

Article

## Mine proof vehicles cannot destroy guerilla war! People's war will destroy them!!

On June 13, 2005, Central Home Minister Shiv Raj Patil handed over to the central Para military forces the mine proof vehicles manufactured at the Ordinance factory in Medak inside the court yard of North Block (Office of the Home ministry). Other police and Para military officials participated in this along with the Home secretary Duggal. They announced that these mine proof vehicles will work very efficiently in facing the Maoist movement spreading and intensifying throughout the country as well as in the anti insurgency operations going on in Jammu and Kashmir and North East. By explaining about the various tests they have undergone, their efficiency and greatness, they said that these mine proof vehicles would work in the best manner in assuring speed movements of forces, protection of forces from mine attacks by separatists and launching counter attacks when attacked and started a programme of boosting the morale of military and police forces which was already lost in the mine warfare.

Even the press and media published and relayed stories on these mine proof vehicles with half knowledge exaggerations as if 'contributing their share'. Exactly at this time, they propagated on a large scale that in Dantewada district of Chattisgarh, when the vehicle in which the SP was traveling was blasted with a mine nothing happened to the SP or the other policemen traveling in it and that the reason for that was because it is a mine proof vehicle. There are no details as to how the Dantewada vehicle was blasted, how much of explosive was used, how much of the vehicle was damaged etc but the propaganda went on in a high pitch that nothing would happen even if Maoists blast mines. As a result, special police forces of various states placed orders to the Medak ordinance factory on a large scale. Even to fulfill the orders already placed, it would take some years for that factory. We should not forget that there is the tactics to privatize the Defence industries gradually by creating lot of demand by placing more orders and with the excuse that they are not able to produce them immediately, giving them off to private companies.

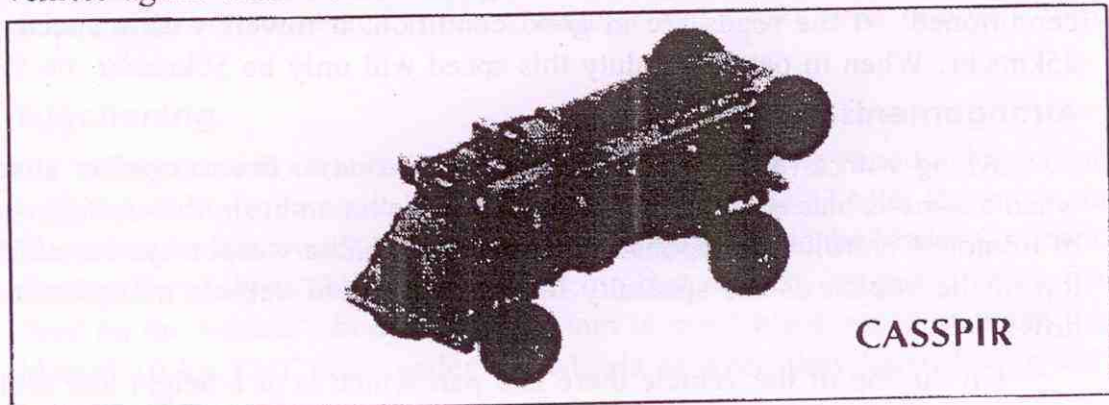
Mine proof vehicles are also part of armoured vehicles. Before going into the necessity of armoured vehicles, their development, their advantages



and limitations, let's know some details about the mine proof vehicles which are in propaganda.

From the end of 80s, we have eliminated hundreds of police and Para military forces in AP and DK using mines. The North East nationalities waging armed struggle since decades have been mainly doing attacks and ambushes, but the use of mines, though used seldom, increased gradually. Even in Jammu and Kashmir, the use of mines increased rapidly. In order to reduce the severe losses due to mines and keep up the morale of the police and Para military forces, the central government decided to manufacture an armoured vehicle which would be able to withstand mines in 1996-97 itself. The ordinance factory in Medak was given this responsibility. For immediate needs, mine proof vehicles called 'Casspir' were imported from South Africa. In 1998, Indian government bought nearly 90 'Casspir' mine proof vehicles and handed them over to armed forces in J&K. It bought 90 more 'Casspir' vehicles in 1999 and used them in J&K and in anti insurgency operations in North East. In 2000, order was placed for another 75 Casspirs from 'Vickers' company and they were delivered in 2001.

