MOTOR POOL MESSENGER

the official monthly newsletter of the
MILITARY TRANSPORT ASSOCIATION
visit us online at www.MTAofNJ.org

Issue:MAY 2021 Editor: Dave Steinert

In This Issue . . .

Old Idea. . .New Design!

ON THE COVER…

THEN- The Hafner Rotabuggy (formally known as the Malcolm Rotaplane) and as the "M.L. 10/42 Flying Jeep" was a British experimental aircraft that was essentially a Willys MB combined with a rotor kite, developed with the intention of producing a way of air-dropping off-road vehicles.

It was designed by Raoul Hafner of the Airborne Forces Experimental Establishment (AFEE) after their development of the Rotachute enjoyed some success.

The prototype was built by the R. Malcolm & Co. Ltd (also producer of the Malcolm hood) at White Waltham in 1942. Air Ministry specification 10/42 for a "Special Rotating Wing Glider" was used to identify the project.

Initial testing showed that a Willys MB could be dropped from heights up to 2.35 metres (7.7 ft) without damage to the vehicle. A 12.4 metres (40 ft 8.2 in) diameter rotor was attached, along with a tail fairing and fins, but no rudders. Two men were required to pilot the aircraft: one to drive it as an automobile, and one to pilot it in the air using a control column. Initially it was named the "Blitz Buggy", but that was soon dropped for the "Rotabuggy".

The first trial was conducted on 16 November 1943, with the unit being towed behind a Diamond T lorry, but the lorry could not get enough speed to put the Rotabuggy in the air. A more powerful vehicle, a supercharged 4.5-litre Bentley automobile, was used on 27 November to finally allow the machine to become airborne and in test could obtain glide speeds of 45 mph. Later tests were made towed behind an Armstrong-Whitworth Whitley bomber.

Although initial tests showed that the Rotabuggy was prone to severe vibration at speeds greater than 45 miles per hour (72 km/h), with improvements the Rotabuggy achieved a flight speed of 70 mph (113 km/h) on 1 February 1944. The last test flight occurred in September 1944, where the unit flew for 10 minutes at an altitude of 400 feet (121.9 m) and a speed of 65 mph (105 km/h), after being released by a Whitley bomber, and was described as "highly satisfactory". However, the introduction of gliders that could carry vehicles (such as the Waco Hadrian and Airspeed Horsa) made the Rotabuggy superfluous and further development was cancelled.

NOW- Though the Black Night Transformer is not yet in operation, the vehicle known as "the flying jeep," boasts the ability to reach a maximum speed of 70 miles per hour on land and fly as high as 10,000 feet. Advanced Tactics, which debuted this concept in 2012, envisions it as the ultimate tool for cargo resupply missions. But this transformer does more than drive and fly: The bottom can accommodate a boat hull in place of the drivetrain.

The Black Knight Transformer's patented technology is a first-of-its-kind in vertical takeoff and landing aircraft. The vehicle design is highly modular for a wide variety of payloads including a ground drive-train unit that allows it drive like an automobile.

Configuration

The Advanced Tactics Black Knight Transformer is a multi-engine rotorcraft drawing inspiration from small electric "multicopters" that have become popular in the last decade. Unlike the small electric versions, the Black Knight is a full scale aircraft with a significant payload and range capability. The vehicle also has a fully independent ground drivetrain that provides it with off-road driving capabilities so that it can reach any destination, whether a suitable landing zone is available or not.

The Black Knight Transformer is the world's first roadable vertical takeoff and landing vehicle. This capability provides it with a new set of missions that could not previously be performed. As a casualty evacuation platform, the vehicle can land in a safe landing zone away from enemy fire and then drive to a wounded soldier so that he does not have to be carried, reducing danger to other soldiers.

ATTENTION MEMBERS!

