

REAR AXLE

(DUAL REDUCTION)

(OPTIONAL)

Make.....	Mack
Model.....	RAD507 (with aluminum brake chamber brackets, spiders and shoes)
Housing construction.....	One-piece, formed from tubular stock, heat-treated. Pressed steel cover welded to banjo.
Spindle dia., inner brg.....	3-5/8"
outer brg.....	3-3/8"
Carrier:	
Make.....	Mack
Model.....	CRD78
Type.....	Dual reduction
Ratios.....	4.28, 4.66, 5.36, 6.35, 5.78
Housing material.....	Malleable iron
Differential, type.....	Three-pinon, open
Driving gear:	
Face width, bevel gears.....	1-3/4" (4.28, 4.66 and 6.35 ratios)
	1-51/64" (5.36 and 5.78 ratios)
Face width, helical gears.....	3"
Bearings:	
Bevel pinion, front.....	Tapered roller, single-row
rear.....	Tapered roller, single-row
Bevel gear and helical pinion shaft.....	Tapered roller, single-row (2)
Differential.....	Tapered roller, single-row (2)
Rear wheels, inner.....	Tapered roller, single-row (2)
outer.....	Tapered roller, single-row (2)
Axle shafts:	
Type.....	Integral flange
Material.....	Chromium-molybdenum steel, heat-treated
Diameter, minimum.....	2"
Over splines.....	2-3/8"
Root of splines.....	2-3/32"
Splines at inner end.....	Seventeen
Type.....	Involute
Oil capacity.....	31 pints

REAR AXLE

(SINGLE REDUCTION)

(OPTIONAL)

Make..... Mack
Model..... RAS509 (with aluminum brake
chamber brackets, spiders and
shoes)
Housing construction..... One-piece, formed from tubular
stock, heat-treated. Pressed
steel, cover welded to banjo.
Spindle dia., inner bearing..... 3-5/8"
outer bearing..... 3-3/8"
Carrier:
Make..... Mack
Model..... CRS84
Type..... Hypoid, single reduction
Ratios..... 4.25, 4.63, 5.14, 5.57, 6.17, 6.83
Housing material..... Malleable iron
Differential, type..... Three-pinion
Driving gears:
Face width, bevel pinion..... 2-3/4" (4.25, 4.63, 5.14, 5.57 ratios)
2-49/64" (6.17 and 6.83 ratios)
Face width, ring gear..... 2-1/4" (5.57, 6.17 ratios)
2-17/64" (5.14, 6.83 ratios)
2-19/64" (4.25, 4.63 ratios)
Bearings:
Bevel pinion..... Tapered roller, single-row (2)
Spigot..... Cylindrical roller, single-row
Differential..... Tapered roller, single-row (2)
Rear wheels, inner..... Tapered roller, single-row (2)
outer..... Tapered roller, single-row (2)
Axle shafts:
Type..... Integral flange
Material..... Chromium-molybdenum steel,
heat-treated
Diameter, minimum..... 2"
Over splines..... 2-3/8"
Root of splines..... 2-3/32"
Splines at inner end..... Seventeen
Type..... Involute
Oil capacity..... 28 pints

REAR AXLE

(DUAL REDUCTION)

(OPTIONAL)

Make.....	Mack
Model.....	RAD509 (with aluminum brake chamber brackets, spiders and shoes)
Housing construction.....	One-piece, formed from tubular stock, heat-treated. Pressed steel cover welded to banjo.
Spindle dia., inner brg.....	3-5/8"
outer brg.....	3-3/8"
Carrier:	
Make.....	Mack
Model.....	CRD78
Type.....	Dual reduction
Ratios.....	4.28, 4.66, 5.36, 5.78, 6.35
Housing material.....	Malleable iron
Differential, type.....	Three-pinion
Driving gears:	
Face width, bevel gears.....	1-3/4" (4.28, 4.66, and 6.35 ratios)
	1-51/64" (5.36 and 5.78 ratios)
Face width, helical gears.....	3"
Bearings:	
Bevel pinion, front.....	Tapered roller, single-row
rear.....	Tapered roller, single-row
Bevel gear and helical pinion shaft.....	Tapered roller, single-row (2)
Differential.....	Tapered roller, single-row (2)
Rear wheels, inner.....	Tapered roller, single-row (2)
outer.....	Tapered roller, single-row (2)
Axle shafts:	
Type.....	Integral flange
Material.....	Chromium-molybdenum steel, heat-treated
Diameter, minimum.....	2"
Over splines.....	2-3/8"
Root of splines.....	2-3/32"
Splines at inner end.....	Seventeen
Type.....	Involute
Oil capacity.....	31 pints

