

MACK TRUCKS, INCORPORATED
ENGINEERING DIVISION

B422T

VEHICLE SPECIFICATIONS

Specification No. B422T-9592
General Engineering Department
Allentown, Pennsylvania
Issued: October 16, 1959

FOREWORD

This specification describes the new Mack Model B422T, Highway Tractor Vehicle, with a gross combination weight rating of 40,000 pounds with a single axle trailer and 53,000 pounds with a tandem axle trailer.

This model features the installation of a 438 cubic inch displacement engine, to adequately meet the present day performance demands for vehicles in this category.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

COMPONENT PARTS OF STANDARD CHASSIS

Wheelbase	146-1/2", Platform 165"
	CA dimension.. 72"
Frame	9" x 3-1/4" x 1/4"
Engine	EN438
Air compressor	Tu-Flo #400
Air cleaner	Oil bath type
Oil filter	By-pass type
Mounting	Flange, to engine
Thermostats	Ballows type (set to open @ 170 degrees)
Clutch	CL401
Exhaust	Underframe
Transmission	TR771, constant mesh, direct
Front axle	FA505
Rear axle	RAS508
Carrier	CRS84
Ration	5.57, 6.17, 6.83
Steering gear	SG25
Steering wheel dia.	22"
Wheels	Cast spoke
Tires, single front and dual rear	10.00/20 (12 ply rating)
Rims	7.5
Cab	CA21

With instrument board including the following:

- Speedometer
- Fuel gauge
- Lube oil pressure gauge
- Temperature gauge
- Air pressure gauge
- Ammeter
- Throttle control
- Choke control

Brakes	Air, with buzzer type low pressure indicator
Electrical system and equipment:	
System and voltage	12V, 30 amperes
Lighting	12V
Starting	12V
Regulator	30A
Generator	30A
Battery	(1) 12V
Horn	Electric, dual tone
Stop and tail light	(1) combination type, shock mounted
I.C.C. lights	One on each front corner of cab roof
Marker lights	Cluster of three (3) on cab roof
Recessed sealed beam headlamps and parking lamps	
Headlamp hi-beam indicating light	
(2) Two interior cab lamps	
Automatic reset circuit breakers	

**COMPONENT PARTS OF
STANDARD CHASSIS**

(CONTINUED)

Fuel tank 22 gallon, L.H. apron
Chassis equipment:
Front shock absorbers
Wheel wrench and handle
Semi-trailer brake and electrical connections

OPTIONAL CHASSIS COMPONENTS

Wheelbases 137-1/2" (CA27 only)
Platform 102"
CA dimension ... 69"
164-1/2", Platform 123" (CA21)
99" (CAS28)
CA dimension ... 90" (CA21)
66" (CAS28)

Frame reinforcement 1/4" inside channel

Engine:

Air compressor Tu-Flo #500
Clutch air assist (not available with 5-speed transmissions)
Transmissions TRD775, Unishift, Duplex, Direct
TRD77, Two-lever, Duplex, Direct
Front axle FA517
Steering gear SG26 (obligatory with FA517 and
when FA505 is furnished in con-
junction with CA27 contour cab)
Power steering Hydraulic, Mack linkage type
(available only with 12V, 55A
electrical system)

Rear axles:

Carrier RAD508
CRD78
Ratios 5.78, 6.35, 7.44, 7.89
Carrier RA2DT516 (with TR771 only)
CR2D100
Ratios 5.63-7.21; 6.65-8.52
Steel disc wheels
Aluminum disc wheels
Tires 10.00/22, 12 ply rating on 7.5 rims
11.00/20, 12 ply rating on 8.0 rims
Fuel tanks (1) 50 gal. - LH - step - steel
(2); (1) 50 gal. - RH - step - steel
(1) 50 gal. - LH - step - steel
(1) 125 gal. - saddle
(2); (1) 50 gal. - RH - step - steel
& standard LH apron tank

Brakes:

Hand control valve
Front wheel brake limiting valve
"Sealco" automatic drain valve
Break-away safety valve
Vacuum adapter for trailer brakes
Cabs CA27
CAS28

OPTIONAL CHASSIS COMPONENTS

(Continued)

Electrical system:

System and voltage 12V, 55 ampere
Regulator 55A
Generator 55A
Batteries (2) 6 Volt
Air horn (dual)
Two (2) combination stop and tail lights, shock mounted
Turn signals, front, one each side

Chassis equipment:

