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CATALOGED BY ASTIA  
AS AD No 288 880

UNITED STATES ARMY ARMOR BOARD  
Fort Knox, Kentucky

STEBB-ST P-2202-4

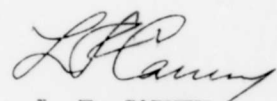
20 NOV 1962

SUBJECT: Report of Project No 2202-4, Evaluation of Nylon Ballistic  
Shield for M60A1 Tanks

- TO:
- Commandant, United States Army Armor School, Fort Knox, Kentucky
  - Director, USMC Landing Force Development Center, c/o USMC Liaison Officer, US Army Armor Board, Fort Knox, Kentucky
  - British Liaison Officer, USAFEC, c/o Director of Munitions, British Embassy, 3100 Massachusetts Avenue N. W., Washington, D. C.
  - Canadian Liaison Officer, US Army Materiel Command, Washington 25, D. C.
  - Commander, Armed Services Technical Information Agency, ATTN: TIPCR, Arlington Hall Station, Arlington 12, Virginia

The subject report and copy of Headquarters, US Army Test and Evaluation Command action letter is furnished for your information and retention.

FOR THE PRESIDENT:



L. F. CARNEY  
Lt Col, CE  
Secretary

1 Incl  
as

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**AMSTE-BB**

**8 November 1962**

**SUBJECT: Report of Project No 2202-4, Evaluation of Nylon Ballistic Shield for M60A1 Tanks**

**TO: Commanding General  
U. S. Army Tank-Automotive Command  
Centerline, Michigan**

1. Reference Report of Project No 2202-4, Evaluation of Nylon Ballistic Shield for M60A1 Tanks, United States Army Armor Board, 30 October 1962 (Incl 1).

2. This headquarters concurs in the conclusion in paragraph 6 and the recommendation in paragraph 7 of referenced report.

3. Further action is not required as the nylon shield is being installed on all production M60A1 Tanks.

**FOR THE COMMANDER:**

1 Incl  
a s

**JOHN W. RODGERS**  
Colonel, GS  
C, Admin Div

Copy furnished w/o incl:  
Pres, U. S. Army Armor Board

Incl 1

**UNITED STATES ARMY ARMOR BOARD  
Fort Knox, Kentucky**

**30 OCT 1962**

**STEBB-CV P-2202-4**

**SUBJECT: Report of Project No 2202-4, Evaluation of Nylon  
Ballistic Shield for M60A1 Tanks**

**TO: Commanding General  
United States Army Test and Evaluation Command  
Aberdeen Proving Ground, Maryland**

1. **AUTHORITY.**

a. **Directive.** Line Item No B353, Annex B, USCONARC Pamphlet No 705-1, Materiel Developments Program, Fiscal Year 1963 (U), July 1962.

b. **Purpose.** To determine the suitability of the nylon ballistic shield installed in the turret of the M60A1 tank.

2. **DESCRIPTION OF MATERIEL.** The shield is of the same design as those used on the M48 series and M60 tanks. This particular model was tailored to fit production M60A1 tanks and incorporated a special heat shield to fit around the barrel of the coaxial machine gun.

3. **BACKGROUND.** The nylon ballistic shield for the M60A1 Pilot 3 vehicle had not arrived at the Armor Board for test at the time the report of service test on the tank was prepared. Subsequently, the shield arrived and was installed and tested as recorded in this report.

