

ARMORED CAR

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A "SWISS" Eagle 4x4 Armored Reconnaissance Vehicle



Currently in serial production for the Swiss Army, the successful AM General "heavy" Hummer chassis forms the platform for the MOWAG Eagle 4x4 Armored Reconnaissance Vehicle. Use of the HMMWV chassis allows usage of the same logistical support system of the original Hummer series of vehicles already in place in many countries. Lightweight, while still carrying a respectable degree of armor protection, the Eagle 4x4 is ideally suited for reconnaissance (its main mission with the Swiss Army), surveillance, liaison, escort, border patrol and police missions, as well as an increasing number of UN and NATO missions where a low profile is an important part of peace keeping missions.

Following trials with prototypes, the Swiss Army ordered 151 Eagles for the reconnaissance units of their armored brigades in 1994, with the first production vehicles reaching units in 1995.

Top of page: MOWAG Eagle with MBK2 turret, the "Heavy" Hummer chassis and suspension are clearly evident. All windows are armored glass. Left: Swiss Army Eagle in the reconnaissance role. The rear hatch is hinged at the top and lifts upwards for full access to the rear storage area. Photos: MOWAG Motorwagenfabrik AG.

Along with periscopes for the driver (on the vehicle left) and commander (vehicle right) a rear opening circular hatch is mounted in the roof, just forward of the turret.

The complete Eagle 4x4 system comprises three main elements:

- The unique armored super structure designed and manufactured by Mowag.
- The armored observation cupola MBK2, developed and manufactured by Mowag.
- Baseline vehicle (notwithstanding its armor protection, the mobility and relevant performances are equal to the original Hummer vehicle).

The Eagle 4x4 is NBC-tight and provides four individual upholstered seats. Even when fully equipped the vehicle is air transportable by C-130 aircraft or helicopter.

Superstructure

The dimensions have been kept identical to those of the original Hummer with the exception of the width, which is increased by approximately 100 mm. The superstructure offers comfortable space for four personnel, along with built-in storage compartments. All windows are made of bullet proof glass, and

Right: Interior of Eagle looking forward through the rear hatch. In the center is the support for the observer/gunner's seat, with storage lockers to the left and right above the wheel wells. Each crew member has a contoured padded seat for decreased crew fatigue.. Below: Since the armored windows can't be opened, a roof fan capable of moving 220 cubic meters of air per hour is standard, for hot climates an air conditioning system is also available..
Photos: MOWAG Motorwagenfabrik AG.

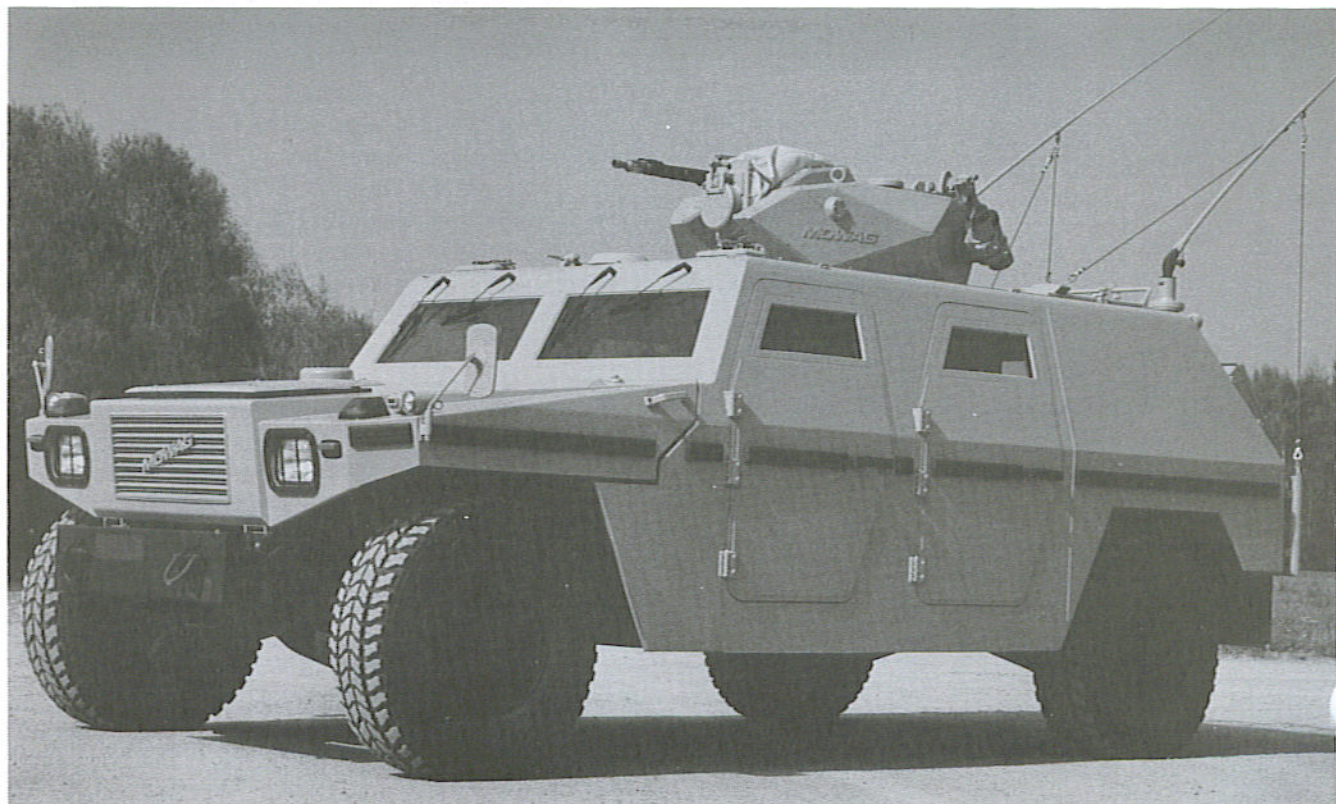
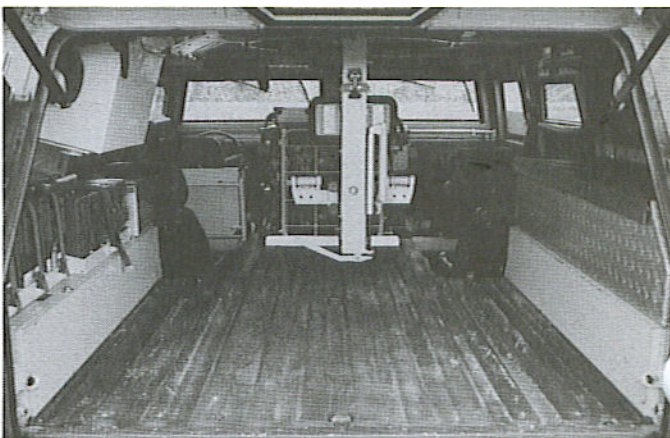
access to the vehicle is provided by four side doors for the crew and one rear door (which opens upward) for the cargo.