REAR AXLE

(TWO-SPEED)

(OPTIONAL)

(FOR USE ONLY WITH TR720, 5-SPEED TRANSMISSION)

Model.....	Mack RA2DT51.8 with electrically powered shift. Control button attached to gear shift lever.
Make.....	Timken
Housing construction.....	One-piece, formed from tubular stock, heat-treated. Pressed steel cover welded to banjo.
Spindle dia., inner brg.....	3-5/8"
outer brg.....	3-1/4"
Carrier:	
Model.....	Mack CR2D101
Make.....	RT340 (Timken)
Type.....	Two-speed, dual reduction
Ratio.....	5.34 - 7.10, 6.16 - 8.31
Differential, type.....	Four pinion, all bushed
Housing.....	Malleable iron
Gears:	
Face width, hypoid pinion	
driving gear.....	2-1/2"
Hypoid driven gear.....	2-1/8"
Helical gears, high range.....	2-9/16"
low range.....	3-3/16"
Bearings:	
Hypoid pinion, front.....	Tapered roller, single-row
rear.....	Tapered roller, single-row
Hypoid and helical gear	
shaft.....	Tapered roller, single-row (2)
Differential.....	Tapered roller, single-row (2)
Rear wheels, inner.....	Tapered roller, single-row (2)
outer.....	Tapered roller, single-row (2)
Axle shafts:	
Type.....	Integral flange
Material.....	Chromium molybdenum steel, heat-treated
Diameter, minimum.....	2-1/8"
Over splines.....	2-1/4"
Splines.....	23
Type.....	Involute

REAR AXLE

(TWO-SPEED)

(OPTIONAL)

(FOR USE ONLY WITH TR720. 5-SPEED TRANSMISSION)

Model..... Mack RA2DT519 with electrically
powered shift. Control button
attached to gear shift lever.

Make..... Timken

Housing construction..... One-piece, formed from tubular
stock, heat-treated. Pressed
steel cover welded to banjo.

Spindle dia., inner brg..... 3-5/8"
outer brg..... 3-1/4"

Carrier:

Model..... Mack CR2D101

Make..... Timken RT340

Type..... Two-speed, dual reduction

Ratio..... 5.34 - 7.10 - 6.16 - 8.31

Differential, type..... Four pinion

Housing..... Malleable iron, all bushed

Gears:

Face width, hypoid pinion
driving gear..... 2-1/2"

Hypoid driven gear..... 2-1/8"

Helical gears, high range..... 2-9/16"
low range..... 3-3/16"

Bearings:

Hypoid pinion, front..... Tapered roller, single-row
rear..... Tapered roller, single-row

Hypoid and helical gear
shaft..... Tapered roller, single-row (2)

Differential..... Tapered roller, single-row (2)

Rear wheels, inner..... Tapered roller, single-row (2)
outer..... Tapered roller, single-row (2)

Axle shaft:

Type..... Integral flange

Material..... Chromium, molybdenum steel, heat-
treated

Dia., minimum..... 2-1/8"

Over splines..... 2-1/4"

Splines..... 23

Type..... Involute

BRAKE SYSTEM

SERVICE BRAKES - AIR

Location.....	All wheels	
Type.....	Internal-expanding	
Actuation.....	Air	
	FA511	FA512
Front, diameter.....	16-1/4"	16-1/2"
width.....	3"	4"
lining thickness.....	1/2"	3/4"
lining area, sq. in.....	204"	276"
Rear, diameter.....	16-1/2"	
width.....	6"	(RAS507, RAD507, RA2DT518)
	7"	(RAS509, RAD509, RA2DT519)
lining thickness.....	3/4"	
lining area, sq. in.....	414	(RAS507, RAD507)
	476	(RAS509, RAD509)
	372	(RA2DT518)
	434	(RA2DT519)
Total braking area, sq. in.....	618	(FA511 and RAS507 or RAD507)
	690	(FA512 and RAS507 or RAD507)
	680	(FA511 and RAS509 or RAD509)
	752	(FA512 and RAS509 or RAD509)
	576	(FA511 and RA2DT518)
	648	(FA512 and RA2DT518)
	638	(FA511 and RA2DT519)
	710	(FA512 and RA2DT519)
Drum material.....	Alloy cast iron	
Lining material.....	Molded block	

