

SCOPE OF WORK: PROVISION FOR REPAIRS AND MAINTENANCE OF TRACTOMAS FOR A PERIOD OF SIXTY MONTHS (5 YEARS) ON AN AS AND WHEN REQUIRED BASIS

Background

The Multi-axle division has Super Abnormal vehicles that transport loads in excess of 100tonnes up to 500tonnes for Eskom, There are twenty two of these specialized vehicles in the Logistics fleet and they need to be maintained effectively to avoid major breakdown and on-route delays.

Nicolas Tractomas vehicles have Caterpillar engines, Clark transmissions, Kessler axles and Renault cabs.

The supplier must have knowledge and equipment to work on this type of equipment on all components.

Qualified mechanics capable of servicing Caterpillar engines, Clark transmissions, Kessler axles and Renault cabs.

The fleet operates in numerous Eskom sites across South Africa; the supplier should have a national footprint to cover planned and unplanned maintenance on request.

The supplier must be equipped with a mobile service vehicle to conduct minor on site services on request.

During contract period, the supplier should train our ERI mechanics on product knowledge to carry out minor repairs and maintenance on these specialised vehicles.

To have service Level Agreement with supplier after contract award to address knowledge transfer

Types of vehicles

Types Of Vehicles	Quantity
TRACTOMAS D100 10X10 671KW Engine spec. 3412E	4
TRACTOMAS D75 8X8 559KW Engine spec. 3412E	3
TACTOMAS D75 8X8 709KW Engine spec. C27 ASCERT	15

SCOPE

Service schedule

The on-going maintenance plan in place is a combination of: breakdown/corrective as well as condition monitoring. Schedule service intervals based on utilization hours and in-line with OEM specifications.

Periodic inspections (three months) must be carried out to ensure integrity of the equipment as well as identify potential equipment issues and provide reports namely:

- *Engine diagnostics report*
- *Gearbox diagnostics report*
- *Oil sampling on all major components*
- *32 point check vehicle inspection report*

The trucks must be serviced every 250hrs intervals. At every service interval, engine/diagnosis downloads together with gearbox test are done and reports must be given on the condition of clutches and related engine components.

The supplier should be able to provide a history of all maintenance performed.

All services will be performed in our workshop, Logistics MAN workshop.

As part of the scope of supply, we require the use of technology to help us improve the reliability and availability of the fleet.

Breakdowns

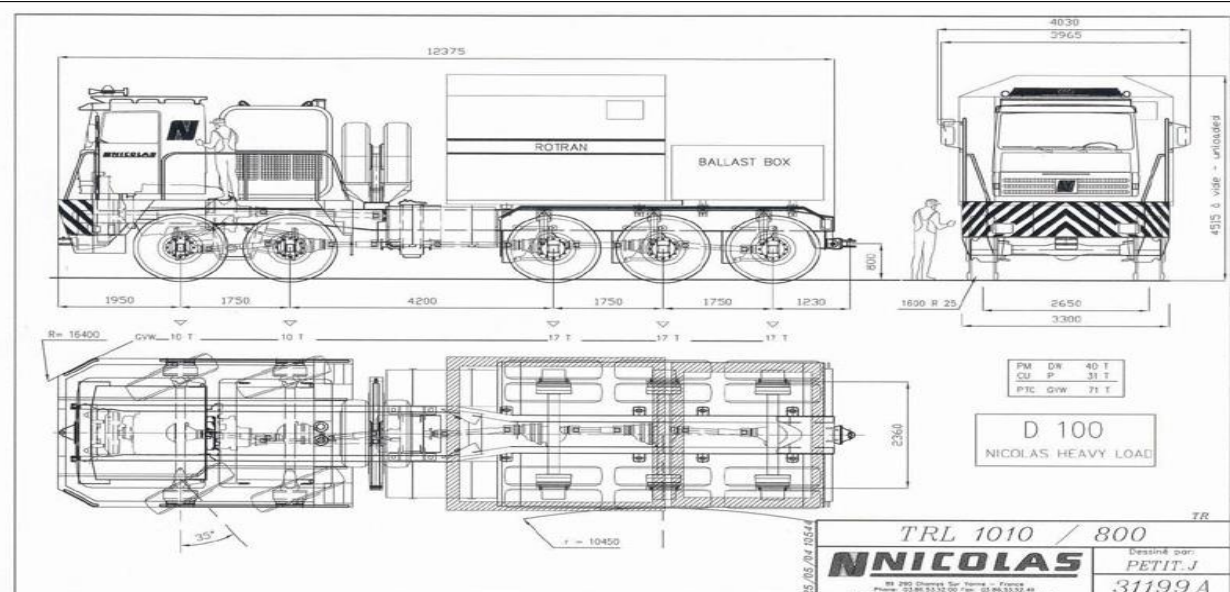
The Nicolas trucks require a permit to travel; supplier must be able to arrange permits for breakdown retrievals and vehicle testing