Observation turret

The 360° rotating observation turret, containing a thermal imaging unit, is located in the center of the vehicle roof. This allows all-round observation in an NBC secure vehicle by day/night and under all weather conditions.

Ballistic protection

The ballistic protection requirement (proof against 5.56mm Ball and 7.62mm Ball from 30 meters, and 7.62mm steelcore from 100 meters) is met with the application of aluminum armor plates with composite armor plates mounted to their inner face.



TECHNICAL DATA

Dimensions

Overall length	4900 mm
Height over hull	1750 mm
Overall width	2280 mm
Wheelbase	3300 mm
Wheel track (front, rear)	1810 mm
Ground clearance	400 mm
Angle of approach	60°
Angle of departure	50°
Number of seats	4-5

Weights

Weight empty (baseline vehicle)	3800 kg
Payload	1000 kg
Total combat weight	4800 kg
Max. axle load front	2100 kg
Max. axle load rear	2700 kg

Performances

Max. speed	125 km/h
Max. speed reverse	35 km/h
Gradient	60 %
Side slope	40 %
Turning circle diameter	14.6 m
Fuel tank capacity	95 Liters
Range on hard level surface	450 km
Spec. ground pressure (rear)	21 N/cm ²
Power-to-weight ratio	24.4 kW/t - 33.3 hp/t
Fording depth	0.76 m

Drive Train

Engine

Manufacturer	General Motors
Type	6.5 L NA
Function	4-stroke /Diesel
No. of cylinders/arrangement	V8/90°
Performance at 3400 rpm	117kW(160HP)
Torque at 1700 rpm	393 Nm

Gearbox

Manufacturer	Hydra-Matic
Type	4 L 80 E
Transmission	automatic
Gear ratios	1. gear 2.48 2. gear 1.48 3. gear 1.00 4. gear 0.75 R. gear 2.08

Transfer case

Manufacturer	New Venture
Road gear	1:1
Off-road gear	2.72:1
4x4 permanent drive	Bevel gear differential

Axles & Suspension

Manufacturer	AMGC
Axle gear	with torsion differential
Independent wheel suspension w/ double control arms	
Brakes	disc brakes on all four wheels
Tires with run-flat core	37x12,50 R 16,5 LT

Electrical system

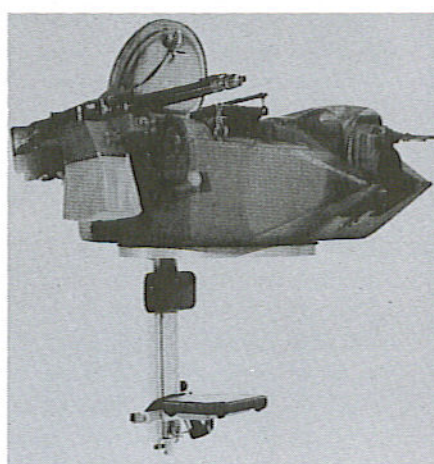
Voltage	24 V
Alternator	24 V/ 100 A
Battery	24 V/ 125 Ah
Starter	24V/ 7kW
Lighting front	Headlamp with blackout light, turn signal with position lamp
Lighting rear	Stop-tail-turn light assembly, integrated blackout light

Standard accessories

Hydraulic power assisted steering	
Roof fan	220 m ³ /h

Auxiliaries / Options

Heater in crew-compartment	7 kW heating capacity
Preheat unit	7.5 kW heating cap.
NBC overpressure system	85 m ³ /h
Central tire inflation system	CTIS
Air conditioning system	
Front self-recovery winch	5.4 ton pulling cap.



Observation turret MBK 2

The Eagle's MBK 2 turret has a primary task of observation with an additional self-defense capability provided by a 7.62mm machine gun operated from inside the turret as well as the six

grenade launcher tubes. Traverse and elevation drives are mechanical, with the MBK2 turret forming an autonomous sub-assembly within the Eagle platform.

The thermal imager unit facilitates detection and identification over greater distances allowing day/night operations under all weather conditions. The turret is fitted with a one-man operated, externally mounted MG 7.62 mm, Type F1 or MAG, light machinegun for close-in defense. The weapon is

operated from within the vehicle. Depending upon the choice of optics, firing is possible by day or day/night. A new belt of ammunition can also be reloaded from inside the vehicle. The turret itself provides protection against external influences such as weather, bullets and splinters, as well as NBC contamination. Six launcher tubes are mounted to the outside of the turret for firing smoke or antipersonnel grenades which can be fired in salvos of three grenades.

