

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

PLANT NUMBER: E9931/1 CE: No

RATED OUTPUT	KVA	<u>60</u>	RATING CLASSIFICATION	<u>PRP</u>		
	KW	<u>48</u>				
	PHASE	<u>3</u>				
	VOLTS	<u>400/230</u>			PERFORMANCE CLASS	<u>G1</u>
	AMPS	<u>87</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>Dks1426</u>
ENGINE MODEL	<u>1103A-23TG1</u>	SERIAL NUMBER	<u>4247873 U</u>
ALTERNATOR MAKE	<u>Merc Alte</u>		
ALTERNATOR MODEL	<u>ECO 32-2L 14</u>	SERIAL NUMBER	<u>0001439334</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>85%</u>	<u>50.7</u>	<u>400</u>	<u>59</u>	<u>41</u>	<u>-</u>	<u>-</u>	<u>5.2</u>
standby/prime+10%	<u>110%</u>	<u>50.0</u>	<u>400</u>	<u>76</u>	<u>53</u>	<u>84</u>	<u>-</u>	<u>4.6</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>100.3</u>	DENSITY	<u>0.84 kg/l</u>
TEMPERATURE (Deg c)	<u>9</u>	CALORIFIC VALUE	<u>42.5 MJ/kg</u>
HUMIDITY (%)	<u>100</u>	LUB OIL SPEC	<u>Multigrade</u>

WIRING DIAGRAMS:

ENGINE	<u>06-130700</u>	CONTROL PANEL(S)	<u>10-170800</u>
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TESTED BY H. Wal

DATE 02/10/2010

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

PLANT NUMBER: E9931/2 CE: No

RATED OUTPUT	KVA	<u>60</u>	RATING CLASSIFICATION	<u>PRP</u>			
	KW	<u>48</u>					
	PHASE	<u>3</u>					
	VOLTS	<u>400/230</u>			PERFORMANCE CLASS	<u>G1</u>	
	AMPS	<u>87</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>DKS1426</u>
ENGINE MODEL	<u>1103A-33T&1</u>	SERIAL NUMBER	<u>U24888A U</u>
ALTERNATOR MAKE	<u>Mecc Alte</u>	SERIAL NUMBER	<u>0001439330</u>
ALTERNATOR MODEL	<u>ECO 32-2L 14</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>85%</u>	<u>50.9</u>	<u>400</u>	<u>59</u>	<u>4.1</u>	<u>-</u>	<u>-</u>	<u>4.8</u>
standby/ prime+10%	<u>110%</u>	<u>50.0</u>	<u>400</u>	<u>76</u>	<u>53</u>	<u>84</u>	<u>-</u>	<u>3.7</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>100.4</u>	DENSITY	<u>0.84 kg/l</u>
TEMPERATURE (Deg c)	<u>10</u>	CALORIFIC VALUE	<u>42.5 MJ/kg</u>
HUMIDITY (%)	<u>94</u>	LUB OIL SPEC	<u>Multigrade</u>

WIRING DIAGRAMS:

ENGINE	<u>06-130700</u>	CONTROL PANEL(S)	<u>10-170800</u>
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Generating Set Functional Test Report
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PLANT NUMBER: E9931/3 CE: No

RATED OUTPUT	KVA	<u>60</u>	RATING CLASSIFICATION	<u>PRP</u>		
	KW	<u>48</u>				
	PHASE	<u>3</u>				
	VOLTS	<u>400/230</u>			PERFORMANCE CLASS	<u>G1</u>
	AMPS	<u>87</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>DkS1426</u>
ENGINE MODEL	<u>1103A-23TG1</u>	SERIAL NUMBER	<u>U2478604</u>
ALTERNATOR MAKE	<u>Mec Alte</u>		
ALTERNATOR MODEL	<u>ECO 32-2L 14</u>	SERIAL NUMBER	<u>0001439335</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>85%</u>	<u>50.7</u>	<u>400</u>	<u>59</u>	<u>41</u>	<u>-</u>	<u>-</u>	<u>4.7</u>
standby/ prime+10%	<u>110%</u>	<u>50.0</u>	<u>400</u>	<u>76</u>	<u>53</u>	<u>83</u>	<u>-</u>	<u>3.8</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>100.4</u>	DENSITY	<u>0.84 kg/l</u>
TEMPERATURE (Deg c)	<u>11</u>	CALORIFIC VALUE	<u>42.5 MJ/kg</u>
HUMIDITY (%)	<u>94</u>	LUB OIL SPEC	<u>Multigrade</u>

WIRING DIAGRAMS:

ENGINE	<u>06-136700</u>	CONTROL PANEL(S)	<u>10-170800</u>
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Generating Set Functional Test Report
In accordance with ISO 8528 - 6 2005

PLANT NUMBER: EQ931/4 CE: No

RATED OUTPUT	KVA	<u>60</u>	RATING CLASSIFICATION	<u>PRP</u>			
	KW	<u>48</u>					
	PHASE	<u>3</u>					
	VOLTS	<u>400/230</u>			PERFORMANCE CLASS	<u>G1</u>	
	AMPS	<u>87</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>Dks1426</u>
ENGINE MODEL	<u>1103A-33TG1</u>	SERIAL NUMBER	<u>U247875U</u>
ALTERNATOR MAKE	<u>Merc Alte</u>		
ALTERNATOR MODEL	<u>ECO 32-2L 14</u>	SERIAL NUMBER	<u>0001439336</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>85%</u>	<u>51.0</u>	<u>400</u>	<u>59</u>	<u>41</u>	<u>-</u>	<u>-</u>	<u>5.0</u>
standby/prime+10%	<u>110%</u>	<u>50.0</u>	<u>400</u>	<u>76</u>	<u>53</u>	<u>84</u>	<u>-</u>	<u>4.4</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>100.4</u>	DENSITY	<u>0.84 kg/l</u>
TEMPERATURE (Deg c)	<u>12</u>	CALORIFIC VALUE	<u>42.5 MJ/kg</u>
HUMIDITY (%)	<u>94</u>	LUB OIL SPEC	<u>Multigrade</u>

WIRING DIAGRAMS:

ENGINE	<u>06-130700</u>	CONTROL PANEL(S)	<u>10-170800</u>
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TESTED BY

H. Ward

DATE 02/10/2010