None of the Casspir mine proof vehicles the Indian government bought was new. All of them were old. They were bought at half price. Government got them repaired and used them. Though it says that since the budget would double if new ones were bought, political leaders and officials get fat amounts as commissions in buying old ones, getting them repaired and getting 'extra fittings' done for them. As soon as the mine is blasted, parts like axle, wheels, gear box etc of this 'Casspir' vehicle which became world famous as a mine proof vehicle, will be damaged. All these spare parts are kept in this vehicle or another vehicle and they fit these spare parts within an hour and drive the vehicle again. This means that this is not a mine proof vehicle in the real





sense.

The first model of the mine proof vehicle of Medak Ordinance factory was manufactured in 1999 itself. Firstly these vehicles were given to the AP police. In those days it was widely propagated in the AP press. Since there were many shortcomings in its make and functioning, it did not come into use on a wider scale. A pig was seated in the vehicle and it was tested by blasting it with 15 kg RDX. They confirmed that nothing happened to the pig. But it is notable that this test was conducted in the desert of Rajasthan. The effect of explosive in loose soil is less. Most importantly, except for the fact that this would protect them from mine blast, there were no weapon systems to counter attack nor was there any arrangement to fire while observing the surroundings from inside itself. Since there were also problems of lot of vibration and lot of noise from engine, it was decided that these problems should be solved and as a result the vehicle which is in use now was developed.

### **Body structure**

This vehicle which weighs more than 9 tonnes has an engine with the capacity of 160 horse power (hp). The bottom of the vehicle body is in the shape of 'V' with 55° angle. The body was bent in this manner so that the shock waves of a land mine will slip. In order to counter attack immediately after a mine blast, there are holes for firing on the sides of the vehicle. 'Bullet proof' glasses were fitted so that the glasses don't shatter due to the effect of the blast. A helper or commander can sit in the front seat along side the driver and ten persons can sit in the middle of the vehicle. This arrangement is for those vehicles built in the Leyland truck model. In the vehicles made in the jeep model of Mahindra & Mahindra, only six persons can travel.

Since they cannot open the windows as in an ordinary vehicle and they have to travel for hours together sitting in it, the whole vehicle was 'air conditioned'. If the roads are in good condition, it travels with a speed of 85kms/hr. When in patrolling duty this speed will only be 50kms/hr.

