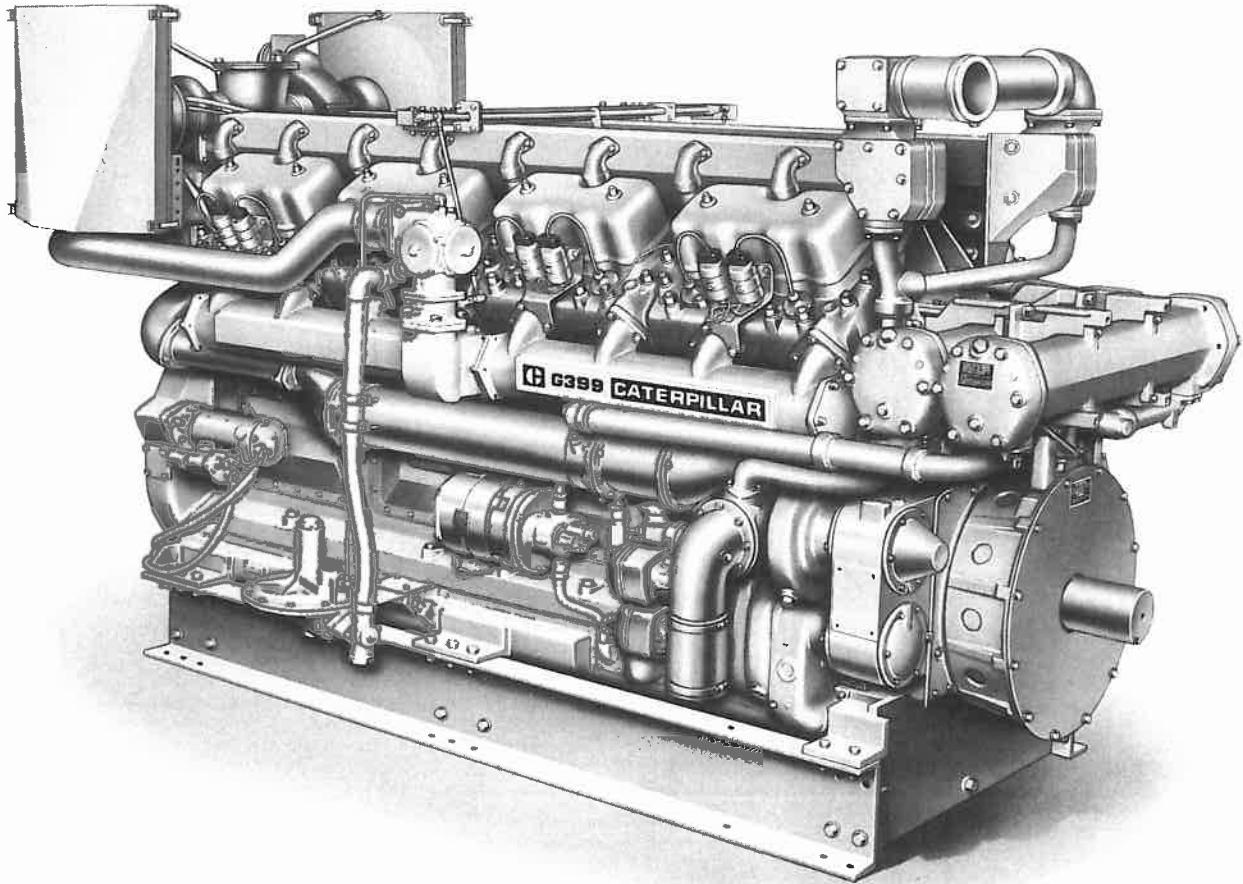


CATERPILLAR

G399

NATURAL GAS
ELECTRIC SET ENGINES



Ratings in BHP	1200 RPM	1000 RPM
*Turbocharged-Aftercooled	930	800
Naturally Aspirated	660	550

*Turbocharged-Aftercooled engines require a separate supply of water to the aftercooler. Water temperature can be no higher than 90°F (32°C).

NATURAL GAS ENGINE

Four-Stroke Cycle, Spark-Ignition, Turbocharged-Aftercooled, or Naturally Aspirated.

