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# EDITORIAL



*Ian Young*

Ian Young  
Editor

I'm writing this month's Editorial comments in mid November, shortly after Remembrance Sunday, and I have to say that I've been astonished at the level of support shown by members of the public this year, and gladdened that the armed forces are being recognized in this way, especially those who paid the ultimate price. The coverage of the various Armistice Day celebrations and events on radio and the TV in the lead up to and on Remembrance Sunday itself has been quite superb, with the BBC's Antiques Roadshow Remembrance Special

aired on the 13th November being particularly moving for the presenters thanks to some incredible tales of courage and heroism. It was also good to see that the local military vehicle clubs and owners were out in force supporting the Poppy Appeal, and for many owners it is a way of keeping in touch with the past, and ensuring that the efforts of our brave servicemen and women is never forgotten. I'm sure that the efforts of those who do their bit to help on this special day are much appreciated, and long may it continue - Ed.



**MILITARY  
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INTERNATIONAL

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# NEWS and REVIEWS

## UP FRONT

### Spotted at DSEi 2011

John Whiting, one of the organizers of the SOE Overlord Military Vehicle Show, attended the recent DSEi defence equipment show in London and has sent along a couple of photographs he thought might be of interest to fellow readers. The one is the Meerkat, produced by the Ovik Group, and is essentially a recycled CVR(T) Scorpion with numerous additions and modifications, and is designed to be a super light tracked vehicle. One of the more notable modifications is the relocation of the driver to a more central position beside the commander. Needless to say it is only at prototype stage.

Also included was the BAE CVRT-2, now referred to as the Enhanced Combat Vehicle Reconnaissance (Tracked), which utilizes a CVR(T) Spartan hull for increased headroom with a Scimitar turret mounted on it and numerous other improvements and upgrades. The Enhanced Combat Vehicle Reconnaissance (Tracked) is now in service in Afghanistan.



## Faces of WW1 On Line

On Armistice Day 11.11.11, IWM (Imperial War Museums) made 100 portraits of people who served in the First World War publicly available through Faces of the First World War on Flickr Commons. The photos, offer a personal and poignant record of the impact of the First World War. They are taken from a collection of thousands of portraits acquired by IWM when it was founded in 1917 to record everybody's experiences of the Great War. IWM will continue to upload an additional portrait from this collection to Flickr Commons every weekday until August 2014, the 100th anniversary of the outbreak of the First World War, and would like the public to help find out more about the life stories of the people in the photographs by adding comments, information, links or text to the photos.

IWM acquired the portraits between 1917 and 1920, following an international public appeal. In some cases, bereaved families donated their only photograph. Some photographs have only a name, rank and unit. Others were accompanied by detailed letters and biographies. Faces of the First World War is part of IWM's preparations to mark the First World War Centenary in 2014 - 2018 by leading a vibrant, four-year programme of cultural activities across the country, including the opening of brand new First World War galleries at IWM London in 2014.

Diane Lees, Director General, IWM said: "The First World War Centenary is a landmark anniversary for Britain and the world. The war was a turning point in world history. It claimed the lives of over 16 million people across the globe and affected the lives of millions more. Everybody in the world has a connection to the First World War, either through their own family history, links to their local community or because of its long-term impact on the world we live in today. Through projects like Faces of the First World War and the wider Centenary programme, IWM will help keep the history and personal recollections of the war alive."

Faces of the First World War can be found at: [www.1914.org/faces](http://www.1914.org/faces)

To find out more visit:  
[www.1914.org](http://www.1914.org)



## Australian Treasures



Following the publication of the October issue, in which I mentioned that I had met John Belfield (founder of the Melbourne Tank Museum) at the War & Peace Show in my Editorial comment, I had a lovely letter from John to say thank you and in the letter he included a few photos of some of his favourite vehicles currently in his collection.

One of John's all-time favourite vehicles is the M1A1 Ward LaFrance wrecker, and even whilst visiting the War & Peace Show I spotted John onboard one of those taking part in the heavy wrecker event in the arena! John has sent along a photo of his wrecker, and according to Bart Vanderveen in issue No.3 of *Wheels & Tracks*, is a Kenworth-built truck going by the chassis number.

The photos also show an interesting 1940 North South Ford semi, as used for the convoys between Alice Springs and Darwin in 1940, with the peculiar half guards at the front, which were apparently done by the Ford Motor Works and were designed to better cope with the rough gravel roads encountered on the route to Darwin. A total of 280 vehicles were modified in this way.

And finally, we have a 1940 Ford Marmon Herrington gun tractor that was designed to tow either the 18-pounder gun and limber or 25-pounder and limber. John tells us that the vehicle was a rusty wreck in many pieces when John first got it, but over the years it has been restored to original condition, as shown here.

My thanks to John for sending along the photos and we look forward to hearing more from John in the future – Ed.



## New Specials from Key Publishing

Key Publishing are pleased to announce the launch of two new aviation special magazines:

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[www.keypublishing.com/shop](http://www.keypublishing.com/shop) from 17 November.

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## Model T Ford Ambulance

I don't know how many readers out there have been watching the ITV series 'Downton Abbey', but those that have been watching (willingly or otherwise) may have spotted the Model T Ford Ambulance that appeared in one of the episodes.

As I was wearing my anorak at the time, which was fully zipped up, I immediately recognized the vehicle as being one that I photographed in similar settings when I attended the Tynesfield 1940s Weekend back in June 2011, and while the ambulance didn't feature in the report from the show (August 2011 issue, pages 10 & 11) I've included some of those photos here instead – Ed.



## French Jeep Wreck

Barrimore England-Davis contacted us to let us know that during a recent trip to France (Northern/Brittany) he discovered derelict Jeep in a barn. He tells us that it was a late jeep that had been 'liberated' from the Americans at the end of the war and turned into a mobile shop selling vegetables. The chap who owned it died and since then it has spent all its time in a shed that eventually collapsed on top of it and as a result had sunk into the floor up to the axles. Sadly it was not for sale, but it does serve to illustrate that this kit is still knocking about even today!







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After sea trials with the newly fitted starboard engine, the last 1950's Royal Navy Motor Torpedo Boat, the Gay Archer is now able to take guests out for fuel-injected jollies on the Bristol Channel!

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Designed to hunt ships and for 'cloak & dagger' missions, the Gay Archer is the last of 12 MTB's that acted as part of covert Cold War operations. Due to the secrecy of her operations her history is still subject to the Official Secrets Act,

however, her main service saw her operating in the Baltic Sea tracking Russian submarines and performing clandestine operations with agents and the commandos behind the 'Iron Curtain'.

To celebrate the Archers return to the waves, Zagreus Films are offering the DVD, 'Build Your Own Motor Torpedo Boat' at only half price! This unique documentary charts the restoration and re-arming of the vessel as well as the history of Coastal Forces, told by the veterans themselves. Please send a payment for £5.99 incl. p&p to: Zagreus Films, 5 Weston Wood Rd, Portishead, Bristol, BS20 6RD.

Or call Tel: 07974 954 978 for trips on the vessel itself.

## Cobbaton VJ Weekend



The annual Cobbaton VJ Weekend held at the famous Cobbaton Combat Collection in North Devon, saw the best turnout of vehicles, displays and stalls so far. The event is an opportunity for vehicle owners to bring along their vehicles and enjoy a fun weekend, taking in the delights of the museum itself (which is well worth a visit if you've never been) and raises money for Burma

Star veterans into the bargain. The show always attracts an interesting selection of military vehicles, but this year there were two newcomers on the scene, namely Adrian Snell's M14 half-track, and Mike Braund's recently released NCRS Comms Station.

Adrian had spent many years restoring the M14 and Preston and Tim Isaac who run the museum

were delighted that it made its first public appearance at their show.

Harking back to an earlier period was a fine display of muzzle-loading cannon, and another old faithful at the show was Graham Holding's ex-SAS Pinkie.

The museum's derelict Daimler armoured car hulks and Comet had been given a makeover for the event and were grouped together as shot-

up vehicles (complete with burning smoke-pots inside) to form part of a living history display.

The show takes place every year at the museum, for further details contact: Cobbaton Combat Collection, Chittlehampton, Umberleigh, North Devon, EX37 9RZ. Tel: 01769 540740  
[info@cobbatoncombat.co.uk](mailto:info@cobbatoncombat.co.uk)  
[www.cobbatoncombat.co.uk](http://www.cobbatoncombat.co.uk)



## Reader Feedback

Brian Baxter, Technical Historian at the REME Museum emailed us with some feedback regarding the November 2011 issue of MMI.

Our thanks to Brian for the information, which is much appreciated and this is what Brian had to say – Ed.

Dear Ian,

There are a number of things in the latest issue, which I would like to comment on. On page 6 the pictures of the NZ Beaverettes reminded me that many years ago there was an article about commercial vehicles produced by Jensen. I think it was in 'Vintage Roadscene', and one photo showed a Beaverette that appeared to be on a Ford V8 chassis with wire wheels.

There was no reference to it in the text, which left us wondering if this was a prototype for what was eventually built on the Standard chassis or a one-off copy of the hull of the Standard perhaps for some Home Guard unit? The recent revelations regarding the NZ Beaverettes gives rise to another possibility that the Jensen Ford may have been a prototype for the NZ vehicles?

Also on page 6 the picture of the coach in US service reminded me that a number of buses and coaches were among the many vehicles we supplied to US forces in Britain under the terms of Reverse Lend Lease. Several cars and utilities of both British and Canadian origin, as well as ambulances and crash tenders were supplied to the US Army Air Corps for its UK bases. The well known batch of London Transport single deck coaches were used by the American Red Cross mostly as 'clubmobile' mobile canteens, but some were used as ambulances.

Reverting to Les Freathy's original article, the Leyland coach bearing the destination 'Stoney Stratford' was used by the Deputy Director of Mechanical Engineering, the senior REME officer in HQ 2nd Army as his personal mobile ops room. Earlier he had told one of his staff officers that he wanted something more

comfortable than the regulation office bodied 3-tonner. The officer then went to a Ministry of Supply vehicle depot housing buses and other vehicles, which had been requisitioned post-Dunkirk for use as infantry transport and then, when replaced by new trucks, stored against future requirements. There he selected, checked then signed for the coach and it became Colonel (later Major General Sir Leslie) Tyler's office.

It successfully negotiated the Normandy beaches. We have the original of Les's photo and one other in the REME Museum. We assume the vehicle was disposed of locally after the War, but its impressed status may have meant that it was returned to UK.

The whole subject of the purchasing and 'impressment' of civilian vehicles for military and other government service during the war needs to be fully recorded while the few who know something about it are still around.

On page 8 the photo of the Tortoise on its transporter shows the original version of the massive tilt bed trailer specially designed for the Tortoise. In later use these trailers had each single large wheel and tyre replaced by much smaller twins. The two Diamond Ts were connected by field telephone so the drivers could co-ordinate gear changes! Not long after joining the Army in 1953 I worked with civilians who had been involved in the trials of the double heading of the trailer. The post-war trials of Tortoise in Germany involved the use of this combination, but prior to that the same rig was used to recover heavy German tanks including King Tigers from the battlefields of Europe. An article on this project appeared in a very early edition of the REME Magazine and was copied much later in an issue of Bart Vanderveen's 'Wheels and Tracks'. Later the trailers proved useful for moving early Conqueror tanks until the Antap appeared.

I hope this information is of interest.

Sincerely

*Brian Baxter*  
(Technical Historian)





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# LP2A

## Local Pattern Carrier

### MMI takes a closer look at the Australian LP2A Carrier

**S**ince the very beginnings of modern motorized warfare allies have shared or copied military technology. In the main this has consisted of the supply of vehicles through various schemes, such as the lend-lease agreements of WW1 and WW2, and even today similar schemes exist where modern defence equipment manufacturers supply their wares to a varied collection of end users.

In some cases this 'aid' has taken a slightly different approach and rather than supplying actual hardware, technology has been exchanged, allowing the country in question to develop vehicles that more specifically meet their requirements. While basic mechanical components such as

engines, axles and the like are sometimes 'bought in' as finished components to speed up the production process, much of the basic vehicle will have been manufactured by the home market manufacturers.

An example of this is the World War Two Australian Local Pattern Carriers, which utilized the basic technology of the British Carriers, and was broadly based on the British Universal Carrier design, but tailored

to meet specific Australian requirements, hence the use of the phrase 'Local Pattern'. Initial variants were designated LP1 (Local Pattern Mk 1), but subsequent development following in-service use and feedback regarding its deficiencies resulted in more variants being developed and built, with the LP2A Carrier variant being the particular model under scrutiny for the purpose of this article.

#### DESCRIPTION

The LP2A Carrier was based around a locally manufactured armoured hull, which utilized ABP3 armour plate up to half an inch in thickness. The layout was broadly similar to British

**Main photo:** the Shopland's restored example of the Australian LP2A Carrier pictured here during the Tyntesfield 1940s Weekend event in 2011.



carriers in that the driver was seated to the right at the front of the vehicle and provided with a steering wheel rather than the control levers more commonly found in tanks. The gunner sat to the left with a forward protruding section for the weapon, and a raised air intake for the centrally mounted engine and transmission compartment was located behind them, with space either side of the engine for the remaining crew members and additional equipment plus the two 10-gallon fuel tanks.

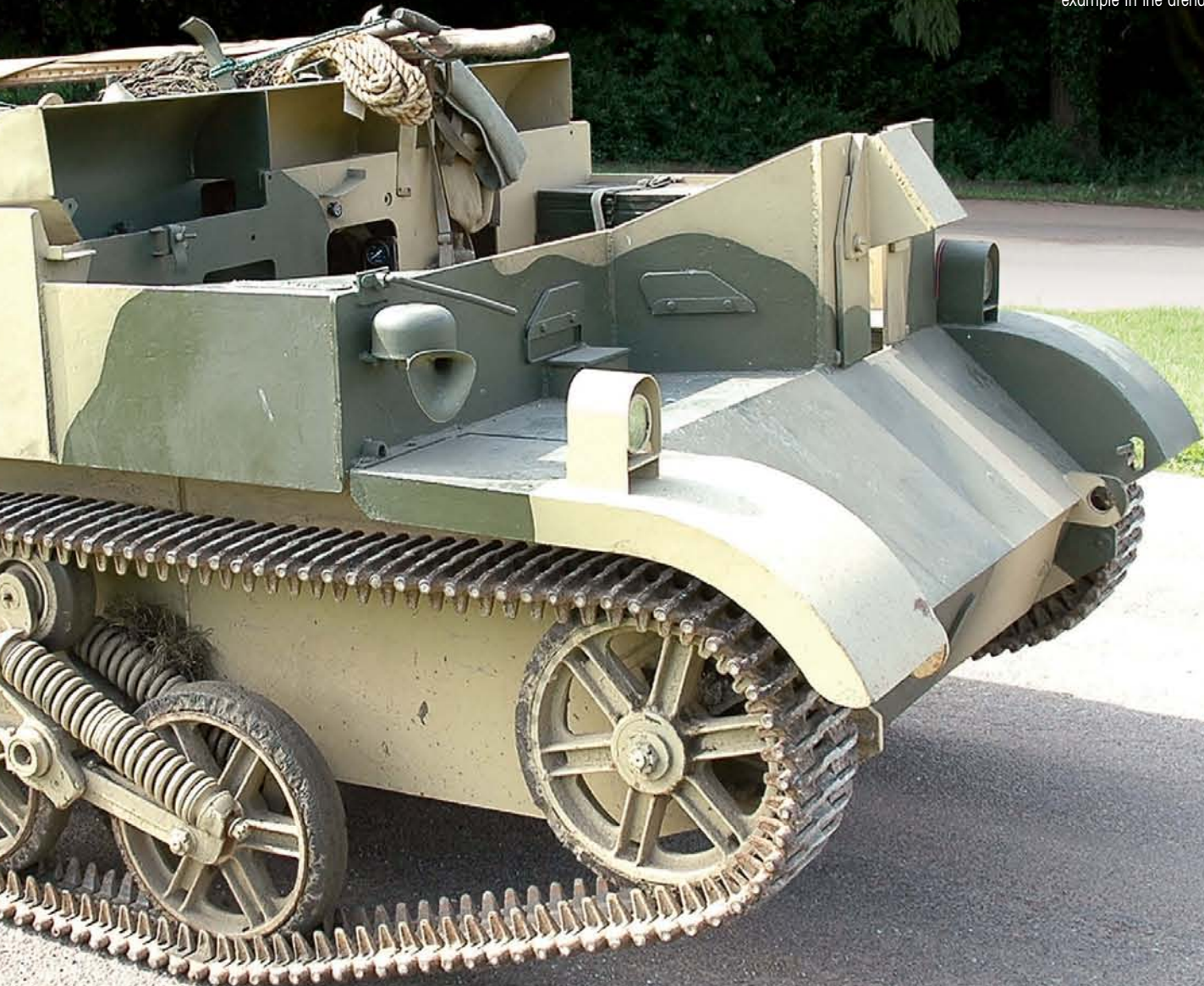
At the rear of a vehicle was a separate stowage area outside of the main crew compartment that was usually fitted with an assortment of

stowage bins and/or jerry can holders. Sloped side panels either end of the stowage area provide an easy point of identification for the Australian Local Pattern Carriers, being different to the British Universal Carrier. Soon after production started, and after approximately 2,276 vehicles had been built, the pioneer tools for the vehicle were relocated from the side of the hull to the rear of the hull below the stowage bins.