THE THURSDAY MAY 6th MEETING WILL LIKELY (WEATHER PERMITTING) BE HELD AT THE ROCKAWAY BOROUGH FIREMAN'S FIELD

Food at 6:00PM…Meeting starts at 7:00PM

MTA Meeting Minutes

Thursday, April 1st 2021 – ZOOM Meeting

Submitted by Anita Roberts, Recording Secretary

The 4th virtual ZOOM meeting of the MTA was called to order and opened with the Pledge of Allegiance and a Moment of Silence. 24 members were on the call. President **Al Mellini** asked for a motion to approve the March 4, 2021 Minutes. **Gary Schultz** made the motion to approve the minutes and **Andy Salzano** seconded. *Motion carried!*

As usual, Al dressed for the occasion setting a good example for the club as many members were now wearing Club gear to attend the meeting. *For some reason, the wearing of hats was missing from the Zoom meeting*

Al gave a report on the state of the President. 8 weeks on crutches, 4 weeks more for recovery and then physical therapy. Feeling better every day.

The financial report was presented by Al as prepared by MTA Club Treasurer **Ginnie McGevitt**:

Financial Report

Mar 31, 2021	
Beginning Balance:	$45,795.50
Income:	1,130.20
Expenditures:	- 914.74
Ending Balance:	$46,011.36

Al stated that was a good balance for the club to have, it's healthy.

President's Report:

Al asked for a vote on the By-Law change that was published in the Newsletter. *Passed unanimously*. **THE THURSDAY MAY 6th MEETING WILL LIKELY (WEATHER PERMITTING) BE HELD AT THE ROCKAWAY BOROUGH FIREMAN'S FIELD**. The Legion's Covid restrictions are preventing us from meeting there. Al mentioned he has swap meet cards for anyone attending events elsewhere.

Events

Gary Schultz gave a report on the upcoming 2021 Spring Trail Ride on Saturday, April 24. We have a low signup at present and he encouraged members to attend. Breakfast and lunch will be sponsored by the Club. Email Gary at garyrschultz@gmail.com to sign up. Gary also mentioned a mid may trip to the Military Museum of NJ. He asked for a $500 donation which was approved by the members at the meeting. **Tim Swanick** said we are confirmed for our June 24 picnic at Fireman's field and have access to Fireman's Field May through October of 2021 for our monthly meetings.

MTA 2021 Officers and Key Committee Heads

President- Al Mellini
Tel: 973-723-2166 email: albert.mellini@gmail.com

Vice President- John Sobotka
Tel: 862-266-6284 email: jjsobotka@hotmail.com

Recording Secretary- Anita Roberts
Tel: email: akroberts356@gmail.com

Treasurer -Ginnie McDevitt
Tel: 845-987-7896 email:

Sergeant at Arms-Andrew Salzano
Tel: 973-831-0920

Membership Chairman- Fred Schlesinger
Tel:908-617-5066 email: fred@mtaofnj.us

Newsletter Editor- Dave Steinert
Tel: 973-347-9091 email: dsteinert@mtaofnj.org.

Parade Coordinator- Ken Gardner
Tel: 973-714-2271 email: mtanjevents@gmail.com

Swap Meet Chairman- Bill Murphy
Tel: 973-803-9725 email: bmurph411@gmail.com

Webmaster- Rudy Garbely
Tel: 973-800-9251 email:rgarbely@gmail.com

Quartermaster and MTA Archives Custodian
Gary Schultz
Tel: 973-207-8955 email:garyrschultz@gmail.com

Railroad Operation Battalion (RROB)

Carolyn Hoffman gave a report on OTT and their efforts in Port Jervis. **John Sobotka** gave a report on the GP9 engine that carries the MTA Logo and the NJ Vets insignia. The engine has been sold but still carries our logo and a tribute to Viet Nam Vets of the Eastern Shore #1823. Al sent photos of the engine to the list. The Club (RROB) plans to donate its switcher engine currently residing at the M&E yard in Morristown to OCC on April 11.

