



ATA

Makes Life Brighter

Generators & Switchgear Solutions

ATA C87.5, CUMMINS, 4BTA3.9-G11 87.5KVA

Engine Speed	Standby Power		Prime Power		Continuous Power	
RPM	Kw/KVA	HP	Kw/KVA	HP	kW	HP
1500	80/100	107	70/87.5	93		
1800	90/112.5	120	80/100	107		

Governed Engine Speed.....-rpm Engine Idle Speed..... -rpm Gross Engine Power Output..... -kW Piston Speed..... -m/s Friction Horsepower.....-kW Engine Water Flow to Engine:.....-litre/sec. Intake Air Flow..... -litre/sec. Exhaust Gas Flow..... -litre/sec. Exhaust Gas Temperature..... -°C Radiated Heat to Ambient.....-kW Heat Rejection to Coolant.....-kW Heat Rejection to Fuel.....-kW	STANDBY POWER		PRIME POWER	
	1800	1500	1800	1500
	950- 1050	950- 1050	950- 1050	950- 1050
	90	80	80	70
	7.2	6.0	7.2	6.0
	8.2	8.2	8.2	8.2
	TBD	TBD	TBD	TBD
	101	70	93	64
	210	134	188	125
	405	548	393	526
	TBD	TBD	TBD	TBD
	TBD	TBD	TBD	TBD
	TBD	TBD	TBD	TBD

Engine Performance Data @ 1800 RPM

OUTPUT POWER			FUEL CONSUMPTION	
%	kW	HP	g/kW.h	L/h
STANDBY POWER				
100	90	120	206	22.5
PRIME POWER				
100	80	107	207	20.1
75	60	80	210	15.3
50	40	53	223	10.8
25	20	27	266	6.4

Engine Performance Data @ 1500 RPM

OUTPUT POWER			FUEL CONSUMPTION	
%	kW	HP	g/kW.h	L/h
STANDBY POWER				
100	80	107	206	20.0
PRIME POWER				
100	70	93	208	17.6
75	52.5	70	208	13.2
50	35	47	214	9.1
25	17.5	23	251	5.3

Dimensions

Type	Length (mm)	Width (mm)	Height (mm)	Fuel Tank (L)	Weight (KG)
Open	2050	775	1325	190	1000
Closed	2360	1110	1500	190	1600

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Approximate Engine Weight (wet).....	-kg	350
Mass Moment of Inertia of Rotating Components (No Flywheel).....	-kg.m ²	0.143
Center of Gravity from Rear Face of Block.....	-mm	373
Center of Gravity above Crankshaft Centerline.....	-mm	163
Engine Idle Speed.....	-RPM	950-1050
Fire Order.....		1-3-4-2

ENGINE MOUNTING

Maximum (Static) Bending Moment at Rear Face of Block.....	-N.m	1356
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EXHAUST SYSTEM

Maximum Back Pressure.....	-kPa	10
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AIR INTAKE SYSTEM

Maximum Intake Air Restriction with Heavy Duty Air Cleaner		
— Dirty Element.....	-kPa	6.2
— Clean Element.....	-kPa	3.7

LUBRICATION SYSTEM

Engine Oil Pressure for Engine Protection Devices:		
— Idle Speed(Minimum).....	-kPa	207
— Governed Speed(Maximum).....	-kPa	345
Maximum Oil Temperature.....	-°C	121
Minimum Required Lube System Capacity - Sump plus Filters.....	-litre	10.9

FUEL SYSTEM

Type Injection System.....	BYC PB Direct Injection	
Maximum Restriction at Lift Pump.....	-kPa	13.6
Maximum Fuel Inlet Temperature.....	-°C	70
Total Drain Flow (constant for all loads).....	-litre/hr	30

COOLING SYSTEM

Coolant Capacity - Engine Only.....	-litre	8.3
Maximum Coolant Friction Head External to Engine...-1800 rpm.....	-kPa	35
	-1500 rpm.....	-kPa 28
Maximum Static Head of Coolant Above Engine Crank Centerline.....	-m	14
Standard Thermostat (Modulating) Range.....	-°C	83 - 95
Minimum Pressure Cap.....	-kPa	69
Maximum Top Tank Temperature for Standby / Prime Power.....	-°C	104 / 100



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ELECTRICAL SYSTEM

Cranking Motor (Heavy Duty, Positive Engagement).....	-volt	12V	
		24V Battery	
Charging System, Negative Ground.....	-ampere	63	
		40 Maximum	
Allowable Resistance of Cranking Circuit.....	-ohm	0.00075	
		0.002 Minimum	
Recommended Battery Capacity			
—Cold Soak @ 0 to 32-F (-18 to 0-C).....	-0°F CCA	625	312

EMISSIONS

Gaseous Emissions per GB 20891-2007, at 1500rpm :

—Weight-Specific NOx.....	g/kW.h
—Weight-Specific HC.....	g/kW.h
—Weight-Specific CO.....	g/kW.h
—Weight-Specific Particulates.....	g/kW.h