Motive power for the LP2A was provided by a 239ci Ford V8 side valve petrol engine supplied by Ford of Canada. Various models of the engine were used in the LP2A carrier



**Above:** my first encounter with the Local Pattern Carrier was at the War & Peace Show some years ago when I spotted this part restored example in the arena.







were designated as the LP2 carrier. Unlike the earlier LP1 Carriers, the LP2 and LP2A utilized track displacement and track braking for steering. With the track displacement the steering was actuated by the turning of the steering wheel, which operated the mechanism that forced the tracks one way or the other depending on which way the steering wheel was being turned, however, this minimal displacement only provided a gentle turn, more suitable for small adjustments in direction at speed or on wide open bends.

For tighter curves or when operating in a confined space, the steering wheel was turned further in



**Top left:** in this view of the rear of the LP2A Carrier we see the stowage arrangement with the boxes and clips for the pioneer tools below.

**Top right:** the suspension system on the Australian LP2A is essentially the same as that found on the British Bren carrier of the same era.

**Above left & right:** two views of the vehicle interior showing the rear engine compartment (left) and a view of the driver's position viewed from the gunner's position.

depending on the year of manufacture with early vehicles being fitted with the 1940/41 model engine and later vehicles using the 1942 model engine. Differentiation was made by different identification letters, with the letter 'I' used for 1940 models, the number '2' or 'A19UC' for 1941 models and the number '3' used on 1942 model engines. All engine numbers, regardless of the model year, were suffixed with the letter 'F' to denote their manufacture for 'foreign export'.

The engine was mated to a standard heavy duty Ford truck gearbox with four forward and one reverse gears arranged in a

conventional 'H' pattern. Depending on when the vehicle was manufactured, the carrier would be fitted with either a heavy-duty bus type clutch or a heavy-duty truck type clutch, the latter being used on a small number of earlier vehicles.

The transmission provided drive through the rear axle, of which two main types were used, the principal difference being in the pinion, with the 1938 type having a splined pinion and the 1940 type having a plain taper type pinion with a woodruff key. It should be noted that the 1940 type pinion was used on the LP2A carrier, whereas those fitted with the earlier 1938 type

order to actuate the rear brakes, locking up one side or the other and allowing the vehicle to slew round in a tight turn. It was a relatively simple system that the drivers could become accustomed to quite easily, making the carriers reasonably easy to drive.

The suspension system on the Local Pattern Carrier was of the Horstmann Slow Motion type comprising of a double front bogie and a single trailing bogie with a single track return roller built into the front bogie. A large idler wheel was mounted to the front, with the drive sprocket to the rear. Rubber shortages later in the war saw them being





**Left:** rear three-quarter view of the Australian LP2A Carrier. This vehicle belongs to the Shopland Collection. The triangular panels to the rear of the hull sides are a distinguishing feature.

**Below left:** the vehicle is clearly based on the British Bren carrier that many will be familiar with, but numerous detail differences identify this as a Local Pattern Carrier.

**Bottom left:** one of my earliest encounters with this vehicles was at the now defunct Bristol Docks military vehicle show.

**Below right:** view of the driver's compartment. Note the build plate to the right of the photo that distinguishes this as an LP2A Carrier.



“... the engine was mated to a standard heavy duty Ford truck gearbox ...”



## Specification - LP2A Carrier



Length:	150 in
Width:	79 in
Height:	74 in
Weight unladen:	3 ton 13 cwt
Weight laden:	4 ton 5 cwt
Ground clearance:	10 in
Fording depth:	26 in
Steering:	Track displacement and track brake
Engine:	239 ci Ford V8 SV petrol
Fuel Capacity:	2 x 10 gallon (Imp)
Armour:	0.5 in max
Crew:	4
Armament:	Various, incl. Vickers MMG, Bren LMG, Lewis LMG







“... a number of Australian Local Pattern Carriers are in private hands within the UK ...”

another restored example for the purpose of illustrating this article. This particular example belongs to the Shopland Collection and over the years has appeared at a number of military vehicle shows and events.

The vehicle is fully functioning, with the distinctive growl of the Ford V8 engine hard to miss! Although incomplete and unrestored when imported into the UK some years ago, the Shoplands have since restored it to running condition, with many of the parts not surprisingly sourced from Australia. It now forms part of their impressive collection of vehicles and attracts a great deal of attention wherever it goes.

My thanks to David and James Shopland for giving me access to the vehicle during one of my visits to see their fine collection of military vehicles.



replaced by steel rimmed front idlers and return rollers. The tracks consisted of 176 links per side and were constructed from cast iron. The links were joined using steel hinge pins and were just 9.5-inches in width. Tension could be adjusted by moving the front idler wheel forwards or backwards until the tracks were correctly tensioned.

### PRIVATE HANDS

There are a number of Australian Local Pattern Carriers in private hands, and while many of them are, not surprisingly, to be found in Australia, some have managed to find their way into the UK.

My first encounter with an Australian LP2A carrier was at the War & Peace Show, when one recently imported example turned up in the arena, but since then I have had the opportunity to take a closer look at



**Above:** two further views of the interior of the LP2A Carrier showing the air intake behind the driver and gunner (centre), and the gunner's position with the ammunition stowage and protruding armour section in view.

### References

Australian Military Equipment Profiles Vol.2 – Local Pattern Carriers 1939-1945  
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Making Tracks – British Carrier Story 1914-1972  
by P. Chamberlain and C. Ellis

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by Bart Vanderveen





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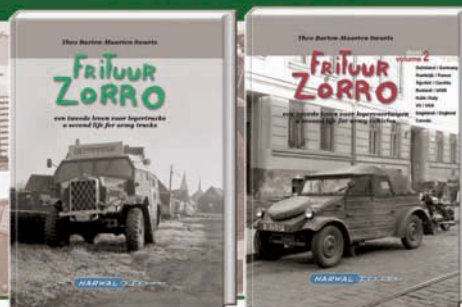
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**Tim Gosling reveals  
WW1 treasures  
from the deep that  
were discovered off  
the coast of Hawaii**

# Watery Grave

**T**he Model B truck built by the Four Wheel Drive Auto Co of Clintonville Wisconsin is one of the most iconic trucks of the Great War. Its scalloped radiator, high driving position and FWD badge on the front make it instantly recognisable.

Despite being slow, difficult to steer, uncomfortable to ride on, hard to start when cold and almost impossible to start when hot it is one of my favourite vehicles from that period. From written records this popularity is a sentiment shared by many of the

drivers during the war and the FWD had a remarkable reputation for coping well in horrendous conditions.

Much like any other reader I always become very excited when I hear about the discovery of any unrestored military vehicle and when I heard about the discovery of a number of WW1 trucks (including several FWD's) in Hawaii you can only imagine my excitement.

Sadly it was to be somewhat short lived as I then heard that the vehicles in question were not actually in Hawaii

**Top left:** this is much how the FWD's would have looked before being pushed in to the sea.

**Main photo right:** a remarkable discovery - after 70 years beneath the ocean this FWD is only missing the wooden body and seat.

**Below:** the copper gills of the radiator are poisonous to marine life. You can just make out on the top of the radiator the letters "LLE" from the factory location "Clintonville".





# grave

but off the coast of Hawaii and were in fact submerged in 400 Metres of sea water.

HURL (or the Hawaii Undersea Research Laboratory to give it its full name) is part of the School of Ocean and Earth Science and Technology at the University of Hawaii. Its objective is to study deep water marine processes in the Pacific Ocean and in order to do so has two submersibles that can operate at up to depths of 2000m, a remotely operated vehicle and a support ship.



**Top right:** this Liberty is virtually unrecognisable but makes an ideal place to grow coral.

**Above:** Much like the Liberty B found, this fine example has late pattern steel wheels.

**Below:** it's interesting to see that the cab, scuttle and bonnet of this Liberty B have all long rotted away, but the wings which are normally very thin steel are still present.







**Top:** apart from the chassis and axles there is not much left of this FWD.

**Above:** the Mack AC Bulldog was favoured by the US Engineers. This photo demonstrates how the body.

**Below:** this FWD has suffered quite badly and has lost its radiator. It still appears to be of interest to the large orange fish alongside.



In 2009 a series of unusual vehicles were found by manned submersibles a few miles South of Oahu. What made these vehicles different was that they appeared to be much older than the World War 2 relics that are more commonly found. Photographs were taken and passed to Steve Price the Chief of submersible maintenance who having an interest in these things sought to identify them. Fortunately, some of the vehicles were in quite remarkable condition and having landed the right way up were easy to identify.

It quickly became apparent that the vehicles included numerous examples of the American built FWD Model B truck some Liberty B trucks and also several tracked 5-ton Holt artillery tractors. Also discovered with them was a motorcycle, some engineers equipment and a Mack AC Bulldog with a steel dump truck body. This variant of the military Mack is quite unusual, as the body was raised by oil being pumped into a vertical hydraulic

cylinder. As the cylinder was raised, steel cables running over the top of two large pulleys would lift the front of the body so the contents could tip out the back. This design was very innovative for its day.

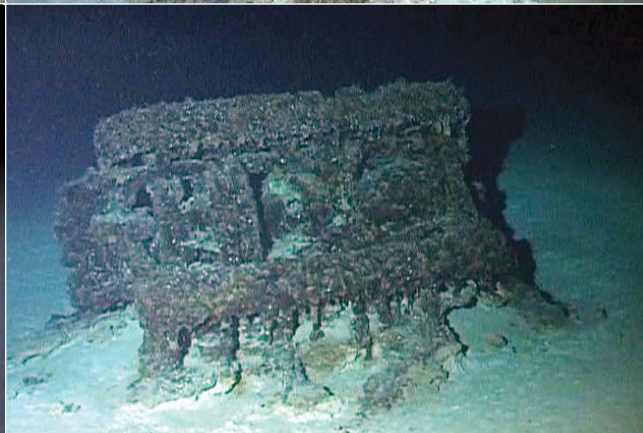
In a number of locations throughout the Pacific you will find WW2 US Army vehicles that had been dumped at sea, but finding ones from the previous World War was something entirely different and which





posed the question how and why did they come to such a watery grave?

The history of Hawaii is quite turbulent. Being in a strategic position it attracted the attention of the Spanish, British, Russians, French and then the Americans who were invited to build a naval base at Pearl Harbour in 1887. Being in the centre of the North Pacific the possibility of bringing in reinforcements in the event of the island coming under attack would be impossible. Therefore as World War One began to gather pace the US Defence Department spent



large sums of money in ensuring the troops on the island were well equipped. Several large Corporations benefited from this additional spend, in particular Holt (who went on to become Caterpillar) and the Four Wheel Drive Corporation (FWD) of Clintonville Wisconsin.

In August 1916 the 9th Field Artillery Regiment was formed in Hawaii and quickly received Holt prime movers making it the first fully motorised unit in the US Army.

FWD capitalised on their contract and in April 1917 published adverts proclaiming that 51 FWD trucks had been despatched to Honolulu to equip America's first motor truck Regiment. The advert went on to say "two thousand miles from factory or service station – a reason for absolute assurance or dependability".

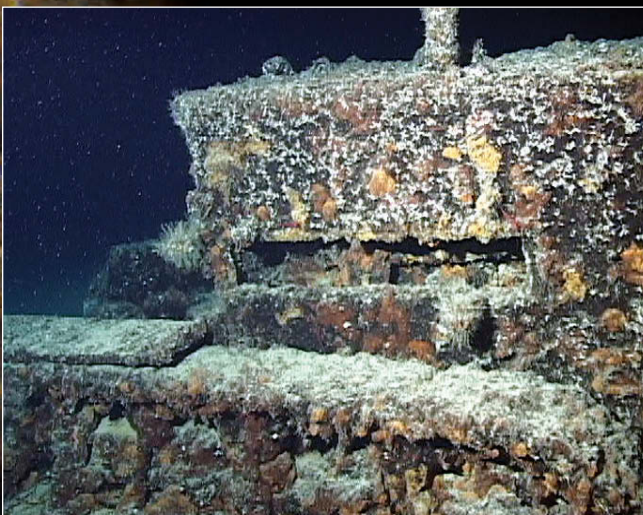
**Top left:** this is how the Holts appeared when in service with the military.

