

JEEP 1/4-TON 4x4 COMMAND RECONNAISSANCE TRUCK

TECHNICAL INFORMATION SHEET T-1

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Popularly known as the Jeep, this 1/4-ton, 4 x 4 Command Reconnaissance Truck is probably the most famous military vehicle in the world.

In mid-1940, the US Army issued a specification for a four-wheel drive light field car with an all-up weight of 1300 lbs. 135 firms were invited to submit prototypes and tenders for 70 pre-production vehicles. Of the three companies that responded, only the Bantam Car Co. of Butler, Pennsylvania was able to produce a prototype car within the set time limit of 49 days.

On the 11th November 1940, Willys-Overland of Toledo, Ohio delivered their prototype Quad, followed twelve days later by the prototype Pygmy from Ford Motor Co. Detroit, Michigan. None of the three companies had managed to produce a vehicle within the required weight limit. The vehicles were field-tested during Army manoeuvres at Cam Holabird, Maryland during the winter of '40-41. Following the Army trials, the three companies each received an order for a further 1500 modified vehicles.

The modified production vehicles were designated as follows:- Bantam 40BRC, Willys-Overland Model MA, and Ford Model GP. After intensive evaluation, the Willys MA was selected for mass-production. It had the best engine - the Willys 4-cylinder 54bhp side-valve "Go-Devil", and Willy's

price was the lowest of the three bids. In July 1941, Willys got their first order for 16,000 vehicles. The modifications required by the US Army included a floor-mounted gear shift instead of the column-mounted gearshift of the MA and the use of the front-end of the Ford GP including the unique hinged headlights - designed to swing back to illuminate the engine for night repairs. Designated the Willys Model MB, the production version was essentially a compound of the Bantam and Ford body powered by the Willys engine.

In early 1942, the Ford Motor Co. began co-production of the Model MB under the destination Model GPW. All parts on both models were interchangeable and the two vehicles were virtually identical. Early production models had the Willys or Ford logo stamped on the rear body panel. When this feature was dropped the Willys MB could be distinguished by the tubular-section front chassis cross-member. The Ford GPW had an inverted U-section cross-member.

Production terminated in 1945 following the end of World War Two. By that time, Willys had turned out over 361,000 Model MB's and Ford a total of nearly 278,000 Model GPW's.

Jeeps were also produced, or assembled in 26 other plants around the world, notably France, where Hotchkiss-Willys began licensed production of the

Model MB in 1953. Designated M201 VLTT (Vehicule de Liaison Tout Terrain) the Hotchkiss Jeep has different wheels, carburettor and electrical systems, and reinforced suspension but was outwardly almost identical with the original MB. All parts were interchangeable. Some 40,000 Jeeps were built by Hotchkiss before production ended in 1969.

From 1941 onwards, the Jeep rapidly replaced the solo motorcycle and sidecar combinations in all units of the Army, Air Force, Marine Corps and Navy shore-stations. Military police detachments however continued to use the motorcycle for traffic control and convoy duties. In combat areas, the Jeep was primarily used in the reconnaissance and communications role, and as front-line am-

balance with various combinations of stretchers over the hood (bonnet) and rear passenger compartment.

In the combat role, the Jeep could be armed with a pintle-mounted Cal.30 or Cal.50 Browning machine gun. A base plate was fitted centrally behind the front seats for an M31 Pedestal Truck Mount. An M48 (Infantry) Machine Gun Mount could also be mounted on the dash to take the Cal.30. A pedestal mount was sometimes attached to the outside of the vehicle ahead of the passenger seat. Leather or canvas weapon buckets for Cal.30 rifles or carbines could be carried strapped to the outside of the vehicle and a rifle carrier could be fitted inside, across the bottom of the windshield. The rifle carrier, with an M1

carbine clipped inside is shown in position in the drawing below. In actual practice, the armament carried varied enormously as individual units introduced their own field modifications which were often influenced by local combat conditions and equipment availability. The Jeeps operated by the British SAS in North Africa, Italy and France, with their various combinations of Cal.30 drum-fed Vickers K guns, Cal.30 and Cal.50 aircraft machine guns are a prime example of "non-standard" jeeps.

A radio receiver/transmitter with telephone-type handset (SCR/509 or 510) could be carried on a shock mounting on top of the wheel arch immediately behind the driver's seat. The mast bracket carrying the 2 or 3-section aerial was mounted on the outside of the vehicle in line with the radio set.

