TAYLOR POWER SYSTEMS

MARATHON ELECTRIC
SYNCHRONOUS AC GENERATOR
TYPICAL SUBMITTAL DATA

Basic Model 744RSL4056 **Test Report No. H-SG740066**

Kilowatt ratings at	**1800** RPM	**60** Hertz	**4** Bus Bars
kW (kVA)	**3** Phase	**0.8** Power Factor	**Dripproof or Open** Enclosure

	Class B	Class F		Class H	
Voltage*	80° C ① Continuous	105° C ① Continuous	130° C ① Standby	125° C ① Continuous	150° C ① Standby
480	1700 (2125)	2010 (2513)	2210 (2763)	2160 (2700)	2260 (2825)
460	1630 (2038)	1920 (2400)	2100 (2625)	2060 (2575)	2180 (2725)
440	1590 (1988)	1860 (2325)	2030 (2538)	1990 (2488)	2100 (2625)
416	1520 (1900)	1780 (2225)	1950 (2438)	1900 (2375)	2000 (2500)
380	1430 (1788)	1650 (2063)	1790 (2238)	1750 (2188)	1850 (2313)

① *Rise by resistance method, Mil-Std-705, Method 680.1b.*

Submittal Data: 480 Volts, 2763 kVA, 1800 RPM, 60 Hz, 3 Phase (Resistances @ 25°C)

Mil-Std-705B Method	Description	Value
301.1b	Insulation Resistance	> 1.5 Meg
302.1a	High Potential Test	
	Main Stator	2000 Volts
	Main Rotor	1500 Volts
	Exciter Stator	1500 Volts
	Exciter Rotor	1500 Volts
	PMG Stator	1500 Volts
401.1a	Stator Resistance, Line to Line,	
	High Wye Connection	0.0012 Ohms
	Rotor Resistance	1.245 Ohms
	Exciter Stator	19.44 Ohms
	Exciter Rotor	0.071 Ohms
	PMG Stator	2.2 Ohms
410.1a	No Load Exciter Field Amps	
	at 480 Volts Line to Line	1.00 A DC
420.1a	Short Circuit Ratio	0.514
421.1a	Xd Synchronous Reactance	2.571 pu
422.1a	X2 Negative Sequence	
	Reactance	0.236 pu
423.1a	X0 Zero Sequence Reactance	0.186 pu
425.1a	X'd Transient Reactance	0.19 pu
426.1a	X"d Subtransient Reactance	0.164 pu
-----	Xq Quadrature Synchronous	
	Reactance	1 pu
427.1a	T'd Transient Short Circuit	
	Time Constant	0.181 sec.
428.1a	T"d Subtransient Short Circuit	
	Time Constant	0.029 sec.
430.1a	T'do Transient Open Circuit	
	Time Constant	3.267 sec.
432.1a	Ta Short Circuit Time	
	Constant of Armature Winding	0.022 sec.

Mil-Std-705B Method	Description	Value
505.3b	Overspeed	2250 RPM
507.1c	Phase Sequence CCW-ODE	ABC
508.1c	Voltage Balance, L-L or L-N	0.2%
601.4a	L-L Harmonic Maximum - Total	5.0%
	(Distortion Factor)	
601.4a	L-L Harmonic Maximum - Single	3.0%
601.1c	Deviation Factor	5.0%
---	TIF (1960 Weightings)	<50
625.1c	Mechanical Strength (High Wye	
	Connection, Sustained 3 Phase	
	Short Circuit Current)	>300%
652.1a	Shaft Current	<.1 ma
---	Main Stator Capacitance to	
	Ground	0.15 mfd

Additional Prototype Data

--	Generator Frame	744
--	Type	Ext. Voltage Regulated, Brushless
--	Insulation	Class H
--	Coupling	Flexible
--	Amortisseur Windings	Full
--	Cooling Air Volume	3000 CFM
--	Exciter	Rotating
--	Voltage Regulator	DVR2000E+
--	Voltage Regulation	0.25%
--	Sensing	1 or 3 Phase

* Voltage refers to wye (star) connection, unless otherwise specified.

