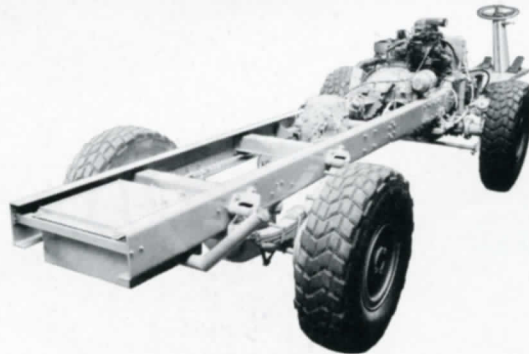




**introducing a new range of Airport  
Crash Tender chassis just as Concorde  
went commercial wasn't a coincidence...**



**SPV**  
*range*

Shelvoke and Drewry Limited Special Purpose Vehicle Division

# if now isn't the time for second generation fire-rescue equipment when is?

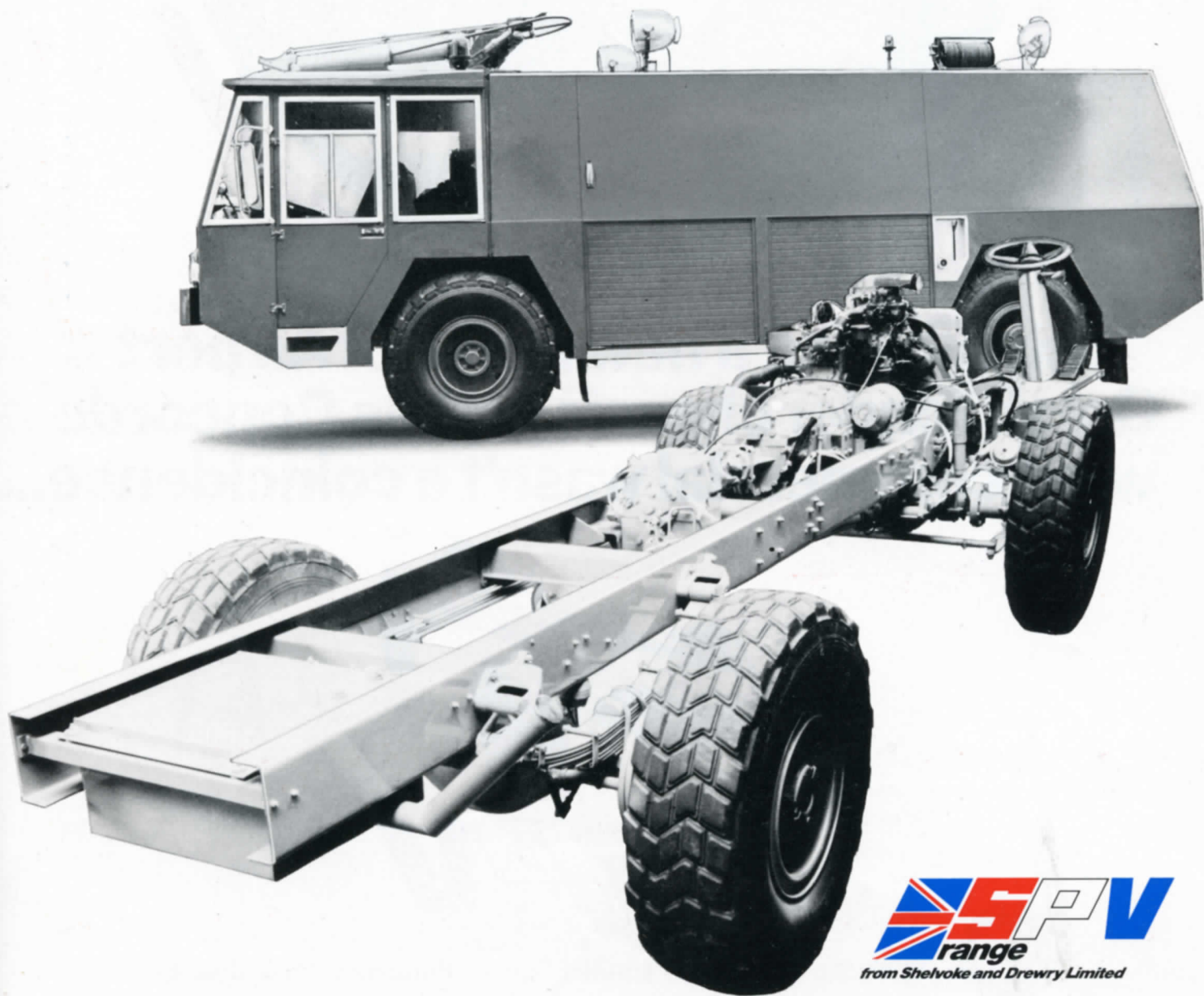
There have been some pretty rapid advances made in the Aviation industry over the last few years, executive jets, jumbo's, Concorde, added to that the need for quicker aircraft turn-rounds and an increase of aircraft movements generally, it all comes down to the same thing – more speed. Have developments in ancillary service equipment kept pace? How will requirements change in the future?

