



# ARMORED CAR



## THE WHEELED FIGHTING VEHICLE JOURNAL

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### PRELUDE

In view of the unsettled times, in August of 1938 the government of the Union of South Africa ordered the delivery of two experimental armored cars. Development of these cars went slowly until September of 1939 when WW II was declared. In anticipation of coming needs, the order was increased to 22 experimental vehicles.

The vehicle concept was based on the Ford 3-ton truck chassis with necessary modifications. After exhaustive trials the car was approved for production in January 1940. Four months later in May of '40 an initial order for 1,000 vehicles was placed.

The first armored cars delivered were of the MK I to MK III variants and participated in the North African campaign and in the Middle East and Cyprus. Of a conventional design, these vehicles had their engine at the front, with the crew compartment and turret at the rear.

### ARMON-HERRINGTON MARK IV

In the next two years ('41-'42) a totally new vehicle was designed around the 2-pound gun. Designated the Mark IV, it had the same basic components as the previous marks, but employed the then novel system of using the hull to act as the frame as well as the fighting compartment.

Of an all welded design, the engine was placed at the rear. At first this engine faced to the front, with air drawn from the back of the vehicle, but later the arrangement was reversed, with the engine facing to the rear, and fresh air drawn in through the crew compartment.

Initially the cars were fitted with a 2-pounder and co-axial water-cooled Vickers machinegun. The Vickers was later replaced by a Browning aircooled .30 caliber. For anti-aircraft protection a Browning .30 or .50 caliber could be mounted on the roof.

Delivery of MK IVs was slow at first because of a lack of spares imported from the UK and USA. These problems were overcome after a British order for 1200 vehicles that were to be used in the Middle East was placed, increasing the priority of the project. Further-

more, instead of M-H Ford components, a switch was made to Canadian Ford F-60L parts because of their similarity. The only external difference being in the use of British style wheels. The MK IVF was born.

A total of 2,116 MK IVs (of which 1180 were MK IVFs) were built, but none of them arrived in time for the North African campaigns because of the slow delivery rate. They were however used in the Middle East and elsewhere by the British and their allies, Greek forces, and the Arab Legion. A few were also later used in pairs for railway protection in Palestine by the British.

After the end of WW II the MK IVFs remained in service at least with the Arab Legion, as well as the Greek and South African Army.

During the Israeli Independence War of 1948 an unknown number took part in operations with the Arab Legion, as well as captured or rebuilt vehicles used by the Israeli's. Some of the Israeli vehicles had their 2-pounder replaced by the French 37mm Sa 38 cannon. These cannons were probably salvaged from Syrian Renault R-39 tanks.

In the Greek Army they were used during the Civil War by the 2d, 9th and 11th Recce Regiments in reconnaissance and convoy protection roles.

## MARMON HERRINGTON MK IV F

Text: V. Papakitsos  
Drawings: V. Papakitsos  
T. Metsovitis

### MODERN SERVICE IN GREECE

Today, after a complete overhaul in the 1980s, an unknown number of MK IVFs are still in service with the Greek Army for reconnaissance and infantry support.

During their overhaul, the Ford engines were replaced by a Perkins Mod. 6305, 5,000 cc diesel. The old 6-volt electrics were replaced by 12-volt ones, and the brakes and running gear by American "M" series parts as used on the 2 1/2 and 5-ton standard trucks. The British Mk 19 radio sets were also replaced with a AN/GRC-8.



M-H Mk IVFs of the Cyprus National Guard parading in Limassol, during the sixties, vehicles are in their original condition.  
Photo: T. Metsovitis

An unknown number of MK IVFs were not retrofitted, but were converted to static pillboxes. All mechanical parts were removed and the turret roof raised at the central section; perhaps to make it easier to handle the 2-pounder. At least a few of these pillboxes were placed on flat cars and used for railway defense.

The MK IVFs are still in use by the Cyprus National Guard, albeit in small numbers. They have taken part in all events on Cyprus from the declaration of its independence until today.

#### DESCRIPTION

The MK IVF armored car is a 4x4 vehicle with the engine in the rear compartment, and the 3-man crew (commander, gunner, driver) forward. It employs Ford components with the hull also acting as the frame.

The hull is made of welded armor plate and is divided into three parts. The front (containing the driver in a low sitting position), the center (with the turret and battle compartment), and the rear (with the engine and transmission).

Initially an 8-cylinder V-90 watercooled Ford engine was used, which delivered 95 bhp at 3,600 rpm. The gear box has 4 forward and 1 reverse gear (4F1R). It also has an auxiliary gearbox with an upper and lower case selection making a total of 8 forward and 2 reverse speeds possible.

Normally power is applied to the front differential only. In rough terrain the driver can engage the rear differential as well. The whole power train is placed on a steel base so that it can be removed and inspected more easily. The suspension is the usual semi-elliptical leaf spring.

The fighting compartment contains the turret and basket, while a rear plate containing the engine radiator separates the crew from the rear engine compartment.

The turret is rotated through 360 degrees with its attached basket, on which are mounted the commander and gunner's seats as well as various boxes for ammunition and storage.

Armament is the British 2-pounder and its coaxial .30-caliber LMG. Various crew sidearms are also carried. Externally there are two 4" smoke launchers and a fitting for either the .30-caliber or .50 caliber machinegun.