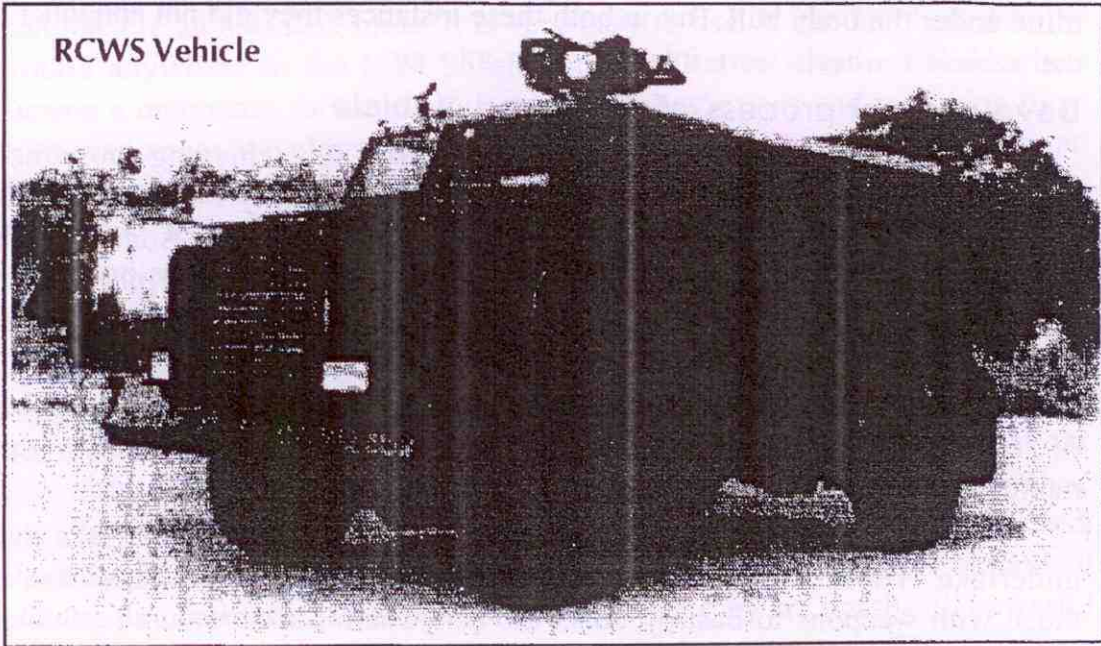
### **Arrangements to attack**

Along with arrangements for the troops inside to fire to counter attack when a mine is blasted or when they are stuck in an ambush, the arrangement of Remote Controlled Weapons Station (RCWS) and a weapon system on the top of the vehicle is the specialty of the mine proof vehicle manufactured now.

On the top of the vehicle there is a part which is at a height and looks



**RCWS Vehicle**



like the hump of a bull. This is called the turret. This moves around 360°. A 7.62 MAG and a 12.7 mm HMG (Heavy Machine Gun) are fitted on this.

7.62 MAG is like an ordinary machine gun. But 12.7 mm HMG is powerful. But this is useful only when the enemy soldiers are in weak covers or in vehicles than for firing on enemy soldiers. There is arrangement for these two machine guns to fire from inside itself using RCWS.

RCWS is a system which is fitted so that the three tasks of observation, targeting and firing are done effectively. In order to observe the surroundings either in day or at night, instruments like night vision goggles and periscopes are fitted on the top of the vehicle itself. There are arrangements from setting the targets to fixing different kinds of Opto-Electronic instruments in it. This total system is connected to the computer and works with remote control from inside.

### **Functioning**

They came to certain conclusions about the vehicle by conducting various tests but did not review it by facing attacks in the field. After the mine was blasted under Dantewada SP's vehicle, it was again sent to the Medak Ordnance factory for analysis. They are announcing that nothing happened when they fired on the vehicle's body with 7.62 mm in point blank range or when they blasted 10 kg TNT mine under the wheels or when they blasted 7 kg TNT



mine under the body hull. But in both these instances they did not announce if the vehicle's wheels were intact or flew into air.

### Development process of Armoured Vehicle

Till the First World War horses were used for achieving the utmost 'mobility' in war. The usage of horses increases mobility but there will be less protection for forces from enemy attacks while traveling. Added to this, they used barbed wires to block the speed of the horses. To solve this problem and to be protected from enemy attacks during travels and to facilitate counter attacks 'armoured vehicles were designed. There used to be cutters also in some models of armoured vehicles to cut the barbed wires. But the problem of 'trenches' was not yet solved. In the later years when vehicles were manufacture with chains instead of wheels, this problem was solved.

Armoured vehicles have different names according to the tasks they undertake. Those which mainly attack the enemy forces are called tanks, those with weapons to destroy tanks are called anti tank armoured vehicles, those which are used to transport troops are called armoured personnel vehicles and there are some for engineering purpose and some for logistics and so on. Though every armoured vehicle has one important task, all kinds of vehicles and firing capacities definitely.



cle which came into use during the First World War (including tanks) by the time of the Second World War. In urban warfare, it became impossible to imagine a war without armoured vehicles. It became common to use tanks as attacking armoured personnel vehicles for moving troops and as command armoured personnel vehicles were not used on their own but as part of the force. The built of these was similar to that of tanks - tracks instead of wheels. Though armoured vehicles with wheels were manufactured for needs of the urban warfare, they were not the main ones.