These were all factors considered by Shelvoke and Drewry Limited prior to their decision to enter the Crash Tender market. A comprehensive study was made over a period of years taking into account recent developments in the Aviation industry and what equipment was currently on the market to meet them.

Results showed it was time for a new look. The Company has the experience of over fifty years in special purpose vehicle production and the resources compatible with an organisation already building vehicles for both UK and Worldwide markets, particularly in regards to After Sales Service. The end product is an integrated range of 4 x 4 and 6 x 6 machines from 13.5 tons up to 38 tons GVW setting new standards of performance for vehicles of this type.

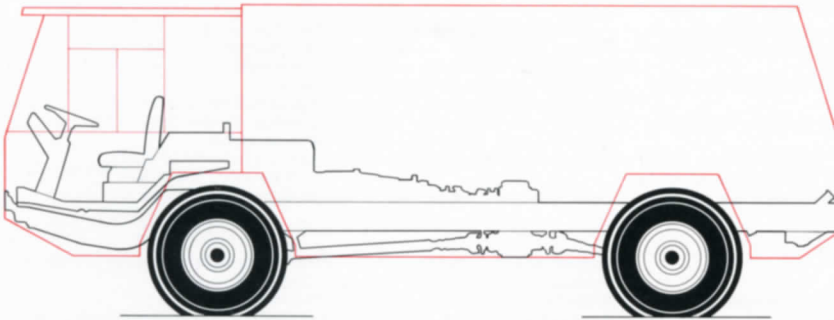
Acceleration, braking and handling were given top priority. In addition cab comfort and accessibility and chassis layouts designed for maximum body adaptability ensure the finished machine will meet the exact specified operating requirements.

A full range of Engine Transmission and service options are also available to suit terrain conditions and performance requirements.



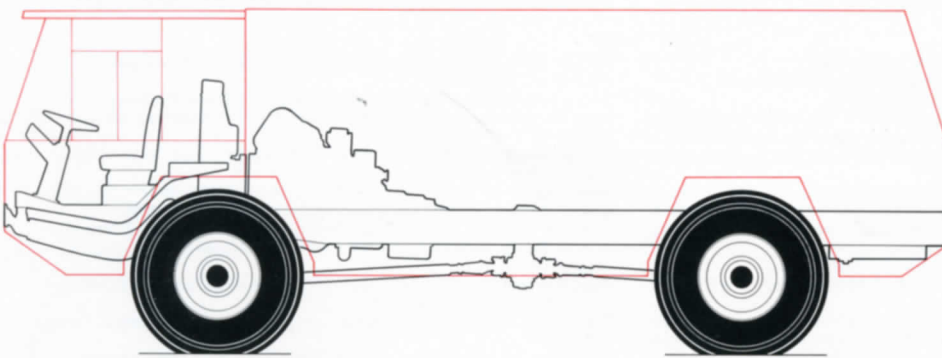
**SPV**  
range  
from Shelvoke and Drewry Limited