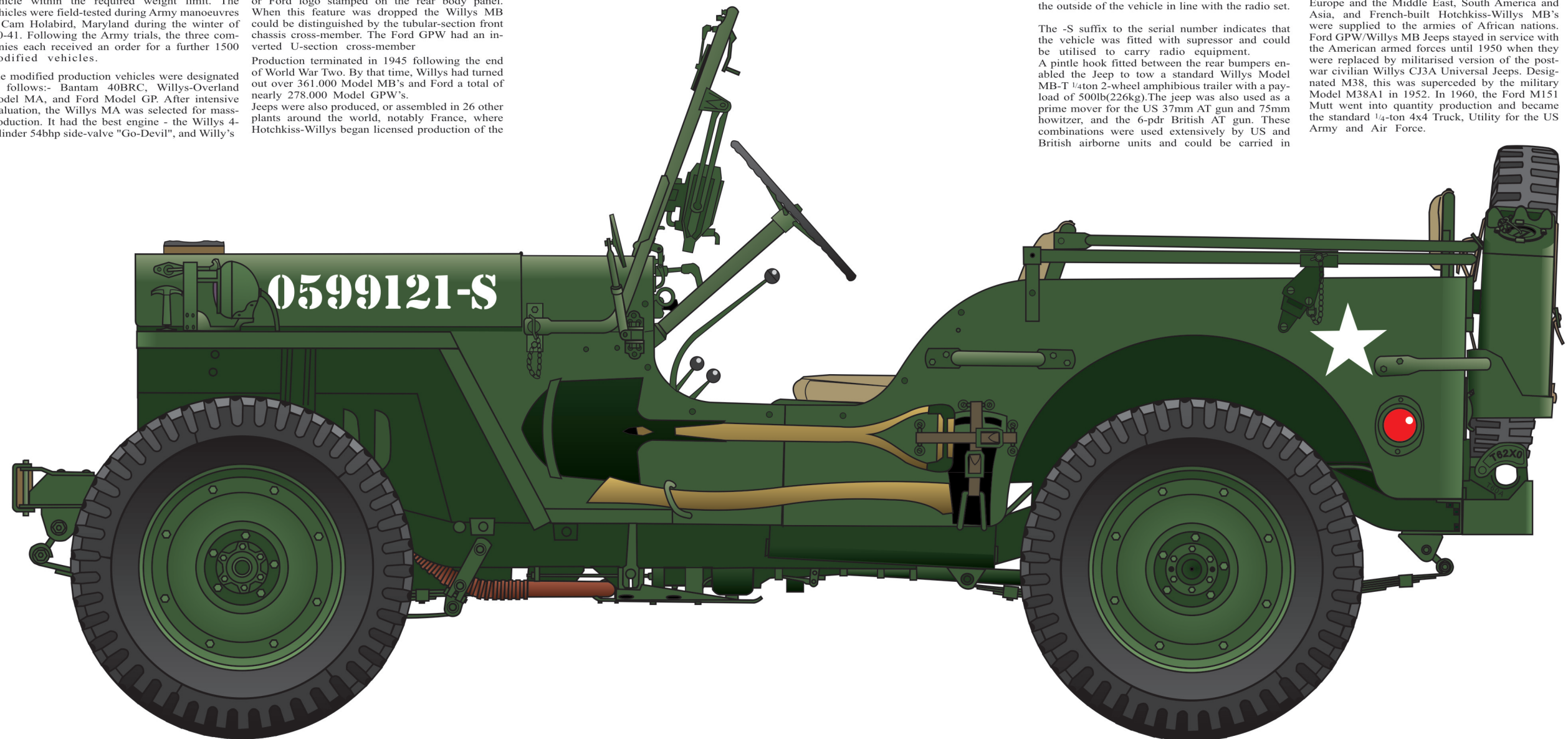
The -S suffix to the serial number indicates that the vehicle was fitted with suppressor and could be utilised to carry radio equipment.

A pintle hook fitted between the rear bumpers enabled the Jeep to tow a standard Willys Model MB-T 1/4ton 2-wheel amphibious trailer with a payload of 500lb(226kg).The jeep was also used as a prime mover for the US 37mm AT gun and 75mm howitzer, and the 6-pdr British AT gun. These combinations were used extensively by US and British airborne units and could be carried in

gliders. Using a tandem hitch, two jeeps could also be used to tow a 155mm howitzer.

Numerous official and unofficial modifications were made to the basic design to fit the Jeep for various specialist roles such as cable-laying Jeeps for the Signal Corps and a 10-seat LWB version for the US Coast Guard. There were also light-weight and half-track variants, an amphibious version of the Ford GPW - the Model GPA (Approximately 6,000 built), an adaptor kit was produced to enable the Jeep to run on railway lines, and with the aid of an autogyro attachment, the RAF managed to coax one into the air on the end of a tow-rope.

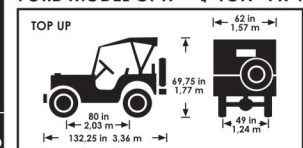
Huge numbers of surplus World War Two Jeeps were supplied to the post-war armies of Western Europe and the Middle East, South America and Asia, and French-built Hotchkiss-Willys MB's were supplied to the armies of African nations. Ford GPW/Willys MB Jeeps stayed in service with the American armed forces until 1950 when they were replaced by militarised version of the post-war civilian Willys CJ3A Universal Jeeps. Designated M38, this was superseded by the military Model M38A1 in 1952. In 1960, the Ford M151 Mutt went into quantity production and became the standard 1/4-ton 4x4 Truck, Utility for the US Army and Air Force.



