

S P E C I F I C A T I O N S

MACK MODEL M100SX

6x4 DUMP TRUCK

(Specifications Subject to Change Without Notice)

*APPLY TO DIR. OF PRICING FOR LATEST PRICE & AVAILABILITY*  
*2/22/70*

Specification No. M100SX-4671  
General Engineering Department  
Allentown, Penna.  
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MAY 1 1967

COMPONENT PARTS OF STANDARD CHASSIS

Frame .....	Rolled I-beam with Fabricated Web
Engine .....	12V-149T
Cooling System .....	Frontal Radiator
Electrical System .....	12-Volt, 62-Ampere Alternator
Starting .....	Air Motor
Transmission .....	DP8960 (Electric Shift)
Front Axle .....	FA1001 (722GS1255)
Rear Bogie .....	SWSP74; Ratio, 20.4 (722GS1182)
Carriers .....	CRSP123-CRS124; Ratio, 3.90 (522GS187-522GS188)
Planetaries .....	PR15; Ratio, 5.25 (522GS186)
Brakes:	
Front .....	Air over hydraulic, 26x5
Rear .....	Air over hydraulic, 26x10
Springs:	
Front .....	Semi-elliptic, constant frequency.
Rear .....	Spring and walking beam
Tires, Front and Rear .....	21.00/35 tubeless on 15.00 rims.
Steering .....	Full hydraulic
Cab .....	CA451 (722GS1244)
Body .....	Heavy-duty 100,000 psi alloy steel construction.
* Capacity, struck .....	60 cu.yd.
* Heaped SAE rating .....	75 cu.yd.
Hoist .....	Twin telescopic, outboard mounted.

\* Recommended body size based on rated capacity with 2670 lb. material. Subject to change to suit payload density.

## GENERAL SPECIFICATIONS

### DIMENSIONS

Wheelbase, centerline front axle to centerline bogie .....	218"
Bogie wheelbase .....	85"
Centerline of front axle to front of bumper .....	92"
Centerline of front axle to back of cab .....	23"
Back of cab to centerline of bogie .....	195"
Frame length back of cab .....	270"
Overall length front bumper to end of frame .....	385"
Overall length front bumper to right rear tire projection.	393"
Overall length front bumper to end of body .....	454"
Overall width at front fenders .....	180"
Overall width rear tires at ground-loaded .....	182"
Overall width-body rear .....	168"
Height ground to top of cab (empty) .....	162"
Height ground to top of canopy (empty) .....	180"
Height ground to top of canopy raised .....	
Height ground to rear of scoop (body raised) .....	25"
Tread - Front (at ground) .....	141"
Rear .....	129"
Road clearance (minimum) - Front axle at center section ..	19"
Rear axle under bowl .....	20"
Turning circle .....	90'
Chassis drawing number .....	7RTA

WEIGHTS

Chassis Weight

Front .....	40,400 lb. ✓
Rear .....	<u>55,085 lb.</u> ✓
Total .....	95,485 lb.

Chassis Weight with Body and Hoist

Front .....	46,010 lb.
Rear .....	<u>85,865 lb.</u>
Total .....	131,875 lb.

Payload ..... 200,000 lb.

Gross Vehicle Weight

Front .....	69,010 lb.
Rear .....	<u>262,865 lb.</u>
Total .....	331,875 lb.

PERFORMANCE DATA

Model ..... M100SX  
 Engine ..... 12V-149T (net torque 2500 ft.lb. at 1900 rpm)  
 Transmission ..... DP8960  
 Axle ..... SWSP74 (20.4 ratio)  
 Tires ..... 21.00/35 (36.7 loaded radius)  
 Chassis Efficiency ..... 85%  
 Rolling Resistance ..... 40 lb./ton (2%)  
 Coefficient of Friction  
 (tires to ground) ..... 0.6  
 Payload ..... 100-ton

