SABOTEUR TROOPER

A LIGHTWEIGHT HELICOPTER-PORTABLE
ALL TERRAIN AMPHIBIOUS VEHICLE
TROOPER MK. VI
TROOPER is the latest version of the proven Saboteur which was designed to carry 4 British Aerospace Swingfire anti-tank missiles in 1977 and has been developed since that time to the current Mark VI version which has hydraulic transmission and offers a choice of 73 hp petrol engine or a 77 hp diesel. It is an aluminium hulled machine, light enough to be carried underwater from a light helicopter and is amphibious, driven in the water by a water propeller fitted into the rear of the hull. The vehicle has now been developed to carry TOW or MILAN, fired either on or off the vehicle. All machinery is totally enclosed and it is designed for maintenance free operation in off-road conditions for long periods and great distances in deserts, marshlands and hardening areas.

TROOPER GENERAL DESCRIPTION
The Trooper vehicle is an eight-wheeled amphibious machine giving exceptional cross-country performance at high-speeds, coupled with lightweight and technical simplicity. Transportable as an under-slung load in a net or by strop on lightweight helicopters; it can also be dropped by parachute with a suitable pallet on airborne operations. It is well adapted to the roughest terrain, flat lands and heavily wooded areas, marshlands, etc.

Powerful, fast and reliable, the Trooper design takes into account the evolution of techniques and armaments required for modern warfare. It incorporates mass produced components, pre-tested, cheap and easily replaceable, leading to low production and operational costs. Trooper is designed to carry 9 fully equipped men or an anti-tank missile system such as a 4-tube TOW launcher with 4 reloads or a MILAN launcher plus 9 missiles and a crew of 3.

TROOPER CHARACTERISTICS
Personnel including driver – 9
Weight empty – 1980 lbs (900 kgs)
Payload – 2000 lbs (907 kgs)
Cross weight – 3980 lbs (1809 kgs)
Ground pressure 3 lbs/5 lbs per square inch (0.206 bars/0.344 bars)
Maximum road speed 35 mph (56 kph)
Maximum cross country speed 35 mph (56 kph)
Climbs slope of up to 45°
Stable on side slopes of 45°
Operates in temperature range – 15° to +35° C in standard configuration.
Requires no preparation for amphibious operation
Power/weight ratio 61 hp/ton (loaded) – (45.5 kw/tonne loaded)
Standard petrol – Octane 96
Standard diesel fuel
Range 150 miles (240 km) on internal tanks containing 12 gallons (55 litres)
Overload tanks available as optional extra containing a further 24 gallons (110 litres)
Incorporates lift points for undercarriages from Westland Lynx or Bell UH-ID.
Incorporates hard points for mounting 4-tube TOW launcher or MILAN pintle mount.
Electrical system 12 or 24 volt
Water speed 4 mph (6.4 kph)
Dimensions: - Length 13ft 6ins/3.92 metres
Width 6ft 3ins/1.90 metres
Height 4ft 3ins/1.30 metres
Ground clearance: 1ft 2ins/0.36 metres
Cargo space – 5ft 7ins/1.71m × 3ft 10ins/1.17m
The vehicle is also available completely remote controlled – for use as an AGILE TARGET or for RECONNAISSANCE.

TROOPER TECHNICAL DESCRIPTION
1. CHASSIS
This consists of two fabricated box sections in N8 aluminium 6mm gauge plate, welded to two cross members of identical construction. The whole forms a frame of immense strength. The side members carry the stub axles and enclose the drive system in an oil bath. To the rear of the side members are welded the drop gear boxes, also forming an oil bath. To the cross members are welded the engine support plates, seat, tank control, and other fittings, plus the lifting eyes.

2. BODY
This is constructed of Aluminium to NS8 and is of various gauges ranging from 12 to 20 depending on the position in the body, and the stiffness and strength required in various areas.

3. BEARINGS
Heavy duty ball bearings are used for the axles and are common throughout. They are carried in bearing housings bolted to the chassis for ease of replacement and general maintenance.

4. DRIVE SYSTEM (TRANSMISSION)
Two engine driven hydraulic swash plate pumps drive two bent axis motors, one to each side of the vehicle, which in turn drive the master axle via drop gears. The master axle drives the 3 slave axles via Triplex roller chain stress to 15000 lbs (6804 kg).

5. STEERING
This is controlled by a patent "Bell" system of twist grips controlling the speed and torque output of the hydraulic pumps. This varies the speed differentially to the drive on each side of the vehicle. With the length/breadth ratio of 1:4 a trained driver can carry out turns within the flexible limit of the tyre side wall and avoid scuffing the tyre. Emergency neutral turns are possible with the system, but increased tyre wear will result.

6. ENGINE
Various engines can be fitted at the time of manufacture. Currently the VW 127 air cooled petrol engine of 73 hp (54.4 kw) is fitted as standard, or the VW 6 cylinder diesel engine of 77 hp (57.4 kw) is fitted to special order.
Design studies have been carried out to incorporate Ford and other engines in the 65-78 hp range, (i.e. 48.6 kw to 58.1 kw range).

7. LUBRICATION
Only two lubricants are used:- a) Hydraulic oil for hydraulic transmission
b) Standard SAE 30 engine oil for engine, drive gears, roller chain and water propeller shaft.

8. TYRES
Goodyear low pressure tyre 21X1100 – 8NHS

9. WATER OPERATIONS
Propulsion:- Hydraulic gear pumps driving hydraulic motor with 1:8.1 reduction to propeller shaft driving a 13" (33cm) water propeller. Speed is controlled by engine speed. Only engage and disengage control is fitted with no reverse. With propeller disengaged the vehicle can be reversed by rotating the road wheels in reverse. When travelling forward, road wheels should be stopped.
Steering:- By water rudder controlled by remote tiller to side of driver.
All enquiries to:
SABOTEUR VEHICLE COMPANY LIMITED,
QUARLEY, NR. ANDOVER, HANTS.

GRATELEY (026 488) 653
TELEX 86745 BARQUE G

As we are always seeking to improve our product the information in this document gives only general indications of product capacity, performance and suitability none of which shall form part of any contract.
TROOPER GENERAL ARRANGEMENT

NEAR SIDE VIEW

DIMENSIONS
LENGTH - 3.92m
WIDTH - 1.90m
HEIGHT - 1.30m

FRONT VIEW

REAR VIEW