



# ARMORED CAR

THE WHEELED FIGHTING VEHICLE JOURNAL



Issue #7

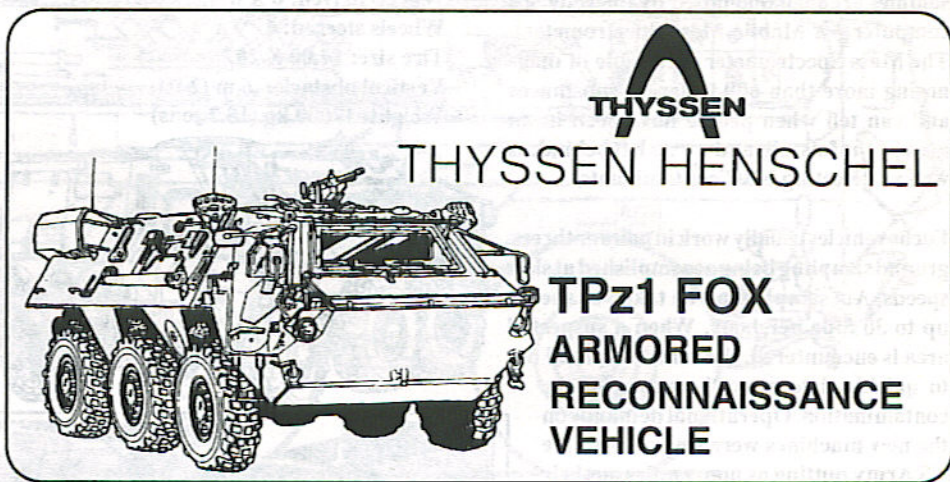
September 1991

\$2.00

When the US Army entered Saudi Arabia for Desert Shield, and later Desert Storm, they brought with them the German Army's NBC reconnaissance vehicle, the six wheeled, TPz1 Fuchs. Designed by Thyssen Henschel and produced with General Dynamics, the Fuchs filled the perceived need for a mobile, off-the-shelf NBC reconnaissance vehicle.

The US had already ordered 23 of the vehicles in addition to the 6 already with the 92d Chemical Company, 3rd Infantry Division (Wurzburg, Germany), and the three test vehicles on hand with the 9th Division at Fort Lewis, Washington. (48 Fuchs had already been budgeted for delivery to US Army Europe (USA-REUR) during fiscal year 1992.

In addition the German Army contributed 60 more Fuchs from their stocks for use in Saudi Arabia and Kuwait. At



THYSSEN HENSCHEL

**TPz1 FOX  
ARMORED  
RECONNAISSANCE  
VEHICLE**

least one Fuchs also found its way into the US Marine Corps, bearing the serial number 000001 (see photo next page).

Using a four man crew (driver, commander and two survey personnel) the ...continued next page

A TPz1 Fuchs at full speed.  
Photo :Thyssen Henschel



...continued from page 1  
vehicle samples both soil and air quality while on the move. A few molecules of air are drawn down into the system where they are bombarded with electrons. The broken down samples are then diagnosed by the vehicle's computer ( a Mobile Mass Spectrometer). The Mass Spectrometer is capable of diagnosing more than 600 different substances and can tell when people have been in an area by the fats, oils and waxes left behind, as well as detecting NBC contaminants.

Fuchs vehicles usually work in pairs or threes, ground sampling being accomplished at slow speeds. Air samples can be taken at speeds up to 30 mile per hour. When a suspected area is encountered, the vehicles spread out to quickly determine the extent of the contamination. Operational demands on the new machines were severe, with the US Army putting as many miles on their machines in three months, as they would have received in a year of service in Europe.

Vehicles also include speech secured radio equipment, an automatic position and navigation system, and meteorological sensors.

Production of the Fuchs started in 1977 with first deliveries of the initial order of 996 TPz1's in 1979. Production was originally scheduled for approximately 160 units per year to supply German Army needs.

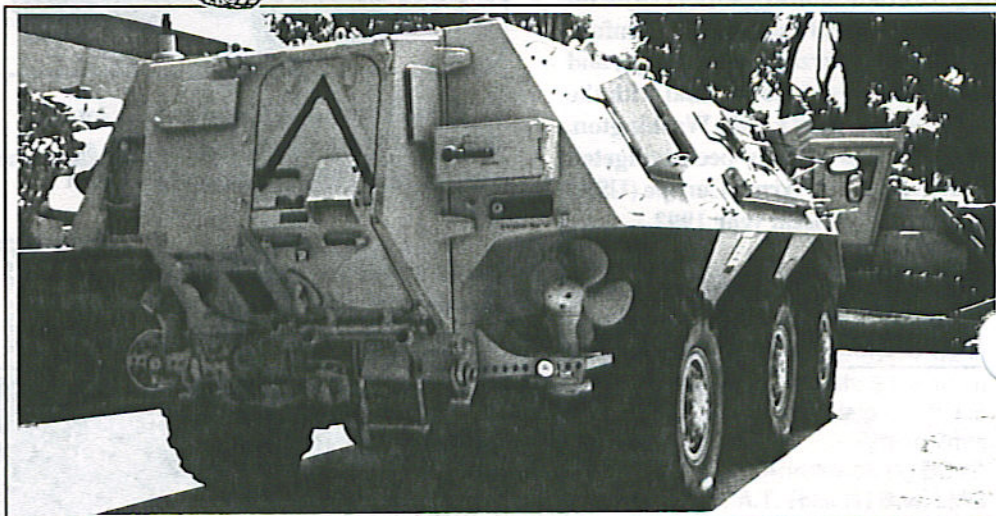
Completely amphibious and propelled in the water by two propellers as well as wheel rotation, there are several versions of the Fuchs including; armored personnel carriers, engineer reconnaissance, armored ambulance, radar, and several radio and radio intercept vehicles.

