

**coming up with a new concept  
in on/off Highway truck design wasn't  
easy....**



**SPV**  
*range*



Shelvoke and Drewry Limited Special Purpose Vehicle Division

# ....and we've been coming up with new design concepts for over 50 years.

Up until now most equipment available on the on/off road vehicle market originated from two sources ; they were either adaptations of commercial haulage type chassis on the one hand, or obsolete ex-military models on the other.

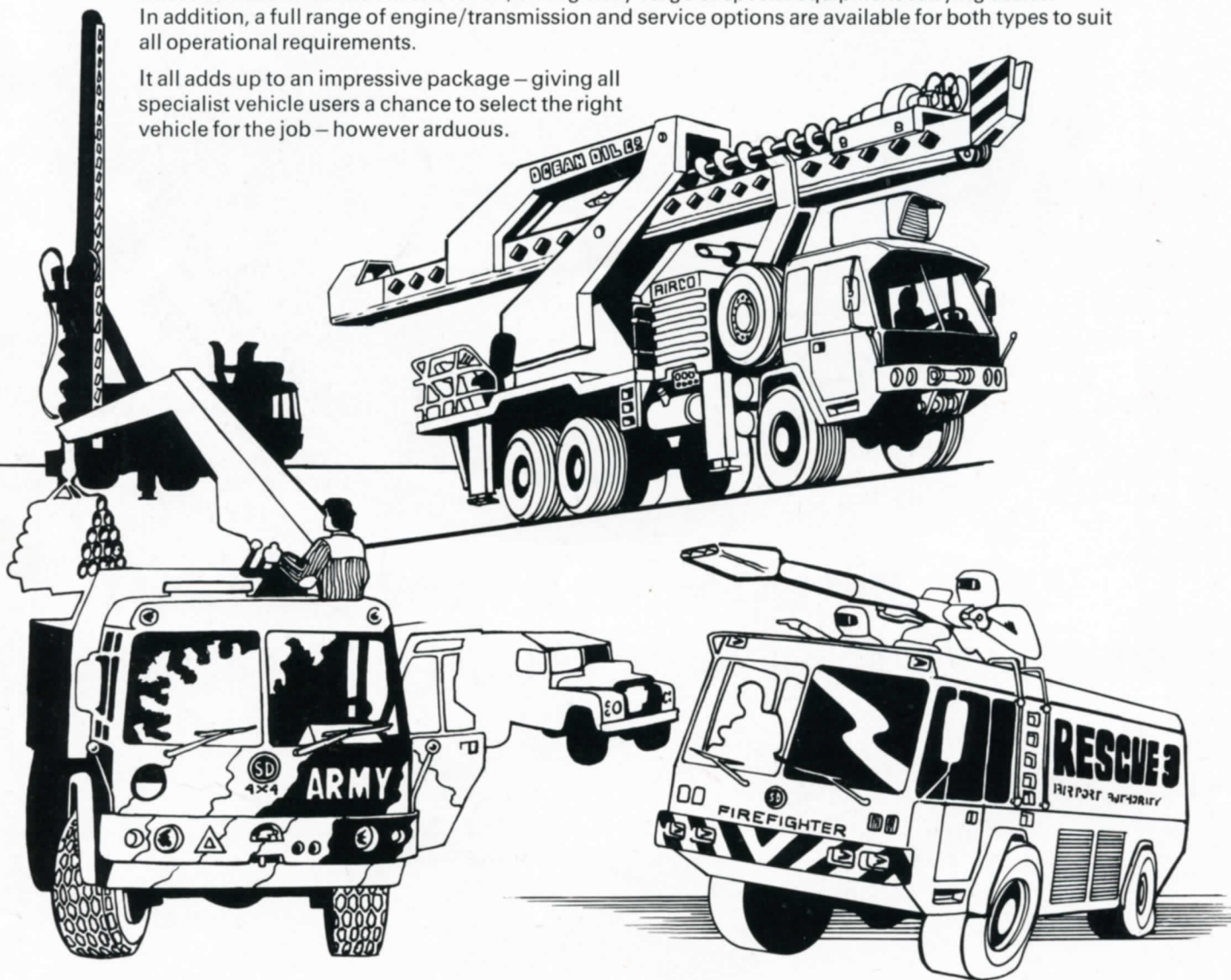
This is surprising considering the arduous conditions and specialist nature of many on/off road vehicles. Clearly something better was called for.

