## ENGINE

Manufacłurer
Mercedes Benz (MTU)
Model
OM471LA (MTU 6R 1300)
Configuration
Inline 6, turbocharged and intercooled

Net Power
380 kW (510 hp) @ 1600 rpm
Gross Torque
2600 Nm ( 1918 lbft) @ 1300 rpm
Displacement
12,8 litres (781 cu.in)
Auxiliary Brake
Jacobs Engine Brake ${ }^{\circledR}$
Fuel Tank Capacity
533 litres (140.8 US gal)
Certification
OM471LA (MTU 6R 1300) is EU
Stage IIIA / EPA Tier 3 emission level equivalent

## TRANSMISSION

Manufacturer
Allison
Model
4700 ORS
Configuration
Fully automatic planetary transmission

Layout
Engine mounted
Gear Layouł
Constant meshing planetary gears, clutch operated

Gears
7 Forward, 1 reverse
Clutch Type
Hydraulically operated multidisc

Control Type
Electronic
Torque Control
Hydrodynamic with lock-up in all gears

## TRANSFER CASE

Manufacturer
Kessler
Model
W2400
Layout
Remote mounted
Gear Layout
Three in-line helical gears
Output Differential Interaxle 29/71 proportional differential. Automatic inter-axle differential lock.

## AXLES

Manufacturer
Bell
Model
30T
Differential
High input controlled traction differential with spiral bevel gears

Final Drive
Outboard heavy duty planetary on all axles

## BRAKING SYSTEM

Service Brake
Dual circuit, full hydraulic actuation wet disc brakes on front and middle axles. Wet brake oil is circulated through a filtration and cooling system.

Maximum brake force:
305 kN (68 567 lbf)
Park \& Emergency
Spring applied, air released driveline mounted disc

Maximum brake force: 218 kN (49 008 lbf )

Auxiliary Brake
Jacobs Engine Brake ${ }^{\circledR}$. Automatic retardation through electronic activation of wet brake system.
Total Retardation Power Continuous: 442 kW (593 hp) Maximum: 854 kW (1 145 hp )

## WHEELS

Type
Radial Earthmover
Tyre
29.5 R 25 (875/65 R 29 optional)

## FRONT SUSPENSION

Semi-independent, leading A-frame supported by hydropneumatic suspension struts
Option: Electronically controlled adaptive suspension with ride height adjustment

## REAR SUSPENSION

Pivoting walking beams with laminated rubber suspension blocks
Option: Comfort Ride
suspension walking beams, with two-stage sandwich block

## HYDRAULIC SYSTEM

Full load sensing system serving the prioritised steering, body tipping and brake functions. A ground-driven, load sensing emergency steering pump is integrated into the main system.

Pump Type
Variable displacement load sensing piston

Flow
$330 \mathrm{~L} / \mathrm{min}(87 \mathrm{gal} / \mathrm{min}$ )
Pressure
315 Bar (4 569 psi)
Filter
5 microns

## STEERING SYSTEM

Double acting cylinders, with
ground-driven emergency
steering pump
Lock to lock turns
5
Steering Angle
$42^{\circ}$

PNEUMATIC SYSTEM
Air drier with heater and integral unloader valve, serving park brake and auxiliary functions

System Pressure
810 kPa (117 psi)

## ELECTRIC SYSTEM

Voltage 24 V

Battery Type
Two AGM (Absorption Glass Mat) type

Battery Capacity $2 \times 75$ Ah

Alternator Rating 28V 80A

| MAX VEHICLE SPEED |  |  |
| :--- | ---: | ---: |
| 1st | $4 \mathrm{~km} / \mathrm{h}$ | $2,5 \mathrm{mph}$ |
| 2nd | $9 \mathrm{~km} / \mathrm{h}$ | 6 mph |
| 3rd | $17 \mathrm{~km} / \mathrm{h}$ | 11 mph |
| 4th | $23 \mathrm{~km} / \mathrm{h}$ | 14 mph |
| 5th | $33 \mathrm{~km} / \mathrm{h}$ | 21 mph |
| 6th | $44 \mathrm{~km} / \mathrm{h}$ | $27,3 \mathrm{mph}$ |
| 7th | $51 \mathrm{~km} / \mathrm{h}$ | 32 mph |
| R | $7 \mathrm{~km} / \mathrm{h}$ | 4 mph |