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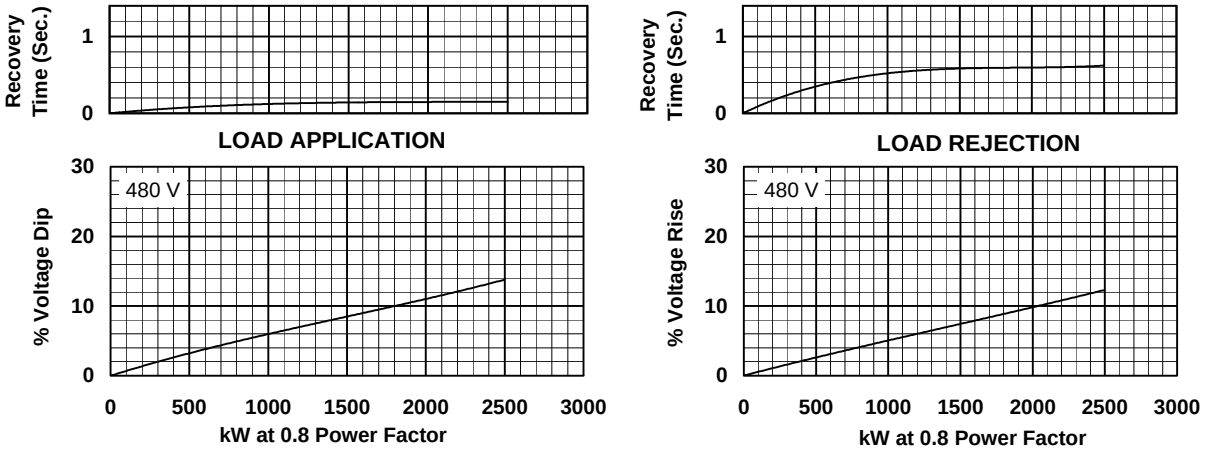
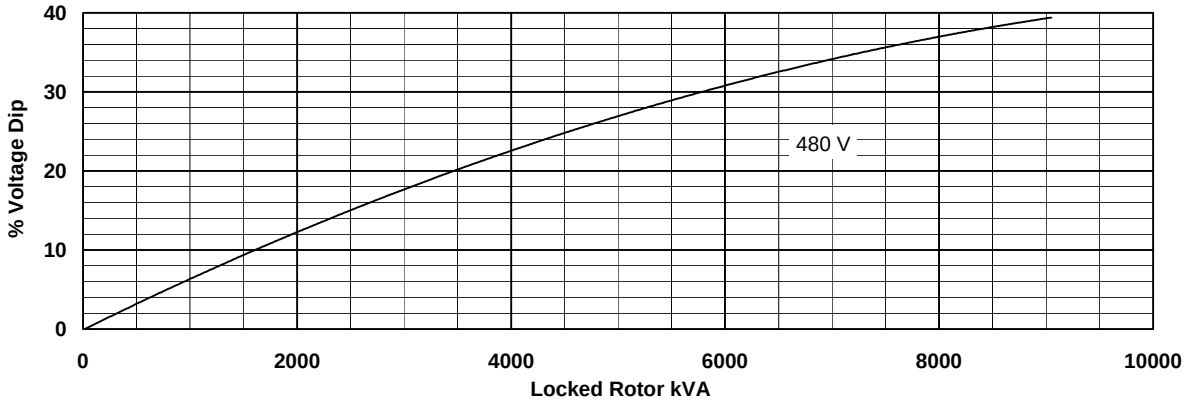
SYNCHRONOUS AC GENERATOR
TYPICAL DYNAMIC CHARACTERISTICS

Date: 07-21-11 **Basic Model 744RSL4056**

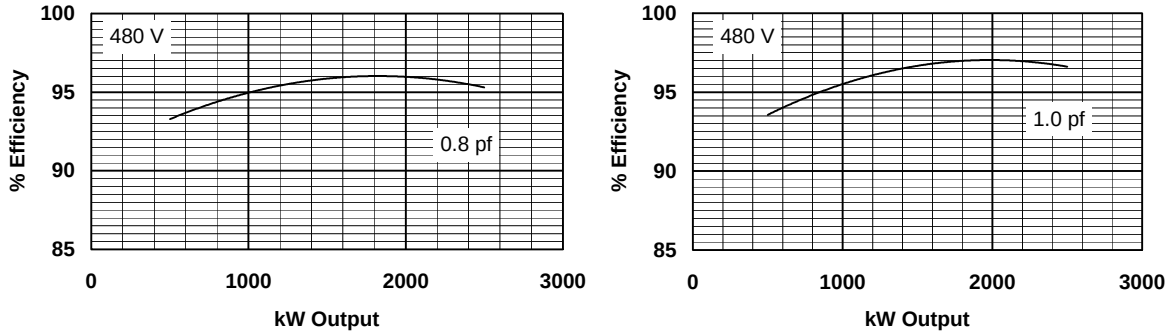
60 HERTZ



TYPICAL MOTOR STARTING CHARACTERISTICS



TYPICAL GENERATOR EFFICIENCY



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