



MMoT POST EXCHANGE THE OFFICAL NEWSLETTER OF THE MILITARY MUSEUM OF TEXAS

Volume 4, Issue 4

August 2005

General News

Well its past time to renew your membership. Dues are the same great price they were last year, \$40. Please make your checks payable to The Military Museum of Texas, and mail them to:

The Military Museum of Texas
8611 Wallisville Road.
HOUSTON, TEXAS 77069-1313

These dues were due by July 31, 2005. Thanks.

Welcome New Members:

Tim Miner
Brent Backman
David Yancy
Joseph A. Kovalchik

Calendar of Events

Aug 4th-6th MVPA Convention
October 8th Military Show Ft Worth
November 11, 2005 Vet's Day
November 19? Tomball Parade

Ride of the Month

The M422 Mighty Mite, introduced in 1959, was the result of a pilot model test made at the end of the WW II. The vehicle was conceived in response to the need for a truck light enough to be flown to forward positions by helicopter and manhandled if necessary. The initial design of the M422 was made by Ben F. Gregory, an automotive engineer. Gregory's first pilot model did well enough in tests in 1946 to lead to the formation of a company to develop the vehicle, and the Mid-American Research Corporation Incorporated (MARCO) in Wheatland, Pennsylvania to accomplish the task.

The Mighty Mite prototype in 1950 had curb weight, including fuel, of only 1500 pounds, and could pull a payload of two men plus a cargo of 500 pounds. Successful demonstrations to the U.S. Marine Corps led to the awarding of a contract for ten vehicles. As previously mentioned the Marine Corps required a



light tactical vehicle for its projected 'Vertical Envelopment' strategy - vertical envelopment requires combat forces to be moved at high speed into forward positions. The Mighty Mite seemed to be just what the U.S. Marine Corps, indeed, the entire military had been looking for.

It had a number of unique features; center-point steering, individual wheel suspension with front leading arms and rear trailing arms, inboard brakes mounted on the differential case, and lightweight aluminum construction.

When MARCO studied the history of the Jeep, one name which kept cropping up in their research was Harold Crist, and the company decided that it needed him for the project. Crist was not to be found easily. The company's efforts to locate him bore no fruit until after the publication on July 27th, 1952 by the 'Erie Times', of a Jeep story in which Crist was said to be living locally.

The Vice President of MARCO Clarence L. Summers, read the 'Erie Times' story and at once took steps to contact Crist. Once found, Crist had the project described to him and, on 1 January 1953, he joined MARCO as the Mighty Mite's project manager. Crist brought with him three of the men who had worked on the original Bantam; Mr. Hempfling, Mr. Turner, and Frank McMillan.

THE M422 MIGHTY MITE

Let's look at a brief description and introduction of the M422 Mighty Mite, 1/4 ton, 4x4, lightweight tactical truck.

The Mighty Mite was designed and developed by American Motors Corporation for the use by the United States Marine Corps as a tactical vehicle for support of their 'Vertical Envelopment' operations. It was planned to be airlifted by helicopter to forward positions.

A basic design requirement was to develop a compact, lightweight, rugged vehicle. Other 1/4 ton military vehicles either in design or in the supply system were not deemed acceptable for these operations.

These goals were accomplished without compromising the ability to perform other required functions of a 1/4 ton, 4x4, tactical vehicle. The curb weight of the vehicle, including fuel, was 1750 pounds, and had an overall length of 107 inches, an overall width of 60 inches and a reducible height of 45 inches. The shipping cube was 171 cubic feet. The M422 satisfactorily performed all required military tests in respect to mobility, carrying capacity and durability.

It was to be basically a personnel-cargo vehicle that included towing the M416B1 model 1/4 ton cargo trailer. It could carry four personnel or two personnel plus 500 pounds, and in cross country operations was capable of pulling a trailer loaded with 1000 pounds. The Mighty Mite could be adapted for mounting the 106 mm recoilless rifle. Two litters could also be installed and it sometimes was used for command radio installation. All components were completely waterproofed and, with little prior preparation, could ford completely submerged.

The Mighty Mite was powered by a newly designed aluminum V-4 air-cooled engine with an output of 55 horsepower at 3600 rpm. The power plant was extensively tested not only in the field but had been qualified as well by the army test facility at Aberdeen Proving Grounds and the navy test facility at Annapolis, Maryland for performance and durability. Tests and evaluation of the Mighty Mite proceeded at Quantico, Virginia.