**model range...**

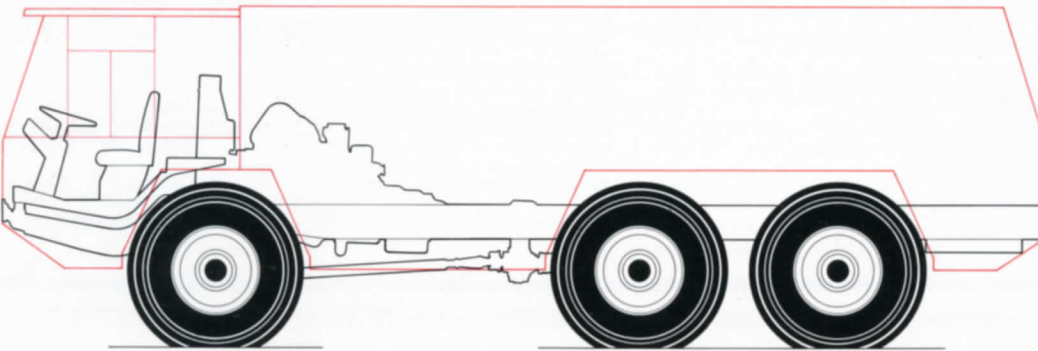


13.5 ton GVW 4 x 4

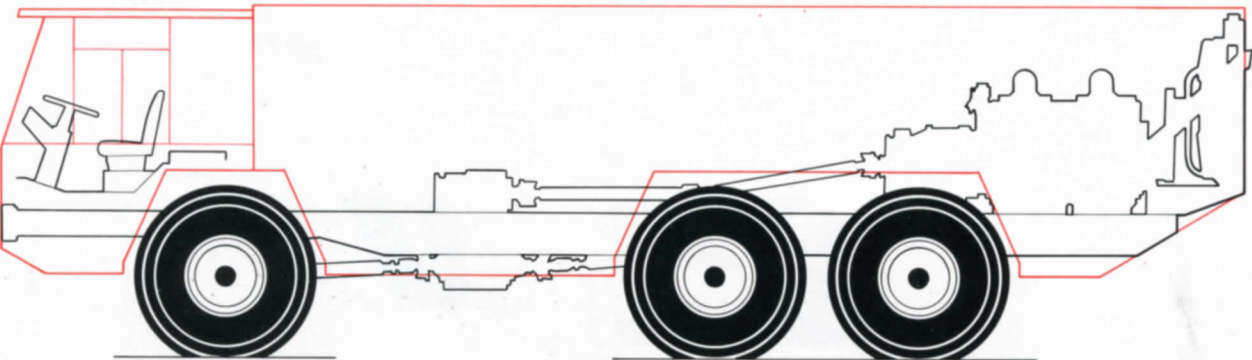
17 ton GVW 4 x 4



22 ton GVW 4 x 4



28 ton GVW 6 x 6



38 ton GVW 6 x 6

## chassis specifications

### Brief Chassis Details: 13.5 ton 4 × 4 model

GVW Tons: 13.5 Engine HP: 235 Acceleration: 0–50 in 45 seconds.  
A full range of options are offered and in particular a Rolls-Royce petrol engine and automatic gearbox.

The frame heights are very low by accepted standards whilst maintaining normal ground clearance ensuring excellent centre of gravity characteristics. Engines are all mounted just behind the front axle to avoid cab intrusion and improve accessibility and hence servicing.

Engine position gives all noise advantages of rear engine mounting without additional cost of special components particular gearboxes and likely subsequent service problems on such specialist hand-made components.

PTO's can all be engaged on the move without speed restrictions cutting out operator error possibilities.

Cab floors are supplied complete to ensure weathersealing and are flexibly mounted to ensure best cross-country characteristics.