Shelvoke and Drewry Ltd, have been building Specialist Purpose Vehicles for over fifty years, and are particularly experienced in designing and supplying vehicles for arduous operational requirements.

After studying all aspects of on/off road vehicle operation and assessing what was required, we came up with the answer – an integrated model range designed from the ground up for on/off road applications, no compromises, no adaptations.

By utilising recent automotive technology and by exacting component selection, new standards in performance for vehicles of this type have been set. Basically, the new Shelvoke and Drewry SPV range falls into two classes, the high powered 'C' series chassis for Airfield/rough terrain rescue duties and the 'N' series chassis for on/off highway cargo or special equipment carrying duties. In addition, a full range of engine/transmission and service options are available for both types to suit all operational requirements.

It all adds up to an impressive package – giving all specialist vehicle users a chance to select the right vehicle for the job – however arduous.



 **SPV**  
range

**4x4 and 6x6 chassis  
for on/off highway applications**

## yesterday....

Shelvoke and Drewry Limited may not be familiar to many Vehicle operators but that isn't to say that we've just arrived on the scene. In fact when Mr Shelvoke and Mr Drewry got things together the strongest competition came from the horse and cart. The Company's dislike for cheap compromises became apparent right from the word go (and we're still proud of it today). One of our first models, a refuse collector, featured compact overall dimensions for narrow streets, low loading height, transverse engine and semi-automatic transmission. Unfortunately for the competition horses and carts weren't as easy to up-date.



## today....

The development of Municipal Vehicles has continued, somehow we've always been a few steps ahead of the competition, *fifty years on* we're leaders in the Municipal Vehicle Field. Almost every Public Authority throughout the UK and many in Europe, Africa and Asia operate SD Refuse Collectors and Municipal Tankers. The Revopak, a high capacity, fast loading machine that is virtually silent in operation has proved to be one of the most successful vehicles of its type available. The chassis, cab, body and hopper are all designed and built at Shelvoke and Drewry's main plant in Letchworth.



## tomorrow....

You don't get to be market leaders by standing still so it goes without saying we've got a talented team of design and development engineers keeping us ahead of the pack.

The lessons we've learnt in building vehicles to stand, stop and start, working day in day out and in treacherous tipping site conditions, have all helped us when it comes to designing and building the new SPV range. And it doesn't stop there, continuous development and careful component selection and assembly ensure that however difficult the operating conditions, you've got a vehicle built for maximum reliability and life.

Batch production might not be the quickest way of assembling a chassis but as far as we're concerned, it does give the opportunity for specification variations and modifications that are required for Special Purpose Vehicles. It ensures that each vehicle is ideally suited to its operational requirements.



## always....

As you would expect for a Company marketing vehicles for both UK and Worldwide conditions an efficient servicing back-up is an essential ingredient to success. We've got one. SD After Sales Service Organisation could well put the larger operators to shame.

Not that large in our case means impersonal, we would still rather know all our customers on first name terms.

There's an impressive network of Spares and Service centres in all major towns throughout the UK, teams of Service Engineers and Agents operating on a Worldwide basis and a spares distribution service to keep the whole thing running smoothly.

**These facilities are now being extended to include the SPV range.**



## range, what range?

Chassis Applications*	GVW class (in tons)								
	11.5	13.5	14	16	17	22	24	28	38
4×2 Municipal	✓		✓	✓					
4×2 Highway-Heavy Duty	✓		✓	✓					
4×2 Firefighter-Domestic	✓		✓	✓					
4×4 On/off Highway		✓		✓					
4×4 Special Applications		✓			✓	✓			
4×4 Firefighter-Crash/Rescue		✓			✓	✓			
6×4 Municipal						✓			
6×4 Highway-Heavy Duty						✓			
6×6 On/off Highway							✓		
6×6 Special Applications								✓	
6×6 Firefighter-Crash/Rescue								✓	✓

\*Further detailed model specifications are available on request.

The above information is intended as a guide to chassis operational weight brackets covered by Shelvoke and Drewry Limited, these may vary due to legislation and other factors outside the company's control. It is suggested that where operators requirements might differ to the above, consultation with the company be made.

### chassis types

The above model range data gives basic chassis details for both 'C' series models for Airfield/rough terrain rescue and 'N' series models for on/off highway cargo/special equipment carrying duties.