**Top right:** the person who first discovered the Holt tractor must have really wondered what he had found.

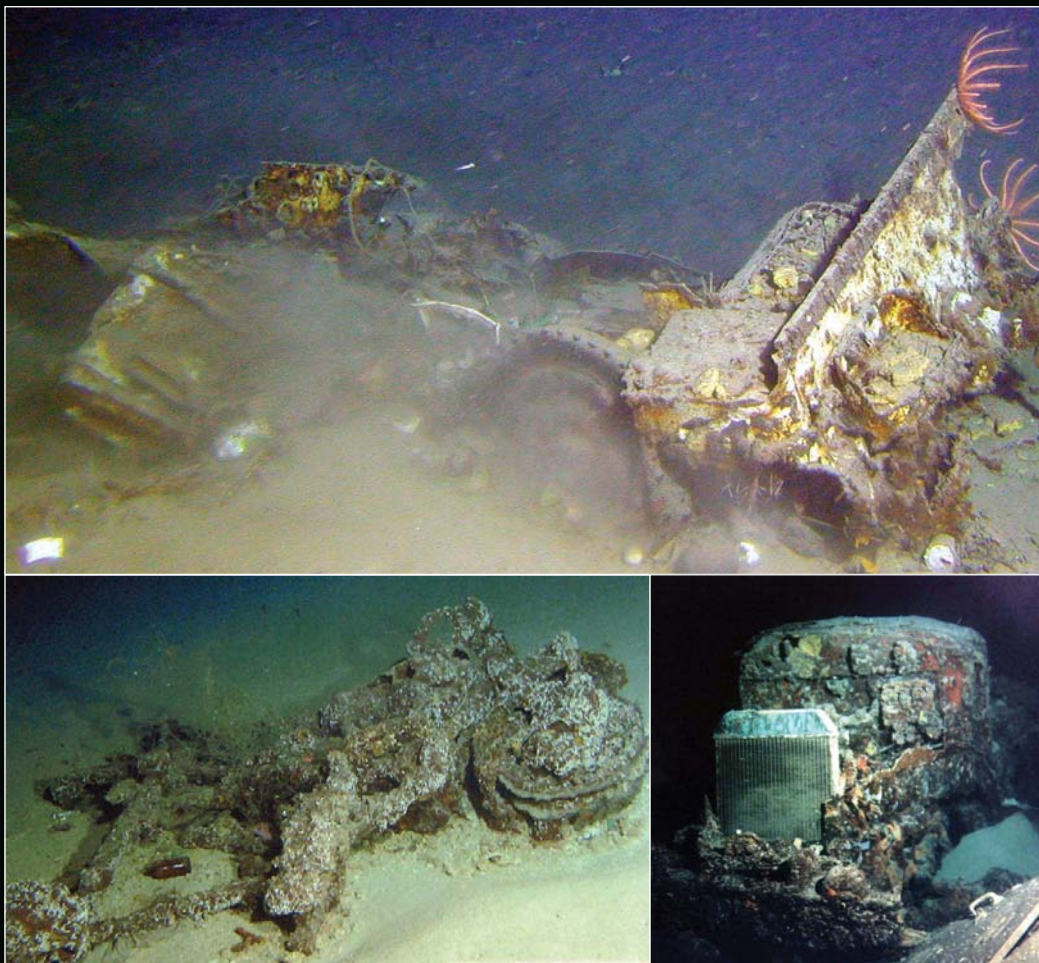
**Above right:** this Holt landed on its side giving a good view of the drive train and tracks.

**Main photo left:** this Model AC Mack can be identified clearly by the two pulleys for hydraulic tipping of the body.

**Below:** with the rear seat gone the Holt is not easily recognisable. The tracks run left to right and on which rests one of the engine covers, which has fallen there.







**Top:** this WW2 Jeep is hard to make out, but the back of it (complete with Jerry can bracket) is on the right.

**Above left:** not much remains of this motorcycle, which defies definite identification.

**Above right:** I am sure most readers may recognise this as a Dodge – probably a T207.

**Main photo right:** just a few miles away from the WW1 trucks lay a good number of more modern vehicles like this LVT (or Amtrac) that was dumped at the end of WW2.

## A WATERY GRAVE

By the 1930's all of these vehicles would have been very tired and ready for disposal. With over 2,000 miles to travel to the American mainland it was just not cost effective in returning the vehicles complete or as scrap metal.

With space on Hawaii always at a premium the military no doubt thought the most efficient method would be dumping them at sea. Loaded on to a barge they were taken just a few miles south of Oahu and pushed over the side. The vehicles are fairly well scattered, but I find it intriguing to see that almost all of them landed the right way up and still sit on their wheels.

It is ironic that what is probably the largest group of WW1 period vehicles in the world only survived the scrap man because they were dumped in 400 metres of water. It would be wonderful to think that they could be brought to the surface, but 70 years underwater will have taken its toll upon them and the corrosion would be irreversible. The only way to realistically preserve these relics is to undertake a thorough photographic record and if anybody wishes to sponsor such an undertaking I am sure the laboratory would be delighted to hear from you.

My thanks go to Steve Price and the team at the Hawaii Undersea Research Laboratory for allowing me to use these photographs in this article.



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# War



**In our fourth and final report from this year's show we take a look at the post-war softskins**

**Top left:** there were some colourful examples of modern military trucks amongst the Vietnam War living history encampment, including 'Maverick'.

**Above left:** the show attracts a wide range of vehicle from, and representing a wide range of countries, including this Russian-built MAZ.

**Main photo right:** the Dutch crew of this DAF YA 328 6x6 3-ton truck certainly seemed to be enjoying themselves during their time in the arena.

For our final report from what was another memorable War & Peace Show, we will be taking a look at a few of the post-war period softskin vehicles that stood out from the crowd. With so many vehicles at a show like War & Peace, it's always difficult to pick and choose from the thousands to be found on site, and we're sorry that we can't feature all of the vehicles there, but we have tried to select photos of vehicles that for one reason or another stood out from the crowd.

The War & Peace Show, as usual, attracted a great many overseas visitors, with large contingents from France, Holland and Scandinavia and







# & Peace



**Group top left (from left to right):** in recent years more and more American Hummers have found their way into private hands and there were several examples to be found at the show; M151A1 Mutt with field modified armour plate, as used in Vietnam; the American CUCV is a popular choice with collectors around the world.

**Above right:** this privately owned Foden DROPS, pictured here leaving the arena, was one of the larger post-war trucks at the show and has appeared at a number of shows up and down the country.







one particular Dutch DAF 6x6 truck stood out from the crowd, not least because of the bevy of attractive girls travelling in the back of the truck during the arena display.

Russian and East German vehicles are also growing in popularity and amongst the many to be found at the show were the amphibious GAZ-46, various GAZ-69A 'Jeeps', Ural and Zil and the mighty MAZ 537 prime mover that has become a regular at the show in recent years.

Amongst the British and American softskins at the show were an increasing number of Land Rover WMIK Wolf replicas, I say replicas because the vast majority of these vehicles have been fitted with the WMIK kits by the owners rather than being released as WMIK vehicles with the kits fitted. However, with so many Land Rovers at the show there were some stand out examples, including the amphibious OTAL (One Tonne Amphibious Land Rover) brought



**Top left:** rare example of the French Sovamag TC10 4x4 light truck, brought along to the show all the way from France by its French owner.

**Above left:** amongst the increasingly large Russian military vehicle presence at the show was this Ural 4320 radio jamming truck, and yet this truck has a UK owner!

**Above centre:** another Russian 6x6 truck, this time a ZIL-131 troop carrier complete with a full complement of troops making their way to the arena for a display.

**Above right:** another East German vehicle, namely an amphibious GAZ-46, essentially a close copy of the American GPA Jeep using components from the GAZ-69.

**Right:** this fine collection of Dutch DAF YA 328 6x6 3-ton trucks was part of a much larger Dutch contingent to be found at the show.







**Left:** since being restored this USMC M1044 Hummer has made appearances at various shows around the country, and 2011 was its second year at the War & Peace show.

**Below left:** over the past few years the show has begun to attract a great many vehicle enthusiasts from Europe and here we see a group of re-enactors in an East German Army GAZ-69 4x4.

**Below right:** another of the Hummers found at the show this year, I spotted this one close to the arena while I was watching one of the displays. Apparently it belonged to a German collector.

**Bottom right:** there are always a good selection of Light Strike Vehicles at Beltring, and this ex-Gulf War Mk1 Longline Light Strike Vehicle took to the arena to perform for the crowds.



“...it’s always difficult to pick and choose from the thousands of vehicles to be found on site...”







“...at the show I found an increasing number of WMIK Wolf Land Rovers on display...”



**Group top right (from top to bottom):** rare prototype One Tonne Amphibious Land Rover (OTAL), part of the Dunsfold Collection; short wheelbase Series IIA Land Rover in 1960/70's Northern Ireland guise; superb replica of an early unit modified SAS Pink Panther Land Rover.

**Top left:** it came as no surprise that there were quite a few Land Rovers at the show, but the number of WMIKs continues to grow.

**Far right:** this Scania TGB40 6x6 truck travelled to the show from Sweden.

**Bottom right:** a tidy 1965 example of the French Berliet TBC 8KT wrecker.

**Below left:** ex-Irish Army Acmat truck, a regular at the show. The Acmat truck is on my 'vehicle wish list' too!

along to the show by the Phil Bashall of the Dunsfold Collection, and a lovely example of a short wheelbase Series II in Northern Ireland guise.

Of the larger vehicles at the show the single example of the Foden DROPS was truly impressive, as were some of the highly decorated trucks of the Vietnam re-enactment group Rolling Thunder. Obviously there were many more examples of larger trucks, but sadly I've run out of room to list them here, but if you visit the show next year you can of course see them for yourself, and with next year being the 30th Anniversary of the War & Peace Show, it's bound to be an extraordinary show.

The dates have been set for the 2012 show, with the show running between the 18th and 22nd of July 2012. You can find out more about next year's show, and catch up on previous events by logging on to the War & Peace website at: [www.warandpeaceshow.co.uk](http://www.warandpeaceshow.co.uk)





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**Top right:** various views of the brand new Mercedes Benz Actros 2755A helicopter fire fighting vehicle.

**Below:** the Mercedes Benz Actros 2755A will shortly enter service with the Royal Dutch Air Force.

Earlier this year five, brand new fire-fighting vehicles were purchased by the Royal Dutch Air Force for use during foreign missions. Their task is to fight any fires that might occur onboard helicopters of Air Force Command (CLSK) (Commando Luchtstrijdkrachten), also called Royal Dutch Air Force (Koninklijke Luchtmacht), as well as any other fires or incidents that might be encountered on the airfield, but more specifically it has been designed to meet the special requirements that might be required for foreign missions.

The vehicle itself is based on the Mercedes Benz Actros 2755A and has room for a crew of three men, which consists of a commander, driver/pump operator and a rescuer.



# Feeling the Heat

**Siete Meeter takes a first look at a new helicopter fire-fighting vehicle about to enter service with the Royal Dutch Air Force**







The fire tenders always operate as a two-vehicle team and while the extinguishing properties of the two vehicles are identical, the interior equipment is different with one equipped as an air watch vehicle and the other as a rescue vehicle.

In an operational situation it is often common practice to refuel helicopters with engines running so that they can take off very quickly should an emergency occur, such as an attack. This method of refueling has the potential of being more dangerous than usual with the heat of the engine and exhaust having the potential to ignite the fuel. To combat this the extinguishing system can be set to be operated through a standby button, which can fire the extinguishers within a few seconds to extinguish any fire that might break out.

The extinguishing agent used is dependent on the type of fire being

tackled and is either water or water and foam with the option of using either the bumper-mounted monitor at the front of the vehicle, or a conventional reel with hand-line to be sprayed by the fire-fighting crew.

The extinguishing system is also equipped with a Compressed Air Foam System (CAFS) that allows the extinguishing of a fire with the bumper-mounted monitor, which has a throw of up to 70-metres and thanks to the long reach it's possible to start fighting a fire from a safe distance.

A powder is also carried and kept in a separate line reel that can be hand-sprayed, and an interesting development is the fact that the vehicle is equipped with ground sprayers for self-protection against fire travelling below the vehicle, which might occur with a fuel spillage.

The structure and the cabin are provided with shelves and cabinets to store the aid packages and other tools that might be needed by the crew. A crate system for the luggage racks was chosen so that it can become interchangeable depending on the function of the vehicle.

The vehicle can perform under high and low temperatures independently and has its own energy supply. With this system the heating or cooling of the vehicle and extinguishing system can be maintained, while the air compressor is used to fill the water tank and CAFS bottles. The generator can also provide electrical power for other vehicles.

The helicopter fire fighting vehicles are stationed at the Gilze Rijen, MLT-Deelen airbase, Leeuwarden air bases and KMSL Fire-fighting Training, Woensdrecht.

### DETAILS

The vehicle is completely self-supporting at temperatures from -32 to 47 C and is provided with air-conditioning, heaters, heating elements in the tanks and insulation. Because the vehicle is designed for use in operational combat areas it is equipped



with a fragment proof cabin and has a maximum wading depth of 750mm. Other equipment includes an electric winch, and specific military equipment such as blackout lighting, and lifting and lashing eyes are integrated into the vehicle at the factory to enable the vehicle to be used with the appropriate air transport, which in this case would be the C-17 transport aircraft.

The first vehicle (prototype) has been extensively tested at the firm of Rosenbauer in Austria, and besides a complete functional test of the vehicle and the fire-fighting equipment installations, the vehicles are also tested to determine the tilt angle, the lane-change ability and a circular test performed on a test track to determine whether the chassis components are functioning correctly at maximum all-up weight.

**Top left:** the Mercedes Benz Actros 2755A helicopter fire fighting vehicles will be stationed at the Gilze Rijen, MLT-Deelen airbase, Leeuwarden airbase and KMSL Fire-fighting Training Centre, Woensdrecht.

**Above:** looking at the front of the vehicle the compressor unit for the intake of air for the air bottles is on the left, next to the number 7082.

**Far left:** here we see the removable crates with reels and pumps that, depending on the role of the vehicle, can be removed from the vehicle. Also shown below is the cab interior.

## Technical Specifications:

Firefighting Equipment:	Rosenbauer (Austria)
Vehicle chassis:	Mercedes Benz Actros 2755A
Engine:	Mercedes Benz OM502, V-8, 405Kw
Gearbox:	Automatic
Layout:	6x6
Max weight:	27,000kg
Structure:	Aluminum monocoque
Water tank:	5,000-litres
Foaming agent tank:	300-litres
Drive pump:	Deutz 17 kW (197 hp) six-cylinder diesel engine
Extinguishing Pump:	Rosenbauer NH35 3,500-litre/min @ 10 Bar
Foam Sprinkler system:	Rosenbauer FLASH-CAFS, compressed air foam system
Bumper Monitor:	Rosenbauer RM25E with feedback control joystick, 2,200-litre/min @ 15 bar.
Throw of Monitor:	70-metres (with CAFS)
Generator:	Kirsch 40kVA (230v and 400v)
Air Compressor:	Bauer Mariner 250E, 250 bars





# Gentle Giant



The Germans, like the Allies, produced a huge number of different vehicles over the course of the Second World War, with all manner of variants and vehicle types being designed to perform a wide range of roles. Once again, like the Allies, the manufacture of these German vehicles involved a huge number of German (and foreign) companies and amongst them was Büssing NAG (Neue Automobil Gesellschaft) of Braunschweig, Germany's oldest truck manufacturer at the outbreak of war, having been established way back in 1843.

Büssing NAG initially supplied their Model 500 truck in different

variants, which was later superseded by the Büssing NAG 4500 and 500 in both A and S variants.

Another similarity to Allied vehicle production was the use of both petrol and diesel fuels, and while the vast majority of wartime German vehicles used petrol engines, a few used diesel engines, including the subject of this feature, the Büssing NAG 4500A 4.5-tonne crane truck.

The 4500 is a surprisingly big truck, and like many of the wartime German vehicles, was beautifully engineered and produced in a number of variants during World War Two, including the standard 4.5-tonne cargo truck, troop carrying truck, workshop truck and of

**We take a closer look at a rare example of the wartime German Büssing NAG 4500A**





course the crane truck shown here. The hard top cab was certainly roomy inside, but with relatively little in the way of instrumentation and equipment, although standard rifle clips were provided to the right of the cabin for the crew's personal weapons.