Name Plate

WILLYS	
NOMENCLATURE	TRUCK 1/4 TON 4 X 4
SUPPLY ARM OR SERVICE	ORDNANCE DEPT.
MAINTAINING VEHICLE	WILLYS MB.
MAKE AND MODEL	
SERIAL NUMBER:	
GROSS WEIGHT	800 LBS.
MAXIMUM PAYLOAD	800 LBS.
MAXIMUM TRAILOAD	1000 LBS.
DATE OF DELIVERY	
RECOMMENDED BY MANUFACTURER	
OCTANE RATING OF GASOLINE	68 MIN.
S.A.E. GRADE OF OIL FOR SUMMER USE 30	S.A.E.
S.A.E. GRADE OF OIL FOR WINTER USE 10W	S.A.E.
PUBLICATIONS APPLYING TO THIS VEHICLE	
PARTS LIST T/M 10 -	
MAINTENANCE MANUAL T/M 10 -	

TECHNICAL DATA
WILLYS-OVERLAND MODEL MB
FORD MODEL GPW 1/4-TON 4 x 4



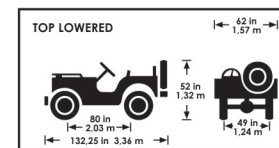
Crew	2
Physical Characteristics	
Weight (gross)	3,253lb/1473kg
Length	11ft 1/4 in/3.55m
Width	5ft 2ins/1.6m
Height - top of cowl	3ft 4ins/1.02m
top of steering wheel	4ft 4ins/1.32m
with top up	5ft 9 1/4ins/1.77m
Ground clearance	.8 3/4ins/22cm
Wheelbase	.80ins/2.03m
Tread (centre to centre of tyres)	49ins/1.24m
Tyre equipment	6.00 x 16, 6 ply (mud and snow)
Armament	
Provision for one cal. -30 or cal. -50 machine gun	

Performance	
Maximum speed on level	65mph/104kmh
with towed load	20mph/32kmh
Maximum grade ability	60%
with towed load	45%
Angle of approach	45°
Angle of departure	35°
Fording depth	18ins/45cm
Fuel capacity	15 gall/68 litres
Cruising range (approx.)	300 miles/482km
with towed load	260 miles/418km
Normal towed load (37mm gun carriage or 1/4-ton, 2-wheel, cargo trailer)	1000lb/453kg
Payload (including driver and assistant)	800lb/362kg
Turning radius	17 1/2ft/5.33m

Battery, Voltage	6-12 volts
Engine Type	"L" head
No. of cylinders	4
Cycle	4
Fuel (gasoline)	68 octane
Displacement	134.2cu ins/2199cc
Compression ratio	6.48:1
Net h.p.	54 at 4,000rpm
Crankshaft rotation	Clockwise
Length	27ins/68cm
Width	22 1/2ins/57cm
Height	26 3/4ins/67cm
Ignition	Battery
Weight	355lb/160kg
Master Clutch Type	Dry, single plate

Radiator, Type	Fin and tube
Capacity of system	22 pints/12.5 litres
Transmission Gear ratios	
First speed	2.67:1
Second speed	1.56:1
Third speed	1.00:1
Reverse	3.55:1
Transfer case Gear ratio Low	1.97:1
High	1.00:1
Differential, Gear ratio	4.88:1
Type of drive	Hypoid bevel
Steering ratio	14, 12, 14:1
Suspension, Type	Semi-elliptic
Wheel construction	Divided

Brakes Type	Internal Hydraulic
Brakes, Parking, Type	External Contracting
Front Axle, Type	Full floating
Rear Axle, Gear ratio	4.88:1



Name Plate

Ford	
NOMENCLATURE	TRUCK 1/4 TON 4 X 4
SUPPLY ARM OR SERVICE	ORDNANCE DEPARTMENT
MAINTAINING VEHICLE	FORD GPW
MAKE AND MODEL	
SERIAL NUMBER:	
GROSS WEIGHT	800 LBS.
MAXIMUM PAYLOAD	800 LBS.
MAXIMUM TRAILOAD	1000 LBS.
DATE OF DELIVERY	
RECOMMENDED BY MANUFACTURER	
OCTANE RATING OF GASOLINE	68 MIN.
S.A.E. GRADE OF OIL ABOVE 32°F	30 S.A.E.
S.A.E. GRADE OF OIL BELOW 32°F	10 S.A.E.
PUBLICATIONS APPLYING TO THIS VEHICLE	
PARTS LIST T/M 10 -	
MAINTENANCE MANUAL T/M 10 -	