SPV 'C' series models are designed for maximum performance having exceptionally high BHP/ton ratios with corresponding reserves of handling and braking; chassis frames are purpose built for this exacting task and are of bolted construction giving both high strength and flexibility.

For more conventional requirements the 'N' series models retain the advanced handling of the 'C' series models but are designed from the outset for load carrying applications whether this be in terms of cargo or equipment carrying. The need for compatibility for trailer towing was also a consideration. The straight-forward unobstructed chassis layout for the 'N' series facilitates mounting of specialist body equipment.

### cab options

'C' Series models are designed for fully forward control 'Lowline' crew cabs mounted ahead of the front axle remote from the power unit. This gives easy entry, together with unobstructed cab floor space. Access from the cab to fire monitor/body is via inter-connecting door in the cab back panel.

For Fire/rescue duties this allows the crew to take up emergency positions in complete safety whilst the vehicle is in motion.

On the 'N' series models where chassis loadspace is at a premium a more conventional forward control cab over engine configuration is available. This gives a maximum scope for mounting of special body requirements, although the 'Lowline' cab configuration might be specified for certain applications.

### engine/transmission options

A full range of engine/transmission options is available for each model type. Diesel, Petrol, straight or Vee power units right up to 700+BHP for the larger models can be specified. Naturally aspirated or turbo-charged power units are available. Both manual or automatic gear boxes are available with ratios/ranges to suit all operating conditions both as regards to terrain and load capacity capabilities.

An exceptionally high degree of ground clearance and axle movement is available on all 4×4 models. All 6×6 machines feature fully articulated rear powered bogies fully compensating torque wind-up and wheel hop.

### operational requirements

The extent of applications for the SPV range is so diverse by nature of the large number of chassis/body and engine/transmission options available on the above basic model brackets that Shelvoke and Drewry Ltd envisage close company/operator co-operation in the choosing of vehicle specifications for specific duties.

In general it can be stated that any specialist requirement that by nature requires a vehicle with a high degree of engineering development is a suitable application for an SPV machine.

This could encompass not only Airfield Fire/Rescue duties and general all terrain cargo carrying duties, but oil/mineral exploration, military and civil engineering. Indeed any application where such standards are inherent and long chassis life and reliability are essential.

## **'4x4 and 6x6 problems?' We've got the answer**

### **'what's this SPV range then'?**

Well you won't have heard much about our range of 4x4 and 6x6 on/off road models yet because they're new. Having assessed what was available on the World markets, design and development engineers at Shelvoke and Drewry set about coming up with something better.

### **'Shelvoke and who'?**

Shelvoke and Drewry Limited. We've been in the vehicle manufacturing industry now for over fifty years, so even though we've just come up with something new, we've still got the experience behind us.

### **'What kind of organization are you'?**

Quite large really, not that we're pretending to be General Motors. We would much rather deal with our customers on a personal basis.

### **'Yes but can you offer big company service'?**

There's an S & D Spares and Service centre in every regional centre throughout the UK, we've also got teams of service engineers that operate world wide, all controlled from Service Headquarters just over the road from our main plant in Letchworth.

### **'Who are your customers'?**

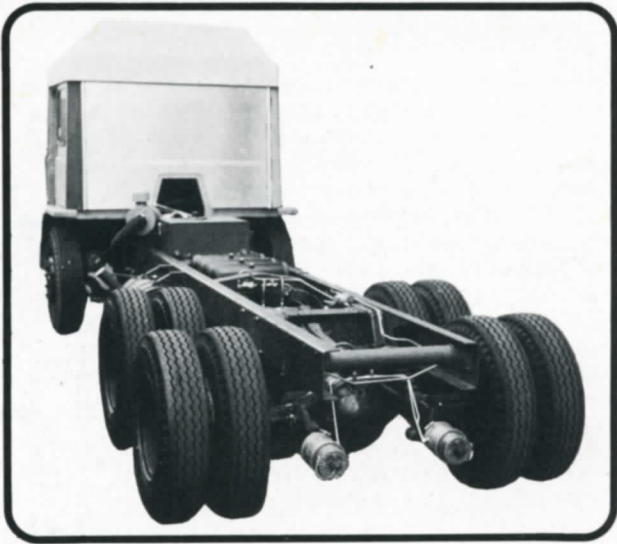
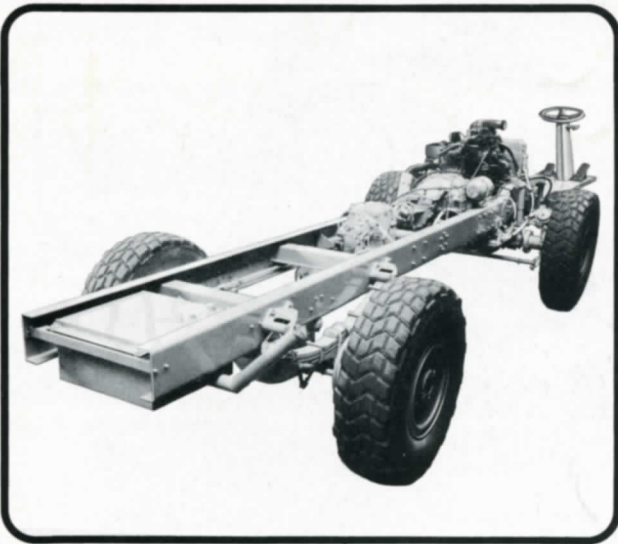
Almost every Council in the UK operate SD Municipal Vehicles of one type or another and many others throughout Europe, Africa and Asia, so we've had experience of building trucks for all extremes of climate and operating conditions.