There are two models of the Fuchs available. A 1/35th vacuform by Schmidt Modelbau (this is a basic kit, with just an overall shape to work with) and a 1/87th version from Minitanks. The 1/87th vehicle can be built as either the standard personnel carrier, or the NBC reconnaissance version. The smaller kit is the better of the two with much more detail, and a lower price.

#### SPECIFICATIONS:

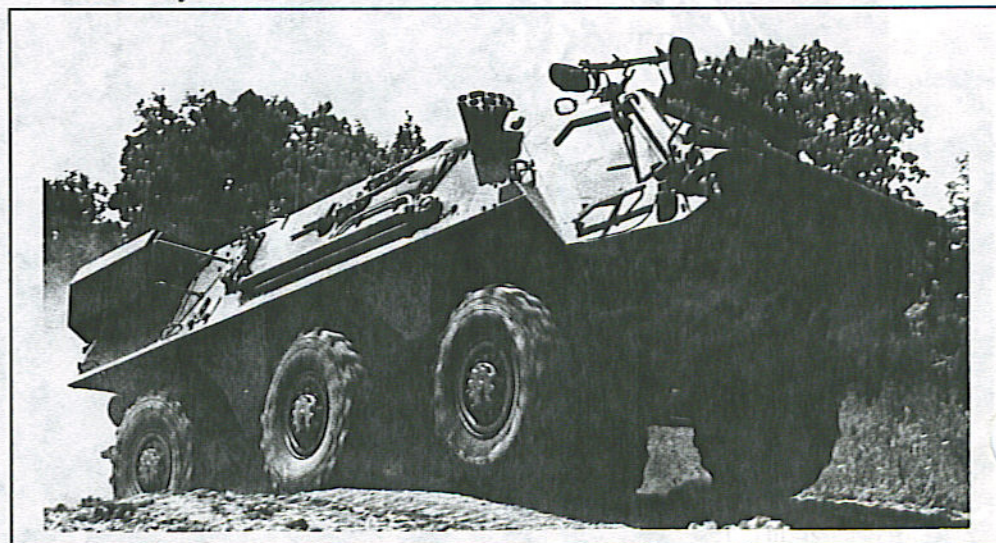
Crew: 4  
Armament: (1) 7.62mm LMG  
Length: 7.3 meters (23.9 ft)  
Width: 2.98 m (9.8 ft)

Height: 2.3 m (8.0 ft)  
Engine: One V8 diesel producing 320 hp  
Transmission: 6 speed automatic  
Max Road Speed: 96 kp/h (65 mph)  
Range: 800 km (500 miles)  
Wheels driven: 6 X 6  
Wheels steered: 4  
Tire size: 14.00 X 20  
Vertical obstacle: .6 m (2 ft)  
Weight: 17000 kg (18.7 tons)



Above: The US Marine NBC Fuchs after its return from Saudi Arabia still marked in Desert Storm colors of sand with black V markings. This machine was photographed at a display in San Diego, California. Photo © Jim Loop, September 1991.

Below: One of the Thyssen Henschel/General Dynamics machines under test in 1990. Photo Thyssen Henschel.