Number of Cylinders V-16

Bore And Stroke: inches 6.25 x 8.00
millimeters 159 x 203

Piston Displacement: cu. in 3927
liters 64.4

	Lb.	Kg.
Approximate Dry Weight: TA	15,000	6804
NA	13,600	6190

Compression Ratio 10:1

Installation Facts

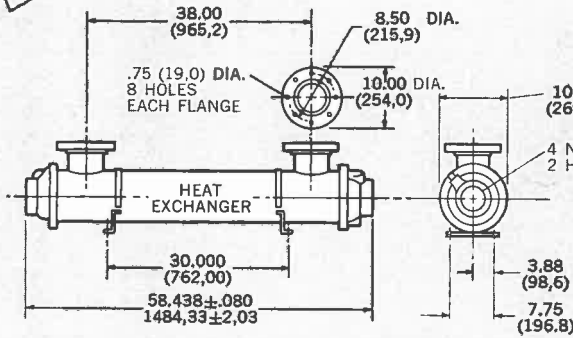
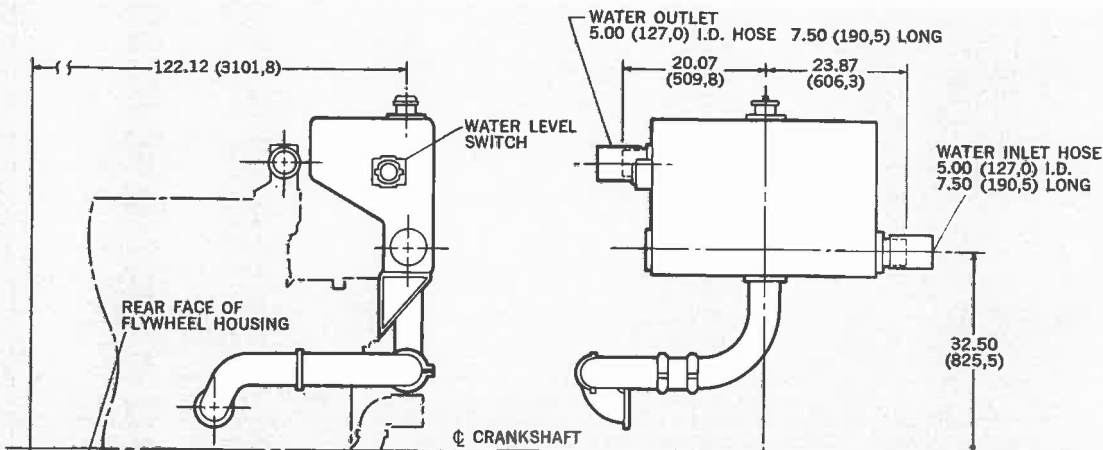
	60 Hz		50 Hz	
	TA	HCR	NA	HCR
FUEL SYSTEM				
Fuel Pressure Range with Regulator psi • kg/cm ²	12-20 • ,84-1,4	2-20 • ,14-1,4	12-20 • ,84-1,4	2-20 • ,14-1,4
LUBRICATING SYSTEM				
Sump Capacity (Refill) gal • lit	110 • 416	110 • 416	110 • 416	110 • 416
COOLING WATER SYSTEM				
Volume gal • lit				
Engine only	85 • 322	85 • 322	85 • 322	85 • 322
Radiator for max. ambient of 110°F. • 43°C.	55 • 204	—	55 • 204	—
Radiator for max. ambient of 125°F. • 51°C.	62 • 234	55 • 204	62 • 234	55 • 204
Maximum System Pressure—Radiator psi • kg/cm ²	7 • ,5	7 • ,5	7 • ,5	7 • ,5
Water Pump Performance				
Jacket Water				
Capacity @ 30 ft • 9,15 m Head gpm • lit/sec	380 • 23,9	380 • 23,9	290 • 18,3	290 • 18,3
Capacity @ 5 ft • 1,52 m Head gpm • lit/sec	418 • 26,4	418 • 26,4	355 • 22,4	355 • 22,4
Max. Allowable Static Head ft • m	57.7 • 17,54	57.7 • 17,54	57.7 • 17,54	57.7 • 17,54
Auxiliary Water				
Capacity @ 46 ft • 14,0 m Head (60 Hz); 30 ft • 9,15 m Head (50 Hz) gpm • lit/sec	50 • 3,2	—	50 • 3,2	—
Max. Allowable Static Head ft • m	57.7 • 17,54	—	57.7 • 17,54	—
Aftercooler				
Maximum Allowable Flow gpm • lit/sec	150 • 9,5	—	150 • 9,5	—
Minimum Flow Required gpm • lit/sec	50 • 3,2	—	50 • 3,2	—
Pressure Drop Through Aftercooler @ Max. Flow psi • kg/cm ²	7.8 • ,55	—	7.8 • ,55	—
Max. Allowable Pressure psi • kg/cm ²	40 • 2,8	—	40 • 2,8	—
Maximum Temperature of Water °F. • °C.	90 • 32	—	90 • 32	—
Heat Rejection BTU/min. • k cal/min.	2180 • 548	—	1930 • 485	—
Jacket Water System				
Heat Rejection (Incl. Standard Manifolds and Oil Cooler) BTU/min. • k cal/min.	39200 • 9878	31600 • 7950	33500 • 8440	28550 • 7160
