



Left: One of the prototype YP-408s

Bottom: PAMT (Mortar Tractor). The rear doors are cut at an angle to facilitate attaching the mortar.



## DAF YP-408

Nederlandse troepencarrier

by David R. Haugh

**DEVELOPMENT** The modern development of the wheeled armored personnel carrier (APC) in Europe can be seen in the YP-408. With its multiwheels long sloped hull, and for the time, innovative use of commercial truck parts, the YP-408 signalled the trend of APC design for the next twenty years.

Developed by Van Doorne's Automobielfabrieken (DAF), the first prototypes of the YP-408 appeared in 1958. Powered by a Hercules gasoline engine, these first machines had separate covers for the driver and gunner, as well as a different roof hatch arrangement over the rear deck. Another visual difference was the fitting of radiator shutters to the bow.

The first production vehicles appeared six years later in 1964, with a total of some 750 vehicles

being produced before production ceased in 1968. Now, some 25 years later DAF YP-408s are still going strong, with the veterans showing up recently in Lebanon with the Netherlands contribution to the UN Peacekeeping Force.

**DESCRIPTION** Using all welded construction, the YP-408 has the engine at the front in a separate compartment from the rest of the vehicle. The vehicle itself actually has 8x6 drive, with the front and two rear axles being driven. The second set of wheels from the front steer, but don't have any power applied.

The gearbox has 5 forward and 1 reverse gears, along with an auxiliary gearbox with high and low range. The power assisted steering controls the front two axles which have independent suspension. The rear axles are in tandem with

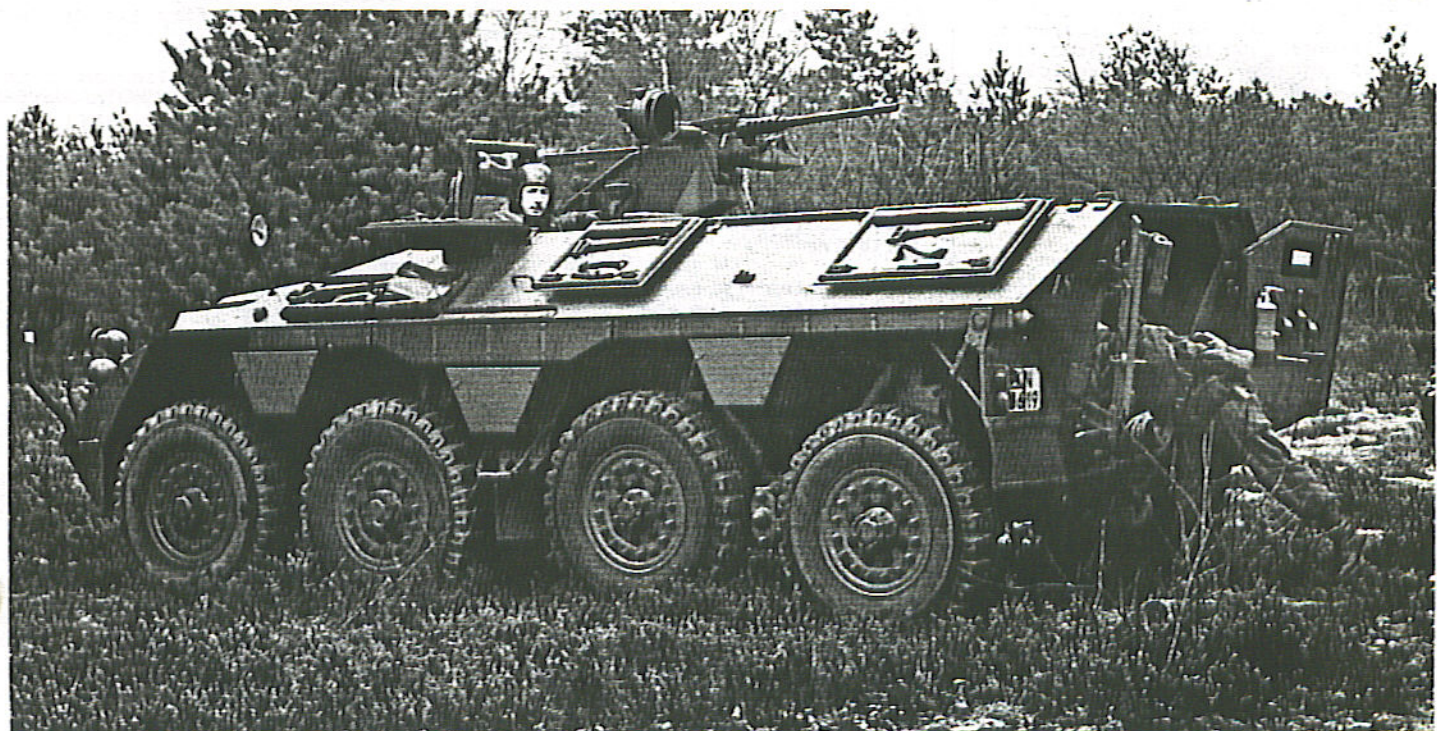
equalising beams and leaf springs.

The driver is seated to the left with a one piece hatch that opens to the outside. This is fitted with a single periscope which can be rotated through 360 degrees.

The gunner to the right has a two piece hatch with a periscope to the front, and another on the right side of the compartment. A .50 caliber HBMG is fitted on a rotating mount that can be swung through 360 degrees. Elevation for the machinegun is 170 degrees, with a -8 degree depression. The weapon itself can also be swung 8 degrees from side to side in its mounting.

