SERVICE CIRCULAR



TATA MOTORS

| SC/ 2013/ 45 | Model : 2528.K 6X4 BSIII | Group: 00 | July'13 |
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Subject: Introduction of 2528.K 45WB 6X4 BS-III

We are pleased to inform you about introduction of 2528.K 45WB 6X4 model. This is BS-III compliant vehicle.

Salient feature of the model are as following:

• It's a construction-application based tipper, with a larger load body and longer wheelbase.



Chassis Type Designation:

| Model | Chassis Barrel | VC No |
|------------------|----------------|-----------|
| 2528.K 6X4 BSIII | MAT713105 | 50210845R |

We are enclosing following details about the vehicle:

- Technical Specifications
- Lube details
- Unique part no. for Propeller shaft and Chassis frame (Ann
- Warranty and Free Service

(Annexure - 2) (Annexure - 3) (Annexure - 4)

(Annexure - 1)

CUSTOMER CARE (COMMERCIAL VEHICLE BUSINESS UNIT)

(As per policy of Tata Motors to continuously improve their products, the company reserves the right to make changes of any nature on vehicles and aggregates without any obligation to incorporate them on previous vehicle)

Annexure - 1 Technical Specification:

| Engine | | |
|-------------------------------|---|--|
| Engine | Cummins ISBe 270 Euro-III | |
| | | |
| Engine Type | Water cooled direct injection, turbocharged,intercooled diesel Engine. | |
| Bore / Stroke (mm) | 107mm/124 | |
| Engine Capacity (cc) | 6700 | |
| Capacity Of Cooling System | 9.4 (Engine) | |
| (Ltrs) | 28(Total) | |
| Compression Ratio | 17.3:1 | |
| Coolant | Water & Ethylene Glycol, in 1:1 ratio by volume. | |
| Crankcase Oil Capacity (Ltrs) | High -17.5 Low -15.0 Total-19.5 | |
| Firing Order | 1-5-3-6-2-4 | |
| Fuel Filter | Pre and fine filtration with water | |
| | separator | |
| Fuel Injection Pump | HPCR | |
| Governor | In -built Centrifugal with Electronic | |
| Oil Filter | output Full flow spin on paper type | |
| MAX Engine Output | 266 BHP @ 2500 RPM | |
| MAX. Torque | 970 Nm at 1200-1700 rpm | |
| No Of Cylinders | 6 Inline | |
| Air Filter | Dry type remote mounted,2 Stage | |
| Radiator Frontal Area | 0.587 Sq.Meter | |
| Turbo Charger | HOLSET | |
| Weight Of Engine (Kg) | 610 kg (Dry) | |
| Engine Fan Type | 8 blade, 26"Viscous fan. | |
| Clutch | | |
| Outside Diameter of Clutch | | |
| Lining (mm) | 430 | |
| Engine Clutch Type | Single plate, Dry friction, pull type | |
| Type of Actuation | Hydraulic with Pneumatic assistance | |
| Transmission | | |
| Model | ZF 9S1110 TD | |
| Model | Synchromesh on all forward gears | |
| Туре | constant mesh on reverse gears | |
| Type | &crawler | |
| No. Of Gears | 9 Forward and 1Reverse | |
| | Crawler -12.73,1st -8.83,2nd- 6.28,3rd- | |
| Gear Ratios | 4.64,4th -3.48, 5th -2.54,6th -1.81,7th - | |
| | 1.34, 8th -1.00, Rev - 13.04 | |
| Tipper Body | | |
| Capacity of Tipper Body | 18 cu m Box Body | |
| | Box type body with sub-frame for | |
| Type of Tipper Body | construction application. | |
| Angle of Tip | 52 deg | |
| | Front end Tipping gear pivoted to the | |
| | sub frame. PTO, pump & hydraulic tilt | |
| Tipping Gear | cylinder-4 stage and complete hydraulic | |
| | fittings | |
| Rear axle | | |
| Model | Tata HR-210-T | |
| _ | Planetary Hub Reduction ,Fully Floating | |
| Туре | axle shaft | |
| Ratio | 5.492 | |
| Design capacity | Rear forward and rear rear both 16 ton. | |
| Front axle | | |
| Туре | Forged I beam Reverse Elliot type | |
| Design capacity | 7.5 ton | |
| | 7.0 1011 | |