Maximum Temperature °F. • °C.	210 • 99	210 • 99	210 • 99	210 • 99
Maximum Allowable Pressure psi • kg/cm ²	25 • 1,8	25 • 1,8	25 • 1,8	25 • 1,8
Radiator Data (Does not include separate core req'd. on TA Engines)				
Fan HP KW				
with 110°F. • 43°C. Radiator	41.5 • 29,4	—	24 • 17	—
with 125°F. • 43°C. Radiator	62.5 • 44,3	41.5 • 29,3	35 • 25	24 • 17
Air Flow through 110°F. • 43°C. Radiator cfm • lit/sec	67680 • 31900	—	55980 • 25400	—
Air Flow through 125°F. • 51°C. Radiator cfm • lit/sec	72700 • 34300	67680 • 31950	60600 • 28600	55980 • 25650
Max. Allowable Static Pressure @ Exhaust Side of Large Radiator @ 100°F. • 38°C. ambient in • mm H ₂ O	.5 • 12,7	.5 • 12,7	.5 • 12,7	.5 • 12,7
ENGINE ROOM VENTILATION				
Combustion Air Requirements @ 85°F. • 29°C. cfm • lit/sec	1350 • 636	950 • 448	1145 • 540	800 • 378
Heat Radiated by Engine BTU/min. • k cal/min.	6600 • 1660	10500 • 2640	6000 • 1512	10000 • 2520
Heat Dissipated by Generator BTU/min. • k cal/min.	2060 • 518	1850 • 466	1900 • 478	1695 • 427
Ventilation Recommended for 15°F. • -9°C. Rise (Engine and Generator radiated heat only) cfm • lit/sec	34860 • 16450	47120 • 22200	30450 • 14380	44700 • 21140
EXHAUST SYSTEM				
Gas Volume cfm • lit/sec	4225 • 1990	3050 • 1435	3540 • 1671	2150 • 1025
Gas Temperature (Stack) °F. • °C.	1100 • 594	1125 • 605	1075 • 580	850 • 454
Max. Permissible Back Pressure in • mm H ₂ O	20 • 508	25 • 634	20 • 508	25 • 634
STARTING SYSTEM				
Air System				
Min. Air Pressure Required at Motor psi • kg/cm ²	90 • 6,33	90 • 6,33	90 • 6,33	90 • 6,33
Max. Air Pressure Allowed at Motor psi • kg/cm ²	150 • 10,55	150 • 10,55	150 • 10,55	150 • 10,55
Electric Dual Motor System				
Voltage	30 - 32	30 - 32	30 - 32	30 - 32
Breakaway Current (Amps.)				
@ 70°F. • 21°C.	1250	1250	1250	1250
@ 40°F. • 04°C.	2025	2025	2025	2025
Rolling Current (Amps.)				
@ 70°F. • 21°C.	500	500	500	500
@ 40°F. • 04°C.	810	810	810	810

