

1/4-TON TRUCKS

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SUBJECT: 1/4-Ton Trucks

1. PROBLEM. To determine if the present number of 1/4 ton trucks organic to an Infantry Rifle Company, Infantry Division, TOE 7-18G, is sufficient to successfully fulfill the requirements of its use.
2. ASSUMPTIONS.
 - a. The rifle company will be at full strength assignment of all authorized equipment and personnel.
 - b. The TOE's of the 7G series will continue to authorize 1/4 ton utility vehicles for infantry units.
 - c. Any vehicle developments in the near future will not result in a better utility vehicle than the M151. (Annex A)
 - d. The number of 1/4 ton trucks organic to an infantry rifle company will not increase or decrease in the near future.
 - e. The mission of an infantry rifle company will not change, nor will new weapons or equipment be added to the current TOE of an infantry rifle company.
3. FACTS BEARING ON THE PROBLEM.
 - a. The 1/4 ton truck is currently organic to all US Army Infantry companies. (Annex B)
 - b. Only qualified operators are authorized to drive the 1/4 ton truck. (2:1)
 - c. Relatively little maintenance is required on the M151 1/4 ton truck, although qualified mechanics are needed to modify or change major components on the M151 truck. (7:8)
 - d. Safety has been a prime consideration for commanders whose units possess the M151 truck. (2:1)
 - e. The M151 must be able to operate effectively in all types of rough terrain. (2:1)

4. DISCUSSION.

- a. The TOE 7-18G lists five 1/4-ton trucks organic to a infantry rifle company. Two 1/4-ton trucks are used by the company headquarters for use by the CO and XO. Other qualified drivers within headquarters company may operate the vehicle in accordance with the companies SOP. The weapons platoon leader has a 1/4-ton truck designated for his use, although other personnel in the weapons platoon headquarters, who are qualified operators, may drive the vehicle. The two 1/4-ton vehicles found in the anti-tank squads are utilized as prime movers for the 106 RR, and any other use is usually not authorized. (Annex B)
- b. Operators of the M151 truck should be school trained and possess a valid government drivers license. (2:1) They must be able to perform preventive maintenance check of the M151 vehicle, and know how to prepare the necessary forms that accompany the vehicle. (7:1) Therefore commanders must provide adequate time for operators to maintain their vehicles in a readiness status.
- c. The M151 has an excellent maintenance record. (1:4) In one study, only one and one-half man hours per month was averaged for organizational maintenance on the vehicle. (3:25) The vehicle availability percentage was over 90% during a month. (4:27) The Quality Assurance Division of the U.S. Army Tank Automotive Command reports that the M151 has the highest reliability of any ordnance vehicle. (1:2) If a major component of the M151 must be changed, or modified, only qualified mechanics at direct support maintenance are authorized to perform the work.
- d. The M151 is not considered to be a tactical vehicle in the sense it can negotiate over extremely difficult terrain or will it offer protection from small arm fire or nuclear fires. The M151 is a vehicle designed to provide utility service, and in the case of the vehicle utilized as a carrier for the 106 RR, as a piece of equipment that will seek out targets, expend ordnance, and expediently move to another position. In other words, it is not a vehicle to utilized in conducting an assault. (2:1)

- e. According to a sample of infantry officers attending the advanced course 2-69, 90% felt that there was no need to increase the number of M151 trucks found in the rifle company. The 1/4 ton trucks found in the company headquarters, weapons platoon headquarters, and in the anti-tank squads were, according to the survey, adequate, and no increase or decrease in these elements was indicated by 90% of those officers questioned. The safety aspect of the M151 as indicated by the surveyed officers, concluded the vehicle to be a safe one, providing the operators know the limitations of the vehicle. 80% of the infantry officers were satisfied with the M151 truck as being an adequate vehicle to carry the 106 RR, providing that the vehicle maintains its present modifications. 60% of the officers stated the maintenance would not become an additional burden at the organizational level if the number of 1/4 ton vehicles were increased in a rifle company. The officers answering the survey have had experience in infantry, mechanized infantry, airborne infantry, and airmobile infantry units. (Annex C)

5. CONCLUSIONS.

- a. It is not necessary to increase the number of 1/4 ton utility trucks found in the TOE of an infantry rifle company.

6. RECOMMENDATIONS.

- a. The number of 1/4-ton utility trucks organic to a infantry rifle company remain unchanged.
- b. The M151 1/4-ton utility truck be retained as the vehicle organic to the infantry rifle company.
- c. That DA Circular 385-21 continue to be adhered to by all commanders.

