

4x4 MULTIPURPOSE BIAxIAL ARMORED PERSONNEL CARRIER

ONCILLA



LACENAIRE

PURPOSE AND SCOPE OF APPLICATION



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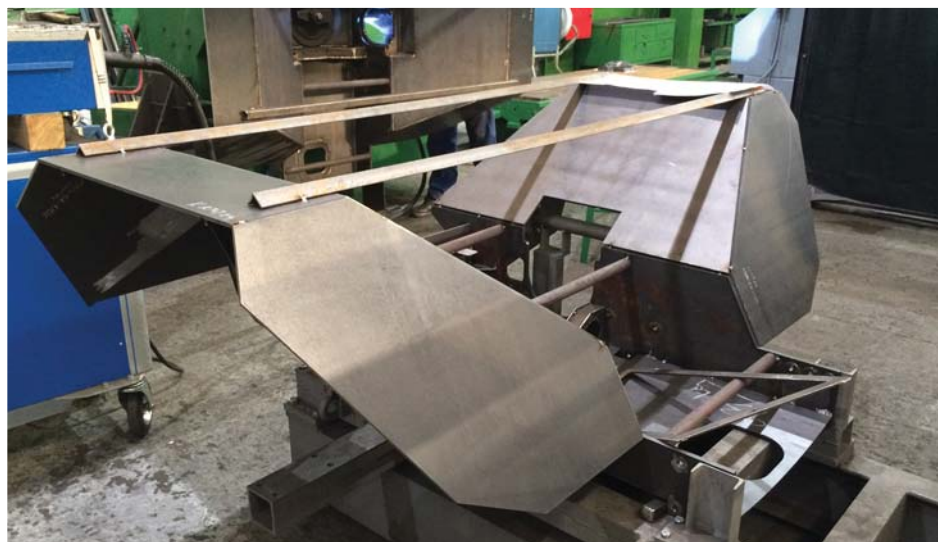
Serial production is organized at the production facilities of the assembling plant MISTA (Poland)



Production capacity and technological equipment of the MISTA plant



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Production capacity and technological equipment of the MISTA plant



LAYOUT OF THE VEHICLE

**APC's hull is its main supporting part.
All systems of the vehicle
are installed in it.**

**Structurally, the hull
consists of 2 sections:**

- a powertrain compartment;**
- a habitable compartment.**

**The compartments are separated
by heat and noise-isolating partition.**



LAYOUT OF THE VEHICLE



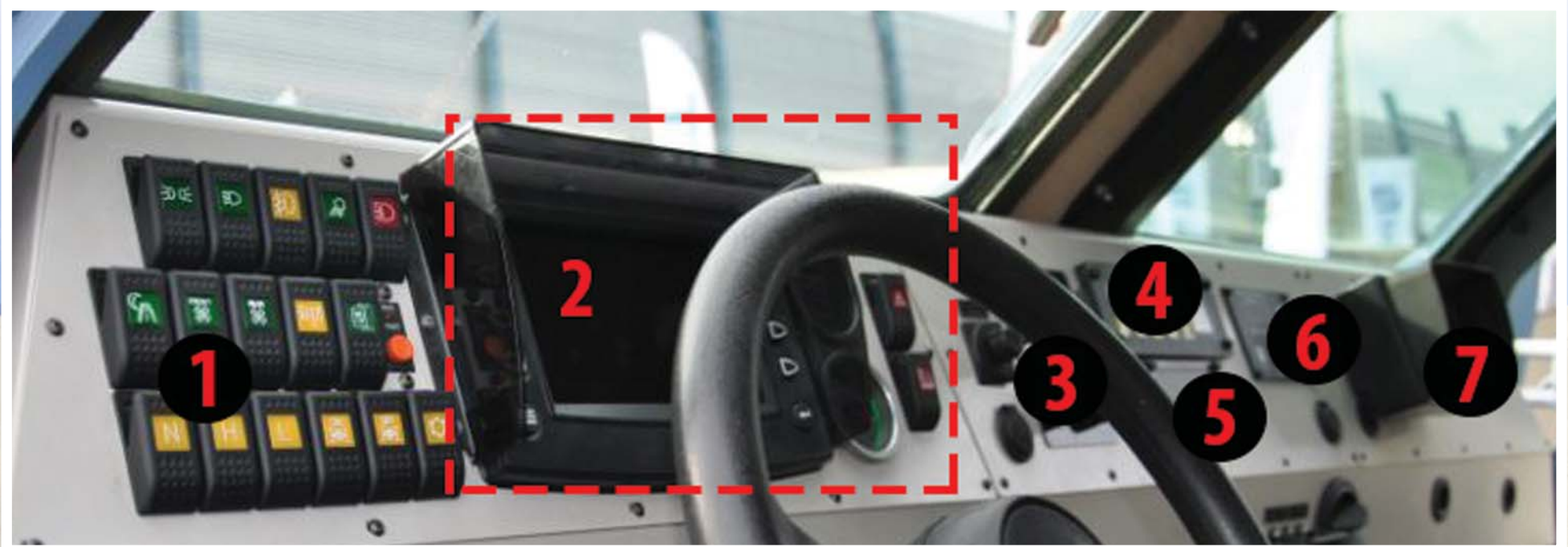
DRIVING COMPARTMENT



CONTROLS EQUIPMENT

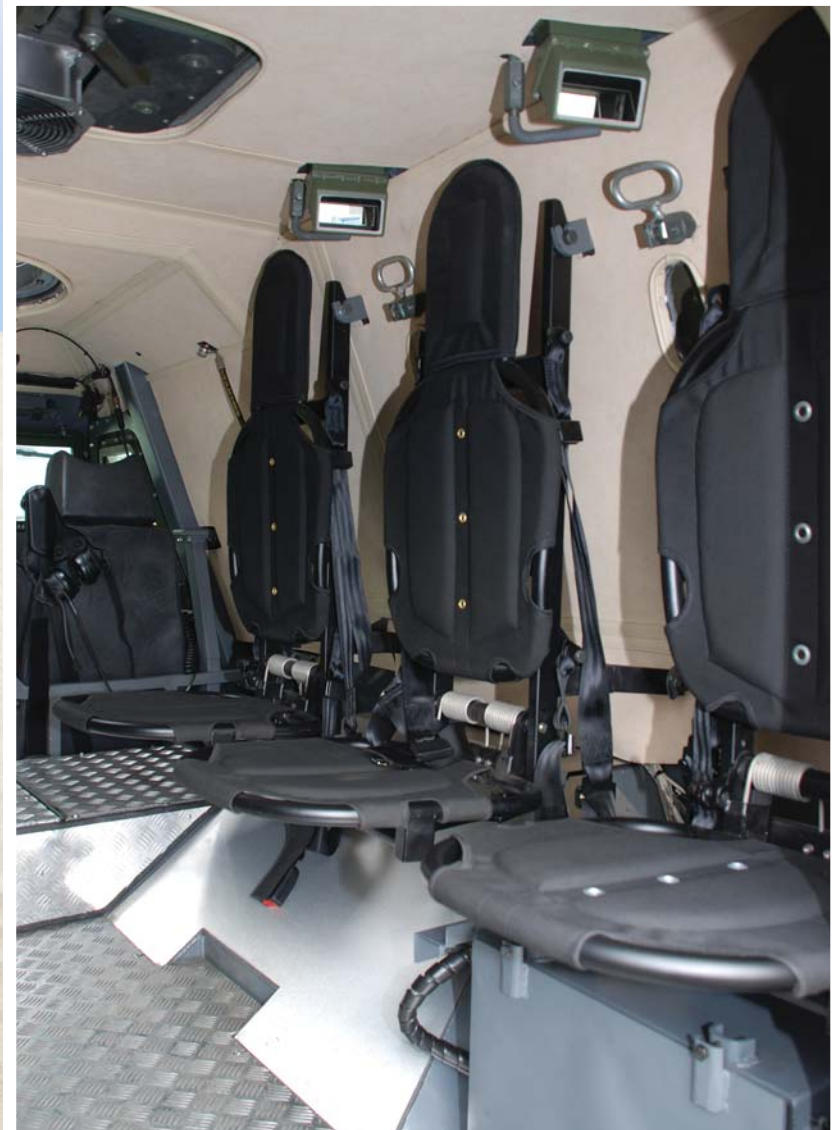


CONTROLS EQUIPMENT



1. Switches of electrical appliances
2. Engine monitoring devices, control and measuring equipment
3. Ventilation control unit
4. The control unit of central tire inflation system
5. The control unit of firefighting system
6. A/C system control unit
7. Commander's monitor