The turret roof is normally open but can be covered over half its length with a plate which also has seats bolted to it. Some vehicles have their roof fully covered by a two or three fold plate.

#### SPECIFICATIONS

Specifications in *italic* refer to the Greek retrofitted MK IVF.

Length: 5.51 m  
 Width: 2.13 m  
 Height: 2.28 m (turret roof)  
 Grd Clearance: 0.26 m (axles)  
 Weight: 6,700 kg (combat)  
           5,700 kg 6,170 kg (empty)  
 Speed: max 80 kph 50 kph  
           cruising 48 kph  
 Range: Road 322 km 370 km  
           CC 193 km  
 Fuel cap: 182 Lts  
 Fuel con: Road 0.56 lt/km  
           0.22 lt/km  
           CC 0.94 lt/km  
           0.26 lt/km  
 Ammo: 2-pounder (40mm) 53 rds  
       .30-cal (7.62mm) 2,250  
       4" Smoke 6

#### MODELING NOTES

The construction of a scratch built MK IVF is straight forward as there are no curves, etc. to deal with. I used the chassis and suspension from the 1/32d Airfix Gun Tractor (now issued by Italeri as kit No. 240). (It might be better to use the suspension from the Tamiya Ford Field Artillery Tractor if you have one, as the axles are closer to the correct shape for the MK IVF. -ed)

Tools came from the scrapbox and the light armament (.30 and .50 cal) from the Italeri weapons set (kit No. 407).

The turret is quite easy being all flat plates. If you chose to model the open top version, interior details will have to be added (see drawings).

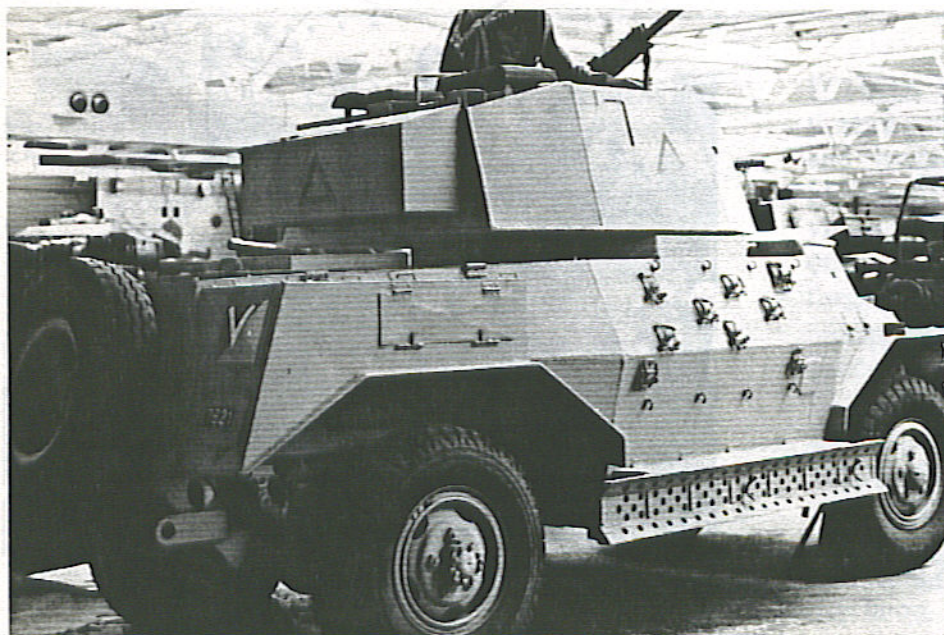
The 2-pounder comes from the ESCI german 20mm FLAK 30 with the lower tube made from cylindrical pieces of plastic.

See ARMORED CAR issue #5 page 6 for Greek Army markings. Serial numbers 88552 and 88407 are confirmed for MK IVFs. For a Greek vehicle the turret marking should be the shield as shown in AC #6 page 7.

