MONTANA
Department of Transportation

MDT-BRG-015 04/23

Montana Department of Transportation
Bridge Bureau
Approved Construction Equipment List

Make:	*Komatsu*
Model:	*HM400-2*
Equipment Type:	*Dump Truck*
Contractor Modifications:	*None*

Interstate Approval Conditions

Approval Type	*Crossing Only*
Speed:	*No Restriction*
Weight:	*71,560 lb or less*
Traffic:	*Approved with regular traffic*
Location Restrictions:	*Remain in painted lane*

Non-Interstate Approval Conditions

Approval Type	*Denied*
Speed:	*Denied*
Weight:	*Denied*
Traffic:	*Denied*
Location Restrictions:	*Denied*

Comments:

Equipment configuration, weights, and specifications on following pages. Approval does not apply to posted bridges. Other construction equipment is not allowed to operate on or cross bridge at the same time this equipment is on the bridge. Equipment must be empty while crossing.

SPECIFICATIONS

ENGINE

Model	Komatsu SAA6D140E-5
Type	Water-cooled, 4-cycle
Aspiration	Turbo-charged, after-cooled, cooled EGR
Number of cylinders	6
Bore	140 mm **5.51"**
Stroke	165 mm **6.50"**
Piston displacement	15.2 ltr **928 in³**
Horsepower	
SAE J1995	Gross 338 kW **453 HP**
ISO 9249 / SAE J1349	Net 327 kW **438 HP**
Rated rpm	2000 rpm
Fan drive type	Mechanical
Maximum torque	213 kg•m **1,541 lb. ft**
Fuel system	Direct injection
Governor	Electronically controlled
Lubrication system	
Method	Gear pump, force-lubrication
Filter	Full-flow type
Air cleaner	Dry type with double elements and precleaner, plus dust indicator

EPA Tier 3 certified

TRANSMISSION

Torque converter	3-elements, 1-stage, 2-phase
Transmission	Full-automatic, counter-shaft type
Speed range	6 speeds forward and 2 reverse
Lockup clutch	Wet, single-disk clutch
Forward	Torque converter drive in 1st gear, direct drive in 1st lockup and all higher gears
Reverse	Torque converter drive and direct drive in all gear
Shift control	Electronic shift control with automatic clutch modulation in all gear
Maximum travel speed	58.5 km/h **36.4 mph**

AXLES

Full time all wheel drive with 100% differential lock in all axles.

Final drive type	Planetary gear
Ratios:	
Differential	3.417
Planetary	4.941

SUSPENSION SYSTEM

Front	Hydro-pneumatic suspension
Rear	Combined hydro-pneumatic and rubber suspension system

STEERING SYSTEM

Type	Articulated type, fully hydraulic power steering with two double-acting cylinders
Supplementary steering	Automatically actuated, electrically powered
Minimum turning radius, wall to wall	8.7 m **28'7"**
Articulation angle	45° each direction

BRAKES

Service brakes	Full-hydraulic control, oil-cooled multiple-disc type on all wheels
Parking brake	Spring applied, caliper disc type
Retarder	Front and center axle brakes act as retarder

MAIN FRAME

Type	Articulated type, box-sectioned construction on front and rear Connected by strong torque tubes.

BODY

Capacity:	
Struck	16.5 m³ **21.6 yd³**
Heaped (2:1, SAE)	22.3 m³ **29.2 yd³**
Payload	36.5 metric tons **40 U.S. tons**
Material	130 kg/mm² **185,000 psi** high tensile strength steel
Material thickness:	
Bottom	16 mm **0.63"**
Front	8 mm **0.31"**
Sides	12 mm **0.47"**
Target area	
(inside length x width)	5629 mm x 3194 mm **18'6" x 10'6"**
Heating	Exhaust heating (option)

HYDRAULIC SYSTEM

Hoist cylinder	Twin, 2-stage telescopic type
Relief pressure	20.6 Mpa **210 kg/cm² 2,990 psi**
Hoist time	12 sec

CAB

Dimensions comply with ISO 3471 and SAE J1040-1988c ROPS (Roll-Over Protective Structure) standards

WEIGHT (APPROXIMATE)

Empty weight	32,460 kg **71,560 lb**
Gross vehicle weight	69,040 kg **152,200 lb**
Weight distribution:	
Empty: Front axle	55.1%
Center axle	22.8%
Rear axles	22.1%
Loaded: Front axle	29.0%
Center axle	35.7%
Rear axles	35.3%