**Chassis Specification** The engine position situated to the rear of the front axle as shown on chassis arrangement gives distinct features advantageous to airfield emergency services.

The engine being located to the rear and remote from the cab, ensures that the noise level within the cab is reduced to a minimum.

The Power Take Off for the main fire pump drive is engaged via multiple disc clutch and enables the operator to engage or disengage the clutch under load or on the move with the engine running at 75% at full speed.

**Brief Performance** Maximum road speed: 65 mph (104 kph)  
Maximum gradient: 1 in 2.6–38.4% Acceleration: 0–30 mph (0–48 kph) = 17 secs. 0–40 mph (0–64 kph) = 29 secs. 0–50 mph (0–80.5 kph) = 45 secs.

**Overall Dimensions** Wheelbase: 13' 6" (4114 mm). Maximum width: 8' 0" (2438 mm). Maximum length: 24' 5" (7442 mm). Maximum height: 8' 3" (2514 mm). Maximum height body + gun: 11' 6" (3505 mm). Turning circle: 63' 0" (19202 mm).

**Engine** Rolls-Royce B81SV 4-stroke petrol. Gross power 235 HP at 4,000 RPM. Gross torque 358 lb ft at 2,600 RPM. Optional diesel engines can be offered.

**Transmission** Allison torque converter and main gearbox. Torque converter TC370, Ratio 2.4:1. Gearbox MT 640 Four Speed.  
Ratios: 1st Gear 3.58:1 2nd Gear 2.09:1 3rd Gear 1.35:1 4th Gear 1.00:1 Reverse 5.67:1

### Brief Chassis Details: 17 ton 4 × 4 model

GVW Tons: 17.0 Engine HP: 330. Acceleration: 0–50 in 36 seconds.

The frame heights are very low by accepted standards whilst maintaining normal ground clearance ensuring excellent centre of gravity characteristics. Engines are all mounted just behind the front axle to avoid cab intrusion and improve accessibility and hence servicing.

Engine position gives all noise advantage of rear engine mounting without additional cost of special components particular gearboxes and likely subsequent service problems on such specialist hand-made components.

PTO's can all be engaged on the move without speed restrictions cutting out operator error possibilities.

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The Power Take Off for the main fire pump drive is engaged via multiple disc clutch and enables the operator to engage or disengage the clutch under load or on the move with the engine running at 75% at full speed.

**Brief Performance** Maximum road speed: 65 mph (104 kph). Maximum gradient: 1 in 2.6 – 38.4%. Acceleration: 0–30 mph (0–48 kph) = 14 secs. 0–40 mph (0–64 kph) = 26 secs. 0–50 mph (0–80.5 kph) = 36 secs.

**Overall Dimensions** Wheelbase: 15' 0" (4560 mm). Maximum Width: 8' 0" (2438 mm). Maximum length: 26' 0" (7920 mm). Turning circle: 74' 0" (22550 mm). **Engine** GM 8V71T. Gross power 333HP at 2,100 RPM.

**Transmission** Allison (GM). HT 750 DRD. 5 Forward Speeds and Reverse. Ratios: 1st gear 7.97:1. 2nd gear 3.19:1. 3rd gear 2.07:1. 4th gear 1.4:1. 5th gear 1:1. Reverse 4.47:1.

Allison Converter TC499 Ratios: 2:10:1. Lock-up in 3rd to 5th.  
**Transfer Box** ZF A600/3D with lockable third diff. giving: 35% Front Axle. 65% Rear Axle. Constant 4-wheel drive.

### Brief Chassis Details: 22 ton 4 × 4 model

GVW Tons: 22. Engine HP: 430. Acceleration: 0–50 in 34 seconds.

The standard engine offered is the GM 8V92T diesel model – alternative engines to customer's choice can be fitted.

The frame heights are very low by accepted standards whilst maintaining normal ground clearance ensuring excellent centre of gravity characteristics. Engine position gives all noise advantages of rear engine mounting without additional cost of special components particular gearboxes and likely subsequent service problems on such specialist hand-made components.