Extended front bumper
Plate type radiator guard (only with extended bumper)
Front tow hooks (only with extended bumper)
Spare rim or spare disc wheel
8 or 12 ton hydraulic jack
Heavy duty rear springs
Rear helper springs
Automatic radiator shutters
Chrome-plated radiator shell

GENERAL SPECIFICATIONS

Chassis dimensional drawing 7RTA5119

RATINGS-WEIGHTS

Gross vehicle weight ratings ..30,000 lbs.(FA505, RAS508 or RAD508)
31,500 lbs.(FA517, RAS508 or RAD508)
28,000 lbs.(FA505, RA2DT516)
29,500 lbs.(FA517, RA2DT516)

Estimated standard chassis weights:

Front 4885 lbs.
Rear 3875 lbs.
Total 8760 lbs.

CALCULATED TURNING CIRCLES

STANDARD CHASSIS

45 feet - R.H. - to outside edge of tire
48 feet - L.H. - to outside edge of tire

FUEL

Tank capacity 22 gallon
Location Behind L.H. apron
Filler spout location Extended from rear of tank
Engine air cleaner:
Make Donaldson
Model #-1108
Type Oil bath
Location R.H. cowl
Intake Outside air
Oil capacity 4 quarts

EXHAUST

Location Underframe
Muffler:
Make Nelson
Model T4961
Type Off-set

COOLING

Radiator:
Type Heavy duty sheet metal with drawn
brass upper and lower tanks
Frontal area, sq. in. 560
Core, type Continuous finned, flat tube
Suspension In steel frame rubber cushioned on
support crossmember

COOLING

(Continued)

Fan:

Type Asymmetrical
Diameter 21"
Number of blades 5
Cooling system capacity 46 quarts

ELECTRICAL

	<u>Standard</u>	<u>Optional</u>
Batteries:		
Make	Exide or Willard or Autolite	Exide or Autolite
No. required	One	Two
Model	5SH HDD5-SH 14H-90	XQ17 2H-120R
Voltage	12	6
Plates per cell	13	17
Amp. hr. @ 20 hr. rate..	90	120
Location	Behind R.H. running board apron	

Generator:

Make	Delco-Remy	
Model	1102210	1106822
Voltage	12	
Capacity	30A	55A

Regulator:

Make	Delco-Remy	
Model	1118839	1118939
Capacity	30A	55A

Starter:

Make	Delco-Remy
Model	1109441
Voltage	12
Lighting system voltage	12

Ignition coil:

Make	Delco-Remy
Model	1115256

PROPELLER SHAFTS

Make Spicer (1600 series)
Type Yoke
Tube dia., O.D. 3-1/2"
Wall thickness 0.156"

AIR RESERVOIRS

No. of tanks One
Size 9-1/2" x 34"
Capacity, cu. in. 2235

HAND BRAKE

Make Mack
Type Drum and band
Size 10" x 3" x 1/4"
Area, sq. in. 85
Location Rear of transmission
Actuation Hand lever

FRAME

Make Mack
Type Pressed channel
Material Chrome manganese steel, heat-treated
Size 9" x 3-1/4" x 1/4"
Frame section modulus 9.76
Frame crossmembers:
Quantity and type:
137-1/2" and
146-1/2" W.B. Two (2) fabricated channel
164-1/2" W.B. Three (3) fabricated channel
Front bumper Steel channel

SPRINGS (FRONT)

	<u>Standard</u>	<u>Optional</u>
Type	Leaf, semi-elliptic	
Size:		
Length between load centers	46"	
Width	3"	
Suspension	Rubber shock insulators, front end; fixed pin, rear end	
No. of effective leaves	8	11
Leaf thickness	(3) @ 0.360" (5) @ 0.323"	0.360"

SPRINGS (REAR)

	<u>Standard</u>	<u>Optional</u>
Type	Leaf, semi-elliptic, with 3-leaf radius rod	
Size:		
Length between load centers ..	59", no load; 46" loaded	
Width	3"	
Suspension	Cam type variable action brackets	
No. of effective leaves	10	12
Leaf thickness	0.446"	

SPRINGS (HELPER)

(Optional)

Type	Leaf, semi-elliptic
Size:	
Length between load centers ..	40-5/8"
Width	3"
No. of effective leaves	8
Leaf thickness	0.291"

SHOCK ABSORBERS

Location	Front
Make	Houdaille
Model	BBCLL
Type	Rotary-hydraulic