| Electrical Specification | |
|---|---|
| System Voltage | 24 Volts |
| Alternator Capacity (Amp) | 28V,90 Amps |
| Battery | 2 X 12V, 150Ah |
| Cab/ Cowl | |
| Cabin Type | Prima CAB |
| Wheels and Tyres | |
| No. Of Wheels/Tyres | Front -2, Drive -8, Spare -1 |
| Tyres | 11.00 x 20-16PR Rib at front |
| Wheel Rims | 11.00 x 20-16PR Lug at rear 8.00 X 20 |
| Frame | 8.00 × 20 |
| | Ladder type heavy duty frame with |
| | riveted/bolted cross members. Side |
| Туре | members are of channel section F3 |
| | type (320mmX90mmX8mm) |
| Width (mm) | Front-950mm Rear-850mm |
| Brakes | |
| | 410 X 200 - Front |
| Brake Drum Diameter (mm) | 410 X 200 - Drive |
| Liping Aron (cm2) | Front - 1120 x 2 Total - 2240 |
| Lining Area (cm2) | Drive - 1240 x 4 Total - 4960 |
| | Full Air Dual circuit - S Cam with ABS |
| Service Brakes | Brake Adjuster- Auto slack adjuster |
| | 160mm length |
| Parking Brake Description | Hand Operated -Air assisted spring |
| | actuated parking brake acting on rear |
| Туре | Air assisted parking brake acting on |
| | rear wheels Electro -Pneumatically operated |
| Engine Exhaust Brake | coupled with service brake |
| Steering | coupled with service brake |
| | Hydraulic Power Steering (Rane) |
| Type Ratio | Variable ratio (22.2:1 to 26.2:1) |
| Suspension | |
| | Parabolic Spring at front & two spring |
| Туре | balance beam bogie with semi elliptic |
| .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | multi spring & rubber mounted. |
| | Front - 90 |
| Leaf Width (mm) | Rear - 90 |
| Shock absorber | Hydraulic double acting telescopic type |
| Shock absorber | at front only. |
| Spring Span (mm) | Front-1750 |
| , | Rear-1450 |
| Antiroll bar | At front and rear rear axle |
| Design capacity | Front 7.5 ton |
| | Rear 40 ton |
| Fuel tank | |
| Туре | Rectangular |
| Capacity (Ltrs) | 260 |
| Performance | |
| Max. Geared Speed in Top | 78 |
| Gear (Kmph) Max. Climbing Ability in 1st | |
| iviax. Climbing Adility in 1st | |
| - - | 36.80% |
| Gear | |
| Gear Minimum Turning Circle Dia. | 36.80% 18350 |
| Gear Minimum Turning Circle Dia. (mm) | 18350 |
| Gear Minimum Turning Circle Dia. (mm) Minimum Turning Clearance | |
| Gear Minimum Turning Circle Dia. (mm) Minimum Turning Clearance Circle Dia. (mm) | 18350 20710 |
| Gear Minimum Turning Circle Dia. (mm) Minimum Turning Clearance Circle Dia. (mm) Main chassis dimension (mm) | 18350 20710 |
| Gear Minimum Turning Circle Dia. (mm) Minimum Turning Clearance Circle Dia. (mm) Main chassis dimension (mm) Wheel Base | 18350 20710 4570 |
| Gear Minimum Turning Circle Dia. (mm) Minimum Turning Clearance Circle Dia. (mm) Main chassis dimension (mm) | 18350 20710 |
| Gear Minimum Turning Circle Dia. (mm) Minimum Turning Clearance Circle Dia. (mm) Main chassis dimension (mm) Wheel Base Front Overhang | 18350 20710 4570 1482 7537 (8037 with Box Body) |
| Gear Minimum Turning Circle Dia. (mm) Minimum Turning Clearance Circle Dia. (mm) Main chassis dimension (mm) Wheel Base Front Overhang Overall Length | 18350 20710 4570 1482 |
| Gear Minimum Turning Circle Dia. (mm) Minimum Turning Clearance Circle Dia. (mm) Main chassis dimension (mm) Wheel Base Front Overhang Overall Length Max. Width | 18350 20710 4570 1482 7537 (8037 with Box Body) 2581 (2590 with Body) |
| Gear Minimum Turning Circle Dia. (mm) Minimum Turning Clearance Circle Dia. (mm) Main chassis dimension (mm) Wheel Base Front Overhang Overall Length Max. Width Front Track | 18350 20710 4570 1482 7537 (8037 with Box Body) 2581 (2590 with Body) 2038 |
| Gear Minimum Turning Circle Dia. (mm) Minimum Turning Clearance Circle Dia. (mm) Main chassis dimension (mm) Wheel Base Front Overhang Overall Length Max. Width Front Track Rear Track | 18350 20710 4570 1482 7537 (8037 with Box Body) 2581 (2590 with Body) 2038 1900 |
| Gear Minimum Turning Circle Dia. (mm) Minimum Turning Clearance Circle Dia. (mm) Main chassis dimension (mm) Wheel Base Front Overhang Overall Length Max. Width Front Track Rear Track Weights (Kg) Bare Chassis Kerb Weight With Cowl | 18350 20710 4570 1482 7537 (8037 with Box Body) 2581 (2590 with Body) 2038 1900 |
| Gear Minimum Turning Circle Dia. (mm) Minimum Turning Clearance Circle Dia. (mm) Main chassis dimension (mm) Wheel Base Front Overhang Overall Length Max. Width Front Track Rear Track Weights (Kg) Bare Chassis Kerb Weight With Cowl Max. Permissible FAW | 18350 20710 4570 1482 7537 (8037 with Box Body) 2581 (2590 with Body) 2038 1900 |
| Gear Minimum Turning Circle Dia. (mm) Minimum Turning Clearance Circle Dia. (mm) Main chassis dimension (mm) Wheel Base Front Overhang Overall Length Max. Width Front Track Rear Track Weights (Kg) Bare Chassis Kerb Weight With Cowl Max. Permissible FAW Max. Permissible RAW | 18350 20710 4570 1482 7537 (8037 with Box Body) 2581 (2590 with Body) 2038 1900 9330 6000 19000 |
| Gear Minimum Turning Circle Dia. (mm) Minimum Turning Clearance Circle Dia. (mm) Main chassis dimension (mm) Wheel Base Front Overhang Overall Length Max. Width Front Track Rear Track Rear Track Weights (Kg) Bare Chassis Kerb Weight With Cowl Max. Permissible FAW | 18350 20710 4570 1482 7537 (8037 with Box Body) 2581 (2590 with Body) 2038 1900 9330 6000 |