### **'OK I need an SPV, how much'?**

Sorry but it's not quite that easy, considering that we would design and build a vehicle to suit your exact specification and not just adapt a standard production model, the cost is relative. Also it's a sure bet it will last longer too for the same reason, what ever your problem...

### **'Shelvoke and Drewry have the answer'**

Right.



**whatever your  
4x4 or 6x6 problems  
we've got the answer**



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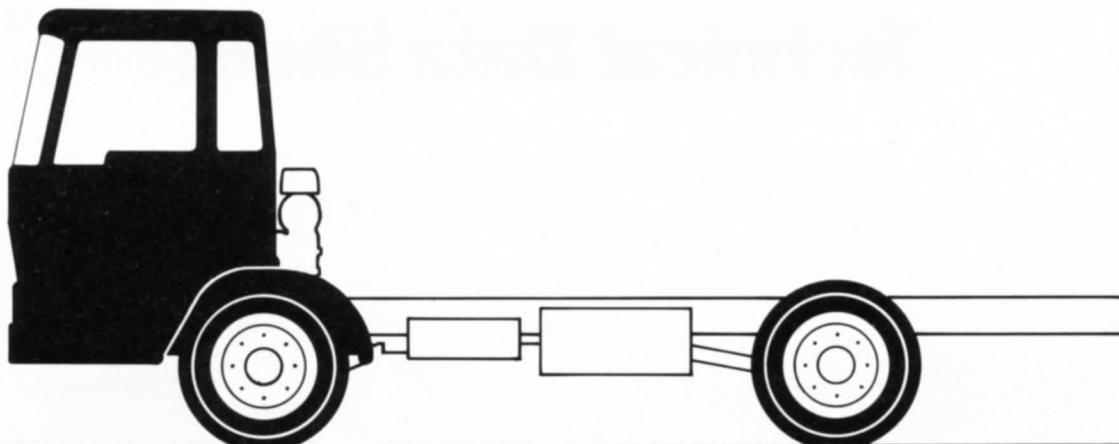
## Technical Data Sheet



**Model: NN series Tiltcab 11.5 tons (11684 kgs) GVW 4 x 2**

# Technical Data Sheet

**Model: NN series Tiltcab 11.5 tons (11684 kgs) GVW 4 x 2**



**Engine NN Series** (a) Perkins Six 354 diesel 6-cylinder, 4-stroke direct injection. Cubic capacity 354 cu in (5.8 litres). Develops 120 BHP at 2,800 RPM governed speed.

(b) Leyland 6-98 diesel 6-cylinder, 4-stroke direct injection. Cubic capacity 345 cu in (5.6 litres). Develops 115 BHP at 2,600 RPM.

(c) Ford 2713E 4-stroke direct injection Develops 113 BHP at 2,800 RPM.

Air cleaner: Remote mounted dry type cleaner at rear of cab.

**Gear Box** Assembled with engine and clutch in complete unit. Five forward speeds and one reverse. All gears are of case-hardened nickel-chrome steel and all forward gears are synchromesh.

Ratios: 1st gear 7.67:1. 2nd gear 4.40:1. 3rd gear 2.51:1. 4th gear 1.48:1. 5th gear 1:1. Reverse 7.48:1.

