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Editor: lan Cushway ian.cushway@keypublishing.com Contributors: Dave Hardway, David Fletcher, Geoffrey Fletcher, Scott Smith, lan Stead, Andy Stead, Nigel Hay, Les Freathy, Diana Hawkins, Paul Hazell, Peter McNeil, Duncan Nicholson, John Norris, Jim Kinnear, Jon Hickman, Jon Burgess, James Taylor, John G Teasdale, David Gilbert, Alain Henry de Frahan, lan Young, John Blackman, Carl Schulze, Tim Bolton, Dimmen B Van Herwaarden, Karl Ludvigsen Piotr Mariusz Radomski Designer: Sean Phillips, AT Graphics Ltd

#### ADVERTISEMENT SALES

Group Sales Manager: Brodie Baxter tel: +44 (0)1780 755131 brodie.baxter@keypublishing.com

#### **PRODUCTION**

Design and Colour Repro: AT Graphics Ltd **Production Manager:** Janet Watkins **Advertisement Production:** Danielle Tempest danielle.tempest@keypublishing.com

#### MARKETING

Group Marketing Manager: Martin Steele Marketing Manager: Shaun Binnington

### MANAGEMENT

Publisher and Managing Director: Adrian Cox Executive Chairman: Richard Cox Commercial Director: Ann Saundry

#### SUBSCRIPTIONS/MAIL ORDER

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### January 2016

### NUMBER 176 Conten

### **OPENING SHOT!**

In search of the ultimate camper for the 2016 show season?

### **REVIEW**

The latest happenings from the classic military vehicle world, with news of two Jeeps at auction and three new books reviewed.

### TWO OF A KIND

#### **★COVER STORY**★

Making one good M4A1 Grizzly out of two was no problem for enthusiast Jez Marren.



### THE DUTCHMAN

#### COVER STORY

David Fletcher profiles the Vickers-Armstrongs versatile Mark IIIB tank.

### **GOOD DAY AT THE OFFICE**

#### COVER STORY \*

This ultra rare Chevrolet HUC Command Car is one of just a handful of survivors.



### **FANCY A CUPPA?**

### **★COVER STORY**★

The mobile canteen must have been a welcome sight for those in the forces, but do you know how they came about? We reveal all...

### **COMMANDING STYLE**

James Taylor looks at Rover staff cars of the 1970s.

### **A BRIDE IN WAITING**

### **★COVER STORY**

James Kinnear extolls the many virtues of the Russian BTR-90 Rostok wheeled APC.



### FRONT COVER

Page 12, this Sherman Grizzly was the ultimate military cut 'n' shut before undergoing an extensive restoration...



### 50 SINK OR SCHWIMM COVER STORY

We're all familiar with VW's Type 166 Schwimmwagen, but less is known about its bigger predecessor the Type 128...



### **FROM THE ARCHIVES**

Proving what a tight fit the Tetrarch tank was in the Hamilcar glider.

### **MILITARY & FLYING MACHINES SHOW**

John Blackman went to Essex to report on events.

### **COMING NEXT**

Find out what's in next month's issue.

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A round-up of forthcoming shows and military fairs.

### THE MILITARY VEHICLE MARKET

Find out about the movers and shakers in the military vehicle market, courtesy of Milweb's Nigel Hay.

### **MV PRICES**

Our bang up to date listing of current vehicle values.

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It's all about the bike!

AND SAVE — PAGE 66
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## OPENING SHOT

### CARRY ON CAMPING!





A round-up of military-vehicle related news and products. Send news items to ian.cushway@keypublishing.com

### Despatches \*\*\*\*\*

o doubt you'll have heard of the term 'cut 'n' shut' when it comes to dodgy cars. It's when the back half of one car is welded to the front of another - usually when the opposite ends of both have been damaged beyond repair in a smash. The hope is that after an awful lot of jiggery-pokery, the end result can be sold on to an unwitting buyer for much more than the sum of the two write-offs that have been used in its construction. Needless to say, in reality the new owner will be driving a potential deathtrap that's worth virtually nothing. Incredibly, the rare Sherman Grizzly you see on the cover once started off as two different tanks - the only difference being that having undergone an extensive restoration, it's worth considerably more than a few buttons. Oh, and it's not likely to fall apart anytime soon, either. The great thing is that it's a cut 'n' shut but in reverse because out of the one tank, the 'second' Grizzly is currently also in the process of being restored. Now, how many car cut 'n' shut stories have that kind of happy ending?



Ian Cushway



# IME & MARLES



A one day event is planned for Sunday 6 March 2016 to commemorate the 75th anniversary of the Luftwaffe attack on the Ransome & Marles bearing factory in Newark-on-Trent and military vehicle owners and re-enactors are invited to come along and get involved.

The commemoration is a joint venture between Newark Air Museum and the NFS and AFS Vehicles Group who specialise in re-enacting wartime and post-war firefighting activities of the National Fire Service and Auxiliary Fire Service: and hopefully Newark Town Hall, Newark Cemetery, NSK (TBC) and other likeminded organisations.

This will be part of the weekend of commemorative events. starting at 1:30pm on the Saturday outside the Town Hall with the reading of the names of the 41 people killed, and culminating at the cemetery on the Monday where 30 of the 41 are buried.

The main event at the museum will be a major air raid demonstration organised by the NFS and AFS Vehicles Group, who are well-known in 1940s circles for their realistic demonstrations at Woodhall Spa, Rufford, and the Newark Fire Show. The demonstration will start at 1:25pm, the actual time of the air raid 75 years ago, and the events in the aftermath of this will run all afternoon.

To help make the day even more memorable the museum is looking to invite visiting displays and participants relevant to that time, including re-enactment groups, particularly those portraying factory workers (the more the better), ARP, rescue, police, fire service, WVS, ambulance, Home Guard and British Army, wartime and pre-war cars and military vehicles. For further details about how to get involved email events@newarkairmuseum.org

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CVRT Scimitar Armoured Reconnaissance Vehicle, Fitted Cummins BTA 5.9lt Turbo diesel, Automatic Gearbox with Neutral turn capability, Maximum road speed 72 km/h, Range 750 km, etc, 820 miles, Excellent condition. Guide price £39,995 (1 Available)



Alvis Stormer Tracked Armoured Recon Vehicle, Fitted Perkins 6-litre, 6-cylinder, Crew: Driver, Commander plus 2 pax, year 1992, low mileage, Excellent condition, Guide price from £12,500 (6 Available)



Spartan CVRT Dieselised APC, Fitted Cummins BTA 5.9lt Turbo diesel engine, Maximum road speed 72 km/h, Range 750 km, The vehicle can carry up to 7 personnel, including 3 crew members, Mileage 1296, Hours 502, Excellent Condition, Guide price £19,995 (1 Available)



Land Rover Wolf 90 300Tdi Hard Top RHD, Fitted 300Tdi engine, 5 speed R380 gearbox, Hi/Low transfer box with centre diff lock, full FFR installation kit, 24-volt electrics, PAS, front and rear disc brakes etc, Mileage from 45110km, Guide price from £10,995 (6 Available)



Wolf 130 Battlefield Ambulance RHD, Fitted 300Tdi engine, 5 speed R380 gearbox, Hi/Low transfer box with centre diff lock, PAS, front and rear disc brakes, heavy duty chassis and axles, Goodyear G90 tyres, spare wheel, low mileage, Year from 1997, runs and drives well, Very good condition, Guide price from £15,780 (5 Available)



The DAF 4x4 Truck, Cargo capacity of 5000kg, Fitted Cummins 5.9 ltr Turbo Diesel, permanent 4x4, Hi Lo Ratio with Diff Lock, PAS, Air brakes, Nato style rear hitch, Engine power 145hp, Maximum road speed 89 km/h, Range 500 km, Year from 1994. Guide price from £4,500 (40 Available)

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# PS UNDER

Tim Bolton reports on the auction of two wartime Jeeps...

In the space of less than ten days two nicely restored Jeeps came up for auction at separate sales in the West Country. On Thursday 15 October Dukes of Dorchester offered a 1942 example stated to be in "well kept running order" that was first registered in 1947. The pre-sale estimate was £10,000-£15,000, which, from the appearance in the photograph did not appear to be over optimistic. Come the day of the sale bidding started at £5000 and the hammer finally fell at £10,500.

On Saturday 24 October at a site on the outskirts of Chippenham, Richard Edmonds Auctions offered a 1942/43 Jeep and Bantam trailer combination which was summarised rather boldly in the description as being "believed to be the best restored example in the UK.' This no doubt led to the quite ambitious pre-sale estimate of £30,000-£32,000 for the combination, the auctioneer thinking this to be achievable given that a Jeep had sold recently at the







Goodwood Revival meeting for a similar figure. The restoration was said to be 'superb' and there was a photographic record of the restoration available together with earlier MoT certificates. Come sale day though normality prevailed, with the pair selling for a hammer price of £24,500, which is about the present market value.

Photographs courtesy of Dukes Fine Art Auctioneers and Richard Edmonds Auctions.







## **PETER GRAY**



George Kimmins is organising a get together for friends of the late Pete Gray on Saturday 23 January 2016 at the Scout Hall, Church Lane, Ashington, West Sussex. It kicks off at 1pm and is expected to draw to a close at around 5pm. All are welcome and, according to friends of the classic military vehicle collecting pioneer, it is likely to be a 'sizeable do'. For more information, call George Kimmins on 01903 872787.

### **WRITE TO** REPLY

### **LANCHESTER LEGACY**

Having read David Fletcher's piece on Lanchester armoured cars in your October issue I thought this photo dated 14 December 1934 might be of interest. The caption on the reverse confirms that it is of the 12th Lancers preparing their armoured cars at Tidworth, Hants, prior to joining the British contingent of 1500 troops which formed part of the international force in the Saar.

Alby Anderson, via email



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### MINS WITH.

We grab a quick chat with Mike Lopez from Engine Carbon Clean North East...

CMV: So who are you, where are you based - how long have you been going? Oakfields was established in 2000 - we are an independent Land Rover specialist, based in Thornaby-on-Tees in the North East of England. In June 2015 we became the North East representative for h2gogo's Engine Carbon Clean franchise network in the UK.

### CMV: What do you do?

General garage services, specialising in engine carbon clean. The engine carbon clean service uses hydrogen technology to help remove harmful carbon build-up in a vehicle's engine via a thorough 'detox'. The effects are immediate, noticeable and long lasting.

### CMV: So do vou see many military vehicles, what are the benefits?

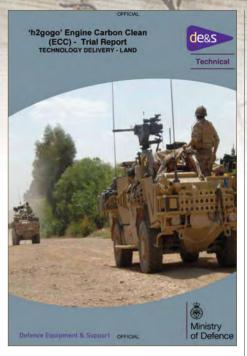
Working with the MoD we have provided the service to various military vehicles including Panther, Jackal and Spartan tanks. The benefits include improved performance, smoother running and more responsive engines, as well as reduced emissions.

CMV: How long does it take, how much does the treatment cost?



Our engine carbon clean treatment starts at £99, and the service takes between 30 minutes and one hour depending on the size of the engine. We can carry out the service on any internal combustion engine, petrol or diesel up to 100-litres.

CMV: To sum up, it's worth doing then? Independent MoD results show that the system had a cleaning effect on the engines which would increase the engine's performance and a give a possible increase



in the engine's lifespan, by reducing the regularity of engine cleaning and maintenance requirements, making substantial savings.

### CMV: How do military vehicle owners get in contact?

Call us on 01642 956110, 07766 789 552 or visit www.oakfieldsservices.co.uk

Engine Carbon Clean can also be contacted on 01494 817174 or www.enginecarbonclean.com

### READ ALL

### **BRITISH MILITARY LAND** ROVERS

Renowned military vehicle historian Geoff Fletcher along with regular CMV contributor James Taylor have contrived to provide a uniquely detailed study of leaf-sprung Land Rovers supplied to the British Army, Navy and RAF between 1948-85. There's even a section on 'specials'. Their tome includes descriptions of the many different types of vehicles issued, including exhaustive lists of the actual vehicles delivered. Illustrated by over 350 photographs, many of which have never previously been seen, it's the perfect database for Land Rover lovers and military vehicle enthusiasts alike. In fact, it's so good we'd go as far as to suggest it's a must-have book for anyone interested in the subject.