Normal exit from the YP-408 from the troop compartment is through the two rear doors. A total of six hatches that swing from the

...continued on page 4



Editorial

As usual with this sort of thing, the editorial is actually the last material to be written. It's been a lot of fun and the response to AC has been wonderful. It was time for a publication like this, and I was lucky enough to find an audience that appreciates the effort.

Issue #3 and #4 are already taking shape. For those that would like to contribute some material (and please do), the lead time is two months. In other words, January's issue is being put together now, with March's issue starting in January.

So the next question is what kind of material do I need for AC? Photos, articles, drawings, references, comments, book and model reviews, or just plain hellos are welcome. Don't worry about neatness, or whether or not the english is just right... editing is my job, and I'll fix things up if necessary so you won't feel embarrassed, and can be proud of the results.

I've had some feedback on what people would like to see in future issues, but so far it seems about evenly split between those interested in the World War I to WWII eras, and those wanting to see more about modern vehicles. So far not too much interest in the 1950s.

A word on scale drawings. While I have taken every care in selecting drawings (or doing them myself) for AC, they are open to error. Either because they were based on photos, the original specifications quoted for a vehicle are incorrect, or (and this can happen even if the actual vehicle is available for measurement) the draftsman made errors in placement while doing the drawing. It has been my experience that all drawings including factory ones, should be considered as provisional, and then compared with photos of the original vehicles.

Letters

Re: the BA-64 article...

Dear Dave:  
The Tonda KPM cutaway shows the detail that belongs on the right side as pertaining to the left. This is not so. There is a rack on the right side which holds the MG tools, ten magazines and to its left, an area occupied by personal stowage and weapons. Also the doors had a large sheet metal box attached to their interiors.

There are two other versions you didn't mention. The first is the Ba-64cd (cheleznaya doroga - railroad) which served as a railway transporter for six soldiers. Its duties were scouting and supporting armored trains.

Another is the Ba-64BSch. This was the halftrack you refer to in the article. The Ba-64VSch (varit sled choldny - winter tracked variant) had the rear wheels replaced with tracks and the front with skis.

Last, the BaSZ-64 was the command version. Unlike the article, it did have a turret and armament with reduced ammunition stowage (1020 rds as opposed to 1260 rounds) and was equipped with an R6-12P radio.

*I didn't come across the last in my references, but I believe you. As I'm sure you've found, eastern sources can be confusing and sometimes contradictory. ed.*

Saul Garcia II, 260 Lee Ave, Brooklyn, NY 11206-5402

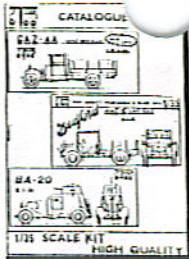
Reviews

Mil Ve Le Magazine Des Vehicules Militaires. published by EDAF groupe de presse, Belgium, price \$4.50.

Articles in this issue include a color spread on the armored personnel carriers and civilian vehicles being used on all sides in the civil war on Sri Lanka.

Issues of Mil Ve are available from Review International, 17525 SW Alexander, Aloha, OR 97006.

New Source of TONDA MATEIKA kits. These excellent models used to be known as TONDAVAC, and up until now have usually been only obtained by trade from Eastern block modellers. The line has been expanded to some 33 kits which include such vehicles as the BA-64, BA-20, GAZ-60 Halftrack, ZIS-6 chassis for the BM-13 rocket launcher and the Bedford 15-cwt truck, all in 1/35th scale. With an average price of \$10, these are a real bargain. Write Edward J. Bernardo, 719 W 7th St, Marysville, OH 43040 for a catalog.



Three-quarter view of the Desert Mobility Vehicle System (DMVS) modified HMMWV and fabricated trailer.

DESERT MOBILITY VEHICLE SYSTEM  
The new Desert Mobility Vehicle System (DMVS) will fill a Special Forces requirement for a ground vehicle system for use on long missions.

In support of the program, 63 HMMWVs will be modified to meet this need, and modification kits will be provided for 12 others.

The modifications include the following:

- \* Removing the run flat tire devices from the wheels to permit the crew to perform tire repairs, and providing a 12-volt air compressor for inflating tires. The run flat system was never intended for long-distance, cross-country operation while deflated.
- \* Replacing the driver's and right-front passenger seats (with bucket seats from the 3/4-ton Commercial Utility Cargo Vehicle (CUCV)) for improved comfort during cross-country operations.
- \* Lengthening the seat belts with a commercially available restraining system that provides better support and keeps crewmen in their seats while traveling at high speeds over rough terrain.

\* Installing storage racks in the area normally occupied by the rear seats to carry 12 "jerrycans" (capacity of five gallons each of water or fuel).

\* Installing a lighted magnetic compass for use in off-road navigation.

\* Installing an interior rear-view mirror.

\* Providing additional ammunition capacity by installing two ammunition boxes atop the vehicle.

\* Installing wire mesh protection for the lower radiator hoses to protect them against cross-country wear and tear.

\* Installing handholds for the crewmen to grasp during rough travel.