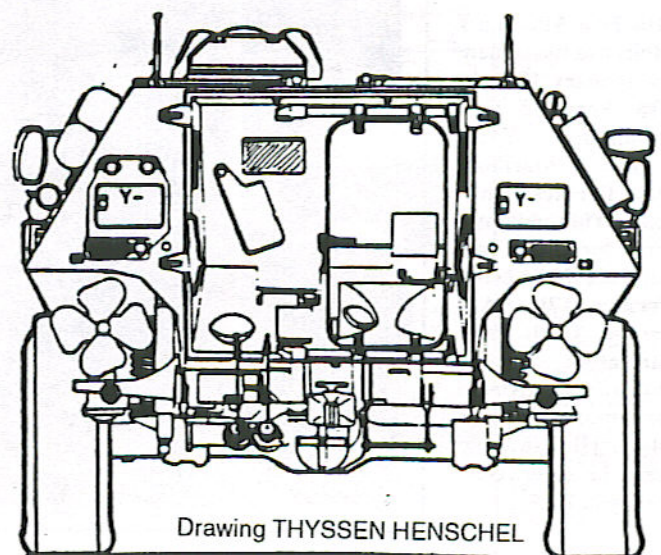
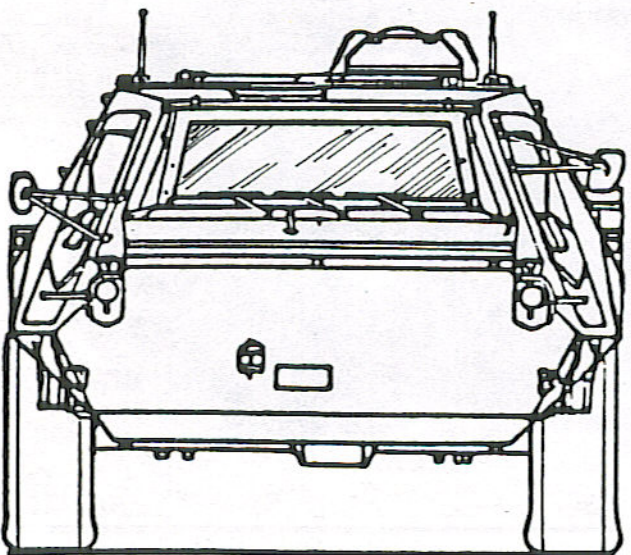
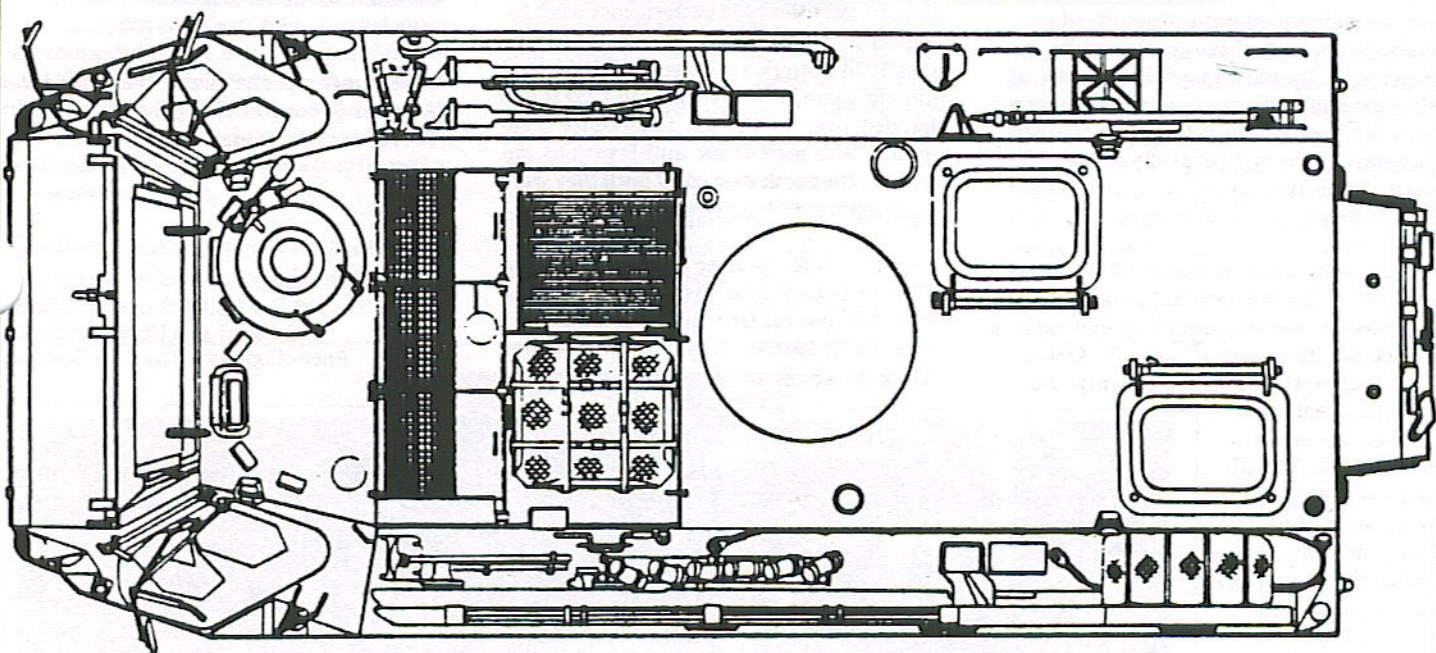
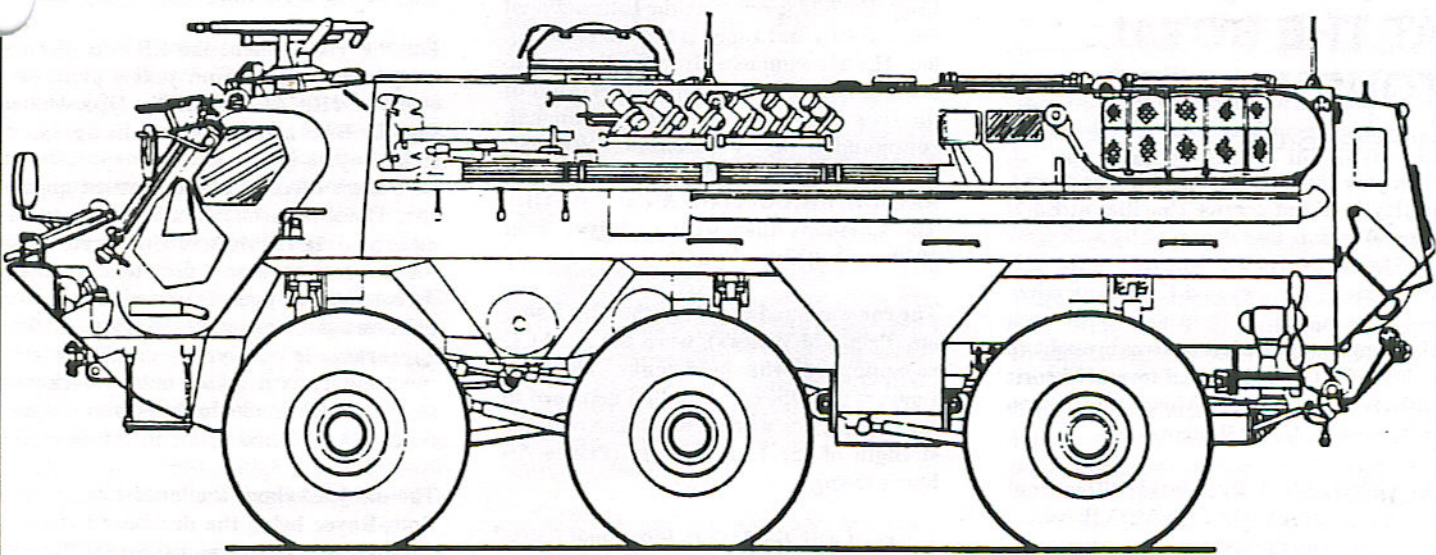
#### EDITORIAL

Here it is, the first annual issue (#7) and I thought I'd take just a little of our precious space to say hello and give you an update on where the newsletter is going, and my plans for the next year. First of all of course, is the news that there is going to be a next year. The response has been very encouraging and I already have the funding to ensure another year of *ARMORED CAR*. As of today I have subscribers in 17 countries, including the US. *AC* has truly become international.

As for those that have contributed, or promised to contribute material, if you've sent things in... Thank You! For those that have promised... please send in your contribution.

...best to all, Dave

# THYSSEN HENSCHEL FOX NBC RECONNAISSANCE SYSTEM



# ARMORED CARS AT THE ROYAL TOURNAMENT

by Peter Brown

Each year the British armed forces stage a display in aid of service charities at Earls Court, London, hosted in turn by each service. The 1991 event was an Army show, with the theme of Cavalry and Communication.