Herridge & Sons Ltd, £35 hardback - ISBN: 978-1-906133-65-8

### WEAPONS AND FIGHTING TACTICS OF THE WAFFEN-SS The military achievements of Hitler's

elite during WW2 were due in no small part to the hardware they deployed. This book by Stephen and Russell Hart examines the weaponry and tactics they used, including the small

arms, anti-tank weapons, armoured personnel carriers and tanks that were called upon by the Waffen-SS between 1939-45. It goes without saying that the chapters that interest us most are the ones which talk about the Panzer and Tiger and their various battle tactics. A definite bookshelf addition for classic military vehicle lovers and re-enactors alike.

Amber Books, £19.99 paperback - ISBN: 978-1-78274-312-5

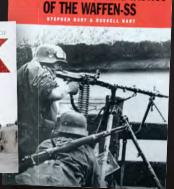
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the iconic tanks of WW2, through to the tanks used during the Cold War and the latest technical marvels that ready themselves for future conflicts around the world. Author Michael E Haskew provides an informed dialogue, supported by quality archive images to illustrate how the tank's last 100 years have unfolded. There are more detailed books around and most of the contents have already been covered elsewhere, but it covers all the bases and provides a useful historical setting to the way tanks developed to cope with different battle situations.

Zenith Press, £25 hardback ISBN: 978-0-7603-4963-2





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# TWO OF A KIND

John Blackman talks to Jez Marren about his freshly restored M4A1 Grizzly



Jez Marren debuted his M4A1 Grizzly at War and Peace Revival 2015 where it took part in the battle scenarios to good – and loud – effect.

recently published estimate suggested that there are as many as 30,000 cutand-shuts on Britain's roads. By and large these are cars cobbled together by unscrupulous motor traders who have welded the good front half of one insurance write-off to the good rear half of another, and concealed the fact in the pursuit of profit. Indeed, you need not search far on the internet to find tales of such cars dangerously separating into their component halves when involved in another accident. Of course, the practice of using components from several cars to make one or, for instance, producing a stretch limo or the like by cutting an existing vehicle and inserting a section between the two halves, is not illegal. It is all a matter of how it is done and whether the result meets stringent safety standards.

How is this relevant? Well, you see before you an extreme, not to say impressive, example of cut-and-shut: Jez Marren's M4A1 Grizzly. I was about to write something to the effect that it is a survivor of the 188 Grizzlys produced at Montreal Locomotive Works during late 1943, which is true except that it is actually based upon the halves of two

surviving Grizzlys welded together. The MV enthusiast's ultimate cut-and-shut you might say, and certainly not one likely to split apart at the first knock.

### TV STAR

Some of you may recall a cable TV series called Tank Overhaul, the first series of which aired back in 2007. Made by a

Canadian production company, it looked at various armour restoration projects undertaken by teams in, for the most part, America and Britain. It was interesting but sometimes frustrating programme because such restoration projects are generally long drawn-out affairs beyond the scope of a short TV series, and one was occasionally left wondering what happened next as the credits rolled. For example, programme three, during which the TV crew visited the now-defunct Isle of Wight Military History Museum where managing director Dave Arnold and his team were embarking on an ambitious project to turn two knocked-about Sherman hulls into one good hull. And so they did. But what happened next? How did the restoration proceed?



Jez Marren looking pretty pleased with Hannibal's performance.

### **FULFILLING A DREAM**

By now the penny should have dropped that what happened next was Jez Marren. For it was he who purchased both the Grizzly cut-and-shut featured in Tank Overhaul and, a few months later, the cut-and-shut made from the left-over, more damaged, halves that Dave Arnold and his team subsequently joined together off-camera. For Jez, getting a Sherman was the culmination of an ambition that dated back to when he was 16. At that age owning a Sherman was probably more of a dream than an ambition; he couldn't even afford the Willys Jeep he hankered after. But a Champ was within budget so that was what tided him over for some 13 years until he managed to get a Jeep which was, as he puts it, his "first proper WW2 vehicle."

He's had plenty since. We've probably missed a few out here but after the Jeep came an International half-track, then an M8 armoured car followed by a Ford GP prototype. A Harley-Davidson WLC which he had acquired made way for a 41-WLA then 42-WLA, what we would understand as the



Jez wants to put in a few more hours getting the interior sorted to his satisfaction but here is a view across the fighting compartment, left to right.

standard military Harley. A Dodge WC5 also joined the Marren collection followed by two M8 armoured cars and then, around five years ago, he purchased the two Sherman projects that had featured in *Tank Overhaul*.

The Grizzly was basically a Canadian-assembled M4A1 based around a hull and turret cast by the General Steel Castings Corporation – the hull at its Commonwealth Plant in Granite City and the turret from its foundry in Eddystone, Pennsylvania. Hence the 'G' logo visible on Grizzly glacis plates (when not covered by kit as per Jez Marren's example) stands for 'General Steel' not 'Grizzly'. There were a few differences between the Canadian Grizzly and US-built M4A1s with the most obvious being the use

of CDP (Canadian dry pin) tracks which did not require the use of rubber, a valuable commodity at the time. The CDP track also necessitated the use of 17-tooth drive sprockets rather than the 13-tooth types found on US-built M4s.

#### GAME OF TWO HALVES

Of course nothing is known of the war service of Jez's two Grizzlys but they were in the batch supplied to the Portuguese Army by Canada in the mid-fifties as part of a military aide programme. Three decades later, once surplus to requirements, they were among a number of ex-Portuguese Army Grizzlys and Sextons that were shipped to the UK and, rather ignominiously, ended

Below: It is said that the British Army requested that turret pistol ports remain a feature of Lend Lease Shermans although the US Ordnance Department had directed in the spring of 1943 that they be deleted from Shermans destined for US forces. Grizzly turrets, however, were cast by General Steel in Pennsylvania and did not have turret ports.



### E RESTORATIO



Following the Tank Overhaul TV programme nothing much happened beyond a film of rust. This is what Jez started with.



First the wheel stations were overhauled and refitted so giving Jez a rolling chassis



Little of the tin work was usable but it at least provided patterns so replacements could be made.

up as hard targets on the MoD's Otterburn training area in Northumberland until rescued by David Arnold.

As one Grizzly hull had significant damage to the front and the other to the rear, Arnold elected to chop both hulls apart and join the two good (relatively speaking) halves together. Easier said than done of course. The key to the success of the exercise (apart from making accurate cuts in the first place) was the mounting of the resulting halves - aligned by fitting the turret ring which 'bridged' both parts - in a revolving welding iig. Imagine a giant rotisserie but with the Grizzly in place of a suckling pig and you'll

get the idea. The point of the jig was to allow Arnold to always weld downwards so that gravity drew weld into the armour. And there was certainly a lot of welding to be done. Apparently some 5 miles (8km), or 66 lb (30kg), of welding wire was used.

So what happened subsequent to the TV programme? Not much, unfortunately, at least until Jez Marren appeared on the scene and snapped up both hulls. "Both had nil internals other than the remnants of the original turret baskets and shot up fuel tanks," Jez now says, "nothing of which was salvageable. But they were good for showing what the parts should look like.

I've spent hundreds of hours searching the internet to buy original parts where possible. And if I couldn't buy original parts I borrowed what I needed from either Carl Brown, Adrian Barrell or Tey Restorations, and made duplicates."

The first thing Jez had to do was to get the wheel stations complete and back on so that he had a rolling chassis. Then it was a case of getting the gearbox and differential functional. "An engine was bought from Chris and Terry Till and rebuilt by Carl Brown's C & C Military. We then had the propshaft made and started work on the turret, the hydraulics and all the other mechanical components," explained Jez.

Tey Restorations worked on the main gun's recoil mechanism and painted and fitted some of the component parts to the new turret basket which had been made by Adrian Barrell to whom I sent the two originals. When it came back we started fitting the motors and electrics, the hydraulic



Hannibal's 'snug' driving position.



Hannibal's Continental R975 nine-cylinder radial was rebuilt by Carl Brown's C & C Military

### M4AI GRIZZLY

### Photos courtesy of Jez Marren



A rolling chassis with the three-piece transmission housing in place.



Jez and his team fabricated such items as new light guards.



Above: Neither of the two battered, original, turret baskets were usable...



...so a copy was fabricated.



A rear view with the turret ring is in place.

reservoirs and all the other many parts. The wheel stations and track fitting we did ourselves, plus all the additional welding of the hull and repairs to the turret ring and the fitting of pioneer tools, headlamps, towing

loops... all that we did in-house as well as all the painting. Any castings I needed I got done at a local foundry and we did the machining to finish them off."

**DRESSED FOR THE OCCASION** Inevitably, when the Grizzly, dubbed *Hannibal*, debuted at the 2015 War and

Peace Revival there were still things to be done, as Jez explained: "A good mate of mine, Mark Almond, who is in the credits of the film *Fury* for prop-dressing, came up one Saturday morning and helped me put

"Imagine a giant rotisserie but with the Grizzly in place of a suckling pig and you'll get the idea.."

the kit on to get the effect right but there are a lot more hours we want to put in to really finish it off and tidy it up, particularly inside. I'll also be putting American tracks on. There isn't a lot of difference, just in pattern. The outside hangers are the same. Most people wouldn't notice."

And what of the second, 'bad', Grizzly? "It is now complete as a hull and chassis."

Jez confirms. "There's none of the battle damage left and we are now at the stage where we are stripping the six wheel stations ready to get it into a

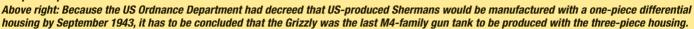
**>>>** 

rolling chassis. We've also repaired the turret and turret ring. A younger friend of mine is very interested in buying it so he'll finish the job under my quidance. I'm going





Above: The gunner's position showing his sight and periscope.





to help him through the project. I've already lined up around 80% of the parts needed. The main things missing are the gun mount and engine. Pretty much everything else is there to restore it."

So it seems as if we have yet another top-notch M4 to look forward to in the foreseeable future. They'll soon be as common as FV432s... well, no. I jest. But we can live in hope.



Above: The co-driver/machine gunner's spot.
Above left: Hannibal's live-firing .50cal.





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# THE DUTCHMAN

David Fletcher looks at the origins of the light tank and profiles Vickers-Armstrongs' charismatic 'Dutchman'

IIIB — but nobody seemed to know that. Forty were requisitioned and taken into service at the outbreak of WW2 from Vickers-Armstrongs Ltd having been built for service with the army of the Dutch East Indies who already had 24 of them. They were typical light tanks of the period, two-man machines powered by a Meadows 88hp petrol engine with about 12mm of armour but, typical of commercial light tanks marketed by Vickers, they could be fitted with the type of turret, armament and brand of radio required by the customer. In Dutch service they would probably have been armed with a pair of air-cooled Colt-Browning machine guns but for British use a single, water-cooled Vickers.303 machine gun was mounted instead. Like most light tanks they were pretty hopeless in combat situations. In truth, they were only ever intended for training although in due course the Prime Minister sent a few to Greece, all of which ultimately ended up in German hands.

Vickers-Armstrongs, as it became in 1928, had already enjoyed considerable success on the export market with its popular but cheap Carden-Loyd Carrier. It was a market it needed to retain, despite increasing foreign competition, especially in view of the fact that the British Army was only ordering tanks in small quantities or as experimental prototypes that only led to profitable business if it resulted in production. Of course part of the success in the export trade relied on having something new to sell and here Vickers was not as prompt as it might have been, often proving reluctant to introduce new models and relying on older ones for far too long.

### **EARLY EFFORTS**

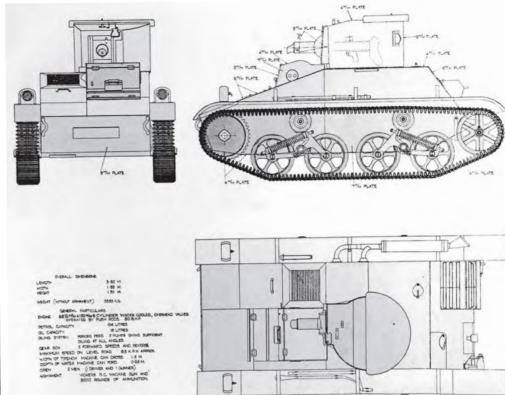
Vickers began designing tanks for commercial sale in the early twenties, all of which were identified by a letter of the alphabet to distinguish them from those built for the British government. Thus its Medium A and B were paper designs only while just one Medium C and a single Medium D were sold to Japan and Ireland respectively. The Mark E, better known as the six-tonner (*CMV* February 2011), was a rip roaring success, while the Mark F, the last of the line, was not.