Cab floors are supplied complete to ensure weathersealing and are flexibly mounted to ensure best cross-country characteristics.

**Chassis Specification** The engine position situated to the rear of the front axle as shown on chassis arrangement gives distinct features advantageous to airfield emergency services.

The engine being located to the rear and remote from the cab, ensures that the noise level within the cab is reduced to a minimum.

The Power Take Off for the main fire pump drive is engaged via multiple disc clutch and enables the operator to engage or disengage the clutch under load or on the move with the engine running at 75% at full speed.

**Transfer Box** Manufacturer ZF 3 shaft and 3rd diff. Model GA350/D. Ratio 1:1 and 1.6:1.

**Front Axle** Rockwell Drive/Steer/D/Reduction. Model FDS 700 (L259). Ratio 7.84:1.

**Rear Axle** Rockwell/D/Reduction. Ratio 7.808:1. Model R500.

**Tyres** Michelin XS 14-00 × 20.

**Wheels** 10-00V × 20.

**Suspension** 2-leaf springs front. 2-leaf springs rear. Semi-elliptic, fitted with shock absorbers on front.

**Steering** Westinghouse Bendix. Ratio 23.6:1. Recirculating ball with integral hydraulic piston, delivering 37,000 lbs/ins = 3,083.3 lbs/ft = 4193.2 NM.

**Cooling System** Shelvoke & Drewry Ltd. Radiator cooled by engine fan and air thrust. Internal heat exchange unit in lower tank for cooling transmission oil.

**Fuel System** Rear mounted fuel tank. Capacity 20 gallons/91 litres. Feed by mechanical pump on engine.

**Electrical** 24 volt double pole system. 150 amp/HP batteries. Charge by alternator.

**Controls** Engine throttle: Foot and Hand. Brakes: Foot and Hand. Gear selection: Automatic. PTO: Hand valve. Electric: Start Key with ignition and accessories, warning lights–ignition, indicators, main beam, temperature, torque converter, oil, air buzzers.

**Brakes** Full air system with fail safe secondary and parking split service brake: 1 Circuit to Front, 1 Circuit to Rear. Air storage, 3 Reservoirs, 2 Service, 1 Secondary and Parking Release System and Performance meets MOT and EEC Regulations. Air supplied by engine driven compressor 10 cu ft per minute.

**Propeller Shafts** Hardy Spicer, 1600 series with joints on needle bearings.

**Frame** Shelvoke & Drewry Ltd. Side Members 10" × 3½" × ⅝" thick high tensile steel. Fitted with robust cross members. Bolted construction. Front drop extension for cab welded and flitched.

**Optional Extras** Electric heater for engine coolant. With pull off connectors when vehicle moves away. Automatic Radiator shutters. Built-in Tyre inflation unit with Gauge. Radio and Interference Suppression.

**Weights (Chassis, Cab Foundation)** Front Axle: 8,180 lbs } 30,254 GVW  
Rear Axle: 4,017 lbs }

Consult chassis manufacturer for weight distribution in laden condition.

**Front Axle** Rockwell Drive/Steer/D/Reduction. Model FDS 700 (L259).

**Rear Axle** Rockwell/D/Reduction. Model U180.

**Tyres** Michelin XS 16.00 × 25.

**Suspension** 2-leaf springs front. 2-leaf springs rear. Semi-elliptic, fitted with shock absorbers on front.

**Steering** Westinghouse Bendix. Ratio 23.6:1. Recirculating ball with integral hydraulic piston, delivering 37,000 lbs/ins = 3,083.3 lbs/ft = 4,193.2 NM.

**Cooling System** Shelvoke & Drewry Ltd. Radiator cooled by engine fan and air thrust. Internal heat exchange unit in lower tank for cooling transmission oil.