TROOP COMPARTMENT



TROOP COMPARTMENT

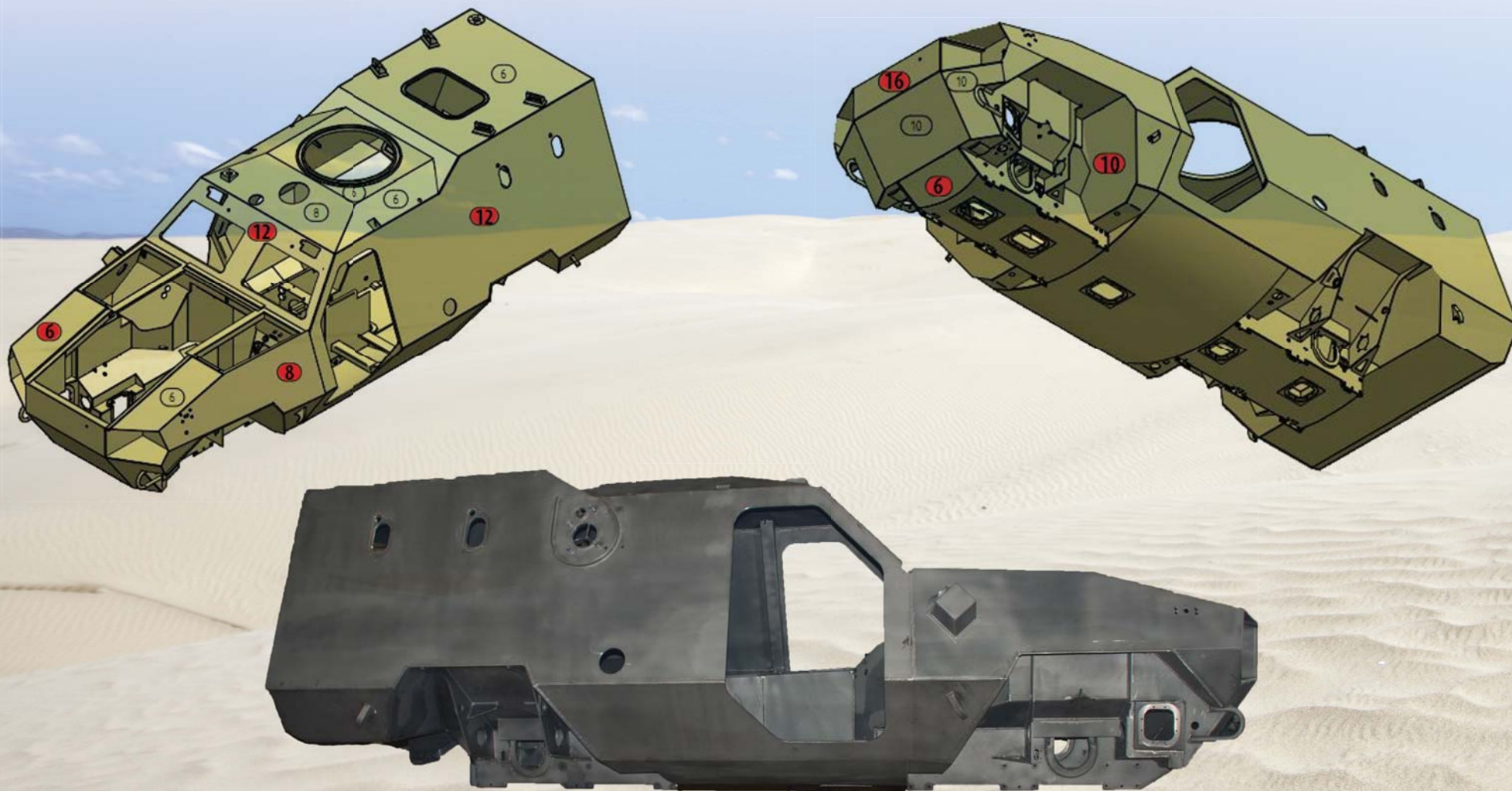


TROOP COMPARTMENT

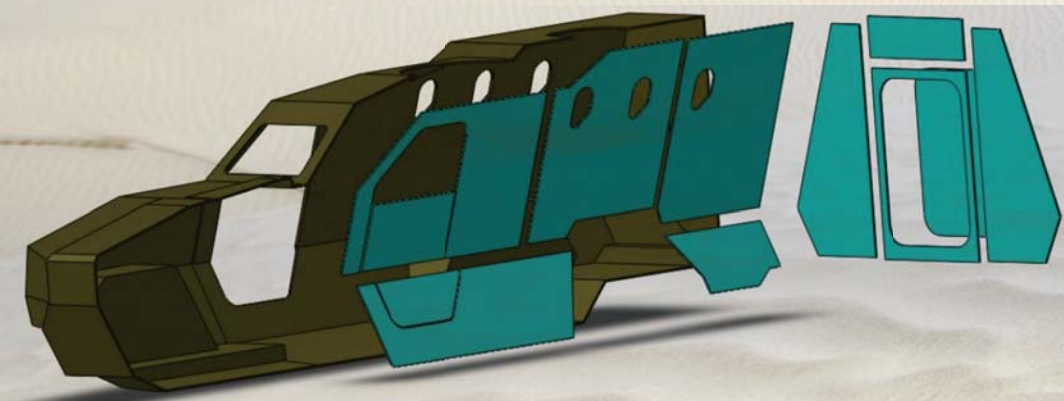
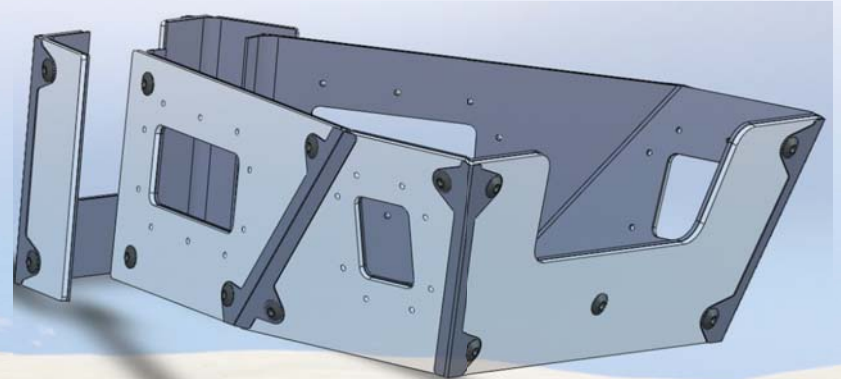
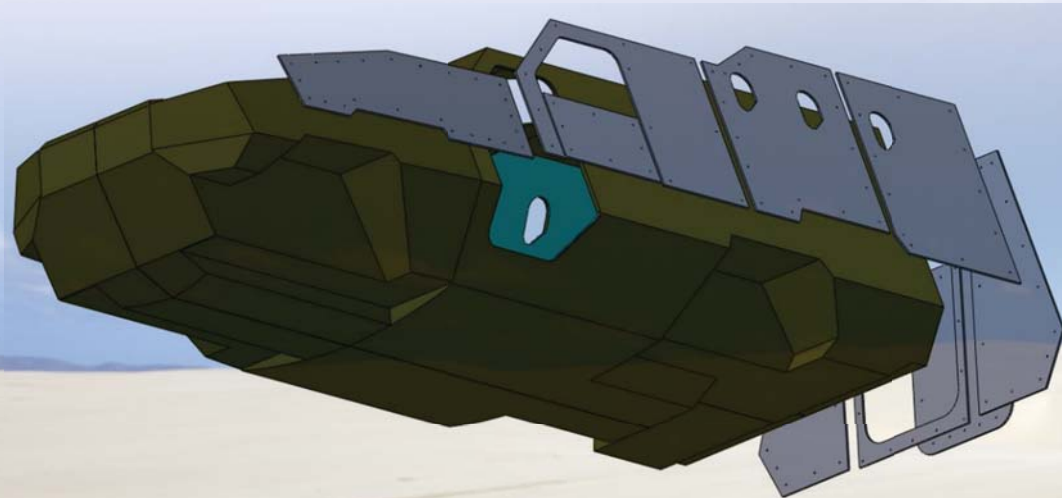


Located at the rear of habitable compartment and includes a gunner's workplace and six special seats for troopers.