Motive power for the truck came from Büssing NAG's own LD series six-cylinder, 7.4-litre, water-cooled diesel engine, which produced 105 bhp at 1800 rpm and could power the 5.2-tonne vehicle to a maximum speed of 65 km/h. Unlike the earlier production Büssing NAG 500 trucks, which were only two-wheel drive, the later production 4500A/S trucks were provided with a four-wheel drive system, which afforded better cross-country performance, something very necessary for the crane truck in particular when trying to reach vehicles on the battlefield.

The crane truck was fitted with a turntable mounted Bilstein manual crane rated at 3000kg maximum lift located on the rear flat bed, which was

more than capable of lifting engines and transmissions from the majority of the trucks and vehicles in service at the time. A large wooden storage compartment was mounted between the crane and the rear of the crew cab to carry all the associated equipment such as chains, tools, pulley blocks and the like. An interesting and useful feature was the ability for the right hand side panel of the compartment to be dropped down so it could double up as workbench and was fitted with adjustable legs to keep it both level and stable on uneven ground.

The crane itself was manually operated using a hand crank that could be fitted to a number of spigots on each side of the crane housing, each of which performed a different action. The main boom could also extend to increase the reach of the crane when operating over the top of a vehicle, as was demonstrated for me at the time of my visit to the Crompton Military Vehicle Collection with the aid of their Hetzer. Under each corner of the rear



**Left:** the Büssing NAG 4500A crane truck dating from 1943 is a rare vehicle in captivity, and is believed to be the only example of the type in the UK, if not the world.





**Left:** there's quite a collection of literature that goes with the vehicle, including the original log book and various user manuals.

flat bed was a fold down adjustable stabilizer leg, which can be dropped down to afford a more stable platform for lifting when the terrain is soft or uneven, or the item being lifted is particularly heavy.

Büssing NAG produced a great many variants over the duration of the war, including the 4500A, and by the end of war around 15,000 of all types had been built. Büssing NAG went on to build trucks after the war, retaining the name until 1950 when the company name was changed to Büssing Nutzkraftwagen GmbH and continued to produce trucks and buses into the 1980s.

## CROMPTON COLLECTION

The crane variant of the Büssing NAG 4500A dating from 1943 that is shown here is an extremely rare truck in private hands and is certainly the only known restored example in the UK, with very few others, if any in preservation around the world. This particular truck is part of the world renowned Crompton Military Vehicle Collection in Suffolk and I was invited up to Suffolk to take a close look in September 2011. While the Büssing did make a brief appearance at the War & Peace Show some years ago when

**Far right & below:** the cab of the Büssing is roomy, but has little in the way of instrumentation. Rifle clips are also provide to the right of the cab.

**Right:** a standard wartime vehicle jack is stored above the step and below the passenger door to the right hand side of the cab

**Below right:** the vehicle is powered by one of Büssing's own LD series six-cylinder, water-cooled, 7.4-litre diesel engine.







was first obtained by the collection, since then it hasn't left the collection's home in Suffolk and is normally displayed in the main collection hall alongside the rest of the collection vehicles.

In addition to the vehicle itself, which is in superb factory-fresh restored condition, all the associated tools and equipment have been gathered together to equip the vehicle, including a full set of manuals and vehicle documentation. This documentation is all the more remarkable for being original to that very vehicle, with all the vehicle numbers matching the documentation, while the log book lists the various units to have been issued with the vehicle and the different theatres of operation in which it served.

While the Büssing NAG 4500A Crane Truck is undoubtedly a fine example of a war machine, it is essentially a 'Gentle Giant', that would have performed routine maintenance and repairs in the field rather than playing any offensive role, but it's a very special survivor of the Second World War all the same and one that is set to educate the generations to come now that it's preservation has been guaranteed with a long future ahead.

My thanks as usual go to Bruce Crompton for inviting me along totake a closer look at the Bussing, and to Phil and Nick Rutherford for their help with the background information for the article and for setting up the vehicle for the photo shoot.

**Above left:** the Büssing NAG 4500A Crane Truck is equipped with a 3,000kg rated Bilstein crane as shown here.

**Below & bottom left:** the Büssing NAG was displayed in a typical scenario with the associated tools and equipment, at the time of my visit.





# Rust in PEACE

**R**ecently, during a stay in Poland I visited two of the main military museums in Warsaw. The first on Jerozolimskie Street (just down from the Charles De Gaulle monument) deals mainly with the military history of Poland, while the second larger institution on the outskirts of the city at Ul Pomska is chiefly concerned with military technology used by Polish forces.

This latter institution, which we hope to feature in more detail at a later date, has an extremely large collection of armour, anti-aircraft defence equipment and fighter aircraft, all of which are displayed outdoors, however, it is the scrap-yard at the rear of this institution that is the focus of this article.

**Newcomer to Military Machines International, Zack Sex, visited a Polish scrapyards and reveals some of the treasures there**

**Below:** shot of the rear engine deck of the OT-62. Of note is the retracted air intake unit, which can be extended when the vehicle is entering the water.

**Bottom:** just some of the Polish T-34/85's to be found slowly rusting into the ground. You have to wonder what's under the tarpaulins?





While this area is normally off limits to the general public I managed, after much wrangling, to persuade the Museum Director to allow me access to view the area and take some quick shots. This provided a fascinating glimpse of some classic Warsaw Pact equipment not on view in the main museum. This equipment, along with the remnants of some WWII German Panzers, quietly sits in its faded and chipped paint rusting slowly into the soil as they wait selection by the museums restoration teams. I'm sure you'll agree that it offers an intriguing look at vehicles that would otherwise remain hidden from the public eye.

With thanks to the helpful staff of the Polish Army Technical Museum for their assistance.



**Above:** the well maintained remains of a Krupp 17cm Kanone 18 (Matterhorn) gun. Missing its tyres, but to all intents and purposes very much intact. Guns like these reduced Warsaw to rubble during WWII.



**Main photo left:** the rusted remains of a Russian KV-1m 1942 model missing its tracks and smooth cast turret. You have to wonder if it will ever be restored.

“... it offers readers an intriguing look at vehicles that would otherwise remain hidden from the public eye.”



**Top right:** a captivating glimpse of the hull of the Panther G mid-production model. Sadly this captive big cat has seen better days.

**Right:** the truck-mounted multiple rocket launcher, often referred to as 'Stalin's Organ', has long been a favourite weapon with Russia and Warsaw Pact members.

**Right:** rear view of the Czech designed OT-64. These vehicles were widely used by the Czech and Polish armed forces.

**Below right:** rear three quarter shot of the right hand side bridge sections on the MTU-55, this simple and robust scissors design can take the weight of a MBT.

**Far right:** detail shot of the MTU-55 displaying the full length of the extension arm.

**Below:** the imposing figure of this Polish variant of the MTU-55 bridgelayer.

**Below right:** possibly one of the largest mobile mortars in existence the Russian-built M-160 160mm.

**Bottom right:** rear view of the M-19/38 122mm artillery piece. Also in this shot is the 152mm howitzer. Both of these have been updated to post-war layout with pneumatic tyres replacing the old solid rubber rims.







**Top left & right:** the shattered remains of a Panzer III lower hull with its L-60 50mm gun held in position by supporting beams. Of note are the open transmission hatches.



**Left:** shot of the WZT-1 armoured recovery vehicle. This Polish variant of the Russian BTS-2 differs in that it utilizes a telescopic snorkel tube as opposed to a hinged one on the original.



**Below & bottom:** two views of the K-61 showing full length of this long narrow vehicle. This amphibian when in the water and fully laden became very unstable.

“... a fascinating glimpse of some classic Warsaw Pact equipment not on view in the main museum.”





# COMBAT camera

**Shaun Connors looks at a selection of military vehicles and equipment and that all failed to reach their objective...**



**Above:** U.S. Army soldiers with 2nd Battalion, 30th Infantry Regiment, 4th Brigade, 10th Mountain Division, cut down a tree in order to free a mine resistant ambush protected vehicle from the mud in the Baraki Barak District, Logar province, Afghanistan, Dec. 21, 2010. ((Photo by: Pfc. Donald Watkins). Date Posted: 12.30.2010 06:27.

**Below:** U.S. Marines use heavy expanded mobility tactical trucks fitted with loading handling systems and wrecker recovery vehicles to tow an M88A2 Hercules recovery vehicle stuck in the mud at Bahram Chah, Afghanistan, March 16, 2011. The Marines are assigned to 1st Combat Engineer Battalion. (U.S. Marine Corps photo by Cpl. McCall/Released)

**B**y the very nature of what they do and where they do it, the vast majority of military vehicles, certainly those classed as combat or tactical support vehicles, need a high level of cross-country mobility. However, all vehicles have mobility limits, and for military vehicles these are heavily influenced by the many compromises involved in overall design, these often driven by the never-ending balance that must be struck between mobility, protection and payload, the so-called 'iron triangle'...

Combat Camera features a selection of images captured by service

photographers around the world on exercise, disaster relief/humanitarian operations, and operational deployment. Where possible and where available the original captions, as originally presented, have been used, with any required supplementary text filling in any equipment identification blanks that may exist, being added as a follow on caption or inserted into the main caption in [square brackets].

This month's selection of images are all US DoD copyright and all feature assorted military or militarised commercial vehicles that have fallen foul of their respective iron triangle...







**Above:** an overturned vehicle seats [sits] on the side of the road on Route Lancaster following a road collapse in Helmand province, Afghanistan, Dec. 16, 2010. Adrian Dubois, head of Military Stabilisation Support Team (MSST) participated in a fact finding reconnaissance mission in Nad-e Ali south district. Project progress and issues were discussed with local elders accompanied by members of Bravo Company 1st Battalion, Royal Irish Regiment, based at Shawquat and commanded by Maj. Bayard Barron. (Photo courtesy of British Royal Air Force Sgt Martin Downs/Released)



**Above:** Cpl. Bryan Ho, 24, a motor transport operator from Houston, digs out the back tire of a TRAM vehicle in Garmser, Jan. 25, 2011. Marines with 1st Combat Engineer Battalion, 1st Marine Division (Forward), were forced to dig out their vehicles using shovels after many of their recovery assets became stuck in soft mud. ((US DoD) Date Taken:01.25.2011. Date Posted: 02.05.2011 11:18. Photo ID:363946. VIRIN:110125-M-####-091. Location:AF)





U.S. Army soldiers dismount from their Humvee after getting stuck in a mud hole while patrolling through Kirkuk, Iraq, on Dec. 28, 2006. The soldiers are from Charlie Company, 2nd Battalion, 35th Infantry Regiment, 25th Infantry Division. (DoD photo by Staff Sgt. Samuel Bendet, U.S. Air Force. (Released))



Tow cables attached to various recovery vehicles pull on an M88A2 Hercules recovery vehicle stuck in the mud at Bahram Chah, Afghanistan, March 16, 2011. The Hercules belongs to the 1st Combat Engineer Battalion. (U.S. Marine Corps photo by Cpl. John McCall/Released)





Marines with 3rd Platoon, Charlie Company, 3rd Light Armored Reconnaissance Battalion, Regimental Combat Team 5, extract a Light Armored Vehicle from mud during Operation Desert Siege, Al Anbar Province, Iraq, on Feb. 11. 3rd Light Armored Reconnaissance Battalion is deployed in support of Operation Iraqi Freedom in the Al Anbar province of Iraq to develop Iraqi security forces, facilitate the development of official rule of law through democratic reforms, and continue the development of a market based economy centered on Iraqi reconstruction. (Date Taken:02.11.2008. Date Posted:07.16.2008 17:21. Photo ID:103480. VIRIN:080211-M-####-015. Location:COMBAT OUTPOST RAWAH, IQ)



“... all vehicles have mobility limits, and for military vehicles these are heavily influenced by the many compromises involved in overall design ...”



U.S. Army Soldiers carry a wrecker's winch cable to the first of three Humvees stuck in oily mud near the village of Tel Ali in the providence of Kirkuk, Iraq, Feb. 23, 2007. The Soldiers are with Bravo Company, 2nd Battalion, 27th Infantry Regiment, 3rd Brigade Combat Team. (U.S. Air Force photo by Tech. Sgt. Maria J. Bare)





# Witham's MoD TENDER

Report from the latest MoD Tender Sale at







**Opposite top left:** for a change not all of the vehicles in the sale were of British Army origin. This Russian-built T-62 tank was said to have been captured from Iraqi forces during the first Gulf War.

**Left & far left:** the latest MoD Tender Sale saw the inclusion of a single example of the Alvis CVR(T) Stormer Command Vehicle.



**Left:** tidy example of the FV434 armoured repair vehicle, one of two in the sale this time around. A number of FV432 armoured personnel carriers were also listed.

**Below:** these two BMP-1 Armoured Personnel Carriers were amongst the non-British Army vehicles in the sale for the month of October.

# DER SALE

**Witham Specialist Vehicles held in October**



**W**ith sunshine the day before and the day after, typically I managed to pick the one day when it was pouring down with rain to attend the October MoD Tender Sale to be held at Witham Specialist Vehicles! Fortunately the rain eased off long enough for me to be able to take some photos of what was quite an interesting and varied collection of vehicles and equipment.

With much of the large site lined by hundreds of Land Rovers, it came as no great surprise to find a considerable number of Land Rovers in the sale, and many of them were in remarkably good condition, some even having reconditioned engines. Amongst the various left and right hand drive 90s and 110s was a Tithonus 110 that had been subjected to an extensive refurbishment as part of the Project Tithonus programme, which included the addition of a roll over cage over the cab area.

Other Land Rovers of note included a couple of left hand drive, diesel-engined, ex-Dutch Lightweights, and another substantial collection of the armoured 'Snatch' Land Rovers. Incidentally, I've now heard several tales of successful recommissioning of these quirky vehicles with minimal work, but younger buyers should be aware that their weight (over 3,500kg



# MILITARY LAND ROVERS



**Above:** a number of Land Rovers were listed this month, including another batch of the armoured 'Snatch' Land Rovers in various states of repair, some very tidy 90 and 110s, a single Project Tithonus 110 in excellent condition, and surprisingly two ex-Dutch Army Lightweight Land Rovers still on storage pallets.



in many cases) may determine whether or not you can drive them on your particular driving license, which with younger drivers will limit you to a maximum of 3,500kg.

## LARGER VEHICLES

Amongst the larger vehicles were another collection of Bedford and Leyland DAF 4-tonners, a stack of RB44s and a small selection of Foden Heavy Recovery Vehicles. Of particular interest was the pair of RB44s fitted with fire fighting equipment in place of the normal back body, and amongst the Foden Heavy Recovery Vehicles was a sand-painted example with a red roof top that has presumably come from BATUS.

Also amongst the larger vehicles was a selection of Seddon Atkinson 38-tonne 6x4 long haul tractor units, together with the smaller Seddon Atkinson Strato 38-tonne 4x2 tractor units, some of which looked to be in very good condition, with one having just 195 kilometres on the clock!

Not all of the armoured vehicles in the sale this month were of British origin, with a BRDM-2 Scout Car, two BMP-1 Armoured Personnel Carriers and an ex-Gulf War Iraqi T-62 MBT rubbing shoulders with the ex-British Army AFVs in the sale.