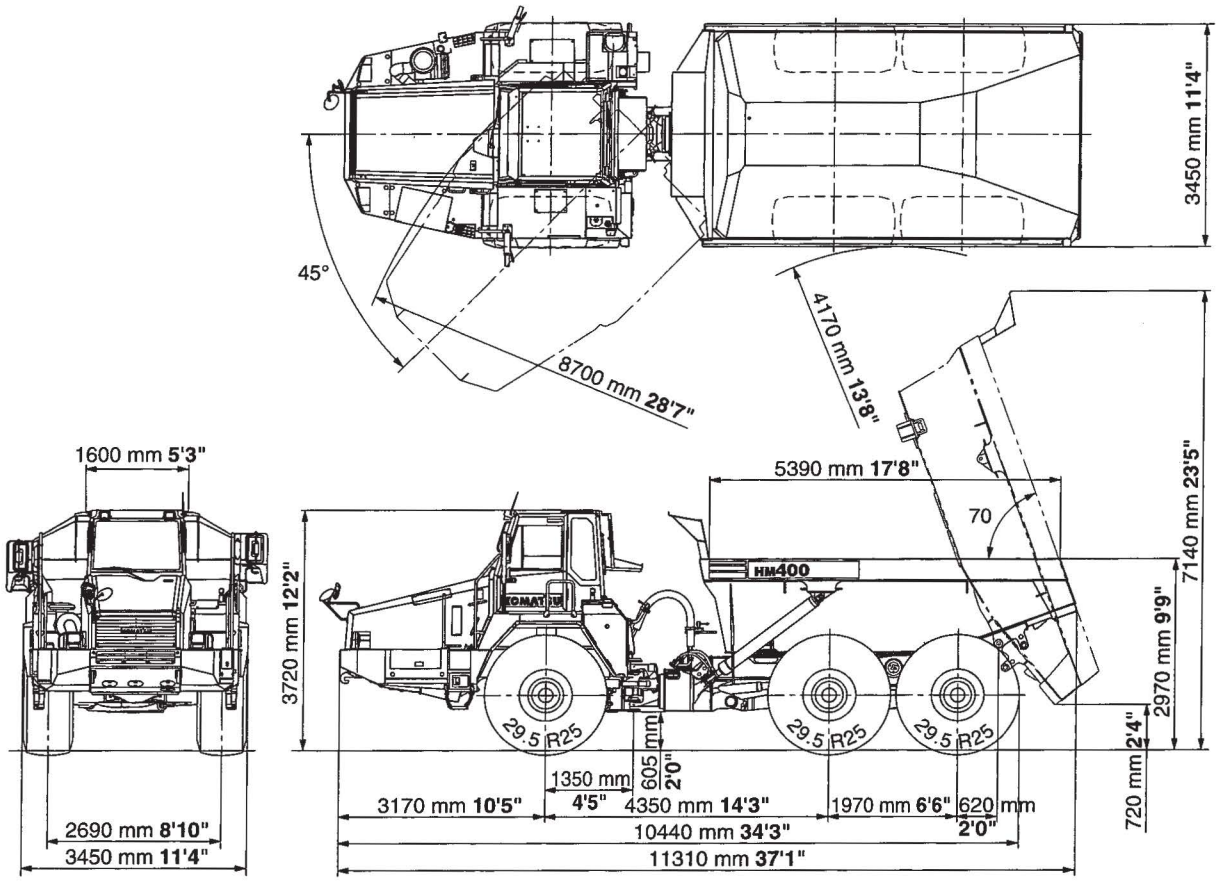
TIRES

Standard tire	29.5 R25

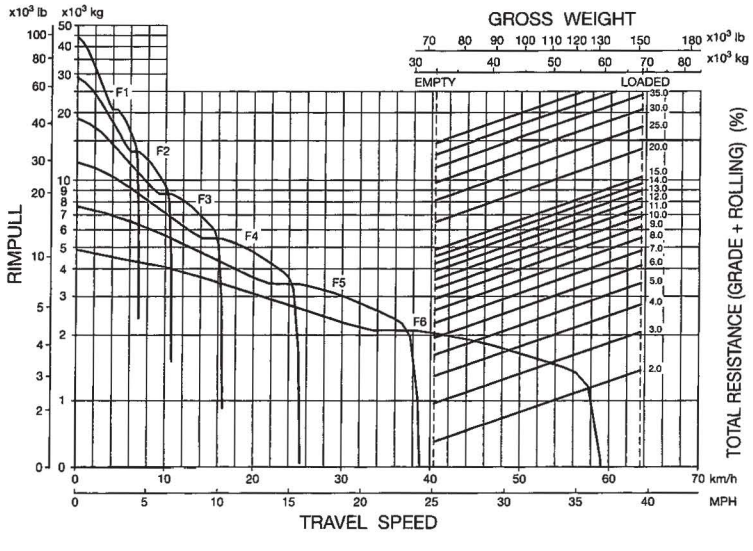
SERVICE REFILL CAPACITIES

Fuel tank	493 ltr.	**130.8 U.S. Gal**
Engine oil	50 ltr.	**13.2 U.S. Gal**
Torque converter, transmission and retarder cooling	115 ltr.	**30.4 U.S. Gal**
Differentials (total)	97 ltr.	**25.6 U.S. Gal**
Final drives (total)	33 ltr.	**8.7 U.S. Gal**
Hydraulic system	180 ltr.	**47.6 U.S. Gal**
Suspension (total)	20.4 ltr.	**5.4 U.S. Gal**

DIMENSIONS



TRAVEL PERFORMANCE



BRAKE PERFORMANCE