PROTECTION



ADDITIONAL ARMOR

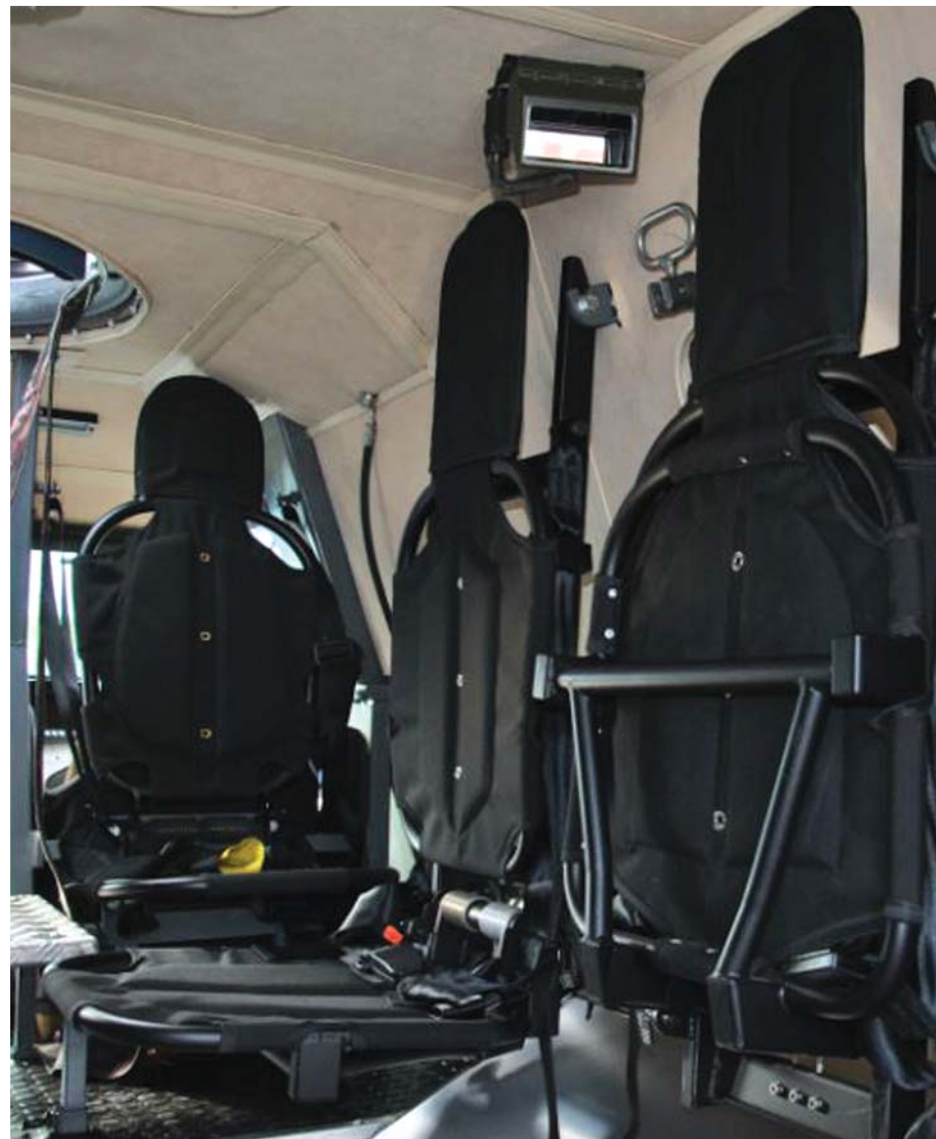


ADDITIONAL ARMOR



It increases protection till Level 3

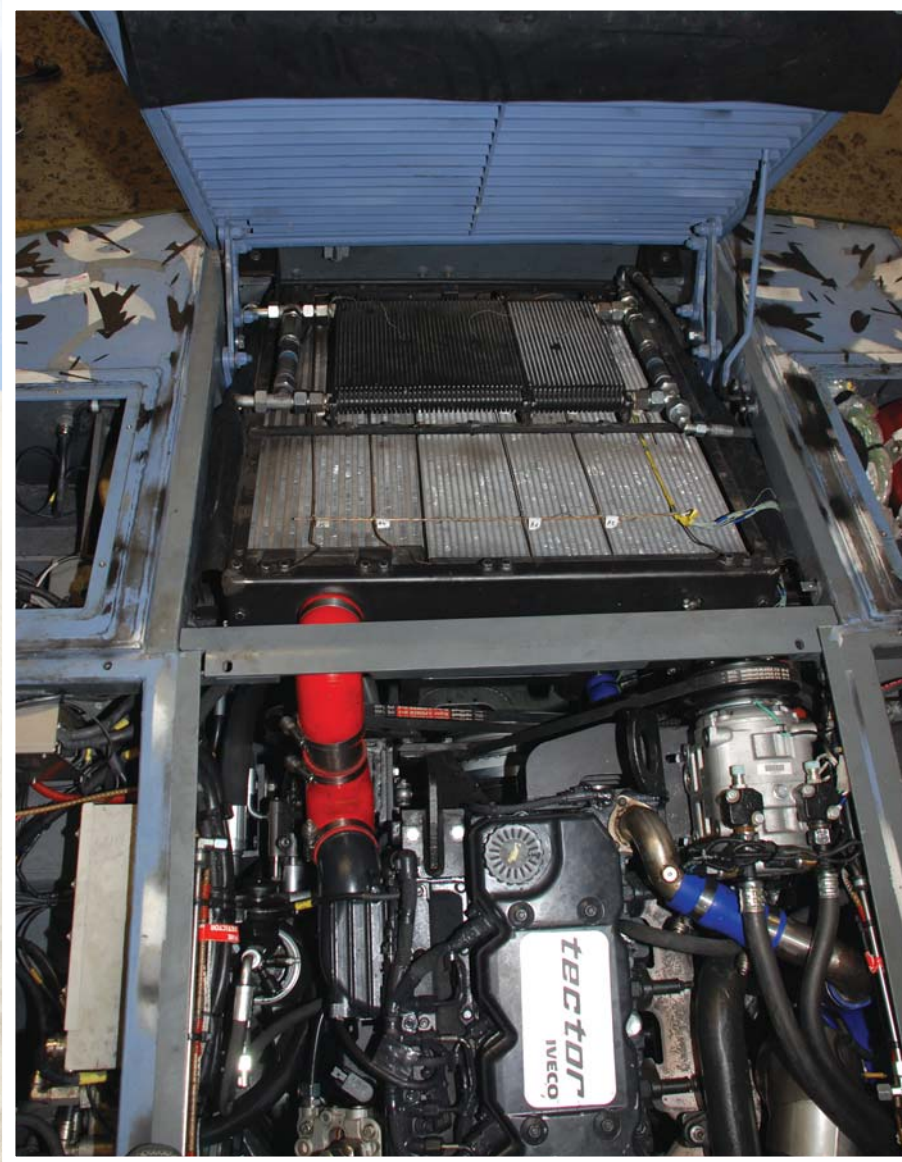
MINE PROTECTION



POWER UNIT



LAYOUT OF THE POWER UNIT WITH DEUTZ ENGINE



LAYOUT OF THE POWER UNIT WITH IVECO ENGINE

ENGINE



	IVECO NEF4TAA
154 kW 209,5 Hp	Output
730 Nm	Maximum torque
1400 rpm	

	DEUTZ BF4M1013FC
140 kW 190,5 Hp	Output
700 Nm	Maximum torque
1400 rpm	



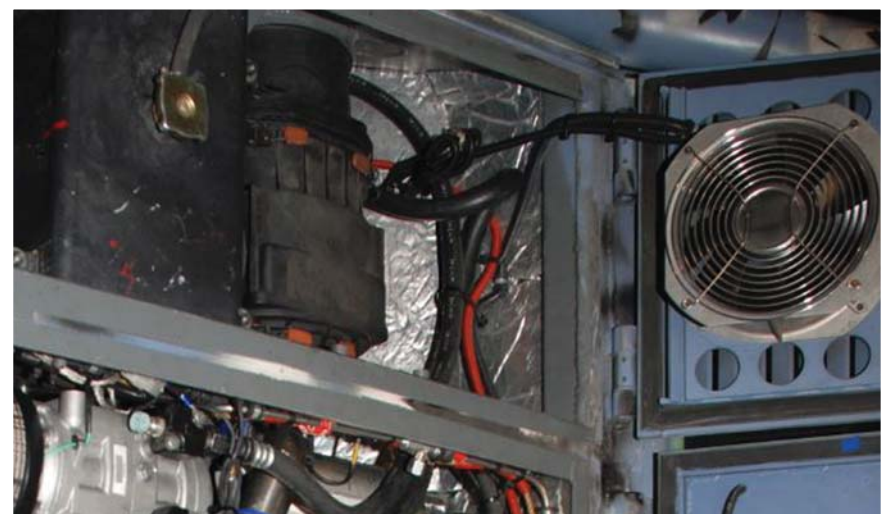
COOLING SYSTEM



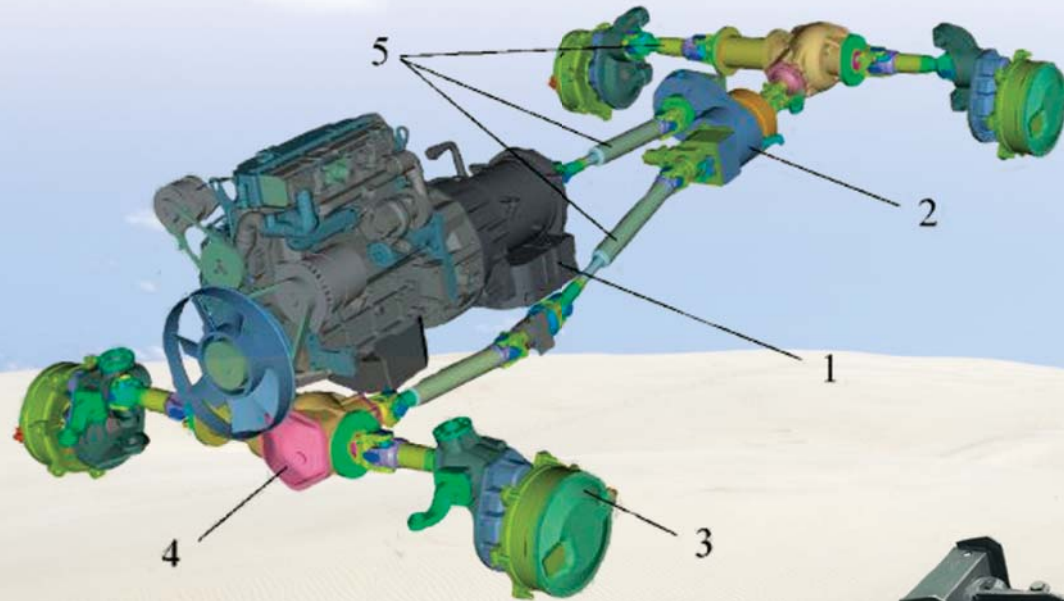
COOLING SYSTEM WITH DEUTZ ENGINE



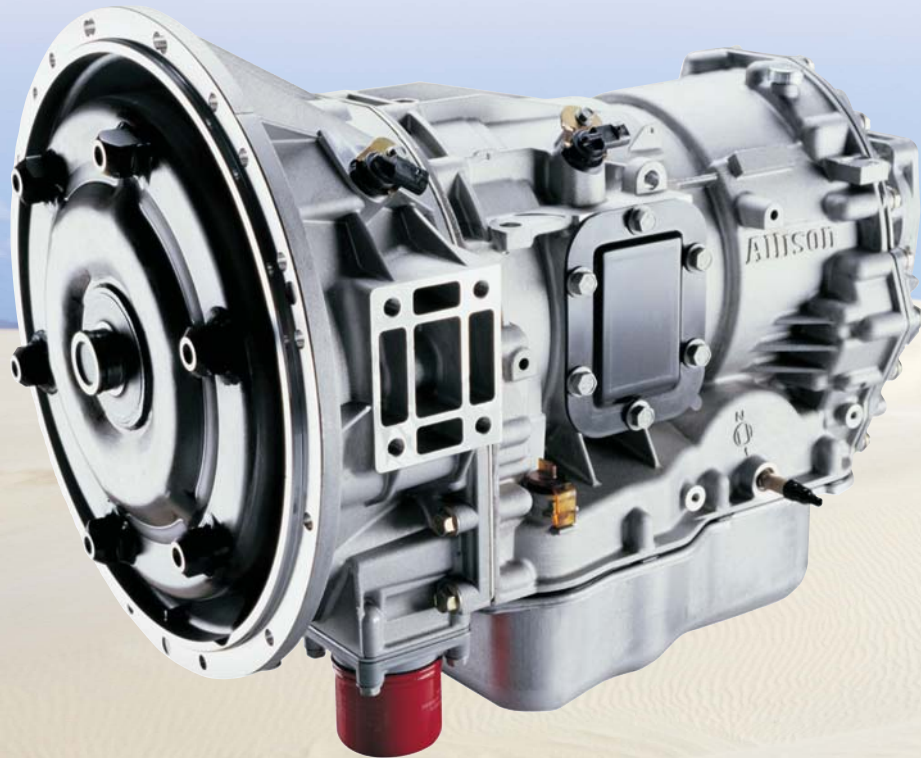
COOLING SYSTEM WITH IVECO ENGINE



POWERTRAIN

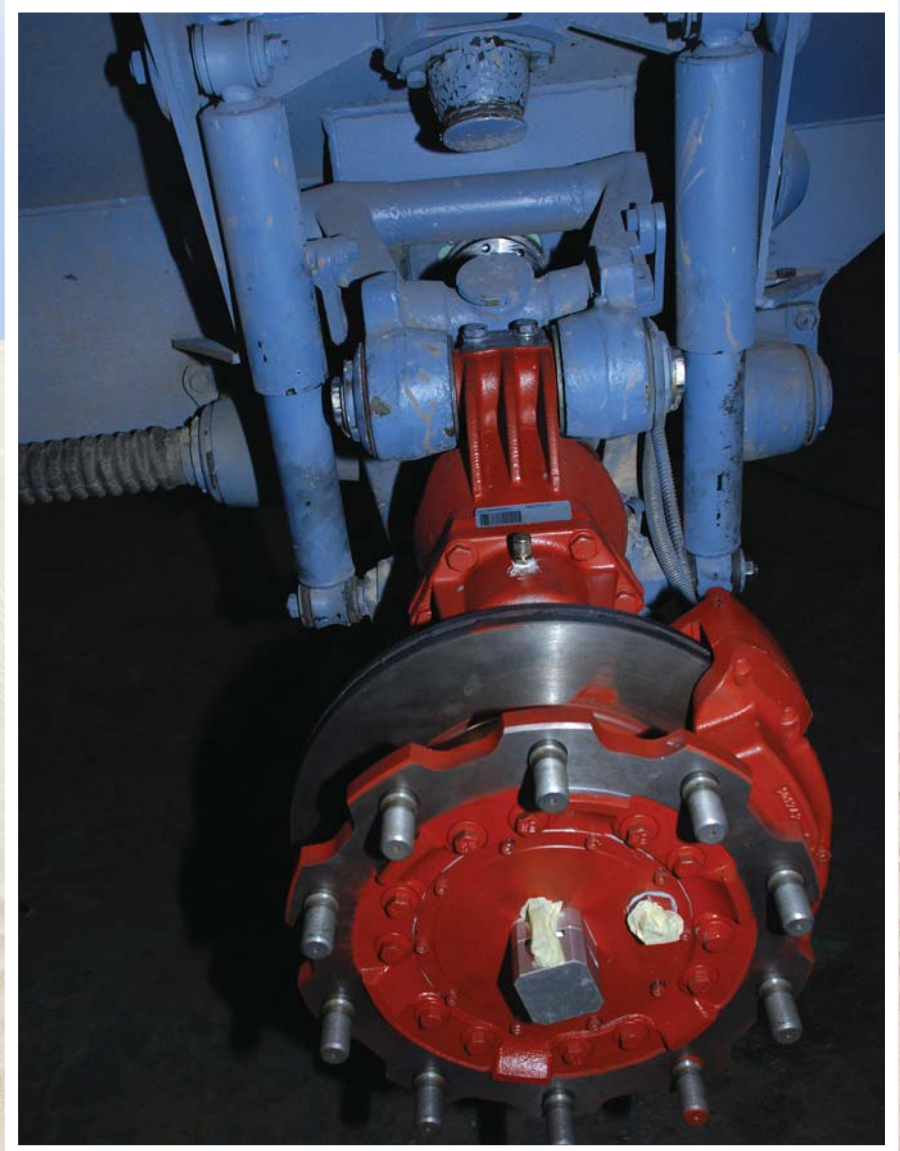


AUTOMATIC GEARBOX AND TRANSFER CASE

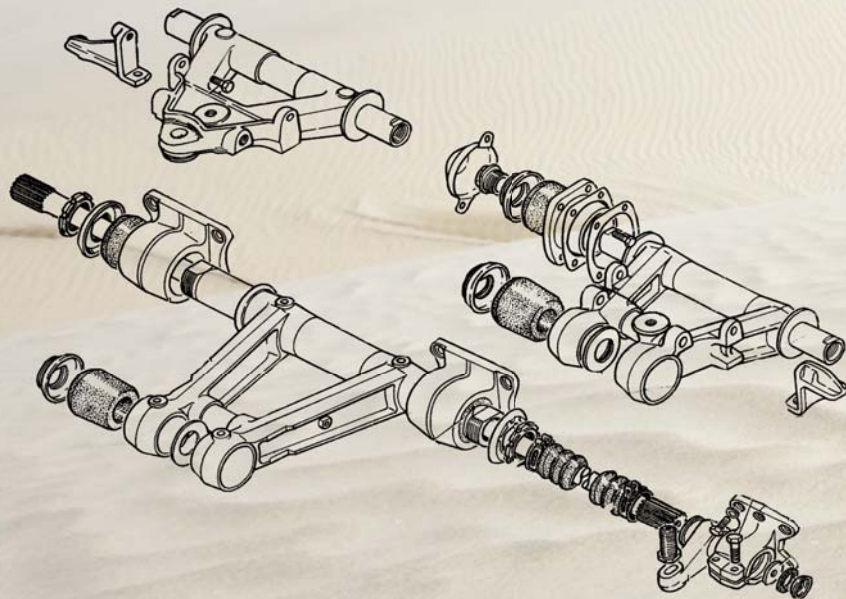


