MTVR
Medium Tactical Vehicle Replacement
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 impossible 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 threefold. The MTVR will operate in climatic extremes from -50°F to 125°F while carrying a 7.1 ton payload cross-country 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 wherever and whenever the battle dictates.

**Vehicle Designation**

MK23 Standard Cargo (14 ft. body) variant w/o winch
MK25 Standard Cargo (14 ft. body) variant w/o 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 (OBDIS)

**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 6.00:1
- 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: Mentor 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)

**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.**
MK27 & MK28 Extended Cargo Truck

**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
- 10 ton (-9072 kg) ISO payload on primary and secondary roads
- 7.1 ton (-6441 kg) ISO and non-ISO payload on all terrain

**ISO Compatible Payloads:** 10 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

**Features:**
- Preset tire pressures for highway, cross-country, mud-sand and snow 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

**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 lbs) with trailer hook-up provisions, 500 lbs. vertical rating
- Heavy-duty air cleaner

**Cooling System**

**Type:** Cross flow fan and tube type radiator • internal transmission cooler • external charge air cooler
- Frontal Area: 1.241 in² (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 in³ (11.9 L)
- Maximum Horsepower: 425 hp (317 kW) at 1800 rpm
- Peak Torque: 1550 ft-lbs (2101 Nm) at 1260 rpm

**Frame**

**Type:** Formed channel • bolted construction with grade 8 bolts and truck bolts
- Material: SAE 1093 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 in² (226 cm²)

**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 ETL 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 CCGVV
- 40% side slope at CGGVV

**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 ZXL
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 • WTCC 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/o winch 28,690 lbs. (13013 kg)
MK27 w/o winch 30,178 lbs. (13688 kg)
MK28 w/o winch 31,069 lbs. (14093 kg)
Gross Vehicle Weight Rating (GVWR):
MK23 w/o winch 57,800 lbs. (26218 kg)
MK25 w/o winch 58,690 lbs. (26621 kg)
MK27 w/o winch 60,178 lbs. (27296 kg)
MK28 w/o 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 bed down kit
- Towbar
- Air conditioning
- Jounce limiting
- Tire chain
- Sliding rear window