MBK2 Turret Technical Data

Dimensions

- Installation diameter of turret ring - 815/ 716 mm
- Rotation radius, external - approx. 1030 mm
- Rotation radius, internal - approx. 350 mm

- Height of firing above turret ring - approx. 561 mm
- Installation depth from turret ring - approx. 842 mm

Weight

- Cupola complete, combat weight - approx. 320 kg

Armament

- MG cal. 7.62 mm, type F1 or MAG with 400 ready to fire rounds
- Smoke Grenade Launcher with 6 tubes, 7.6 cm type WEGMANN or GALIX

Ballistic Protection

- against 7.62 mm NATO ball at all distances from 150 m
- against 7.62 mm AP

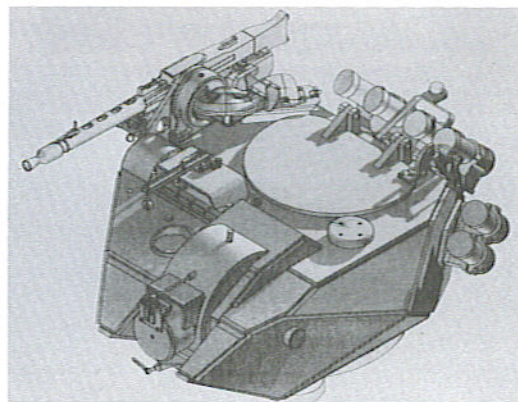
Aiming Range

- MG 7.62mm Elevation +20°
Depression - 12°
Traverse Nx 360°
- Thermal Imager Elevation + 15°
Depression - 10°
Traverse Nx 360°

Electrical System

- Rated voltage 24 VDC
- Voltage range 18 - 30 V DC
- Current relay through trailing cable or slip ring

Right: MOWAG Eagle MBK2 turret. Below: Eagle during trials, the 7.62mm machinegun is mounted on the turret's right side, while the protective cover for the observation sight is in the closed position. Photo/Drawing: MOWAG Motorwagenfabrik AG.



British Armored Cars in the Middle East, Late 1942

by Peter Brown

In AC#16 March 1993 I recorded the details of British armored car holdings at the time of the Battle of El Alamein, 23rd October 1942, based on figures in the Public Record Office (PRO) files, with my comments on these.

Recently Jacques Jost visited the PRO and came across another set of figures, and although they were not what he was searching for, he recorded them and passed them on to me. The original records used for my previous article were from PRO file WO169/3861 which listed vehicles in service with units, under repair and in depots in British hands in Egypt. Jacques' figures are from WO33/1731 which lists total vehicle holdings and the War Establishment - equivalent to US TOE's - for the whole Middle East Theater as of 31 October 1942.

As with all statistics, both sets of figures can say a great deal and also conceal a great deal. As the figures passed to me by Jacques deal with the whole Middle East area, they include vehicles not recorded in the Egypt set. A note on the list says they include Aden and Cyprus, and they would have included Egypt. I also think they would include the area which now includes Israel and the Lebanon where there were British troops.

Figures from another report suggest that the Persian (now Iran) and Iraq area was not included in the

Middle East command area, but I am unsure of the specific extent.

That apart, the figures offer some points of interest. They list the number of vehicles which should be in the various units under the then current War Establishment (or W.E.), and a General Staff Reserve, stated as "calculated at 90 days full F.F.C. rates" which would be those vehicles held to replace cars destroyed in battle or otherwise not in fighting order.

We are told that the forces in the area should have had 792 Scout Cars - these would have been the Daimler "Dingo" - in service, and another 238 in reserve. These would have been used by armored car, tank and other units, Dingos were very popular as armored runabouts as well as fighting vehicles. The figures list those actually there giving separate totals for Mk I and Mk II, and show there was a shortage of 171 vehicles against full establishment alone, with none left for reserves.

Armored car levels were not a lot better, with 229 vehicles below the full establishment and again no reserves. Interestingly, the figures record the numbers of Daimler and Humber armored cars, although without stating which marks were on hand. They record several under "others" which is annoying, some would have been the few AEC Mk I cars then being introduced, but what the remainder were is really only guesswork. After three years of fighting, it would be reasonable to expect that most, if not all, prewar vehicles, even the robust Rolls-Royces, would have been destroyed or worn out by that time. As some were "In Transit", they may have included

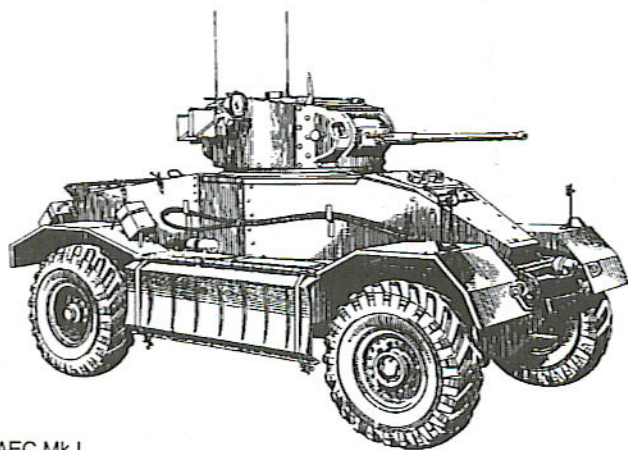
new vehicles as well as possibly obsolete ones.

Another interesting point concerns the Marmon-Herringtons. There were a lot of them, yet the Egypt only figures listed around 340 for 23rd October, so some half of them may not have been in Egypt.

Also unusual is that the Marmon-Herringtons are not listed as part of the W.E. requirements, while the Daimler, Humber and "Others" were. Note that, at that time British armored car regiments - which included those of Commonwealth armies also, should have had some 58 armored cars at full strength, usually Humbers and Daimlers for Armored Car units or Daimlers and Marmon Herringtons for those units classed as Reconnaissance, as of August 1942, with a few early AEC cars being around by the time in question.

Two other types of wheeled armored vehicles are also listed. One is the Armored Command and Armored Demolition vehicles. These are perhaps better known as the "Dorchester", and the Command vehicles which were used in British headquarters and also a few - not listed here no doubt - by none other than Rommel. Less well known is the Demolition variant, which were similar in appearance but were equipped to allow engineer units to plant explosives under fire. Note that the Demolition versions are not listed as part of the standard equipment holdings.

Finally comes the Indian Pattern Wheeled Carrier. Not included as part of the W.E. requirements, there were nevertheless 259 of these. These certainly served in the Middle East, but beware of any published photos captioned as being in Egypt or the Desert battles, several photos of these were actually taken in Persia or Iraq although it is only seeking the original photo details from the Imperial War Museum that prove this.