The story of mounted troops was brought up to date with the inclusion of several historic vehicles from the Tank Museum collection at Bovington, Great Britain.

For *ARMORED CAR* readers I will leave out references to the Light Tank Mk VIb (which broke down on the last day of the show) and the Tetrarch, and concentrate on the wheeled items. I was part of the team running the vehicles in the display, drivers were all Museum staff with crews and helpers provided by the Friends of the Tank Museum who raise funds and generally aid the Museum. Some two dozen of us contributed days and evens weeks to help out.

Star and oldest vehicle was the Rolls-Royce 1920 Mk 1. This is as original as any other 70 year old car, and has led a long and varied service life. It carries its original registration number, H3830 and WD Census Number M247. All inter-war service vehicles carried both. The M prefix denotes a Car, and was used on all types of car. The prefix for armored cars was changed to F in the 1930s.

The Tank Museum's Rolls was issued new in January 1921 to 5th Armored Car Company, Tank Corps at Marlborough Barracks, Dublin. (This unit had been formed in Ireland in 1920 from the former 17th (Armored Car) Tank Battalion, Tank Corps, who in Austin armored cars was the first British Army unit to enter Germany in 1918.

The Car served with the 5th in Ireland until 1922, then back to England from 1923-27. From 1927-29 it was with the International Force sent by the League of Nations to Shanghai. The Museum usually keeps the vehicle finished in the colors and markings of one of the four cars in No 4 Section, Shanghai, commanded by Lieutenant "Rickie" Richards MC (later Major General G.W. Richards, CB, CBE, DSO & Bar, MC, OL). The Company then went to Egypt from 1929 until 1932.

The car was handed over to the 12th Lancers (Prince of Wales's), when the 5th ACC re-equipped with light tanks. The 12th Lancers used the car until they returned to the UK in 1934, when it was taken onto the strength of the 11th Hussars (Prince Albert's Own).

It served with the 11th in Egypt and Palestine. In 1938 the 1920 pattern cars were replaced by the then new Morris AC9 type (the 1924 pattern cars were retained) and our car came back to the UK. In 1939 it was handed over to the 1st Derbyshire Yeomanry who used it for anti-invasions patrols on the north-east coast until they were re-equipped with more modern AFVs.

Finally in late 1940 the car arrived at Bovington, to be precise, the Army AFV school (which is now the Driving and Maintenance School). In 1946 the Royal Armored Corps Tank Museum was being established, and

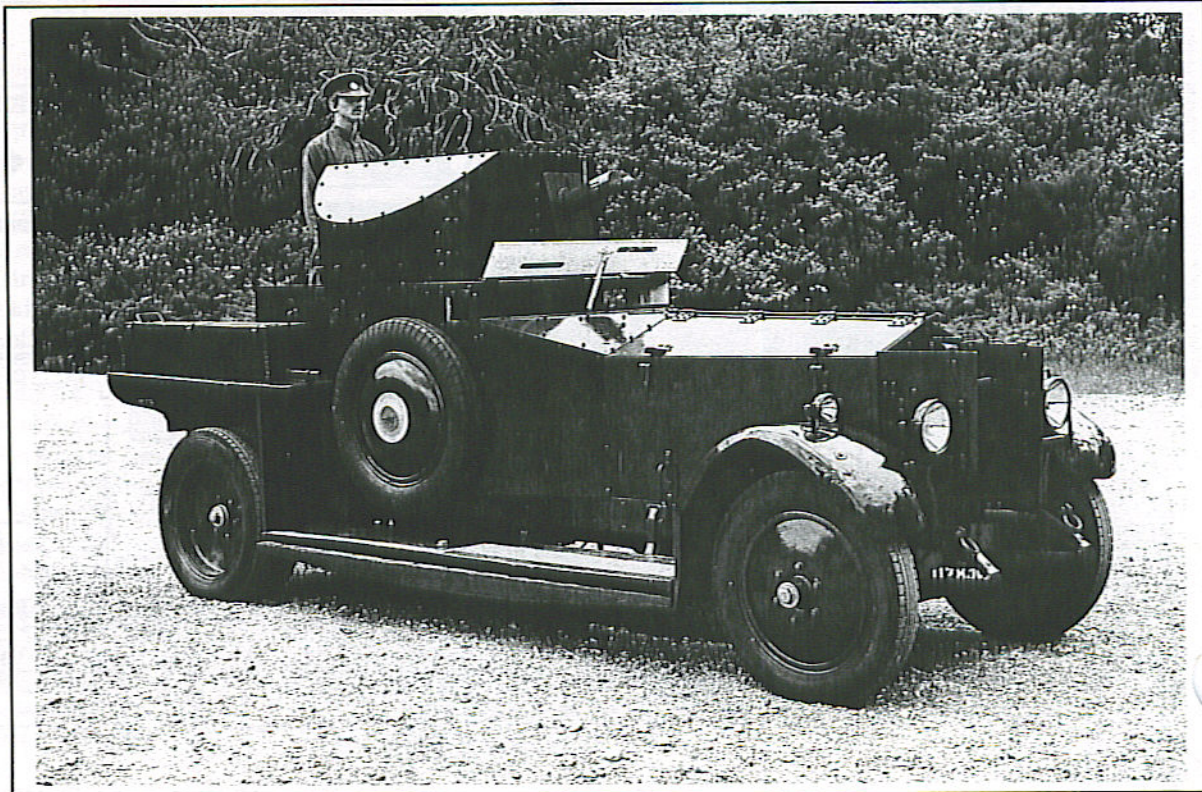
with the advent of the RAC Tank Museum, M247 became one of its exhibits. It has been maintained in running order every since

For the Tournament the RR was given a temporary coat of sand yellow paint and christened HMA CAMAZIN, a typical name used by RAF armored car units operating Rolls-Royces in the 1920s. It appeared in each show three times and caused quite a stir. The show arena is built over a swimming pool, and at six tons with narrow tires the pressure generated threatened a sudden decent into the pool. It was restricted to a tight turn into and out of the arena. Its first appearance in each performance was very spectacular, as it glided onto a darkened stage through smoke to the strains of Lawrence of Arabia and a suitable commentary.

