

NZAR ID 174, Arm Type: AFV, Draft Date: (V1) 18 March 2012, Compiled by : Phil Cregeen

Pattern: (name) Carrier Armoured Personnel M 113A1

Introduced into NZ Service: 1970 , Withdrawn 2005(?)

Crew: 2 plus 10 passengers, **Weight:** 12.3 tonnes **Armour:** 12–38 millimetres (0.47–1.5 in) Aluminium

Length: 4.863 metres (15 ft 11.5 in), **Width:** 2.686 metres (8 ft 9.7 in), **Height:** 2.5 metres (8 ft 2 in)

Guns: One .50 Cal MG or twin .30 MG in turret, **Engine:** Detroit Diesel 6V53T, 6-cylinder, 275 hp (205 kW)

Speed: 67.6 km/h (42.0 mph), **Range:** ~480 km (~300 miles)

Manufactured: Food Machinery Corp. USA



M113A1

Armoured Personnel Carrier M113A1

The M113 is the most widely used Armoured Fighting Vehicle in the Western world. Dozens of different variants have been produced since it was first manufactured in 1958. Thousands of M113's are still in service with many of the world's armies. New Zealand bought 70 of these vehicles from the United States in 1970, which have recently been replaced with the Light Armoured Vehicle (LAV). Numerous modifications have been carried out on these vehicles since they entered service, including the addition of turrets, and improvements in the swimming capability. Perhaps the most famous changes were the addition of armour and white paint for United Nations' service in Bosnia.

The Armoured Personnel Carrier (APC) is designed to carry a section of soldiers into battle while protecting them from small arms fire. Having dropped the soldiers near the action, the APC can support an attack with its machine guns if required. The vehicle is vulnerable to most armour piercing ordnance but does protect its occupants from small calibre rifle fire and shrapnel.



Crew: Two + ten lightly equipped passengers
Engine: 215 hp GMC Diesel
Weight: 10,900 kg loaded
Speed: 65 km per hour on road
Armament: 1 x .50 cal machine gun, 2 x .30 cal machine gun (in turret)



Above photos taken at the National Army Museum November 2011



M113A1 at Tauranga June 2009

The M113 series of armoured personnel carriers has become the most widely produced and utilized APC of the Western World. Its development began in 1956 by the FMC corporation and first prototype was produced in 1957.

Since production commenced in 1961 well over 32,000 M113s and its derivatives have been received by the US Army alone and the overall production in total in 2001 had reached nearly 85,000 of all types. It is the most massively produced armoured vehicle in the world. M113 and its variants are in service with at least 50 countries.

The main feature of the M113 is a fully enclosed hull welded from aluminium armour. Up to 40% of vehicle components are manufactured from the light alloys. Armour of this vehicle provides protection against small arms fire and artillery shell splinters.

The M113 has an internal arrangement which became standard for most of the modern armoured personnel carriers. Engine compartment is at the front of the hull from the right side while driving compartment is from the left. Middle and the rear part of the hull are occupied by personnel.

Main armament of the M113 is a 12.7-mm machine gun mounted over commander's hatch. It is used to engage both ground and low-flying air targets.

This armoured personnel carrier provides accommodation for 11 troops. Occupants enter and leave vehicle through the rear entry ramp. The entry ramp is completed with emergency exit doors. Furthermore one large hatch is mounted in the roof over troop compartment.

The first batch of M113 was completed with Chrysler 75M petrol engine delivering 209 hp. It was coupled with a General Motors TX-200 manual gearbox. Vehicle has a good cross-country mobility over sand, snow and mud. The M113 is amphibious. On water it is propelled by spinning its tracks.

Over the years the size and weight of the vehicle has grown and numerous components have been altered to accommodate that growth but the basic outline has remained the same. There were several M113 improvement programs for the US Army:

- M113A1 entered service in 1964. Its main difference from the base model was a General Motors V6 diesel engine instead of the petrol one. Furthermore this variant was completed with an automatic gearbox.

New Zealand Service

Initially an order of 41 vehicles was approved in 1967 comprising: 29- M113A1, 1- M 577A1 command vehicle, 4- M579A1 fitters vehicles, 1- M806A1 recovery vehicle and 6- M548 cargo carriers plus spares. The first vehicles entered service in 1970. In 1971 an order was placed for 29 Cadillac-Cage T-50 turrets and these were installed by RNZEME later that year. Another 18 carriers and T-50 turrets were also ordered the same year and included 2- M125 mortar carriers, 1- M806 recovery vehicle and 1- M579A1 fitters vehicle. A further seven vehicles were purchased in 1974 including 3- M577A1 command vehicles and 1- M548 load carrier.

The introduction of the M113 ACP coincided with reorganisation of the NZ Armoured Corps into a Cavalry Squadron formed around the amalgamated Queen Alexandra's and Waikato Squadrons and an APC Squadron formed from the NZ Scots.

In 1994 26 of the M113A1s were shipped to Bosnia for use by the QAMR as part of the UN peacekeeping force. For this operation the armour of the vehicles was upgraded to give better protection against mines and heavy machine guns, by adding belly armour and Enhanced Applique Armour Kit (EAAK). The ACP were all equipped with Turret mounted .50 cal MG and Sabre II image intensified sights.



M113A1 fitted with EAAK as used in Bosnia (gun removed)

In 1999 M113s were deployed to East Timor in support of the 1 NZIR acting as part of the UN sponsored Interfet force lead by Australia. They returned to NZ in 2003.



M113A1 landing in East Timor



M579A1 Fitters vehicles in East Timor

The M113s were phased out as they were replaced by LAV 3.5 in 2005 (?)

Acknowledgements:

References: *Fighting Vehicles of the New Zealand Army* by M Burgess

Royal New Zealand Armoured Corps by J Plowman & M Thomas

http://en.wikipedia.org/wiki/FV101_Scorpion

<http://kiwisinarmour.hobbyvista.com> (photos of Bosnia and E Timor M113s)