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Project OK.....

Item..... 15711

T.S.T.P.....

Date..... June 22, 1940

From: Sub-Committee on  
Automotive Equipment

To: The Ordnance Committee, Technical Staff

Subject: LIGHT INFANTRY AND CAVALRY VEHICLES - Development of.

*act*  
400.112 -  
X 095 -  
X 451 - (Proc. 398-41-9)  
(Technical Staff)

1. REFERENCES:

a. O.C.M. Item 15695, June 20, 1940, directed that a special Subcommittee visit the American Bantam Company for conference with their officials and engineers on the military characteristics of Light Reconnaissance and Command Car and the Howie Weapons Carrier.

b. O.O. 451/10001 (A.G. 451 (6-15-40)M-D, transmitting letter dated June 6, 1940, from the Chief of Infantry with draft of military characteristics for a Light Reconnaissance and Command Car and directing Ordnance Committee action and recommendation on light vehicles of this class. This communication also approved by 2nd Indorsement dated June 18, 1940, the action of the Ordnance Committee listed in Reference a.

c. The special Subcommittee and Major Howie, Infantry, met with the officials and engineers of the American Bantam Company at Butler, Pennsylvania, on June 19, 1940, for further discussion of the characteristics of a Light Reconnaissance and Command Car and the Howie Weapons Carrier.

2. DISCUSSION:

a. The Subcommittee and the officials and engineers of the American Bantam Company discussed the possibilities and limitations of the Bantam chassis for use as the basis of the light vehicles under consideration.

b. A brief operating test was conducted with several of the Bantam 3-wheeled drive cars on roads and cross country.

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OF 15010021  
BY: D.H.S. [signature]  
ON 6/1/94  
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Some of this operation was in hilly country including grades estimated at 10%. These 2-wheeled drive vehicles performed well with loads of one or two men. The gross load was approximately 1500 pounds.

c. A stripped dry chassis weighing 660 lbs. was statically loaded with 4500 lbs. of sand without damage to the chassis.

d. Discussion of engineering details resulted in tentative decision to require the following:

(1) A driving front axle with a 2-speed transfer case including provision for de-clutching the drive to the front axle. The tread of axle to be the same, front and rear. Tires 5.50-16 with bullet sealing tubes.

(2) Body of rectangular construction to enclose the wheels, in lieu of mud guards, with bumpers front and rear. All bumpers to be provided with means for attaching tow ropes. Angles of approach and departure at least 45° and 45° respectively. A folding windshield to provide for maximum height of vehicle not to exceed 36 inches. The top to consist of a single bow at the rear and a quickly removable strip of canvas attached to the rear of the body and the top of the windshield. Three bucket type seats, two forward and one centrally located in the rear part of the body.

(3) Provision for mounting a cal..50 Light Machine Gun on a telescoping pedestal located between the two forward bucket seats and provision for the transportation of 300 rounds of cal..50 machine gun ammunition.

(4) Amphibian characteristics to be included if this is practicable.

(5) The following miscellaneous items:

(a) Mount the radiator on its side to reduce silhouette and add a water pump.

(b) Increase engine power at least 10%.

(c) Increase fuel capacity to 3 gallons and add an auxiliary fuel filter.

(d) Increase the capacity of electrical units and use stand wound generator with voltage regulator.

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- (e) Provide radiator guard. ✓
- (f) Provide blackout lighting system. ✓
- (g) Oil bath air cleaner ✓
- (h) Hydraulic Brakes.
- (i) Full floating axles ✓
- (j) Skid shoe under transfer case X

g. Based on the military characteristics contained in letter transmitted with Reference b, and on the meeting on the Subcommittee, Reference e, the draft of military characteristics for the Light Reconnaissance and Command Car are stated as follows:

- (1) Weight without payload: Not to exceed 1200 lbs. ✓
  - (2) Height: Not to exceed 54 inches ✓
  - (3) Four-wheel drive chassis: Wheel base approximately 75". ✓
  - (4) Angles of approach and departure: 45° and 40° respectively. ✓
  - (5) Driver must be able to see the road at a distance of not more than 10 ft. ahead of the front of the car. ✓
  - (6) Armament: One Cal..30 Light Machine Gun on telescoping pedestal mount and 3000 rounds of machine gun ammunition. ✓
  - (7) Crew: 3 Men including the driver. ✓
  - (8) Performance: (a) Sustained low speed of 5 m.p.h. and maximum speed of not less than 30 m.p.h. on level hard-surfaced road. ✓  
(b) Two speed transfer case with provision for de-clutching the drive to front axle for good road operation. ✓
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(c) Maximum practicable ground clearance, but not less than 8-1/2".

(d) Cross country performance and grade ability comparable to that of standard multi-wheeled cargo vehicles.

f. The Light Reconnaissance and Command Car is essentially the same as the Howie Weapons Carrier except for the prone position of the operator. If the Howie Weapons Carrier is to operate in convoy with other vehicles, it must be equipped with conventional steering, brake and clutch controls; if it is not so equipped, it must be transported in trucks. The Subcommittee believes that the test of the Light Reconnaissance and Command Car will determine whether or not further development of the Light Reconnaissance Car and Howie Weapons Carrier should be undertaken.

**3. RECOMMENDATIONS:**

a. That the military characteristics stated in paragraph 2 above be approved.

b. That 70 Light Reconnaissance and Command Cars be procured for service test by Infantry, Field Artillery, and Cavalry. 40 Cars for Infantry - 20 for Cavalry and 10 for Field Artillery.

c. That since this vehicle is a commercial wheeled type without armor protection, the Quartermaster General be charged with its development and procurement.

d. That this light vehicle development be limited to the Light Reconnaissance and Command Car type, in general accordance with the military characteristics stated in paragraph 2.

e. That if this vehicle is found satisfactory, consideration be given to its use in place of the motorcycle with side car and the tri-cycle type of vehicle.

(Signatures on page 2)

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**Action by Technical Staff.**

**APPROVED BY ORDNANCE COMMITTEE**

**JUN 27 1940**  
**JAMES L. HATCHER**

**LT. Col., Ord. Dept., U.S.A.,**  
**AG Secretary**

**APPROVED**

**EARL McFARLANE**

**50**

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