**Clutch** Dry-plate Borg & Beck with low unit pressure on linings, ball-bearing release, hydraulic operation and external lubrication. Clutch diameter 14" (13" diameter Ford).

**Radiator** Flat-tube type with integral tanks and concealed filler. Pressurised water system. A water temperature gauge is provided in the instrument panel.

**Cooling System** A centrifugal water pump at front of engine is driven by a vee belt which also drives an alternator. Fan is crank mounted.

**Transmission** Through balanced tubular propeller shafts supported by rubber mounted spherical centre bearing. Hardy Spicer heavy-duty needle-roller bearings are incorporated throughout with a sliding shaft in the rear section.

**Rear Axle** Spiral bevel wheel and pinion of heavy construction. Ratio 6.83:1. Load capacity 8 tons.

**Front Axle** Axle bed is 'I' section alloy-steel stamping carrying stub axles of highest grade steel stampings with hardened swivel pins.

**Steering** Integral power steering fitted as standard.

**Brakes** Air/Hydraulic actuation, split front and rear to give secondary braking. Parking brake spring applied, air released mounted directly on rear axle. Front brakes - Girling 15½ x 5 HLS/S. Rear brakes - Girling 15½ x 4½ 2LS.

**Chassis** Manganese steel frame channel pressing 8.1/16 x 2½ x ¼ with top hat and tubular cross members utilising an all bolted construction.

**Road Springs** Semi-elliptic front and rear - 48" centres x 3" wide, utilising anti-roll clip plates for stability. All leaves shot peened on tension side - telescopic shock absorbers fitted at front.

**Fuel Tank** 20 or 30 imperial gallons (89 or 136.4 litres) capacity on near or offside, depending on chassis options requested.

**Wheels and Tyres** 8.25 x 20 x 14 PR tubed tyre on pressed steel three-piece rim. Spare wheel mounted on offside of chassis.

**Electrical System** Negative earth with alternator. Two flat beam dipping headlamps recessed in front panel. Two side lamps, flashing indicators front and rear, twin rear stop/tail lamps and reflectors. Electric horn. Twin wipers and screen washers. Fuses and regulators mounted behind front panel readily removable for access. 12 volt, two 6-volt batteries 120 amp/hr capacity.

**Tilt Cab** Steel/wood/fibreglass integral construction with seating for driver and 2 crew. Cab designed for maximum comfort and visibility. Fitted with interior light, twin wipers and washers. Air flow heater and demister. Twin rear view mirrors, heavy duty front bumper.

**Instrument Panel** Ergonomic design giving full range of instruments. Speedometer with mileage indicator or optional Tachograph, oil pressure gauge, air pressure gauge, battery indicator, fuel gauge. Horn, flashers and lights switch, column mounted. All controls positioned for ready access to reduce fatigue.

**Chassis Lubrication** By grouped nipple system. ACL or Airdromic automatic lubrication systems optional.

**Ancillary Equipment** Spare wheel and tyre, number plates, licence holder, tool box and tools. Towing brackets and other service options available.