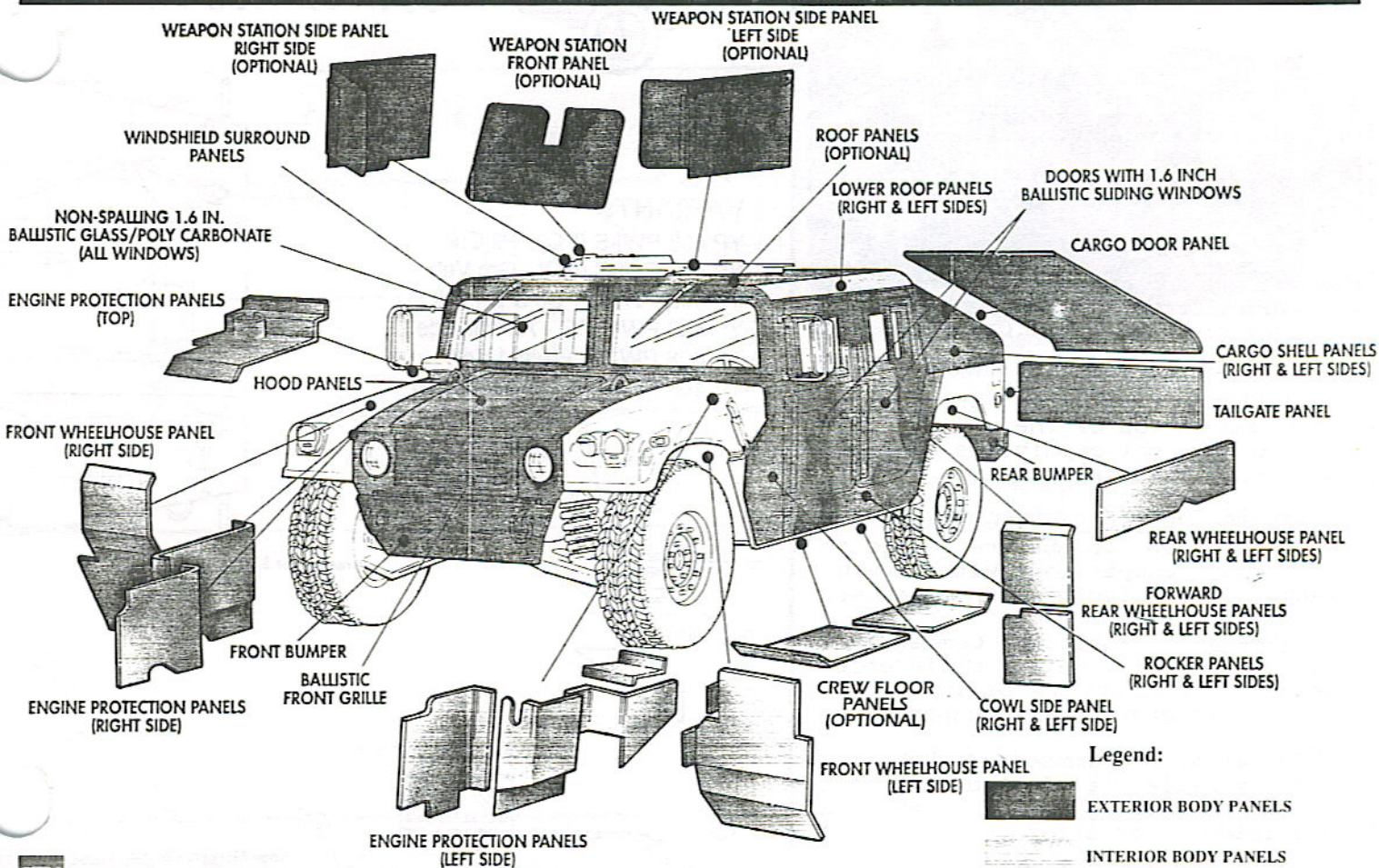
\* Installing additional tie-downs to keep cargo from bouncing around.

\* Installing duplicate vehicle instruments for the navigator.

In addition the HMMWVs are being painted a sand color instead of the traditional three-color camouflage pattern. The acquisition of a DMVS trailer and motorcycle are also being pursued.

- Infantry Sept-October 1990

**UP-ARMORED HEAVY HUMMER VARIANT (HHV) BALLISTIC PROTECTION CONFIGURATION**



**AM** Missiles and Electronics Group

AM General Division

**XM-1097**

**SPECIFICATIONS:**

- \* .41m (16") ground clearance
- \* Full-time 4 wheel drive
- \* Four wheel independent suspension
- \* Power hydraulic front & rear disc brakes
- \* V8, 6.2L, 150hp diesel engine
- \* 94.6L (25 gal) fuel capacity
- \* 3-speed automatic transmission
- \* 2-speed transfer case
- \* Power steering
- \* 24 volt electrical system
- \* 37 x 12.50R-16.5 load range "D" radial tires
- \* 1542 kg (3,400 lb) capacity 16.5 x 8.25 2-piece take apart wheels
- \* CARC Paint: Camouflage or Sand Tan
- \* Central tire inflation system - option

**PERFORMANCE:**

- \* 40% side slope capability
- \* 60% grade capability
- \* Forging depth: .76m (30") standard

- 1.52m (60") with kit
- \* Acceleration
  - 0 to 30 mph (48 kph) - 9.4 seconds
  - 0 to 50 mph (80 kph) - 26.1 seconds
- \* Operating range - 483 km (300 miles)
- \* Maximum speed - 65 mph (105 kmh)

**ARMAMENT PROVISIONS:**

- \* TOW Missile systems
- \* Mk 19 40mm MG
- \* 7.62mm M60 MG
- \* 30mm ASP-30 Cannon
- \* .50 cal M2HB MG

**TRANSPORTABILITY:**

- (Fully equipped with payload)
- \* Vehicle Dimensions:
  - Height 1.88m (74")
  - Width 2.16m (85")
  - Length w/o winch 4.77m (188")
  - Length w/winch 4.93m (194")
- \* Weight data:

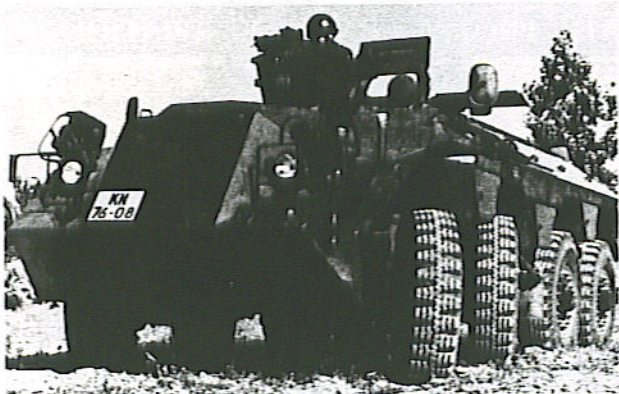
Curb 3461 kg (7,630 lbs)  
 (Includes base vehicle with 7.62mm ballistic panels)  
 GVW 4536 kg (10,000 lbs)  
 (Must use 10,000 lb HHV chassis)  
 Payload 1075 kg (2,370 lbs)



*UP-ARMORED HUMMER shown here with McDonnell Douglas Helicopter Company's 30mm ASP-30<sup>®</sup> Cannon.*

(Includes crew, ammunition, weapon, weapon mount, personal gear, special kits, & Basic Issue Items (BII))  
 Curb weight does not include the following optional protection panels

-Crew floor	90 kg (196 lbs)
-Roof	45 kg (100 lbs)
-Wpn Station	36 kg (80 lbs)
<b>Total</b>	<b>171 kg (376 lbs)</b>



YP408 PWI-S (GR) with MG shield

...continued from page 1

centerline outward are also provided on top of the vehicle. The YP-408 is not amphibious, and has no built-in NBC system.

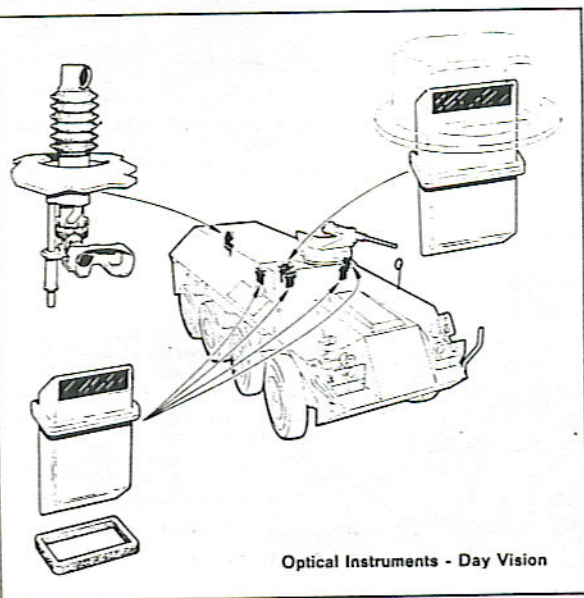
**VARIANTS PWI-S(GR)** The basic APC version. Ten troops are seated in the rear compartment with five on each side facing the center.

**PWI-S(PC)** Platoon Commander's vehicle. The main difference between this and the basic version is additional radio capability.

**PWCO** Battalion Commander's Vehicle. This vehicle is fitted out as a command post inside, and has provisions for attaching a tent at the rear.

**PW-GWT (Ambulance)** Unarmed version with a crew of three (a driver and two medics). Two stretchers and four seated patients can be carried.

**PW-V (Freight)** Designed to carry 1500 kg of cargo in a protected flat cargo area. The driver and the gunner are protected from a



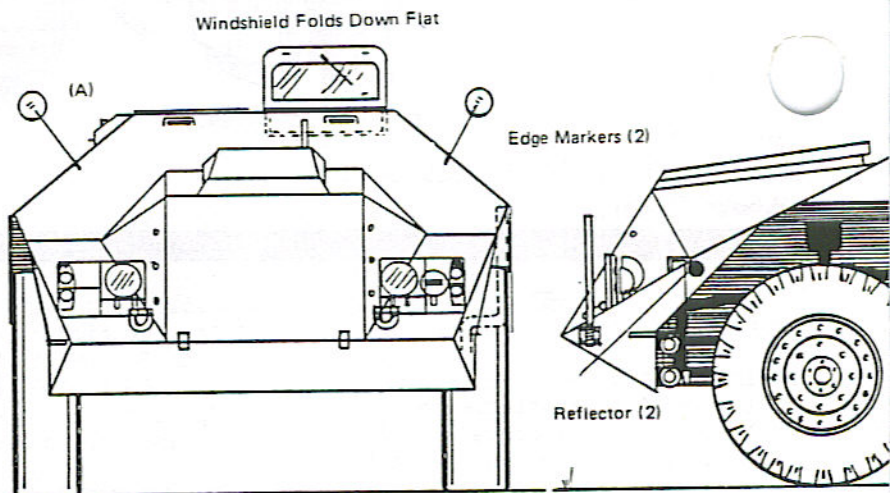
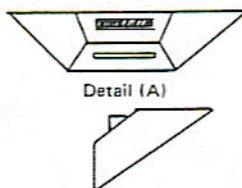
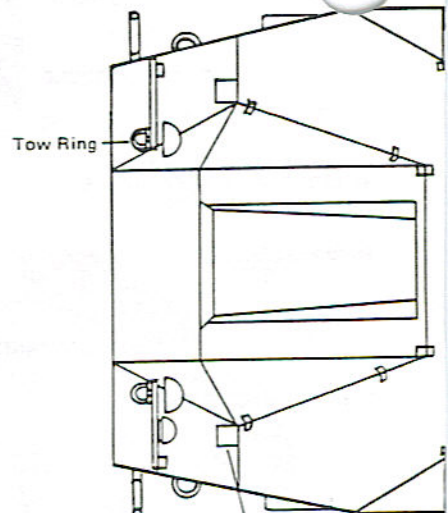
Optical Instruments - Day Vision