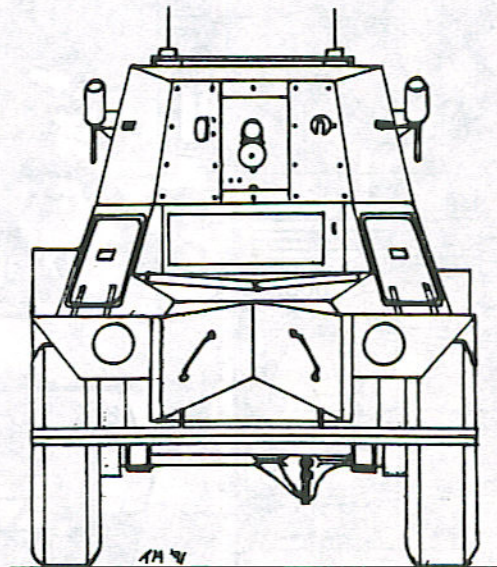
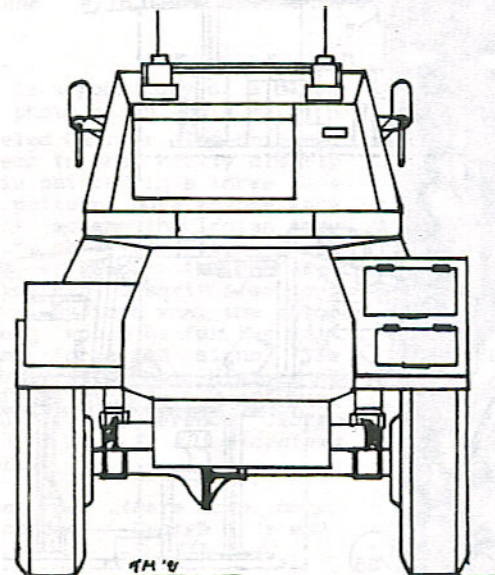
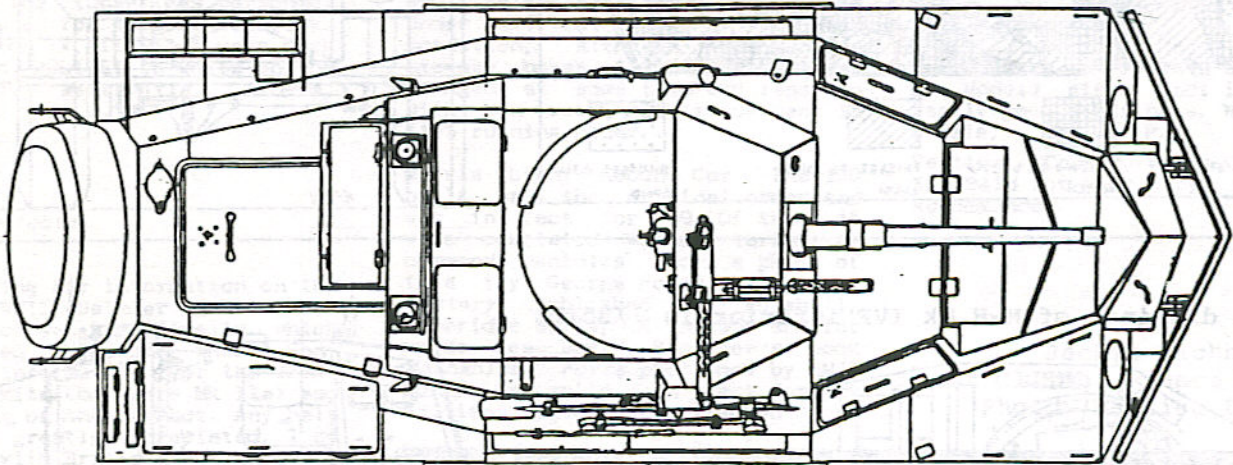
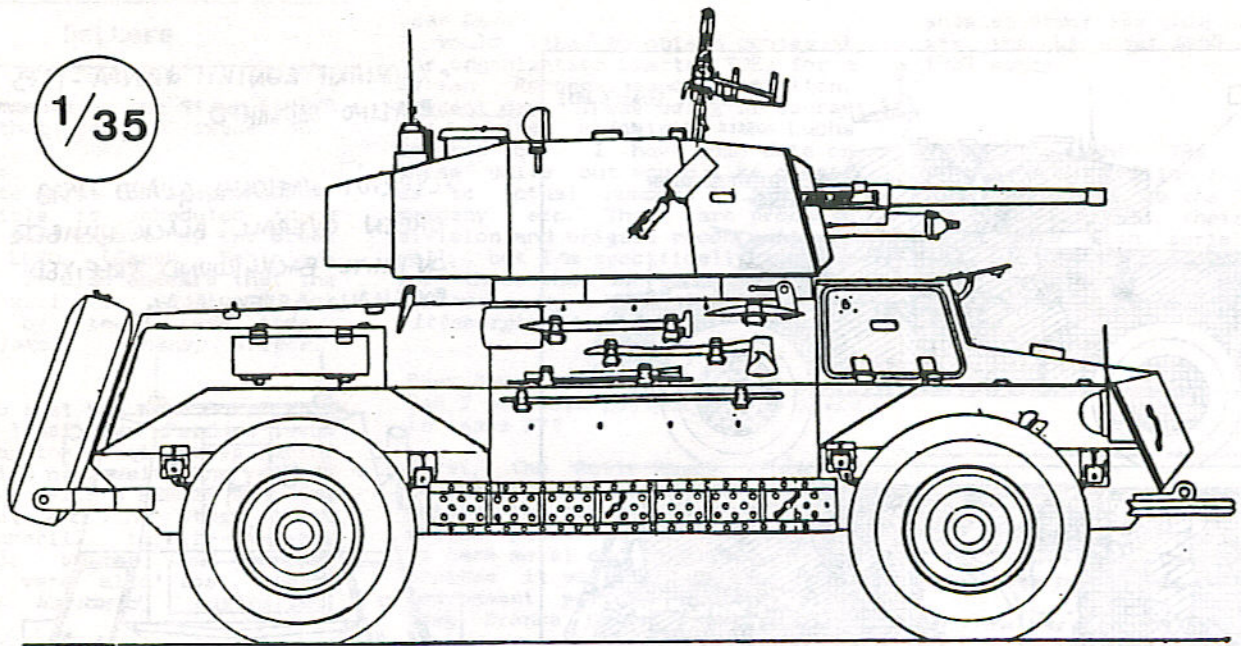
Plastimodellismo makes a decal sheet that includes both Greek aircraft and armored vehicle markings. (You'll probably have to trade with an IPMS member in Greece to get these decals, see ad for IPMS Greece below)

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M-H Mk IVF in Arab Legion colors. Note wheel pattern as opposed to those on the Greek Army Mk IVF below. Photo left: Mike Rogers collection Photo below: T. Metsovitis