AEC Mk I

Weapons and Ammunition - Empire States of Readiness (Overseas) Monthly Returns - At 31st October 1942
Theater:- Middle East (Including Aden and Cyprus)

Vehicle	W.E.	G.S. Reserve	Holdings	In Transit
SCOUT CARS	792	238	(621)	-
Mk I	-	-	226	-
Mk II	-	-	395	-
Armored CARS	916	275	(687)	143
Daimler	-	-	205	-
Humber	-	-	373	97
Others	-	-	109	46
Marmon Herrington Mk II & III	-	-	786	-
Armored Command	65	19	79	-
Armored Demolition	-	-	8	-
Indian Armored Wheeled Carrier	-	-	259	-

Source - Public Record Office, Kew, London, Great Britain File WO33/1731

As an aside, the total War Establishment for Carriers, meaning the tracked Armored Universal, Mortar and Armored Observation Post vehicles were recorded as 3174 with 1143 reserves, there was an adequate stocks on hand to meet the W.E. requirements for these, apart from a shortage of around 200 AOP versions, although there were still shortages which would have been met by the 651 vehicles in transit.

The unarmored Loyd carriers were in a better state, with 331

on hand to meet needs for 42 in service and 13 in reserve. Tank states were about adequate, with enough Cruiser tanks (Crusaders, Lee/Grants and Shermans) to meet the W.E., although not enough for full reserves. There were excess stocks of Infantry Tanks (Matildas, Valentines and a few Churchills), and there was a complete shortage of Observation Post versions called for as part of the full W.E. with none available.

I hope these figures, and my comments, will be of some use to

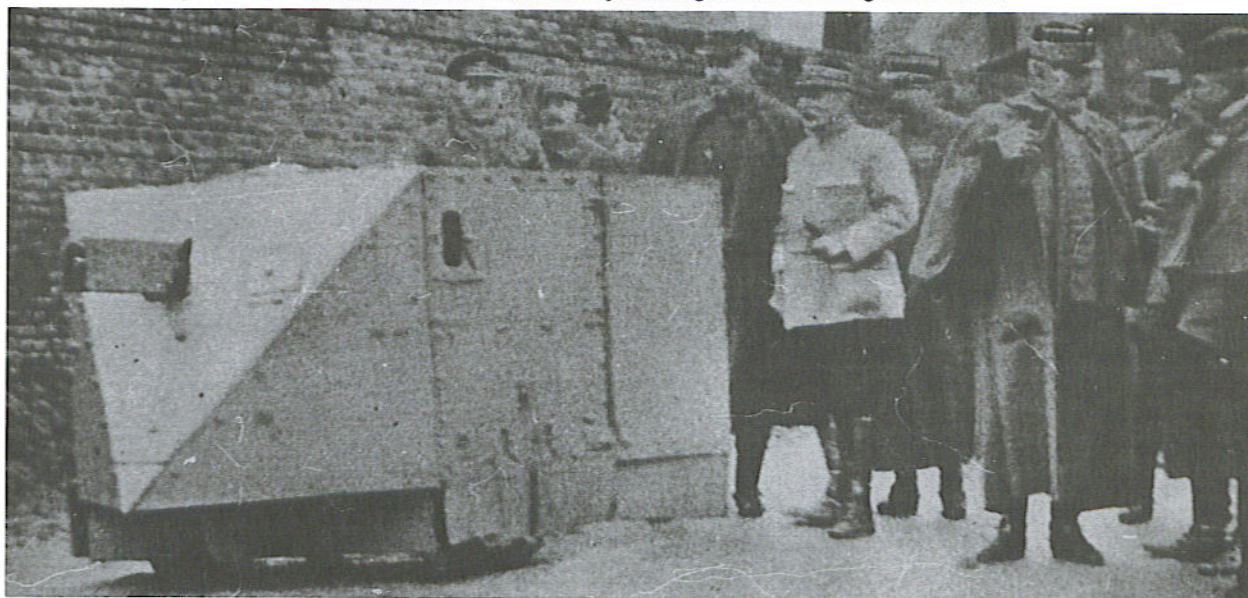
anyone interested in British armored cars during this period. Your comments, or further details from original sources, would be welcomed. Any similar figures for earlier periods - those in WO33/1731 seem only to have been recorded from October 1942 - would be useful. I have access to the RAC Half Yearly reports, and may report on these in future.

Acknowledgement. Many thanks for Jacques Jost for sending me a copy of these figures.

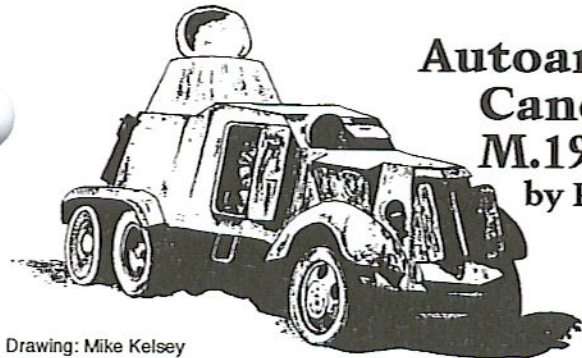
PUZZLE CORNER

From David Fletcher, Librarian, The Tank Museum, Bovington, comes a photo of what appears to be an armored WWI motorcycle w/sidecar combination. The photo appeared at least once in "The Illustrated War News" on March 10, 1915. If anyone has any ideas as to who made the vehicle, or what it was called. Please send your thoughts or ideas along to the Editor.

What are they?
Photos from readers.



The Spanish Autoametralladora- Canon Chevrolet, M.1937 (AAC-1937) by Raymond Surlémont



Drawing: Mike Kelsey

During the Spanish Civil War (1936-39), alongside 362 tanks, the Soviet Union delivered 120 armored cars as part of its military aid to the Spanish Republican Government. These cars were of two types, one light, the four wheeled FA-I and one heavy, the six-wheeled BA-3/BA-6 series.

From late 1936 onwards, the Spaniards took several initiatives to manufacture their own armored vehicles, with the aim of increasing their war potential and reducing their dependence on foreign supplies. With the Spanish automobile industry concentrated in Catalonia, and with the assistance of Soviet military engineers, it seemed the Republican Government had all the trump cards in their hands to achieve this goal. But the Republican Government in Valencia, at first, didn't have much influence over the *Generalidad* (the autonomous Catalanian Government) which was anxious to preserve its independence.