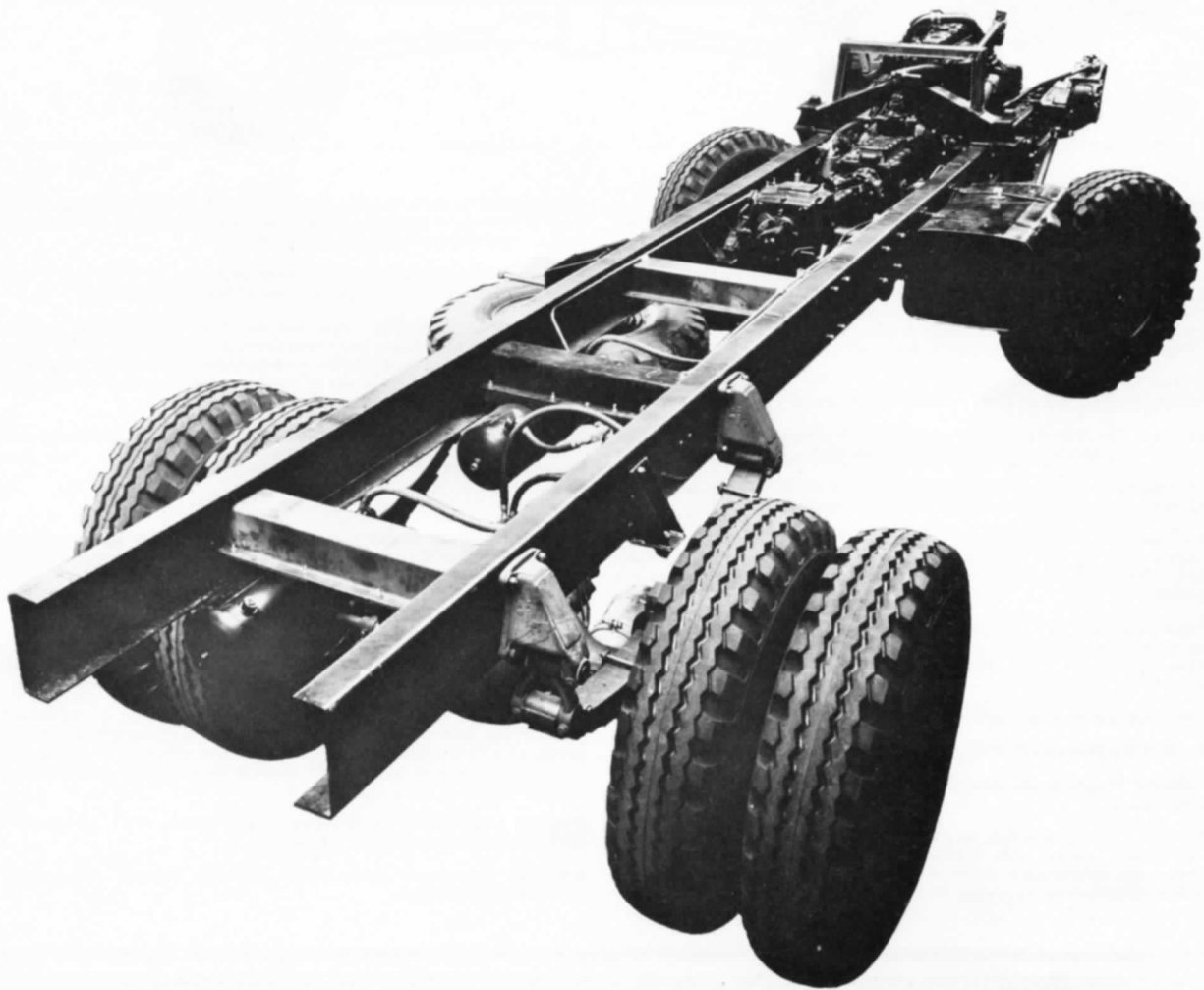


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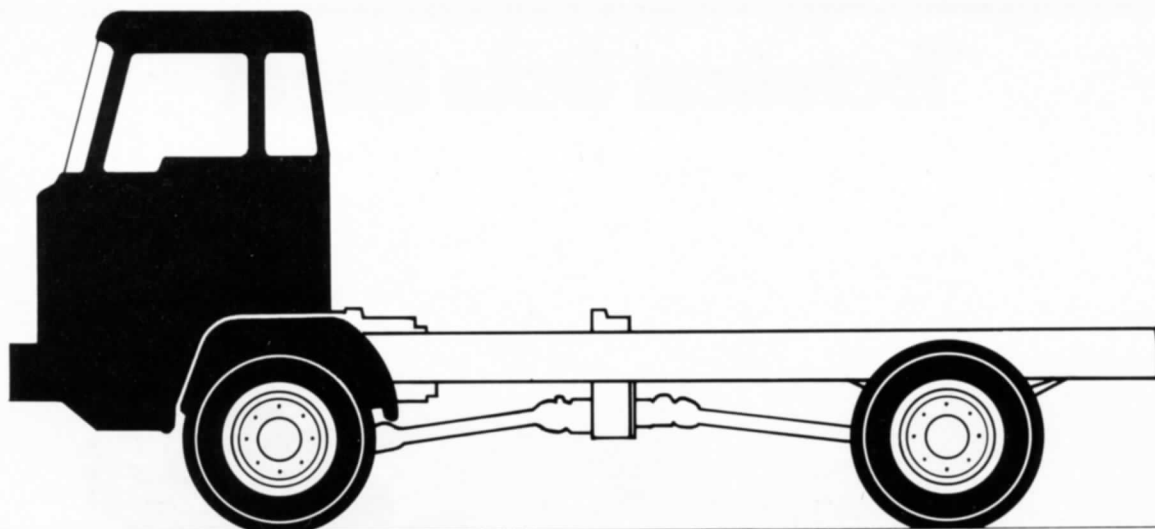
## Technical Data Sheet



**Model: NY series 16-0 tons (16257 kgs) GVW 4x4**

# Technical Data Sheet

**Model: NY series 16-0 tons (16257 kgs) GVW 4x4**



**Engine** Leyland 410 Turbo-charged engine. Direct injection, 4-stroke, 6-cylinder. Water cooled diesel. Swept volume, 399 cu in (6.54 litres) developing 144 BHP at 2,600 RPM (BSAU 141a 1971 net rating). Remote 10" diameter dry type air cleaner.