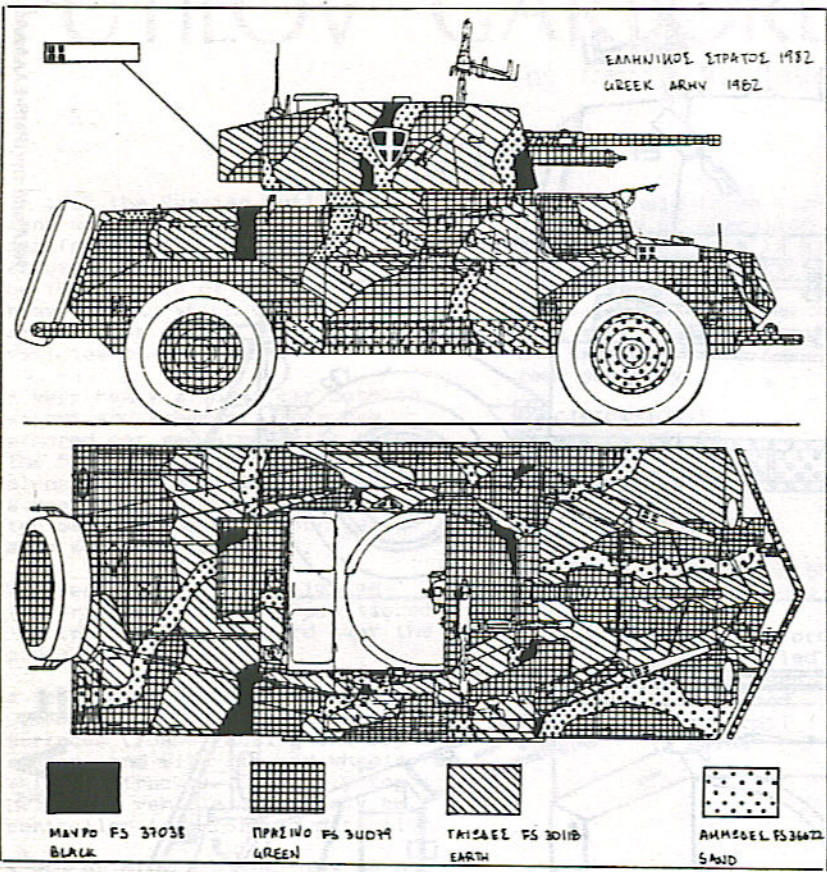
1/35



T. Metsovitis

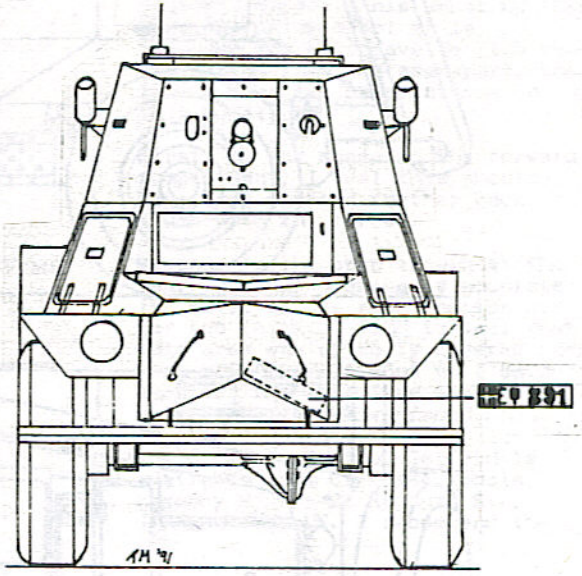
MARMON HERRINGTON MK IV F

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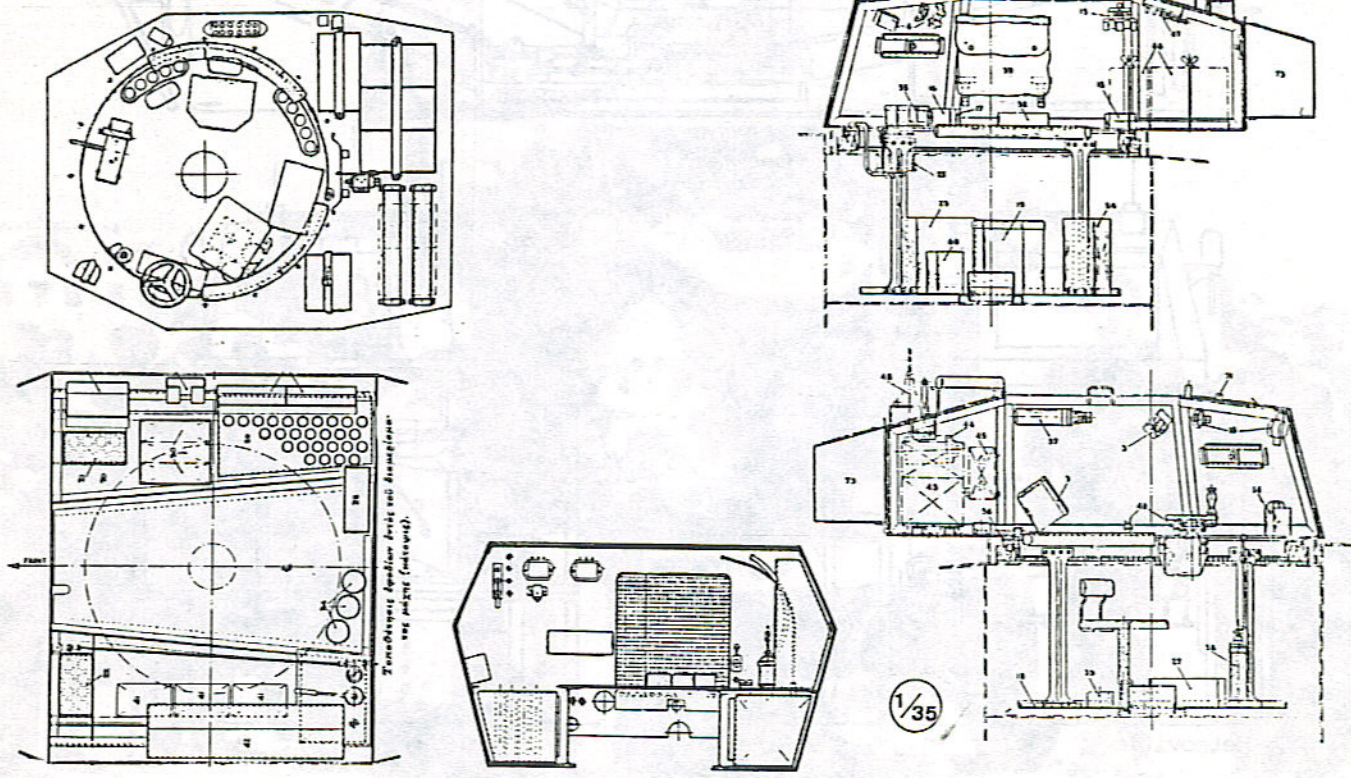


