

MTVR

MEDIUM TACTICAL VEHICLE REPLACEMENT



PERFORMANCE IN MOTION

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MTVR 12/02



OSHKOSH TRUCK CORPORATION

BECAUSE VICTORY MEANS GETTING EVERYTHING YOU NEED INTO THE FIELD

The U.S. Marine Corps Medium Tactical Vehicle Replacement (MTVR) is a revolution in off-road mobility. This truck redefines performance possibilities for all military vehicles well into the future. With the Oshkosh TAK-4™ Independent Suspension System, the MTVR achieves levels of performance never before realized in a tactical wheeled vehicle, enabling the MTVR to traverse terrain previously regarded as impassible by military trucks. The addition of an all aluminum cab and a strict anti-corrosion program during production enables the MTVR to continue to perform long after other current tactical vehicles have been sent to the salvage yard.

The MTVR reflects the same high-quality proven standards of reliability found in other Oshkosh products used throughout the world. With a Marine Corps requirement of 70% off-road and 30% on-road, the MTVR exceeds these standards by more than three fold. The MTVR will operate in climatic extremes from -50°F to 125°F while carrying a 7.1 ton payload cross-country or up to 15 tons on primary or secondary roads. It is capable of traversing a 60% gradient and a 30% side slope with its maximum cross-country load, fording five feet of water, traveling at 65 mph on paved surfaces, and has an on-road cruising range of 300 miles.

The pace of modern battle is accelerating rapidly, but a fighting force can move only as fast as its supplies and equipment. The MTVR will allow the fighting force to move whenever and wherever the battle dictates.

TRUST THE MTVR TO GET YOUR FORCES INTO PLACES NO ORDINARY MILITARY TRUCK COULD EVER GO.



VEHICLE DESIGNATION

MK23 Standard Cargo (14 ft. body) variant w/o winch
 MK25 Standard Cargo (14 ft. body) variant w/winch
 MK27 Extended Cargo (20 ft. body) variant w/o winch
 MK28 Extended Cargo (20 ft. body) variant w/winch
 Additional Configurations:
 Wrecker • dump truck • MTVR trailer
 • HIMARS resupply vehicle and trailer • tractor

ANTI-LOCK BRAKES (ABS) AUTOMATIC-TRACTION CONTROL (ATC)

Features
 Eaton®/Bosch® field proven system
 Dual-wheel speed sensors
 Enhanced stopping distance
 ABS/ATC ECU communicates with engine ECU
 Monitored by On Board Diagnostics System (OBDS)

AXLES

Axle Configuration: 6x6 • three axles
 Make and Model: Oshkosh MTVR Axle
 Rated Capacity:
 Front Axle - 16,000 lbs. (7257 kg)
 Intermediate Axle - 23,500 lbs. (10659 kg)
 Rear Axle - 25,500 lbs. (11567 kg)
 Type: Full-time all Wheel Drive • fixed center differential and planetary hub reduction

Inter-Axle Differential Lock: Controlled by Central Tire Inflation System (CTIS) terrain selection with manual override
 Intra-Axle Differential Lock: Controlled by CTIS terrain selection on all axles with manual override
 Gear Ratios:
 Final 6.000:1
 Differential 1.687:1
 Wheel Drive 3.556:1