As a result of these divergent priorities, while a *Comisaria de Armamento y Municiones* was set up in Valencia to oversee and coordinate the production, procurement and supply of weapons for the Popular Army, the Catalanian Government had already created its own *Comision de Industrias de Guerra de Catalunya* (IGC), or Commission of War Industries of Catalonia, in Barcelona. Headed by the anarchist Eugenio Vallejo, this body was placed under the direct control of the *Generalidad*.

By the end of 1936, the Republicans were already trying to produce armored cars of better quality and performance than the

early *tiznaos* variants which had flourished everywhere in the early days of the Nationalist uprising. The *Union Naval de Levante* (UNL) shipbuilding concern in Valencia had designed and built, with the help of the Russian military engineers N.N. Alymov and A. Vorobiov, the UNL-35, a four-wheeled armored car based on imported Soviet ZiS-5 lorries. Production of this UNL-35 commenced in January 1937.

It is quite likely that the same team of Soviet technicians was also involved in the design of three heavier armored cars to be built in Catalonia. Among the models produced by the General Motors Peninsular S.A. company, was a version based on the Chevrolet SD, Model 1936, six-wheeled truck chassis with four driven rear wheels. Although a little roomier, the bodywork and turret of the new Chevrolet armored car was little different than that of the UNL-35.

The design was ready in March 1937 and the final assembly of what was then named the Autoametralladora-Canon Chevrolet, M.1937 (ACC-1937) was entrusted to another automobile concern in Barcelona, La Hispano Suiza, which began production in May of that year.

Description

The Chevrolet M.1937 armored car weighed 4.8 tons with a crew of three or four. It was powered by an in-line six-cylinder gasoline engine which delivered 85hp at 3,300rpm. This engine was coupled with a four speed forward and one reverse gearbox which transmitted the drive to the four rear wheels (6x4). The power plant gave the car a

maximum road speed of 60km/h and a range of 300km on one filling of gasoline. Like the UNL-35, the AAC-1937 had sheet armor 8mm thick and made use of chrome-nickel armor plates supplied by the Sagunto Alto Hornos steel works, in the province of Valencia.

The armament first proposed for this car was only two 7.62mm machine guns, one in the one-man revolving turret, and one located beside the driver's position. Such a light armament was soon considered as too modest for a large-sized vehicle, and the Russian General, D.G. Pavlov, suggested that the French 37mm Puteaux guns could be taken over from the few, and almost unserviceable, Renault FT.17 light tanks still in existence in the Republican Army. This new gun was to be fitted in the AAC-1937's turret.

The production rate of the AAC-1937 remained slow for the whole war and probably never exceeded four machines per month. This rate was even lower after the Nationalist offensive in Aragon had managed to cut the Republican territory into two parts, in April 1938, thus isolating Catalonia from its supply source for armor plates.

By the time production ceased in January 1939, only 70-odd armored cars of this type had been delivered to the Popular Army. When the Nationalists occupied Barcelona they discovered a few almost completed examples left in the factory and took them over.

Armored Car Units

Very little is known about the use of wheeled armored vehicles in the Spanish Civil War. Things were made confusing because the Spaniards tended to call all armored vehicles "tanks", whether wheeled or tracked, and whether armed with machine guns or cannon. This is confirmed in Ernest Hemingway's novel "For Whom the Bell Tolls", "Robert Jordan had gone back to look for the tank which Montero said he thought might have stopped behind the apartment building on the corner of the tram-line. It was there all-

right. But it was not a tank. Spaniards called anything a tank in those days. It was an old armored car."

In May 1937 the Republicans created a *2a Brigada Blindada*, or *Brigada de Blindados*, in charge of the armored cars of the Popular Army. Despite of what the title may suggest, this was not a combat unit, only an administrative and maintenance structure. Its nominal headquarters were located in Cuart de Poblet, near Valencia; it controlled around one hundred armored cars in three battalions, some workshops and depots and a school. The battalions were split into three companies, made up of three-car sections. Late in July 1937, this body was rechristened *Brigada de Autos Blindados* and, in September, the paper establishment of its component sections was raised from three to five cars. In April 1938, the paper organization of the Republican Mixed Brigades was also modified to include a section of five armored cars but, evidently, there were too few machines made available to implement this dream.

The AAC-1937 in Nationalist service

During the war, the Nationalists captured and made serviceable for themselves some AAC-1937 armored cars, rearming a few of these with a larger, two-man turret housing a 45mm gun and a co-axial machine gun salvaged from disabled Russian T-26 tanks and BA-3/BA-6 armored cars. The Nationalists replaced the former 7.62mm machine guns with German (Dreyse) MG.13, 7.92mm machine guns. Thus fitted, the Chevrolet M.1937 looked a little like one of the Soviet six-wheeled armored cars, although it differentiated itself in the lack of spare wheels mounted on the hull sides between the front and rear wheels. Also the hull layout around the driver's station and the mudguards were distinctively different than those on the Soviet built BA-3/BA-6 cars.

The Nationalists used their AAC-1937 armored cars in Spain's

northern zone, in Andalusia and in Extremadura. Towards the end of 1938, the Nationalist General G. Queipo de Llano ordered the formation of an armored unit in Seville. This new unit was to gather all the armored vehicles his Army had captured from the Republicans. It fought as the *Agrupacion de Carros de Combate del Ejercito del Sur* (Group of Armored Vehicles of the Southern Army) against the last Republican diversionary effort in Andalusia in January 1939. This unit included about fifteen heavy armored cars, a mixture of BA-3/BA-6s and AAC-1937s.

When the Popular Army was defeated in Catalonia, early in 1939, some Republican armored cars of various types were driven over the French border. A few of these vehicles were AAC-1937s amongst which at least two undoubtedly had the strangest fate of any Spanish-built armored vehicles. Stored in two French Army depots in Montlhéry, they were found and taken over by German forces in 1940. When the German Army invaded the Soviet Union in 1941, the two cars turned up on the eastern Front under the names of "Jaguar" and "Leopard". "Leopard" was still armed with the French 37mm Puteaux gun but, later on, it was stripped of both its turret and cannon which were replaced by a shielded machine gun. Most likely the Germans used these two cars in anti-guerilla operations, after which they were in turn, taken by the Soviets.