## ODDS & SODS

I usually manage to come across a variety of other items of interest amongst the rest of the tender items, and the October tender was no different. Something that I spotted inside the main storage shed where the smaller items are displayed, was several stillages containing an assortment of CVR(T) parts, and in several of them I noticed some of the stand-off perforated armour, as seen fitted to various vehicles in the CVR(T) family whilst serving in Iraq and Afghanistan.

Outside I noted a stillage full of GPMG gun mounts described in the catalogue as 'Mk400 GPMG mounts', and if I'm not mistaken, are of the type used on the Saxon APC/ Patrol Vehicle, and across the way were two completely stripped out Pinzgauer 6x6 body shells/frames.

At the time of writing the date for the next Tender Sale had not been confirmed, with the date being announced as either December 2011 or January 2012, so keep an eye on the Witham Specialist Vehicles website for more details. You can also check out the vehicles available for direct sales, the online auction site, as well as the tender details and previous sales' results. Check out the website at:

[www.mod-sales.com](http://www.mod-sales.com)

# MILITARY TRUCKS

**Right:** amongst the latest batch of Reynold Boughton RB44s to be released was this one with a demountable body. It had just 5,200 miles on the clock!

**Centre right:** Seddon Atkinson 4x2, 38-tonne tractor unit, one of several in the sale.

**Far right:** there were three Foden Heavy Wreckers listed, including this one that judging by the colour scheme looks to have served at BATUS (British Army Training Unit Suffield).







**Opposite left:** the other non-British Army vehicle in the sale was this BRDM-2 Armoured Personnel Carrier. An interesting vehicle that's four-wheel drive, amphibious and has a set of belly wheels that can be lowered to aid the crossing of rough terrain.

**Left:** this 1996 Seddon Atkinson 6x4 38-tonne long haul tractor unit was ex-reserve and had just over 46,000 Kilometres on the clock, but some examples had as little 202 Kilometres on the clock!

**Left:** also amongst the Reynold Boughton RB44s to be released was this one equipped with fire fighting equipment. It was one of two examples in the sale.



**Left:** amongst some of the stillages containing CVR(T) parts I came across these stand-off armour panels. A rare find for someone.



**Left:** this pair of 6x6 Pinzgauer bodies were to be found outside, they had been stripped of everything!



**Left:** also outside was this stillage full of Mk400 GPMG mounts, which I believe were used on the Saxon.

## Stonefield P5000 4x4

Finally, and not in the Tender Sale, I came across this Stonefield P5000 4x4 fitted with a workshop type body. Looking at the state of it I would guess that it's been sitting around somewhere and someone's decided to finally dispose of it. At the time of writing the Stonefield was up for sale on Witham's online auction site.





# USMC GROWLER

**Below:** the M1161 is essentially an air-portable light strike vehicle and replaces the Interim Fast Attack Vehicle based on the Mercedes-Benz G-Class 290GTD. The latter has been used by the USMC since 1999.

**Below centre right:** note the size difference between the M1161 and the M1151A1 Humvee. The M1161 has an overhead ring mount suitable for typical USMC weaponry such as the M240, .50-cal M2HB or 40mm Mk 19 AGL.

In September 2011 I boarded USS Boxer (LHD-4), a Wasp-class amphibious assault ship. With the 13th Marine Expeditionary Unit (MEU) embarked, the ship was on its way back to its home port of San Diego, California.

Apart from the impressive array of helicopter types filling the flight deck, there was one special, little vehicle that caught my attention. It was small and it could easily have been overlooked. The object in question was a very new vehicle fielded by the US Marine Corps (USMC) – the M1161.

In size and appearance the M1161 bears more than a passing resemblance to the famous MUTT of yesteryear. Not only that, but the M151's design and drive train were the inspiration for this 21st century vehicle. Known as the Internally Transportable Vehicle (ITV), its name gives away its primary function. The diminutive vehicle is designed to be carried internally inside the MV-22 Osprey. American Growler Inc commenced development in 1999, and it has aptly received the nickname "Growler" from its progenitor. It now forms part of the product line of

General Dynamics Ordnance and Tactical Systems (GDOTS). The USMC-led programme will also see the US Special Operations Command (SOCOM) fielding the vehicle too.

The ITV family is extremely small at present since it contains only two members. These are the M1161 and the M1163. The former is a reconnaissance/fast attack vehicle, while the second tows mortars and ammunition trailers. The latter forms part of the Expeditionary Fire Support System (EFSS), with the complete system consisting of two M1163

## Gordon Arthur takes an exclusive first look at the US Marine Corps' M1161 ITV Growler



**Right:** this M1161 is stashed away deep inside the vehicle deck of USS Boxer. It has a ride height adjustment system that allows lowering of the vehicle to fit inside the V-22.



towing vehicles, the M327 120mm mortar and an ammunition trailer. The first M1163 vehicles were fielded by the USMC in January 2009. By August 2011, the USMC had received 209 M1161s and 102 M1163s. A further 42 towing vehicles are on order.

The M1161 I saw was parked next to an up-armoured M1151 HMMWV, and the difference in size is remarkable. The M1161 tips the scales at only 1,497kg. Not only can the ITV fit inside the Osprey, but it can also go aboard CH-53 Super Stallion helicopters.

The ITV has attracted criticism for its cost. After being awarded the contract, the M1161's price rose 120% to USD 209,000, while the price tag for the M1163 rose 86% to USD 178,000. To some, this seems steep for a vehicle that is essentially just an improved MUTT. Furthermore, it does not offer any armour protection for the crew. However, with CTIS and ride height adjustment system, it is much more technologically advanced than the M151. Furthermore, this class of vehicle represents the USMC's desire to return to its expeditious roots.

## First look at the United Growler



“In size and appearance the M1161 bears more than a passing resemblance to the famous MUTT of yesteryear.”



**Top right:** the ITV is powered by a four-cylinder 2.8-litre turbocharged diesel engine coupled to a four-speed automatic transmission, giving a top road speed of 100+km/h.

**Above:** despite its small size, the M1161 still has seating for four crewmen, the same as the much larger and heavier HMMWV.

**Left:** a close-up of the self-recovery winch mounted on the front of the nimble 4x4.



For cross-country driving, CTIS allows variable tyre pressure. The rollover protection system is foldable to reduce its size even further.





# Kiwi Bedfords Part 2

**Ian Stroud looks at the Bedford QL in New Zealand military service in the Post-war years**



**A**fter WW2 demobilization in 1946 the New Zealand Army began its reorganization initially rebuilding the Regular Force units followed by Territorial units from 1948. In 1948 the Army held approximately 396 x 40mm Bofors, all being acquired during the War.

The new NZ Artillery organization included an anti-aircraft component, all Territorial units. It consisted of 3 Composite AA Regiments (13th, 14th, 15th) and a Light AA Regiment (6th). The Composite Regiments were equipped with a mixture of 40mm Bofors and Ordnance Q.F. 3-inch Mk3 (132 of the later in mobile and static mounts being held by the Army). The 15th Com AA Regt was disbanded in

September 1954 and the 13th and 14th Com AA Regts. were disbanded in April 1956.

The 6th Light AA Regt. organization included 3 Batteries (61st, 62nd, 63rd) each of two Troops each having 6 guns (40mm Bofor). Once again my calculations make this 36 gun tractors being required. This Regiment was earmarked for the reconstituted NZ Division in the event of any further outbreak of war.

This arrangement continued until 1961 when the guns were considered obsolete without radar direction and therefore ineffective in the new threat environment. The units were disbanded that year and vehicles disposed of via the Government Stores Board.





**Main photo left:** although this isn't a genuine New Zealand QLR, it does serve to illustrate a similar type to that used. The vehicle is part of the Shopland Collection.

Also by the mid 1950s the New Zealand Air Force had established 2 light AA batteries for airfield defence (51 and 52 Territorial Squadrons). Each Battery had 12 ex-Army Bofors in 2 Flights of 6 guns, a total of 24 guns, but once again no information on what tractor used, if any.

The New Zealand ARMY Vehicle Register lists (as at 1949) 66 x Tractor, 4x4, AA Light (Bedford). Although it states Bedford it doesn't state the model, but it can be safely assumed they are QLB. The majority of these (46 in total), were held by the Central Military District with the rest being in Southern (12) and Northern (8) Military Districts. So far I have not been able to find information relating to the QLR variant in NZ Service. We think Reg Gibson's QLR has vehicle number NZ29581, but as to whether this is another vehicle or one of the above four vehicles renumbered has yet to be ascertained.

## KOREAN WAR

Because of the reorganization of the Army in New Zealand at the time of this conflict the New Zealand contribution was made up for the most part entirely from volunteers for the duration and K Force (also written as Kay Force) as it was known was treated basically as a separate entity.

The reinforcement group sent after the initial Army commitment (which was mainly 16 Field Regiment, NZ Artillery) consisted of 10 Transport Company RNZASC. 10 Transport Company did not take any vehicles to Korea, but upon arrival were issued with 103 vehicles from the British Advanced 4th Ordnance Depot at Pusan – most of these were Bedford QLD cargo carriers. 10 Transport then proceeded north to replace the British 78 Company RASC on 15th October 1951 in the Divisional Column of the 1st Commonwealth Division. Other Divisional Column units being the British 57 Company and the Canadian 54 Company, (later replaced by Canadian 23 Company).

Since March 1951 there had already been a NZ Transport Platoon (with 30 Chevrolet CMP 3-ton 4x4 trucks) operating with 78 Company RASC. This platoon joined 10 Transport and reluctantly exchanged their Chevrolets for 6x6 GMC cargo trucks and operated as A Platoon.



**Left & below left:** here we see Reg Gibson's QLR as found, and as yet untouched. While it's in need of complete restoration, it is at least largely complete, with most of the fixtures and fittings with the vehicle, which should make the restoration a little easier.

**Below:** compare this view of Reg's Bedford QLR with the one below it showing one of the QLRs in the Shopland Collection in the UK (Photo - Ian Young). There were different variations of the QLR depending on who built them, but these two look to be very similar if not the same.

**"The 6th Light AA Regt. organization included 3 Batteries (61st, 62nd, 63rd)..."**



B and C Platoons operated the Bedford QLDs with C platoon later also converting to the GMC leaving B Platoon the sole user of QLDs. All QLDs used by 10 Transport Company throughout this conflict retained their British registration number, Allied white star on each cab door and platoon letter/vehicle number on front left guard eg: B 23, as well as Commonwealth unit markings.

The Divisional Column strength was reduced with the 'ceasefire' from August 1954 when the British and Canadian units departed leaving 10 Transport to carry on until disbandment of the Commonwealth Division on 10th March 1956. 10 Transport was formally disbanded on 15th May 1956 and all remaining personnel returned to New Zealand, however, I have yet to establish whether the QLs were handed back to British Stores or whether all or at least some were returned to New Zealand. The later possibility is prompted by finding metal tags affixed to engine blocks and instrument panels of QL remnants located in New







ranging from fully restored to a slow death by decay (sad but true). With a chassis in one location and a body in another its difficult to determine if this represents one or two vehicles.

The number of known complete vehicles so far numbers just 6 (some have been built up from parts acquired from wrecks, which may be included in the overall total of 22. Complete vehicles are 1 x QLR (possibly NZ29581 as already stated), 1 x QLB (NZ19871) and 4 x QLD (including NZ22583 restored and formerly owned by Reg Gibson . Any assumptions

made in this article are purely my own and I stand to be corrected should any additional information come to hand. I welcome any additional information or corrections that can be provided by readers.

### POSTSCRIPT

Six months after completing the article, I found an item on MT in New Zealand 1930-50s in "Wheels and Tracks" magazine, issue 52, which included is a photo showing a CMP Chevrolet C60L fitted with Bedford

## "The number of known complete vehicles so far numbers just 6..."

**Top left:** another view of Reg Gibson's Bedford QLR. It's interesting to compare it to the photo of the preserved example below it (photographed in the UK), which is of a different design.

**Top right:** two views comparing the features on the Kiwi QLR and a UK QLR, which in this area are very similar in design.

**Far right centre:** if you look past all the flaking paint and dust, the interior of this QL is in surprisingly complete and original condition.

**Far right:** there are still some Bedford QL restoration projects to be found in New Zealand, although it would take a brave man to try and restore this particular example to complete and running order!

Zealand which state "rebuilt to Class 1 Standard by Brit Com Base Wkshop". Examples of the metal tags seen so far are dated 1954 and 1956.

My research has established that Brit Com Base Wkshop stands for British Commonwealth Base Workshop, which was part of the main British Commonwealth Base Supply Depot initially in Taegu, Korea, but with the North Korean initial offensive advance was moved to the ex Imperial Japanese Naval Base, Kure, Japan for the remainder of the conflict.

The other possibility is that New Zealand acquired the refurbished engines and instrument panels to replace worn out WW2 items fitted to vehicles still in New Zealand Army service. Perhaps someone out there can solve the issue pass on their knowledge via the editor?

### NEW ZEALAND SURVIVORS

The known remains (and many of them are just that) so far, of ex NZ Army Bedford QL military trucks possibly totals a maximum of 22,







QLR body and designated as a Command LP (I presume this is Local Pattern) vehicle, the modification done at RNZEME Workshops, Trentham, circa 1950/51.

How many were built? Did the all or some of the 4 QLRs listed in service in 1949 donate their bodies for this project? If this is so, then the origin of Reg Gibson's QLR changes. His QLR has a Brit Com Wkshps tag on the instrument panel dated 1954 and I have to wonder if the vehicle was acquired during or shortly after Korean conflict.

Also discovered shortly after the article was completed was a scrapbook kept by a WAAC driver of her service, which recorded all the different types of vehicle she drove. A total of 45 are listed from Jeeps to a Valentine tank, and included in the list are three vehicles relevant to this article, namely a Bedford Bofors, Chev AA Gun Tractor, Ford AA Gun tractor.



The first is the Bedford QLB and the latter two are CMP Chev C30 and Ford F30 Truck, 30cwt, 4x4, LAA Tractor. The number of CMP LAA Tractors in service in NZ is not known and I have not seen any photos to date, but with 100 LAA Tractors listed in 1944 and then in 1949 only 66 QLB listed, it would appear that the number of CMP tractors was quite possibly total 34 or less.

Source: "The WAAC Story" (the story of the NZ Women's Army Auxiliary Corps) by Iris Latham.

**Top left:** restored Bedford QLD belonging to Reg Gibson photographed at the Men of Steel event. The markings are fictitious, applied for a film.

**Top right:** the sad remains of a Bedford QL languishing in the countryside and slowly rusting away.

**Below left:** various views of now derelict Bedfords around New Zealand, including this chassis section complete with engine and gearbox.