Parades

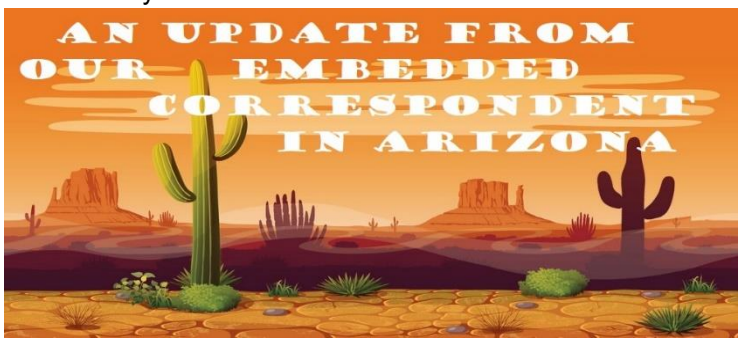
Ken Gardner informed the club that Secaucus, Midland Park and Wyckoff have scheduled Memorial Day parades. Nutley and Morris Plains have cancelled, and we have not heard back from New Milford, W. Caldwell, E. Hanover, or Madison. Please sign up by emailing Ken at kenneth.gardner@yahoo.com. *THE CLUB NEEDS PARADE INCOME!*

Swap Meet

Al is in contact with the Sussex Fairgrounds to discuss Covid restrictions with the FG Manager. The FG Manager has informed Al that they are following the Governor's guidelines for attendance. Currently that limits 200 people max at the fairgrounds and 25 max in the Richards Building. The FG

Manager did say he expects the limits to be increased before our event in October. But it is touch and go!!! **Gary Schultz** has started discussions with the Forest Service for a helicopter and with Picatinny Arsenal for trucks at the Meet. **Frank Shane** will be planning a state police helicopter.
Pat Tipton (with an assist from **Pat Dolan**) presented an excellent presentation on the weasel he is restoring that included footage of several MTA members assisting in the process. *THANK YOU TO BOTH PATS!*

Motion to adjourn the meeting was made by **Gary Schultz**, seconded by **Pat Dolan**. *Motion carried!*



Your embedded Southwestern Correspondent has suffered a collapse of willpower which has prevented him from purchasing a jeep for over 30 years. However, my will has failed me and I now own a 1952 M38 ¼-ton utility truck.

I had to go to CT to find a reasonably solid citizen as AZ is knee deep in specimens that have been thoroughly red necked to the point of unrecognizability— **Phil Francis**

The Evolution of Weaponry in 12th Army Group from D-Day to the Battle of the Bulge Part I

By Jim Swanick

The latter years of the Second World War saw the nations of the world field more powerful and innovative weapons than ever before. In its final months the war featured the combat employment of jet fighters, the first crude ballistic missiles, and nuclear weapons. These technological leaps were unique among most improvements made to the weapons systems of each combatant, as they represented a gamble and a war's worth of experience, investment, and development. Far more common was the refinement and even replacement of entire types of small arms, armored fighting vehicles, aircraft, and ships over the course of the war. Furthermore, soldiers in combat bore perceptions of the weapons they carried and the tanks they operated that influenced how they utilized or modified the weapons systems they were equipped with. Thus, in order to gain a better idea of how the US Army would fight the Battle of the Bulge it is useful to examine how its equipment changed from June to December 1944, and how and why its soldiers modified their weapons and armor during that same time period.

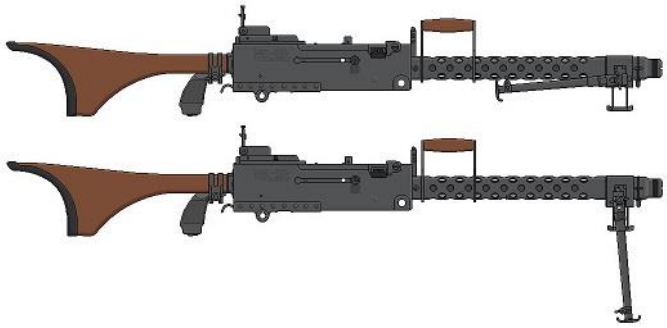
In general, the rifle squad liked the weapons it carried. The M1 Garand rifle and BAR (Browning Automatic Rifle) were both highly regarded, and although the latter was no MG42 (German) it could be highly effective in the hands of a skillful gunner. Most rifle squads sought to satiate their desire for more firepower by obtaining a second or even a third BAR; armored infantrymen, who spent much of their time fighting dismounted away from their machine guns, requested it and rifle grenades in order to bolster their mobile firepower. Paratroopers, who were not issued the weapon due to the inclusion of a light machine gun in every rifle squad, also desired the BAR so that they possessed greater mobile firepower immediately upon landing.