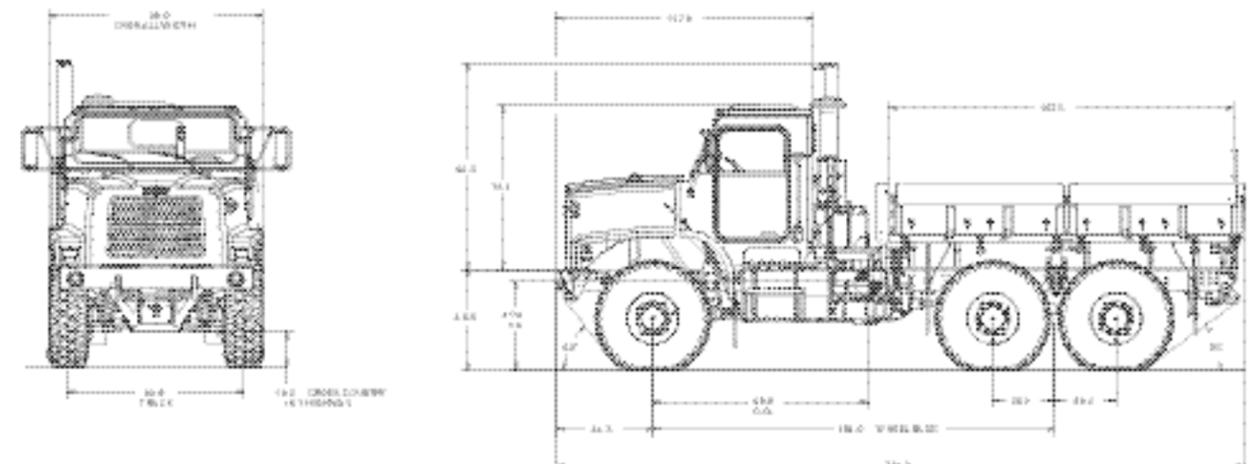
PARKING AND EMERGENCY BRAKES

Type: Spring brakes on axles 2 and 3 • modulated emergency system • 60% grade holding capabilities
 Make: Eaton Extended Service S-Cam, intermediate and rear axle

SERVICE BRAKES

Type: Drum with internal shoe • dual system air operated
 Make: Front Axle - Meritor RDA Type • 9° wedge
 Intermediate and Rear Axle - Eaton Extended Service S-Cam
 Size: Front Axle - 16.1 x 7.1 in. (410 x 180 mm)
 Intermediate and Rear Axle - 16.5 x 7 in. (419 x 178 mm)

MK23 & MK25 Standard Cargo Truck



Specifications, descriptions and illustrations in this literature are as accurate as known at the time of publication, but are subject to change without notice. Illustrations may include optional equipment and accessories and may not include all standard equipment.



CAB

Construction and Accessories: Welded aluminum extrusion construction with adhesively bonded corrosion resistant skins • three-person 83 in. (2108 mm) cab width • hinged windshield, roof, side walls, door frames, and rear wall for reducible height to 98 in. (2489 mm) • one piece front windshield for improved visibility • piano-type door hinges with stainless steel hinge pins • suspension driver seat and bench style passenger seat • two speed electric windshield wipers • windshield washer • heater and defroster • 3 point seat belts with retractors • electric operated air horn • optional air-conditioning kit

Instrumentation: Modular dash panels for easy service • multiplex gauge control • J1708 and J1939 data bus communications • US/metric color band gauges

CARGO BODY

MK23, MK25

Type: ISO and non-ISO payload compatible
Payload Capability:

- 15 ton - (13608 kg) non-ISO payload on primary and secondary roads
 - 10 ton - (9072 kg) ISO payload on primary and secondary roads
 - 7.1 ton - ISO and non-ISO payload on all terrain
- ISO Compatible Payloads: 10 ft. EMI/EMC shelters (1 ea.) quad-cons (2 ea.) • six-cons (2 ea.)

MK27, MK28

Type: ISO and non-ISO payload compatible
Payload Capability:

- 15 ton - (13608 kg) ISO and non-ISO payload on primary and secondary roads
- 7.1 ton - (6441 kg) ISO and non-ISO payload on all terrain

ISO Compatible Payloads: 20 ft. ISO container and shelter (1 ea.) • 10 ft. EMI/EMC shelters (2 ea.) quad-cons (4 ea.) • six-cons (3 ea.)