With the usage of tanks, the destructive capacity in war increased in an unprecedented manner. The number of tanks and their strengths and capacities used to influence the outcome of the war severely. So destroying tanks in war also came forth as an inevitable necessity. This development went on to anti tank missiles starting from anti tank mines. A tank which weighs some tonnes and has the most powerful weapons became shattered by an anti tank mine which weighed only a few kilos. It is very cheap to



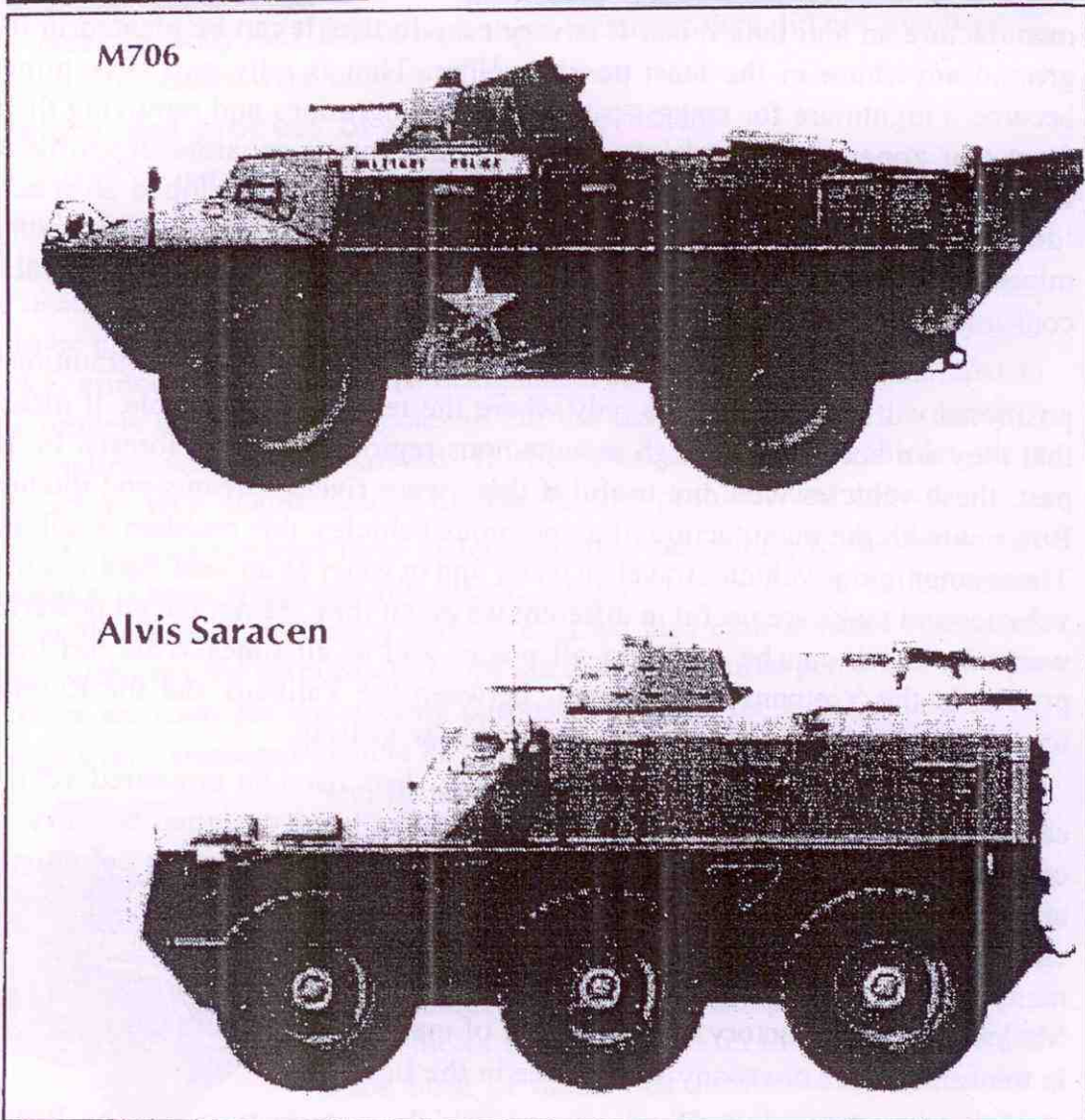
manufacture an anti tank mine. It is very easy to use. It can be planted in the ground anywhere in the least possible time. That is why anti tank mines became a nightmare for tanks. As a result, finding mines and removing them from war zones developed into a science and into a separate department. Even to this day, though science and technology have developed so much, 'de-mining' technology is still going on at a snail's pace. It means that finding mines and removing them is not only a very tiresome and hard task but also consumes a lot of time.