**Hydro mechanical, automatic, planetary gearbox Allison 1000 LET is applied, which has six ranges forward and one back.
Transfer case - mechanical, four-shaft with differential distribution of torque.**

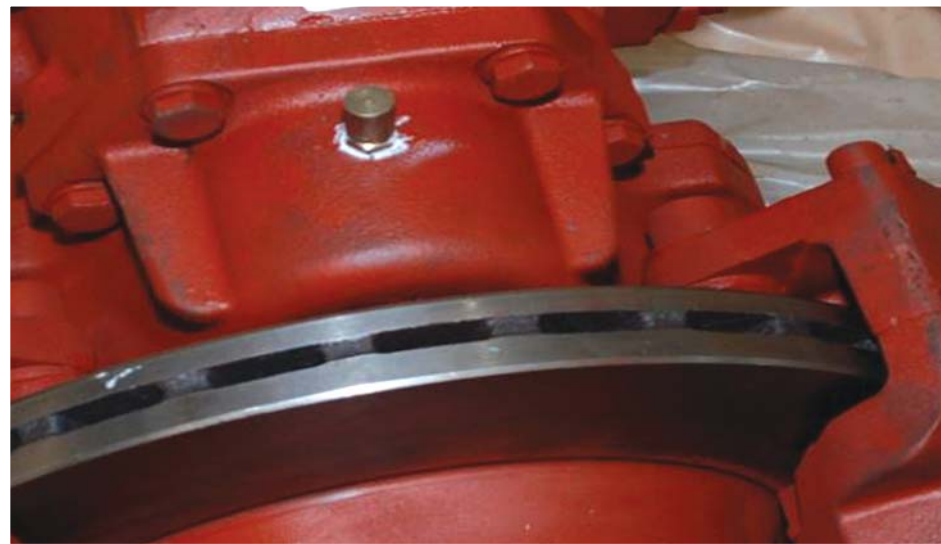
DRIVING AXLES AND WHEEL REDUCERS



CHASSIS

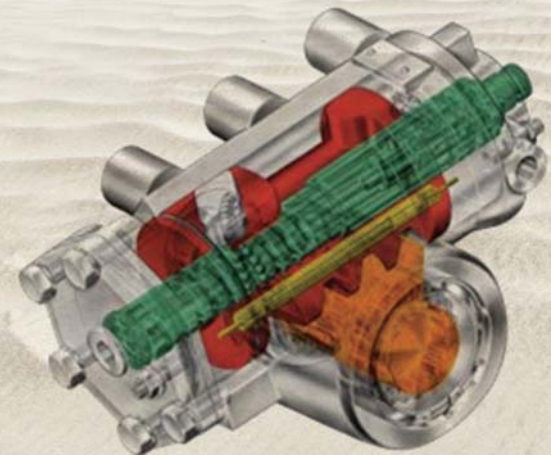
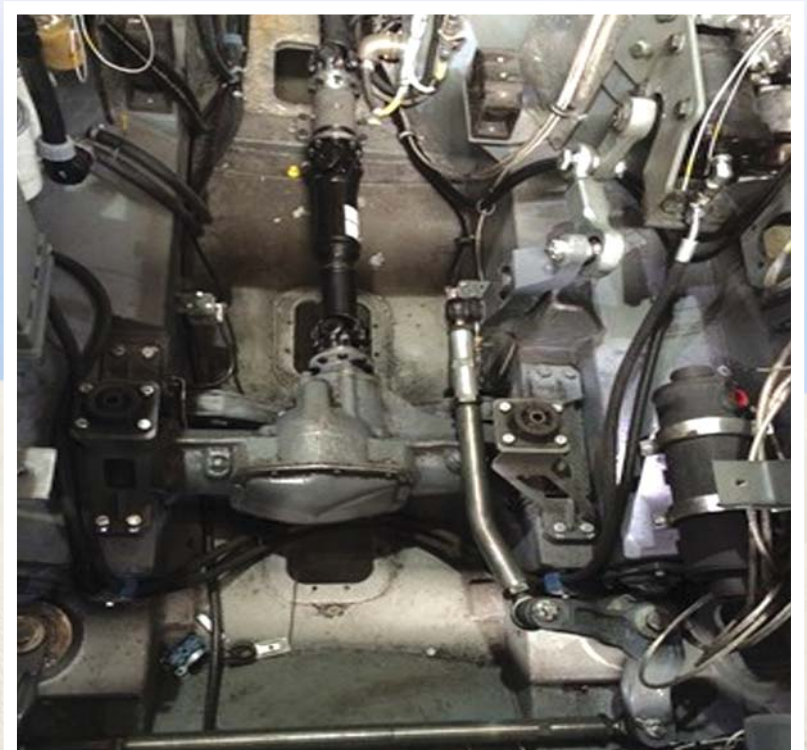


CENTRAL TIRE INFLATION SYSTEM

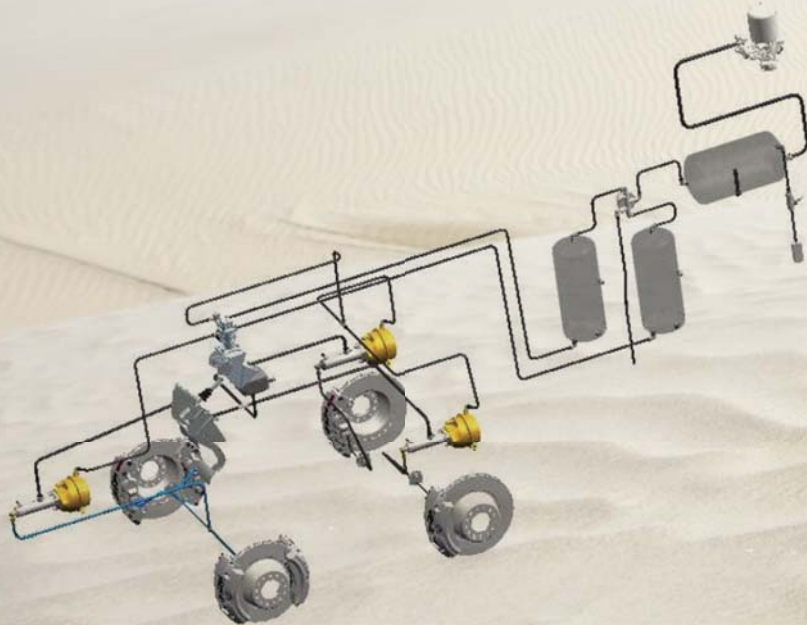


Controls and monitoring of tire pressure are displayed on a separate block of the driver's instrument panel.

STEERING SYSTEM



BRAKING SYSTEM



HABITABILITY SYSTEMS



The comfort of the crew and troopers is provided by:

- air ventilation system;
- heating system;
- A/C system.

HABITABILITY SYSTEMS



Air conditioning system is developed and installed for operation in the countries with hot climate up to +55 C.

A/C system provides the lowering of the air temperature inside the vehicle up to 20 C as compared to the outside temperature.

