

Engine: 3412	Generator Frame: 596	Selected Model	Genset Rating (kW): 508.0
Fuel: Diesel	Generator Arrangement: 9Y1449	Genset Rating (kVA): 635.0	Line Voltage: 400
Frequency: 50	Excitation Type: Permanent Magnet	Pwr. Factor: 0.8	Phase Voltage: 230
Duty: PRIME	Connection: SERIES STAR	Application: MAR	Rated Current: 916.5
			Status: Current

Version: 41205 /40310 /38261 /107

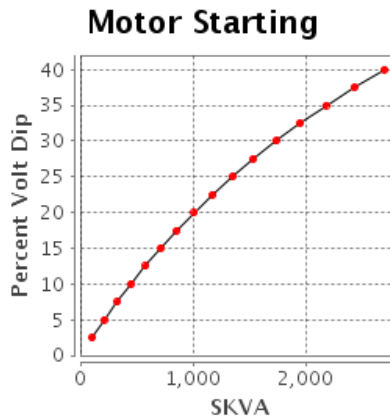
Generator Cooling Requirements - Temperature - Insulation Data	
Cooling Requirements:	Temperature Data: (Ambient 50 °C)
Heat Dissipated: 23.4 kW	Stator Rise: 90.0 °C
Air Flow: 93.6 m ³ /min	Rotor Rise: 90.0 °C
Insulation Class: H	
Insulation Reg. as shipped: 100.0 MΩ minimum at 40 °C	
Thermal Limits of Generator	
Frequency: 50 Hz	
Line to Line Voltage: 400 Volts	
Marine 90/50	638.0 kVA

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Starting Capability & Current Decrement Motor Starting Capability (0.4 pf)

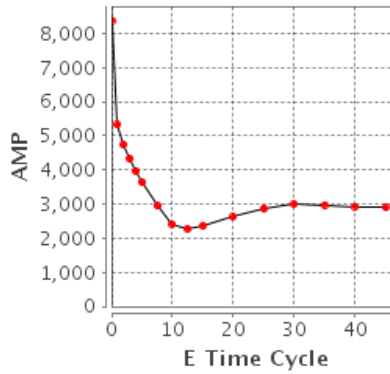
SKVA	Percent Volt Dip
104	2.5
213	5.0
328	7.5
450	10.0
579	12.5
715	15.0
859	17.5
1,013	20.0
1,176	22.5
1,350	25.0
1,537	27.5
1,736	30.0
1,951	32.5
2,181	35.0
2,431	37.5
2,701	40.0



Current Decrement Data

E Time Cycle	AMP
0.0	8,376
1.0	5,320
2.0	4,733
3.0	4,326
4.0	3,963
5.0	3,635
7.5	2,942
10.0	2,400
12.5	2,278
15.0	2,367
20.0	2,623
25.0	2,870
30.0	2,998
35.0	2,975
40.0	2,929
45.0	2,896

Current Decrement



Instantaneous 3 Phase Fault Current: 8376 Amps

Instantaneous Line - Line Fault Current: 7213 Amps

Instantaneous Line - Neutral Fault Current: 9400 Amps

Engine: 3412
Fuel: Diesel
Frequency: 50
Duty: PRIME

Generator Frame: 596
Generator Arrangement: 9Y1449
Excitation Type: Permanent Magnet
Connection: SERIES STAR

Selected Model

Genset Rating (kW): 508.0
Genset Rating (kVA): 635.0
Pwr. Factor: 0.8
Application: MAR

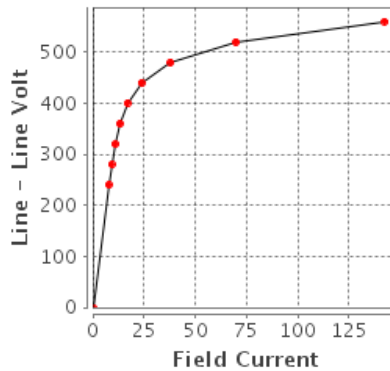
Line Voltage: 400
Phase Voltage: 230
Rated Current: 916.5
Status: Current

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Generator Output Characteristic Curves
Open Circuit Curve

Field Current	Line - Line Volt
0.0	0
7.7	240
9.2	280
10.9	320
13.2	360
16.8	400
23.7	440
38.0	480
69.8	520
142.4	560

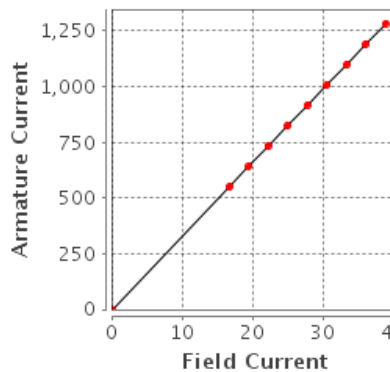
Open Circuit



Short Circuit Curve

Field Current	Armature Current
0.0	0
16.7	550
19.5	642
22.2	733
25.0	825
27.8	917
30.6	1,008
33.4	1,100
36.1	1,192
38.9	1,283

Short Circuit



Engine: 3412
Fuel: Diesel
Frequency: 50
Duty: PRIME

Generator Frame: 596
Generator Arrangement: 9Y1449
Excitation Type: Permanent Magnet
Connection: SERIES STAR

Selected Model

Genset Rating (kW): 508.0
Genset Rating (kVA): 635.0
Pwr. Factor: 0.8
Application: MAR