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- ANNEXES: A - Truck, Utility, 1/4-Ton, 4x4, M151
B - Authorization of the 1/4-Ton, 4x4 vehicle
C - Survey of Officers from Advance Class 2-69
D - Bibliography

CONCURRENCES: (Omitted)
NONCONCURRENCES: (Omitted)
CONSIDERATION OF NONCONCURRENCES: (Omitted)
ANNEXES ADDED: (Omitted)
ACTION BY APPROVING AUTHORITY:

DATE:

Approved (disapproved), including (excluding) exceptions.

Signature

ANNEX A -- Truck, Utility, 1/4-Ton, 4x4, M151

The attached data (Appendix I) will give a brief description, purpose, history, and some technical data on the M151 vehicle.

Truck, Utility, 1/4 Ton, 4x4, M151

The M151 is a general purpose utility vehicle and is used in many roles such as command, reconnaissance, signal communications, and as a carrier for mounted light weapons.

This vehicle (Figure 1) was introduced in 1960 and is currently being produced by Ford Motor Company under contract to U. S. Army Ordnance. It is now in use in Korea and Germany, and by STRAC and other combat ready units.

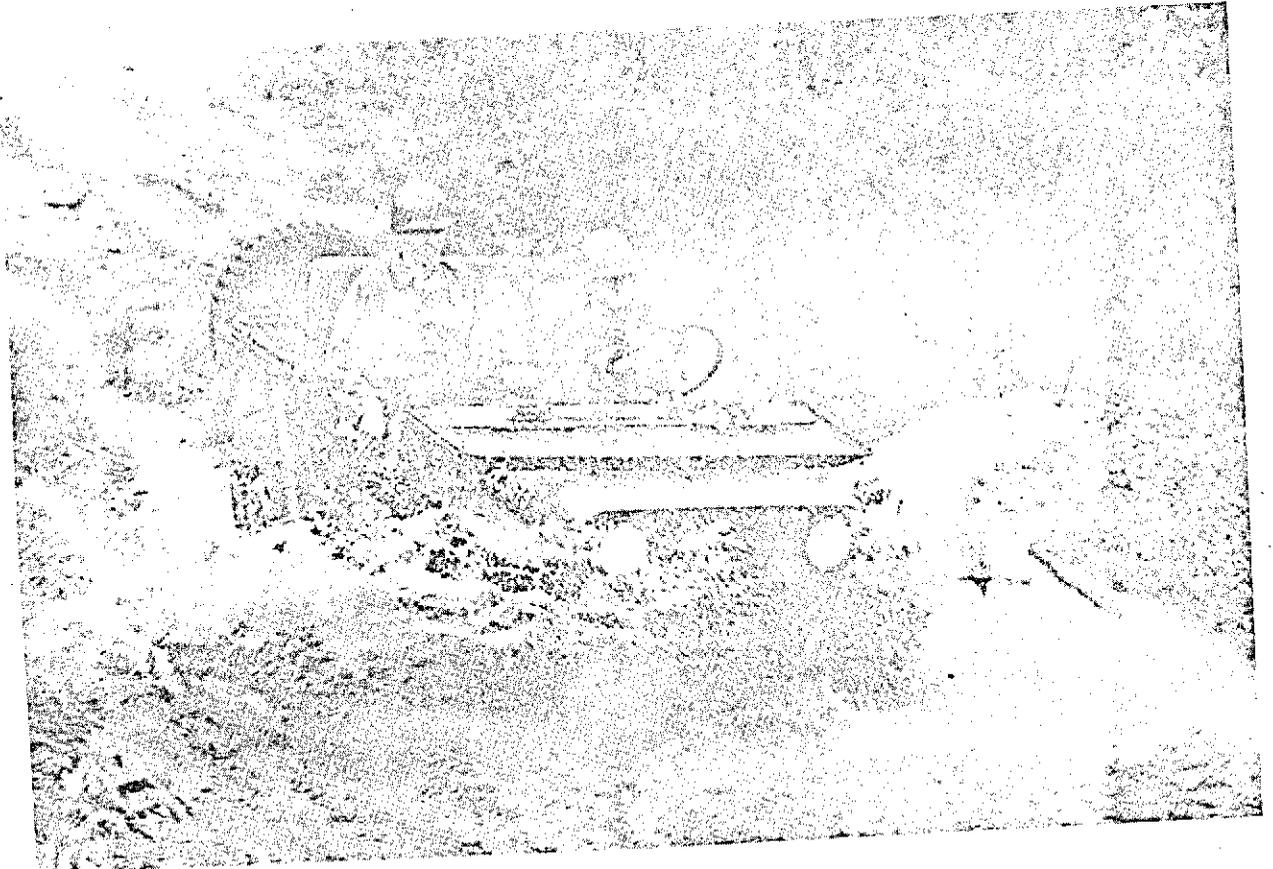


FIGURE # 1 M151

It includes among its desirable features light weight, good ride, and high performance. Perhaps most important, it has the highest reliability of any Ordnance vehicle today, according to the current reports of the Quality Assurance Division of OTAC.

