOAD TYPE	LOAD %	HZ	VOLTS	AMPS	KW	ENGINE TEMP DEG C	OIL TEMP DEG C	OIL PRESS BAR
load acceptance	<u>60%</u>	<u>51.1</u>	<u>415</u>	<u>70</u>	<u>50</u>	<u>-</u>	<u>-</u>	<u>5.0</u>
standby/ prime+10%	<u>110%</u>	<u>50.0</u>	<u>415</u>	<u>129</u>	<u>92</u>	<u>82</u>	<u>-</u>	<u>4.0</u>

GENERATING SET ENCLOSURE MECHANICAL PROTECTION

IP

AVERAGE SOUND PRESSURE LEVEL (DBA AT 1 M)

(UNITS WITH ACOUSTIC CANOPIES ONLY & MEASURED UNDER TEST BAY CONDITIONS AT 75% LOAD IN ACCORDANCE WITH ISO8528-10)

AMBIENT TEST CONDITIONS		FUEL/OIL USED	
ALTITUDE (M)	<u>Sea Level</u>	FUEL SPEC	<u>BS2869A2</u>
BAROMETRIC PRESSURE (kpa)	<u>101.8</u>	DENSITY	<u>0.84 kg/l</u>
TEMPERATURE (Deg c)	<u>9</u>	CALORIFIC VALUE	<u>42.5 MJ/kg</u>
HUMIDITY (%)	<u>82</u>	LUB OIL SPEC	<u>Multigrade</u>

**WIRING DIAGRAMS:**

ENGINE	<u>08-152300</u>	CONTROL PANEL(S)	<u>10-170300</u>
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TESTED BY

H. Wal

DATE 18/09/2010

**Generating Set Functional Test Report**  
In accordance with ISO 8528 - 6 2005

PLANT NUMBER:

E9870/4

CE:

No

RATED OUTPUT	KVA	<u>105</u>	RATING CLASSIFICATION	<u>PRP</u>	
	KW	<u>84</u>			
	PHASE	<u>3</u>			
	VOLTS	<u>415/240</u>		PERFORMANCE CLASS	<u>G1</u>
	AMPS	<u>146</u>		(AS DEFINED BY ISO 8528-1)	
	HZ	<u>50</u>			
	RPM	<u>1500</u>			
GOVERNOR TYPE		<u>Mechanical</u>	COOLING METHOD	<u>WATERCOOLED</u>	

ENGINE MAKE	<u>Perkins</u>	BUILD NUMBER	<u>VBS1439</u>
ENGINE MODEL	<u>1006TG2A</u>	SERIAL NUMBER	<u>UA182124</u>
ALTERNATOR MAKE	<u>Mecc Alte</u>		
ALTERNATOR MODEL	<u>ECP 34-2S/4</u>	SERIAL NUMBER	<u>A1091228</u>
CONTROL PANEL(S)	<u>Autostart</u>	SERIAL NUMBER(S)	
SWITCHGEAR		SERIAL NUMBER(S)	

**LOAD TEST RESULTS (AT UNITY POWER FACTOR)**

LOAD TYPE	LOAD %	HZ	VOLTS	AMPS	KW	ENGINE TEMP DEG C	OIL TEMP DEG C	OIL PRESS BAR
load acceptance	<u>60%</u>	<u>51.0</u>	<u>415</u>	<u>70</u>	<u>50</u>	<u>-</u>	<u>-</u>	<u>4.8</u>
standby/ prime+10%	<u>110%</u>	<u>50.0</u>	<u>415</u>	<u>129</u>	<u>92</u>	<u>83</u>	<u>-</u>	<u>3.9</u>

GENERATING SET ENCLOSURE MECHANICAL PROTECTION

IP

AVERAGE SOUND PRESSURE LEVEL (DBA AT 1 M)

(UNITS WITH ACOUSTIC CANOPIES ONLY & MEASURED UNDER TEST BAY CONDITIONS AT 75% LOAD IN ACCORDANCE WITH ISO8528-10)