AIR COMPRESSOR

Make.....	Bendix-Westinghouse
Model.....	Tu-Flo #500
Type.....	2-cylinder, engine lubricated, water cooled
Capacity.....	1200 CFM
Drive.....	Gear

AIR RESERVOIRS (ALUMINUM)

No. of tanks.....	Two
Size.....	8" x 26"
Capacity, cu. in.....	2480

BRAKE SYSTEM
(CONTINUED)
BRAKE CHAMBERS

FRONT

Make.....	Bendix-Westinghouse
Type.....	16 (FA511)
	20 (FA512)
Effective area sq. in.....	16 (FA511)
	20 (FA512)

REAR

	<u>Except RA2DT518-519</u>	<u>With RA2DT518-519</u>
Make.....	Bendix-Westinghouse	Timken
Effective area, sq. inches.....	30	30

SLACK ADJUSTERS

	<u>Except RA2DT518-519</u>	<u>With RA2DT518-519</u>
Make.....	Mack	Timken
Type.....	Worm and gear	Adjustable
Size, front.....	5" (FA511)	-
front.....	4-1/2" (FA512)	
rear.....	6"	5-1/2"

HAND BRAKE

Make.....	Bendix Products, Co.
Type.....	Duo-Servo (internal shoe and drum)
Size.....	12" x 5" x 3/8"
Lining area, sq. in.....	139
Lining material.....	Molded block
Location.....	Rear of transmission
Actuation.....	Hand lever (Orscheln at left of driver's seat)

FRAME

Make.....	Mack
Type.....	Pressed steel channel
Material.....	Chrome, manganese steel, heat-treated
Size.....	9" x 3-1/4" x 1/4"
Section modulus.....	9.76
Crossmembers:	
Quantity and type.....	Two (2) channel

STEERING GEAR

Model..... Mack SG26
Make..... Gemmer
Type..... Worm and roller
* Ratio..... 24.7 to 1
Steering wheel, dia..... 22"

WHEELS - TIRES - RIMS

		Cast Spoke or Disc			
		9.00/20	10.00/20	10.00/22	11.00/20 11.00/22
Wheels, type.....					
Tires, Size.....		9.00/20	10.00/20	10.00/22	11.00/20 11.00/22
Ply rating.....		10	12		12
Rim, size.....		7.0	7.5		8.0
type.....		R5 ⁰	R5 ⁰		R5 ⁰
Chain clearance.....		Dual	Dual		Single

SPRINGS

(FRONT)

	<u>FA511</u>	<u>FA512</u>
Type.....	Leaf, semi-elliptic	
Size:		
Length between load centers..	46"	46"
Width.....	3"	3"
Pack thickness.....	3.610"	4.380"
Material.....	Chromium-manganese steel	
Suspension.....	Fixed pin(rear); Rubber shock insulated (front)	
No. of effective leaves.....	12	15
Leaf thickness.....	0.323" (Main to #4 incl.)	0.323" (Main to #5 incl.)
	0.291" (#5 to #12 incl.)	0.291" (#6 to #10 incl.)
		0.262" (11 to #15 incl.)

(REAR)

Type..... Vari-rate, semi-elliptic leaves with three-leaf radius rod

Size:

Length between load centers.. 59" no load, 46" loaded

Width..... 3"

Pack thickness..... 6.808" (incl. 3-leaf radius rod)

Material..... Chromium manganese steel

Suspension..... Cam type variable action brackets

No. of effective leaves..... 15

Leaf thickness..... 0.401" (#1 to #5 incl.)

0.360" (#6 to #15 incl.)

Sheet No.34, Spec.No. H67-69LT-7581

* Was 28.4 to 1 - March 18, 1959

SPRINGS

(CONTINUED)

(REAR)

OPTIONAL -- HEAVY DUTY

Type..... Vari-rate, semi-elliptic leaves,
with three-leaf radius rod

Size:

Length, between load
centers..... 59" no load, 46" loaded

Width..... 3"

Pack thickness..... 6.705" (incl. 3-leaf radius rod)

Material..... Chromium manganese steel

Suspension..... Cam type variable action brackets

No. of effective leaves..... 12

Leaf thickness..... 0.447"