## WATER TANKER PLUMBING

Centrifugal water pump
Rate of Flow
$5400 \mathrm{~L} / \mathrm{min}$
Head
70 m

## CAB

ROPS/FOPS certified 76 dBA
internal sound level measured
according to ISO 6396

Load Capacity \& Ground Pressure

| OPERATING WEIGHTS |  | GROUND PRESSURE <br> LADEN (No sinkage/Total Contact Area Method) |  | LOAD CAPACITY |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| UNLADEN |  |  |  |  |  |
|  | kg (lb) | 29.5 R 25 | kPa (Psi) |  |  |
| Front | 15743 (34707) | Front | 310 (45) | Rated Payload | 35000 litres |
| Middle | 10046 (22 147) | Middle | 341 (50) |  | (9250 gallons) |
| Rear | 9528 (21 005) | Rear | 341 (50) |  |  |
| Total | 35317 (77 859) |  |  |  |  |
| LADEN |  |  |  |  |  |
| Front | 18342 (40 438) | 875/65 R29 | kPa (Psi) |  |  |
| Middle | 27391 (60 386) | Front | 293 (43) |  |  |
| Rear | 27584 (60 811) | Middle | 329 (48) |  |  |
| Total | 73317 (161 636) | Rear | 329 (48) |  |  |

| Dimensions


Machine Dimensions

| A | Length - Transport Position | 12084 mm | (39 ft. 8 in.) | 0 | Rear Axle Centre to Bowser / Tank Rear | 2443 mm | (8ft. 0 in.) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | Height- Transport Position | 3802 mm | (12 ft. 6 in .) | P | Mid Axle Centre to Rear Axle Centre | 1950 mm | (6ft. 5 in.) |
| C | Width over Mudguards | 3495 mm | (11 ft. 6 in .) | 0 | Mid Axle Centre to Front Axle Centre | 4438 mm | (14ft. 7 in .) |
| D | Width over Tyres - 875/65 R29 | 3656 mm | (11 ft. 12 in.$)$ | R | Front Axle Centre to Machine Front | 3255 mm | (10 ft. 8 in.) |
| D | Tyre Track Width - 29.5R25 | 3487 mm | (11 ft. 5 in.$)$ | S | Front Axle Centre to Artic Centre | 1558 mm | (5 ft. 1 in .) |
| E | Tyre Track Width - 875/65 R29 | 2773 mm | (9 ft. 1 in.) | T | Approach Angle | $24^{\circ}$ |  |
| E | Tyre Track Width - 29.5R25 | 2725 mm | (8ft. 11 in .) | V | Maximum Articulation Angle | $42^{\circ}$ |  |
| F | Width over Tank / Bowser | 3379 mm | (11 ft. 1 in.$)$ | W | Front Tie Down Height | 1265 mm | (4 ft. $2 \mathrm{in}$. ) |
| F | Width over Tank / Bowser (with hose) | 3529 mm | (11 ft. 5 in.$)$ | X1 | Tank Lifting Centres | 10023 mm | $32 \mathrm{ft}$.10 in.) |
| G | Width over Mirrors - Operating Position | 3614 mm | (11 ft. 10 in.$)$ | X2 | Front Lifting Centres to Tank Lifting Centre | 7173 mm | (23 ft. 6 in .) |
| H | Ground Clearance - Artic | 545 mm | (1 ft. 9 in.) | Y | Inner Turning Circle Radius - 875/65 R29 | 4782 mm | (15 ft. 8 in.) |
| I | Ground Clearance - Front Axle | 545 mm | (1 ft. 9 in.) | Y | Inner Turning Circle Radius - 29.5R25 | 4866 mm | $15 \mathrm{ft}$.12 in .) |
| M | Tank / Bowser Length | 6797 mm | (22 ft. 4 in .) | Z | Outer Turning Circle Radius - 875/65 R29 | 9320 mm | (30 ft. 7 in .) |
| N | Maximum Tank Height | 4002 mm | (13 ft. 2 in .) | Z | Outer Turning Circle Radius - 29.5R25 | 9235 mm | (30 ft. 4 in .) |

## | Gradeability/Rimpull

1. Determine tractive resistance by finding intersection of vehicle mass line and grade line. NOTE: $2 \%$ typical rolling resistance is already assumed in chart and grade line.
2. From this intersection, move straight right across charts until line intersects rimpull curve.
3. Read down from this point to determine maximum speed attained at that tractive resistance.


## |l Retardation

1. Determine retardation force required by finding intersection of vehicle mass line.
2. From this intersection, move straight right across charts until line intersects the curve. NOTE: $2 \%$ typical rolling resistance is already assumed in chart.
3. Read down from this point to determine maximum speed.