In 1931 Vickers also came up with a design which it hoped would appeal to

the British Army, as well as overseas customers. This was its Light Amphibious Tank of which the British bought just two, which were used for trials but never accepted for service in larger numbers. The tank was an unusual design with hardly any hull to speak of at all. It was powered by a Meadows six-cylinder petrol engine with an extra take off from the gearbox to drive a marine propeller. This gave it a top speed of about 3mph (4.8km/h) in the water and up to 40mph (64km/h) on land, which given the general lightness of its construction proved to be too much.

The range of light tanks we're interested in here took on a different form of classification from Vickers' earlier products. Indeed such are the variety and minor differences between them it is not easy to classify them at all, although one method that seems to have been used for some years is to classify them by the year of introduction — namely M1933, M1934, M1936, M1937 and so on. Being new sales were good, despite the fact Vickers was forbidden to include any features that originated from government agencies (such as the Royal Ordnance Factories) in its commercial designs.





Above: Vickers-Armstrongs' drawing for the M1934 design. The original is tinted in rather silly colours.

CARDEN-LOYD INFLUENCES
Without wishing to deviate, it's worth
mentioning that there was another Vickers
design that came before the first proper light
tank, namely the Carden-Loyd Light Patrol
Tank which appeared in two forms in 1933.
It seems to have been based on the CardenLoyd three-man carrier B11E10 which

appeared in the same year and it is tempting to see the Light Patrol Tank as a derivative of this although it may be a contemporary or even a predecessor. In fact, you could see the Light Patrol Tank as the three-man carrier with all-over cover and a small turret. Both used the Ford Model A engine, of 24hp and a single return roller while the first of

the Light Patrol Tanks had the same leaf spring suspension, typical Carden-Loyd, while the second one used a diminutive set of coil springs with a scissors action which gave improved ground clearance. Whether they were really light tanks at all or glorified carriers is a mute point but they were offered as light tanks with the turret, driver

Below: A Dutchman in the mud at Bovington, with a light Mark IV. The impressed light tank lacks a gun, as most of them did.





M1934 during cross-country trials. This one has coil spring suspension but like all these light tanks has front sprocket drive.

and engine transposed if the customer preferred. As far as we know there was only ever one customer, Denmark, which first had a sample tank from Britain and then bought two but they were very disappointed with them. They have, however, preserved one of these tanks, armed with a Madsen

machine gun, if you wish to see one.

### FIRST OF A KIND

The first Vickers light tank also appeared in 1933. A single example survives in Finland although another went to Switzerland and 16 to Lithuania. The type can be recognised by leaf spring suspension and a rounded style of turret. It was a two man light tank,

powered by a Meadows six-cylinder petrol engine and with armour between 7-9mm thick. Among some photographs recently obtained from Vickers is one showing an otherwise unknown version of the 1933 model which does not have a separate rear idler; instead it has a shorter track

"...like most light tanks they were hopeless in combat situations."

> base. like that fitted to some tractors. where the last road wheel also serves as the idler. We know nothing about this light tank at all, except that it existed and was photographed. A year later Vickers modified the design by fitting angled coil

inevitably does. Later on toothless idler wheels were ordered for these two tanks. Switzerland ordered five more tanks in 1935, one of them survives in good condition along with another that requires restoration. A number were also supplied for the Argentine Army, along with a big order for Belgium amounting to 42 tanks in all. These were of the 1934 pattern but

spring suspension. One of these tanks

also went to Switzerland, arriving at the

the drive sprocket, although this usually

results in a problem when the two won't

match up after the

track stretches, as it

same time as the tank with the leaf spring

suspension. The Swiss wanted their tanks fitted with teeth on the idler as well as

fitted with a taller, more conical turret and they were armed in Belgium with either a 13.2mm Hotchkiss machine gun or a 20mm cannon. All of these earlier tanks had small rounded turrets.

### SIX OF THE BEST

In 1936 Vickers offered the same hull, but this time with a six-sided turret formed of flat plates. It was still a one-man turret but it was perhaps better for carrying a wireless set. Tanks of this type were supplied in reasonable numbers to China, Latvia and Lithuania. A small order was placed by Holland itself, followed by a further batch for the Dutch East Indies, 40 of which, as already mentioned, were taken into British service on the outbreak of war. But the Latvian order is most interesting since, from a batch of 18 acquired between 1936 and



M1934 in service with the Argentinian Army, hence the coal scuttle helmets which were not ideal for wearing inside a tank.



Above: M1933, with the original leaf spring suspension, giving a trench crossing demonstration.



The Vickers-Carden-Loyd Light Patrol Tank, one of which is preserved in Denmark.

1938, six were fitted with enlarged turrets housing a 40mm gun. This tank was also marketed as a new design in 1935 and at least one had extra shock absorbers added to the suspension. This was possibly carried out as part of a trial for a future model. The gun was Vickers' own affair – it was a semi-automatic weapon with performance only a little inferior to the famous War Office two pounder of the period. An example is in the Russian Tank Museum at Kubinka, finished in a very gaudy camouflage scheme.

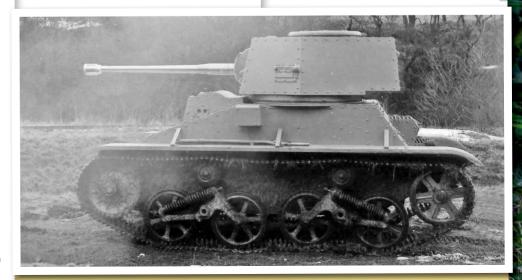
### **TAKING COMMAND**

War may have been imminent but this does not seem to have inhibited the commercial department at Vickers-Armstrongs. Indeed there was some discussion among the Vickers management over whether it would be better off making tanks for the British government or concentrating on commercial designs for overseas sales. As it transpired, WW2 would provide the company with more than enough work and would indeed eclipse overseas sales, for the duration anyway. Yet in 1938 it came up with what appears to be an eminently more up-to-date design. Known as the Command tank it was a three-man machine with an



M1936 with the angular turret, the model that became the Dutchman.

enlarged hull built along typical light tank lines but surmounted by a turret which looks as if it owes more to the company's venerable six-tonner Type B, armed with a 40mm semi-automatic gun. It was said to weigh about 5-tons and have armour



The Vickers-Armstrongs Light Tank fitted with its 40mm gun, as used by Latvia and now on display in Kubinka.



A very late production, the Vickers-Armstrongs Command Tank with a 40mm gun in an enlarged turret. In fact this tank is larger in most respects than the ordinary commercial light tanks but it never sold.

up to 11mm thick but its most interesting feature would appear to be the suspension. Although basically Horstmann, with double sloping springs on each bogie it featured disc instead of spoked wheels, and special shock absorbers attached to each spring to cope with the extra weight. Vickers promoted the three-man design heavily, pointing out that the extra man, having nothing else to do, could be employed as a commander, working with a group of two-man tanks or in some similar role as section, company or even battalion commander who could work in the field without any other distractions. Belgium showed an interest in the new design and there was even talk of having the tank built in Belgium, who would then supply it to other commercial customers. In the end, with war in the offing, it all came to nought and this interesting design, the only one of its kind, remained in store during the war and was scrapped soon afterwards.

### VICKERS' OTHER TANKS

Other Vickers designs, like the Valentine itself, produced just before the war, were built with the export trade in mind. The Valentine actually dates from 1938 and to begin with the War Office showed no interest at all except as an alternative to the A12 Matilda, should that fail. In any case the Valentine only had a two-man turret, which was unacceptable as a fighting tank by British standards and only carried 65mm of armour at the front which was not really adequate for an infantry tank, bearing in mind that the frontal armour of Matilda was 80mm. But these were desperate times and eventually the Valentine entered British service as the Infantry Tank Mark III, although in the end it was used more like a cruiser than an infantry tank.

Another, very similar case involved what Vickers called its PR tank. The company hoped that the British Army might buy it as a light cruiser (after all, it had the same armament) but when there was no official interest it was also considered as a commercial venture. By now, however, war was imminent and the commercial market ceased to exist so the new tank, to be known as the A17 Tetrarch, was adopted by the British Army. But production was slow due to cooling problems and later Vickers transferred the work from Elswick to Metro-Cammell in Birmingham. Here production was virtually brought to a halt after an extensive bombing raid and did not really get going again until 1942. Tetrarch saw some active service – in Madagascar, for instance – and a few were even supplied to Russia but in the end it was decided to employ it as an airborne tank, in which it made a name for itself but proved to be of very little use in combat, being entirely out of place on a 1944 battlefield.



Above: A very strange Light Tank about which we know nothing at all. If you look closely, you'll notice there's no rear idler! Right: The Belgian T15 with a special turret design. These tanks saw some service with the Belgian Army





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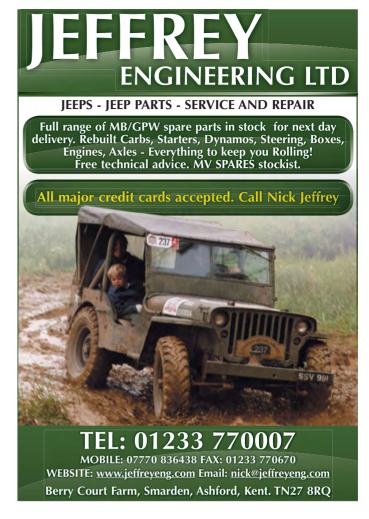
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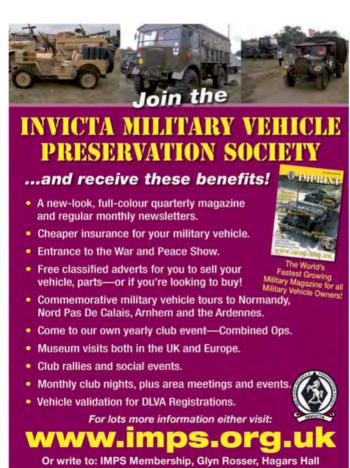
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Used for plotting and planning firing missions, Chevrolet's 'Computor' is a rare beast indeed. That's why lan Cushway was delighted to meet up with James Baxter and his 'shed' at W&PR 2015...

ften in our hobby it's a childhood interest that spawns a passion for collecting in later life, and this was most definitely the case for retired shipping executive James Baxter from Surrey. "My father was in the TA and served in WW2 so he bought me a Jeep pedal car when I was three. I loved it so much I told myself one day I would own the real thing," he smiles as he lovingly fettles the ultra rare 1944 Chevrolet Truck, Heavy Utility, Computor (HUC) he's driven from his home in Godstone to Folkestone's very own Mecca for all things military.

True to his childhood promise, he did buy a Jeep - but not until 1969. He sold it to buy a Ford Script-bodied version which he sold in 1973 for £400. "Sadly, I didn't appreciate the significance of a Script body, or its value. If only I had it now!" he exclaims. James went on to buy a 1942 Jeep from Warnham War Museum in 1975, which he still owns, as well as a 1943 ex-Australian Army example which he bought in 1995 while living in Australia. With his military vehicle collecting bug taking hold, it was only a matter of time before his wartime hoard started to swell in numbers.





High driving position is good, noise and somewhat bouncy ride isn't.

"I bought the HUC in 1985 from Andy Haynes in Chelmsford, it was complete and running but it was completely empty in the rear. All that remained was a frame for a stretcher which the previous owner used for sleeping on when he went on MV tours," explains James. "Due to its shape, it quickly got nicknamed the 'shed'."

With its light and airy back end, James used it for the next decade or so for going to shows, a makeshift bed in the back providing the ideal on-site sleeping facility.



Original date plate puts production bang on D-Day, but the truck never actually saw frontline service.



Six-cylinder 85bhp 3.5-litre GM engine runs as sweet as a nut following its rebuild by Pat Curran.

The fact that he had black out curtains to block out any daylight obviously came in rather handy. But then, no doubt spurred on by its historic interest, he decided to embark on the task of returning it to how it would have looked when in use during WW2 by Artillery Survey Units.

### **MOBILE OFFICE**

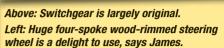
While plenty of examples exist of the HUP, the Computor version is much rarer. Indeed, of the 12,967 C8As built between 1942-45, just 3000 were HUCs and James knows of only one other, owned by Michael Burne, in the UK.

In its time the rear of the vehicle would have been a hotbed of activity with officers using it to plot and plan fire missions. Curtains on all of the windows would have prevented it from being spotted from the air during night time operations. Essentially its crew would have been involved in computing firing ranges (hence the 'C' in HUC), taking into account distance, range and weather conditions in their equations. You can almost imagine the frenzy as their expert digits fiddled with an armoury of sliderules to calculate the necessary data years before the advent of the modern computer.