Gaseous Emissions per GB 20891-2007, at 1800rpm :

—Weight-Specific NOx.....	g/kW.h
—Weight-Specific HC.....	g/kW.h
—Weight-Specific CO.....	g/kW.h
—Weight-Specific Particulates.....	g/kW.h

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ALTERNATOR SPECIFICATIONS

TAL 044 - Three-phase 70 to 200 kVA - 50 Hz / 88 to 250 kVA - 60 Hz

Insulation class	H	Excitation system 6-wire	SHUNT AREP+ / PMG
Winding pitch	2/3 (wind.6S - 6-wire / wind.6 - 12-wire)	AVR type	R120 R180
Number of wires	6 (12 option)	Excitation system 12-wire (option)	SHUNT AREP+ / PMG
Protection	IP 23	AVR type	R120 R180
Altitude	≤ 1000 m	Voltage regulation (*)	± 1 % ± 0.5 %
Overspeed	2250 R.P.M.	Total Harmonic Distortion THD (**) in no-load < 2 %	
Air flow 50 Hz	0.29 m³/s	Total Harmonic Distortion THD (**) in linear load < 5 %	
Air flow 60 Hz	0.34 m³/s	Waveform: NEMA = TIF (**)	< 50
AREP+/PMG Short-circuit current = 2.7 In : 5 second		Waveform: I.E.C. = FHT (**)	< 2%

Control Panel

DSE4510
Auto Start Control Module
The DSE4510 is a compact Auto Start Control Module that has been developed to provide an outstanding range of features within a compact enclosure.
OVERALL SIZE
140 mm x 113 mm x 43 mm (5.5" x 4.4" x 1.5")
PANEL CUTOUT SIZE
118 mm x 92 mm (4.6" x 3.6")
MAXIMUM PANEL THICKNESS
8.0 mm (0.3")
WEIGHT
0.26kg
PRODUCT VARIANTS
4510-03 - 4510 Auto Start Control Module (Ct, Rtc)
4510-04 - 4510 Auto Start Control Module (Ct, Rtc, Htr)



Optional configurations:

Engine accessories:

- ☐ Heavy-duty air filter
- ☐ Coolant heater
- ☐ Lubricant oil heater
- ☐ Fuel and Water Separator
- ☐ Lube oil rotary pump

Alternator And Accessories:

- ☐ Leroy somer/stamford
- ☐ Anti condensation heater
- ☐ PMG + AVR ◇ Double bearing
- ☐ alternator High voltage _____ kV
- ☐ RTDs for Bearing and winding

Cooling System:

- ☐ 55 degree Radiator
- ☐ Remote Radiator

Control System:

- ☐ AMF
- ☐ Parallel
- ☐ Practical type in low temperature environment
- ☐ Control Screen Heater
- ☐ Remote Annunciators
- ☐ Other (ComP, DEIF)

Circuit Breaker:

- ☐ 3/4 poles
- ☐ Fixed/handcart type
- ☐ Electric mechanism

Automatic Transfer Switch (ATS):

- ☐ ATS cabinet
- ☐ Contractor type ATS
- ☐ Motorized changeover type ATS

Start Battery:

- ☐ Nickel-cadmium battery
- ☐ Maintenance-free battery
- ☐ Battery charger and selector switch
- ☐ Charging current meter

External Fuel Tank:

- ☐ Single /double wall fuel tank (500-5000 L)
- ☐ Fuel Transfer pump

Exhaust Muffler:

- ☐ Residential grade
- ☐ Critical grade
- ☐ Hospital grade

Available for voltages :

- ☐ 400/230V, 480/277V, 380/220V, 440/254V, 416/240V, 220/127V, 208/120V

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Prime Rating:

Unlimited hours usage, with an average load factor of 80% over each 24 hours period. 10% overload is available for 1 hour in every 12 hours operation. 0 overload is permitted on standby power.

Standby Rating:

Limited to 500 hours annual usage, with an average load factor of 80% of the published standby power rating over each 24 hours period. Up to 300 hours of annual usage may be run continuously. No over-load is permitted on standby power.

Engine:

Cummins, including air filters, fuel filters, oil filter, starting motor and charging alternator etc.

Warranty policy:

ATA products have a warranty for 12 months or 1000 hours whichever occurs first against any manufacturing defects

Wearing parts (filters), incorrect man-made operation, maintenance failures are excluded from the warranty policy

Radiator:

50°C, fan protective shroud

Fuel Tank:

Capacity of fuel tank is for 8– 10 hours running
Built in fuel tank up to 800 kVA

Circuit Breaker:

3 pole LS MCCB

Alternator Type:

brushless AC alternator

Control system alarms:

Over and Under Speed

Low and High Battery Volt. Start and Stop Failure Over Current Under / Over Generator Voltage

Low Oil Pressure
Emergency stop High engine temperature



STAMFORD
power generation

DSE



**LEROY
SOMER**

Manufacturer reserves the right to make changes in model, technical specifications, color, equipment and accessories without prior notice. All photos are representative and may not reflect exact mode.

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