For LCR information consult your Caterpillar representative.

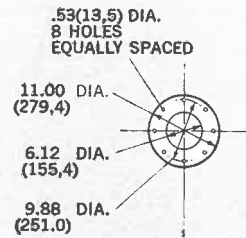
Material and specifications subject to change without notice.



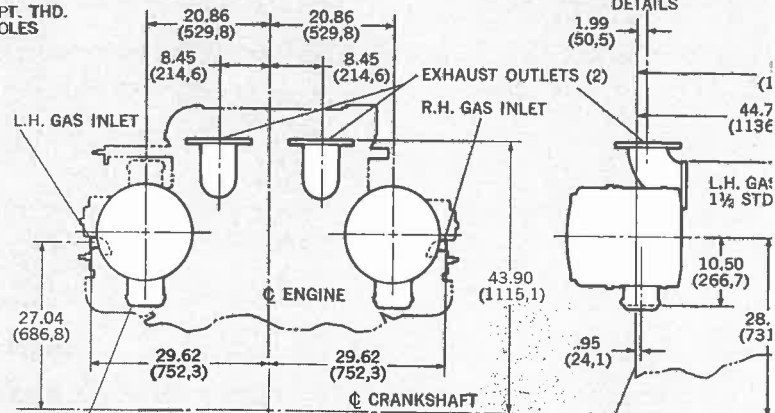
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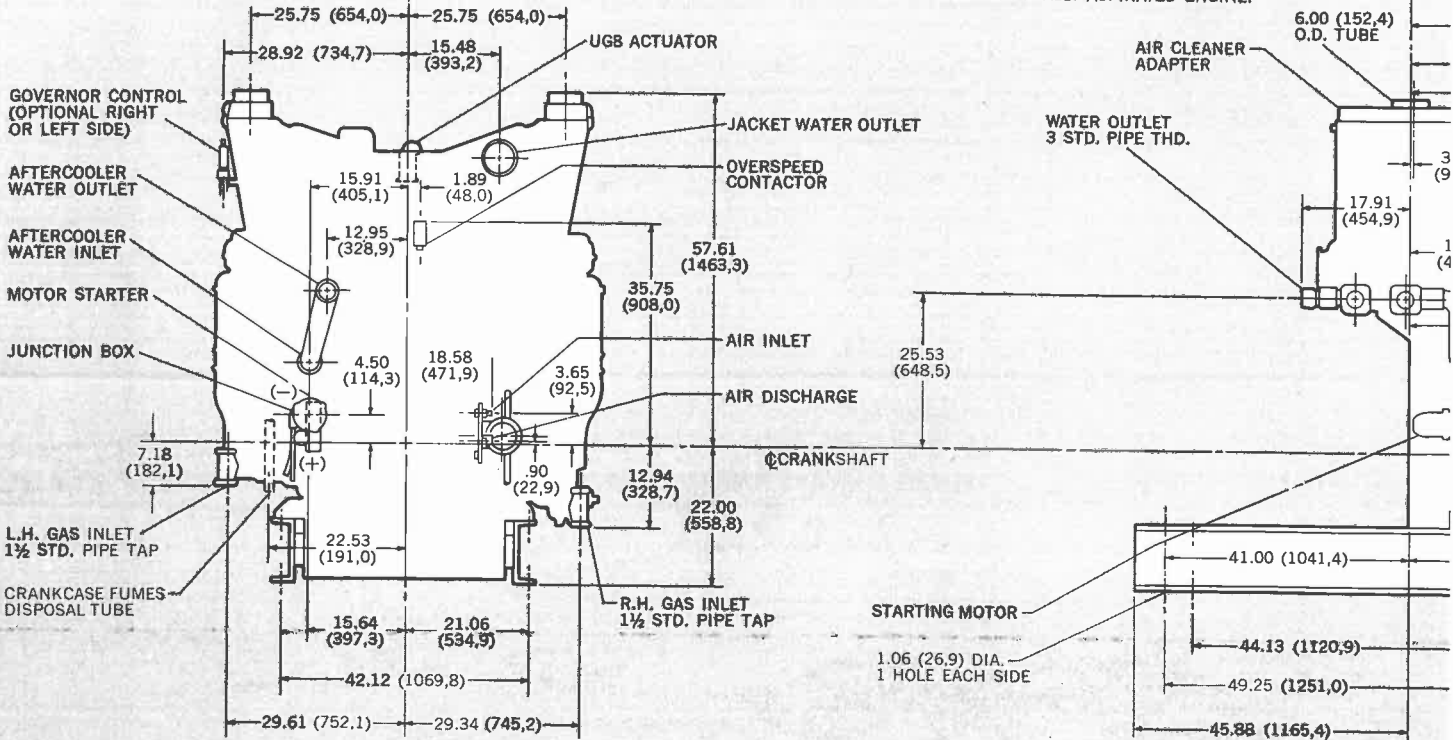
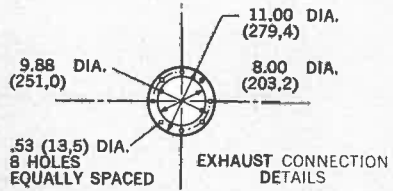
EXPANSION TANK GROUP



EXHAUST CONNECTION DETAILS



EXHAUST OUTLET, GAS INLET AND AIR CLEANER FOR NATURALLY ASPIRATED ENGINE.



FLYWHEEL END OF ENGINE

REAR FACE OF FLYWHEEL HOUSING