**Gearbox** 6 forward speeds - 1 reverse. All gears of case-hardened nickel/chrome steel. All forward gears constant mesh. Ratios: 1st gear 7.013:1. 2nd gear 4.304:1. 3rd gear 2.544:1. 4th gear 1.54:1. 5th gear 1:1. 6th gear 0.76:1. Reverse 6.6:1.

**Clutch** Single dry plate Borg & Beck 'AS' 15" diameter. Ball-bearing release, hydraulic operation from pedal-mounted master cylinder.

**Radiator** Flat-tube type with integral tanks and concealed filler. Pressurised water system. A water temperature gauge is provided in the instrument panel.

**Cooling System** A centrifugal water pump at front of engine is driven by a vee belt which also drives an alternator. Fan is crankshaft mounted.

**Auxiliary Gear Box** ZF model G350/3D - 2-speed - 1:1 and 1.6:1 reduction, having torque proportioning third differential 35% to front axle - 65% to rear axle mounted in chassis frame to provide excellent ground clearance.

**Transmission** Through balanced tubular propeller shafts supported by rubber mounted spherical centre bearing. Hardy Spicer heavy-duty needle roller bearings are incorporated throughout with a sliding shaft in the front and rear shafts.

**Rear Axle** Eaton model R500 11.500 Kg capacity with 7.013 ratio.

**Front Drive Steer Axle** Eaton model FDS 700 with 6.923 ratio.

**Steering** Integral power steering gear chassis mounted. Power Steer Pump engine driven.

**Brakes** Full air cam brakes on all wheels. Front brake 17-165 x 5" wide, rear brake 15 1/2 dia x 7" wide. A dual air pressure system is employed with the compressor mechanically driven from the engine. The brake actuating system comprises spring brakes on rear axles. Each spring brake provides

braking effort for the foot brake and gives an effective parking system when no air is supplied. A sensitive control lever in the cab provides air for releasing the spring parking brakes when moving away.

**Chassis** Manganese steel frame channel pressing, 10" x 3 1/2" x 5/16". Frame cross members top hat and tubular section. All bolted construction.

**Road Springs** Semi-elliptic front and rear. Front springs at 54" centres x 4" wide controlled by heavy duty shock absorbers. Rear springs at 50 1/2" centres x 3 1/2" wide. Rear spring deflection in conjunction with rubber spring aids to ensure a comfortable ride under all loading conditions with minimum roll. All spring leaves shot peened on tension side.

**Fuel Tank** 30 gallon (136.4 litres) capacity mounted on nearside of chassis.

**Wheels and Tyres** Pressed steel 3-piece rim 6.8 offset. Single 12-00 x 20 16 PR Tyres - Front. Twin 12-00 x 20 16 PR Tyres - Rear.

**Electrical System** Negative earth with alternator. Two flat beam dipping headlamps recessed in front panel. Two side lamps, flashing indicators front and rear, twin rear stop/tail lamps and reflectors. Electric horn. Twin wipers and screen washers. Fuses and regulators mounted behind front panel readily removable for access.

**Crew Cab** Steel construction tilt cab. Cab designed for maximum comfort and visibility. Fitted with interior light, twin wipers and washers. Air flow heater and demister. Twin rear view mirrors. Heavy duty front bumper.

**Instrument Panel** Ergonomic design giving full range of instruments. Speedometer with mileage indicator or optional Tachograph, oil pressure gauge, air pressure gauge, battery indicator, fuel gauge. Horn, flashers and lights switch, column mounted. All controls positioned for ready access to reduced fatigue.

**Chassis Lubrication** By grouped nipple system. ACL or Airdromic automatic lubrication systems optional.

**Ancillary Equipment** Spare Wheel and tyre, number plates, licence holder tool box and tools.



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