**Fuel System** Rear mounted fuel tank. Capacity 20 gallons/91 litres. Feed by mechanical pump on engine.

**Electrical** 24 volt double pole system. 205 amp/HP batteries. Charge by alternator.

**Controls** Engine throttle: Foot and Hand. Brakes: Foot and Hand. Gear selection: Automatic. PTO: Hand valve. Electric: Start Key with ignition and accessories, warning lights–ignition, indicators, main beam, temperature, torque converter, oil, air buzzers.

**Brakes** Full air system with fail safe secondary and parking split service brake: 1 Circuit to Front, 1 Circuit to Rear. Air storage, 3 Reservoirs, 2 Service, 1 Secondary and Parking Release System and Performance meets MOT and EEC Regulations. Air supplied by engine driven compressor 10 cu ft per minute.

**Propeller Shafts** Hardy Spicer, 1600 series with joints on needle bearings.

**Frame** Shelvoke & Drewry Ltd. Side Members 10" × 3½" × ⅝" thick high tensile steel. Fitted with robust cross members. Bolted construction. Front drop extension for cab welded and flitched.

**Optional Extras** Electric heater for engine coolant. With pull off connectors when vehicle moves away. Automatic Radiator shutters. Built-in Tyre inflation unit with Gauge. Radio and Interference Suppression.

**Weights (Chassis, Cab Foundation)** Front Axle: 8,400 lbs } 38,000 GVW  
Rear Axle: 4,400 lbs }

Consult chassis manufacturer for weight distribution in laden condition.

**Brief Performance** Maximum road speed: 66.5 mph (106.5 kph). Maximum gradient: 1 in 1 – 50%. Acceleration: 0–30 mph (0–48 kph) = 12 secs. 0–40 mph (0–64 kph) = 21 secs. 0–50 mph (0–80.5 kph) = 34 secs.

**Overall Dimensions** Wheelbase: 16' 0" (4.88 m). Maximum width: Determined by body. Maximum length: 27' 0" (8.2 m). Turning circle: 90' 0"

**Engine** Detroit Diesel (GM). 8V 92T Two cycle. 430 BPH at 2,100 RPM. 1,186 lbs/ft at 1,400 RPM at 85°F. 8-cylinder vee, turbo-charged 736 cu ins = 12.07 litres. Bore 4.84 ins × 5 ins. Stroke 123 mm × 127 mm. C/Ratio 17:1.

**Transmission** Allison (GM). HT 750 DRD. 5 Forward Speeds and Reverse. Ratios: 1st gear 7.97:1. 2nd gear 3.19:1. 3rd gear 2.07:1. 4th gear 1.4:1. 5th gear 1:1. Reverse 4.47:1.

Allison Converter TC499 Ratio: 2:10:1. Lock-up in 3rd to 5th.

**Transfer Box** ZF A600/3D with lockable third diff. giving: 35% Front Axle. 65% Rear Axle. Constant 4-wheel drive.

**Front Drive Axle** Kirkstall SD65–11–1. Capacity: 9T = 9,070 Kg. Ratio: 5.56:1.

**Rear Axle** Kirkstall D85–14–2. Capacity: 14 tons = 14,120 Kg. S/Reduction Hypoid. Ratio: 5.56:1.

**Tyres** Michelin Radial 18.00 × 25 XS (all round).



**three 4 x 4 and two 6 x 6 basic chassis**

forming an integrated range from 13.5 to 38 tons GVW allowing for modular fleet planning and simplified servicing procedures.

**dozens of engines/transmission options**

designed to meet all current and future performance standards and worldwide operating conditions.

**hundreds of body/equipment configurations**

advanced chassis layouts give maximum scope for body/equipment builders to make adaptations to operators requirements.

**one manufacturer-Shelvoke and Drewry Limited**

builders of Municipal and Special Purpose Vehicles since 1922.

# chassis specifications

## Brief Chassis Details: 22 ton 4x4 model

**Suspension** Leaf springs – front. Leaf springs – rear. Semi-elliptic, fitted with shock absorbers on front.

**Steering** ZF – Ratio 23.6:1. Recirculating ball with integral hydraulic piston, delivering 37,000 lbs/ins=3,083.3 lbs/ft=4,193.2 NM.