Breakdown vehicle must be able to perform minor on site services

NICOLAS TRACTOMAS TRUCK 10x10 D100

The vehicle dimensions are:

12,6m (l) x 4,515m (h) and 3,47m (w)



NICOLAS TRACTOMAS TR 10x10 D100 SPEC

Total length approx. 12,620 mm

Total width approx. 3,480 mm

Total height (loaded) approx. 4,515 mm



Tare weight approx. 40,000 kg

Total weight approx. 71,000 kg

Engine

Brand: CATERPILAR

- Type: V 12 Caterpillar 3412 E
- 27.3 liter cubic capacity
- 912 BHP at 2,100 rpm
- Lube oil system: 75 litres
- Cooling system: 120 litres

Automatic transmission

- 3,460 Nm at 1.400 rpm Transmission: Dana Spicer power-shift torque converter clutch
- 8 forward gears
- 4 reverse gears
- Axle configuration 10X10

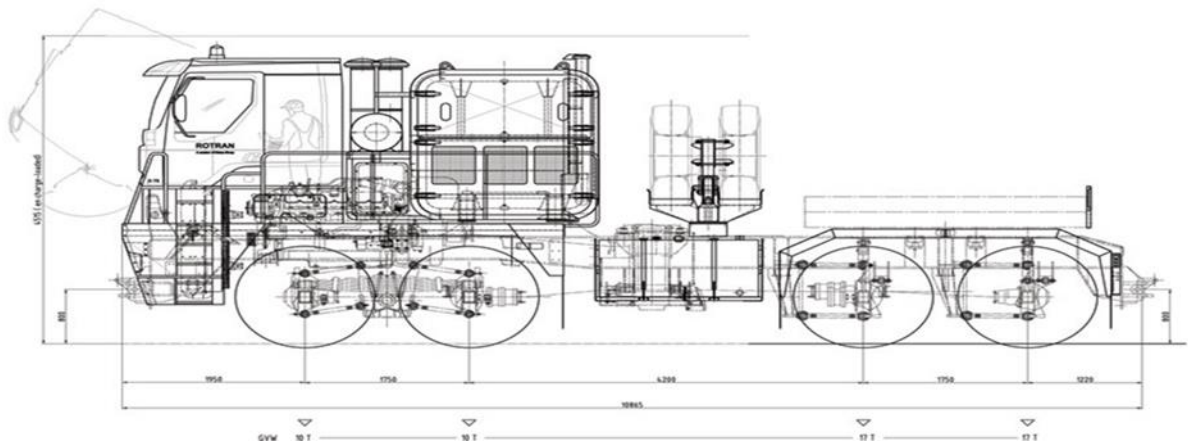
LUBRICATION SPECIFICATION 10X10

MODEL	ENGINE OIL	GEAR-BOX OIL	DIFF OIL	STEERING SERVICES	COOLANT
D100 10X10 671KW	75L	240L	150L	150L	120L
OIL TYPES	15W40	SAE/SAR 10W	SAE SPIRAX A80W90	AFT DEXRON(ATF)	

