SUPACAT MK III

2001 Supacat 6x6 ATMP Mk III 1900 Turbo Diesel with 4 speed auto gearbox. This vehicle was refurbished in 2017, to include, reconditioned gearbox, dashboard ,drive axles, replacement Gel batteries, new wing mirrors and a full service.
Set of floatation tires fitted with 90% tread remaining.

PRICE ON APPLICATION (AVAILABLE NOW)

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Supacat 6x6 Mk III configuration

The Supacat 6x6 Mk III 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 the centre wheel on each side of the vehicle, giving brake (skid) steering. The vehicle is diesel powered and driven through a torque converter, four 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, although working on one wheel per side, are effective on all wheels on that side. The final drive to the front and rear wheels is by heavy duty one inch (1") pitch duplex chains. The vehicle frame is a welded structure of steel rectangular hollow sections with aluminium cladding, forming an enclosed hull. This allows the vehicle a limited ability to float and protects majority of the mechanical components. The bottom of the hull (belly plate) is constructed from 4 mm hardened aluminium. To protect the leading edge of the belly plate, an impact panel, constructed from 4 mm thick Hardox 400, is used to sandwich the main belly plate and the frame.

Cooling
The engine cooling system is via air drawn through transmission oil coolers, a grille on the front of the vehicle and grilles in the tunnel. The engine-driven fan moves the air through the radiator and out via vents on either side of the engine cover. The Supacat 6x6 Mk3 has a four-row radiator with a mechanical cooling fan. The front air intake grille can be covered with a blind to limit the ingress of water when the vehicle is being floated.

Reduction gearbox
Each output shaft from the differential drives the input shaft of a reduction gearbox. There is one reduction gearbox each side of the vehicle whose functions are to provide a reduction ratio of 3.58:1 and to transfer the drive from the level of the differential shaft down to axle level. The output shaft of each reduction gearbox drives through the universal joint of the centre axle hub and the chain sprockets through which the front and rear axles are driven.
The reduction gearbox employs three shafts. Each shaft is supported by one ball and one roller bearing.
The top shaft carries a 19 tooth helical gear with internal splines engaging splines on the shaft and retained by a fine threaded ring. The central shaft carries a gear cluster bolted to a flange formed on the shaft. This gear
cluster comprises a 37 tooth helical gear in mesh with the top shaft gear and a 25 tooth spur gear which meshes with a 46-tooth gear on the bottom shaft. This gear is fixed to its shaft by 8 screws through a flange formed on the shaft, which is extended towards the centre of the vehicle and splined to carry two chain sprockets. It is further supported by a flanged bearing fixed to the chassis. The outboard end of the shaft is externally splined to engage the drive shaft, which in its turn engages the driving member of the constant velocity joint in the outer hub.
Though the gear cases are handed and will only fit on one side of the vehicle, none of the internal components are handed and all will fit either hand reduction gearbox assembly.

Drive chains/lubrication
Drive on front and rear wheels is achieved via drive chains from the centre axle sprockets, under the engine and gearbox assembly, to the front axle sprockets, and rearward to the rear axle sprockets. The chains are one inch pitch duplex, lubrication of which is via meter valves and oiler brushes on the automatic lubrication system. The lubricant reservoir feeds a pump, activated via a lever and cam on the rear axle. The system operating pressure is between 3.1 bar (45 lbf/in2) and 4.6 bar (67 lbf/in2).

Brakes
There are three separate braking systems - inboard, outboard and the 'Park' brake (transmission lock).
The inboard brakes comprise discs, which are mounted on the drop box input shafts with calipers mounted on the boxes themselves. These brakes are actuated by the handlebars and are independent of each other. One or other may be operated for skid steer control or operated together for retardation. The outboard brakes are the standard Land Rover brakes on the centre axle outer hubs. They are operated together by one foot pedal. The front outer hubs do not carry brakes, but all wheels are braked by the centre axle brakes through the transmission. The 'Park' brake locks the transmission, and is engaged by selecting the 'P' position on the gear selector control. It is only to be engaged when the vehicle is completely stopped.

Steering column
The steering column is manufactured in stainless steel and is supported at the top end by a nylon bearing that carries the clamp bolt which allows the steering column to be lowered. The lower end of the steering column is supported by a self adjusting bearing. The handlebar carrier bracket at the top of the column and the brake mounting cylinder carrier at the bottom are both clamped to the column.

Construction
The chassis frame consists of a welded steel rectangular hollow section of various dimensions. This incorporates lifting/towing points which may be used for helicopter under slinging. 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.
The vehicle carries on board two loading ramps, which are stowed under the vehicle wings and held in place by ramp access doors. The ramps can be accessed from either the front or the rear of the vehicle.
The body cladding comprises aluminium plate of various grades of hardness and thickness according to position and duty. Some are riveted onto the frame, others are removable.
The belly plate (the principle cladding member) is manufactured as one piece of 4 mm thick 'half-hard' aluminium plate extending from the front panel, under the entire vehicle, to just below the tailgate. A hardened steel impact panel, constructed from Hardox 400, is fitted to the front of the vehicle.

NOTE
This method of construction forms a hull which allows an open top Supacat 6x6 Mk3 ( ) to float.

Electrical system
The Supacat 6x6 Mk3 has a 12 V system voltage derived from two 12 V sealed gell ‘maintenance free’ batteries connected in parallel, each with a capacity of 48 Ah @ 20 hrs, and charged from an alternator capable of supplying 65 Amps (maximum). The batteries have excellent low temperature vehicle starting capabilities, and are able to operate at -40 degrees Centigrade. Starting is by glow plug and starter motor.

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