Based at the regimental or battery HQ the information required to hit their target would then be transmitted via a No. 19







radio set to the gun crew. If they were likely to be in position for a reasonable period of time, they would run out a telephone

wire instead so the enemy couldn't listen in.

Obviously the fact that the HUC featured selectable four-wheel drive and

had excellent ground clearance gave it good cross-country ability and meant

it could access even the most remote battlefield positions.

a telephone Having only been built in June 1944, am not sure if we "Despite sounding rather opulent, the

swivel seats are horribly uncomfortable and were never popular."

coincidentally just in time for D-Day, James says it never saw frontline service and was

demobbed in 1946. "As far as I've been able to find out, it was shipped to the UK then put into storage and unused. After it was sold off it was once again put into store. I am not sure if was issued to the British or

Canadian Army."
It was then
bought by a garage

who cut down the back body and bolted a crane on the back and used

it as a recovery vehicle before entering preservation. The crane had been removed,



the back rebuilt and the sliding roof reinstalled when James took possession.

### **TAKING COMMAND**

For James, as with most restorations, it was a case of trying to source original archive material in order to ascertain what equipment it had and where everything went.

"I didn't have much to go on, but an article on an HUP ambulance owned by Bart Vanderveen in Wheels & Tracks

wheels & Iracks
magazine helped." In around 1997, armed
with all the information he could muster,
James approached Keith King in Nutfield,
Surrey to help recreate the office area in
the back. Keith was one of the founding
members of the All Wheel Drive Club and
having developed an interest in ex-military
vehicles, began buying WW2 lorries in the
days when they were very cheap and selling

them to construction companies as well as supplying them for films such as *The Dirty Doze*n before going on to specialise in their restoration. He retired some time ago, but still helps local MV owners with maintenance and repairs.

Keith subsequently got busy making the necessary twin folding tables and office paraphernalia along with a bench seat with accommodation for the officer. The driver would have slept in a slit trench!" confirms James.

James's Chevy is the Command version meant for officers, which means it has double glazed windows, leather fittings and swivel seats in the rear. "Despite sounding rather opulent, the swivel seats are horribly uncomfortable and were never popular,"

he confesses.

"The fact that the middle pedal is the accelerator and the brake is on the left makes things a bit more interesting."

locker underneath fitted with a removable back rest so that it can face either backwards or forwards.

James then commissioned a tent maker to create two canvas awnings or 'penthouses', hence the rolls of canvas on the roof each side of the vehicle. "These would have been used to provide additional working space and/or sleeping **BOUNCY RIDE**At around the same time the original GM 85bhp 3.5-litre six-

cylinder overhead valve engine was rebuilt by Pat Curran at Curran Auto Repairs in South Merstham, Surrey which, as James confirms, instantly transformed the way it drove. "Basically, the engine was worn but having had the work carried out it now runs beautifully, in fact it's very much like a car. The relatively short wheelbase, the upright seats and the fact that they are so

Below: The roll of canvas on the roof is the 'penthouse' awning, used for extra office space or sleeping.





Four-wheel drive gives the Chevrolet good off road capability.

As well as a bench seat, there's also the luxury of a swivel chair – although apparently it's not that comfortable.



Computor compartment complete with twin folding tables, lockers and filing drawers made the ideal mobile office.



Original map reading lamp is a nice touch.

well sprung makes it a bit bouncy, though," he laughs.

The only slight peculiarity is the pedal arrangement. "The fact that the middle pedal is the accelerator and the brake is on the right makes things a bit more interesting. That said, all the Canadian Military Pattern lorries, as well as a good number of British cars and commercials from the 1920s, had them arranged this way."

The story goes that the design of the first CMP cabs (No. 11 and 12), were done in a hurry to meet British design specifications so the driver's footwell was very narrow and the only way to fit the three pedals in the space was to reverse the brake and accelerator pedals. By the time the later cab design (No. 13, as used in the HUP) came into production

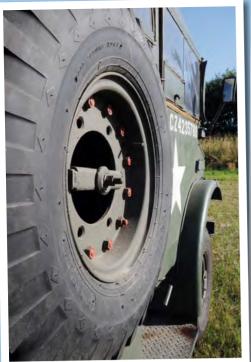
with its much wider footwell, it was too expensive to retool the production line so the same set-up remained on all CMP vehicles throughout the war.

"Being unassisted, the steering is hard work and in the cab itself it's very noisy. On the motorway, it's most comfortable at around 45mph (72km/h)," adds James. The consolation is the lofty driving position and that beautifully crafted wood rimmed steering wheel. "It's wonderfully smooth and lovely to handle, and there's no steering wobble."

### WELL TRAVELLED

You'll be impressed to discover that James, accompanied by his partner Annie Appleyard, piloted the historic wartime Chevrolet all the way to Strasburg last November to take part in the celebration of its liberation, a trip of over 500 miles each way! "Obviously we didn't have any real connection with the actual liberation, but everyone was very hospitable. In fact, we appeared in a local newspaper – we became celebrities."

With his various other European jaunts, little bits of consultancy work in the container shipping industry, his other two Jeeps and the fact that he is kept busy in his role as president of the Invicta Military Vehicle Preservation Society (IMPS), time is a valuable commodity for James. No surprise then that there are currently no plans for any future work on the HUC. For the time being at least...



Early models used runflat tyres and didn't have a spare, but they were deemed to use too much rubber in their manufacture.



James and his partner Annie have travelled all over Europe (at 45mph/72km/h) in their wartime HUC.





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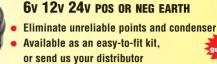
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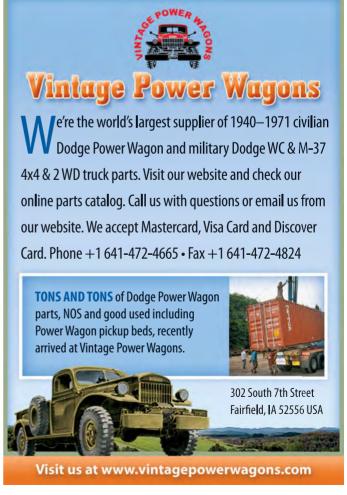
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## FANCY A CUPPA?

A welcome sight the world over, wartime canteens played a very special and much needed role in the military. Les Freathy charts their evolution...



Military style Bedford OX photographed during a handing over ceremony at the Church Army headquarters in South East London. From the lettering on the side, canteen number 181 was donated by W Stranger from Leicester.

obile canteens have long been established in the history of the British Isles and still thrive today on many of the county's roads providing much needed refreshment, especially since the demise of so many transport cafes.

It is safe to say that during WW2 when the chips were down the appearance of the mobile canteen brought a sense of relief from the toil and struggle with its promise of that much needed cuppa.

Many mobile canteens were built onto requisitioned vehicles and in particular the high powered cars of both British and American origin of which fortunately a good number were available here in the pre-war period. The American chassis were favoured but many British lightweight vans were also adapted for canteen use, with perhaps the most popular and prolific being the Ford E83W 10cwt. Canteens were often called upon to serve in difficult to access locations both at home and abroad wherever the forces were serving and

for this reason large numbers of military chassis were diverted to be fitted and kitted out for the canteen role as well.

### WARTIME ESSENTIALS

Various established civilian organisations were the mainstay for operating these vehicles, including the Church Army, NAFFI, YMCA, WVS and the Salvation Army to name but a few. Much of the cost of supplying the canteens was met by donations from British and Commonwealth organisations, the names of the benefactors appearing on the side of the vehicles. Examples we've seen include the Church of England Hastings, Sri Lanka canteen Ceylon, The British South Africa Police, Canadian Committee of the Save the Children Fund,

the Canadian Red Cross and the Jamaica Mutual Life Association Society. The same manner of funding also came via numerous organisations in the US.

Ford was among the most prolific marque in the smaller range of vehicles - especially the American chassis supplemented by names such as Buick and Hudson. That said, any suitable type of car or van made available would have been ripe for conversion. British vehicles, including the previously mentioned Ford 83W 10 cwt van, were popular. Indeed, Henry Ford gifted 350 'emergency food vans' to be serviced free of charge by Ford agents around the country. Photographic evidence shows the smaller Ford 8 was also adapted for the role. Among the many wartime images Ford does indeed dominate in all the civilian classes of canteens up to 3-ton, with larger vehicles commonly being based



Above: A further image of the Austin K4 3-ton depicting the position of the rear opening doors. This one has been fitted with a large roof rack, although what it was used for is unknown. This type of canteen served both at home and abroad. Right: An Austin K4 3-ton canteen seen here at the coachbuilder's premises, believed to be J C Clark of Greenside, London. The drop down is closed but just visible under the front of the body is the spare wheel and the door for providing access to the water heater behind the cab.





Above: One of the Church Army Bedford OY 3-ton canteens gets a fond farewell as it leaves London bound for Europe. Left: Large numbers of 30cwt Bedford OX were employed by the Emergency Food Flying Squad sponsored by the USA for the Ministry of Food. Collectively known as the Queens Messenger Convoy these convoys of mixed vehicles would move around the country to provide food and drink to badly affected bombed cities and towns.

on Bedford MW. OX and OY chassis. The Austin K4 and some Commers also adopted canteen bodies. In addition to the specially adapted vehicles built in Britain, a number of American vehicles were shipped over to serve as mobile canteens - mainly by the US-based British War Relief Society Incorporated. The Church Army in particular was issued with a good number of the Chevrolet AJ Dubi-Diti vans used for deliveries in the US before conversion to canteens and stores.

### FIT FOR FOOD

The typical interior layout of a 3-ton canteen consisted of a wide gangway through the centre for freedom of movement with the serving counter on the hatch side and a further work counter opposite. Underneath the counters were numerous draws for cutlery, mugs and various crockery, each tier of draws being secured during transit by a single hinged board running from top to bottom and overlapping at one end with a single bolt to lock it in position. Nearly all wartime mobile canteens had the serving hatch on the nearside of the vehicle, the lower hinged

flap forming a serving counter when open while a top flap would provide rudimentary weather protection while waiting for the tea and buns.

Four tanks were installed on the Bedford

OY and the Austin K4 3-ton models, enabling them to hold 120 gallons of water. Obviously the smaller the canteen vehicle the smaller the water capacity. To keep the tea hot at all times Thermos-type urns



An interesting photo depicting the framework construction on a Bedford 3-ton cab and chassis. This is the workshop of J C Clark Ltd of Greenside, London.



A Ford E83W 10cwt van number 204 operated by the Salvation Army here providing much appreciated refreshment to a anti-aircraft searchlight crew. It is interesting to note the overhead cable, presumably providing power to the searchlight.

were installed - there would be as many as five in the 3-ton vehicles plus a five or six gallon water boiler to replenish the urns

and keep a constant flow of hot beverages on tap.

Various cupboards and shelves were fitted to suit each type of canteen plus a sink for cleaning and washing crockery operated semi rotary pump.

which would have to be emptied by a hand

welcome to service personnel and civilians alike. They were the unsung heroes of that grey wartime period, providing the

necessary lift in moral when it was

needed most - and for that reason they are very much deserving of recognition.

### "A top flap would provide rudimentary weather protection while waiting for the tea and buns."

During the trying times of WW2 the sight of a mobile canteen would have been most



Above and right: Many 3-ton civilian wartime chassis were converted to canteens such as this Ford 7V operated by the Salvation Army. Note the placing of the hot water storage tanks behind the cab.



Above: This image shows again the Ford E83W number 204 in difficulty on the anti-aircraft site; the Ford was indeed outside its comfort zone on this muddy site.





used to mount canteen bodies including the smaller Ford 8 operated by the YMCA and seen here supplying refreshment to farm workers during the summer harvest. It is possible this is the canteen donated and maintained by the Columbia University staff committee USA. Right: Two of the Ford E83 W vans gifted by Henry Ford and assembled at Ford's works in Dagenham. The emergency food vans were used to provide refreshments to bombed areas. The vans were painted off white and grey with a red band round the centre. Below: Many powerful American built cars were converted such as this Ford V8 tea car operated by the YMCA. The unidentified vehicle behind the tea drinkers appears to be a small truck, probably used for stores towing a converted pre-war touring caravan.









Above: The smaller Fordson E88W also provided a useful chassis to mount canteen bodies. This one, complete with camouflage paintwork, has been donated by the Canadian Legion.