Chemical Contamination Protection System



**The vehicle is equipped with filter-ventilation system.
The system consists of an air blower and filter element,
which are installed in a special compartment outside of the vehicle.**

FIREFIGHTING SYSTEM



ELECTRIC EQUIPMENT



ELECTRIC EQUIPMENT



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ELECTRIC EQUIPMENT



COMMUNICATION EQUIPMENT



NAVIGATION



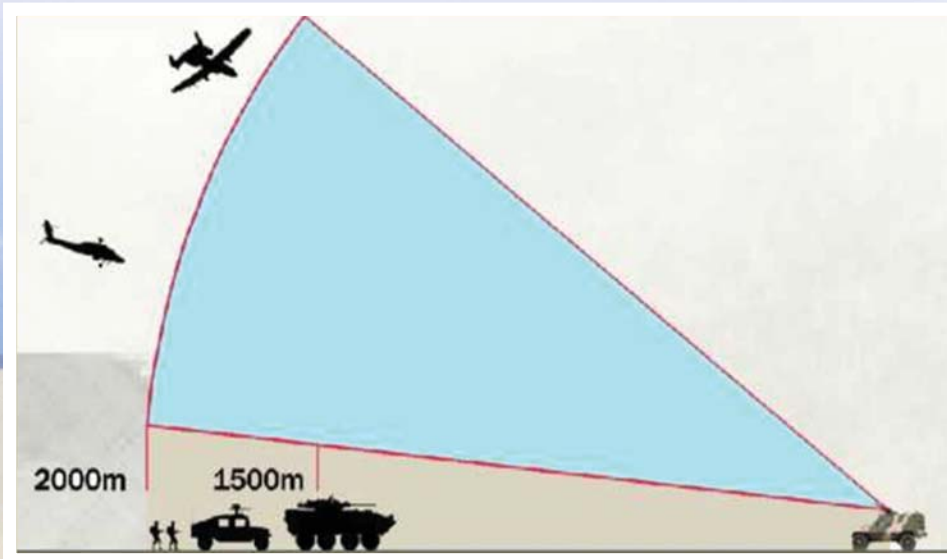
APC is equipped with radio navigation equipment, operating on radio signals of GPS, NAVSTAR and GLONASS satellite systems anywhere in the world, at any time, regardless of weather conditions.



ARMAMENT



ARMAMENT



Aiming angles:

- elevation

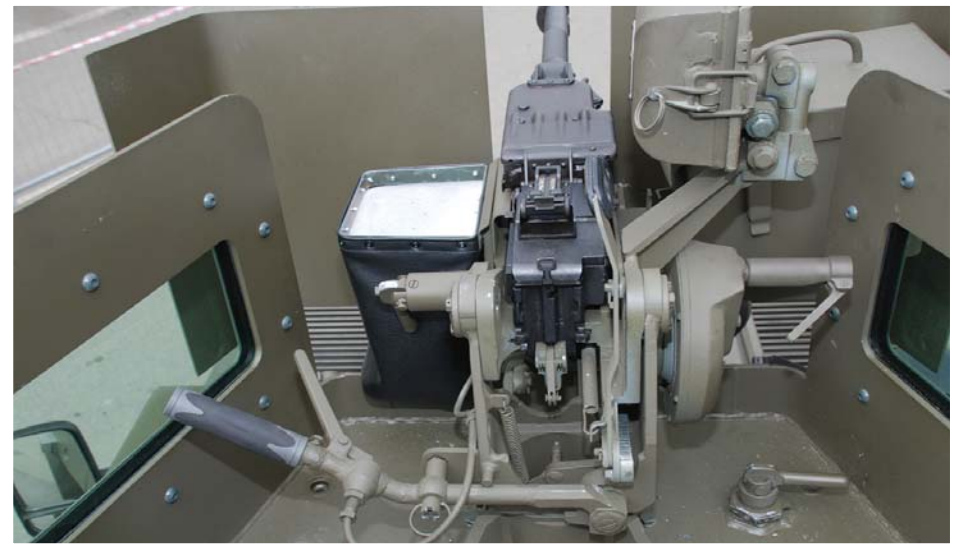
from - 3° to +68°

- azimuth

360°

**Ammunition load,
rounds**

350 (7x50)



ARMAMENT



OPTICAL ELECTRONIC UNIT:

- TV camera;
- rangefinder;
- thermal imager

MACHINE GUN:

Machine gun	
Model	NSVT
Caliber, mm	12.7
Firing rate, rpm	700
Ammunition supply	belt-fed

GENERAL PERFORMANCE

Gross weight, kg	8800 +3%
Overall dimensions, mm:	
Length	5450
Length including winch	5800
Width	2450
Height	2300
Height to the machine gun top in a travel mode	2700
Track width	2000
Clearance	400
Wheelbase	3100
Min. turning radius, m	8,9
Crew	3
Personnel	6/8

The APC is fitted for road, rail, sea and air transportation.

MOBILITY AND MANEUVERABILITY

Fording

Speed

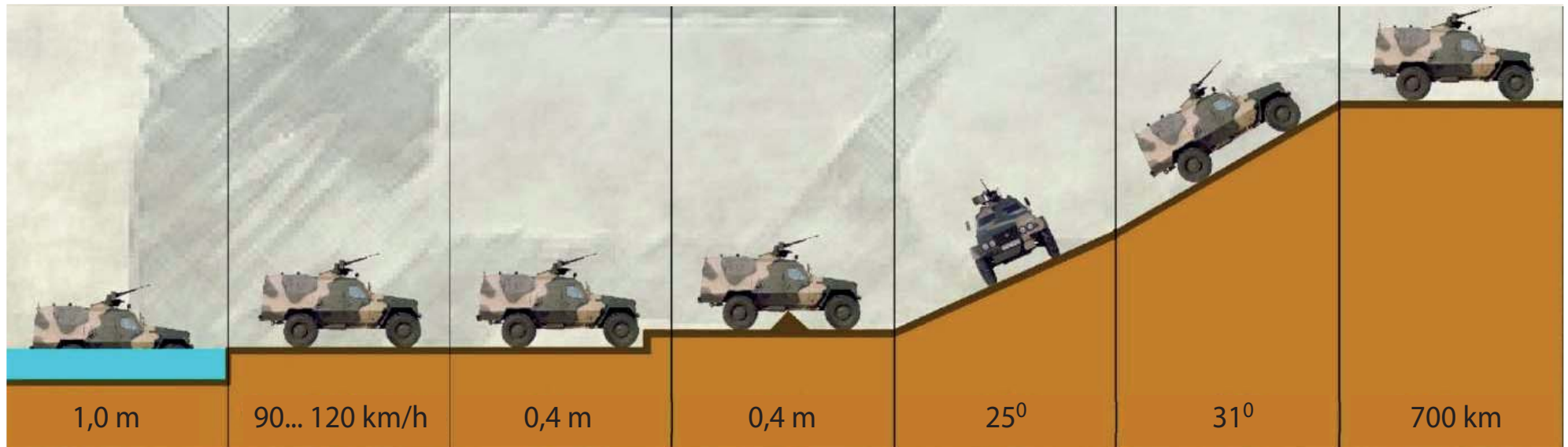
**Vertical
step**

Clearance

Inclination

Climbing

Range



THE ONCILLA FAMILY ARMORED VEHICLES

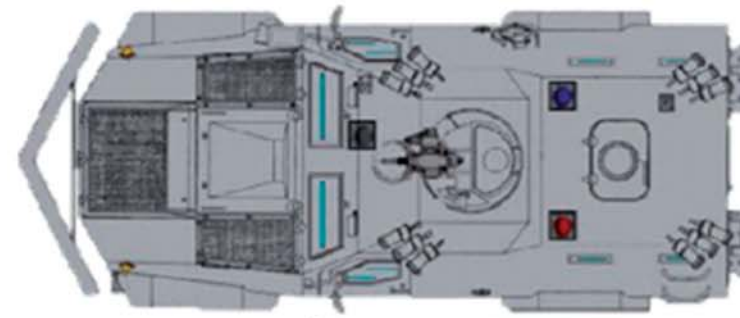
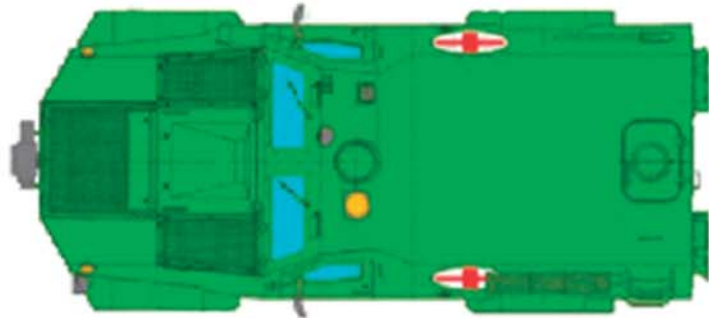


COMMAND VEHICLE



RECONNAISSANCE AND PATROL VEHICLE

THE ONCILLA FAMILY ARMORED VEHICLES



MEDICAL VEHICLE

RIOT POLICE VEHICLE

Other types of vehicle as water tank or fuel tank, RV (with dozer blade) could be supplied according to the customer's needs

REPAIR AND RECOVERY VEHICLE (RV)

RV – a repair and recovery vehicle is made on the chassis of APC "Oncilla".

On the "Oncilla" chassis is installed special equipment, tools and accessories that can be used to carry out repair works of the APCs in the field conditions.

MAIN EQUIPMENT:

1. Special crane based on HIAB T-018(1.9 t)
2. Hydraulic Outriggers
3. Electric winch
4. Jack
5. Strapping tools (slings, shackles, earrings, etc.)
6. Polyspasts (on the right side wall)
7. Thrust device (under the winch)
8. Towing device (on the left side wall)
9. Generator (in a special compartment on the right)
10. Electric welding machine (on the box for batteries)
11. Additional cable 30m (in the box on the back wall)
12. Machine tool for a drill (on the table)
13. Electric drill
14. Angle grinder
15. Grindstone (on the left inside wall)
16. Vice metalwork 125 (in the box on the back wall)
17. Vice metalwork 63 removable
18. Set of special keys
19. Set of keys
20. Measuring instruments (ruler, tape measure, calipers ...)
21. A set of the metalwork tools
22. Soldering Iron
23. Carrying
24. Rack with tools, spare parts, etc. (inside rear left)
25. Two hermetic containers with spare parts (on the roof)
26. Two hermetic containers with spare parts and tools (on the side walls)
27. Hermetic container for additional cable and accessories for strapping (at the rear on the right).