• ΚΥΠΡΙΑΚΗ ΕΘΝΙΚΗ ΦΡΟΥΔΑ - 1973  
ΠΡΑΣΙΝΟ ΟΛΟΚΛΗΡΟ.

• CYPRIOT NATIONAL GUARD - 1973  
GREEN OVERALL. BLACK NUMBER  
ON WHITE BACKGROUND PREFIXED  
BY SMALL GREEK FLAG.



Detail drawings of M-H Mk IVF interior in 1/35th



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**Letters**


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the comments on the Steyr PANDUR article that ran in issue #6)

Dear Dave:  
Just a note about the Steyr PANDUR. This vehicle is scheduled to be produced for export by the Greek company ELVO (Greek Vehicle's Limited). It also appears that the vehicle will be evaluated for adoption by the Greek Army.  
*T. Tsiplakos, Athens, Greece.*

Dear Dave:  
It appears that you were correct in that at least two Pandurs were captured by the Iraqi forces during the invasion of Kuwait. One vehicle was fitted with a MERCAR 90mm two man turret and the other with a 90mm Cockerill turret. A large number of spares and support equipment were also lost.  
*Barry Marriott, Mayfield, Australia.*

Dear Dave:  
The Austrian police have at least one PANDUR in service. This appears to be the turretless personnel version used for airport security. I saw it on TV, it was a very dark blue with POLIZEI in white on the sides.  
*T. Metsovitis, Athens, Greece.*

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**Other Subjects)**

Dear Dave:  
I am looking for information on the British WWII Daimler and Humber armored cars. Specifically which units used them and when. Conversion information for the 1/72d Hasegawa kits (both are MK IIs) and any books on the subject. Any help would be greatly appreciated. I am familiar with British WWII camo and markings.  
*James A Pratt III, 1010 Sugar Lane #116, Palestine TX 75801.*

Dear Dave:  
Enclosed is a poor copy of a black & white photo of an India Pattern MK II Wheeled Carrier. The original photo seems to show pretty clearly that it is painted in a three tone geometric pattern. Does anyone know what paint scheme the Indian Army used in the early war years? Is it in anyway similar to the one used in the Western Desert? Also does anyone have any idea what the color combinations would be for the unit serial and formation signs? See George Forty's A Photo History of Armoured Cars in Two World Wars page 145 for reference.  
*George Petronis, 60 Main St #D, Vicentown NJ 08088-8870.*

If anyone out there can help, please contact George - ed)

Dear Dave:  
I'm looking for some information on the LAV-25 series, can anyone help?  
*Foster Powell, 20 Old Chattanooga Pike, Jasper, TN 37347.*

Dear Dave:  
I would like to obtain copies of the organization charts (TOE) for a German Reconnaissance Battalion, present day. These being of course the units containing the Luchs armored car. I have some data on these units but would like detail as to actual numbers in platoon, company, etc. There are probably division and brigade recon units as well, but I'm specifically looking for those that use the Luchs.  
*W.R. Solomon Jr, 195 Vernon Drive, Pittsburgh, PA 15228.*

Dear Dave:  
Can I add some postscripts to items in issue #7?

First, the Rolls-Royce. Since the tournament has been refurbished, mainly to get rid of the horrible yellow paint. It has been stripped to bare metal and repainted. In the process it was found to have Royal Tournament yellow, post-war gloss Deep Bronze Green, wartime Olive Drab, pre-war Bronze-Green (a more blue shade and lighter than the modern color), sand (from its Egypt and Palestine days) and khaki. Under all that it was in very good condition, although the wooden storage boxes at the rear had been damaged at some time and repaired with box wood. It is now back in 110% running order.

