



## Supacat 6x6 1900 T - Technical Specification

### VEHICLE CONFIGURATION

The Supacat has permanent six wheel drive (6x6) with the front four wheels (two axles) steered conventionally (Ackerman) by using a rotating handlebar arrangement. These handlebars also operate the steering brakes (inboard discs) which act independently on each side of the vehicle giving brake (skid) steering. The Supacat is diesel powered and driven through a torque convertor, three forward and one reverse ratio automatic gearbox and a single differential. Twin output shafts transmit the drive to the two drop gear reduction boxes, which carry the inboard disc brakes. The centre axle is shaft driven direct from the drop gearbox. The centre axles carry the outboard, foot pedal operated disc brakes which are effective on all wheels. The final drive to the front and rear wheels is by heavy duty one inch (1") pitch duplex chains. The Supacat is built around a steel rectangular hollow section (RHS) chassis frame which forms the entire shape of the vehicle and to which all components and attachments are fitted. The 'body' of the Supacat is made from graded aluminium and forms a hull which enables the vehicle to float and protects the majority of mechanical components. The 'belly plate' is of 5mm hardened aluminium.

### ENGINE - 1900 Turbocharged

Make	- Volkswagen
Type	- ADE 1.9
Fuel	- diesel
Cylinders	- four (4)
Displacement	- 1896 cc
Bore & Stroke	- 79.5 x 95.5 mm
Compression ratio	- 23:1
Injection system	- indirect
Injection pump type	- DIP - JG3 Bosch ( auto air bleed )
Turbo charge pressure	- 0.60 - 0.83 bar
Power	- 58 Kw (78 bhp) @ 4000 rpm
Max torque	- 164 Nm (121 lbs/ft) @ 1850 rpm
Max engine speed	- 5200 rpm
Valve arrangement	- overhead hydraulic tappets.
Cooling	- pressurised liquid, mechanical fan.
	- water/oil coolers, engine and gearbox

## FUEL

Type	- Diesel ( Summer or Winter as required )
Option	- Diesel + Petrol up to 30% maximum, > - 25C
	- Avtur FS 11 (F - 34) may be used but it will reduce engine life and invalidate the warranty.

## AIR CLEANER

Type	- Dry, paper element
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## GEARBOX

Make	- Volkswagen / Audi
Type	- Automatic 089
Ratios	- 2.71 / 1.50 / 1.00 / R 2.43:1

## TORQUE CONVERTER - (Integral with gearbox)

Ratio	- Maximum conversion ratio 2.5
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## DIFFERENTIAL

Make	- Volkswagen / Audi
Ratio	- 3.25 : 1

## DROP GEARBOXES - (Two, one each side)

Make	- Supacat
Ratio	- 3.37 : 1

## FRONT AXLE

Make	- Supacat
Type	- Chain driven from centre axle, one on each side of vehicle with steerable hub.

## CENTRE AXLE

Make	- Supacat
Type	- Common to drop gearboxes, shaft driven steerable hub with disc brake.

## STEERING HUBS

Make	- Land Rover - Supacat uprated.
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Type - 90 /110

## REAR AXLE

Make - Supacat  
 Type - Chain driven solid shaft running in two chassis mounted bearings, one each side of vehicle.

## DRIVE CHAINS

Type - 1" pitch duplex, tensioned by adjustable idler gear, four identical chains per vehicle.

## STEERING - (Ackerman)

Make - Supacat  
 Type - Handle bar operated, power assisted

## STEERING - (Brake)

Make - Supacat / AP.  
 Type - Handlebar operated hydraulic, onto inboard discs, one per side controlling all wheels on that side through transmission.

## BRAKES

Make - Supacat / AP  
 Type - Foot pedal operated hydraulic onto outboard Land Rover 110 discs, one per side controlling all wheels through transmission.

## PARKING BRAKE

Type - Transmission lock integral with gearbox.

## SUSPENSION

Type - Low pressure tyres.

## ELECTRICS

Power - 12 volt  
 Alternator - 65 amp  
 Battery - 66 amp hour  
 Starter motor - 1.8 Kw  
 Radio suppression - optional

## ELECTRICAL COMPONENTS

- horn, lights, indicators, rear fog light, cold start, hazard warning, (bilge pumps, convoy lights, winch, winch/intervehicle start power plug, auxiliary lights, auxiliary poweroutput) (Option - FLPT power and control output)

## LIGHTING

- Head, side, tail, brake, indicators, to UK road legal requirements.  
 - Trailer socket optional, 7 pin, NATO 12 pin, or as required.

## CONSOLE INSTRUMENTS

- Tachometer, coolant temperature, fuel level, engine hours.

## WHEELS

- Type - Steel centre and reinforced rim
- Size - 13 x 15

## TYRES

- Size - 31 x 15.5 x 15 (Section width 389mm, O/D 788mm)
- Ply rating - 4 ply
- Tubes - Tubed or tubeless
- Make - Avon 'Tredlite' or Goodyear 'Wrangler'
- Construction - Cross ply
- Sealant - Optional in tubeless

## CONSTRUCTION

- Chassis frame - Welded steel rectangular hollow section of various dimensions. This incorporates lifting / towing points which may be used for helicopter underslinging. Parts of the frame are accessible and may be used for the attachment to and / or support of additional equipment. Load securing points are also incorporated.
- Body panels - Aluminium plate of various grades of hardness and thickness according to position and duty. Some are riveted onto the frame, others are removable. Some GRP is also used.
- Belly plate - One piece, 5mm 'half hard' aluminium plate extending from the front panel, under the entire vehicle to just below the tailgate.
- N.B. - This method of construction forms a hull which allows an open top Supacat to float.