The old joke about the loudest thing on a Rolls-Royce being the dashboard clock is almost true - under armor the seven liter engine is very quiet.

Later in the performance the Rolls led a Daimler Scout Car (Dingo) and a Daimler Ferret onto the stage.

The 1920 Pattern Rolls-Royce Armored Car preserved at The Tank Museum, Bovington. Finished as a No 4 Section Car. Photo Copyright, The Tank Museum.



## ARMORED CARS AT THE ROYAL TOURNAMENT CONTINUED....

Also at Earls Court, but sadly not running, was the Lanchester. The only remaining example of 39 built, the Lanchester has been recently restored. The tires, believed to be original, were wearing out due to their great age and were virtually impossible to replace. They had been regularly rotated to save wear. Now they have been injected with a urethane material known as Tyrfil... they are imperishable, puncture proof and yet still look completely original. They are now one of the strongest parts of the car.

To carry out the work, the tires were sent to the manufacturer's plant where they were injected with Tyrfil at high pressure. Back in place within a week, they look wonderful.

Most applications relate to shop tractors and earthmovers, but increasingly rare wheeled exhibits are being treated. Motorists should not think that they have found the answer to punctures, speeds for treated tires are restricted to about 20mph. The rest of the car is very original, and apart from the gunner's seat, intact.

Lanchesters were built from 1927 until 1932, totaling four prototypes, 18 Mk I, 4 Mk Ia, 1 Mk II and 6 Mk IIa. The Mk I and Ia had

twin rear tires while the IIs had singles tires all round. Other differences were in the turrets, Mk I and II had circular, flat-topped cupolas while Ia and IIa vehicles had cupolas with sloping sides.

The Museum car is a Mk II, the 34th car built, one of four ordered in 1931. The census numbers for these machines were F960 to F963, with registrations from MT9754 to MT9757.

The Museum machine is marked as a 12th Lancers car, as used in the early 1930s after their return from Egypt. Some time ago I met a former Lancer who has fond memories of the cars while serving in them in the Saar in 1935. He recalls vividly cleaning and polishing them, including the wheel rims under the tires!

By 1939, 26 machines were still in service. All but four served in Malaya, and some saw action against the Japanese. Of the others that remained in the UK, one was apparently converted to a passenger car for VIPs during 1940, while two served briefly with the free Belgian armored car squadron for training in 1941.

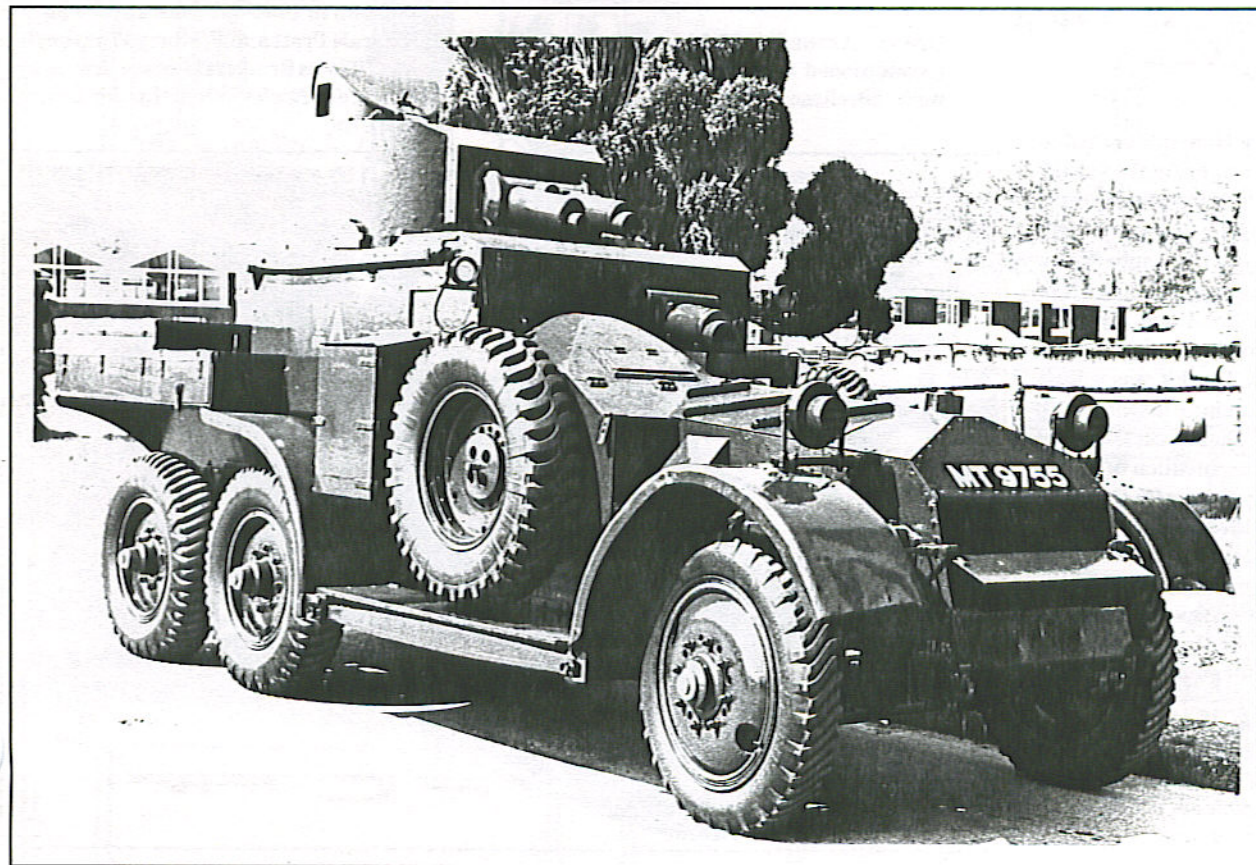
Technically the Lanchesters were more advanced than the earlier cars they replaced. They used a purpose-built chassis, rather than one adapted from a car or truck design.