REPAIR AND RECOVERY VEHICLE (RV)

With the help of the equipment the following works can be performed:

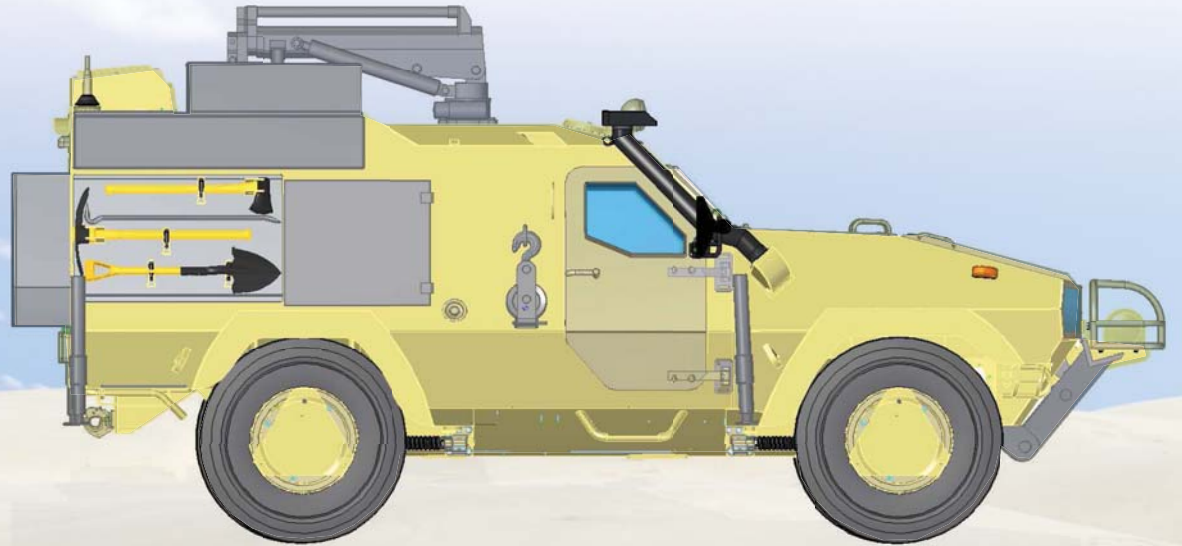
- **evacuation of the jammed vehicles using the main winch weighing up to 16 tons. For this the RV is equipped with a special anchor in the bow of the hull and an additional roller which increases traction of the main winch is 2 times;**
- **removal and installation of engines and aggregates of the vehicle. It is carried out using a hydraulic crane, mounted on the roof of APC "Oncilla". Besides, for the steady work of the crane hydraulic unloading devices are mounted on the vehicle's hull;**
- **electric welding to weld and cut armor parts using a welding machine.**

Power supply for the welding machine and other power tools is carried out by energy plant, located on the right board of the armored hull in a special niche.

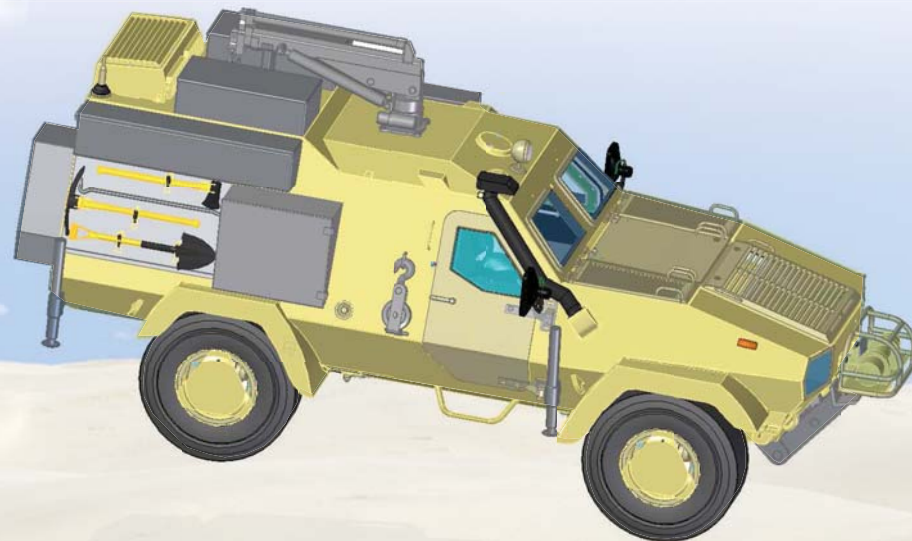
The inhabited compartment of the vehicle is equipped with a locksmith workplace on a special workbench where installed electric drill, bench vise and electrical grinding machine. Inside bench stacked sets of the metalwork tool.

Technical assistance to damaged or defective APCs is carried out by means of spare parts and materials which are arranged in special hermetic containers, stacked on the roof of the vehicle on the right and left sides of the hull.

REPAIR AND RECOVERY VEHICLE (RV)



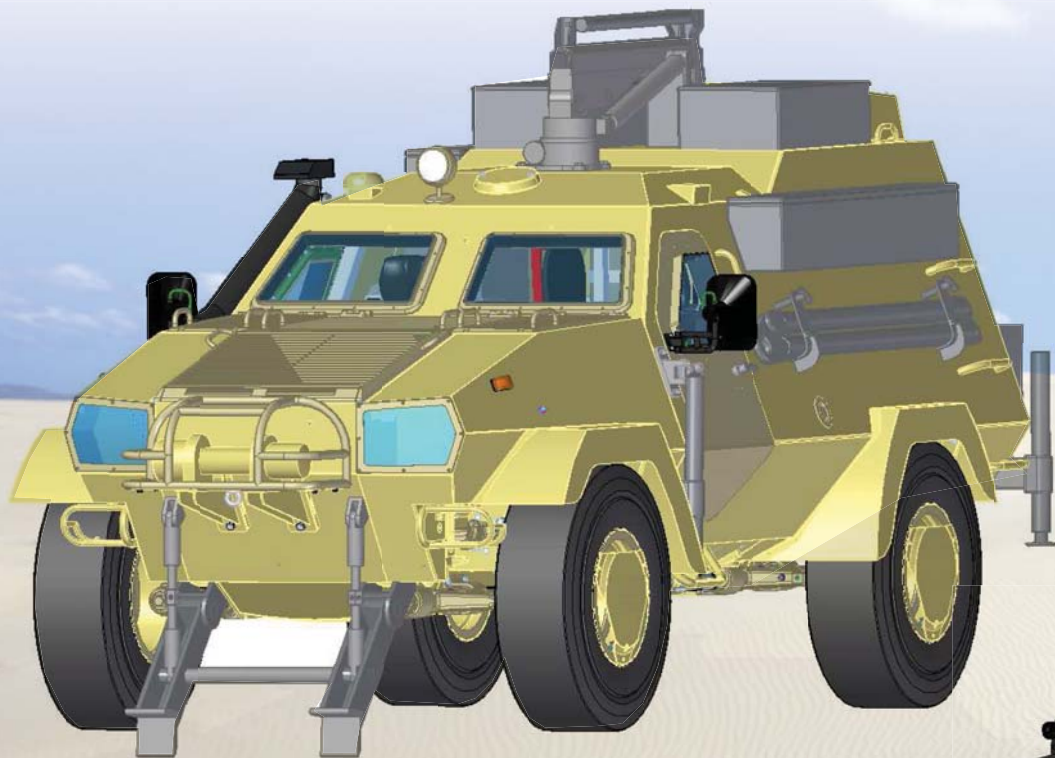
REPAIR AND RECOVERY VEHICLE (RV)



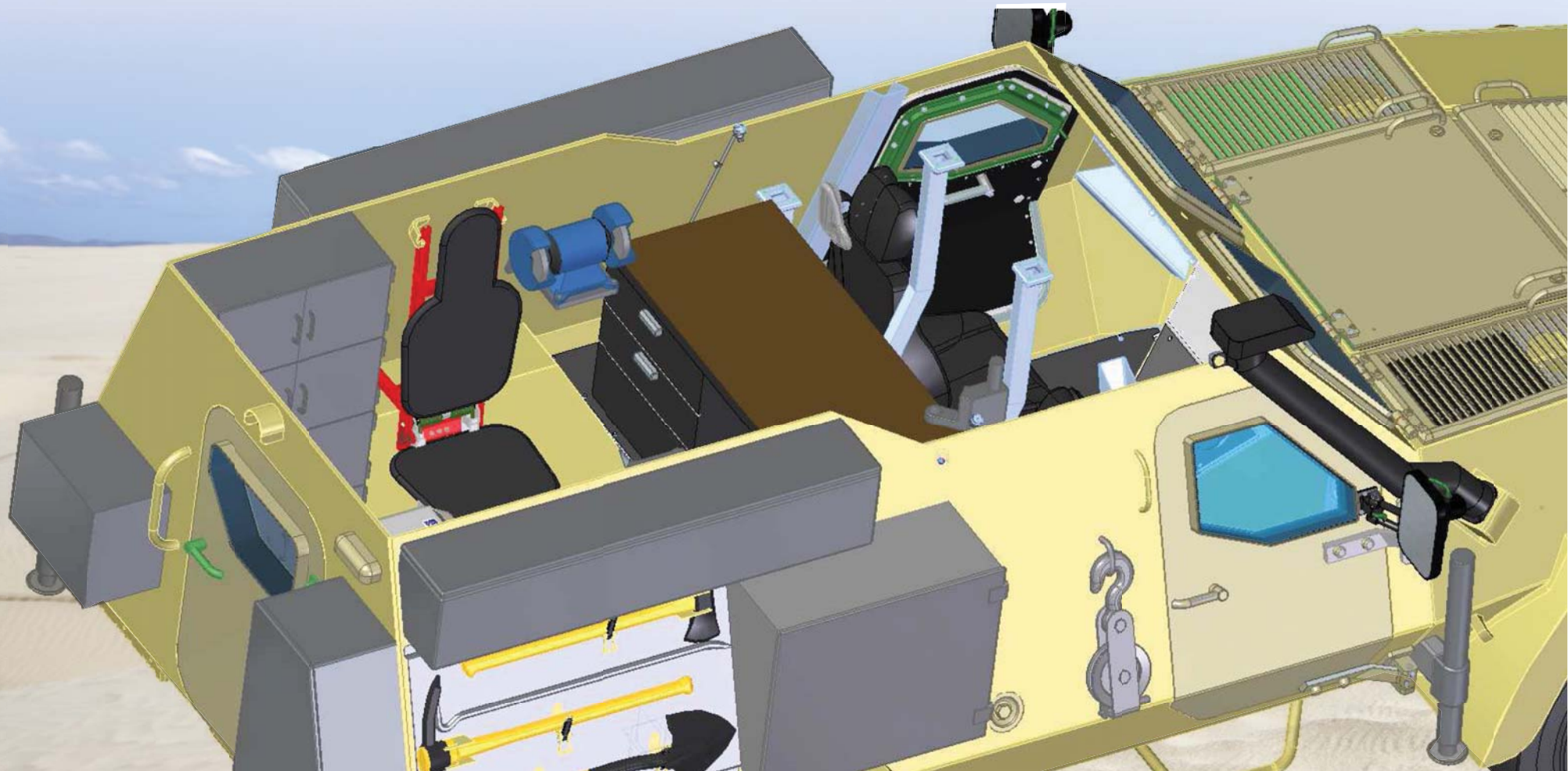
REPAIR AND RECOVERY VEHICLE (RV)