The Marine Corps wished to bring the vehicle into production without delay but an item in military regulations prevented this happening. The test vehicles had Porsche 4-cylinder engines. Military regulations, while allowing the use of imported motors for test vehicles, for obvious reasons did not extend this permission to production models. The unfortunate and slightly embarrassing fact was that there had been no satisfactory American production engine available. MARCO made contacts within the vehicle and engine industry to see if any company or group had a project going to produce an engine with the characteristics required for the Mighty Mite. They were lucky.

At American Motors Corporation an engine existed in prototype stage, a V-4 air cooled aluminum engine capable of producing about 50 HP. This engine seemed to be approaching the answer to the power problem, and it satisfied the Marine Corps' requirement. MARCO and American Motors found it convenient to reach an agreement which involved the transfer of the Mighty Mite's manufacture to American Motors, which proceeded with the development of the vehicle.

One of the first modifications was the enlargement of the engine from 95 to 104 cubic inches (about 1700cc) for extra horsepower,

after which it gave 54 HP at 3600 rpm. The Marine Corps proposed modifications including changing the tubular frame construction to the conventional type frame construction. This change would lessen the frame's weight and reduce the corrosive effects of the exhaust gases and also "the vehicle was increased to an overall length of 107 inches on a 65 inch wheel base. This increase in length, plus other changes, increased the curb weight to 1700 pounds which was still considered to be within the limits of the requirements of the Marine Corps."

Development of the vehicle continued from November 1954 to November 1957. Negotiations with the military led, on 30 April 1958, to a contract which called for the production of fifty vehicles. The first requirement, however, was seven prototype vehicles for testing by the US Army and the US Marine Corps. Conditional, upon satisfactory performance in the tests, a further 243 would be purchased.

Tests on the first seven were completed in December 1959.

Deficiencies were corrected and production of the remaining 243 vehicles began. Early in the process of filling the order a contract for 1000 more M422s were issued. In the middle of the 1000 vehicle order a change proposed that the M422s length should be increased. Again the weight issue emerged, as any increase in length inevitably involved also an increase in weight. The vehicle's length went up six inches but by careful reworking the weight increase was held to thirty pounds and was now designated the M422A1. Two contracts, which between them brought production up to 3922 vehicles, followed the length modification. The final unit of the order was produced in December 1962.

The Mighty Mite (standard models, M422 and M422A1) looks like an abbreviated Jeep. Both models had two non adjustable bucket seats, a downfolding and demountable windshield, a hinged tailgate and independent suspension with longitudinal leaf springs to reduce the roll-over danger. Lifting hooks or clevises are mounted on the front and rear bumpers.

Article courtesy of 'Army Motors' magazine, issue 91, Spring 2000.

Someone needs to Belly up to the Bar and get one of these, we could park it next to the Huey.

Corporate Sponsorship

By Buddy West, Corp Development

A Thank You to our latest corporate sponsor.

Recently we discovered that the tank was leaking even more fuel than normal. It turns out that we had a damaged fuel injector, and I was deeply concerned about the cost of repairing such a unique part. It was beginning to appear that the tank would not be ready for the Independence Day activities downtown.

In response to a perhaps wistful e-mail, Ken Smith of AMBAC International sent me a message. He let me know that they were, and even better are, the manufacturer of the part. Ken and AMBAC

graciously offered to donate the restoration of the fuel injector, and would like to remain available should we have any more problems with the tank's fuel system. An injector was received in due course, and was installed in the tank. Thanks to AMBAC's support, the M60A3 was ready to participate in the Houston July 4th Celebration again this year. Thank you again AMBAC International and especially thank you Ken Smith for stepping outside of the box and helping us out.