The 40 hp six-cylinder engine was mounted at the front, driving the two rear axles via a three-speed epicycle pre-selected gearbox and a two-speed auxiliary gearbox. Armament was good for its day, a .50 caliber and a .303 caliber Vickers gun in the turret, along with a second .303 machinegun alongside the driver. Some vehicles did away with the .303 mounted next to the driver and fitted a No 9 radio set instead.

Crew was four men. Definitely in the heavy class, the Lanchester weighed around 7 tons with armor up to 9mm thick. At 20 feet long, 6' 7" wide and 9' 3" tall, and a 53 foot turning circle, they were quite a handful.

Contemporary light tanks were smaller and lighter, slightly better armored but many carried only one Vickers machinegun and never more than two in the later Mk V and Mk VI series from 1934.

All of the vehicles performed well at the Tournament, with only minor maintenance needed over the three-week show period. A tribute to their original builders and the Museum which looks after them. Overall the cars can be said, with tongue in cheek, in the words of a long-ago cavalryman about the horse arm, "to have added tone to what would have otherwise have been an unseemly brawl".



The Tank Museum Lanchester Mk II, the 34th vehicle in the series built. Photo copyright, The Tank Museum.

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## Letters

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Dear Dave:

If anyone has them, I would like to purchase two of the older Revell (or Adams) 1/40th scale M20 Utility Cars. I've also recently purchased the following armored car kits and thought you might like to have my reactions:

- 1). *Sovereign* 1/35th Ferret Mk2. Quite nicely done.
- 2). *Sovereign* 1/35th SdKfz 231. Too solid and heavy a kit, I like to do interior detailing and this kit doesn't allow any interior work.
- 3). *Sovereign* 1/35th Daimler Mk 1. Again too solid and heavy, hollow turret will allow some interior detail. (*I also have a Bandai 1/48th kit, what a beauty.*)
- 4). *ADV* M8 Greyhound. A nice kit with plenty of interior capability.
- 5). *ADV* Staghound. Again a very nice kit with interior detail capability.

Finally I'd like to see an article on the South African Marmon-Herrington series of armored cars. *Ken Briscoe, 16 Cawder Dr. NW, Calgary, Alberta T2L 0L9, CANADA.*

*...I'll be running an article on the M-H Mk IV soon, hang in there. ed.*

Dear Dave:

In response to Dave Hansen's question about the 20mm Breda gun for the Sahariana I seem to remember pictures of the Breda gun appearing in one of the *ORBIS - War Machine* issues... not sure which one. Also some time ago (1983?) an Italian manufacturer called *Amati* made a 1/32d scale metal kit of the Breda 20mm on its pedestal mount. The kit was a little crude, with some (but insufficient) photo etched brass parts. The instruction sheet was also poor with no mention of ammo feed. For something to go with the car, I would suggest the old *Italeri* kit #303 (no, not the S.M.L.E. rifle) Italian Paratroopers Divisione "Folgore". Besides the figures you get 3 helmets, several rifles and carbines, plus two rifles in scabbards (air drop) and a portable radio. *R.E. Driscoll, Southgate, MI.*  
*...the Italian company ITALSEDI, via F. Marchetti 19, 00199 Rome, Italy, makes a 1/35th resin AS37 light lorry with the 20mm Breda on its pedestal mount. I don't know the cost.*

Dear Dave:

If anyone out there has a some spare SdKfz 250/3 parts; wheels, suspension, tracks, interior parts, etc., please get in touch with me. I've a few ADV 250's waiting on me! Thanks.  
*Doug Somers, 910 N Gibbons, Arlington Heights, IL 60004.*

Dear Dave:

Thanks for the recent 'plug' regarding MAFVA. Not mentioned was our Information Service which is run by myself. This is virtually a free facility except that members are expected to provide IRC's or SAE's for my response, copying costs may arise too. This is not a sales pitch nor am I trying to poach your members. I simply want to make them aware that the data they seek exists.

I personally enjoyed the Baltic States Armor 1918-40 by Ed Bernardo and the Greek armor articles. Perhaps you would allow me to add further:

**Estonia:** purchased only one Landsverk armored car, an L180 in 1936, for service with the police at Tallin. Armament was a 20mm Madsen and a couple of machine guns. The side doors carried the force badge that included a lion on the logo.

**Trieste/Henriquez Collection:** Rumor has it that the Italian Army has all this equipment with a view to restoring and preserving it in a covered museum.

**Greece:** Around 1922-23 a quantity of 40 reconditioned war surplus Peerless lorries were purchased, they were converted to

a/cars and fitted with Vickers armor plate. A picture exists in the magazine *Old Motor*.