A soldier of the 167th Signal Photographic Company shows off his M3 "Grease Gun," the ammunition pouch for which he has foregone by taping his magazines together. This expedient was common among troops issued the M3.

The Thompson submachine gun enjoyed a good reputation thanks to its stopping power and range, but the M3 submachine gun evoked much more mixed emotions in its users as the primary wartime production model contained several flaws in terms of durability and reliability. Opinions on the M1 carbine also varied, as it lacked the range and stopping power of the M1 rifle, but it found a niche in the rifle squad as a good weapon for use in close combat. The light machine gun was criticized for its low rate of fire and lack of quick-change barrels but was otherwise considered to be reliable and durable, and the heavy machine gun was well-regarded for its ability to provide sustained fire over long intervals. Both weapons lacked mobility, however, which led to the issue of the M1919A6 light machine gun at the end of 1944. The M1919A6 was a modified version of the M1919A4, the standard light machine gun, and it featured a bipod, carry handle, and

shoulder stock. The A6 had been conceived early in the war for use by airborne units but combat experience against superior German firepower led to it being given to regular infantry divisions in limited numbers. Though certainly more mobile than the M1919A4, it was prone to overheating and remained bulky, weighing over 30 pounds. The bazooka was found to be effective at destroying enemy tanks and proved itself ubiquitous as an all-purpose bunker, house, and emplacement buster, while the rifle grenade was found to be equally useful in attacking both infantry and armor. Riflemen were also very fond of white phosphorus grenades, the incendiary properties of which were prized in digging entrenched enemy soldiers out of their emplacements.

Battle-wise: Using a hole in a wall to limit his exposure to enemy fire a GI of the 30th Division fires his M1919A6 light machine gun at enemy troops near Kohlscheid, Germany, 16 October 1944.



Most battlefield modifications made to weapons were simple, such as taping magazines together for rapid reloading during firefights, using heavy machine guns with light machine gun tripods in an effort to improve mobility, or discarding the weighty bipod and carry handle of the BAR. Others were more complex. Elements of the 2d Division welded BAR bipods or attached steel spikes to the trunnions of their light machine guns and screwed makeshift stocks to the pistol grips to convert their M1919A4's to A6's. One enterprising infantry regiment devised a method by which they projected 60mm mortar shells with their grenade launchers. The 30th Division's 120th Infantry Regiment found that with some handy electrical work they could power their bazookas with flashlight batteries. Tankers were to prove the most prolific battlefield engineers of all. Tank destroyer crewmen found that with some minor metalwork they could rig their .50 caliber machine guns, mounted for anti-aircraft protection, for use against infantry, and constant threats from German handheld antitank weapons such as the panzerfaust inspired both tank and tank destroyer crews to experiment with applique armor, usually in the form of sandbags. The effectiveness of this expedient remains unquantified and therefore scientifically unknown- but the practice became widespread, which provides insight into the contemporary opinion of the crews. Environmental factors spurred development as well, as track-widening grousers were conceived to improve the flotation of tanks and tank destroyers in the mud, and tankers began carrying logs for use as matting over wet or muddy ground.

"Old Reliables" of the 9th Division attach corduroy matting to the front of a tank of the 746th Tank Battalion in preparation for an attack on Merode, 10 December 1944. The matting was used to cross particularly muddy patches of ground.