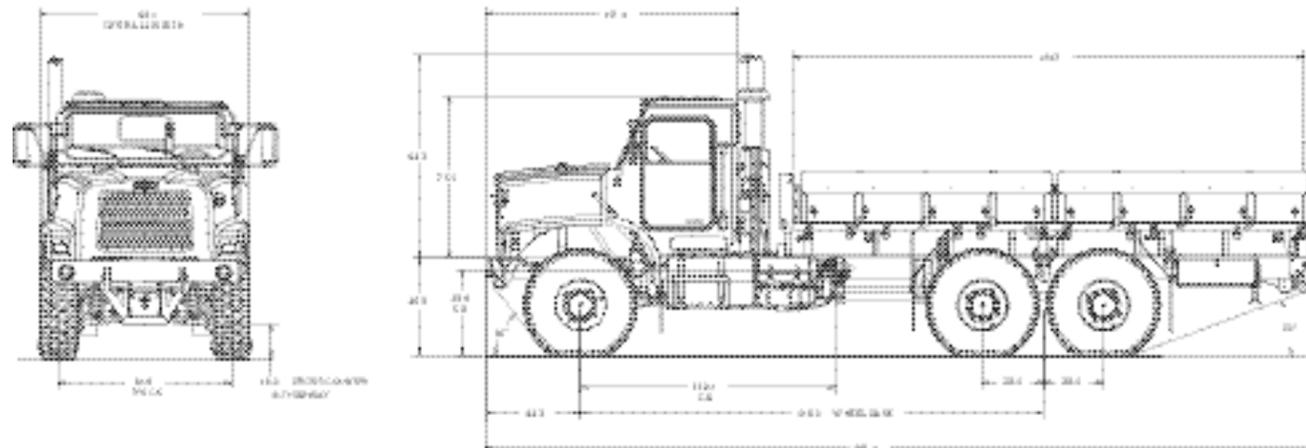
CENTRAL TIRE INFLATION SYSTEM (CTIS)

Type: Eaton, electronic controlled, terrain and payload biased • automatic upon operator selection
Control: Transfer case, inter-axle, and all axles side-to-side lockup control with manual override

Features

Preset tire pressures for highway, cross-country, mud-sand-snow and emergency • overspeed function with warning and automatic tire pressure and drive line lock corrections • run flat function provides continuous air to punctured tire • utilized SAE J1708 and 1939 data bus for external control functions

MK27 & MK28 Extended Cargo Truck



CHASSIS EQUIPMENT

Composite hood
Front and rear tow eyes
Front and rear overhead lift provisions
Blackout lights
Front and rear identification, clearance, and turn signal lights
Stop and tail lights on rear
Four way flashing front and rear
Two halogen sealed beam headlights
Service/emergency air brake connectors front and rear
Slave start connector
Trailer electrical connector • 24 volt
Trailer and auxiliary air supply connection
78 useable gallon (303 L) fuel capacity
Pintle – 22,000 lbs. (9979 kg) with trailer hook-up provisions, 500 lb. vertical rating
Heavy-duty air cleaner

COOLING SYSTEM

Type: Cross flow fin and tube type radiator • internal transmission cooler • external charge air cooler
Frontal Area: 1,241 in.² (8006 cm²)
Construction: Fabricated end tanks and side members bolted together to form a rigid frame surrounding the radiator core • built in deaeration system
Fan: 32 in. (813 mm) nine blade • serpentine belt driven
Fan Clutch: Temperature controlled

ELECTRICAL SYSTEM

Alternator: 150 amp
Voltage: 24V with 12V/10 amp accessory provision in cab
Battery: Two 12V • 625 CCA each @ -18°F (-28°C)
Battery box has provisions for four batteries, for temperatures of 32°F to -50°F (0°C to -46°C)

ENGINE

Make and Model: Caterpillar® C-12 electronic control, Adam III
Type: 4-stroke • in-line • six cylinder • electronic

Bore: 5.12 in. (130 mm)
Stroke: 5.91 in. (150 mm)
Displacement: 729 in.³ (11.9 L)
Maximum Horsepower: 425 hp (317 kW) at 1800 rpm
Peak Torque: 1,550 ft. lbs (2101 Nm) at 1200 rpm