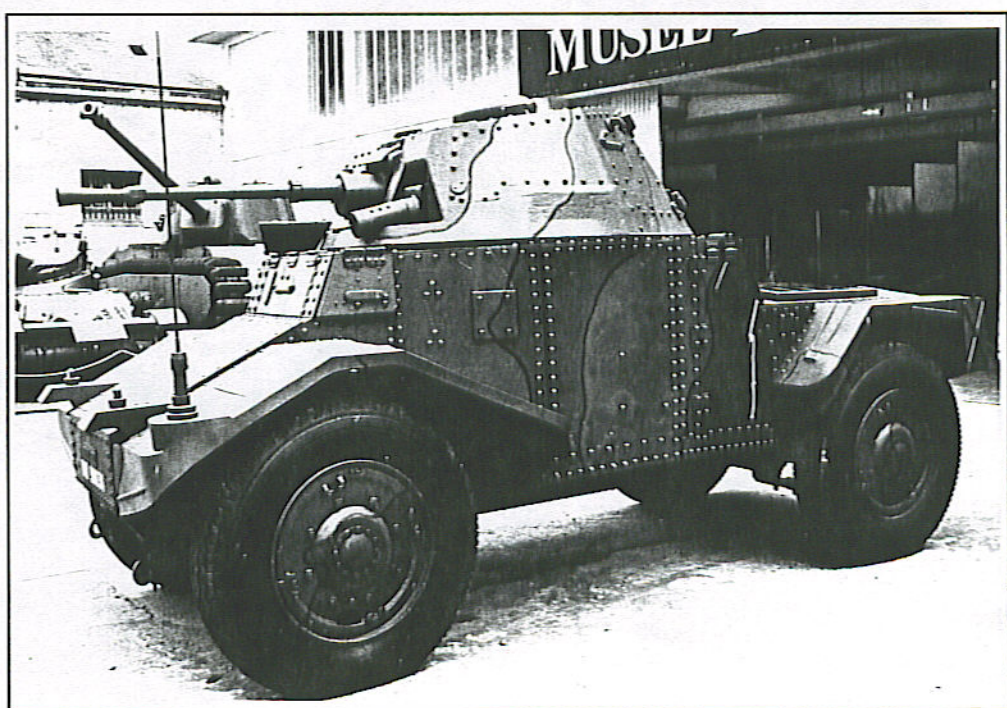
**White/Laffly:** The Yugoslav Army obtain an early version of this vehicle.

Please note that Geoff Lacey's plan service (315A South Lane, New Malden, Surrey KT3 5RR, Great Britain) has covered many afv's some 550 vehicle drawings being available direct from him. Both armor and softskins from all nationalities are available. Send a large SAE and a P/O for a pound (UK only) or send four IRC's (foreign/US) to cover postage of a list. *John Baumann, 102 Clockhouse Lane, Collier Row, Romford, Essex, RM5 3QT, Great Britain.*

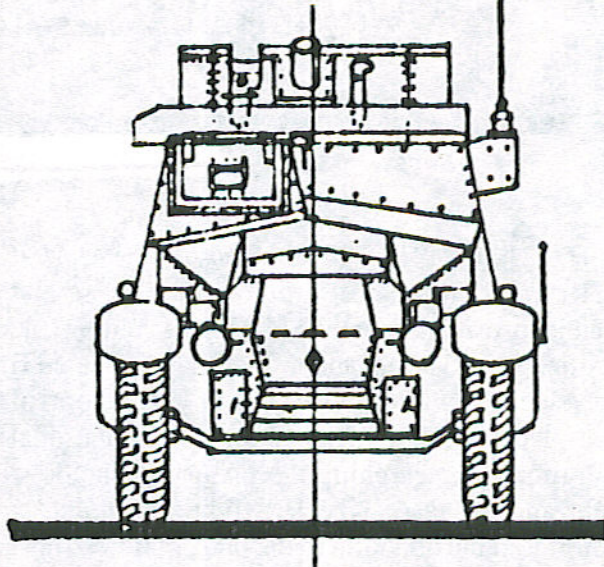
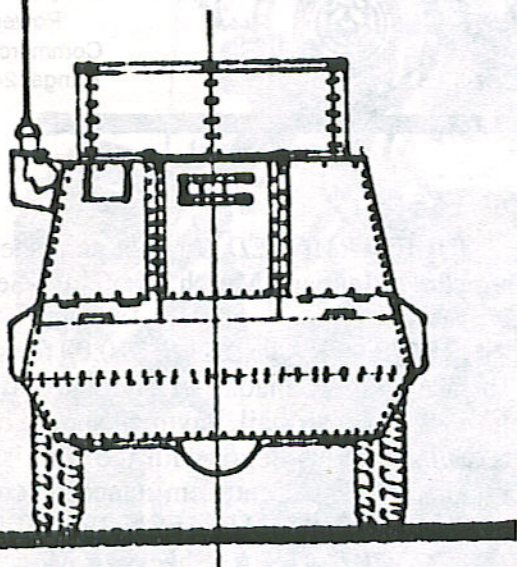
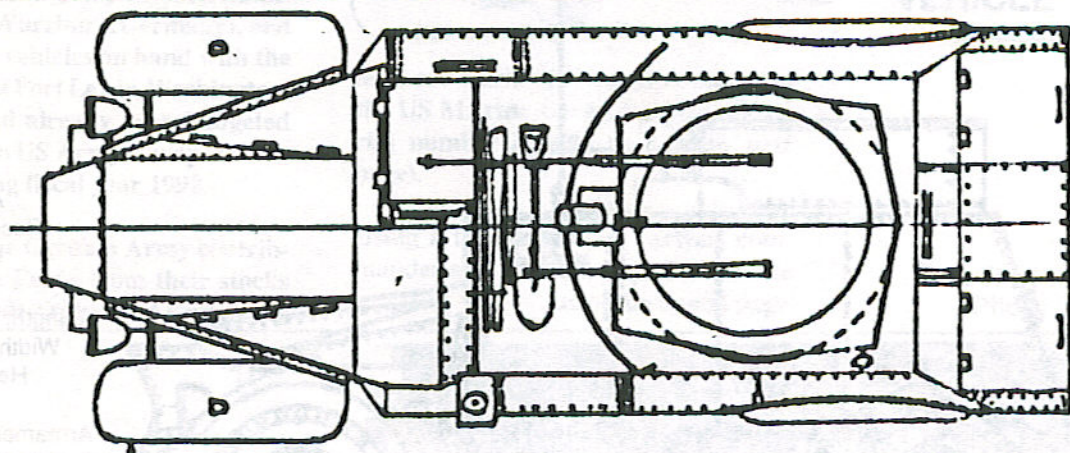
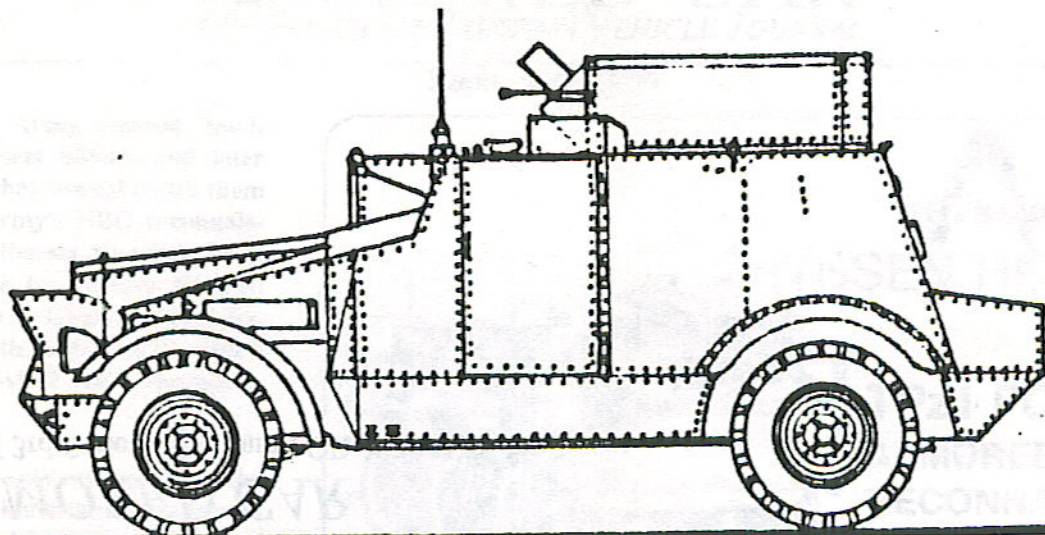
*...One of G. Lacey's drawings is in this issue, the AC9. Geoff's originals are in 1/76th scale the slight fuzziness is caused by my enlarging them to 1/35th, they hold up well because of his skill...for those that may have forgotten, the address for MAFVA is c/o Gary Williams, 15 Berwick Ave., Heaton Mersey, Stockport, Cheshire SK4 3AA, Great Britain, ask for the current rates, and enclose an IRC to help with postage.*