Morris Light Recon Car. The 100 built was the original order and was in fact for 99. Of these 15 were completed without turrets as command vehicles. For a photo of this try George Forty's The First Victory published by Nutshell, Tunbridge Wells, UK in 1990 and for words see David Fletcher's book Mechanised Force published by HMSO London recently. In fact for any British inter-war tracked or

wheeled armor see this book! By the way the LAC cost £550 or \$2200 in 1937 money.

Finally, eight TPz Fuchs also served with British forces in the Gulf, attached to the 32 Armoured Engineer Regiment, their color was plain sand with serials in the --KK-- range. Luckily they were not used in their primary role, imsh'Allah.  
*Peter Brown, Colehill, UK.*

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**Plugs**

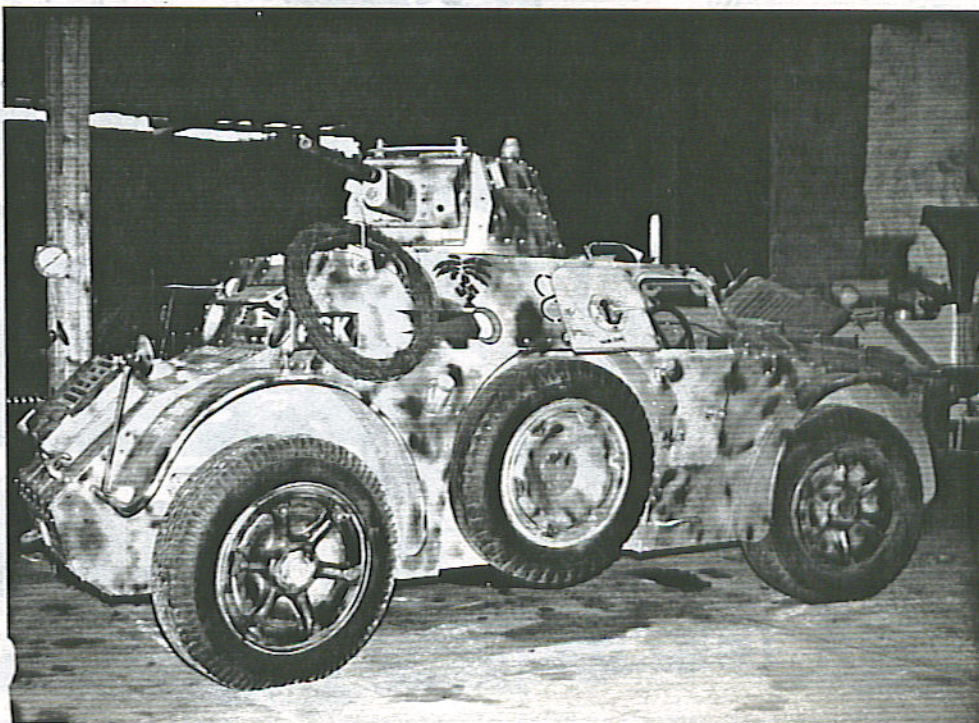

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If you haven't already sent for his latest list of 1/76th scale models, send a note to US Casts, P.O. Box 3229, Santa Cruz, CA 95063. DJ has added some new stuff. Recommended.

For the armor modelers out there, send a note to AMM Review, Attn: Mike Rogers, 17525 SW Alexander, Aloha OR 97006-4433 for a sample issue, you'll be glad you did. Highly recommended.

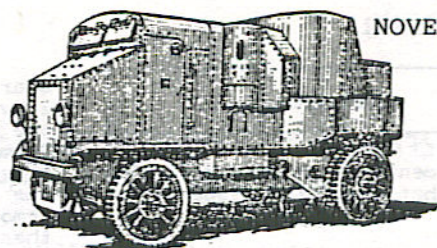
I received a Products Update from MB Models since last issue, some really good stuff here. Write to MB Models, Inc., P.O. Box 8241, Festival Center, North Charleston, SC 29418 for your copy. Recommended.

Jackie Pichon's AB41  
at Cleres, France May 1991  
Photo: Patrice DeBucquoy



# PUTILOV-GARFORD

by David R. Haugh



In 1915 the Russian Putilov armament works of Petrograd, began manufacturing the Putilov-Garford armored car. This vehicle was based on the chassis of the U.S. Garford heavy truck, which used the chain driven rear wheels common for heavy vehicles of that time.

A very heavy armored car both in weight and armament, this new armored car was armed with either the 57mm or 76.2mm assault gun along with one Maxim machinegun in a rear mounted turret. A further two machineguns were mounted in side sponsons forward.

The rear turret had a limited traverse, but could be positioned to fire slightly forward over the sides.

A very heavy vehicle, the Putilov-Garford could only be run on hard surfaces (roads -during the dry season- and with flanged wheels, on railroad tracks). Extremely top heavy the vehicle could only be controlled in a forward direction.

A number of these vehicles were built, each slightly different than the others. So far in those photos I've found, each vehicle has been unique in the exact layout and shape.

Despite their large size and the difficulty of operation Putilov-Garfords were seen in all theaters, one even being the first armored car to reach Teheran, Persia in 1915. Long lived, some of these cars were reported to still be in use until at least 1936 for railroad security.