Below: Many canteens were to be seen in all the overseas areas where allied forces served. The W.A.S. (B) markings suggest this canteen was operated by the Women's Auxiliary Service in Burma.



Above: Not all wartime canteens were motorised as demonstrated here by these custom-built trailer canteens parked outside the Institute of Seamen in Liverpool. Below: One of a number of Chevrolet AJ Dubi-Duti vans supplied to the Church Army by the British War Relief Society in the USA. We think the location here is a bomb scarred rear of the Horse Guards Parade in London.

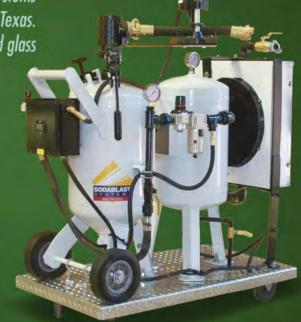


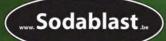


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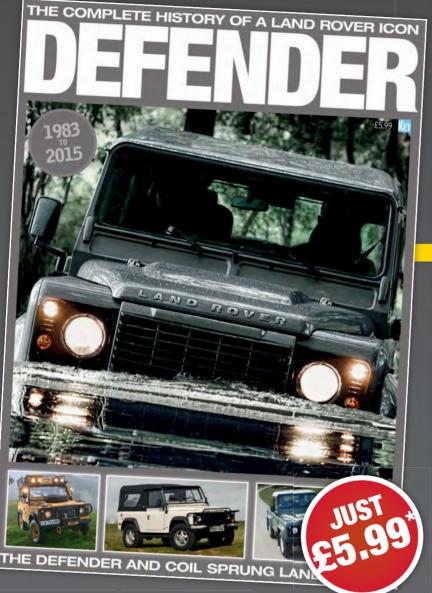


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# COMMANDING STYLE

While the troops travelled in Land Rovers, the top brass were conveyed in Rover saloons. James Taylor looks at the firm's staff cars of the 1970s



59 AM 19 is now in preservation but is seen here carrying an RAF pennant as it would have done when in service between 1973 and 1980. (Dave Cole)

Povers entered service as staff cars with the British armed services at the end of the 1960s. In earlier years, the favoured chauffeur-driven transport for top brass had been the big Humbers, but the Super Snipe and Imperial went out of production in 1967 and were not replaced, so the MoD had to look around for a suitable alternative.

It had to be British-built and dignified rather than ostentatious, which meant there was an extremely limited choice. In fact, there was really no alternative to the big Rovers. By the late 1960s, they were already quite an elderly design, having been introduced in 1958 with a six-cylinder engine as the 3.0-litre model. However, from autumn 1967 they had been rejuvenated with a more powerful 3.5-litre V8 engine as the Rover 3.5-litre, and they had an undeniable presence that no other British car of the time could emulate. Even the Queen had one, which she used to enjoy driving herself in the days when she was permitted to do such things.

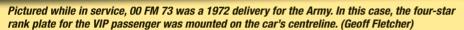
#### **FOLLOWING ORDERS**

So the Army and the RAF both ordered examples for 1968 delivery, classifying them as suitable for the transport of Grade 1 and Grade 2 officers. Later that year, Daimlers became available for Grade 1 use, and the Rovers were downgraded to Grade 2 cars in mid-1969. Nevertheless, they clearly fitted the bill rather well, because further orders followed over the next five years until Rover brought its production to an end in summer 1973. Batches were delivered to the Army and/ or the RAF every year except 1971 (and that omission was probably the result of production shortages caused by strikes),

and there were some for the Royal Navy as well. The Army was the largest user, taking around three times as many as the RAF; unfortunately, a lack of records makes it impossible to be sure how many the Royal Navy had, although there were probably not very many of them.

Some were transferred between services, and the 1971 shortfall was made good by a group of eight cars transferred into Army use from the Government Car Service. Although broadly similar in specification to the examples ordered by the MoD, these ex-GCS cars (originally used to ferry Ministers around) had a number of differences. One of the most obvious was that they had beige cloth upholstery — a feature not available from the factory — that was added to them by Hooper Motor Services in Kilburn. All this complicates the issue of how many there were in total, but





current evidence suggests that there were just over 100 if the ex-GCS cars are counted as well.

#### **SPECIFICATIONS**

Most were righthand-drive, although around nine were supplied with lefthand-drive for overseas use. All of them were painted Ebony (black), which was available only to special order, and they came with the Saddle Tan leather upholstery which was a standard Rover option. At least one car delivered direct to the Army is said to have had GCS-pattern cloth upholstery instead, but whether it did so from new is not clear. Although all of them were given military serials, several carried civilian registration plates in the 1970s. It appears that this was a security measure to protect high-ranking military staff when the PIRA mainland bombing campaign was at its height.

The cars were probably all ordered by warrant from rolling contracts WV4052 and WV8765, the latter also being used for

These are the military handbook identification drawings of the 'Car Salon Grade 2 4v2

These are the military handbook identification drawings of the 'Car, Saloon, Grade 2, 4x2, Rover 3½-litre'. The roof aerial is a standard Rover fitment; the rear aerial is for the R/T. The flagstaff mount on the bonnet differs from those on known cars, and there is an additional spotlight below the front bumper. (Dave Cole)

Land Rovers at the time. These contracts allowed individual or small-quantity vehicle purchases without the formalities associated with the larger contracts. The Rovers were asset-coded 1120-0773 (RHD) and 1120-5773 (LHD), and many of the





This in-service shot shows 59 AM 19. The rank plate, this time for a three-star VIP, is offset to the driver's side of the car. (Dave Cole)

final batch of 21 remained in store at the Ashchurch vehicle depot until required as

replacements for the earlier deliveries. This meant that

the final

examples

#### "Although all of them were given military serials, several carried civilian registration plates."

did not enter service until 1975 or possibly even 1976, a fact which led to persistent rumours that the government had bought all the last examples and put them into store. They had not, and nor had the MoD, although the final MoD batch certainly was delivered just a couple of months before production ended.

The cars were specially equipped before entering service, and normally carried an additional aerial at the rear for a radiotelephone. There were vertical plates front and rear to carry the rank plate of the passenger, and there was a pennant

cars may have had an additional spotlight under the front bumper.

mounting near the front of the bonnet.

Wing mirrors were standard (they were an

accessory on civilian models), and some

On the inside, there were additional

switches on the centre console, and a hazard warning system (not standard on civilian models) was fitted. Rear seat

passengers had additional reading lamps, and

in at least one case seem to have had loose cushions as well. The details of the R/T installation probably varied to suit both the



08 FM 40 has an additional security lock on the front passenger door. This appears to have been added in service, although it was not fitted to other military Rovers. (Reinhard Stadthaus)



The front interior of 59 AM 19 shows the R/T system with its tuner and speaker mounted on the parcel shelf and the handset on the console next to the driver. (Dave Cole)





Above and left: The system fitted to 08 FM 40 is different, with the head unit mounted on the front parcel shelf but the R/T handset between the seats. Those are not cables beside the handset, but the tubular stalks of the front seat belt lower mountings, and the domestic carpet in the footwells is not original! (Reinhard Stadthaus)

user service and the requirements of the main passenger. In our pictures, the ex-RAF car has the handset mounted on the centre console next to the driver, but the ex-Army car has the handset between the front seats, where it can easily be reached from the rear seat.

#### LOW SURVIVAL RATE

Most of these cars were withdrawn by the end of 1980, although a couple lingered on and the last one was not sold until 1983. By that stage, the big Rover had been out of production for ten years. Despite a strong enthusiast following, its typical

fuel consumption of 15-18mpg and oldfashioned style meant that the car was not much sought-after on the second-hand market at the time.

One result was that surprisingly few of the ex-military staff cars seem to have survived, although there may be some survivors that have not been identified for what they are. Much of the special equipment (including the R/T) was removed when the cars were sold off through the



The military identification plate was fitted to the base of the passenger's side front seat. (Reinhard Stadthaus)



Additional reading lights like this one seem to have been fitted to all the military Rovers. The dowager strap was a standard production feature, although in this case the original cloth-faced type has been replaced with a leather one. (Reinhard Stadthaus)



These twin cushions belong to 08 FM 40, although they are not known from other cars. (Reinhard Stadthaus)

Ruddington auctions, and of course they were re-registered on civilian plates. We would be pleased to hear from readers who know more about these cars or know of other survivors!

Special thanks to Dave Cole, Geoff Fletcher and Reinhard Stadthaus for information and photographs used in this feature.

#### **THE KNOWN CARS**

ARMY		PROBABLE TOTAL: 77 (PLUS ONE EX-RAF)
64 FG13 to 64 FG 19	Total 7	Delivered 1968, withdrawn 1974
20 FH 27	101a1 1	Delivered 1968, withdrawn 1974  Delivered 1968, withdrawn 1974
43 FH 46 to 43 FH 57	12	Delivered 1969, withdrawn 1974-1977
25 FJ 84 to 26 FJ 01	18	One LHD. Delivered 1970, withdrawn 1974-1982
00 FL 60	10	LHD. Delivered 1970, withdrawn 1975
00 FM 70 to 00 FM 77	8	Two LHD. Delivered 1972, withdrawn 1977-1980
01 FM 56	1	Delivered 1972, withdrawn 1975
04 FM 55 to 04 FM 56	ż	Delivered 1972, withdrawn 1976 (56) and 1979 (55)
08 FM 34 to 08 FM 50	17	One LHD. Delivered 1973, withdrawn 1979-1983
75 XE 39 to 75 XE 40	2	Presumed LHD; for Berlin Brigade
35 BT 07 to 35 BT 15	8	Transferred from GCS, 1970-1971; withdrawn 1977-1979
30 BT 23	1	Transferred from RAF, 1972; formerly 40 AM 60
		, , , , , , ,
DAE		DDODADI E TOTAL 22
RAF		PROBABLE TOTAL: 23
00 AR 01 to 00 AR 02	2	01 not identified: 02 formarly 61 AM 03

00 AB 01 to 00 AB 02 13 AB 20 17 AB 24 17 AB 93 to 17 AB 95 33 AN 00 to 33 AM 03 33 AM 12 33 AM 15 35 AM 07 to 35 AM 08 36 AM 60	2 1 1 3 4 1 1 2 3	01 not identified; 02 formerly 61 AM 03 No details Delivered 1968, withdrawn 1976 Delivered 1968, withdrawn 1975-1976 Delivered 1968, withdrawn 1975-1976 LHD. Delivered 1969, withdrawn 1970 LHD. Delivered 1969, withdrawn 1977 Delivered 1969, withdrawn 1975-1976 Delivered 1969, withdrawn 1976-1981
35 AM 07 to 35 AM 08	1 2 3 1 1	Delivered 1969, withdrawn 1975-1976
		became 00 AB 02

NB Details for Royal Navy cars are very sketchy because of a lack of records. The four cars listed below are known from photographs and/or personal sightings.

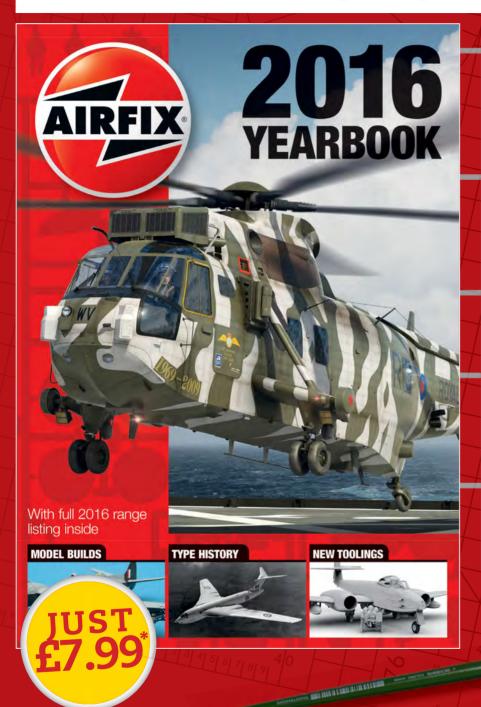
**POSSIBLE TOTAL: 4** 

0001 RN	40
00 RN 03	1
00 RN 11	1
00 RN 14	13

**ROYAL NAVY** 



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# A BRIDE IN WAITING

# James Kinnear extolls the many virtues of the Russian BTR-90 Rostok wheeled APC

he BTR-90 was initially developed in the closing years of the Soviet Union, with the first prototype having its public debut at a military exhibition in Nizhny Novgorod in 1994, three years after the break-up of the Soviet Union itself. As with several Russian military vehicles developed in the immediate post-Soviet era, the BTR-90 has had a protracted development, and although a small series of trial vehicles have been built and extensively evaluated, the vehicle has not as yet entered full series production.