The armaments of the rifle squad remained more or less unchanged at the end of 1944. The same cannot be said for tank and tank destroyer battalions, however. Upon landing in France, American armored fighting vehicles quickly found themselves duking it out not only with the ubiquitous German StuG and Mark IV but also the vaunted Mark V. As early as 10 July tests were conducted against captured Panthers to find out whether British and American weapons were up to the task of defeating it in a stand-up fight; the results were disheartening. More extensive tests were done in August that confirmed the results of the first- that American antitank weapons were badly outclassed by the Mark V's superior frontal armor. It wasn't *all* bad- the sides, rear, mantlet, and

Old and New: The M10 Tank Destroyer, mounting a 3-inch gun, at left; the M36 Tank Destroyer, mounting a 90mm gun, at right. Delivery of the latter was expedited following exposure to the Mark V "Panther" tank

portions of the turret were all vulnerable to American fire to varying degrees- but as the SHAEF G-3 astutely noted in an

11 July report to George Marshall's office, the *bocage* in France allowed American armor to defeat German tanks by maneuver. This would not be the case once the Allies broke out of Normandy and into open country, where the characteristics of the battlefield would favor not only the Mark V, which had been engineered for long-range combat on the Russian steppes, but also the high-velocity guns mounted by the StuG and Mark IV. The concerns generated by the initiation of combat against the Mark V resulted in delivery of the M36 tank destroyer being expedited, with the first examples arriving in September. The M36 mounted a 90mm gun on the hull of the M10 or M4 and was capable of engaging the Panther at long range, but even here there was a caveat- the standard 90mm AP round had trouble reliably penetrating the front of the Mark V past 500 yards.

The Difference a Gun Makes: 2d Armored Division tankers compare the 75mm shell, left, against the new 76mm shell, right, in front of a new M4A3E8 Sherman tank.

The M36 solved only part of the problem of defeating the Mark V. The fact of the matter was that the US Army was fielding two primary types of armored fighting vehicles, and the other, the tank, constituted the bulk of armor on the battlefield.

By late summer of 1944 a new M4 had arrived on the Continent. The M4A3 represented the second generation of the Sherman tank, and it featured several upgrades over the M4 and M4A1 that American formations had been using since 1942. Probably the most significant of these in terms of protection was the advent of a wet ammunition stowage system, which moved the ammo storage from unarmored bins above the tracks down into the floor of the tank beneath the turret basket. It placed the ammunition into lightly armored bins surrounded by water or antifreeze, and this measure, combined with its relocation the floor where the mechanical components of the tank protected it, reduced the percentage of brew-ups from 60-80% to 10-15%. The M4A3 carried three different types of main guns: the traditional 75, a 105mm howitzer, and the 76mm gun left behind by the armored divisions prior to the invasion of Normandy.

The 76mm gun, which was also mounted onto the M4A1 beginning in 1944, suddenly came into great demand following initial skirmishes with the Panther in early July. Any illusions that the 76 was a wonder weapon were quickly dispelled, however. Although testing against captured Mark V's in July and August showed that it was better than the traditional 75, its performance remained quite disappointing.

Furthermore, its arrival was not met with universal gusto; the 76mm HE round lacked the same punch as that for the 75, and the 76 lacked any kind of white phosphorus shell whatsoever, which by now had proven itself useful in forcing green German tank crews to abandon their tanks in a panic. Many armored formations found these characteristics problematic, as enemy armored fighting vehicles accounted for only 14% of their targets, while antitank guns, artillery pieces, buildings, fortifications, and enemy infantry constituted 68%.

Some units resisted accepting the up-gunned M4 even after coming into contact with sizeable numbers of Mark V's, citing the superior infantry support characteristics of the 75mm as their reasoning. These complaints proved temporary, however, and by 1 December Sherman tanks armed with 76mm guns constituted 30% of all M4's in 12th Army Group. In order to boost the performance of the 76mm, 3-inch, and 90mm guns mounted by the M4, M10, M18, and M36, work on developing high-velocity armor-piercing (HVAP) ammunition was accelerated, with the first production batches arriving in September in 76mm and 3-inch. Although these shells nearly doubled the penetrating power of their respective weapons, they were hard to come by as their production was limited by the availability of tungsten- therefore, most fighting would be done using standard AP ammunition.