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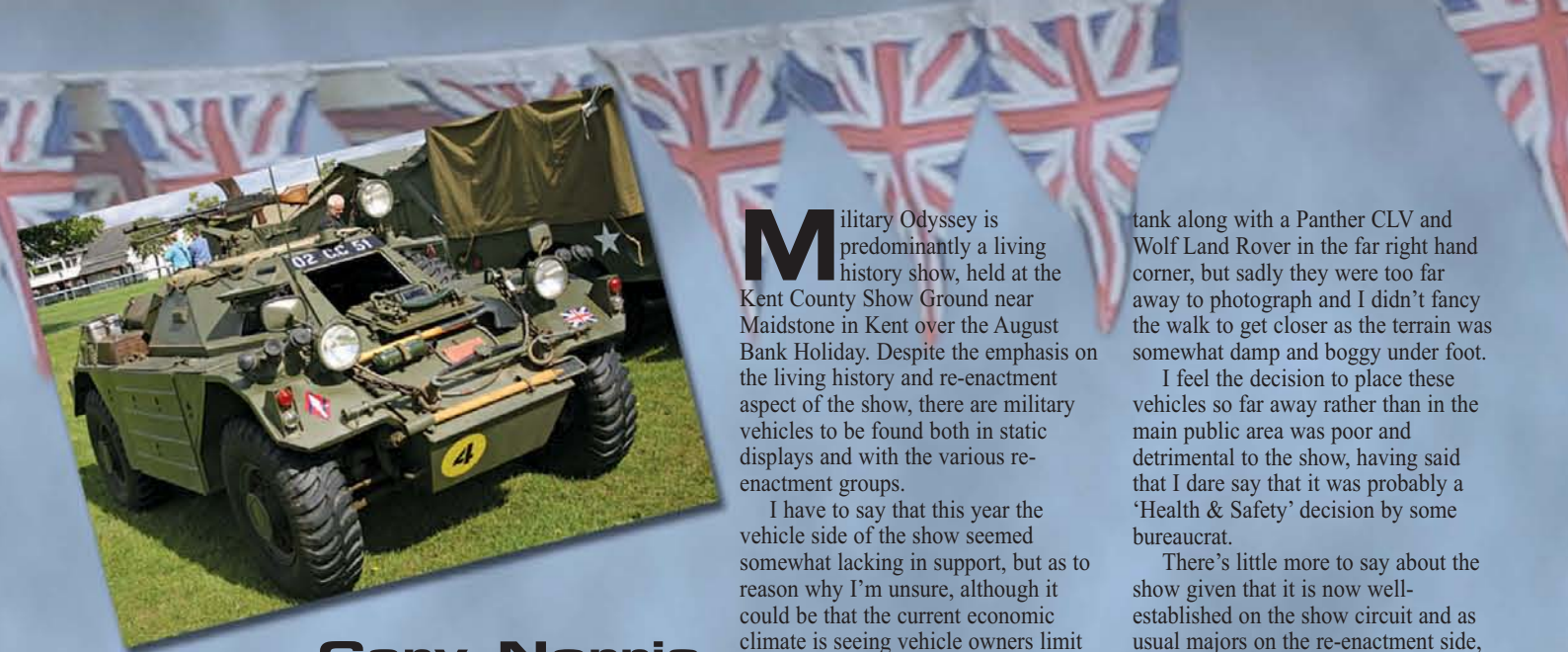
## THE INDIVIDUAL NZ VEHICLE NUMBERS

NZ4784 – 4786	NZ19855 – 19858
NZ4897 – 4900	NZ19871
NZ9549 – 9555	NZ22175
NZ9868	NZ22202
NZ15060	NZ22691 – 22692
NZ15138 – 15145	NZ22721 – 22723
NZ15147 – 15149	NZ22766 – 22767
NZ15276	NZ22770
NZ15279 – 15282	NZ22814 – 22815
NZ15284 – 15290	NZ22836 – 22837
NZ15385	NZ22982
NZ17826 – 17829	NZ22996
NZ18356	NZ23112
NZ18652	NZ23652

Also another 4 vehicles listed for 1949 as: Lorry, 3-ton, 4x4, Wireless H.P. Type 'D' 33 (Bedford), once again I have assumed these to be Bedford QLRs, although its not stated as such but their NZ vehicle numbers are:

NZ27424	NZ 27525
NZ27523	NZ27526





**Gary Norris  
reports from the  
premier living  
history event held  
at Detling in Kent**

**M**ilitary Odyssey is predominantly a living history show, held at the Kent County Show Ground near Maidstone in Kent over the August Bank Holiday. Despite the emphasis on the living history and re-enactment aspect of the show, there are military vehicles to be found both in static displays and with the various re-enactment groups.

I have to say that this year the vehicle side of the show seemed somewhat lacking in support, but as to reason why I'm unsure, although it could be that the current economic climate is seeing vehicle owners limit the amount of shows they attend during the year, however, a few die-hards always make the effort, which this year included the RAF Manston fire Brigade collection.

There was little in the way of heavy armour this year, although when I visited the arena I spotted a Challenger

tank along with a Panther CLV and Wolf Land Rover in the far right hand corner, but sadly they were too far away to photograph and I didn't fancy the walk to get closer as the terrain was somewhat damp and boggy under foot.

I feel the decision to place these vehicles so far away rather than in the main public area was poor and detrimental to the show, having said that I dare say that it was probably a 'Health & Safety' decision by some bureaucrat.

There's little more to say about the show given that it is now well-established on the show circuit and as usual majors on the re-enactment side, which is of limited interest to readers of MMI, but I have included a broad selection of vehicles I found at Military Odyssey in order to, give an overall appraisal of the show, however, my own personal opinion this year would be could do better on the vehicle side of things, but then I suppose I am a

# Military Odyssey







**Left:** superb example of the hard top American Hummer. The Hummer seems to be getting more popular with vehicle collectors despite high retail prices.

**Below left:** this tidy Series III Land Rover was amongst a larger collection of military Land Rovers at the show. Note the unusual jerry can holder to the rear.

**Below right:** an early Series IIA Land Rover in typical Northern Ireland guise, complete with mesh guards for the windows and side mounted wire cutter.

**Bottom right:** not all of the WW2 German vehicles at the show were real, here we have a replica, albeit a very good replica, based on a Czech OT-810 half-track.

# 2011







Although vehicle attendance was a little down for 2011, it did attract this superb example of the World War two British Morris Light Reconnaissance Car

“...the annual Military Odyssey show is now well-established



**Above:** the British WW2 paratroopers are well supported by re-enactors and living history groups.

**Below:** this beautiful replica of a wartime Marmon-Herrington MkIII armoured car is based on a Land Rover!

**Right:** the attention to detail from all of the re-enactors attending the show is stunning, including this well turned out US Airborne ‘Screaming Eagle’.







ed on the show circuit and majors on the re-enactment side of the hobby..."



**Above:** a well thought out WW2 diorama display that incorporated a selection of wartime trucks, vehicles and field tentage.

**Left:** pair of Steyr 1500A trucks (personnel carrier in front, truck behind) two of the 'real' WW2 German vehicles at the event.

**Below left:** a beautifully restored example of the horse drawn general service carriage that is a regular at the show.

**Bottom left:** the local Manston Fire Museum always attends Military Odyssey, bringing along a selection of fire appliances.

**Bottom right:** the show is well known for the quality of the re-enactors and living history encampments and it attracts each year.

"There was little in the way of heavy armour this year..."





# 2011 Combined Ops



**Phil Royal reports  
from this popular  
event staged at  
Headcorn  
Aerodrome**



**F**irst reported in these pages back in the April 2011 Issue, the 'Combined Ops' event organised by the Invicta Military Vehicle Preservation Society (IMPS to their friends) is a fairly recent addition to the show calendar. For quite a few years after the War and Peace Show organisation was passed on by the Club to be run commercially due to its immense popularity, IMPS were without their own club show until 2009 when a meeting was organised at Headcorn Aerodrome, near Ashford in Kent. In 2010 the event was re-run and well supported, so inevitably another gathering was organised for 2011.

The pleasant twist with a 'Combined Ops' approach when compared to many other military vehicle events is that it is held at an active airfield, resulting in a great variety of things for the paying visitor to enjoy - the best of both worlds to many enthusiasts! With variable weather forecast for mid-August 2010 - you may recall the summer weather





“Combined Ops is organized by the Invicta Military Preservation Society.”

we had could barely be described as ‘summer’ - expectations were as to how well supported the show would be were mixed. But arriving on the first morning of the show it was immediately clear to me that the turn out seen at the previous year’s event was equalled if not considerably surpassed – and not only in terms of the paying public, but also in terms of member’s vehicles and the supporting aircraft. Given the economics of taking vehicles to an event such as this in the current financial environment, the vehicle list proved that vehicle owners were keen to support the show – although maybe preferring to take something a little smaller this year.

Consequently the vintage armour presence was less than one might have hoped, but there were the usual dynamic demonstrations from a number of FV432 APC’s (which presumably must be very frugal in their fuel consumption!).

As per the previous years event, busy arena schedule included vehicle displays on themes such as 70 years of the Jeep, heavy wreckers, the Blitz Fire Brigade and the usual noisy ‘high

speed armour’ sessions! It could be argued that a few too many turns were done by those FV432’s, but when it comes to it they are a lot of fun to drive - and to see being thrashed around in the arena for that matter! Each show day ended with an explosive and theatrical battle display put on by the Kelly’s Heroes and Second Battle group re-enactors, plus a few friends. Lots of bangs and dust, few happy endings...



**Left:** arena-battle organiser Malcolm Dunlop blasts away with his 50 cal machine gun, but unfortunately he was to be the last Allied trooper standing at the end of the battle.

**Main photo left:** P-51D Mustang ‘Janie’ banks towards the crowdline during a scintillating display at the 2011 Combined Ops show.

**Opposite bottom left:** Alex Scott’s superb Humber Mk1 Light Reconnaissance Car won awards for both Best Armour and Best in Show at Headcorn Aerodrome this year.

**Below:** rare Dodge VF32 Airfield fire tender with Ansul fire fighting equipment.





“The Red Arrows also performed a flypast at the Show on the Saturday.”



*Top left:* Richard Farrant's 1940 Bedford QLD general service truck.

*Above right:* a 1943-built Chevrolet C60L 'Jane' sits in the evening sunshine.

*Left:* a GMC CCKW with ETO 'Blood Bank' body is overflowed by a DH Dragon Rapide.



*Right:* Paul Chapman's 1941 vintage Austin K3 general cargo truck.



As always a few vehicles in particular caught the eye, and a number were rewarded in the show prize list. Best Armour and Best in Show went to Alex Scott's Humber Light Reconnaissance Car, while Best Heavy Vehicle went to Richard Cheeseman's Reo M35A1. Other awards went to Ted Catt and John Guppy with their Austin K9 radio truck and Bedford MWR respectively.

Other interesting vehicles to which my eye was drawn included Gavin Bowman's stunning 1929-built Karrier WO6, and John Millers Morris Series Y Ambulance.

## IN THE SKIES

Aviation highlights included displays from various aircraft resident at Headcorn, plus there was a good range of vintage visitors including the Battle of Britain Memorial Flight Lancaster, Spitfire and Hurricane, Maurice Hammonds P-51 Mustang 'Janie' and

Hawker Hurricane as well as a plethora of other visiting classic civilian types. The Red Arrows also performed a flypast on the Show Saturday.

Beside the vehicle and aviation attractions the show had a decent selection of traders on site, and the usual facilities at Headcorn were available including the free museum - worth a visit on its own merit anytime. Re-enactors were again out in force, portraying both the WWII period and more recent conflicts, including the Gulf and Northern Ireland. A range of small non-military WWII living history displays were also present

**Left:** Lancaster PA474 is escorted by a late mark XIX photo reconnaissance Spitfire PM531 finished in PRU Blue.



**Above:** a 1944-built Studebaker M29 Weasel tracked amphibian, owned by Michael Hopkins but up for sale.



**Below:** British Airborne troops pictured at speed in their well armed Jeep.

**Below right:** lovely example of the Austin K5 truck, owned by Richard Hughes and built in 1944.

**Below left:** a beautiful example of the wartime Fordson WOT 2 in RAF livery stands in the evening sunshine.







**Top right:** John Miller's lovely Morris Series Y ambulance, not a military vehicle as such, but with WWII provenance.

**Right:** Stephen Smith's Alvis Saracen Mk6 demonstrates for the crowd during the show.

**Main photo below:**

RAF 212 Squadron re-enactors planning and about to depart on their missions or scrambling to their aircraft.

giving demonstrations of various aspects of wartime life, and Judi Knight and the 'Forward to Victory' team were justly rewarded for their considerable efforts with the prize for Best Living History display. Combined Ops is a friendly informal show to be recommended, with lots to see and explore.


The dates have already been set for 2012 on the weekend of 13th/14th August – so get it in your diary and check out the show website at: [www.combinedops.co.uk](http://www.combinedops.co.uk)



“Re-enactors were again out in force, portraying both the WWII period and more recent conflicts, including the Gulf and Northern Ireland.”







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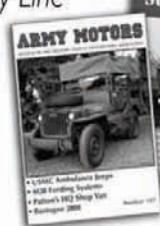

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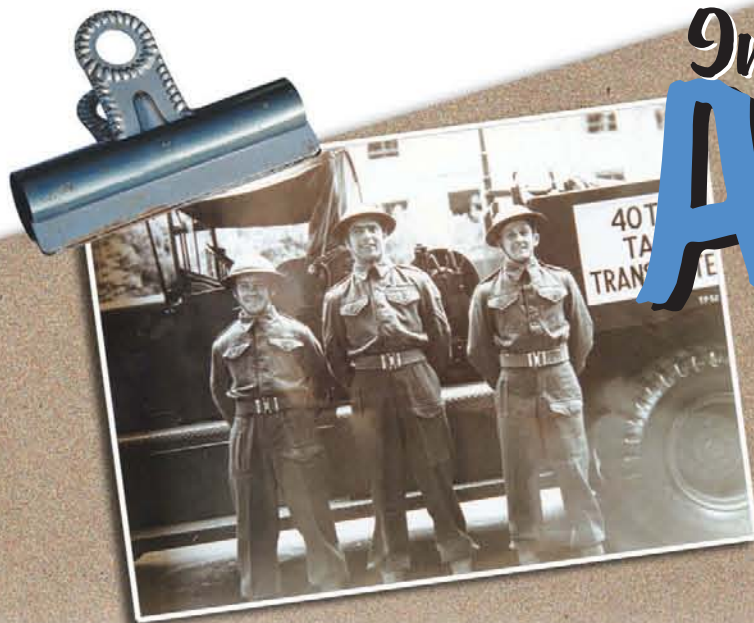
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# Into the Archives



## Les Freathy delves into the archives to look at the Diamond T 980/981 in the post-war years

**Top:** uniforms well creased, this happy crew prepare to take their well-bullded Diamond T out to the London Victory parade in 1946.

The Diamond T 980/981 had its beginnings in 1940 when the British Purchasing Commission in New York were searching for the procurement of a suitable tank transporter. Britain had the Scammell Pioneer and a number of six-wheeled ex-French contract White Ruxtalls and White 920 converted to transporters these latter vehicles were limited to carrying AFV up to 18-ton. The fact was that with a fast growing army acquiring more and more heavier tanks the British motor industry were hard pushed to keep pace with demand on existing products let alone develop and build new types of transporters.

The British specification called for a tractor and trailer combination capable of handling tanks up to 40-ton in weight, the Diamond T Motor Company were chosen to build the new tractor as they were available to begin production immediately, while most other US heavy truck manufacturers were already heavily involved in supplying the growing home front forces.

**Main photo below:** post-war photo of No.19 Company with early panel cab 980 and 981 models and converted living accommodation built onto the rear ballast body, all are of a similar pattern probably built in the company workshops.







A number of US companies supplied components, which were approved by the Purchasing Commission including Hercules (engine), Fuller (gearbox), Timkin (axles) and Garwood (winch). These and many other components certainly sped up the production of the vehicles and by the end of 1941, 425 had been built.