#### SPECIFICATIONS:

Length: 18' 9"  
 Width: 7' 6"  
 Height: 9' 2"  
 Grd Clr: 1'  
 Weight: 11 tons  
 Crew: 8  
 Arm: (1) 76.2mm or 57mm cannon  
 (3) Machineguns  
 Armor: 7 to 9mm  
 Engine: (1) 35hp Garford  
 watercooled  
 Fuel: 80 gals, gas  
 Max spd: 11 mph road  
 20 mph rail  
 Range: 75 miles

#### MODELING:

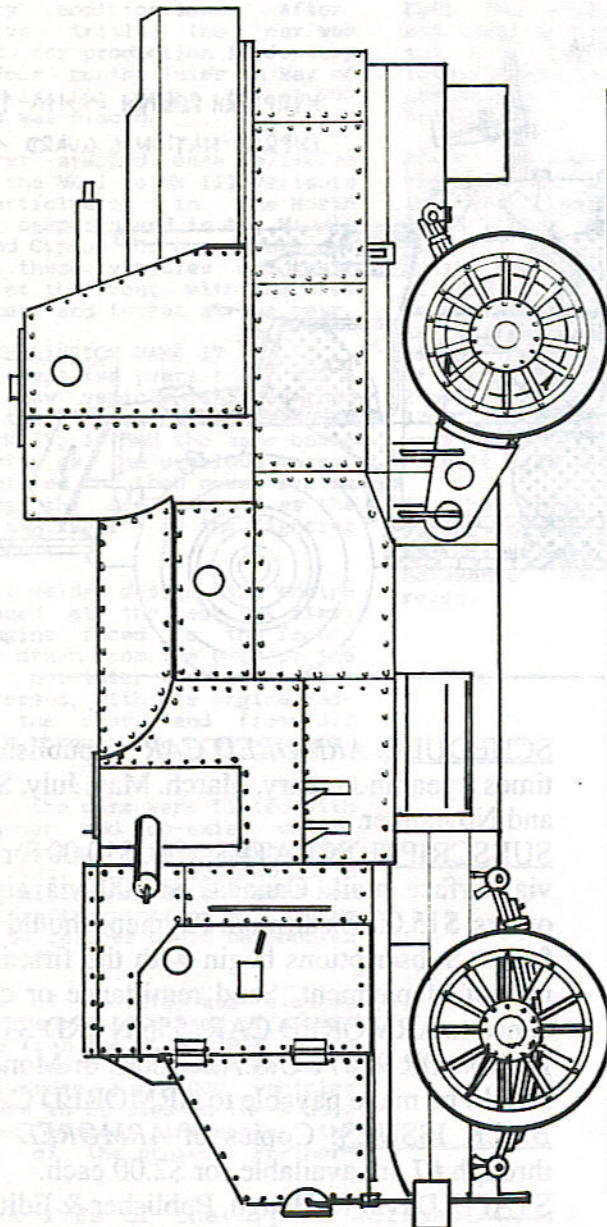
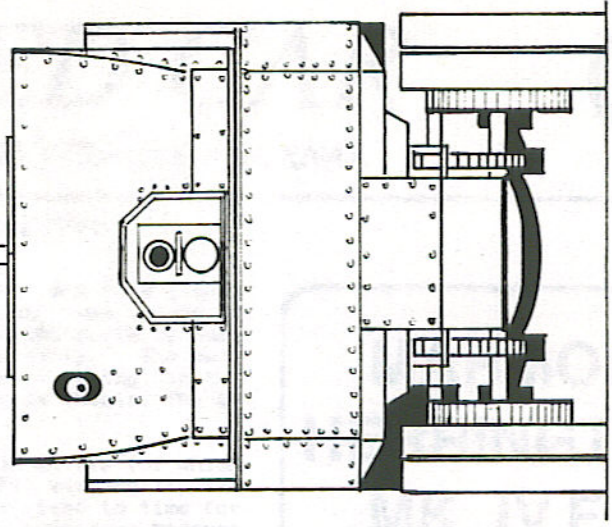
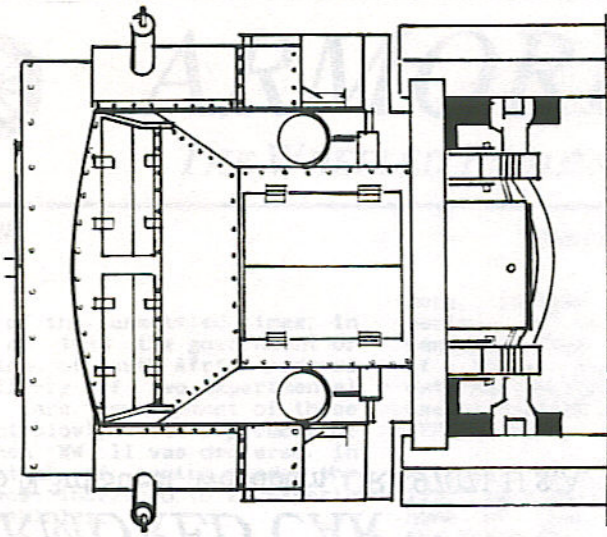
Aside from scratch-building a version, the only way to get a model of the Putilov-Garford is to use the 1/76th resin version from Cromwell Models. This makes up into a good looking model as is, although you will have to find your own Maxims from the spareparts box. I only have two reservations on this model.

First, is the shape of the forward compartment, I feel this should have been carried further back flush with the turret.