The modernization undergone by the Field Artillery Branch at the beginning of the war and the quality of the pieces it had produced meant that little had changed in terms of armament by the Battle of the Bulge. The old Schneider howitzers, which had staffed the general support battalion of the infantry division in 1942 and 1943, were gone, replaced by the new M1's. By the time of the landings in Normandy all standard pieces were in action, from the 105mm howitzer to the 8-inch gun; the only true obsolete weapons in service were 155mm GPF guns that had been strapped to the chassis of the M3 medium tank, refurbished with M4 medium tank components, and sent to Europe, where they provided able service in cracking the Siegfried Line. Experimental 4.5-inch rockets were employed beginning in the summer of 1944 as Brest was under siege and would remain in use for the rest of the war. Thus, with the exception of accepting new weapons for testing and the usage of the 155mm M12 GMC the branch had nothing major to report in terms of changes in armament. The same could not be said for its prime movers, however. Three high-speed tractors were developed during the war to move artillery. The M4 HST was designed for use with heavy artillery, the M5 for use with light and medium artillery, and the M6 for use with super heavy artillery such as the 240mm howitzer and 8-inch

A 155mm M12 GMC employs direct fire against enemy positions near Gürzenich. The gun is the obsolete GPF model, granted new life as a self-propelled piece.

gun. None entered production until at least 1943, with manufacture of the M6 lagging to 1944, and as a result three expedient prime movers were developed and adopted. The M33 was a conversion of an M31 tank recovery vehicle, itself based on the M3 medium tank- the M33 was essentially a turretless M3 medium tank. A second initiative to adapt TRV's led to the adoption of the M34, but with 24 units converted this run was insignificant. The final and most common expedient was the M35, a conversion of the chassis of the M10A1 tank destroyer, and these came to the ETO with the 240mm howitzer battalions in 1944. The M6 would not arrive until the spring of 1945.

An M33 prime mover pulls a 240mm howitzer in Italy in January 1944. The M33 was a stopgap measure until the M6 HST arrived

There was a single "wonder weapon" that the US Army did possess on the eve of the Battle of the Bulge. The proximity fuze dramatically enhanced the effectiveness of artillery fire on soft targets in the open, and although it had been authorized for use beginning in October it had not yet been utilized. Apart from this munition, however, 12th Army Group would fight the Battle of the Bulge with the same weapons it had been using for the past six months.

An M35 prime mover, essentially a turretless M10 tank destroyer, drags an 8-inch gun. The M35 was the most common improvised prime mover used until the M6 HST could come into service.

For more information on the U.S. M35 Prime Mover go to:
https://www.tanks-encyclopedia.com/ww2/US/M35_Prime_Mover.php

CLASSIFIEDs

To add or remove listings from the Classifieds, please email Dave Steinert at dsteinert@mtaofnj.org ***or call 973-347-9091.***

For Sale: 1971 M35A2 W/OW, solid body, original canvas top in very good condition. Comes with 11 brand new NDCC OZ tires and MANY brand new parts. Buy to complete or to use as parts. Asking $2000.00. Clean transferable New York registration, in New Hampton N. Y.. Please contact Dave at, dmz0462@gmail.com or text 845-490-1082

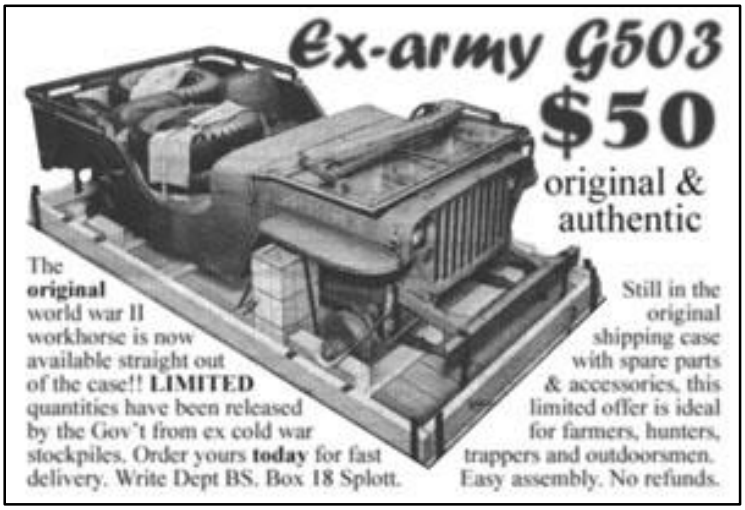
For Sale: Two 1952 Dodge M37s. One restored and in good condition, $4500. Another 1952 M37 unrestored, $3200. I also have many Jeep and M37 parts for sale, call Tom Weaver @ 973-627-9448.