The trailer requirement was also built in America although Cranes of Dereham in the UK had already built a prototype with a 40-ton capacity, which in the long run would be

produced and issued to the army with many built by rivals Dyson. The American company Rogers had submitted drawings to the US Quartermaster on similar lines to the British design, but with 8.25x15 tyres as apposed to the British Crane and Dyson fitted with 36x8.

Rogers gained the contract and eventually, due to demand, sub contracted another trailer builder Winter Weiss Co. of Denver Colorado to build the trailers to Rogers design. The first deliveries of the tractor and trailer were shipped direct to the Middle East where the large battles



and long movements were placing a severe strain on the tank recovery and transporter units.

The final contract for 288 soft top vehicles of which only 138 were completed due to the end of hostilities in 1945. In total 6554 980/981 models were built, with 900 of them being issued to the US Army and at this time it is not known how many were lost at sea during transit. Many were also snapped up from military surplus dealers after the war for further employment in the heavy haulage, recovery, fairground and construction industry, while the last Diamond Ts left the British Army in the 1970s, illustrating the reliability of these now aged vehicles.

As usual, if you have any additional information regarding the photos featured here, please feel free to get in touch via the Editorial Office, details of which can be found on page 3.

**Top:** a most unusual post-war role for the Diamond T. This model 981 is towing a pair of Corporal Missile tubes on a Rubery Owen semi-trailer coupled to a Cranes of Dereham dolly trailer converter. The AEC Militant Mk I tractor would in most cases have towed the semi-trailer so this is indeed a rare photo. (Photo - Tim Neate)

**Above right:** a Diamond T 980 still finished in military livery. Additional post-war rear view mirrors and frames supplement the original mirrors. The bulge in the engine side panel confirms this vehicle to be powered by a Rolls Royce.

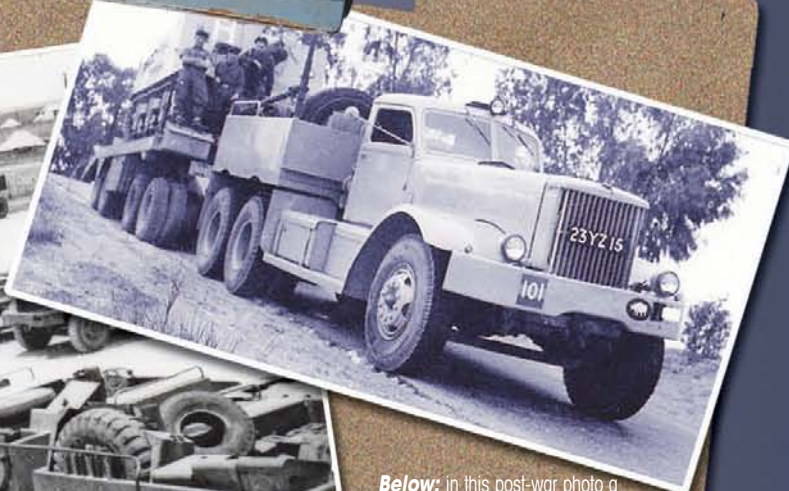
**Above left:** Loading a Centurion onto a Dyson 50-ton 32-wheeled trailer. A large number were supplied during the 1950s as replacements for the 40-ton Rogers, Dyson and crane trailers.





**Right:** a vehicle park in the Middle East showing soft-top Diamond T 980 and 981 models with Rogers 40-ton transporter trailers, they were part of a tank delivery squadron.

**Below:** the canal zone in the 1950s and this early panel cab 980 is towing the Dyson 50-ton multi-wheel transporter trailer loaded with a Sexton 25pdr self-propelled Gun. (Photo - John Newton)



**Below:** in this post-war photo a lone Thornycroft Antar is seen with this group of Diamond Ts of No.19 Company and would eventually replace the Diamond Ts. The long bonnets provide a warm rest area for the crews and behind the two Ts is a Ford E4 3-ton stores vehicle from the attached REME support squadron.



Diamond T 981 with Rogers trailer and Churchill tank bulled up for the Queen's birthday parade in Hong Kong during the 1950s. Roy Gray who took the picture was a serving member in the REME at the time.





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# BULLETIN BOARD

**Shaun Connors looks at Canada's attempts to replace the bulk of its light, medium and heavyweight vehicle fleets and questions if the current and projected requirements will be capable of delivering the balanced fleet they need to...**



As a major part of Canada's Medium Support Vehicle System (MSVS) program a fleet of 2,769 Bombardier 2.5-ton (6x6) Medium Logistic Vehicle Wheeled (MLVW) are being replaced. Deliveries of these trucks, which are a derivative of the US-produced M35 series, ran from 1982 and with the type initially having a projected service life of 15 years.

It is well known, certainly within the industry, that in 2004 Canada's DND made an attempt to replace the MLVW via the FMS (Foreign Military Sale) government-to-government purchase route, and with the FMTV (Family of Medium Tactical Vehicles) from then-manufacturer Stewart & Stevenson. The project failed as disgruntled potential MLVW replacement contenders objected to a sole-source procurement and Industry Canada officials protested that the deal would not offer enough industrial benefits for domestic firms. Other prominent criticisms included the misleading claim that an FMTV purchase would be akin to a further MLVW purchase, in that the FMTV (which entered production in 1994) would be outdated technology when procured.

The MLVW replacement requirement in its current MSVS format first formally emerged mid-2006, and in what is the almost unique Canadian style, the RFP (Request for Proposal) was split into two vehicle purchases, MilCOTS (Military Commercial Off The Shelf) and SMP (Standard Military Pattern).



In January 2009 (following the November 2007 RFP for an estimated 800 trucks), it was disclosed that lone MilCOTS bidder Navistar Defense LLC had been awarded a contract, the C\$274 million award calling for the delivery of a 1,300 trucks. Deliveries of the six primary variants involved commenced in July 2009 and concluded early-2011, Navistar's primary in-country partner for the MSVS MilCOTS award being DEW Engineering.

The MSVS project also includes the acquisition of 895 Special Equipment Vehicle (SEV) Baseline Shelters for use with the SMP and MilCOTS trucks, and the kitting of the SEV Baseline Shelters. The Baseline Shelter award (valued at C\$130 million) was secured by DEW Engineering in August 2009, with the SEV kitting pre-qualified bidders list announced in June 2011.

Draft technical specifications for MSVS's ongoing SMP truck segment first appeared in October 2007. The SMP

requirement, which is far more demanding than the earlier MilCOTS requirement, has consistently called for up to 1,500 trucks in four main variants, up to 150 armour protection systems (APS) and up to 300 companion load handling system (LHS) trailers, with options for up to 650 more trucks, 150 more APS kits and 240 trailers. SMP deliveries were initially slated to commence in 2008, however, extensive program delays have ensued, primarily for the revision of technical requirements, but also due to an apparent lack of consensus within DND regarding in-service support.

In addition to its MilCOTS/SMP procurement approach, Canada is also rather unique in that it separates acquisition and in-service support (ISS) into two contract awards, but evaluates them together when selecting the vendor.

Following the issue of the MSVS SMP Solicitation Of Interest and Qualification (SOIQ), which closed on Feb 1st 2011, a list of pre-qualified SMP bidders was announced by Canada's DND in March of

this year. Only those companies pre-qualified were eligible (with their pre-qualified vehicles) to move to the next step of the procurement phase, the Request for Proposal (RFP).

All six companies that responded to the SOIQ pre-qualified, these being: BAE Systems, Mercedes-Benz, Navistar, Oshkosh, Renault, RMMV.

It is understood that post-SOIQ a request for technical documentation in French was received, compliance with this request causing a further delay and the revision to the latest MSVS timeline which anticipates the RFP to be released in the fall of 2011. This should now be followed by comprehensive testing of trials vehicles in 2012, a contract award in early 2013, with initial deliveries planned for spring 2014; full operational capability should now be reached by summer 2015.

The mix of SMP vehicles pre-qualified by bidders is interesting, and suggests either very careful wording by the DND (to allow room for bidder manoeuvre), or a degree of ambiguity in SMP technical documentation.

BAE Systems' is understood to have pre-qualified with a Canadian-specific FMTV (6x6), Mercedes-Benz with a Zetros (6x6), Navistar with a TATRA-based ATX8 (8x8), Oshkosh with a mix of FMTV, HEMTT A4 and MTRV (6x6 & 8x8) vehicles, Renault with a Kerax (8x8), and RMMV with a MAN HX77 (8x8).

In more detail, the MSVS SMP requirement, which is replacing a fleet of 'medium weight' 2.5-ton trucks, calls for all four variants to have an 8-tonne payload, this payload remaining a constant with variants' ancillary equipment such as winches, cranes, LHS and APS fitted. Further, and despite SMP being for 'expeditionary roles' (basically deployed







operations) compliance with legislation that is more of a hindrance than a help for such roles is also deemed essential...

That combination of factors clearly led some bidders to conclude that primarily for front axle loading issues a four-axle chassis is required for full technical compliance, despite such chassis usually being rated at around 15-tonnes payload (inc. superstructure) in the military environment. However, others bidders clearly believed that all requirements could be met with a more standard three axle configuration, this the more common solution for a medium weight military truck. A possible further option might have been the so-called 'Chinese Six' configuration of twin front and single rear axles, but as a non-standard configuration this may have been considered a risky proposition.

Irrespective of those early axle configuration conclusions, sources have suggested that post-SOIQ qualification technical documentation revisions have effectively ruled out a 6x6 chassis.

However, how any affected pre-qualified bidders might react to any such revisions after achieving their pre-qualification status will be interesting to see.

The most recent MSVS development (at the time of writing (November 2011)) was the September 2011 disclosure that Renault Trucks Defense had withdrawn from the competition. And while not officially stated, it is believed the key driver behind Renault's decision was an all-too-clear difficulty in meeting Canada's restrictive Industrial and Regional Benefits (IRB)/offset requirements.

Running in parallel with the closing stages of the MSVS program will be Canada's next sizeable vehicle procurement, Logistic Vehicle Modernisation (LVM). LVM will replace (not necessarily on a one-for-one basis) Canada's two remaining sizeable vehicle fleets, the 2,800 Western Star-produced (IVECO 40.10-based) Light Support Vehicle Wheeled (LSVW) and the UTDC-produced (Steyr-based) 1,200 Heavy Logistics

Vehicle Wheeled (HLVW), plus one minor fleet, the 59 Western Star Heavy Engineer Support Vehicle (HESV).

LVM project deliverables will include a split (MilCOTS/SMP) LSVW replacing capability, an SMP only HLVW replacing capability, and may also include trailers, special equipment vehicle kits, special containers and bulk material handling systems, and material handling equipment. Sources are suggesting that the heavy recovery vehicle has been taken out of the HLVW replacement, and that procurement of this will be separate.

Current timelines for LVM see an initial contract award in June 2014, followed by an initial operating capability in April 2015; these dates will doubtless see slippage.

Overall, the procurements covered by MSVS SMP and LVM will effectively cover the replacement of the vast majority of Canada's tactical/deployable truck fleet. The pending danger is that Canada is likely to create for itself a huge capability gap if these procurements are followed as currently outlined...

LVM will replace 10-tonne payload 'heavy trucks' with more capable current generation designs, these without doubt 8x8 chassis. These will compliment the currently being procured MSVS SMP 'medium truck' fleet, these heading towards an 8x8 chassis, or at best a top-end 6x6 chassis. There is currently no option for a conventional GS (General Service) truck as used to transport troops and carry out general 'run-around' transport duties, the type of role for which most NATO armies use 4x4 5-6-tonne payload trucks...

There of course remains a possibility that LVM's replacement of the current LSVW may evolve to encompass more than just a replacement for the current 1.5-tonne payload light vehicle, and may expand to include some form of 'GS truck' requirement. LVM is currently ready to proceed to its option analysis phase, this determining the best mix of payload, functionality, mobility, protection, and firepower for the logistic vehicles involved.

Photography: Canadian DND,  
Mercedes-Benz, Navistar/TATRA





## [www.afvsociety.co.uk](http://www.afvsociety.co.uk)

The Alvis Fighting Vehicle Society, as the name suggests, has its interests in all the various Armoured Fighting Vehicles produced by Alvis. The society was formed in 2005 after the founding members decided to pool resources and knowledge to benefit anyone seeking to collect, renovate and display these vehicles at a variety of shows. The Society has grown considerably as has the general interest in post WWII armour, the excellent build quality; ease of maintenance and affordability of these vehicles has seen an increase in their popularity. The society now has over thirty vehicles in its care and you can find out more about the Alvis Fighting Vehicle Society at: <http://www.afvsociety.co.uk>



## [www.crossley-motors.org.uk](http://www.crossley-motors.org.uk)

Crossley Brothers was set up in 1867 by Francis and William, when Francis, with help from his uncle, bought the engineering business of John M. Dunlop at Great Marlborough Street in Manchester. During the First World War Crossley had been fully occupied making 20/25 based vehicles principally for the Royal Flying Corps and its successor from April 1917 the Royal Air Force. The first post-war military contract came almost by accident when the British Army, who at the time was operating in India, had a requirement for Armoured Cars for areas such as the North West frontier and as a consequence the IGA1 was born. To find out more take a look at the website, which you can find at: <http://www.crossley-motors.org.uk>



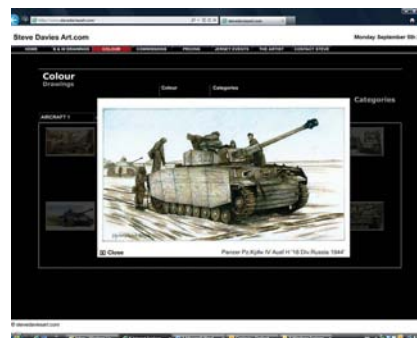
## [www.vintagebike.co.uk](http://www.vintagebike.co.uk)

Vintage Bike is the home of Vintage and Classic Motorcycles. Log-on to their website for a delightful experience where you will find a website containing over 8,500 superb pictures of classic and vintage motorcycles, as well as over 50 gorgeous classic bike sounds and videos, plus a busy technical forum! As if that wasn't enough you'll also find hundreds of Classic Motorcycles and Classic Bikes for sale in the Classifieds section! It is true that there are not too many military versions, but some are present, such as an original Russian Military Bike M72 based on the German BMW R71 complete with sidecar shown here in the screen-shot. If you're a keen biker or just wanting to learn more log-on to their website at: <http://www.vintagebike.co.uk>



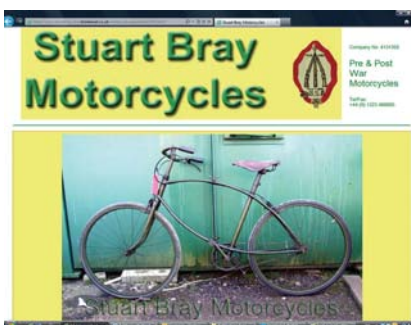
## [www.stevedaviesart.com](http://www.stevedaviesart.com)

Stephen J.E. Davies is a Graphic Artist & Illustrator. From an early age he was fascinated by aeroplanes and flight, especially when studying the Airfix artworks by Roy Cross and the paintings of Michael Turner. Inspired by these artists, his website displays various examples of his aviation and military vehicle drawings, ranging from WW2 German Panzers and aircraft, to RAF Spitfires, Hurricanes and Lancaster bombers. He sells prints as well as original artwork and is always willing to undertake commissions if you're looking for something a little bit special, so how about a drawing of your military vehicle for over the fireplace? You can find out more about Stephen and his artwork at: <http://www.stevedaviesart.com>