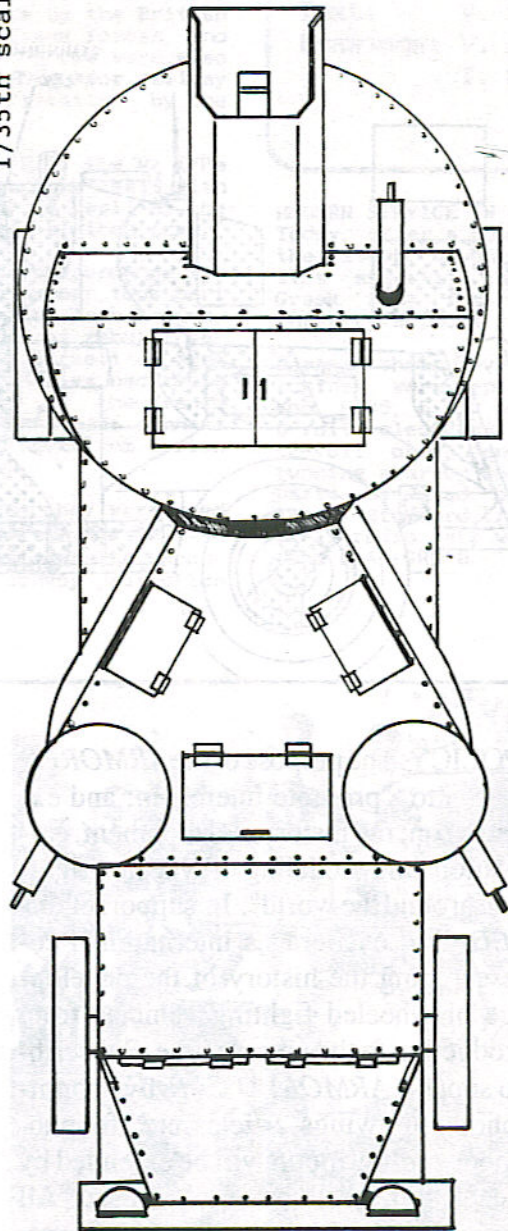
Second, is the open trough at the rear. If this opening is accurate the walls of the rear section are far too thick. I tend to feel that this area was actually covered over with a flat plate. But as I said earlier, the more I've looked, the more variations I've found.

The Cromwell Putilov-Garford is available from Cromwell Models, Regency House, 22 Hayburn St., Glasgow G11, UK. I recommend the kit.



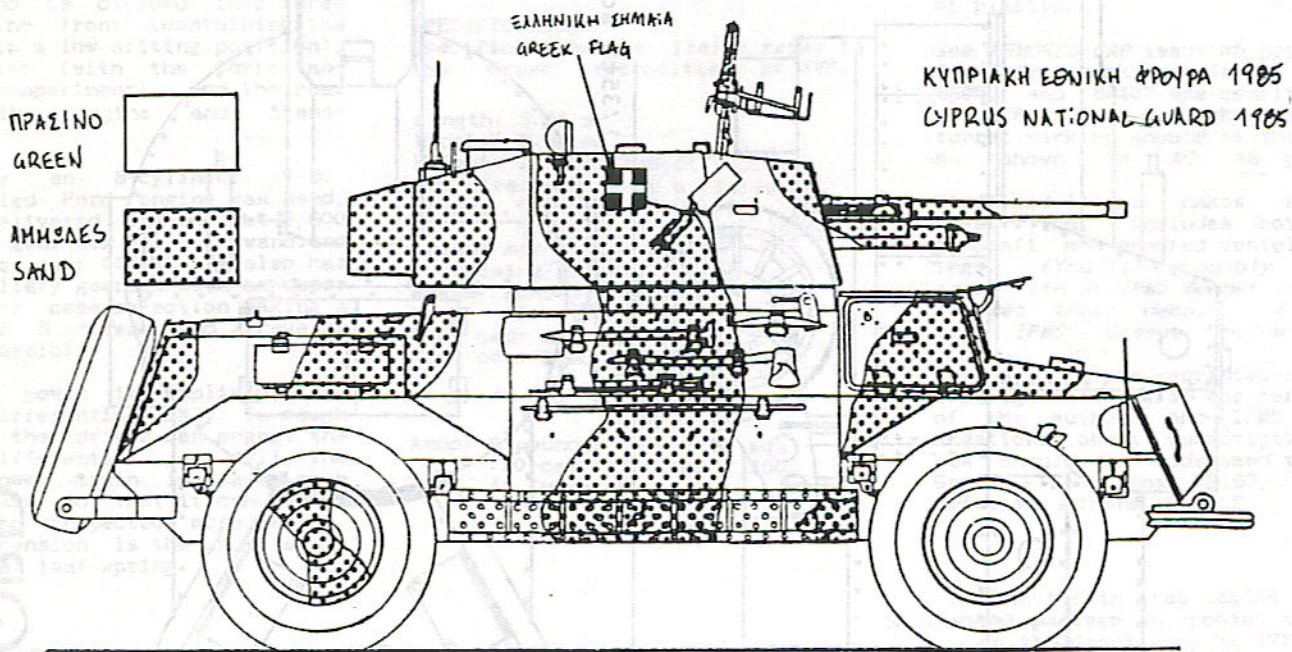


1/35th scale.



# PUTILOV ~ GARFORD

Drawing by David R. Haugh, November 1991



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