

Montana Department of Transportation Bridge Bureau Approved Construction Equipment List

Make:	<i>Komatsu</i>
Model:	<i>HM400-2</i>
Equipment Type:	<i>Dump Truck</i>
Contractor Modifications:	<i>None</i>

Interstate Approval Conditions

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

Non-Interstate Approval Conditions

Approval Type	<i>Denied</i>
Speed:	<i>Denied</i>
Weight:	<i>Denied</i>
Traffic:	<i>Denied</i>
Location Restrictions:	<i>Denied</i>

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



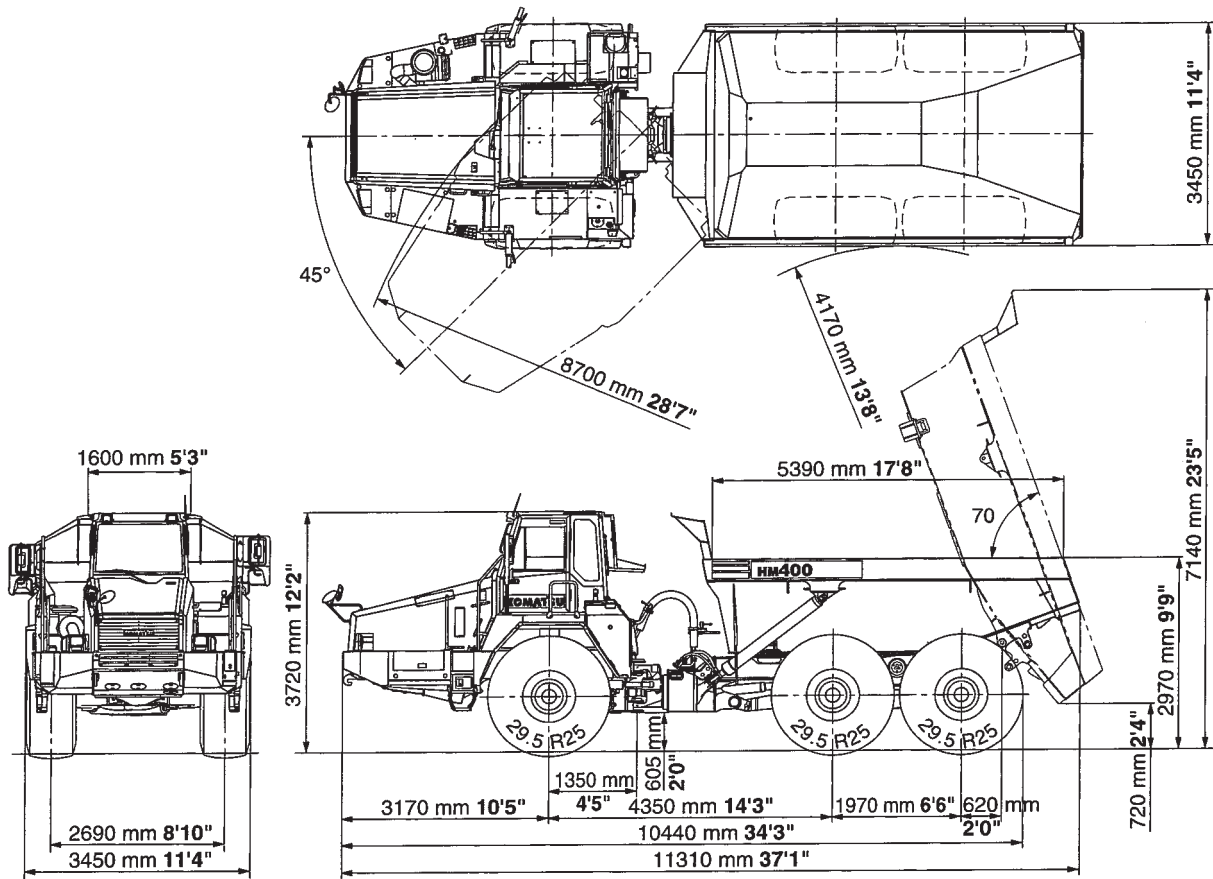
SERVICE REFILL CAPACITIES

Fuel tank 493 ltr. **130.8 U.S. Gal**
 Engine oil50 ltr. **13.2 U.S. Gal**
 Torque converter, transmission and
 retarder cooling115 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**

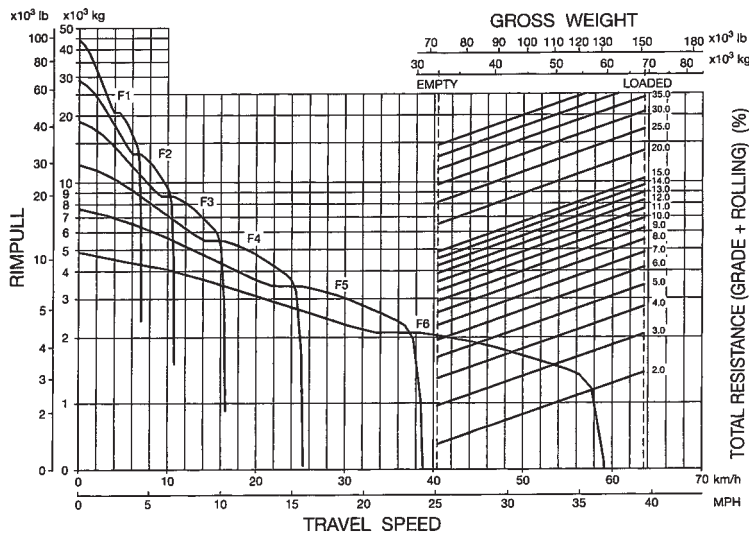
HM400-2 ARTICULATED DUMP TRUCK



DIMENSIONS



TRAVEL PERFORMANCE



BRAKE PERFORMANCE