FRAME

Type: Formed channel • bolted construction with grade 8 bolts and huck bolts
Material: SAE 1027 modified • carbon manganese steel • heat-treated
Yield Strength: 110,000 psi minimum (758 Mpa)
Size: 9.75 x 3.0 x 0.38 in. (248 x 76 x 9.7 mm)
Section Modulus: 13.8 in.³ (226 cm³)

ON-BOARD DIAGNOSTICS SYSTEM (OBDS)

Features

Message Information Center (MIC) has 20 character x 4 line flat panel display
RS 232 port for laptop and IETM interface
Fault Mode Indicators (FMI) from engine, transmission, ABS, ATC, and CTIS control modules
Memory for Vehicle PM logs
Runs STE/ICE-R tests with VADS

PERFORMANCE

Gradient:
60% longitudinal at CCGVW
40% side slope at CCGVW
Environmental Operation:
-50°F to 125°F • 150°F storage (-46°C to 52°C • 66°C)
-25°F to -50°F with kits (-32°C to -46°C)
Speed Maximum: GVW Road 65 mph (105 km/hr.)
Fording: 60 in. (1524 mm) without kits
Cruising Range: 300 mi. (483 km)

STEERING SYSTEM

Type: R.H. Shepard® integral power steering with booster and separate fluid reservoir

Steering Gear Ratio: 18:1

Turning Circle:

MK23 & MK25 - 85.4 ft. wall to wall (26.0 m)

MK27 & MK28 - 95.4 ft. wall to wall (29.1 m)

SUSPENSION

Type: Oshkosh TAK-4™ Independent Suspension

• coil spring • control-arm

Wheel Travel:

Front Axle - 16.0 in. (406 mm)

Intermediate Axle - 12.8 in. (325 mm)

Rear Axle - 12.8 in. (325 mm)

Roll Stability: Anti-sway bar on axles #2 and #3

TIRES

Type: 16.00R20 XZL

Quantity: Six

Limp home capability in case of flat tire where CTIS cannot maintain pressure

TOWING CAPACITY

22,000 lbs. trailer towing capacity

500 lbs. vertical pintle load capacity

TRANSFER CASE

Make and Model: Oshkosh 30000 Series

Type: Three-shaft • single speed with torque

proportioning differential w/manual differential lock

Ratios: 1.271:1

Torque Split: 32% Front • 68% Rear

TRANSMISSION

Make and Model: Allison HD 4070P • automatic

electronic control • WTEC III

Type: Seven speed automatic with TC-541 torque

converter • second gear start

Ratios:

Seventh 0.64:1

Sixth 0.74:1

Fifth 1.00:1

Fourth 1.43:1

Third 1.91:1

Second 3.51:1

First 7.63:1

Reverse 4.80:1

TRANSPORTABILITY

Aircraft: C5, C17, C141, C130 (w/preparation), CH53 Helicopter at VCW (MK23 only) • shipboard

• rail • hard lift points for crane loading

WHEELS

Type: Two piece bolt together • steel disc

Size: 20 x 10 in. (508 x 254 mm)

WEIGHTS

Vehicle Curb Weight (VCW):

MK23 w/o winch 27,800 lbs. (12610 kg)

MK25 w/winch 28,690 lbs. (13013 kg)

MK27 w/o winch 30,178 lbs. (13688 kg)

MK28 w/winch 31,069 lbs. (14093 kg)

Gross Vehicle Weight Rating (GVWR):

MK23 w/o winch 57,800 lbs. (26218 kg)

MK25 w/winch 58,690 lbs. (26621 kg)

MK27 w/o winch 60,178 lbs. (27296 kg)

MK28 w/winch 61,069 lbs. (27700 kg)

WINCH, SELF-RECOVERY

MK25, MK28 only

Make and Model: dp Manufacturing • S 20K

Capacity: 20,000 lbs. (9072 kg) first layer

rear deployment only

KITS

Engine arctic kit

Cargo personnel arctic kit

Machine gun mounting kit

Chemical alarm mounting kit

Decontamination apparatus mounting kit

S-280 shelter tiedown kit

Towbar

Air conditioning

Jounce limiting

Tire chain

Sliding rear window