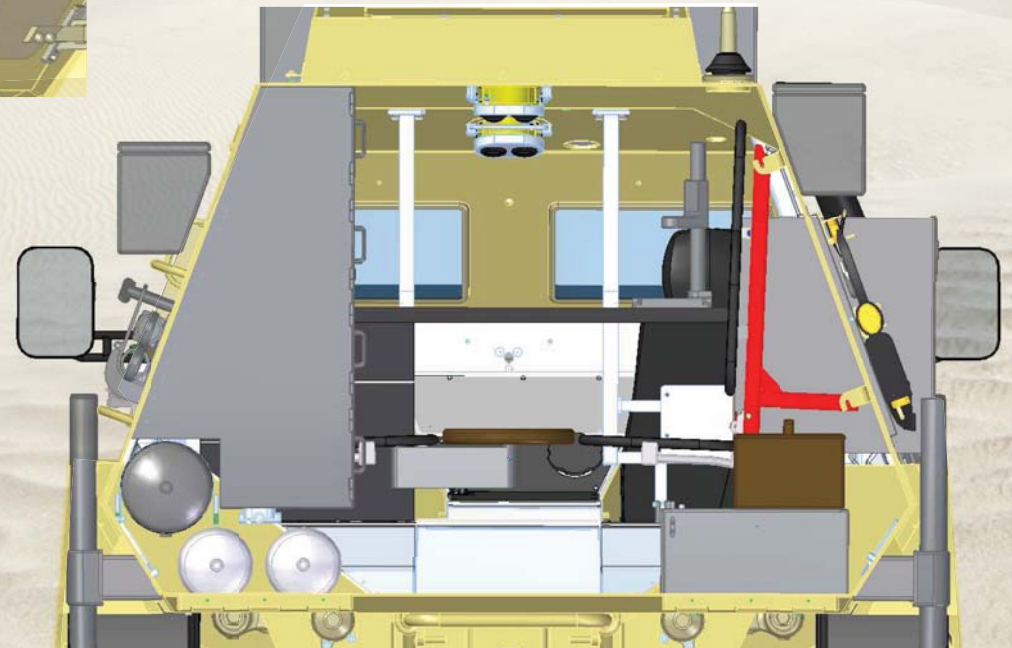
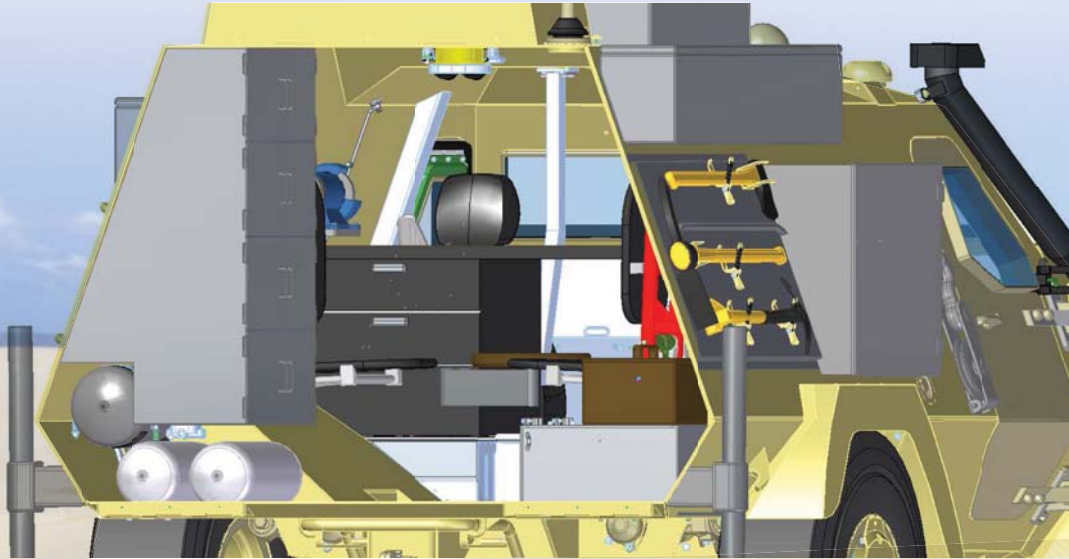
REPAIR AND RECOVERY VEHICLE (RV)



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REPAIR AND RECOVERY VEHICLE (RV)

EQUIPMENT



COMMANDER APC

Commander APC is designed to provide military divisions control and interoperability of various parts of the staffs. Developed on the basis of the APC "Oncilla", maintaining its combat and technical characteristics and outward appearance is no different from the basic model, which allows to command secretly a division.

The crew of Commander APC consists of three persons: a commander, senior radio operator; a gunner, radio operator and a driver. For a unit commander and a staff officer there are equipped workplaces in the troop compartment with folding tables, subscriber units to work on the means of communication and GPS with a computer in order to achieve effective and covert control. APC is equipped with built-in and remote VHF radio stations, VHF radio receiver, intercom and switching equipment.

A charging unit is installed to ensure smooth operation of equipment and communication means.

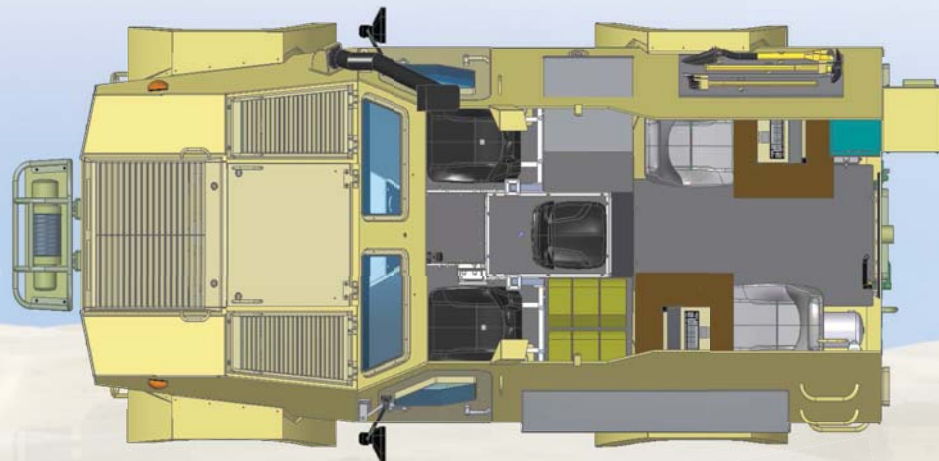
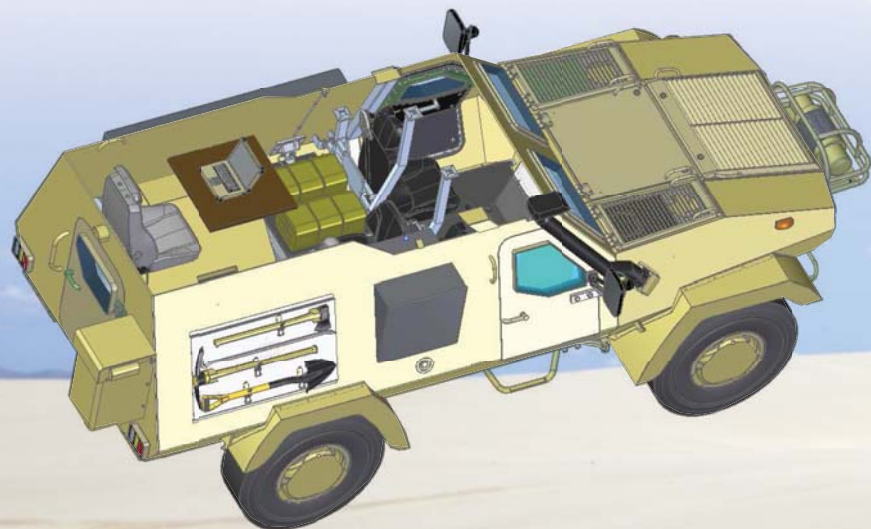
COMMUNICATION MEANS:

- VHF transceiver radio station - 2 pcs;
- VHF radio - 1 pc;
- equipment for secret negotiations - 1 set;
- equipment of internal communication.

OPTIONAL EQUIPMENT:

- GPS navigation equipment;
- charging unit;
- auxiliary winch 8 t;
- doses definition unit of radioactive and chemical contamination;
- filter-ventilation system;
- fire-fighting equipment.

COMMANDER APC



ARMORED MEDICAL VEHICLE (AMV)

Armored Medical Vehicle (AMV) is designed to search for, collect and evacuate the wounded, provide first medical aid in various difficult terrain in day and night conditions.

A battle APC Oncilla is used as an AMV chassis with increased dimensions on height, with 2 landing hatches on the roof, 6 windows on the side walls and a rear door.

The AMV hull provides protection Level 3, mine protection – Level 2a, 2b according to STANAG 4569-2 standards.

- Total weight of the vehicle - 9700 kg;
- Dimensions - 6040x2450x2730 mm;
- Ground clearance – 400 mm;
- Power plant - IVECO NEF4ENTC (Italy) with automatic gearbox Allison 1000 (USA);
- Crew – 3 persons;
- Evacuees capacity – 6 persons.

The AMV interior volume is divided into two parts:

- control compartment;
- inhabited medical compartment with:

First aid equipment

- a portable defibrillator – 1 set;
- a three-channel ECG with a monitor – 1 set;
- an oxygen inhaler with additional oxygen cylinders - 2 sets;
- a portable electric sucking pump – 1 set;

ARMORED MEDICAL VEHICLE (AMV)

Auxiliary equipment

- a set of splints for transportation immobilization of the wounded – 1 set;
- a vacuum mattress – 1 pc;
- a portable refrigerator – 1 pc;
- a cupboard for medicines – 1 pc;
- sanitary stretchers – 3 pcs;
- hard stretchers – 1 pc;
- a device for loading of stretchers with the wounded – 1 pc;
- fixed seats with seat belts – 4 pcs;
- water dispenser with a supply of water – 1 pc.