Brief technical data for the M151 follows:

Curb weight	- 2325 lbs.
Gross vehicle weight	- 3125 lbs.
Net hp/ton of GVW	- 39
Transmission	- 4 speed, synchromesh
Suspension	- Independent, coil springs
Tires	- 7.00 x 16, NDCC
Body - frame	- Unitized, spot welded
Floatability	- None
Speed	- 65 mph

The XM408, 6x6, experimental version (Figure #2) of the M151, has demonstrated the feasibility of using M151 components for a 3/4 ton vehicle with good utility.

ANNEX B -- Authorization of the 1/4-Ton, 4x4 vehicle

The following excerpts were extracted from TOE 7-18G, and provides the basis for the number of 1/4-ton vehicles that are organic to a infantry rifle company.

Equipment Allowances (TOE 7-18G) (8:12)

"...2 Truck Utility:1/4 Ton W/E..."

"...1 Truck Utility:1/4 Ton W/E..."

"...2 Truck Utility:1/4 Ton 4x4 Carrier for 106
MM Rifle W/E..."

ANNEX C -- Survey of Officers from Advance Class 2-69

The attached questionnaire (Appendix II) was completed on January 1969 by a selected sampling of officers attending the Advanced Class 2-69. A summary of their answers is included after each question.

10 January 1969

SUBJECT: Staff Study

1. The information requested below is for a staff study - TO DETERMINE THE OPTIMUM NUMBER OF 1/4 TON TRUCKS THAT SHOULD BE ASSIGNED TO THE CONVENTIONAL RIFLE COMPANY. The present TOE (7-18G) authorizes five 1/4 ton trucks which are distributed as follows:

a. Co Hq Sec	_____	2 W/trailer
b. Wpns Plat Hq Sec	_____	1 W/trailer
c. Anti tank Sec	_____	2 W/106 RR

2. Please answer the following questions keeping in mind the fact that an Infantry Rifle Company must be prepared to fight anywhere in the world, not just Vietnam.
3. Does the rifle company need two 1/4 ton trucks in the company headquarters section?

Yes 100% No 0% Explain: The two vehicles are needed for administrative and logistical purposes. They are used for reconnaissance by the company commander, 1st Sgt, and communication personnel. More than two vehicles would not be essential. The company commander needs the vehical for attending briefings at Battalion, which is normally 3-5 Km from the company position.

4. Does the weapons platoon headquarters section need its 1/4 ton truck?

Yes 90% No 10% Explain: The weapons platoon leader need the vehicle for reconnaissance, he also needs the vehicle if the 81MM mortars are split and must coordinate the fire support. The Weapons Platoon Leader needs the vehicle to supervise the 106 RR and motar sections.

5. Are the two 1/4 ton trucks in the anti tank section adequate?

Yes 80% No 10% Should be increased by No Comments
 Explain: The officers questioned felt the number is adequate unless the number of weapons increases.

6. Should the rifle company have additional 1/4 ton trucks authorized?

Yes 10% No 90%
 If your answer was yes, where should they be assigned and for what purpose? Explain: The officers answering 'yes', felt the additonal vehicles could be used for carring ammunition.

7. Is the 1/4 ton truck, M151, a satisfactory carrier for the 106 RR?

Yes 80% No 10% Explain:
The officers said that as long as the present modifications exist, the M151 is a satisfactory carrier for the 106 RR.

8. Do you feel that an increase of 1/4 ton trucks would create a burden on organizational maintenance?

Yes 60% No 40% Explain:
Those officers answering in the affirmative, felt that additional personnel would be needed to maintain these vehicles. Those answering in the negative felt the additional burden would be minute.

9. Do you feel that the M151 is a safe vehicle for open road and cross country operations?

Yes 80% No 20% Explain:
Providing the operator has undergone special drive training and knows the limitations of the vehicle.

10. Any additional comments will be greatly appreciated.

A good vehicle if properly maintained.

11. Thanks for your assistance. Please give completed questionnaire to any of the undersigned.

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ANNEX D -- Bibliography

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