

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

PLANT NUMBER: E9864/1 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>YBS1439</u>
ENGINE MODEL	<u>1006TG2A</u>	SERIAL NUMBER	<u>U018163U</u>
ALTERNATOR MAKE	<u>Mecc Alte</u>		
ALTERNATOR MODEL	<u>ECP 34-2S/4</u>	SERIAL NUMBER	<u>0001433100</u>
CONTROL PANEL(S)	<u>Manual start</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>5.0</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>4.2</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>101.4</u>	DENSITY	<u>0.84 kg/l</u>
TEMPERATURE (Deg c)	<u>10</u>	CALORIFIC VALUE	<u>42.5 MJ/kg</u>
HUMIDITY (%)	<u>71</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 17/09/2010

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

PLANT NUMBER: E9864/2 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>YBS1439</u>
ENGINE MODEL	<u>1006TG2A</u>	SERIAL NUMBER	<u>UA18161U</u>
ALTERNATOR MAKE	<u>Mecc Alte</u>		
ALTERNATOR MODEL	<u>ECP 34-2S/4</u>	SERIAL NUMBER	<u>0001433115</u>
CONTROL PANEL(S)	<u>Manual start</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>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>4.2</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>101.4</u>	DENSITY	<u>0.84 kg/l</u>
TEMPERATURE (Deg c)	<u>12</u>	CALORIFIC VALUE	<u>42.5 MJ/kg</u>
HUMIDITY (%)	<u>62</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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Generating Set Functional Test Report
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PLANT NUMBER: E9864/3 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>YBS1439</u>
ENGINE MODEL	<u>1006TG2A</u>	SERIAL NUMBER	<u>U9181624</u>
ALTERNATOR MAKE	<u>Mecc Alte</u>	SERIAL NUMBER	<u>0001433102</u>
ALTERNATOR MODEL	<u>ECP 34-2S/4</u>	SERIAL NUMBER(S)	
CONTROL PANEL(S)	<u>Manual start</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>4.3</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>101.4</u>	DENSITY	<u>0.84 kg/l</u>
TEMPERATURE (Deg c)	<u>12</u>	CALORIFIC VALUE	<u>42.5 MJ/kg</u>
HUMIDITY (%)	<u>62</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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DATE 17/09/2010

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

PLANT NUMBER: E9864/4 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>				
	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>YBS1439</u>
ENGINE MODEL	<u>1006TG2A</u>	SERIAL NUMBER	<u>UA182194</u>
ALTERNATOR MAKE	<u>Mecc Alte</u>		
ALTERNATOR MODEL	<u>ECP 34-2S/4</u>	SERIAL NUMBER	<u>0001433111</u>
CONTROL PANEL(S)	<u>Manual start</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>51.2</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>4.3</u>	<u>-</u>	<u>8.2</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>101.5</u>	DENSITY	<u>0.84 kg/l</u>
TEMPERATURE (Deg c)	<u>14</u>	CALORIFIC VALUE	<u>42.5 MJ/kg</u>
HUMIDITY (%)	<u>48</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 17/09/2010

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

PLANT NUMBER: E9864/5 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>				
	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>YBS1439</u>
ENGINE MODEL	<u>1006TG2A</u>	SERIAL NUMBER	<u>U918213U</u>
ALTERNATOR MAKE	<u>Mecc Alte</u>		
ALTERNATOR MODEL	<u>ECP 34-2S/4</u>	SERIAL NUMBER	<u>0001387022</u>
CONTROL PANEL(S)	<u>Manual start</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>4.6</u>
standby/ prime+10%	<u>110%</u>	<u>50.0</u>	<u>415</u>	<u>129</u>	<u>92</u>	<u>81</u>	<u>-</u>	<u>3.3</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>101.6</u>	DENSITY	<u>0.84 kg/l</u>
TEMPERATURE (Deg c)	<u>14</u>	CALORIFIC VALUE	<u>42.5 MJ/kg</u>
HUMIDITY (%)	<u>48</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. Wan

DATE 17/09/2010