After the Civil War

On 1 November 1939, the Spanish Army was placed on a peace footing. Thus reduced and restructured, it inherited a host of some 651 armored vehicles, formerly either Nationalist or Republican vehicles. Amongst these, there were 80-odd armored cars of the UNL-35, BA-3/BA-6 and (Chevrolet) AAC-1937 types. A number of the latter were given to an *Escuadron de Autoametralladoras-Canon de Ifni-Sahara* and to the *Grupo de Exploracion y Explotacion I* (1939-40).

In 1940-41, three newly

organized units received (Chevrolet) AAC-1937 armored cars in their establishment, namely the:

- *Regimiento Mixto de Cuerpo de Ejercito*, n° 11. (1940)
- *Regimiento Mecanizado* n° 5. (1940)
- *Regimiento Mixto de Cuerpo de Ejercito*, n° 19. (1941)

All these formations were short-lived and already disbanded in 1943, their AAC-1937s passing to other units, namely the:

- *Grupo de Exploracion de la Division Acorazada*. (1943)
- *Grupo Blindado "Dragones del Alfambra"*. (1943-54)
- *Regimiento de Dragones de Alcantara*, n° 15. (6th Squadron) (1943-58)

At some unknown date after the Civil War, all the Chevrolet armored cars were re-engined with a Chevrolet 1500cc engine which delivered a motive power of 85hp. This rejuvenation permitted the cars to survive in active service up to as late as 1957-58.

Technical Data

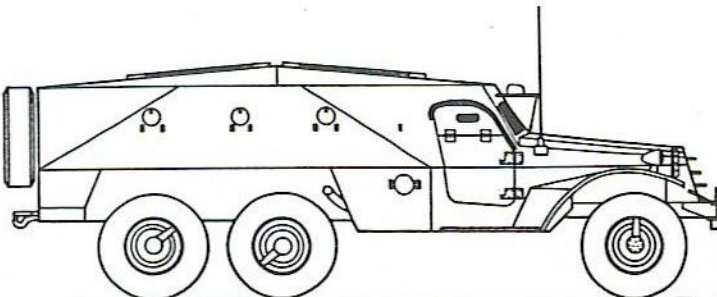
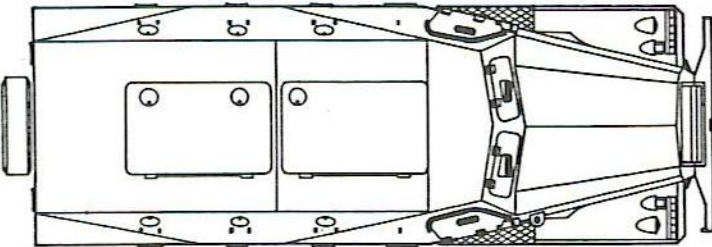
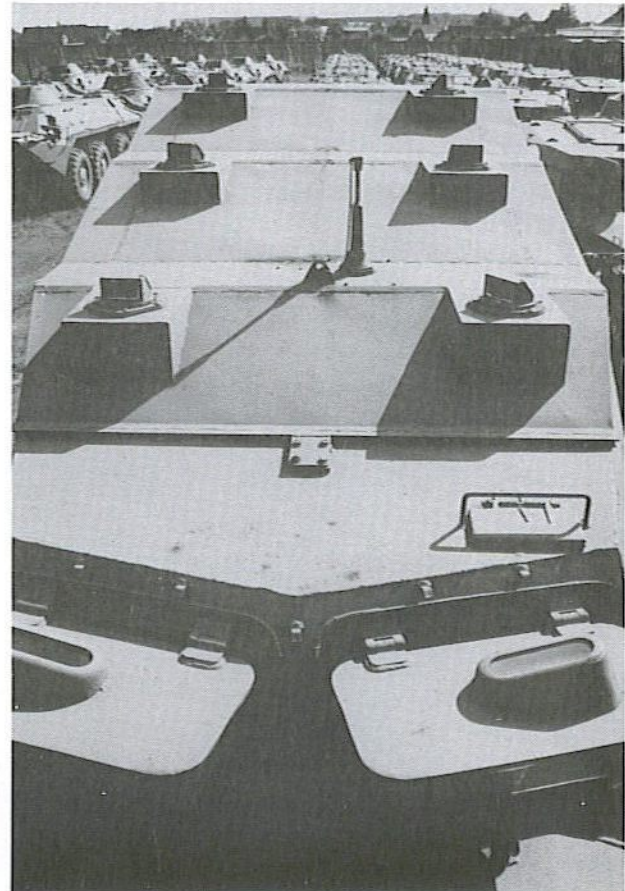
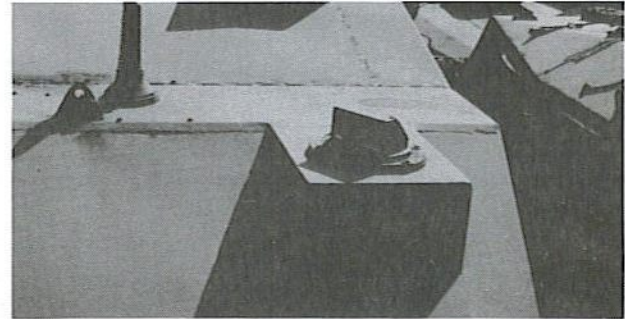
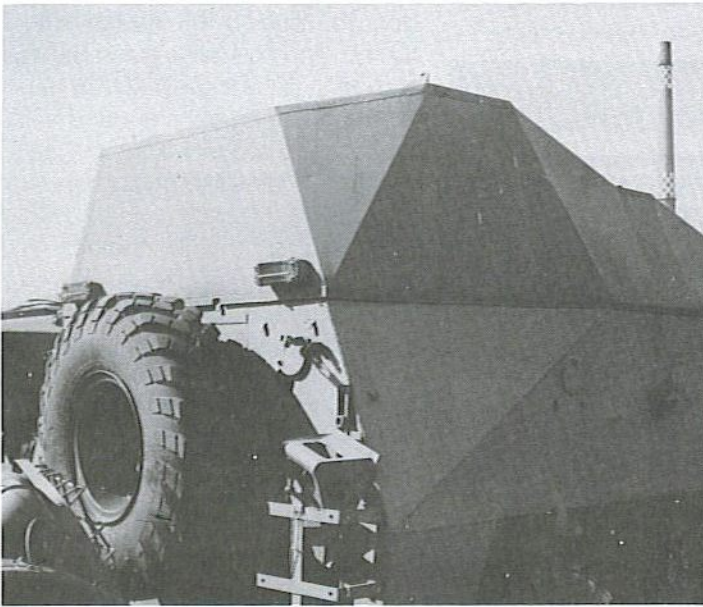
Weight:	4,800kg
Crew:	3-4
Length:	5.40m
Width:	2.25m
Height:	2.40m
Wheelbase:	3.99m
Armament:	(2) 7.62mm MGs or (1) 37mm cannon & (1) machine gun