SHOCK ABSORBERS

FRONT

Make..... Houde

Type..... Rotary-hydraulic

DATA APPLICABLE TO H67LT AND H69LT EXCEPT AS NOTED

Model..... Mack CAS34 - H67LT
 Mack CA34-H69LT
 Type..... C.O.E. all-metal tilting cab of
 lightweight construction.
 Width, overall..... 80"
 Features and Equipment..... Chrome-plated hardware; non-shatter-
 able plate glass in two-piece, fixed,
 V-type windshield, safety sheet glass
 in windows; right hand and left hand
 outside, adjustable rear view mirrors;
 dome lamp; dual air-operated windshield
 wipers; cigar lighter; glove compart-
 ment; tool compartment under R.H. Seat;
 defroster nozzles, grab handle on each
 side of cab to facilitate entering or
 leaving; a manually actuated hydraulic
 lifting device for tilting the cab
 forward 38° - 30° to provide accessi-
 bility to the power plant.

To insure against accidental release
 or to preclude tampering with, the cab,
 in the "down" position, is secured
 by a lock located in the cab rear
 interior, on the R.H. side, at the
 bunk compartment door.

Ventilation..... One ventilator on cab front sheet.
 Crankdown windows and wingtype quarter
 windows in doors. Right-hand and left-
 hand hinged vents in compartment behind
 seats. The R.H. vent is used for air
 intake; the L.H. for exhausting air.

Seating..... Seats and back cushions are plywood
 base mounted.

The R.H. seat and back cushions are of
 coil spring construction and are padded
 with felt, cotton wadding and rubberized
 interlaced curled hair. The L.H.
 (driver's) seat has a foam rubber topper
 (over springs), and the seat back is
 full foam rubber. All seats and back
 cushions are covered with 42 oz.
 Fabrilite. The driver's seat, as a unit,
 has a 4" fore and aft adjustment, in
 addition to six (6) independent
 adjustable positions for the seat cushion
 and three (3) for the back cushion.

CAB (CONTINUED)

Instrument and Controls..... The main instrument board includes the glove compartment on the right hand side and on the left, directly in front of the driver's position, is an instrument and control panel box, on which the instruments are mounted in such position so as to be easily visible to the driver. On this panel box are installed the following instruments and controls:- Speedometer, tachometer, air pressure gauge, ammeter, temperature gauge, lube oil pressure gauge, headlamp hi-beam indicating lamp, light switches and diesel engine controls.

This panel box has an added feature in that for quick access to the underside of the instruments and controls, the upper portion containing the instruments can be removed.

An anti-glare shield is mounted ahead of the instruments, to prevent their illumination reflecting on the windshield.

The center of the main board has the fuel gauge and dual windshield wiper controls at the top. Further down is a removable panel on which is mounted the cigar lighter, and, when requested, the controls for the front wheel brake limiting valve and the cab heater. In back of this panel are mounted the circuit breakers with reset buttons protruding through the panel.

Operating Controls..... The hand brake lever is located to the left of the driver's seat and the gear shift levers are to the right. The air starting lever, when specified, is on the floor, ahead of the gear shift levers.

CAB (CONTINUED)

Sheet Metal..... Below the cab and attached to it are the steel fenders with inner removable splash panels, the cab step arrangement and sheet metal skirting, containing a rear apron door for access to the oil filter, air cleaner, engine oil level dipstick, etc., when the cab is down.

The flat crowns of the fenders are covered with aluminum tread plates for non-skid entry or egress. The treads also suffice as convenient platforms on which to stand while cleaning the windshield.

Dual headlights are mounted in the fender front face, in a removable headlight panel, to facilitate replacement in the event of damage. Parking lights are mounted inboard and immediately adjacent to the headlights.

Front directional signals, (when specified), are mounted at the extreme outside edges of the fender crowns, so as to be easily visible from the rear as well as from the front.

External radiator fill is provided through the hinged door upper grille.

Mounting..... The cab is four-point, rubber insulator mounted. The front of the cab is attached to two support arms which are fastened to the frame and serve as hinges when the cab is tilted. The hinge pin and the support arms are insulated with rubber bushings.

The cab rear mounting is insulated with four rubber biscuits.

CAB (CONTINUED)

Note:- The following applies only to H67LT.

The CAS34 cab provides space behind the seats complying with I.C.C. sleeping compartment regulations, that can be used as such by the installation of a mattress. Underneath the sleeping bunk is a full width luggage or storage compartment. However, when air starting is specified, this space is utilized by the air starting reservoir.

E.M.Knauss/dl