**Cooling System** Shelvoke & Drewry Ltd. Radiator cooled by engine fan and air thrust. Internal heat exchange unit in lower tank for cooling transmission oil.

**Fuel System** Rear mounted fuel tank. Capacity 30 gallons/136 litres. Feed by mechanical pump on engine.

**Electrical** 24 volt double pole system. 205 amp/HP batteries. Charge by alternator.

**Controls** Engine throttle: Foot and Hand. Brakes: Foot and Hand. Gear selection: Automatic. PTO: Hand valve. Electric: Start Key with ignition and accessories, warning lights—ignition, indicators, main beam, temperature,

torque converter, oil, air buzzers.

**Brakes** Full air system with fail safe secondary and parking split service brake: 1 Circuit to Front, 1 Circuit to Rear. Air storage, 3 Reservoirs, 2 Service, 1 Secondary and Parking Release System and Performance meets MOT and EEC Regulations. Air supplied by engine driven compressor 15 cu ft per minute.

**Propeller Shafts** Hardy Spicer, 1700 series with joints on needle bearings. **Frame** Shelvoke & Drewry Ltd. Side Members 12" x 3 1/2" x 3/8" thick high tensile steel. Fitted with robust cross members. Bolted construction. Front drop extension for cab bolted to mainframe.

**Optional Extras** Electric heater for engine coolant. With pull off connectors when vehicle moves away. Automatic Radiator shutters. Built-in Tyre inflation unit with gauge. Radio and Interference suppression.

**Weights (Chassis, Cab Foundation)** Front Axle: 9,150 lbs } 49,280 GVW  
Rear Axle: 5,900 lbs }

Consult chassis manufacturer for weight distribution in laden condition.

## Brief Chassis Details: 28 ton 6x6 model (as for 22 ton GVW except as shown)

GVW Tons: 28. Engine HP: 535. Acceleration: 0–50 in 38 seconds.

**Brief Performance** Acceleration: 0–30 mph (0–48 kph)=14 secs. 0–40 mph (0–64 kph)=23 secs. 0–50 mph (0–80.5 kph)=38 secs.

**Overall Dimensions** Wheelbase: 15' 0" (4.67 m). Maximum width: Determined by body. Maximum length: 30' 0" (9.12 m). Turning circle: 90' 0" (27.4 m). **Engine** Detroit Diesel (GM). 12V 71T Two cycle 535 BHP at 2,100 RPM. 12-cylinder vee, turbo-charged C/Ratio 17:1.

**Transmission** Allison (GM). CLT 5960 Power Shift. 5 Forward Speeds and Reverse. Allison Converter. Lock-up in 3rd to 5th.

**Transfer Box** Incorporated in main transmission.

**Rear Axle (Tandem Bogie)** Kirkstall D80-13 series. Capacity: 26 tons=26,400 Kg.

**Tyres** Michelin Radial 16.00 x 25 XS (all round).

**Weights (Chassis, Cab Foundation)** Front Axle: 9,360 lbs } 62,600 GVW  
Rear Axle: 10,440 lbs }

Consult chassis manufacturer for weight distribution in laden condition.

## Brief Chassis Details: 38.5 ton 6x6 model

GVW Tons: 38.5. Engine HP: 720. Acceleration: 0–50 in 42 seconds.

The only engine offered to date is GM model 16V92.

The frame heights are very low by accepted standards whilst maintaining normal ground clearance ensuring excellent centre of gravity characteristics.

The engine in this chassis is positioned at the extreme rear and thus eliminates cab noise.

The transmission uses an engine mounted torque converter with lock-up clutch and a remote (mid) chassis mounted power shift transmission with 6 forward speeds and one reverse speed and being a deep drop transmission, eliminates the need for an additional auxiliary gearbox.

All drive line components are currently tried and proven.

