

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

PLANT NUMBER: E9728/1 CE: No

RATED OUTPUT	KVA	<u>20</u>	RATING CLASSIFICATION	<u>PRP</u>	
	KW	<u>16</u>			
	PHASE	<u>3</u>			
	VOLTS	<u>415/240</u>		PERFORMANCE CLASS	<u>G1</u>
	AMPS	<u>28</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>G1065732</u>
ENGINE MODEL	<u>404D-22G</u>	SERIAL NUMBER	<u>U984407T</u>
ALTERNATOR MAKE	<u>Merc Alte</u>		
ALTERNATOR MODEL	<u>ECO 28-1LN/4</u>	SERIAL NUMBER	<u>A1083459</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	OIL TEMP	OIL PRESS
						DEG C	DEG C	BAR
load acceptance	<u>80%</u>	<u>50.9</u>	<u>415</u>	<u>18</u>	<u>13</u>	<u>—</u>	<u>—</u>	<u>5.2</u>
standby/ prime+10%	<u>110%</u>	<u>50.0</u>	<u>415</u>	<u>25</u>	<u>18</u>	<u>84</u>	<u>—</u>	<u>4.7</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 ISO8528-10)

AMBIENT TEST CONDITIONS		FUEL/OIL USED	
ALTITUDE (M)	<u>Sea Level</u>	FUEL SPEC	<u>BS2869A2</u>
BAROMETRIC PRESSURE (kpa)	<u>101.3</u>	DENSITY	<u>0.84 kg/l</u>
TEMPERATURE (Deg c)	<u>18</u>	CALORIFIC VALUE	<u>42.5 MJ/kg</u>
HUMIDITY (%)	<u>73</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 22/07/2010

## Generating Set Functional Test Report

In accordance with ISO 8528 - 6 2005

PLANT NUMBER: E9728/2 CE: No

RATED OUTPUT	KVA	20	RATING CLASSIFICATION	PRP	
	KW	16			
	PHASE	3			
	VOLTS	415/240		PERFORMANCE CLASS	G1
	AMPS	28			(AS DEFINED BY ISO 8528-1)
	HZ	50			
	RPM	1500			
GOVERNOR TYPE			Mechanical	COOLING METHOD	WATERCOOLED

ENGINE MAKE	Perkins	BUILD NUMBER	GN65739
ENGINE MODEL	404D-22G	SERIAL NUMBER	U988791T
ALTERNATOR MAKE	Mec Alte	SERIAL NUMBER	A1083461
ALTERNATOR MODEL	ECO 28-1LN/4	SERIAL NUMBER(S)	
CONTROL PANEL(S)	Autostart	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	80%	50.7	415	18	13	—	—	5.2
standby/ prime+10%	110%	50.0	415	25	18	82	—	4.7

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)	Sea Level	FUEL SPEC	BS2869A2
BAROMETRIC PRESSURE (kpa)	101.4	DENSITY	0.84 kg/l
TEMPERATURE (Deg c)	17	CALORIFIC VALUE	42.5 MJ/kg
HUMIDITY (%)	82	LUB OIL SPEC	Multigrade

WIRING DIAGRAMS:			
ENGINE	08-152300	CONTROL PANEL(S)	10-170300

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DATE *22/07/2010*

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

PLANT NUMBER: E9728/3 CE: No

RATED OUTPUT	KVA	<u>20</u>	RATING CLASSIFICATION	<u>PRP</u>	
	KW	<u>16</u>			
	PHASE	<u>3</u>			
	VOLTS	<u>415/240</u>		PERFORMANCE CLASS	<u>G1</u>
	AMPS	<u>28</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>G.N65732</u>
ENGINE MODEL	<u>404D-22G</u>	SERIAL NUMBER	<u>U984381T</u>
ALTERNATOR MAKE	<u>Mecc Alte</u>		
ALTERNATOR MODEL	<u>ECO 28-1LN/4</u>	SERIAL NUMBER	<u>A1083453</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>80%</u>	<u>51.0</u>	<u>415</u>	<u>18</u>	<u>13</u>	<u>—</u>	<u>—</u>	<u>5.2</u>
standby/ prime+10%	<u>110%</u>	<u>50.0</u>	<u>415</u>	<u>25</u>	<u>18</u>	<u>82</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>101.4</u>	DENSITY	<u>0.84 kg/l</u>
TEMPERATURE (Deg c)	<u>16</u>	CALORIFIC VALUE	<u>42.5 MJ/kg</u>
HUMIDITY (%)	<u>88</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 22/07/2010