## [www.stuartbray.bsa.btinternet.co.uk](http://www.stuartbray.bsa.btinternet.co.uk)

Stuart Bray Motorcycles Limited is a long established company based in South-east England, specialising in British Military and Civilian motorcycles. Their stock ranges from high quality museum pieces to restoration projects. The website reveals that they also sell interesting bicycles such as the BSA Parabike - frame number R47435, dating from World War Two shown here in the screen shot. According to the website this folding parabike is in original condition and would need new tyres before it could be ridden, but nonetheless is a rare and collectable thing and a little piece of history. It's a fascinating site if you like military motorcycles, so if you're a biker or just looking to get yourself a bike why not take a look at their web presence, which you can find at: <http://www.stuartbray.bsa.btinternet.co.uk>



## [www.kingarthurswrites.com](http://www.kingarthurswrites.com)

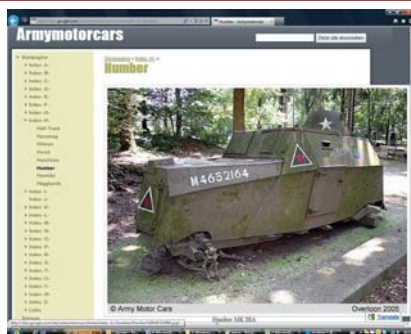
Gordon Arthur has more than seven years of experience in military and defence photojournalism in the Asia-Pacific region, King Arthur's Writes provides specialist defence photography and up-to-date news reports for a number of defence publications, including articles in Military Machines International, and has even published books via Tankograd Publishing. Based in the Far-east, Gordon's unique photos showcase a wide range of Asian military forces thanks to exclusive access to various military exercises. His reports provide accurate perspectives on defence-related issues within the region and a wide range of subjects. To find out more about Gordon's work why not check out his website, which you can find at: <http://www.kingarthurswrites.com>





**<http://sites.google.com/site/armymotorcars/home>**

Army Motor Cars is quite an amazing photographic resource. There is very little text, just literally hundreds of vehicles. From ADI to Zil, they are all there. Many of the variants shown are new to me. The Dutch-based website features wartime and post-war vehicles, both armoured and softskins, with the general quality of the vast majority of photos being excellent and very quick to load on screen, which is always a bonus. Not all of the photos are bang up to date, with many dating back some years, such as this Humber photographed outside the museum in Overloon in 2005. It's a fascinating site that's well worth a look when you have some time to spare. Check them out at: <http://sites.google.com/site/armymotorcars/home>

**[www.sirhc.co.uk](http://www.sirhc.co.uk)**

On the SIRHC website you will find pictures and details of the military vehicles that they have restored over the years. For more photographs of each vehicle visit the gallery page and use the navigation bar above to begin browsing. Their Ferret was taken into service in 1959. The record cards show it served with the 13/18 Hussars in Germany in the 1960s. It was base-overhauled in 1972, placed into storage and not used until its disposal in 1994. It sat outside for 10 years in all weathers prior to restoration. There are hundreds of photos to be found on the SIRHC website, which you can check out at: <http://www.sirhc.co.uk>

**[www.dvandam.nl](http://www.dvandam.nl)**

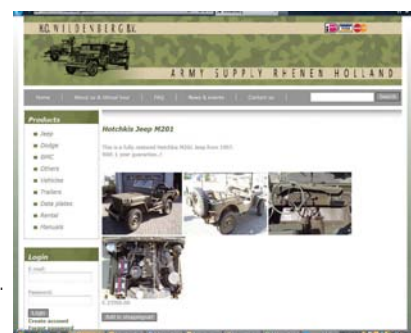
D. van Dam B.V. is an internationally operating company specializing in the importing and exporting of ex-army vehicles. The company is based in the Netherlands and they sell a very wide selection of vehicles and machines from most manufacturers sourced in the main from various NATO armies. Moreover, they can also provide spares for most vehicles to ensure that you can keep them running. Their headquarters is in Bennekom, but in addition they have an establishment in Rhenen that specialises in ex-military Land Rovers, as well as a storage facility in Herkenbosch where up to 3,000 vehicles are stocked at any one time. To find out more about D. van Dam B.V check out their website at: <http://www.dvandam.nl>

**[www.muckleburgh.co.uk](http://www.muckleburgh.co.uk)**

The Muckleburgh Military Collection, based at Weybourne, Norfolk, England, claims to be the UK's largest privately owned working Military Collection with 25 Tanks all in working order. The Collection includes tanks, armoured cars, artillery and missiles used during World War II and later, together with the Suffolk and Norfolk Yeomanry Museum. It's a fascinating place to visit if you're ever in the area, but it is a bit off the beaten track so visiting their website is a good place to start! Tank driving experiences are also available through the museum, and they hold a military vehicle show each year (see Mission Briefing for details). To find out more check out the website at: <http://www.muckleburgh.co.uk>

**[www.wildenbergparts.nl](http://www.wildenbergparts.nl)**

H.O. Wildenberg BV is a parts wholesaler for various models of military vehicles. They specialize in Jeep, Dodge and GMC, sourcing their parts from all over the world and have what is widely regarded as the most extensive inventory in Europe. Wildenberg BV was founded in 1954 in Zeist, in the Netherlands. While the selling of spare parts for military vehicles was the mainstay of the company's business at the beginning, the sale of military vehicles soon became an important part of the business and the company grew steadily and soon outgrew their original premises and eventually relocated to Rhenen. To find out more about what H.O. Wildenberg BV has to offer, you can take a look at their website, which you can find at: <http://www.wildenbergparts.nl>

**[www.keypublishing.com](http://www.keypublishing.com)**

For those not aware, since being taken over by Key Publishing in 2011, MMI has become part of a much larger organisation with numerous titles in their portfolio. Amongst the many titles published by Key are of course Military Machines International, but also Airfix Model World, FlyPast, AirForces Monthly and a host of other aviation and specialist titles. If you log onto the Key Publishing website you'll be able to find out about the complete range of publications available from Key, including the many 'Specials' produced each year as well as a whole host of other features, such as the online shop, various forums and up to the minute news and reader offers. To find out what Key have to offer simply log onto the website, which you can find at: <http://www.keypublishing.com>





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# MISSION BRIEFING

## DATES FOR YOUR DIARY

### DECEMBER 2011

#### Sunday 4 December 2011:

**Gent Militaria:** International arms and militaria fair held at Flanders Expo Hall 2, Maaltekouter, BE-9051, Ghent, Belgium. Open between 9.00am and 4.00pm. Entrance 5 Euro, Parking 5 Euro. For more info call Pascal Ginneberge or Sophie De Meyer on: Tel: +32 9 328 0346 or check out the website below.  
[info@gentmilitaria.be](mailto:info@gentmilitaria.be)  
[www.gentmilitaria.be](http://www.gentmilitaria.be)

#### Sunday 18 December 2011:

**The History on Wheels Motor Museum Open Day:** located in Eton Wick, near Windsor, Berkshire. Ample free parking and NAAFI Cafe. Tel: 01753 862637  
[info@historyonwheels.co.uk](mailto:info@historyonwheels.co.uk)  
[www.historyonwheels.co.uk](http://www.historyonwheels.co.uk)

### JANUARY 2012

#### Sunday 29 January 2012:

**Militaria 2012:** held at the Exhibition Centre, Stoneleigh Park, Coventry, Warwickshire, CV8 2LZ. Doors open at 9.00am. Advance tickets available. For further details contact the organiser Roy Elvis. Tel: 01283 820050  
[info@militariashows.com](mailto:info@militariashows.com)  
[www.militariashows.com](http://www.militariashows.com)

### FEBRUARY 2012

#### Saturday 25 February 2012:

**On Track:** Military Modelling Show, held at Leas Cliff Hall, Folkestone, Kent, CT20 2DZ. Admission Adults £5, accompanied children under 16 Free. Show opens between 10am to 5pm.  
[on.track@live.co.uk](mailto:on.track@live.co.uk)  
[www.ontrackshow.co.uk](http://www.ontrackshow.co.uk)

#### Sunday 26 February 2012:

**Gent Militaria:** International arms and militaria fair held at Flanders Expo Hall 2, Maaltekouter, BE-9051, Ghent, Belgium. Open between 9.00am and 4.00pm. For more info call Pascal Ginneberge or Sophie De Meyer on: Tel: +32 9 328 0346  
[info@gentmilitaria.be](mailto:info@gentmilitaria.be)  
[www.gentmilitaria.be](http://www.gentmilitaria.be)

### MARCH 2012

#### Sunday 4 March 2012:

**Bournemouth Aviation Museum Annual Vintage Transport Day:** on the B3073 Bournemouth International Airport perimeter road, follow signs for the Airport, or for Sat Nav enter post code BH23 6BA. Show opens to public between 10.00 and 16.00.

#### Sunday 25 March 2012:

**Hack Green Secret Nuclear Bunker Rally:** French Lane, Nantwich, Cheshire, CW5 8BL. Sale of amateur, PMR, ex-Government radio equipment. Gates open at 10am. Call Rod on: Tel: 01270 623353  
[www.hackgreen.co.uk](http://www.hackgreen.co.uk)

### APRIL 2012

#### Sunday 1 April 2012:

**Northern Military Expo:** Newark Country Show Ground, Notts, 2 minutes off the A1M (NG24 2NY). Event opens between 9.00am and 4.00pm. Tel: 01302 739000  
[jeep.promotions@btconnect.com](mailto:jeep.promotions@btconnect.com)  
[www.northernmilitaryexpo.co.uk](http://www.northernmilitaryexpo.co.uk)

### MAY 2012

#### Saturday 19 Sunday 20 May 2012:

**Militracks 2012:** Held at Liberty Park, Overloon, The Netherlands, Museumpark 1, 5825AM. A presentation of mainly German WWII vehicles in the surroundings of Liberty Park. The weekend includes a military market and battlefield museum (Operation Aintree). For further details contact the Museum Director Erik van den Dungen:  
[info@militracks.nl](mailto:info@militracks.nl)  
[www.militracks.nl](http://www.militracks.nl)

### JUNE 2012

#### Friday 1 to Monday 4 June 2012:

**Overlord 2012:** held at The Lawns, Denmead, Waterlooville, PO7 6TZ. Organised by the Solent Overlord Executive. Facilities include free vehicle entry, camping, hot showers and evening entertainment. For further details contact: Myrddin Evans (General & Trade) Tel: 01243 375695 Trevor Bush (Vehicle Entry) Tel: 07774 988015 or visit: [www.solentoverlord.co.uk](http://www.solentoverlord.co.uk)



#### Friday 15 to Sunday 17 June 2012:

**Cholmondeley Pageant of Power:** held on the Cholmondeley Estate in Cheshire, the motorsport event celebrates power and performance in its many forms. For further information visit: [www.cpop.co.uk](http://www.cpop.co.uk)

#### Saturday 23 Sunday 24 June 2012:

**Muckleburgh Collection Military Display Weekend:** Held at The Muckleburgh Collection, Weybourne Camp (off the B149) Norfolk, NR25 7EG. Open between 10.00am and 5.00pm daily. Tel: 01263 588284  
[info@muckleburgh.co.uk](mailto:info@muckleburgh.co.uk)  
[www.muckleburgh.co.uk](http://www.muckleburgh.co.uk)

### JULY 2012

#### Friday 6 Saturday 7 Sunday 8 July 2012 NEW DATES...

**Ponderosa War Weekend:** held at Ponderosa's Rare Breeds Farm, off Smithies Lane, Heckmondwike, WF16 0PN (between Leeds & Bradford) Junction 26 off the M62. General enquires/stalls call Debbie: Tel: 01924 235276 or email [info@ponderosa-centre.co.uk](mailto:info@ponderosa-centre.co.uk) Living history group's contact Brian: Tel: 07885 479473 or email [brianleathley1957@hotmail.co.uk](mailto:brianleathley1957@hotmail.co.uk)  
[www.ponderosa-centre.co.uk](http://www.ponderosa-centre.co.uk)



#### Wednesday 18 to Sunday 22 July 2012:

**The War & Peace Show:** held at The Hop Farm, Paddock Wood, Kent. The world's largest military vehicle show. For further details contact: Tel: 01304 813945  
[www.thewarandpeaceshow.com](http://www.thewarandpeaceshow.com)  
 Tel: 01622 872068  
[www.thehopfarm.co.uk](http://www.thehopfarm.co.uk)

#### Saturday 21 Sunday 22 July 2012:

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### OCTOBER 2012

#### Sunday 7 October 2012:

**Hack Green Secret Nuclear Bunker Rally:** French Lane, Nantwich, Cheshire, CW5 8BL. Sale of amateur, PMR, ex-Government radio equipment and stores. Gates open at 10am. For details call Rod on: Tel: 01270 623353  
[www.hackgreen.co.uk](http://www.hackgreen.co.uk)

### NOVEMBER 2012

#### Sunday 4 November 2012:

**Northern Military Expo:** Newark Country Show Ground, Notts, 2 minutes off the A1M (NG24 2NY). Open between 9.00am and 4.00pm Tel: 01302 739000  
[jeep.promotions@btconnect.com](mailto:jeep.promotions@btconnect.com)  
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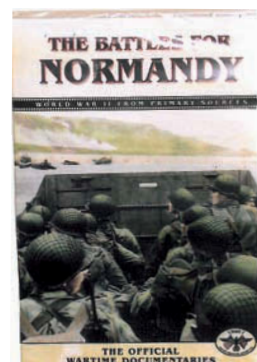


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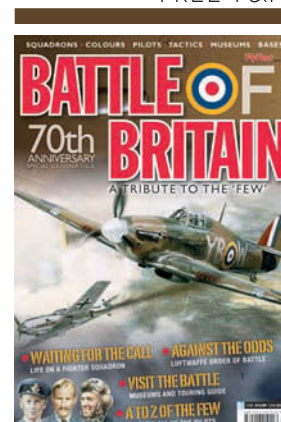


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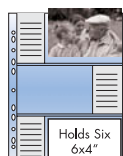
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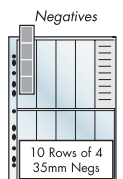
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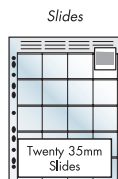
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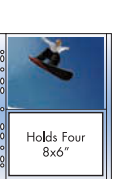
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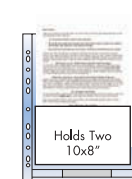
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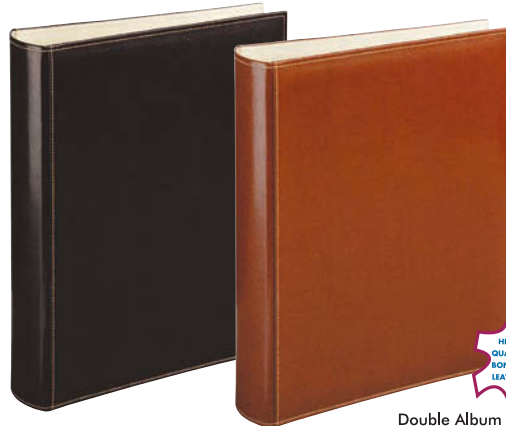
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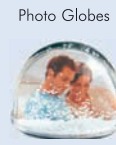


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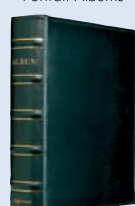
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