Whether tanks or armoured vehicles, they are useful only in traditional positional warfare and that too only where the terrain is favourable. It means that they are not useful in high mountainous regions and thick forests. In the past, these vehicles were not useful if there were rivers, streams and ditches. But now with the manufacture of amphibious vehicles, this problem is solved. These amphibious vehicles travel on water and in water as on land. So armoured vehicles and tanks are useful in different ways but they are not the all powerful weapons which can be useful in all places and at all times. This has been proved in the Vietnam War, the war between the Talibans and the Russian imperialist forces and now in the ongoing war in Iraq.

During Vietnam War, America imperialists used an armoured vehicle called M706 very extensively. This vehicle has been designed to carry on counter insurgency operations effectively, counter rapidly when communist armies ambush and achieve mobility and protection. This weighs ten tonnes, carries five people and has a 7.62 mm machine gun fixed on it. There are many similarities between this and the mine proof vehicle manufactured in the Medak Ordinance factory. Since the aim of manufacturing both these vehicles is the same, there are many similarities in the built too.

'Alvis Saracen' is the armoured vehicle manufactured by the British imperialists to suppress the revolutionary movement in Malaya. 2+10 people can travel in this vehicle which weighs 8 1/2 tonnes. There are two 7.62 mm machine guns fixed on top of this vehicle which can fire at 360°. Though this has been manufactured in 1950s itself, it runs with a speed of 72kms/hr with a 160 hp Rolls Royce engine. There are firing holes on the sides of the vehicles in order to counter attack when the forces traveling in it are attacked. To repress the revolt of IRA in Ireland and some more countries in Africa, this vehicle has been in use till 1980s. This vehicle also has similarities with the vehicle manufactured in Medak.





M706

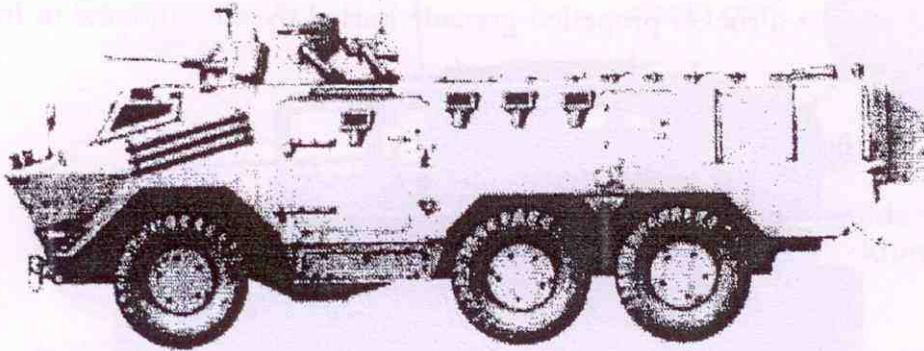
Alvis Saracen

South Africa manufactured an armoured vehicle called 'Ratel 20' in place of the British made 'Saracen'. This vehicle was manufactured with utmost mobility, protection, fire power according to the conditions in African continent and especially to suppress armed struggles going on in the vast areas of Namibia and Angola.

By observing history we can understand that imperialists have been manufacturing weapons and vehicles not only for the needs of Conventional warfare but also to suppress guerilla struggles and armed revolts according to the nature of those wars and warfare. The developments in science and

Wheeled Infantry Vehicles

Ratel 20



technology have been used to develop warfare from time to time. The weapon systems, electronic warfare instruments necessary for modern high tech war are used in manufacturing tanks and armoured vehicles. When we observe the Humvee and Bradley armoured vehicles of America which are considered the most modern armoured vehicles in the world, this becomes clearer.