Engine:	
Make/Model:	Chevrolet 216
Cylinders:	6 cyl, in-line
Power:	85hp @ 3,300rpm
Cooling:	Water
No. of wheels:	6x4
Transmission:	4F - 1R
Suspension:	Leaf spring
Max. Speed:	60km/h
Range:	300km

Bibliography

Mazarrasa, Javier de: *Blindados en Espana*, Quiron Ediciones, Valladolid, Spain.
Zaloga, Steven and James, Grandsen: *Operation Barbarossa* (Tank Illustrated N° 16), Arms and Armour Press, London, Great Britain.
'Identifile' column in issue #16, 18 and 22 of *Wheels and Tracks*, (G.B.).

The Reference Page: Former East German Army BTR-152 fitted with a raised superstructure equipped with six periscopes and radio sets. It was used within the former GDR for training officers of motorized infantry and tank units. Up to six officers were able to guide their troops from under armored cover and follow them under battlefield conditions. The BTRs next to the training vehicle are BTR-152Ks fitted as armored ambulances. All photos © Jochen Vollert 1996.



BTR-152K • Scale 1/76th • Drawing, US Army

WORLD WHEELED FIGHTING VEHICLE NOTES

BANGLADESH. The Army of Bangladesh is trying to modernize its units and equipment to meet the increase in tension on the Indian sub-continent. While working under severe fiscal constraints, the goal is to field seven infantry divisions along with the supporting infrastructure. At present Bangladesh's single armored brigade contains just one armored regiment and one infantry regiment. Training for a mechanized infantry is presently being carried out with ex-Soviet MT-LB carriers and some 20 BTR-80 APCs.

LAV AIR DEFENSE VEHICLES FOR U.S. ARMY. Lockheed Martin Ordnance Systems has been awarded a \$72 million plus contract for 17 LAV-AD vehicles, along with technical data, operator and maintenance training and spare parts. The contract is to be completed by June 1998. DoD December 1995.

NIGERIAN AFV BUILD-UP. Over the last four years Nigeria has been on a program of expansion and modernization of its armed forces. Acquisitions of wheeled armor have included:

-70 MOWAG Piranha APCs from Switzerland (1991-92).

-75 EE-9 Cascavel armored cars from Brazil (these may have been transhipped through Romania) (1993).

-10 Panhard VBL armored cars from France (1993).

-42 wheeled APCs (type unknown) from France (1994).

Source: Africa Policy Report.

UP-ARMORED HMMWV. O'Garra-Hess and Eisenhardt Armoring has been awarded a \$7 million plus contract to exercise the option for 81 up-armored XM1114 High Mobility Multi-Wheeled Vehicles (HMMWV). Work is expected to be completed by May 1997. DoD February 1996.

UPGRADED MEXICAN ARMY M8. As part of an overall plan to

modernize the equipment and structure of the Mexican Army, a major effort is being made to either purchase new systems, or up-grade those on hand. As a result of this program, some 40 M8 armored cars have been rebuilt with new armor, diesel engines and transmissions. The 37mm cannon has been replaced with either a 7.62mm machinegun or a breech loading 60mm mortar. The original turret has been retained, but overhead cover in the form of a split hatch has been added. The newly up-graded cars look very much like an early Brazilian EE-9 Cascavel. The M8s are operated alongside Panhard ERC-90 armored cars, as well as Panhard VBL scout cars and MOWAG Roland APCs.

NOTES

It's with regret that I announce the death of long time armored vehicle researcher, writer, and friend LTC (Ret) James W. Loop on the 25th of January 1996. A veteran of Vietnam, among his many awards and decorations, James was the holder of the CIB, 2 Bronze Stars, Purple Heart and 2 Air Medals. Faced with terminal cancer, James refused to give up and lived an active life until the very end. James was 62 when he died, and left us too soon. -Dave Haugh, Editor.

ADDITIONAL GERMAN FORCES FOR NATO. During 1995, the IVth German army corps located in Potsdam (and consisting of all the operational forces of the Bundeswehr in former East Germany), were assigned to the North Atlantic Alliance. Among other units, the IVth Corps contains two mechanized divisions and six separate brigades, as well as one air defense fighter wing and one surface-to-air missile wing. NATO Review March 1995.

ARMED FORCES VEHICLES. Ed Poole (Commandant Miniatures) has

a range of modified WWII ID models in 1/36th scale. These models come pre-painted, and are compatible for display with Britains Ltd., or similar 54mm figures and vehicles. Each vehicle is cast in resin with metal parts, and have movable wheels or rollers. Besides 29 tanks, his range includes three armored cars (Guy Mk1, Humber Mk1 and Daimler I), plus a truck. These aren't scale models, but definitely are collectible. Write for a price list and flyer.

COMMANDANT MINIATURES,
Edward K. Poole, Prop., 926
Terrace Drive, Austin TX 78746.