> Oils & Lubricants:

| Oil Chart | | | |
|-------------------------------|--|--|---|
| Aggregate | Filling capacity | Frequency of Oil change | Oil Grade |
| Engine Oil (ISBe) | 19.5 Ltrs | 1st: 500 Hrs 2nd: 500 Hrs Every 1000 Hrs subsequently | SAE 15W40 Cl4+(with venturi-combo filter) |
| Gear Box (ZF 9S1110) | 11.5 Ltrs | Every 1000 Hrs | SAE 80W90 |
| Rear Axle (HR-210-T) | Rear Forward :29 Ltrs (24 Ltrs for center Diff + 2.5 Ltrs each Hub) Rear Rearward:17 Ltrs (12 Ltrs for center Diff + 2.5 Ltrs each Hub) | Every 2000 Hrs | SAE 80W140 Long Drain SS6578 |
| Coolant | 28 Ltrs | 6000 Hrs | 50% water+50% ethylene glycol |
| Power Steering Fluid | 4 Ltrs | Every 2000 Hrs | ATF Dextron II, IID, III or Mercon Color 'RED' |
| Clutch oil | 300 ml | Every 2000 Hrs | Hydraulic Brake fluid HD DOT-4 IS8654-205 SS7710 55130 86015 9 |
| Tilt Cab Cylinder Oil | 896 ml | Every 2000 Hrs | HVI 26 |
| Tipper hydraulic system | 50 | Every 2000 Hrs | Anclo 68 |
| Air Conditioning | 450 <u>+</u> 20 gms | As Required | R134a Compressor Lub oil: ISU PAG 105 |
| Front axle wheel hub greasing | | Every 1000 Hrs | SKF VGK X/180 |

Annexure - 3

> Unique part no. for Prop-shaft and chassis frame

| Part No. | Part Description |
|--------------|--|
| 502131000102 | ASSY FRAME LPK2528(6X4) 45WB |
| 502141100101 | ASSY.PROP SHAFT FRONT (M/S SIL) WITH ZF GB |
| 502141120101 | ASSY PROP SHAFT INTERAXLE |

> <u>Warranty:</u>

Vehicles will be eligible for five Free Labour Services apart from Pre Delivery Inspection (PDI)

| S.N. | Free Service | Hours | Period |
|------|-------------------------|-------|-----------|
| 1 | PDI | | |
| 2 | 1st Service | 500 | 8 months |
| 3 | 2nd Service | 1000 | 20 months |
| 4 | 3rd Service | 2000 | 30 months |
| 5 | 4th Service | 3000 | 40 months |
| 6 | 5 th Service | 4000 | 48 months |

Vehicle Warranty:

Vehicle warranty for M&HCV with Cummins engine is 24 Months or 5000 hours from date of sale whichever is earlier.

Driveline Warranty:

Driveline warranty includes Engine, Transmission and Rear Axle warranty which is 48 Months or 5000 hours from date of sale whichever is earlier.

Note: - In free service only labour is free and material is chargeable.