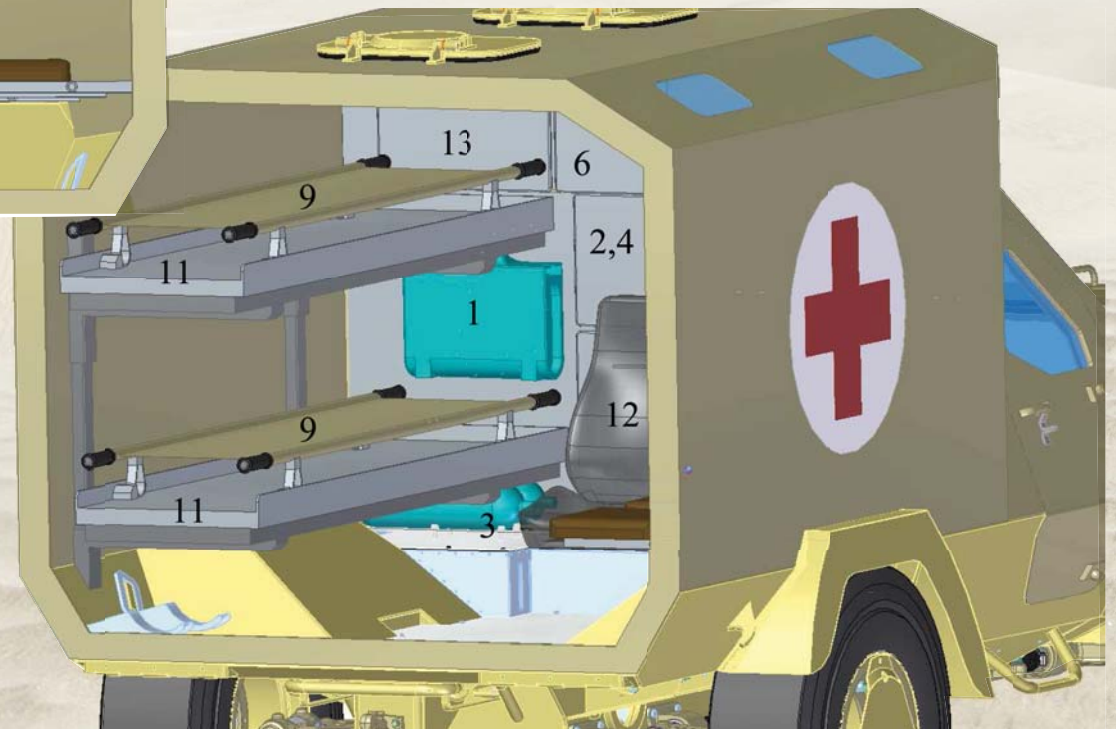
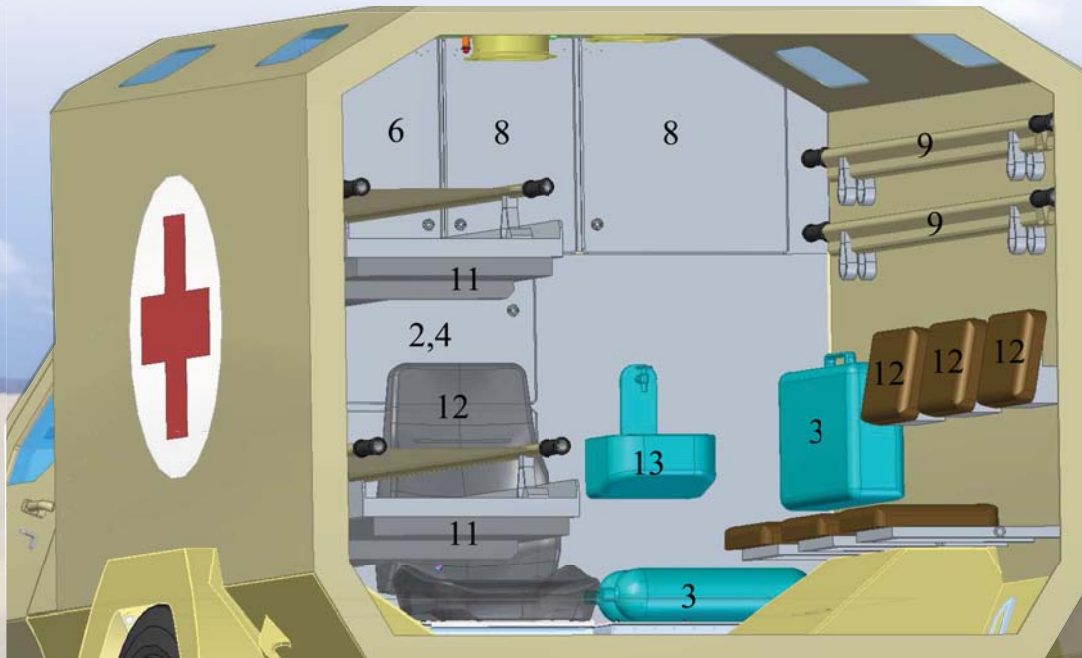
A medical care occurs on the stationary hard stretchers, which are flipping down with a special device. The AMV has the ability to transport 4 seriously wounded or 2 seriously wounded and 3 persons sitting. Ventilation and A/C systems create favorable conditions (20-22° C) at ambient temperatures up to +55° C.

The power is supplied from 24V onboard power supply or external 24V DC unit. The interior surfaces have heat and sound insulation. Dimensions of medical compartment allow the staff to move freely during the work.

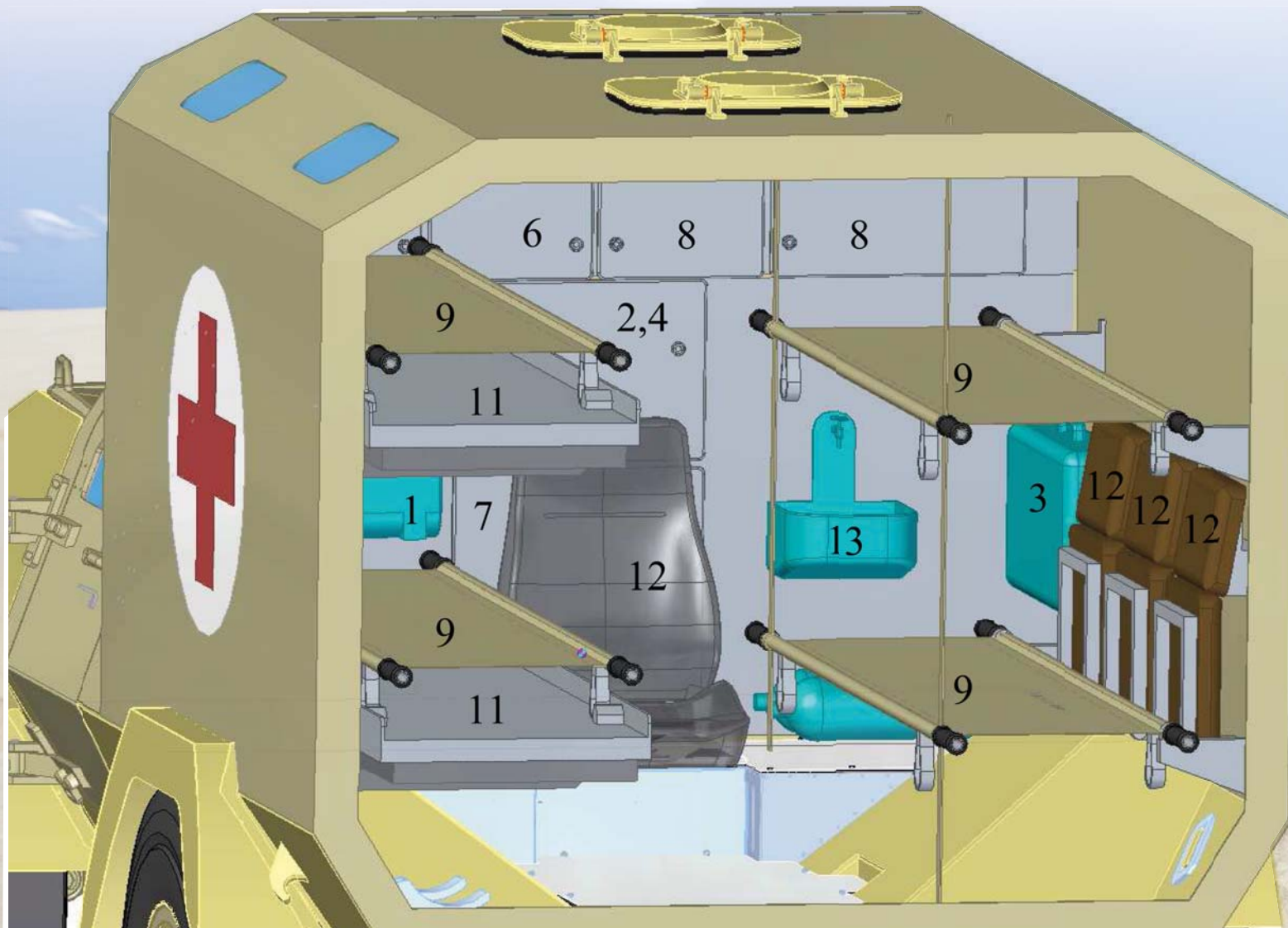
ARMORED MEDICAL VEHICLE (AMV)



ARMORED MEDICAL VEHICLE (AMV)



ARMORED MEDICAL VEHICLE (AMV)



ARMORED MEDICAL VEHICLE (AMV)



ASSAULT OBSTACLE-CLEARING BARRAGE SPECIAL ARMORED VEHICLE

Made on the basis of APC Oncilla.

Designed to provide the possibility of overcoming obstacles and penetrating of the battle groups in the buildings at the level of the first and second floors.

It has an assault ladder, operated from the inhabited compartment with the special control panel.

Also has 2 assault shields mounted at the end of the assault ladder.

It is equipped to perform obstacle-clearing-barrage works:

- with a disk petrol cutting torch,
- with a plasma cutting torch,
- with a dozer blade,
- with a kit manual universal hydraulic tools.



ASSAULT OBSTACLE-CLEARING BARRAGE SPECIAL ARMORED VEHICLE



The assault ladder has 3 sliding sections controlled hydraulically. The length of the ladder in the open position is 8 m, lifting height reaches 8 m. Unfolding and folding time is 30 seconds.

ASSAULT OBSTACLE-CLEARING BARRAGE SPECIAL ARMORED VEHICLE