The BTR-90 Rostok was developed as the GAZ-5923 at the Arzamas Machine Building Plant (AMZ) near the city of Nizhny Novgorod, under the direction of chief designers EM Murashkin and AG Masyagin. It was finally accepted into service with the Russian Army in 2008, but as yet only a pre-series trials batch has been manufactured for prolonged service evaluation trials. The AMZ plant today still continues to build the current BTR-80 series of wheeled APCs, which the BTR-90 was originally developed to replace.

#### MONSTER TRUCK

The BTR-90 is an altogether different vehicle to the BTR-80, not least in terms of sheer size. The BTR-90 is huge by Russian wheeled BTR standards, being 8.30m long, 3.125m wide and 3.025m high, such that it towers over the BTR-80, which looks diminutive by comparison when they are parked alongside each other. As with all Russian wheeled BTR vehicles since the BTR-60 was introduced as long ago as 1961, the BTR-90 features a 8x8 configuration.

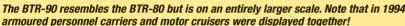
With thicker armour than the BTR-80

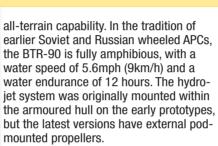
and a combat weight of 20-20.9 tonnes depending on the variant, it is 2-3 tonnes heavier than the tracked BMP-3 MICV and a significant 25% heavier than previous generations of light tanks such as the PT-76 amphibious light tank. The vehicle has a crew of three and despite its immense size transports only seven infantry, reflecting the role of the vehicle as wheeled Mechanised Infantry Combat Vehicle (MICV) rather than APC.

The base model BTR-90 is provided with the two-man turret and armament package derived from the BMP-2 tracked MICV, the BTR-90 being to all intents and purposes a wheeled MICV rather than a wheeled armoured personnel carrier. The base model is powerfully armed, with a fully stabilised 30mm 2A42/72 cannon and co-axial 7.62mm PKTM machine gun, a 9P135M









To an extent, the BTR-90 is a hard vehicle



The BTR-90 being prepared for its first public display in 1994.

The seven man crew egress the vehicle via doors located between the second and third road wheels, a design feature which began with the BTR-70; with the lower half of the door forming a footplate and the rear half hinging vertically.

#### RECENT VARIANTS

The BTR-90 has undergone several metamorphoses during its protracted

development, and the current vehicle offerings are significantly different in specification and appearance to the

original prototype unveiled in 1994, with several alternative turret and armament options being available.

The BTR-90M Bakhcha-U, for example, was first demonstrated at the IDEX-2001 exhibition in Abu-Dhabi in the UAE. The Bakhcha-U is a universal turret module developed for application on light armoured vehicles, armed with the same 100mm 2A70 gun and 30mm 2A72 cannon as

#### "It matches, and of late greatly excels, the earlier tracked BMP-2 tracked MICV in terms of firepower."

combat weight the somewhat steroidal BTR-90 is not a slow vehicle. Power is provided by a 16.95-litre 2V-06-2S turbocharged diesel engine developing 510hp at 2000rpm, coupled to a hydro-mechanical transmission, giving it a healthy top road speed of 56mph (90km/h). The vehicle's 8x8 configuration and 14.00-20 tyres fitted with a CTPRS system providing 0.5-3.0kg/cm² variable ground pressure give the BTR-90 formidable

anti-tank missile rocket launcher firing

9M113M Konkurs-M anti-tank missiles,

and a 30mm AG-17 automatic grenade

launcher and six 902V Tucha smoke

grenade launchers for good measure.

The ammunition complement contained

significant, with 500 rounds of 30mm,

tank missiles.

RAPID WITH A

**GOOD RANGE** 

Despite its size

and significant

2000 rounds of 7.62mm, 400 rounds for

the 30mm grenade launcher and four anti-

within the large vehicle is correspondingly

to define. It matches, and of late greatly excels, the earlier tracked BMP-2 tracked MICV in terms of firepower capability, and while the armour layout makes the BTR-90 more vulnerable than tracked alternatives, it has the advantage of a decent maximum road speed, which in the current typical scenario of limited combat engagements puts it at a significant advantage compared with its tracked MICV counterparts.







Above: BTR-90 on ranges Omsk (Andrey Aksenov). Below: An early BTR-90 prototype.



Rear view of the early BTR-90 prototype, showing the early hydro-jet propulsion system doors.

mounted on the tracked BMP-3 MICV, together with four Arkan guided antitank missiles, complemented by thermal sighting, laser range-finding and a sophisticated automated fire control system and ballistic computer.

The 100mm main armament has a direct fire range of 7km when firing HE ammunition; the 30mm cannon can fire HE rounds to a range of 4km and armourpiercing rounds to 2.5km; while the Arkan anti-tank missiles have a range of 5.5km.

As such the BTR-90 Bakhcha-U has combined firepower that exceeds that of earlier generation MBTs. The vehicle has an ammunition complement of 34 rounds of 100mm, 500 rounds of 30mm and four anti-tank missiles in ready-to-launch configuration. Either the commander or gunner can operate the fully automated fire control system.

The BTR-90M Berezhka turret module

was developed by the Priborostroennii design bureau (KBP) in Tula, famous for generations of light weapons development. The Berezhka turret module combines the original armament package of the BTR-90 with four turret-mounted Kornet-E anti-tank missiles mounted either side of the turret, and a 30mm AG-30M grenade launcher, with thermal imaging, television optics and laser range-finding, providing the BTR-90 with an all-weather armament package allowing all-target engagement capability to a range of 3.5km, with the vehicle's Kornet-E ATGMs able to penetrate

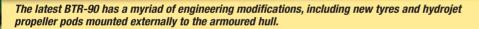




Above: An early BTR-90 prototype at the Omsk arms show in 1999 (Andrey Aksenov) Left: The BTR-90s turret, borrowed from the BMP-2, is apparent in this view.







the equivalent of 1200m of RHA armour – which is ten times the that of a typical heavy tank at the end of WW2 – at an engagement range of up to 5.5km.

In 2009-2010 the AMZ plant began development of an entirely new-wheeled

APC design based on the original BTR-90, the BTR-Gilza. In a new departure for Russian wheeled APC/MICV (but something that was standard on the original tracked BMP MICV series), the BTR-90 has a reversed layout, with the motor-



The BTR-90s exit doors are between the second and third axles as with all Russian wheeled APCs since the BTR-70, with the doors opening vertically to form a footplate and overhead cover respectively.

transmission compartment located at the front of the vehicle to maximise protection for the crew within the vehicle. The BTR Gilza, which is at present at prototype development stage, is to have maximum unification with the BMP-3 tracked MICV.



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Piotr Mariusz Radomski compares the 'Grosser' amphibian Type 128 with its rivals and explains how it paved the way for the development of the smaller, more successful Type 166

ater obstacles have always served to hamper advancing troops and it wasn't long before the Wehrmacht recognised that finding a fast and efficient way for reconnaissance units to cross rivers or lakes would prove crucial to the success of their campaigns. That's why, alongside its armoury of mobile bridges, boats, rubber dinghies and other bridging equipment, it saw the need for a specialist amphibious vehicle which could be quickly and relatively easily developed without the timeconsuming and complex process of adapting an existing vehicle for swimming.

Examples of such vehicles already existed, of course, in the form of the 1914 Hydromotor and 1917 Hydrocar, both of which originated in the US, as well as the Austrian Hydro-Automobil of 1915, the German Autoschiff made by the Hoppe & Krooss company in 1929 and also Land-Wasser-Auto of Jakob Baulig in 1934 - to name just a few.

#### HERR TRIPPEL VERSUS HERR **PORSCHE**

Probably the best known creator of motor vehicles with an ability to swim during the interwar period was self-taught German designer Hans Trippel. His first car the Schwimm-Auto broke cover in 1934, with various prototypes undergoing constant evolution subsequently, with one such example managing a creditable 20km/h during testing in 1936.

The German Chancellor showed an interest and in 1937 Adolf Hitler decided to allocate funds for construction of a plant (Trippel-Werke) in which production could begin. The first amphibious vehicles were made in the same year, allocated the model name SG6, and delivered to the newly formed Wehrmacht. However, in use the vehicles proved hugely disappointing. Not only were Trippel's creations expensive to produce, too heavy for both land and water and very thirsty on fuel, but they were unreliable too and suffered numerous breakdowns. Indeed, most of the 800 vehicles produced by Trippel between 1937-1943 spent the majority of their time in repair shops.

Even though the Adler and Opel engines used in the SG6 (producing 48hp and 55hp respectively) were more than sufficient, and its swimming abilities and 500kg hoisting capability satisfactory, the vehicle quickly lost favour with Hitler who had already formed a friendship with another engineer who had impressed him with his brilliant ideas and design prowess. His name was Ferdinand Porsche.





Above: Rival Trippel SG6 proved unreliable and thirsty in trials. (US National Archive NARA) Right: A broken steering wheel called a temporary halt to the testing of prototype 128/5 in 1941.







Similarities between the Type 128 (left) and Type 166 are obvious, but can you spot the differences?

Born in 1875 in Maffersdorf (now part of the Czech Republic), Porsche was associated with Mercedes-Benz, Zundapp and NSU

during the early part of his career and was hugely innovative, always looking for clever

engineering solutions to every conceivable automotive conundrum, even pioneering the use of electric and hybrid technology. By 1900, while working for the Vienna-based

Lohner company, he had already designed the first 4x4 vehicle.

But, as we all know, from the early thirties

Volkswagen. Despite the fact that up until the start of WW2 his Stuttgart factory had only produced around 60 civilian Beetles, it

was to form the basis for the first amphibian vehicle produced by Ferdinand Porsche

- the Grosser Schwimmwagen Type 128 - a direct descendent of the militarized version of the KdF car.

# "They each spent 18 hours swimming on rivers and lakes in central Germany."

he focussed his many talents on creating an affordable passenger car for the masses namely the KdF-Wagen, later known as the



Above: A hinging steering wheel on 30 preseries cars made it easier to get in and out. Right: There was significantly more space for the crew inside a Type 128 and the addition of a rear seat bench meant it could seat five in relative comfort.





width 1.6m, height 1.66m, wheelbase 2.4m. Type 87 – length 4.06m, height 1.7m, width 1.6m, wheelbase 2.4m.

BODY CONSTRUCTION: Body produced by Drauz Karosseriewerke KG, placed on the Type 87 platform.

**WEIGHT:** Type 128 948kg, Type 166 910kg. Capacity 500kg.

MAXIMUM SPEED: 50mph (80km/h) on land and 6.25mph (10km/h) on water.

ENGINE: Air-cooled four-cylinder boxer engine, capacity of 1131cc. Power 25hp at 3000rpm. Petrol tank capacity 47-litres giving a range of 325 miles (520km) or around an hour in the water.

TRANSMISSION: Four ahead gears, one reverse and cross-country. The rear wheels were driven constantly with the possibility of attaching – via a differential gear – the front wheels also. Overcoming water obstacles, the amphibian was able to swim ahead only. The vehicle didn't have a rudder, steering was via movement of the front wheels.

TYRES: Nearly all 'Big Amphibians' were fitted with 5.25 x16 tyres. A few photographs exist of them fitted with 690x200 (200x12) balloon tyres.

ITEM DIFFERENTIATING THE TYPE 128 FROM THE TYPE 166: Pole for the measurement of water depth, bilge pump, lights on the port and the starboard, lights on the port and the starboard, semaphore trafficators, side and back windows in the tarpaulin, seating for five, side handles, hubcaps, dashboard panel, speedometer from the Type 87 KdF, exhaust system under the rear mudguards as opposed to the top of the body, pivoting steering wheel, back canopy for three passengers, boot behind the back canopy, two oars instead of one, twin windscreen winers instead of one. two handles on the wipers instead of one, two handles on the engine flap instead of one, one 47-litre fuel tank instead of two 25-litre tanks.

#### ORIGINS OF VOLKSWAGEN'S 'BIG AMPHIBIAN<sup>3</sup>

Realising the Wehrmacht's need to find a light vehicle with drive to all wheels, Porsche constructed a rigid driving axle, a new transmission and low ratio gearboxes at the beginning of 1940 with the intention of installing these parts in first Kraft durch Freunde 4x4 vehicle, which was to become known as the Type 87. Testing of this vehicle got underway in June 1940.