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

PLANT NUMBER: E9728/4 CE: No

RATED OUTPUT	KVA	<u>20</u>	RATING CLASSIFICATION	<u>PRP</u>	
	KW	<u>16</u>			
	PHASE	<u>3</u>			
	VOLTS	<u>415/240</u>		PERFORMANCE CLASS	<u>G1</u>
	AMPS	<u>28</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>G1065739</u>
ENGINE MODEL	<u>404D-22G</u>	SERIAL NUMBER	<u>U989164T</u>
ALTERNATOR MAKE	<u>Mec Alte</u>		
ALTERNATOR MODEL	<u>ECO 28-1LN/4</u>	SERIAL NUMBER	<u>A1094489</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>80%</u>	<u>51.1</u>	<u>415</u>	<u>18</u>	<u>13</u>	<u>-</u>	<u>-</u>	<u>5.2</u>
standby/ prime+10%	<u>110%</u>	<u>50.0</u>	<u>415</u>	<u>25</u>	<u>18</u>	<u>82</u>	<u>-</u>	<u>4.5</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>102.0</u>	DENSITY	<u>0.84 kg/l</u>
TEMPERATURE (Deg c)	<u>14</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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*H. Ward*

DATE 23/07/2010

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

PLANT NUMBER: E9728/5 CE: No

RATED OUTPUT	KVA	<u>20</u>	RATING CLASSIFICATION	<u>PRP</u>	
	KW	<u>16</u>			
	PHASE	<u>3</u>			
	VOLTS	<u>415/240</u>		PERFORMANCE CLASS	<u>G1</u>
	AMPS	<u>28</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>GJ065732</u>
ENGINE MODEL	<u>404D-22G</u>	SERIAL NUMBER	<u>U985797T</u>
ALTERNATOR MAKE	<u>Mecc Alte</u>		
ALTERNATOR MODEL	<u>ECO 28-1LN/4</u>	SERIAL NUMBER	<u>A1096487</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>80%</u>	<u>50.8</u>	<u>415</u>	<u>18</u>	<u>13</u>	<u>-</u>	<u>-</u>	<u>5.2</u>
standby/ prime+10%	<u>110%</u>	<u>50.0</u>	<u>415</u>	<u>25</u>	<u>18</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>102.0</u>	DENSITY	<u>0.84 kg/l</u>
TEMPERATURE (Deg c)	<u>14</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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DATE 23/07/2010

## Generating Set Functional Test Report

In accordance with ISO 8528 - 6 2005

PLANT NUMBER: E9728/6 CE: No

RATED OUTPUT	KVA	20	RATING CLASSIFICATION	PRP	
	KW	16			
	PHASE	3			
	VOLTS	415/240		PERFORMANCE CLASS	G1
	AMPS	28			
	HZ	50			
	RPM	1500			
GOVERNOR TYPE			Mechanical	COOLING METHOD	WATERCOOLED

ENGINE MAKE	Perkins	BUILD NUMBER	GN65732
ENGINE MODEL	404D-22G	SERIAL NUMBER	U98804T
ALTERNATOR MAKE	Mecc Alte		
ALTERNATOR MODEL	ECO 28-1LN/4	SERIAL NUMBER	A1094488
CONTROL PANEL(S)	Autostart	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	80%	50.9	415	18	13	—	—	5.2
standby/ prime+10%	110%	50.0	415	25	18	84	—	4.3

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)	Sea Level	FUEL SPEC	BS2869A2
BAROMETRIC PRESSURE (kpa)	102.1	DENSITY	0.84 kg/l
TEMPERATURE (Deg c)	17	CALORIFIC VALUE	42.5 MJ/kg
HUMIDITY (%)	63	LUB OIL SPEC	Multigrade

### WIRING DIAGRAMS:

ENGINE	08-152300	CONTROL PANEL(S)	10-170300
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TESTED BY

H. Wal

DATE 23/07/2010