# DAF YP-408 Armored Pe

## VARIANTS

- YP 408 PWI-S (PC) - Plt Cdr
- YP 408 PWI-S (GR) - Grp Veh
- YP 408 PWCO - Co & Bn Cdr
- YP 408 PW-GWT - Ambulance
- YP 408 PW-V - Freight Veh
- YP 408 PW-MT - Mortar Tractor



Scale 1/35th

shifting cargo by steel grates. This vehicle can be converted to the ambulance version in a few hours, or a few minutes in the field as an expedient ambulance. The cargo version doesn't carry any vehicle radios.

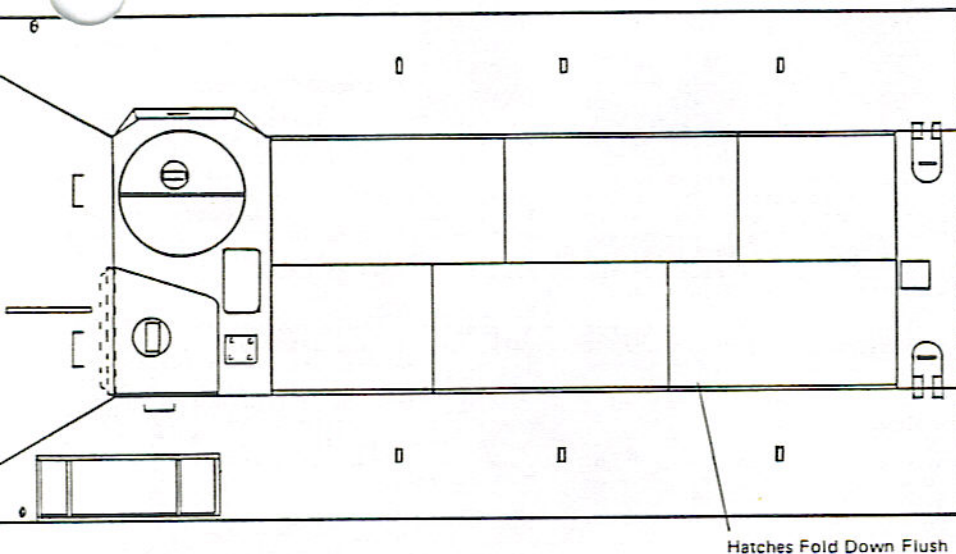
**PW-MT (Mortar Tractor)** This vehicle tows a French 120mm Brandt mortar as well as carrying a crew of seven and fifty plus mortar rounds in ready racks. The rear doors of the mortar version have been shortened to allow opening and closing when the mortar is attached in the towing position.

**PWAT** The basic ve a TOW antitank sys

**PWRDR (Radar)** TH fitted with a Bri surveillance radar

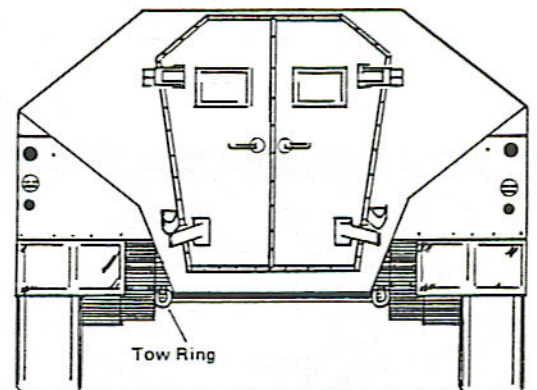
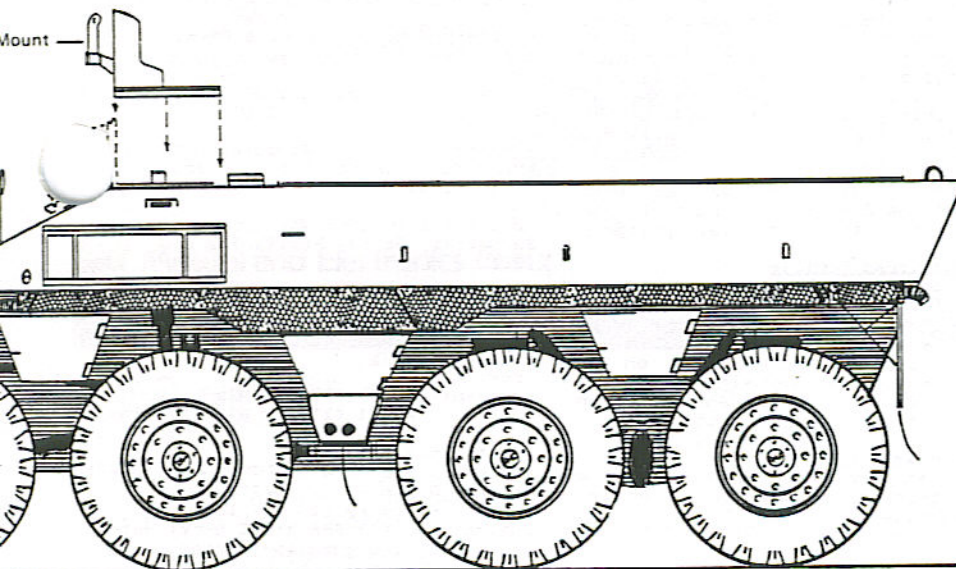
**SERVICE** The DA service wi' the ex-Dut pu of Surinam. vehicles in th YP-408s equip forces of a reinforced infan 1,000 personnel.