The idea of building the floating car based on the same construction came about at around the same time. A Heereswaffenamt

(HWA) letter dated 18 June 1940 makes reference to an instruction for Ferdinand Porsche to design a light vehicle which is able to cross natural water obstacles with a speed of at least 10km/h, steered in the water with wheels to enable it to exit water without stopping. An official order by the



The green light on the starboard and a semaphore were standard items on the Type 128.



The fact that the exhaust system was located beneath the rear wheelarch proved to be one the Type 128's weak points. Note the twin oars.







Above: Bonnet mounted spare features a KdF hubcap. Left: Type 128 prototypes were painted black or dark grey.

HWA to build a prototype of such a car was submitted on 1 July the same year. Four days later another two prototypes were ordered, with Porsche receiving a sum of 200,000 RM to pay for the work.

The first prototype was constructed in collaboration with the Drauz company in Heilbronn and swimming tests on the lake Max-Eyth near Stuttgart were conducted on 21 September 1940.

After the completion of factory testing on 1 November 1940, the three prototype Type 128 were delivered to the German Army in Heereswaffenamt WA Pruf 6, where they were put through more intensive field testing. A little known fact is that while being put through its paces it was being compared directly with the Hans Trippel SG6.

In total the vehicles travelled 1400km along motorways, 1270km along other paved

roads, 180km along dirt tracks, 200km off road and 300km roughing it in the mountains. Additionally, they each spent 18 hours swimming on rivers and lakes in central Germany.

28/19

Despite the fact that Trippel had seven years to iron out any shortcomings, his creation fell way short of its rival. Indeed, during the tests the SG6 still suffered frequent breakdowns, it was unable to





The 'Grosser' Schwimmwagen proved too long and heavy to make it any good over rough terrain.

maintain the fixed maximum speed on land or water and it consumed 15% more fuel than its competitor.

Needless to say, once the results were in, the HWA submitted an order for the first series of 100 Type 128s.

In defeat, Trippel subsequently accepted an order to produce torpedoes for Kriegsmarine and immediately post-

war moved his manufacturing operation to Bugatti's old factory in occupied Molsheim. However, due to his previous connections with the Sturmabteilung (Storm Detachment, or SA) after the liberation he was imprisoned for three years. Despite

being involved in civilian amphibious projects during the sixties and the development of the iconic gullwing doors for Mercedes, he didn't manage to break of his run of bad luck.

"The first prototype was constructed in collaboration with the Drauz company in Heilbronn."

> WW2 4X4 VOLKSWAGENS Having started production of the Type 128 and its smaller Type 166 sibling, Porsche took elements of 4x4 drivetrain to create other off road vehicles for the military. Highly advanced technically and

expensive to manufacture, cars produced by Volkswagen with 4x4 drive and closed bodywork were called Gelandevolkswagen or Kommandeurswagen and given the classification Type 92 Allrad, Type 92 SS

Type 82e Allrad and Type 287/87. Open bodied Kubelwagen. in which the similar four-wheel drive system was applied, were given the

nomenclature Type 86.

Little documentary evidence exists regarding total production numbers of 4x4 prototype KdF vehicles with open and closed bodywork and estimates fluctuate between a dozen or so to several hundred



1132cc 25bhp engine was taken from VW's KdF. Note the drive for the propeller taken off the bottom pulley and the high position of the air intake so it didn't suck in water.



Photographs of the Type 128 in military service are very scarce. This one appears to have a balloon tyre on its bonnet.



Left: This Type 128 prototype number 19 was produced on 27 May 1941. Below: The dashboard on this 128/19 prototype still has some of its original markings.





Above: Schwimmwagen employed a threeblade propeller which could be lowered down when it entered the water. Right: Type 128 cabin was relatively well equipped.

units, although we tend to lean towards the former figure. A figure of no more than 150 Type 128 'big amphibians' seems realistic.

#### **VERDICT**

Documentary evidence from the time suggests that the 'grosser Schwimmwagen' wasn't particularly successful. It was just too heavy and too long, making it unable

to tackle rough terrain, and ultimately too expensive to build. What it did do, however, was pave the way for the more mass-

on to become a useful tool in the German Army's WW2 armoury.

Photographs: Mikołaj Urbański from the archive of Jacek Krajewski, US National



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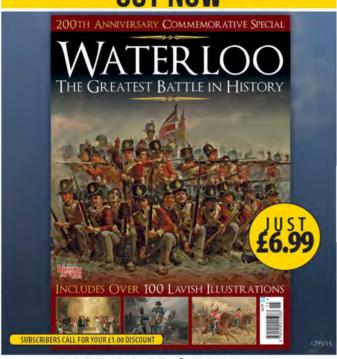
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## LEFT HAND DOWN...







#### OUT AND ABOUT WITH



# MILITARY & FLYING MACHINES - DAMYNS HALL AERODROME, ESSEX - 8/9 AUGUST 2015

John Blackman reports on the 2015 military spectacular.

his is a show that has had its trials and tribulations over the nine years that it's been running - for instance being situated within the London Olympics no-fly zone which, in 2012, all but wiped out the 'Flying' part of the show title. Then there was the little matter of the breakaway - my word not theirs - from the Military Vehicle Trust and the formation of the Essex Historic Military Vehicle Association (HMVA) to keep the event running. But the M&FM team have weathered it all and, you have to hand it to them, now put on an annual event that in many ways illustrates just how far club shows have advanced over the years. The days when it seemed good enough to park a few dozen green machines in a field are long gone.

Having a site situated inside the M25, a mortar's lob from London's eastern suburbs, is an advantage exploited by the simple expedient of offering the public a good day out with a wide range of things to, paraphrasing

the words of Colin Tebb the HMVA chairman, entertain, enthral and educate. So along with green machines parked up in rows (can't get away from that entirely), we have living-history groups in their tents and trenches, funfair rides, classic cars, aircraft buzzing around, explosive battle scenarios, dancing, bands, wild-west gunfights, stalls where you could purchase all manner of things from a window box to a last will and testament and... well, you get the drift. Plenty to entertain and enthral there, and if something educational sinks in regarding the history behind our hobby, all well and good.

But what about the MV enthusiast? Anything new or unusual for us? Ah, well now I'm struggling because there was precious little to be honest. I was chatting to a re-enactor who hit the nail on the head when he suggested it must be difficult going to shows year after year and finding anything different. I could only agree and add that even if there was a newly restored olive-drab Jeep, for the sake of argument, you might not necessarily spot it amongst the lines

of other olive-drab Jeeps. And as if to illustrate my point, I'd been at the show a couple of hours before even noticing the 1940 Bantam BRC-60 sitting at the end of a row of Jeeps; a beautiful little vehicle with enormous historical significance. The light utility 4x4 concept behind it impressed the US Army no end but when a contract for what we now know as the Jeep was put out to tender, Ford and Willys were the winners and Bantam very much the loser.

Unfortunately that was about it in terms of novelty, at least as far as vehicles went. But I have to mention the motorcycle display created by Rick Curtis and friends... or to be exact, the backdrop to the display. For those of you who don't know, it was Rick who created the bomb-damaged French café that has been so popular at previous M&FMs and War & Peace. Now he has come up with a reconstruction of a back-street motorcycle dealership specialising in ex-military bikes. True, the 'stock' - which included some beautifully restored 'bikes was decidedly upmarket for such a seedy



Above: Philip Lambert of the Hertfordshire Homeguard gets ready to repel the Wehrmacht. The Vickers on wheels was reconstructed using photos of a contraption actually used by the Herts Homeguard during wartime.

Right: One of 70 Bantam BRC-60s passed to the US Army for evaluation in 1940. Its performance was such that the Army wanted 16,000 more but put the order out to competitive tender. Ford and Willys were the winners and Bantam, which had arguable first promoted the light utility 4x4 concept, was left by the wayside.





Below: A 1939 98cc DKW as used by the Hitler Youth. The owner, Mike Pickett, tells me that the front number plate is original to the bike and denotes registration in Sudetenland.



Above: The brutish-looking Volvo 915 command/radio car from the fifties, which was affectionately known as the Suggan (Sow), has something of a cult following.

Right: This ex-RAF Land Rover 110 radar truck was converted to SAS specification using original Glover Webb drawings and replicates a vehicle used by A Squadron, 22 SAS, during Operation Granby in 1991.

Below: Mike Pickett's Indian 741B being given the once over by Rick Curtis outside of his seedy military-surplus 'bike shop.







Among the vehicles fielded by the Restore & Display Military Group were this 'Jimmy' and a pair of Diamond Ts, a 4-ton 6x6 cargo and 6x4 980A prime mover.

corrugated-iron emporium. But the whole thing was skilfully executed right down to an outside lav complete with sound effects. All in the best possible taste of course.

The motorcycle dealership attracted a lot of attention as did most of the living-history endeavours and, of course, the arena battles. In the one I saw the Germans with their FV432based panzers and Land Rover-based armoured cars heavily outnumbered the underdog Allies who could only muster a Carrier, Jeep, 3/4-ton

Below: A cute matching pair of Cushman Autoglides shackled together lest they prove too tempting.

Dodge and a couple of fire engines that came in to put out grass fires caused by the pyrotechnics. But it was loud and it was fun, and that was really all the audience demanded. Check out the

accompanying photos for a little of the M&FM flavour. I reckon plenty left for home entertained and enthralled, and if they weren't also educated, it wasn't for the want of trying.









Left: Vehicles are frequently and unnecessarily packed in too close together at shows as if huddling for protection, but not in the case of these two **Bedford OYs. Chris Butcher owns The Gin Palace** while Elsie belongs to Alan Zeller.



Above: The Imperial War Museum's T-34/85 put in an appearance.

Right: Rob Warren's Caterpillar D4 featured in CMV recently but the scraper box is a new acquisition.







Below: If you are only going to have two original tanks at an event let one of them be Rick Wedlock's A27M Cromwell. It's a beauty... and it's for sale.

Left: According to a rebuild plate on James Nobbs's 8cwt Humber Snipe it was rebodied at a REME workshop in 1944, so may well have started life as a wireless truck. Sand-coloured paint was discovered during the restoration so it is presented in desert trim complete with sand tyres.



Below: HMVA chairman Colin Tebb has been campaigning his rare Bedford QLB Bofors tractor for many years.









Above: Can we use the word 'swarms' when talking of the number of Land Rovers present? Above right: There are some fine 'bikes in this line up, not least of all the Harley WLA and RAF Norton 16H nearest the camera. Right: Steve Turner's Austin Tilly sets off his collection of UXB (unexploded bomb) equipment. It was originally restored by the late Tim Wood.



Below: Two original bits of Wehrmacht kit were among all the re-enactor look-alikes, a wonderfully patinated NSU Kettenkrad and a very tidy VW Kübelwagen.





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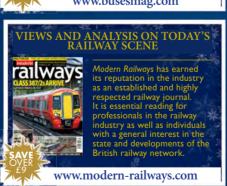
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Watch out for the following features in the February issue of CMV, on sale 15 January 2016

# SHOW/MUSEUM GUIDE SPECIAL

A complete calendar of 2016 military shows and fairs - plus our round up of the world's best military vehicle collections.







#### TANK TRANSPORTERS

David Fletcher profiles the various vehicles used to transport tanks, including a couple of unusual prototypes.

#### RADIO CONTROL

Scott Smith visits the radio fanatic owner of a 1938 Morris Commercial wireless truck.

#### SHOW BUSINESS

John Blackman meets the new man at the









And don't miss our regular features, including product reviews, forthcoming events, pages and pages of classifieds, the very best in military-vehicle photography... and, as regular readers will be only too well aware, far more than we can list here!

These are just some of the features planned for the next issue, but circumstances outside our control may force last-minute changes. If this happens we will substitute items of equal or greater interest.



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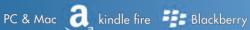


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# The major military-vehicle and militaria events in the UK and around the world...

There are many military-vehicle rallies held in the UK and elsewhere; only the larger events are listed here but more appear in the major club magazines – or look at www.milweb.net, www.mvpa.org, or www.mvt.org. It is always wise to ensure an event is still on before setting out on a long journey. CMV can

accept no liability for errors or omissions in this list.

Show organisers, please send details of your event to ian.cushway@keypublishing.com or to the editorial address at least eight weeks in advance. Unfortunately we have space only for shows with significant military-vehicle content.