Dear Dave:

Just came back from Saumur, enclosed is a photo of the Panhard AMD 178 rebuilt from bits and pieces (*see photo below*). I also have two requests, does anyone know which French units had the Dodge WC 55 (with the 37mm gun in 1944-45? Does anyone have a 1/32d scale Pratt and Whitney Wasp engine from Williams Brothers? *Patrice Debucquoy, 35-6 rue des Ecoles, 59390 Lys lez Lannoy, FRANCE.*



## MORRIS - COMMERCIAL CS9/LAC 4 X 2 ARMORED RECONNAISSANCE CAR



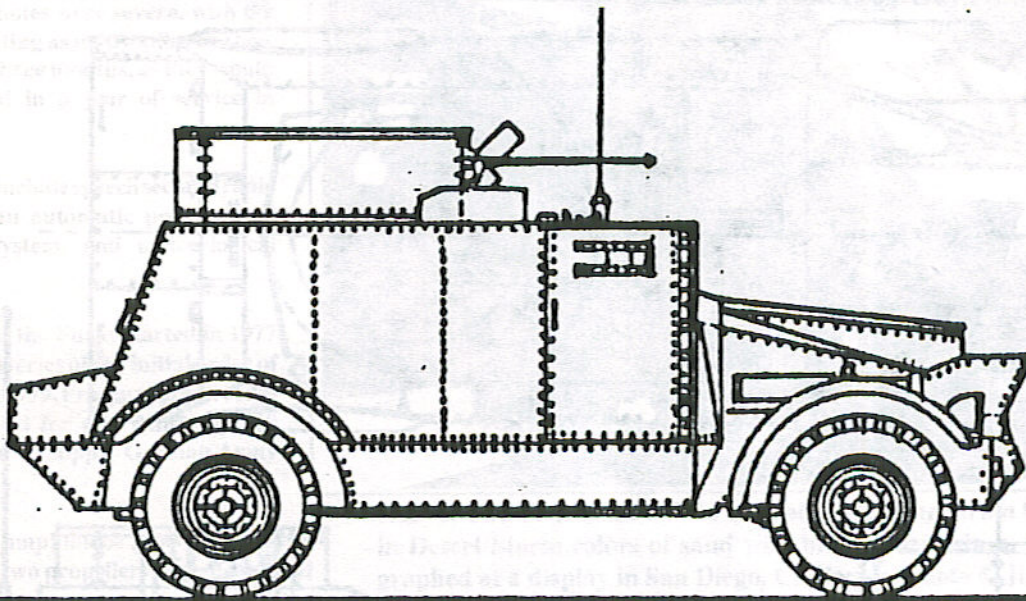
Crew 4. 100 built 1937-8 using extended 15 cwt chassis. 38 taken to France in 1939 by 12th Lancers the only armored car regiment of BEF. Also used by 11th Hussars in Libya. All withdrawn from service by Spring 1941.

Scale 1/35th

Drawing Copyright © Geoff Lacey, September 1991

556 N 3rd Street, Woodburn, OR, 97071 U.S.A.

## ARMORED CAR



Armored Car  
Reconnaissance  
Morris (AC9)

Length: 15 ft 7 1/2 in

Width: 6 ft 8 1/2 in

Height: 7 ft 3 in

Armor: 7mm

Armament: (1) BOYS

A.T. Rifle (1) Bren LMG

Power: Morris

Commercial 96hp

Range: 240 miles

**EDITORIAL POLICY:** The purpose of the *ARMORED CAR* Newsletter is to, "promote interest in; and exchange information on; the history, development, collection, preservation, and modeling of wheeled fighting vehicles from around the world". In support of this goal, *ARMORED CAR* encourages international cooperation in researching the history of the development and usage of wheeled fighting vehicles from their initial introduction to the present time. Subscribers are asked to support *ARMORED CAR* by submitting material (photos, drawings, articles, etc.) for publication. A member's subscription will be extended by one issue for each time their material is used. All material is copyrighted by *ARMORED CAR* and no reproduction in whole or in part is permitted without written permission.

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