For Sale - M725 $3,800.00, Ammo trailer $350, 1957 DAF 1- ton troop carrier. Rare, not many of these around $6,000, M109A3-shop van with benches and shelves. Good shape $4,500. Call or text Jude Meehan 732-433-3359.

Parts for Sale- 230 CI M725 motor, ran when pulled, burns oil $200, M725 litter racks-best offer, M725 Rear doors, some dents, no rust $200 for the pair, M715 windshield frame, minor surface rust $150, NOS in packing Southwind heater for M725 possible M-43 best offer, M37 windshield frame outer only $75, M725-M715 rims with lock rings –make offer. Many more items available, too many to list. Call for more information. Call Matt Ziegler, cell 973-445-3890, email : Mattrziegler@gmail.com

For Sale: 1964 Ford M151, current Odometer: 34252. Currently registered and inspected in New York State. Comes with Army radio, mounted machine gun (disabled firearm) w/ mount and cartridges, trailer, plastics to go over vehicle (no photo included, but available at request) as well as two large boxes of extra parts. Vehicle has always been garage kept. Buyer is responsible for pick-up or to arrange for shipment for out of town sales. This vehicle has not been cut. Asking $18,000. Located in Pine Island, NY. Please contact Lodzia - 845-258-4493 or Vince - 845-728-9191.

For Sale: Replica 81mm mortar. M1 tube and bi-pod. M4 sight. Has incorrect M23A1 two-piece base (Nam era?). The tube is original with 1 pin cross welded and a dummy cup welded on. Comes with one practice round (inert) in a newer tared tube. And a wooden ammo crate. Asking $3000 . Will take a M35a2 ring mount in trade. Kirk Stinson 862-209-0933.



Military Transport Association
P.O. Box 391
Budd Lake, NJ 07828

THE THURSDAY MAY 6th MEETING WILL LIKELY (WEATHER PERMITTING) BE HELD AT THE ROCKAWAY BOROUGH FIREMAN'S FIELD

IF YOU HAVE FORGOTTEN TO PAY YOUR MEMBERSHIP DUES, PLEASE DO SO OR THIS WII BE YOUR LAST NEWSLETTER!

IF YOU ARE TAKEN OFF THE MEMBERSHIP LIST, THE MEMBERSHIP CHAIRMAN CAN EASILY REINSTATE YOU UPON RECEIPT OF YOUR MEMBERSHIP DUES. DON'T MISS OUT ON OUR EVENT—SEND IN YOUR CHECK!

The Military Transport Association is dedicated to the education and preservation of historic to present military vehicles. Members enjoy restoring, displaying, and operating military vehicles of all types, from bicycles to tanks.

But trucks and Jeeps aren't all we do! Join today and participate with us at our annual Toys for Tots train ride and toy drive, help at our annual Swap Meet at the Sussex County Fairgrounds, or attend our special events for veterans. Our lively, informative monthly meetings are held in Whippany, NJ.

You do not have to own a military vehicle to be part of this exciting and active hobby – you just need a desire to do your part in keeping our military history alive. All you need to join the MTA is to fill out the the form below, include your dues payment, and mail it to the address below. Alternately, you can give your form and dues to any MTA member you meet at any of our events.

for more information, visit our website at www.MTAofNJ.org

Name: _____

Street: _____

City: _____ State: _____ ZIP: _____

Phone: (_____) _____-_____ *(cell preferred)*

Email: _____

MTA Membership Level: ☐ Single ($30) ☐ Family ($35)

Are you a member of MVPA? ☐ Yes ☐ No

Military vehicles owned: _____

_____

Return form with $____ annual dues and $____ donation to:

Military Transport Association, Inc.
P.O. Box 391
Budd Lake, NJ 07828

Contributions, gifts, or membership dues made or paid to the Military Transport Association, a 501(c)(4) organization, are non-refundable or transferable, and are NOT deductible as charitable contributions for federal tax purposes.