## Personnel Carrier, 8 x 6



## SPECIFICATIONS

Unladen Weight:	9500 kg
Laden Weight:	12000 kg
Wheelbase:	3400 mm
Track, Front:	2054 mm
Track, Rear:	2080 mm
Range, Road:	500 km
Range, Off-road:	400 km
Cruising Speed:	60 km/hr
Max Speed:	80 km/hr
Width:	95.75" (2400mm)
Length:	241.25" (6230mm)
Height: (to top of open hatch)	83.25" (2090mm)



David R. Haugh, June 1989

Vehicle fitted with  
item.

The basic version  
British ZB298 ground

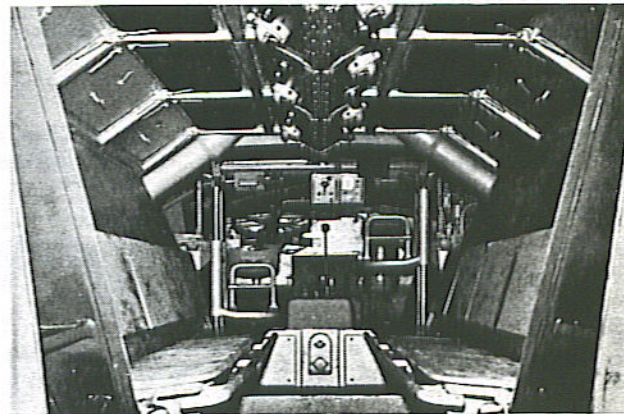
The YP-408 is in  
the Netherlands and  
the African colony  
the only armored  
country, the  
Suriname's armed  
approximately one  
battalion of

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## Autoblinda AB40/41



Above: AB-41 in North Africa

DEVELOPMENT

Originally designed to replace the aging Lancia IZs, the Autoblinda 40 & 41 armoured cars had their origins in a requirement for a high-performance car for use by the Italian colonial police.

As it turned out, the Italian cavalry had a requirement for a new armoured car at about the same time, so the two projects were merged to produce a new vehicle design which appeared in 1939. From this vehicle evolved the Autoblinda 40. Production of the new design began a year later in 1940.

The Autoblinda 40 and 41 were used extensively by Italian reconnaissance units in the Western Desert and Tunisia, as well as Russia, Hungary, the Balkans, and of course Italy. Several of these cars were taken over by the Germans after the Italians switched sides.

More than 550 AB40/41s were produced before the end of the war.

DESCRIPTION

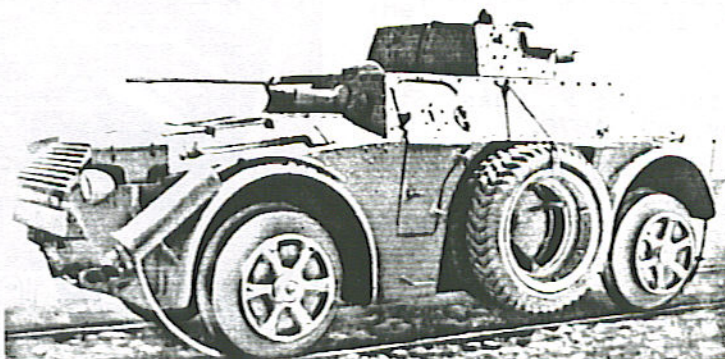
Sophisticated and complicated vehicles; the rear mounted 6-cylinder, 80 horse power, 5-liter engine drove all four steerable wheels using individual propeller shafts, from a central lockable differential. Combined with a manual transmission of six forward and four reverse gears, the car was fast, and mobile both on the road and cross-country.

Separate driving positions were provided front and rear to facilitate driving in reverse. The main driver's position far forward, gave a fairly large field of view, valuable for cross country travel.

Suspension included independent springs with plenty of movement, along with free wheeling spare wheels mounted to the sides to help prevent bellying of the vehicle on obstacles.

Right: AB-40 fitted out as a rail patrol vehicle.

Far right: Left side view of the AB-41 with fender (width) markers visible.



Development on this vehicle ceased in 1944.

50mm SPG

An open hulled variant with a German 50-mm anti-tank gun was also tried, but never placed in production.

Forward Observation Vehicle

There was also an open hulled variant that was produced in small numbers as a command vehicle or mobile observation post for artillery units.

MODELING NOTES

At present I don't know of any 1/32-35th versions of the AB40/41 on the market. There are several solid cast versions in various scales, including *Quality Casting* in 15mm (108th) scale, 1/285th scale AB40/41s from C and C, and 1/76th scale AB40/41s from *US Casts*, PO Box 3229, Santa Cruz, CA 95063. The last are cast in resin.