ASSOCIATION MILITARIA ITALIAN COLLECTORS INTERNATIONAL (AMICI). Dedicated to history and documentation of Italian military forces, subjects covered in the association's recent journal, "Amici Nel Mondo" ranged from Roman military camps and siege works to Part I of the Italian Expeditionary Force in the Spanish Civil War, to articles on weapons and, yes, cooking in an Italian WWII mess kit. I enjoyed my sample issue of Amici and have joined the association, write and ask for a sample copy. Memberships are \$25 a year in the U.S. and \$35 a year everywhere else. **AMICI, C.J. Scozzari, 6300-138 Creedmore Road #109, Raleigh NC 27612 USA.**

MILITARY CUSHMAN CLUB. This newsletter is still going strong and fun to read. If you have any interest in two wheeled military vehicles, and particularly the Cushman motor bikes from WWII, you'll like this publication. Full of tips on collecting, finding and restoring Cushman scooters. Subscriptions are \$12 for 12 issues. **Larry "Airborne" Powell, 129 East 13th, Junction City KS 66441.**

NEW BATTALION FOR UN OPERATIONS. Based on the successful NORBAT (Nordic Battalion) consisting of units from Denmark, Finland, Norway and Sweden, the Baltic countries have proposed an additional battalion for UN operations. To be called BALTBAT, this new unit will be manned with units

and personnel from Estonia, Latvia and Lithuania. Raising and training of the new battalion is to be coordinated by Denmark, which already has experience working with the new Baltic military forces. A Lithuanian platoon has been part of the Danish UN battalion (DANBAT) since early 1995. NATO Review May 1995.

WORLD WAR II HISTORICAL SOCIETY. If WWII is one of your primary subjects, this is the organization for you. Besides an incredible array of monographs, the Society also publishes a monthly newsletter called, "The Bull Sheet". Memberships which include the newsletter are \$15 in the U.S. and \$20 everywhere else. Even if you don't join I recommend writing and asking for their list of WWII publications. **World War II Historical Society, Ray Merriam, Director, 218 Beech St., Bennington VT 05201 USA.**

LETTERS

EXCHANGE WANTED. I am a hobbyist interested in expanding my collection and yours too, no money,

no checks, no IRCs... only trade! I collect 1/76th and 1/82d scale kits and soldiers of WWII only, tanks, AFVs, armored cars, artillery and soft skins. My offer is simple, militaria of the Brazilian Army, Navy, Marines and Air Force in exchange for kits. I also have a six hour video on the Brazilian Army and equipment as well as booklets and photos. Please write for my latest want/trade list. **Fernando Costa de Sousa, Rua Major Gondim 259A, Venda Da Cruz - Sao Goncalo-RJ, CEP 24411-110 BRAZIL.**

CORRECT RUSSIAN

SPELLING. Why not use correct Russian spelling? For long time when building Western model kits, or reading books about AFVs, I have seen a lot of mistakes in decal slogans or artist drawings of Russian/Soviet vehicles. Some very well known model makers seem to make as many mistakes as possible, despite all the photos of real WWII tanks. I am not a jingoist, but I

thought historical accuracy was the aim. I'm sure that among the many Russian emigrants, Western producers and publishers must be able to find one or two who can supply the correct spelling. I'd be pleased to help if someone wanted to write me before they started to produce decals, or finish a drawing. **V.O. Shpakovsky, ul. Dzerzhinskogo 35-43, Penza 440061, RUSSIA.**

ITALIAN MILITARY INFORMATION.

Wanted: photo's and information on Italian military vehicles 1915-1945 for a book on Italian Armored and Motorized forces. Also photo's of completed Italian vehicle models. If you can help, please send photocopies, with details, and name with return address. Full credit as to source will be given for any photos published. All correspondence will be answered. **CPT Howard R. Christie, CMR 414, Box 627, APO AE 09173 USA.**

Below: The St. Petersburg armored car unit in the day of the October Revolution. The names of the cars (from left to right) are: "Falcon", "The Enemy of Capital" and "Russian Vania - or - Russian Ivan". Photo via: V.O. Shpakovsky.



FOR SALE. Magazines, books, videos, decals, model kits, Floquil paints, etc. Over forty years of acquiring the above items. Send three dollars for list of military/historical related books/magazines/videos. Mostly WWII to now. Specify EVENODD. Add one dollar for ODDBALL list. Thank You! Bill Whitley, 311 Bundy Avenue, Endicott NY 13760-3201 USA.

Contributors to this issue include:

Peter Brown
8 Saddle Close, Colehill
Wimborne, Dorset BH21 2UN
GREAT BRITAIN

V.O. "Slava" Shpakovsky
ul. Dzerzhinskogo 35-43
Penza 440061
RUSSIA

Raymond Surlémont
avenue des Ardennes, 90
B-4130 Tilff
BELGIUM

Jochen Vollert
Ullitzstr. 11
95183 Trogen
GERMANY

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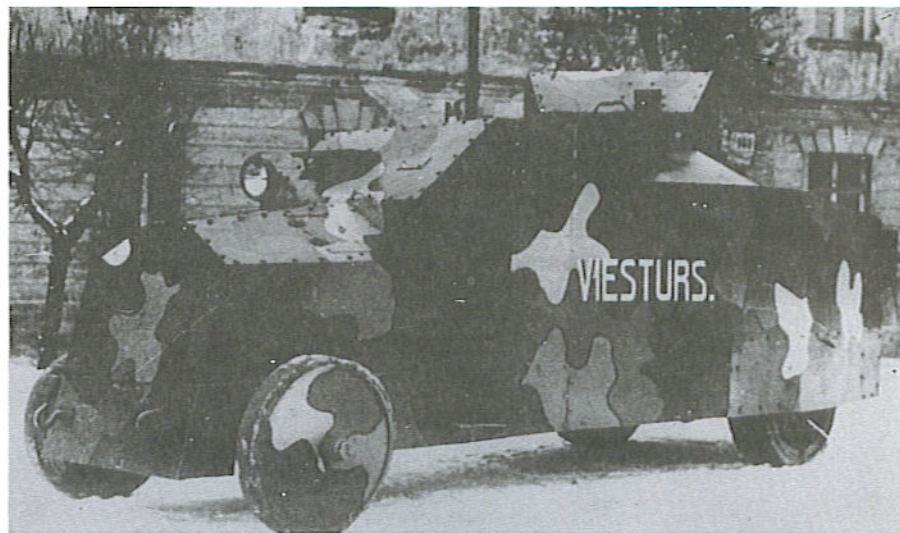
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Latvian Armored Cars from the 1920s

Below: *Latvian Crossley (?) circa 1928 with 37mm cannon.* Photo via: V.O. Shpakovsky.



Below: *Latvian Putilov-Garford circa 1920, "LACPLESIS" means "The Man from Lacplesis".* Photo via: V.O. Shpakovsky.