**Chassis Specification** The engine in this chassis is positioned at the extreme rear and thus eliminates cab noise.

The transmission uses an engine mounted torque converter with lock-up clutch and a remote (mid) chassis mounted power shift transmission with 6 forward speeds and one reverse speed and being a deep drop transmission, eliminates the need for an additional auxiliary gearbox.

All drive line components are currently tried and proven.

The Power Take Off for the main fire pump drive can deliver up to 400 HP and this drive can be engaged via multiple disc clutch to engage or disengage with the engine running at 75% of full speed.

**Brief Performance** Maximum Road Speed: 62.5 mph (100 kph). Maximum gradient: 47% at stall. Acceleration: 0–50 mph (0–80 kph)=42 secs.

**Overall Dimensions** Wheelbase: 17' 6" (5334 mm). Maximum width: 8' 6" (2591 mm). Maximum length: 36' 9" (11201 mm). Maximum height: 10' 6" (3200mm). Turning circle: 90' 0" (27,432 mm).

**Engine** Detroit Diesel (GM). 16V92. 720 BHP (85°F & 500 ft) at 2,100 RPM. 1,966 lb/ft at 1,400 RPM. 16-cylinder vee diesel. Bore 123 mm x stroke 127 mm. Compression ratio 17:1.

**Transmission** Twin Disc 2600 series deep drop. Model TD-61-2603. Ratios: 1st gear 3.63:1. 2nd gear 2.5:1. 3rd gear 1.79:1. 4th gear 1.21:1. 5th gear 0.84:1. 6th gear 0.6:1.

**Power Take Off** Engine dependent, hydraulic clutch engagement. Rating: 310 HP at 2,600 RPM.

**Front Drive Axles** Kirkstall Forge SD65-11-1 Planetary. Ratio: 10:4:1.

**Rear Bogie Axles** Kirkstall Forge D80-13-2HF/H Planetary. Ratio: 10:31:1

**Tyres** Michelin XS 18.00 x 25.

**Suspension** Leaf springs – front. Leaf springs – rear. Semi-elliptic, fitted with shock absorbers on front.

**Steering** ZF – Ratio: 25.5:1. Recirculating ball with integral hydraulic piston, delivered 37,000 lbs/ins=3,083.3 lbs/ft=4,193.2 NM.

**Cooling System** Shelvoke & Drewry Ltd. Radiator cooled by engine fan and air thrust. Internal heat exchange unit in lower tank for cooling transmission oil.

**Fuel System** Rear mounted fuel tank. Capacity 50 gallons/228 litres. Feed by mechanical pump on engine.

**Electrical** 24 volt double pole system. 205 amp/HP batteries. Charge by alternator.

**Controls** Engine throttle: Foot and Hand. Brakes: Foot and Hand. Gear selection: Pre-selective. PTO: Hand valve. Electric: Start key with ignition and accessories, warning lights, ignition, indicators, main beam, temperature, torque converter, oil, air buzzers.

**Brakes** Full air system with fail safe secondary and parking split service brake: 1 Circuit to Front, 1 Circuit to Rear. Air storage, 3 Reservoirs, 2 Service, 1 Secondary and Parking Release System and Performance meets MOT and EEC Regulations. Air supplied by engine driven compressor 15 cu ft per minute.

**Propeller Shafts** Mechanics type joints on needle bearings.

**Frame** Shelvoke & Drewry Ltd. Side Members 15" x 4" x 1/2" thick high tensile steel. Fitted with robust cross members. Bolted construction.

**Optional Extras** Electric heater for engine coolant. With pull off connectors when vehicle moves away. Automatic Radiator shutters. Built-in Tyre inflation unit with gauge. Radio and Interference Suppression.

**Weights (Chassis, Cab Foundation)** Front Axle: 4,471 lbs } 86,000 GVW  
Rear Axle: 33,230 lbs }

Consult chassis manufacturer for weight distribution in laden condition.



Shelvoke and Drewry Limited  
Special Purpose Vehicle Division, Icknield Way, Letchworth, Herts SG6 1EN, England  
Telephone: Letchworth 6555 Telex: 825556

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