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#### March

75TH ANNIVERSARY RANSOME & MARLES FACTORY AIR ATTACK

DATE: Sun 6 March 2016

**LOCATION:** various Newark-on-Trent **CONTACT:** www.newarkairmuseum.org, events@newarkairmuseum.org

May

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**CONTACT:** 01995 61866, www.chippingsteamfair.co.uk

#### July

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**DATE:** Fri/Sun 8-10 July 2016 **LOCATION:** Cockleshaw Beck Farm, Hunsworth Lane, Hunsworth, Bradford

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**CONTACT:** Stuart Wright,

stuart.wright@hotmail.co.uk, website

www.ywe-event.info

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#### **January**

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Date: Sun 3 Jan 2016

**Location:** Hallmark Hotel, Purley Way,

Croydon, Surrey CR9 4LT Contact: 07973 885754

#### **DALLAS DIG OUT**

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**Location:** Dallas Autos. Cold Ash Farm.

Long Lane, Hermitage, Newbury

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Contact: 01635 201124

#### **MILITARIA**

Date: Sun 31 Jan 2016 Location: Exhibition Centre, Stoneleigh Park, Warks Contact: 01743 762266, www.militariashows.com

#### March

#### **MALVERN MILITARIA FAIR**

Date: Sun 20 Mar 2016

Location: Three Counties Showground,

Wye Hall, Malvern

Contact: 01743 762266,







# THE MILITARY-VEHI

s autumn suddenly changed into winter we saw a surge of vehicles coming onto the market again. Many were from sellers in mainland Europe, hoping to attract UK buyers taking advantage of the strong pound. That said, UK advertisers also tell us they are getting plenty of serious enquiries and sales from Europe.

November saw a wide range of vehicles come up for sale, from challenging restoration projects and those that ran when parked through to show condition examples. These are right across the categories, wartime and post-war. But noticeably, and we don't know why, there has been a decline in Soviet era vehicles in recent months. That doesn't mean

people have lost interest in them because if that had been the case we would already have seen a surge of adverts.



East Coast Jeeps in Kent tell us it has 18 Jeeps due to arrive shortly from the USA. This should kickstart the Jeep spares market once these are sold and work starts on them.

The MoD disposal contractors, Witham Specialist Vehicles, has just imported some M998 Humvees from the USA and is offering them at very competitive prices starting at £15,000. Humvees have been hard to sell in the UK, possibly because of the previously perceived high value by their sellers and because they are not every enthusiasts' 'must have' vehicle. However, now many more are coming onto the market and prices have softened, we should see more in private hands with purchasers in the "I wouldn't mind one at the that sort of money," bracket coming forward. It is certain that some buyers will convert these cargo versions to the later slant back models that are more typical of front echelon



M998 Humvee from Witham. Interest in these should grow as prices soften.



Dig this - Brockway C666 crane found in Normandy and restored from a really derelict state will soon be coming up for sale. But what's it worth?

# CLE MARKET Compiled by Nigel Hay

combat troops. Incidentally, Hughes Movie Services of Chichester has just finished renting its slant back Humvees to the producers of the latest Brad Pitt film War Machine. As we go to press lan Hughes and his team are hard at work fabricating prop German vehicles for a Great War film.

#### HEN'S TEETH RARE

A rare 1945 Canadian built Dodge APT 236 with arctic cab at a realistic £5500 was the first time we had ever seen one of these for sale. Looking like a normal Canadian built weapons carrier, this weather protection is a quantum leap from the overtly breezy canvas topped version.

A vehicle can be rare, indeed very rare, but rarity isn't necessarily commensurate with value. If it's rare, but to most collectors uninteresting or totally impractical, it can be notoriously tricky to put a price on. Take Mick Wilson's superbly restored Brockway C666

with Quickway shovel crane that is just comina onto the market. It is rare, in fact it is the only one

known to be in preservation. The hard work of restoration and finding all the right bits has already been done so it's a turnkey purchase. But how do you value it? It is a very specialist vehicle and ideal if you like military construction and engineering vehicles and equipment. And after all, there is a current trend for tracked military dozers and plant - an interest that didn't really exist in any numbers five years ago. Certainly it is a stunningly visual vehicle and has been the focal point of the excellent Red Ball Express dioramas at many shows. That alone makes it perhaps perfect for display at several of the Normandy museums. I am not going to suggest a value here but it has to be worth much more than the White 666 cargo version and certainly as much as a small convoy of GMCs. It will sell for sure - there is a man out there for it and at the end of the day, you only need one buyer who sees the value in it.



German trucks being built to be sent to the front - in Chichester!

#### **BRIDGING THE GAP**

The Imperial War Museum (Duxford) is busy restoring the ex Normandy Mulberry Harbour Whale Bridge which was gifted to them by a small group of Normandy enthusiasts, Les Amis Pont Bailey, who, led by Christopher

www.christopherlong.co.uk/baleine).

Well, that's it, 2015 is behind us. It's been fun with military vehicles and all that history stuff. A year that has seen the very last War and Peace Revival and then within days of the announcement, its continuation

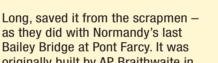
> under new stewardship. A year tinged with tragedy when two American

"...there has been a decline in Soviet era enthusiasts were killed by an explosion in a wartime Hellcat whilst filming a documentary.

> founder of our hobby, Peter Gray, passed away.

And the end of an era when the

A happy New Year to you all!



vehicles in recent months."

originally built by AP Braithwaite in 1943 and will make a remarkable new exhibit at Duxford in 2016 (see



A first for Milweb - a 1945 Canadian built Dodge APT 236 with arctic cab.



## THE MILITARY-VEHICLE PRICE GUIDE

Compiled by Nigel Hay

					1111		HHHHH		111118
	VEHICLE	COUNTRY	YEAR	ENGINE: CAPACITY;	APPROX	ASKING PR	ICES:		
		OF ORIGIN	OF ORIGIN	CYLINDERS; FUEL	PRODUCTION	LOW	HIGH	AVERAGE	TREND
Н									
,	SOFT-SKIN VEHICLES								
	AM General HMMWV	USA	1984	6200cc; V8; diesel	(on-going)	£15,000	£45,000	£26,000	•
	Austin Champ, FV1801	UK	1952	2838cc; 4; petrol	12,150	£3200	£6200	£4600	$\blacksquare$
	Bedford MK/MJ, FV13800	UK	1970	5420cc; 6; diesel	50,000	£2250	£3250	£2783	-
ł	Bedford RL, FV13100	UK	1952	4927cc; 6; petrol	73,150	£4500	£4750	£4625	-
1	Dodge WC51, WC52	USA	1942	3770cc; 6; petrol	141,075	£4820	£9700	£7223	•
	Dodge WC54 ambulance	USA	1942	3770cc; 6; petrol	26,000	£10,500	£25,000	£18,500	
	Dodge WC55-WC58 command	USA	1942	3770cc; 6; petrol	37,000	£6925	£25,000	£11,685	
I	Dodge WC62, WC63, WC64	USA	1942	3770cc; 6; petrol	43,000	£2250	£14,000	£8153	
	GMC CCKW	USA	1941	4416cc; 6; petrol	562,750	£3000	£14,790	£6950	
	Jeep M151	USA	1960	2319cc; 4; petrol	175,500	£3000	£8500	£5375	
	Hotchkiss Jeep M201	France	1957	2199cc; 4; petrol	14,500	£8750	£11,520	£10,037	
1	Jeep M38, M38A1	USA	1952	2199cc; 4; petrol	100,000	£6500	£13,500	£10,823	
	Jeep MB/GPW	USA	1941	2199cc; 4; petrol	627,000	£4995	£16,500	£13,199	
7	Land Rover Defender 90/110	UK	1983	2506cc; 4; diesel;	(on-going)	£2350	£8650	£5727	
				and others					
	Land Rover 101 forward-control	UK	1971	3500cc; V8; petrol	2675	£6000	£9750	£8437	
	Land Rover Lightweight	UK	1966	2286cc; 4; petrol	14,000	£4500	£6995	£5373	
V	Land Rover Wolf (incl replicas)	UK	1996	2506cc; 4; diesel	_	£8000	£12,500	£9825	
	Land Rover Series II/IIA	UK	1958	2286cc; 4; petrol;	858,051**	£3500	£5500	£4248	
Ţ				and others					
	Land Rover Series III	UK	1971	2286cc; 4; petrol;	510,276**	£3000	£4995	£3290	
				and others					
	M35 (etc) 21/2-ton 6x6, G742	USA	1951	5425cc; 6; diesel	15,000	£5500	£9000	£8125	
·	WHEELED ARMOURED VEH								
1	Daimler Ferret, FV700	UK	1952	4255cc; 6; petrol	4500	£10,000	£10,750	£10,158	
	TRACKED ARMOURED VEH								
	Alvis CVR(T) series, FV100	UK	1971	4200cc; 6; petrol*	3500	£4750	£15,000	£9875	_
	GKN FV432 (Mk 2), FV434	UK	1962	6570cc; 6; diesel	3000	£12,750	£13,500	£13,085	
1	Vickers Abbott (Mk 2), FV433	UK	1966	6570cc; 6; diesel	500	£10,000	£26,000	£18,000	_
1	AMPHIBIOUS VEHICLES								
	Alvis Stalwart, FV620 (etc)		1050	650000 0 potrol	1575	06750	20500	£7975	
	AIVIS Statiwart, FVOZU (Etc)	UK	1959	6522cc; 8; petrol	1575	£6750	£9500	11913	_
	MOTORCYCLES								
	Harley-Davidson WLA, WLC	USA	1939	740cc; V2; petrol	78,000	£13,700	£16,500	£14,735	_
		33	, 000		. 0,000	2.0,.00	3.0,000	2,,,,,,	
	TRAILERS								
	1/4-ton (for WW2 Jeep)	_	_	_	_	£850	£850	£850	•
	3/4-ton British (for Land Rover)	-	-	_	_	£375	£500	£414	_
	,								

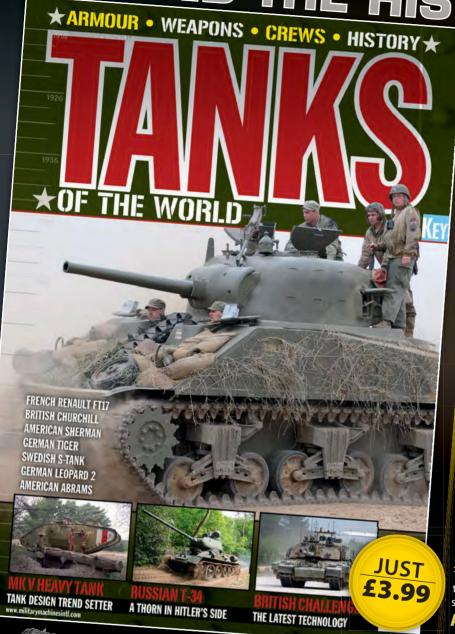
<sup>\*</sup> Engine capacity figure refers to vehicle as introduced; other engine capacities used during production run.

This guide is not intended to be comprehensive – at present it covers only the most popular collectors' vehicles. Similarly, the figures given are not valuations and do not necessarily reflect condition – they have been derived from the asking prices for vehicles recently advertised in Classic Military Vehicle magazine and on MILWEB. But remember that the price at which a vehicle was advertised is no guarantee that it sold at this price... or that it sold at all.

The effect of VAT on prices has been excluded so if you are buying from a dealer you must ensure that you understand what you will pay in total.

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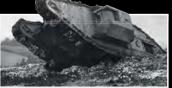
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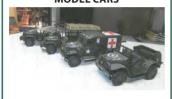


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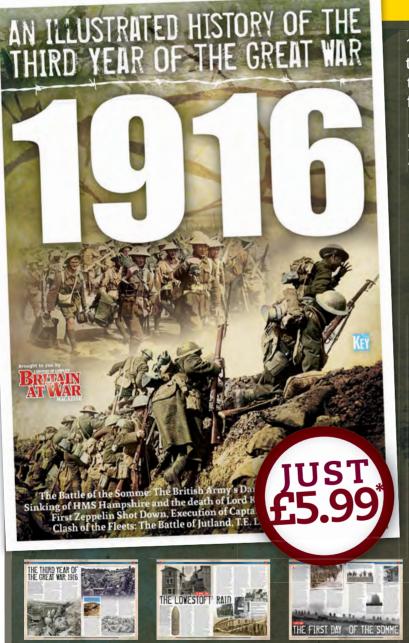
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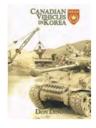
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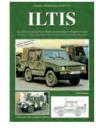
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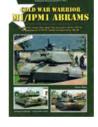
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