BULLET RESISTANT VEHICLE



CHANAKYA AUTOMOBILES (I) PVT. LTD. (Armoured Division) NEW DELHI

Chanakya Automobiles India (P) Ltd. (Armored Division) is the only private sector Manufacturing Company in India to produce armoured vehicles to the levels specified for the highest category of VVIP in India which have been completely tested by BPR & D. A team was formed by govt. of India and comprised SPG, BPR & D and Cabinet Secretariat. They have evaluated the performance of the prototype vehicle after armouring and found it mission worthy. They have also carried out live testing of the vehicle including firing of 42 SLR bullets into the car and on the roof and simultaneous detonation of 2 HE 36 Grenades under the vehicle. Detailed reports confirming mission worthiness are available.

Every vehicle that we build at Chanakya Automobiles India (P) Ltd. is designed to do one thing – Save lives without compromising on comfort and drivability. Our team of engineering experts meticulously design armour systems that will defeat threats from 9 mm handguns up to SLR 7.62mm and even armour piercing munitions. Every ballistic material we use is tested for quality by independent labs and installed in overlapping panels by experienced craftspeople. Ballistic vulnerable areas are eliminated. Total safety is assured.

Our vehicle has a complete shell of armoured steel cocooned within the outer shell. This shell within a shell design means that the interior armoured shell provides additional strength to the structure of the vehicle in addition to the original shell. This means that the vehicle has exceptional ability to survive roll over in case of loss of control while evading an attack.

The extra weight of this shell means an engineering team comes into play to redesign the suspensions, brakes, cooling systems and drive train. Special redesign is required to ensure that power is boosted so that the vehicle will perform like a standard vehicle.

Anonymity is part of our protective advantage. The vehicle is externally indistinguishable visibly from amongst other vehicles. Needless to say the driving pleasure of the original vehicle is retained

Cars can be designed to withstand underbody and side blasts as well as airburst overhead.

We undertake to bulletproof a wide range of vehicles.

A formal order is required from the buyer. We will inform police and Ministry of Home affairs.

Warranty

For some vehicles we will keep manufacturers warranty intact. Warranty on armoured glasses for 2 years against manufacturing defect. Warranty on joints welding is for 3 years

Annual Maintenance Contract

For some vehicles, Annual Maintenance Contract (AMC) covering all aspects of the vehicle except accidental damages or physical breakage can be provided at our works in Delhi..

Basic types of Protection Provided

<u>1/. Shell Protection against Ballistic attack:</u> The car is enveloped in a cocoon of ballistic resistant material capable of withstanding the weapons being fired. Broadly, there are transparent and opaque armour. Where visibility is required transparent armour is provided and the rest of the body is cocooned with opaque armour. Where ever the two meet an overlap is required to be provided. The special skill of the designer is to cover all vulnerable areas in the armour.

Some examples of vulnerable areas which are hard to plug are the areas where wires, handles and pipes go from within the protective shell to outside. Some such areas would be where brake,

clutch, air-conditioner and other controls move from within the cabin to the engine compartment. Like wise, there are controls for opening the doors which cause vulnerable areas in the doors. The key point is that at no angle, should a hostile projectile be able to penetrate the protective shell.

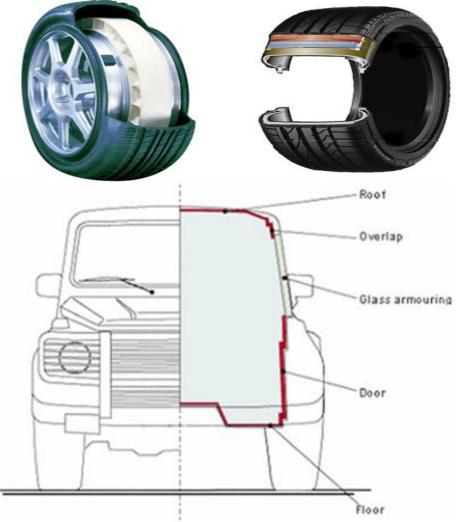
The transparent armour is not just thicker glass as is often perceived. The material is a composite constructed of multilayers.

The opaque armour (body metallic armour plate) is made from imported armour steel.

2/.Underbody Protection: For protection against explosions, the floor and roof are armoured. They are then layered with special materials. Each layer absorbs some energy and buckles inward leaving less stress for the next layer. Under test conditions, the vehicle has successfully driven away after simultaneous explosion of two grenades under the vehicle with no penetration in the cabin whatsoever.

<u>3/.Fuel Tank</u>: The fuel tank is completely wrapped in a defensive cocoon to thwart any attempt to puncture it. In the rare event of penetration the tank is filled with anti explosive materials to eliminate the possibility of underbody explosions in the fuel tank.

<u>4/.Run flat / Safety Roller:</u> The last layer of defense is against assault on the Tyres. We change the rims and Tyres to heavy duty products and fit a run flat insert. This insert will typically keep the vehicle running for a distance of 50 kms at a speed of 50 kmph in deflated conditions (due to bullet/stone hit/puncture). There are systems to warn of any drop in tyre pressure.



STANDARD EQUIPMENT

The vehicle will can be equipped with the following security equipment

- Dual battery system
- Air purifier and ionizer
- Cabin Toxic gases warning systems.

PROTECTION LEVELS AVAILABLE

The vehicle will be armoured to withstand multiple hits from the ammunitions specified including simultaneous explosion of two grenades beneath the vehicle and all lesser threats according to accepted ballistic specification standards. All specifications are fully tested and validated by Government of India ballistic testing laboratories..

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