America is using Humvee and Bradley armoured vehicles extensively. Of these, Humvee is light but Bradley is very heavy. It has modern weapon systems. Experts say that this would be the main armoured vehicle of American forces for another 25 years in the 21st century. These two kinds of vehicles are used extensively in Iraq at present.

**Humvee armoured vehicle**

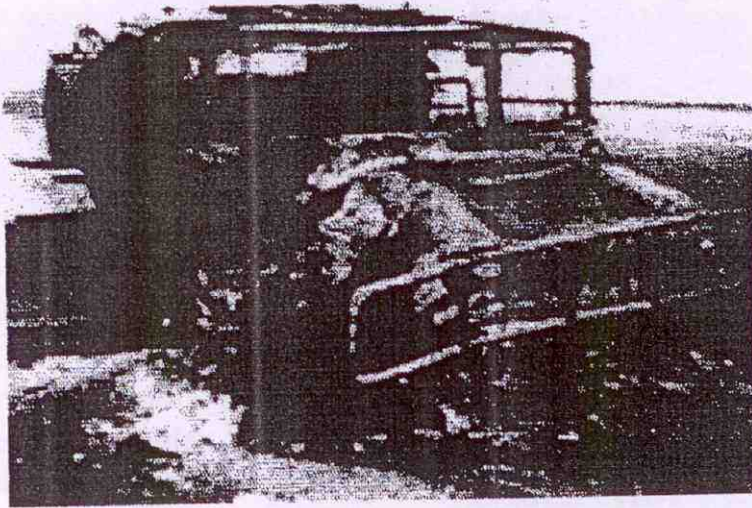
There are about 17 kinds of Humvee armoured vehicles in the army for different purposes. The one used for attacks weighs about 4 tonnes. This can

**Humvee armoured vehicle**



travel in all kinds of weather conditions and in different terrains. This travels on road with a speed of 88kms/hr and carries 4 soldiers.

Though Humvee is conducive to mobility and attacks, this is not much reliable regarding protection. Because recently Humvee was completely damaged by just a rocket propelled grenade hurled by the militants in Iraq.



Humvee destroyed by Iraq militants with RPG

### Bradley

In the American army, after the main war tank 'Abraham', Bradley armoured vehicle was the most popular. This weighs 24.73 tonnes and has an engine with 500 hp. The speed of the vehicle and other capabilities of the vehicle depend on the powerful engine and its weight ratio. In the case of Bradley, this ratio is highest. This is also an amphibious vehicle. Regarding weapon systems, this has various kinds of weapons ranging from machine guns and smoke bombs to missiles. This has a coordinated RCWS which can observe targets, aim and fire with remote control. It has thermal sensors, range finders, protection from NBC (nuclear, biological and chemical) attacks, a system to put out fires if the vehicle caught fire accidentally by automatically finding out. This also has a missile system which can recognize immediately anti tank missiles fired by enemy forces and render them ineffective. There are even jammers in it which can prevent the vehicle from being blown up by remote control.

But militants in Iraq have blasted this Bradley armoured vehicle having so many modern systems using just roadside bombs. They are using 'laser'