<u>Axle Ratio</u>	<u>Transmission</u>		<u>Total Ratio</u>	<u>MPH at 1900 rpm</u>	<u>Percent Gradeability at 1900 rpm</u>	
	<u>Gear</u>	<u>Ratio</u>			<u>Empty</u>	<u>Loaded</u>
20.4	1st	4.24:1	86.5	4.8	39.6	16.1
	2nd	2.34:1	47.9	8.7	23.2	8.0
	3rd	1.70:1	34.7	12.0	16.3	5.3
	4th	1.31:1	26.8	15.5	12.1	3.6
	5th	1.00:1	20.4	20.3	9.0	2.3
	6th	0.73:1	14.8	28.8	5.8	1.1
	Rev.	5.75:1	117.5			



### STARTING SYSTEM

Starting motor, type ..... Air  
Make ..... Ingersoll-Rand  
Model ..... 20 BM  
Rating ..... 20 hp  
Actuation ..... Quick opening air valve operated by  
push button valve on dash.  
Neutral interlock ..... Valve incorporated in shift mechanism.  
Air starting reservoir  
Size ..... 24" O.D. x 42" long  
Capacity ..... 18,096 cu.in. (10-1/2 cu.ft.)  
Location ..... Frame mounted, right hand side.

### PROPELLER SHAFTS

Location ..... Front  
Make ..... Twin Disc  
Type ..... J490  
Tube diameter, O.D. .... 5.5"  
Wall thickness ..... .203"  
Location ..... Inter-axle  
Make ..... Twin Disc  
Type ..... J310 (35° joint angle)  
Tube diameter ..... 5.0"  
Wall thickness ..... .165"

### DUAL BRAKE SYSTEM

Dual Brake System ..... Two segregated air systems.  
Low pressure indicator .... Dual Wig-Wag.  
Air Horn.  
Air Compressor  
Make ..... Bendix-Westinghouse  
Model ..... Tu-Flo 600  
Capacity ..... 14.5 cu.ft. per minute  
Air Reservoirs  
Number of tanks ..... Two - double compartment (protected)  
Size ..... 9-1/2" x 44"  
Capacity, cu.in. .... 6012 (3-1/2 cu.ft.)  
Hand Brake  
Size ..... 17-1/4 x 4  
Location ..... Transmission  
Actuation ..... Spring applied; air released.

### FRAME

Make ..... Mack  
Type ..... Rolled I-beam with fabricated web.  
Cross Members ..... 2, plus bogie structure and integral  
front and rear bumper.  
Tow Pins ..... Front and rear.

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BODY

Make ..... Heil  
Type ..... Vertical side; scoop end  
Capacity ..... 60 cu.yd. struck  
Length inside ..... 318"  
Width, inside front ..... 150"  
          inside rear ..... 156"  
Height inside ..... 66"  
Body Plates:  
  Canopy ..... 3/16" - 50,000 psi yield.  
  Front header slope  
    section ..... 1/2" - 100,000 psi yield, 321 BH minimum.  
  Sides ..... 3/8" - 100,000 psi yield  
  Wear ..... 3/4" - 100,000 psi yield, 321 BH minimum.  
  Bottom corner ..... 1/2" - 100,000 psi yield, 321 BH minimum.

HOIST

Make ..... Heil  
Model ..... UT94-160  
Type ..... Twin; double acting; outboard mounted  
          4-sleeve telescopic cylinder assembly  
          directly coupled to body and chassis  
          with self-aligning bushing to  
          provide maximum flexibility.  
          Power down with snubbing action  
          during last stage.  
Dumping angle ..... 65°  
Hoist pump:  
  Make ..... Hydreco  
  Model ..... 3620A  
  Capacity ..... 90 gal. per minute at 1200 rpm.  
Mounting ..... Independent of power take-off driven  
          through universal shaft.  
Drive ..... Chelsea power take-off 4400 series  
          (wide gear). 0.915:1 ratio.  
  
Body Heat ..... Entry at rear hinge, Standard.  
Rock Ejectors ..... Standard.  
Rock Guards ..... Standard.

OPTIONAL COMPONENTS

BRAKES

Alcohol vaporizer.

CAB

Heater, 35,000 Btu with defrosters, hot water type.  
Tachograph in place of tachometer.

CHASSIS OPTIONS

Hubodometer.

BODY OPTIONS

Alloy wear bars ..... 9-3/4" x 6"  
Twin body props.

LDVogt/MC