



## ENGINE / END 864A

Make .....	Mack	Inlet and exhaust valve seats .....	Permanently fitted inserts of high-alloy, heat-resistant metal
Type .....	Thermodyne Diesel, naturally aspirated, V-8, 4-stroke, open chamber, direct injection	Valves, location .....	Overhead
Number of cylinders .....	Eight	Exhaust .....	Hard faced, with positive type rotators
Bore and stroke .....	5" x 5 1/2"	Clear dia. of ports, Inlet .....	2-3/64"
Piston displacement .....	864 cu. in.	Exhaust .....	1-11/16"
Compression ratio .....	16.18	Lift, Inlet & Exhaust .....	9/16"
Brake horsepower @ 2100 r.p.m. (gov.) .....	280	Material, Inlet .....	Chromium-silicon steel, Stellite faced
Max. torque @ 1600 r.p.m. .....	700 lb.-ft.	Exhaust .....	Stabl-ite (face, Stellite; head and upper end of stem, chromium-nickel-nitrogen-austenitic steel; lower end of stem, nickel - chromium - molybdenum steel)
A.M.A. horsepower .....	80.0	Cylinder numbering .....	1-2-3-4 right bank 5-6-7-8 left bank
Cylinder block .....	Chromium-nickel-copper alloy iron	Firing order .....	1-5-4-8-6-3-7-2
Cylinder sleeves .....	Special alloy iron	Fuel injection pump, make .....	American Bosch, PSJ
Type .....	Wet	Type .....	Single plunger
Cylinder heads cast in .....	Two's, Two heads per bank	Drive .....	Gear, driven at engine speed
Pistons, material .....	Aluminum alloy	Timing .....	Variable
Piston rings, compression .....	Three (top ring chrome plated)	Transfer pump, type .....	Gear, integral with injection pump
Oil control .....	One	Nozzles, type .....	Four-hole spray
Wristpin, type .....	Full-floating	Fuel filters .....	Primary and secondary
Diameter .....	1-7/8"	Governor, make .....	American Bosch
Retention .....	Snap rings	Type .....	Mechanical
Connecting rods, type .....	Drop-forged I-beam	Manifolds, Inlet .....	One each cylinder bank with cross-over tube
Cap angle .....	35°	Exhaust .....	One (2 section) per bank
Length, center to center .....	10-1/2"	Air cleaner .....	Donaldson, oil bath
Crankshaft .....	Integral counterweights	Air compressor (gear driven) .....	Tu-Flo 500 (12 cu. ft.)
Material .....	Medium carbon steel, Tocco hardened journals	Cooling:	
Weight .....	233 lbs.	Water delivery to cylinder block .....	Through gallery cored in block
Vibration damper .....	Viscous type	To cylinder head .....	From cylinder block through ports directed toward exhaust valve seats
Main bearings, material .....	Copper-lead, steel back with babbitt overlay	Water conditioner .....	Perry
Number and diameter .....	Five, 4"	Thermostat, to open .....	170°, two
Total length .....	7-5/64"	Lubrication, oil filter	
Connecting rod bearings, Material .....	Copper-lead, steel back with babbitt overlay	Make and model .....	W.G.B., WB-5
Diameter & length .....	3-1/2" x 1-33/64", two connecting rods per crankpin	Type and capacity .....	Combination Full Flow/By-Pass, 12 quarts
Camshaft, bearings .....	Five	Lubrication, oil cooler .....	Tube and shell type
Timing drive .....	Mild carbon steel, case-hardened, generator ground helical gears	Oil Capacity, including filter and oil cooler .....	30 quarts (approx.)
Valve-lifter, type .....	Mushroom, Durafaced (Tungsten-Carbide)		



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SAE DIESEL ENGINE TEST CODE

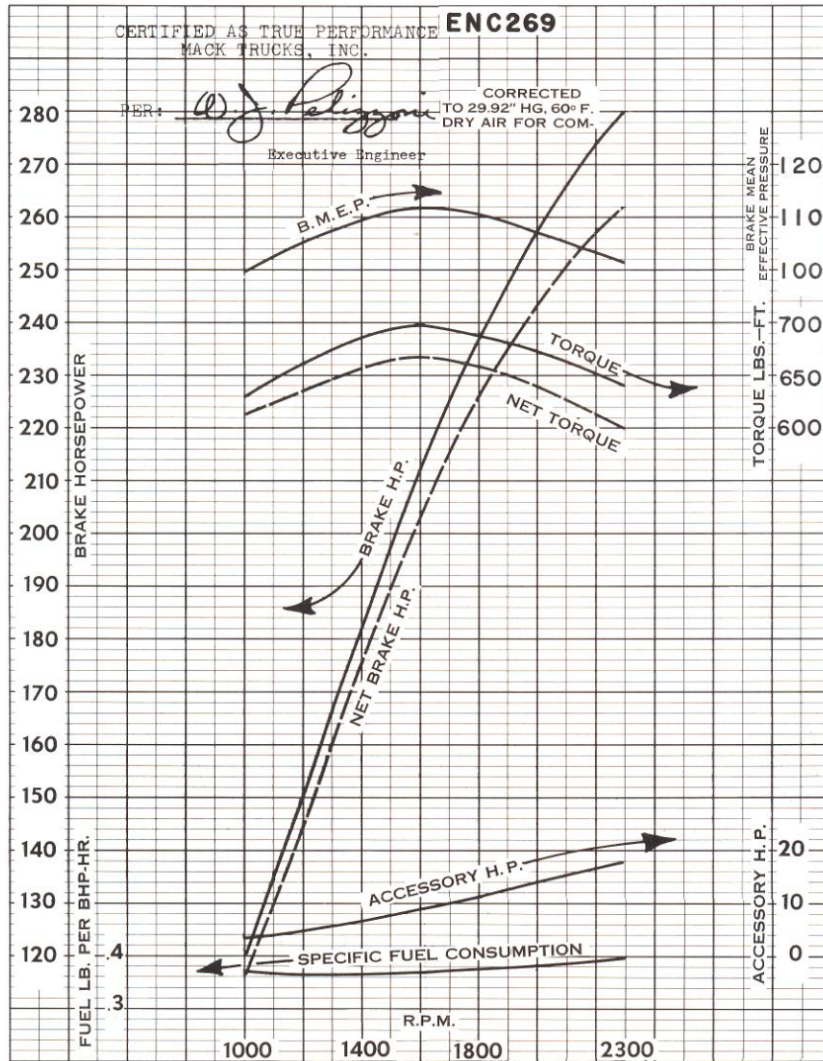
Curve Sheet DD-4

Test No. \_\_\_\_\_

Eng. Mfr. **MACK** Model **END864A** Serial No. \_\_\_\_\_ Date \_\_\_\_\_

No. Cyl. **8** Bore **5"** Stroke **5-1/2"** Displacement **864 CU. IN.**

Fuel **DIESEL** For Details see Mech. Inform. Sheet **END864A-A** and Log Sheet **T-10A-22**



MACK TRUCKS, INC. • ALLENTOWN, PA.

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