### Bradley Fighting Vehicle

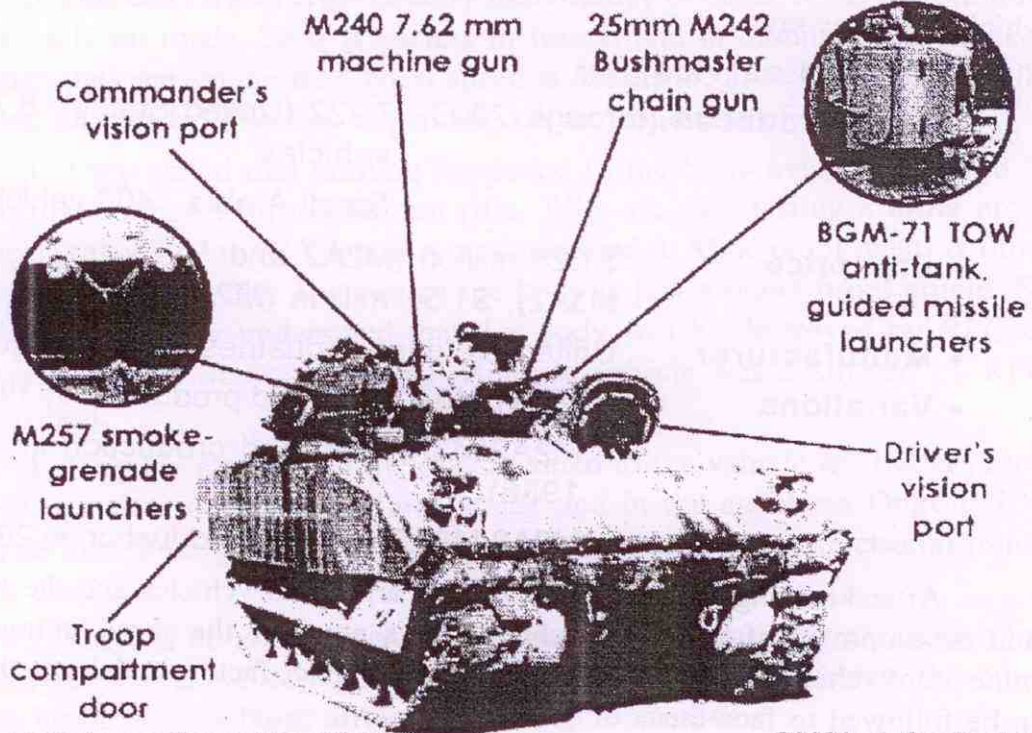


Image Source: Department of Defense

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### Vitals

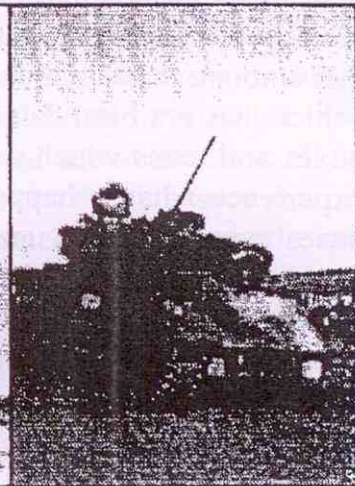
M2A1



M2A2



M2A3





remote controls instead of general remote controls. The jammers can stop the signal of general remote controls. But they are not able to stop the remotes which use laser rays.

- **Entered service** : 1981
- **Total produced** (through 2003): 7,122 (United States - 6,722 vehicles;  
Saudi Arabia - 400 vehicles)
- **Unit price** : \$1.25 million (M2A2 and M3A2); \$1.54 million (M2A3/M3A3)
- **Manufacturer** : United Defense Industries Incorporated.
- **Variations** :
  - M2A1/M3A1 (entered production in 1985)
  - M2A2/M3A2 (entered production in 1988)
  - M2A3/M3A3 (entered production in 2001)

After knowing the details of various armoured vehicles and the birth and development of armoured vehicles, let's now see the shortcomings of mine proof vehicles manufactured in Medak Ordinance factory and the methods to be followed to face them.

### **Mine proof vehicle - its shortcomings**

1. Firstly, it is an utter lie to call it a mine proof vehicle. There is no such thing as a mine proof vehicle which had been manufactured anywhere in the world till now. They can only say how much of RDX or how many kilos of TNT blast it can withstand. What does it mean? Doesn't it mean that it can be destroyed if explosive is used in larger quantity? Even when it is tested with that amount, those in the vehicle may not be killed but are they saying that the vehicle has not been damaged? They are using only those tyres, wheels, gear boxes and axles which are being used for ordinary trucks. We know in our experience what is happening to the tyres, wheels and axles of trucks and buses even when we use only 9 kg gelatin. This means that when we use explosive in the general ratio (in the ratio we are using now) those in it may not die but the vehicle will definitely be damaged, especially wheels, tyres, gear box etc. It is difficult for the vehicle to run again.

The name mine proof vehicle is being propagated only to boost the morale of forces which have lost it. This is only temporary tactics. This



morale will surely become shattered due to losses in the war.