Oak Ridge ROTC a God Send to the Museum **By Buddy West Corp Development**

The Oak Ridge Air Force Junior ROTC program has again volunteered to help us out this school year. They would like to set up one Saturday each of their nine-week grading periods to assist around the facility. Fifteen cadets came out on May 7, to pitch in on a myriad of projects. Joe supervised several cadets in preparing and painting the front gate and cleaning up the front of our property. Frank Vera took charge of the work on the VTR. Buddy West coordinated work on his M151 and on general facility upkeep. It is not all work. The cadets get to spend some time running engines to charge batteries, exploring the vehicles, and we try to arrange a few rides. They also get to interact with us and learn a few bad habits that may **help** them in any future military careers. Buddy will work with the Board and the Oak Ridge cadre to set up a schedule. We, and they, get the most benefit from their visit when we have members show up with work they'd like help with on their vehicles. If you have any project ideas or preferred dates, please let Buddy know (westbuddy1@aol.com). A schedule will be distributed once we have finalized the dates with Oak Ridge.

After Action Report 4th of July in Downtown **Houston**

Capt. Kirk Sullivan S-2

The 4th of July Event in Downtown was held again this year. The Museum had a great turn out with Joe Kuti, Charles Sumner Sr. and Jr., Kenny Rogers, Brent Backman, Jonathan Potts from Oak Ridge JROTC, Jonathan's friend, Buddy West and Family, Francisco Vera, Danny Benczedi, Peter Burland, Ed Farris, Steve

Madison, Rodney Williams and myself all present at one time or another. We had special guests from the Blue Bonnet Military Motor pool there, Dot and Jerry



M-60 on Display 4th of July

Mc Curry. Jerry brought his beautifully restored '42 Ford Fire truck, also there was the M-60, Brent's M-35 with a shop van, my CUCV, Peter Burland's GPW, Ed's M-114 and Joe's M-113. Ed and Kenny and Jonathan spent the night at Allen Parkway and that is a story all to itself. Joe Kuti has gone into the



Joe Kuti's M-113 and Jerry's Fire Truck and Kirk's CUCV Ready for Action on Allen Parkway the 4th of July

watermelon business, talk to him for the details. Rodney Williams and Buddy West gave Clint Black a

guided tour of the M-60 Sunday Evening. Clint asked me a couple questions, but I didn't recognize him, he looks different in a Biking Outfit. We left the Museum approximately 1730hrs on July the 3rd and we



The Group at the 4th of July on Allen Parkway, except me.

returned approximately 0030hrs on July the 5th. Everyone had a great time, the weather cooperated very well and a great time was had by all. If you weren't there you missed a great time.

State Guard Report

By PFC. Sullivan

Well the Annual Training for the State Guard was the last weekend in July. The Battalion Commander, Lt.Col.Boone, asked if we could bring some our goodies to the AT again this year. Charles Jr., Ed Farris Mike Miner and I spent the last couple weeks of July preparing the vehicles for the road trip to Camp Swift. We changed oil, filters, computers and wiring and you name it to get these vehicles ready.

The Guard started showing up about 06:00 on July 29th, with the convoy leaving approximately 08:00. The CUCV and the 5 ton led the convoy to Camp Swift using Hwy 290 as our avenue of approach. We spent the weekend conducting training and FTX type stuff. The convoy arrived at Camp Swift Approximately 13:00, with no major problems to report. During classroom training on Saturday, Pvt.

Charles Jr. and I both received our amature radio license's. The 5ton gave us a little amount of problems, but nothing that SSgt Miner myself and Jr. couldn't fix. The CUCV was used Saturday night as the Medic vehicle during night time operations. We woke up Sunday morning, got all the vehicles started, which was no small feat itself, then we returned to the Museum using I10 as our path of digression. We had chow at Mikaska in Columbus, what a great BBQ buffet. All this put us back at the Museum on Sunday



Texas State Guard at Mardi Gras in February on Galveston Island

evening. We cleaned and put everything up and closed the museum, which had been staffed by Buddy West. All in all it was a very successful endeavor. Come talk to me if you would like to join the State Guard and see East Texas.

**Rodeo Clown School asks for Museums Help
By Sgt. Danny King**



Here are the missing inmates can anyone identify them?

The Rodeo Clown School and Lune Asylum has asked for our help in identifying some of their escaped inmates. They are not to be considered dangerous unless you take their chains and boomers to Jaspers place in the country, or make fun of their hats. If found, give liberal amounts of chewing tabacky and polish your boots right away! This will help calm them down so we can cage them and return them to their natural habitat, a GP medium with plenty of MRE's or should I say C-Rat's.

Military Vehicle Preservation Association

SINCE 1976, an international organization dedicated to the preservation of military transport

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