NICOLAS TRACTOMAS TRUCK 8x8

The vehicle dimensions are:

10,8m (L) x 4,1m (H) and 3,47m 9(W)



NICOLAS TRACTOMAS TR 8x8 D75 SPEC

Total length approx. 10,800mm

Total width approx. 3,480 mm

Total height (loaded) approx. 4,100 mm

Tare weight approx. 40,000 kg

Total weight approx. 71,000 kg

Engine

Brand: CATERPILAR

Type: C27 ACERT

- Turbo charged V12-4-Stroke-Cycle Diesel Engine
- Bore x Stroke: 137.2mm x 152.4mm
- Displacement: 27.03 litres
- Maxi power rating: 663 kW / 900 hp at 2100 rpm
- Lube oil system: 75 litres
- Cooling system: 120 litres

Automatic transmission

- 3,460 Nm at 1.400 rpm Transmission: Dana Spicer power-shift torque converter clutch
- 8 forward gears

-4 reverse gears

-Axle configuration 8X8

LUBRICATION SPECIFICATION 8X8

MODEL	ENGINE OIL	GEAR-BOX OIL	DIFF OIL	STEERING SERVICES	COOLANT
D75 8X8 559KW D75 8X8 709KW	75L	140L	120L	150L	120L
OIL TYPES	15W40	SAE/SAR 10W	SAE SPIRAX A80W90	AFT DEXRON(ATF)	

INSPECTION SHEET

Clean vehicle properly

Take out oil sample on the following Components to lab. To analyse , provide report

- Engine
- Gearbox
- Diff

Check gearbox lock -up and provide report

Connect laptop download, print fault codes and clear

Provide details report full report

Drain and renew engine oil and filter 15W40 quantity 75litre

Drain cooling system and renew antifreeze premix CAT quantity 120 litre

Remove /replace rocker covers and adjust valve clearances to spec

Drain and renew power steering oil and filter ATF quantity 150 litres


Drain and renew transmission oil and filter including torque convertor monograde oil SAE 30 quantity 240litre

Check operation of cooling fan drive pumps for engine and transmission check for leaks

Check cooling system radiator mountings brackets cooling fans and vee belt adjustments
Check all batteries wiring and terminals adjust vee belts check charging
Check alternator, compressor and air-con mountings and belts
Check all hoses and oil pipes for leaks renew if necessary
Check Prop shafts for York play all bolts are secured and is greased if necessary
Check all axles hub cover for oil leaks
Check for oil water and air leaks check for loose connections and secure clamps and fittings
Check operation of wipers and window washer sprayers
Check all lights for operation cracks and damage renew globes if necessary
Check seats doors locks handles windows for damage visibility and operation
Check all instruments steering wheel and switches for operation and damage
Check steps and walkways for damage and security Check driveline mounting bolts prop shaft bolts centre bearings universal joints and pinion play and oil leaks
Check all steering draglinks and linkages ball joints track arms and kingpins for play and security
Check fuel tank straps security check pipes for leaks renew fuel filters bleed system
Check all breaks adjustment wear slack adjusters and boosters for leaks
Check for loose missing wheel nuts and secure
Check all piping cables and fittings for security, leaks and routing
Check all suspension spring packs u bolts and mountings for wear and security
Wipe and grease all grease points
Check and secure all loose chassis bolts

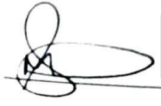
Compile by : Mavela Mswane

Date : 02/06/2022

Signature : 


Suported by : Mpho Mokwena

Date : 26/05/2022

Siganture : 

Suported by : Thulani Tsuma

Date : 02/06/2022

Signature : 

Approve : Mike Masondo

Date : 26/05/2022

Signature : M.T Masondo