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SPECIFICATIONS

Crew: 4

Armament: AB 40 (3) 8mm MGs  
AB 41 (2) 8mm MGs (1) 20mm cannon

Length: 5.2m (17' 5")

Width: 1.92m (6' 4")

Height: 2.48m (7' 11 1/2")

Weight: 6,850 kg (15,097 lbs)

Engine: One (1) SPA Abm 1 6-cyl water cooled gasoline engine developing 80 hp

Max road speed: 78 kmh (49 mph)

Max cross-country speed: 38 kmh (24 mph)

Range road: 400 km (248 miles)

Vertical obstacle: .3m (12")

Grade: 40%

Fording depth: .7m (28")

Armor: 9mm

Maker: Ansaldo

VARIANTSAB40

The base vehicle was the AB40 with three 8mm machineguns, two in the turret and one firing to the rear. Relatively few Autoblinda 40s were produced, and many of these were later converted to the Autoblinda 41 configuration. One of the identification marks of these early AB40s converted to AB41 standards are the side doors. On early models, the side doors hinge to the rear. On the later AB41, they hinge to the front.

When the original production order was placed it was specified that a small number of Autoblinda 40s would be produced with a 20-mm cannon in place of the two 8-mm turret machine-guns (these became the AB41).

The new turret came from the L6/40 light tank in place of the original low flat turret. With the success of the new design, production centered on the Autoblinda 41.

AB41

For its time the Autoblinda 41 was an advanced design and possessed good performance marred only by recurrent steering troubles that were never entirely eliminated. The main armament was a converted 20-mm Breda modello 35 anti-aircraft cannon, with this weapon was mounted a coaxial 8-mm Breda modello 38 aircooled machinegun. Another of these machineguns was mounted at the hull rear next to rear driver's position.

At the end of September 1942 there were 298 Autoblinda 41s in use, and more were employed by the colonial police.

AB40/41 Railroad Vehicle

A kit was available to convert the AB40/41 for use on railway tracks. This kit included railway wheels and extra lighting and signalling devices, along with a searchlight mounted on the turret. Vehicles fitted with these kits were used extensively for anti-partisan patrols in the Balkans.

SPA 41 Portamunizioni

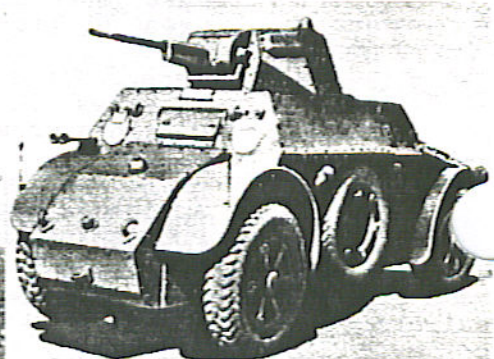
These were standard vehicles with the turret removed, used as an armored supply vehicle.

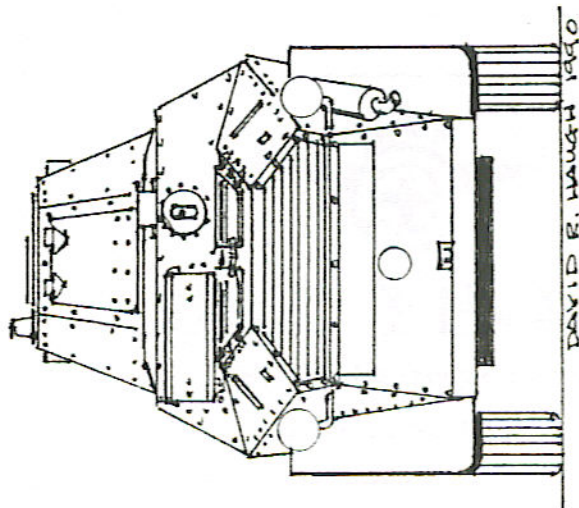
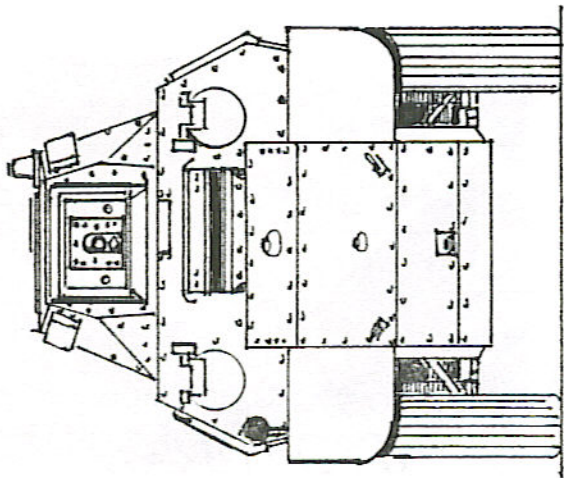
SPA 42

A standard AB40/41 with the turret removed and the top opened. A 47mm anti-tank gun complete with shield was mounted for armament.