2. This can't travel cross country like Bradley or tanks. It has to definitely travel only on roads. So it is useless in forests and in mountainous terrains. Though they are saying its highest speed is 80kms/hr, in reality it will hardly exceed 60 kms/hr. That too depending on the condition of the roads.

3. They stated that nothing happened to the body even when fired in point blank range with a 7.62 mm rifle. Why are they testing a mine proof vehicle with a 7.62 mm? There is a reason behind it. Mine proof metal is fitted only under the vehicle. The rest of the body is just a bullet proof shield. So anybody can easily understand that this body will be destroyed by RPG or rocket launchers. It was clear that Humvee vehicle was destroyed by RPG fire in Iraq.

4. They are saying that the glasses fitted to the vehicle are bullet proof. It became clear during the Alipiri attack and in the attack on Ongole SP's vehicle that these glasses flew away when land mines or directional mines were used.

5. There is no arrangement to find out and automatically extinguish fire in this vehicle. If we use cocktails or napalm as soon as we blast the mine, those inside will be burnt alive with no way to escape.

6. The mobility of the enemy forces will come down rapidly by using this vehicle. Already they are using high speed vehicles like Mahindra Nissan, DCM, Tata, Mitsubhishi (120 to 140 kms/hr). Now this speed will come down by half. This means mobility will come down considerably.

7. In AP, the Grey Hounds have modified Tata vans so that they can get down within seconds and attack, especially when the squad is in some shelter. They have fitted 5 to 6 doors on three sides so that the whole section inside the vehicle can jump down in a second. In this vehicle all have to get down through only one door. If this single door gets jammed due to the blast, all will be buried alive. In Alipiri and Ongole incidents doors on the side were jammed. In the Ongole incident not only was the door jammed but the vehicle itself caught fire. Since the door on the other side opened the SP and other personnel were saved.

8. The engine of this vehicle has only 160 hp capacity. The ratio of weight & H.P. of the vehicle is 17.5. Usually by international standards this is between 20 to 25. This is another weak point of the vehicle.

9. Another important aspect is the limitation to the number of persons



who can travel by it. Only one section force can travel by it. Nowadays not less than one platoon is needed to conduct raids anywhere. So at least 3 vehicles are needed if one platoon wants to travel. It becomes very hard to move troops on a large scale due to the economic burden and also non availability of vehicles.

10. They stated that they're spending 40 to 50 lakhs to buy one vehicle. It is impossible to make this vehicle available to all forces, especially to those taking part in operations by spending so much. So the few vehicles acquired will be used in raids where they have concrete information. Officials are facing criticism that they are issuing orders while sitting in cities. So they may also use it to go to the 'field' to issue orders to the forces. If this happens, the contradiction between the officers and soldiers will sharpen further.

11. The functioning of the machine guns or the RCWS on the top of the vehicles depends on factors such as - in which kind of place the blast occurred, to what extent the vehicle was damaged, in what position the vehicle tumbled etc. For e.g., if the vehicle falls to one side due to the blast, then the machine guns on the top cannot fire roaming 360°. That is if they had not already flown into air by then!

12. Already Andhra police are following the tactics of traveling secretly, without being seen by local people when they have concrete information. They are traveling in passenger buses and lorries along with people and using them as human shields. It is not possible to travel secretly in this vehicle. Anybody can easily recognize such a special vehicle. There will never be the problem of 'mistaken identity' to our forces sitting in ambush. We can recognize it by its sound itself.

13. Even if the vehicle suffers slight damage, it has to be definitely sent back to Medak factory. They can repair it only there. This means that if we can damage the vehicle even a little, we will be able to keep it out of service for a long time.

14. The vehicle is completely air conditioned. It will take a few hours for the vehicle to start from the head quarters and reach the field. Since they'll be in AC for such a long time, when they get down from the vehicle, they encounter a difference in temperature which affects their bodies in many ways. They will not be able to bear hot temperatures and hard labour and may be severely affected by sunstrokes. This will gradually affect the mental preparedness. They feel like staying inside the vehicle as long as possible. ⊕