Line Voltage: 400
Phase Voltage: 230
Rated Current: 916.5
Status: Current

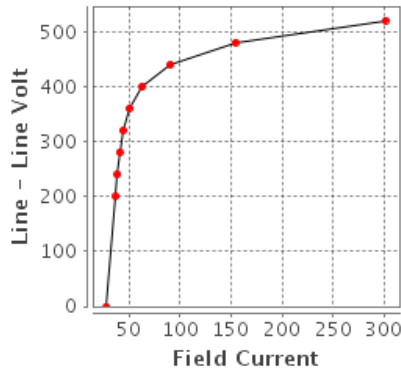
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Generator Output Characteristic Curves

Zero Power Factor Curve

Zero Power

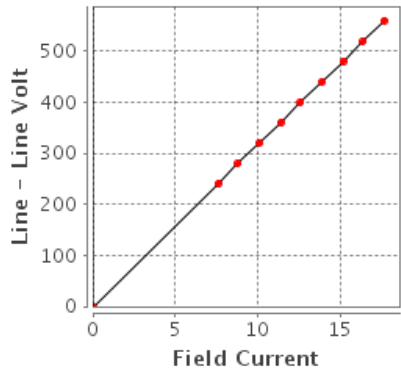
Field Current	Line - Line Volt
27.8	0
36.5	200
38.2	240
40.4	280
43.7	320
49.9	360
62.6	400
90.6	440
154.3	480
301.4	520



Air Gap Curve

Air Gap

Field Current	Line - Line Volt
0.0	0
7.6	240
8.8	280
10.1	320
11.4	360
12.6	400
13.9	440
15.2	480
16.4	520
17.7	560



Engine: 3412
 Fuel: Diesel
 Frequency: 50
 Duty: PRIME

Generator Frame: 596
 Generator Arrangement: 9Y1449
 Excitation Type: Permanent Magnet
 Connection: SERIES STAR

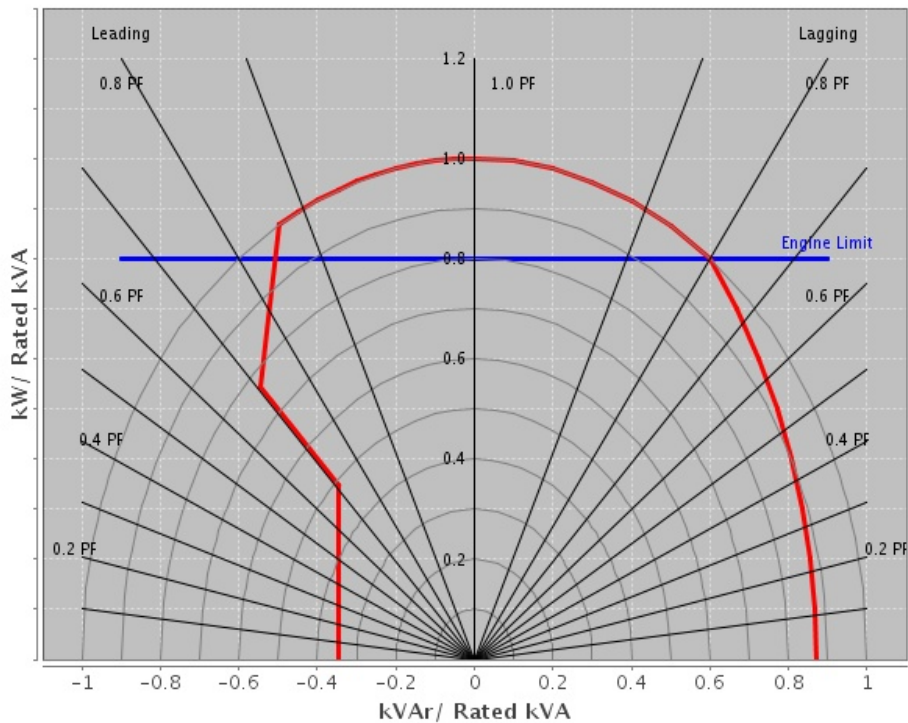
Selected Model

Genset Rating (kW): 508.0
 Genset Rating (kVA): 635.0
 Pwr. Factor: 0.8
 Application: MAR

Line Voltage: 400
 Phase Voltage: 230
 Rated Current: 916.5
 Status: Current

Version: 41205 /40310 /38261 /107

**Reactive Capability Curve
 Operating Chart**



Selected Model

Engine: 3412	Generator Frame: 596	Genset Rating (kW): 508.0	Line Voltage: 400
Fuel: Diesel	Generator Arrangement: 9Y1449	Genset Rating (kVA): 635.0	Phase Voltage: 230
Frequency: 50	Excitation Type: Permanent Magnet	Pwr. Factor: 0.8	Rated Current: 916.5
Duty: PRIME	Connection: SERIES STAR	Application: MAR	Status: Current

Version: 41205 /40310 /38261 /107

General Information

DM7824 Caterpillar SR4B Generators (50 Hz, 60 Hz)
Data for 360s, 440s, 450s, 490, 590, 660, 690, 820 and 860 frames.
Caterpillar SR4B generators built by Leroy Somer-USA(& predecessors).

Refer to DM7821 for explanation of all generator data in Technical Marketing Information (TMI) except generator efficiency for which the explanation is given below.

GENERATOR EFFICIENCY

Generator efficiency is the percentage of engine flywheel (or other prime mover) power that is converted into electrical output. The generator efficiency shown is calculated by the summation of all losses method, and is determined in accordance with the IEC Standard 60034. The efficiency considers only the generator. There is no consideration of engine or parasitic losses here.

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