## TOWING

- Towing attachments may be fitted below the tail gate (height 410mm / 16") or to the optional heavy duty tailgate (640mm / 25"). The standard attachment is a 50mm ball universal hitch on the lower position. NATO or equivalent hitches may also be fitted as required. Two (2) lifting/towing 'eyes' are fitted both at the front and rear of the Supacat as standard.

## TOWING CAPACITY

- The Supacat is capable of producing approximately 2 tonnes of drawbar pull in ideal conditions.

## FLUID CAPACITIES

- Fuel 50 litres (11 galls)
- Engine oil 4.5 litres
- Coolant 10 litres
- Front axle 0.5 litre (each)
- Drop gearbox 1.25 litres (each)

- Chassis lube 2 litres
- Gearbox 2.5 litres
- Differential 0.75 litres
- Power steering 2 litres

## DIMENSIONS

- Only the principal dimensions are listed - please see 'Supacat Dimension Sheet' for more detail. All dimensions in millimetres (mm).
- Overall length, 3335 (minimum)
- Overall length, 3440 (with NATO hitch)
- Overall width, 2000 (wheel to wheel)
- Overall width, 1870 (vehicle structure)
- Maximum height, 1895 (open vehicle)
- Maximum height, 2010 (cabbed vehicle)
- Minimum height, 1210 (non cabbed folded)
- Wheel base, 1846
- Wheel track 1601 (centre to centre)
- Platform height, 940
- Load area, 1445 x 1870
- Ground clearance 215 (on wheels)
- Ground clearance 316 (on tracks)
- Angle of approach 57 degrees
- Angle of departure 58 degrees
- Ramp length, 2690 (optional extra)
- Height of two Supacats stacked & folded 2150
- Fording depth laden approximately 860 mm
- Unladen vehicle floats at approximately 700 mm depth of water.

## WEIGHTS

- Basic Supacat - 1690 Kgs (calculated)
- ATMP - 1800 Kgs (090)
- Soft Top Range Special - 1810 Kgs (071)
- Hard Top - 2140 Kgs (083)

## OPTIONAL EQUIPMENT

- Winch kit - 50 kgs
- Ramps - 26 kgs each
- Spare wheel - 41 kgs
- CES kit - 25 kgs approx
- FLPT (trailer) - 457 kgs
- tonne trailer - 280 kgs

## AMPHIBIOUS CAPABILITY

- This ability is limited but the Supacat will float without preparation Bilge pumps are available as optional equipment. An outboard motor can be fitted to the tailgate. Only open top Supacats can be floated. Load limited to 300 kgs plus driver.

## PERFORMANCE

- N.B. The following figures are for guidance only, performance will vary according to vehicle specification and prevailing conditions.
- Maximum speed 64 kph (40 mph)
- Speed range infinitely variable, 0 - max,

- full torque at zero speed.
- Gradability 100% (45 degrees)
- Fuel consumption
- Drawbar pull 2.0 tonnes (estimated)
- Payload 1.0 tonne (normal)  
1.4 tonnes (maximum)
- Fording depth 860 mm (34 inches, laden)
- Floating depth 710 mm (28 inches, unladen)
- Load when floating 300 kgs. (open vehicle only)
- Stability in excess of 50 degrees, static  
unladen in all directions.
- Turning circle diameter kerb to kerb  
Ackerman - 14.35 m  
Braked - 4.8 m

## TRACKS - (optional extra)

- Type - Full - Supacat single pin jointed rubber belt with  
rubber moulded cleats fixed by bolts.  
Approximate effective ground contact area  
500 mm x 2306 mm per track.
- Half Track - Under development, rubber half track with  
steerable front axle.

## WINCH - (optional extra)

- Type - Warn 8000 / Superwinch Husky
- Pull (first layer) - 3636 kgs / 3850 kgs
- Cable diameter - 8 mm / 8 mm
- Cable length - 24 metres / 45 metres
- Power supply - 12 volt direct from vehicle's battery
- Location - centre (standard), front or rear of vehicle  
by fitting to lifting / towing eyes.

## MECHANICAL HANDLING

- The Supacat may be lifted by a fork lift with  
the forks between the wheels and acting on the  
bellyplate. The vehicle may be hoisted by the  
load restraint frame which is at the  
longitudinal centre of gravity. The front and  
rear lifting / towing eyes may also be used.

## AIR MOBILITY

- The lifting / towing eyes may be used for  
helicopter underslinging and are approved by  
JATE. There are optional 'parachute brackets'  
designed to take parachuting loads direct into  
the vehicle frame. The vehicle is normally  
parachuted on an MSP (Medium Stressed Platform)  
but other schemes are under development.  
Supacats may be underslung individually or in  
pairs side by side or as a group of four side by  
side with no additional preparation. Supacats  
may be flown 'stacked' as an internal load and  
are designed to fold down and with optional  
ramps, to selfstack. Supacats may be flown  
underslung laden as a netted load only.  
Supacats can be transported as internal loads by  
helicopters and fixed wing aircraft as palletized  
or drive in loads.