



## ENGINE / END 711 & ENDL 711\*

### THERMODYNE DIESEL:

Make	Mack
Type	Naturally aspirated
Number of cylinders	Six
Bore and stroke	5" x 6"
A.M.A. horsepower	60
Brake horsepower @ 2100 rpm (gov.)	211
Piston displacement	707
Compression ratio	15.80
Max. torque @ 1350 rpm	602 lb-ft.

### CYLINDER BLOCK:

Construction	Chromium-nickel-copper alloy iron
Cylinder sleeves	Special alloy iron, phosphate coated
Type	Dry
Cylinder heads cast in	Threes

### PISTONS:

Pistons, material	Aluminum alloy
Piston rings, compression	Three (top ring chrome plated)
Oil control	Two (chrome plated)
Wristpin, type	Full-floating
Diameter	1 7/8"
Retention	Snap rings

### CONNECTING RODS:

Type	Drop-forged I-beam
Cap angle	35°
Length, center to center	10-11/16"

### CRANKSHAFT:

Type	Integral counterweights
Material	Medium carbon steel, induction hardened journals
Weight	230 lbs.
Vibration damper	Viscous type
Main bearings, material	Copper-lead, steel back with babbitt overlay
Number and diameter	Seven, 4"
Total length	10-15/16"

### CAMSHAFT:

Bearings	Seven
Timing drive	Mild carbon steel, case-hardened, generator ground helical gears

### VALVES:

Valve-lifter, type	Mushroom, Durafaced (Tungsten-carbide)
Inlet and exhaust valve seats	Permanently fitted inserts of high-alloy, heat-resistant metal
Valves, location	Overhead
Exhaust	Hard faced, with positive type rotators
Clear dia. of ports, inlet	2-3/64"
Exhaust	1-11/16"
Lift, inlet & exhaust	9/16"
Material, inlet	Chromium-silicon steel, Stellite faced
Exhaust	Stabl-ite (face, Stellite; head and upper end of stem, chromium-nickel-nitrogen-austenitic steel; lower end of stem, nickel-chromium-molybdenum steel)

**FIRING ORDER:** 1-5-3-6-2-4

### FUEL SYSTEM:

Fuel injection pump, make	American Bosch, APE
Type	Multiple unit, flange mounted
Timing	synchroavance, variable automatic
Transfer pump, type	Plunge
Nozzles, type	Four-hole spray
Fuel filters	Primary and secondary
Governor, make	America Bosch
Type	Mechanical
Optional Extra	Woodward (hydraulic)

### MANIFOLDS:

Inlet	Ram type
Exhaust	3 piece, 6 port

### AIR SUPPLY:

Air cleaner	Donaldson, oil bath
Oil capacity	8 pints
Air compressor (gear driven)	Tu-Flo 500 (12 cu. ft.)

### COOLING SYSTEM:

Thermostat, to open	170°
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### LUBRICATING SYSTEM:

Lubrication, oil filter:	
Make and model	W.G.B., WB-5
Type	Combination full flow/by pass
Capacity	12 quarts
Oil capacity, including filters	33 quarts

\*Engine Model END 711 is the same as Model ENDL 711 except for having the flywheel housing of aluminum instead of iron.



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Curve Sheet DD-4

## SAE DIESEL ENGINE TEST CODE

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

Eng. Mfr. **MACK** Model **END 711** Serial No. \_\_\_\_\_ Date \_\_\_\_\_

No. Cyl. **6** Bore **5** Stroke **6** Displacement **707 CU. IN.**

Fuel **DIESEL** For Details see Mech. Inform. Sheet **END 711-A** and Log Sheet \_\_\_\_\_

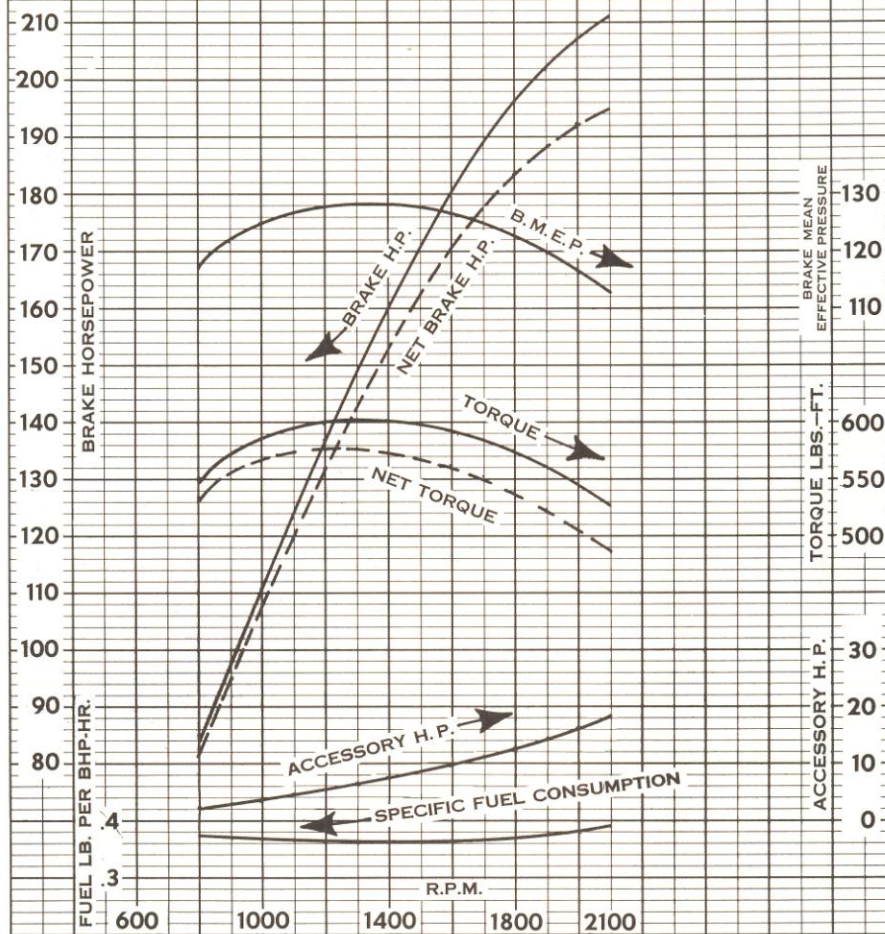
CERTIFIED AS TRUE PERFORMANCE  
MACK TRUCKS, INC.

ENC 2254

BHP CORRECTED  
TO 29.92" HG, 60° F.  
DRY AIR FOR COM-  
PARISON WITH  
COMPETITIVE  
ENGINES SO RATED

PER: \_\_\_\_\_

*W. J. Pelizzoni*  
Executive Engineer



MACK TRUCKS, INC. • ALLENTOWN, PA.