AMBIENT TEST CONDITIONS		FUEL/OIL USED	
ALTITUDE (M)	<u>Sea Level</u>	FUEL SPEC	<u>BS2869A2</u>
BAROMETRIC PRESSURE (kpa)	<u>101.8</u>	DENSITY	<u>0.84 kg/l</u>
TEMPERATURE (Deg c)	<u>11</u>	CALORIFIC VALUE	<u>42.5 MJ/kg</u>
HUMIDITY (%)	<u>82</u>	LUB OIL SPEC	<u>Multigrade</u>

**WIRING DIAGRAMS:**

ENGINE	<u>08-152300</u>	CONTROL PANEL(S)	<u>10-170300</u>
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TESTED BY

H. Wall

DATE 18/09/2010

**Generating Set Functional Test Report**  
In accordance with ISO 8528 - 6 2005

PLANT NUMBER: E9870/5 CE: No

RATED OUTPUT	KVA	<u>105</u>	RATING CLASSIFICATION	<u>PRP</u>	
	KW	<u>84</u>			
	PHASE	<u>3</u>			
	VOLTS	<u>415/240</u>		PERFORMANCE CLASS	<u>G1</u>
	AMPS	<u>146</u>		(AS DEFINED BY ISO 8528-1)	
	HZ	<u>50</u>			
	RPM	<u>1500</u>			
GOVERNOR TYPE	<u>Mechanical</u>	COOLING METHOD	<u>WATERCOOLED</u>		

ENGINE MAKE	<u>Perkins</u>	BUILD NUMBER	<u>VB51439</u>
ENGINE MODEL	<u>1006TG2A</u>	SERIAL NUMBER	<u>UA182114</u>
ALTERNATOR MAKE	<u>Mecc Alte</u>		
ALTERNATOR MODEL	<u>ECP 34-2S/4</u>	SERIAL NUMBER	<u>A1090588</u>
CONTROL PANEL(S)	<u>Autostart</u>	SERIAL NUMBER(S)	
SWITCHGEAR		SERIAL NUMBER(S)	

**LOAD TEST RESULTS (AT UNITY POWER FACTOR)**

LOAD TYPE	LOAD %	HZ	VOLTS	AMPS	KW	ENGINE TEMP DEG C	OIL TEMP DEG C	OIL PRESS BAR
load acceptance	<u>60%</u>	<u>51.3</u>	<u>415</u>	<u>70</u>	<u>50</u>	<u>-</u>	<u>-</u>	<u>4.8</u>
standby/ prime+10%	<u>110%</u>	<u>50.0</u>	<u>415</u>	<u>129</u>	<u>92</u>	<u>82</u>	<u>-</u>	<u>4.0</u>

GENERATING SET ENCLOSURE MECHANICAL PROTECTION

IP

AVERAGE SOUND PRESSURE LEVEL (DBA AT 1 M)

(UNITS WITH ACOUSTIC CANOPIES ONLY & MEASURED UNDER TEST BAY CONDITIONS AT 75% LOAD IN ACCORDANCE WITH ISO8528-10)

AMBIENT TEST CONDITIONS		FUEL/OIL USED	
ALTITUDE (M)	<u>Sea Level</u>	FUEL SPEC	<u>BS2869A2</u>
BAROMETRIC PRESSURE (kpa)	<u>101.8</u>	DENSITY	<u>0.84 kg/l</u>
TEMPERATURE (Deg c)	<u>13</u>	CALORIFIC VALUE	<u>42.5 MJ/kg</u>
HUMIDITY (%)	<u>72</u>	LUB OIL SPEC	<u>Multigrade</u>

**WIRING DIAGRAMS:**

ENGINE	<u>08-152300</u>	CONTROL PANEL(S)	<u>10-170300</u>
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TESTED BY

H. Wal

DATE 18/07/2010