AB43

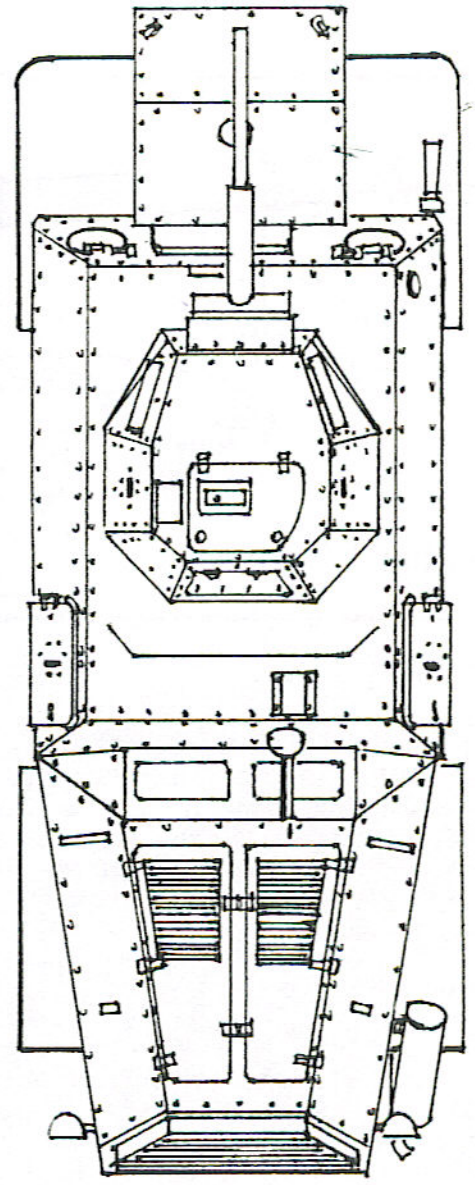
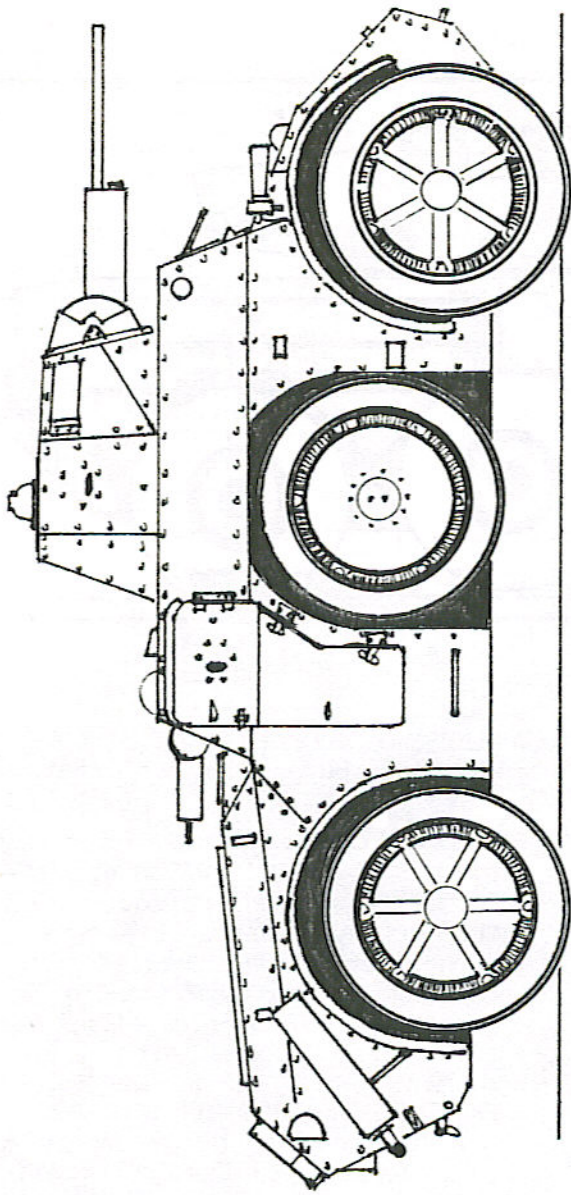
Some development work was carried out on the basic design which later led to the mounting of a turreted 47-mm gun.





DAVID E. HAUGH 1990

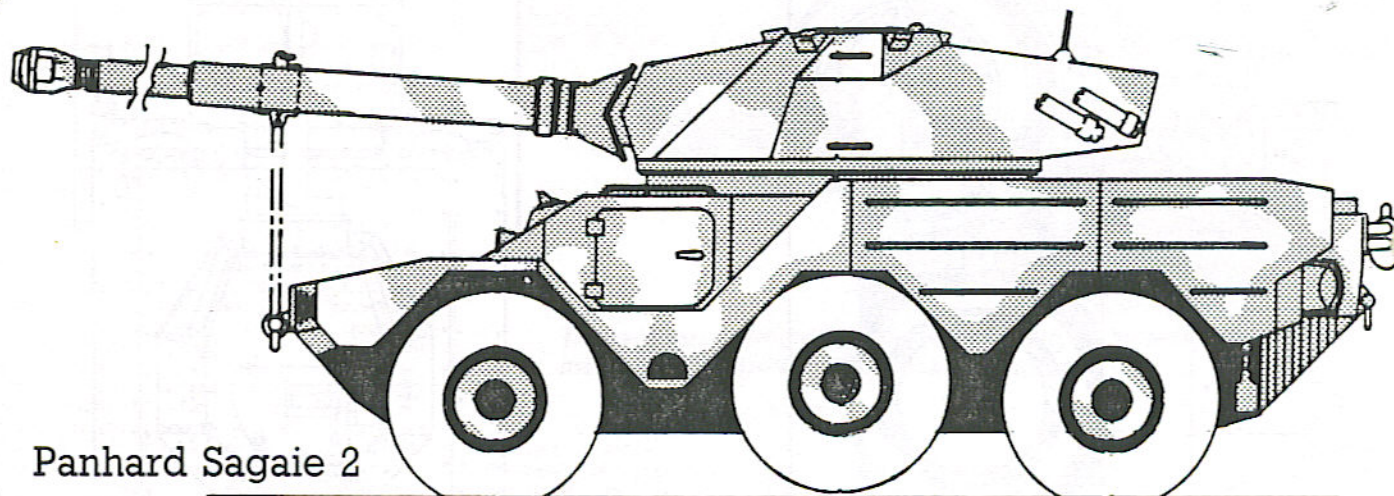
Scale 1/35th



Autoblinda 41

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

## ARMORED CAR



Panhard Sagaie 2

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