4. **SUMMARY OF TESTS.** Tests were conducted by Captain Charles A. Roper, Jr., Armor, assisted by other personnel of the Combat Vehicle Division.

a. Preoperational Inspection and Physical Characteristics. Prior to installation, the nylon ballistic shield was inspected and found to be in serviceable condition.

b. Installation. Initial attempts at installation in M60A1 tank pilot no 3 showed that the nylon shield did not fit properly. The mounting grommets in the shield were not aligned with the mounting studs welded to the inside of the turret. (See inclosures 1 and 2.) Also, there was a binding condition between the coaxial machine gun barrel and the heat shield surrounding it. The fit was corrected to a satisfactory condition by relocating the mounting studs to conform with production drawings.

c. Durability and Reliability. At the time of this report the test item had been mounted in the M60A1 tank during the course of 1,870 miles of durability testing. The only failure experienced was the decomposition of a portion of the soft metal band inclosing the heat insulating material surrounding the coaxial machine gun barrel. This band was replaced by the manufacturer with a metal of a more durable composition.

5. DISCUSSION.

a. The initial misfit of the shield was due to the changes made in the dimensions of the front of the turret between the fabrication of the pilot model tanks and the release of production drawings. The test item was made to production specifications.


b. Shields of the same design as the test item are now being installed on all production M60A1 tanks.

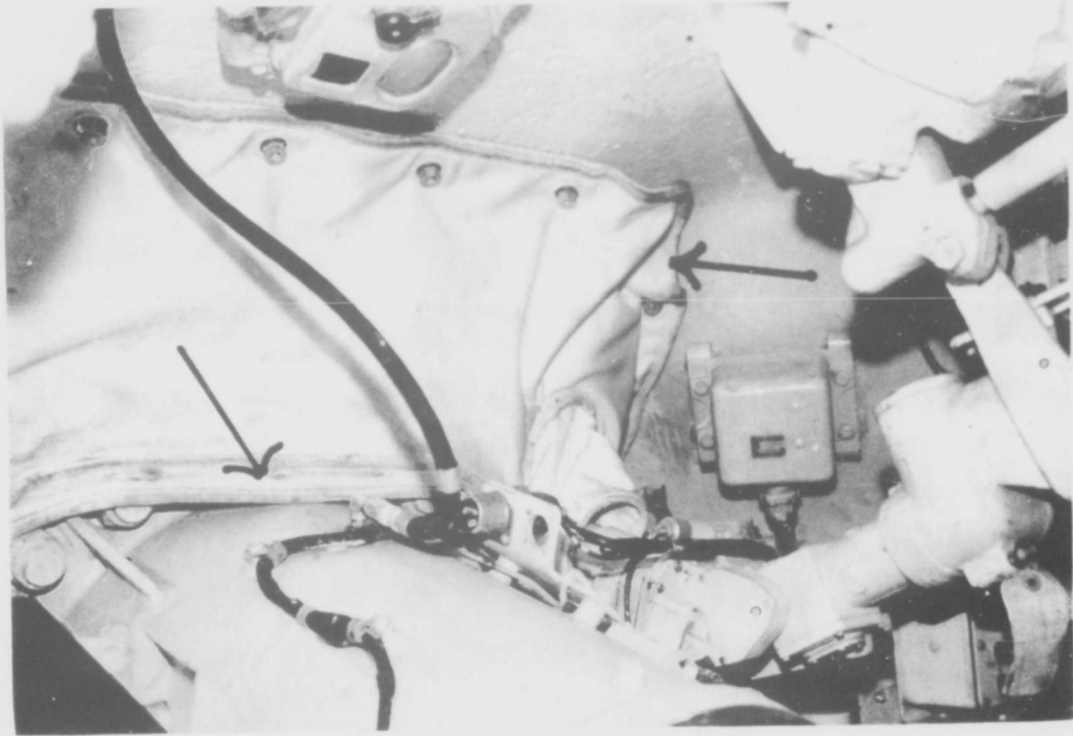
6. CONCLUSION. US Army Armor Board concludes that the nylon ballistic shield is satisfactory for use in the turret of the M60A1 tank.

7. RECOMMENDATIONS. None. (The nylon ballistic shield is being installed on all production M60A1 tanks)

2 Incl

1. Photo No 62-363
2. Photo No 62-363A

  
FRANK F. CARR  
Colonel, Armor  
President

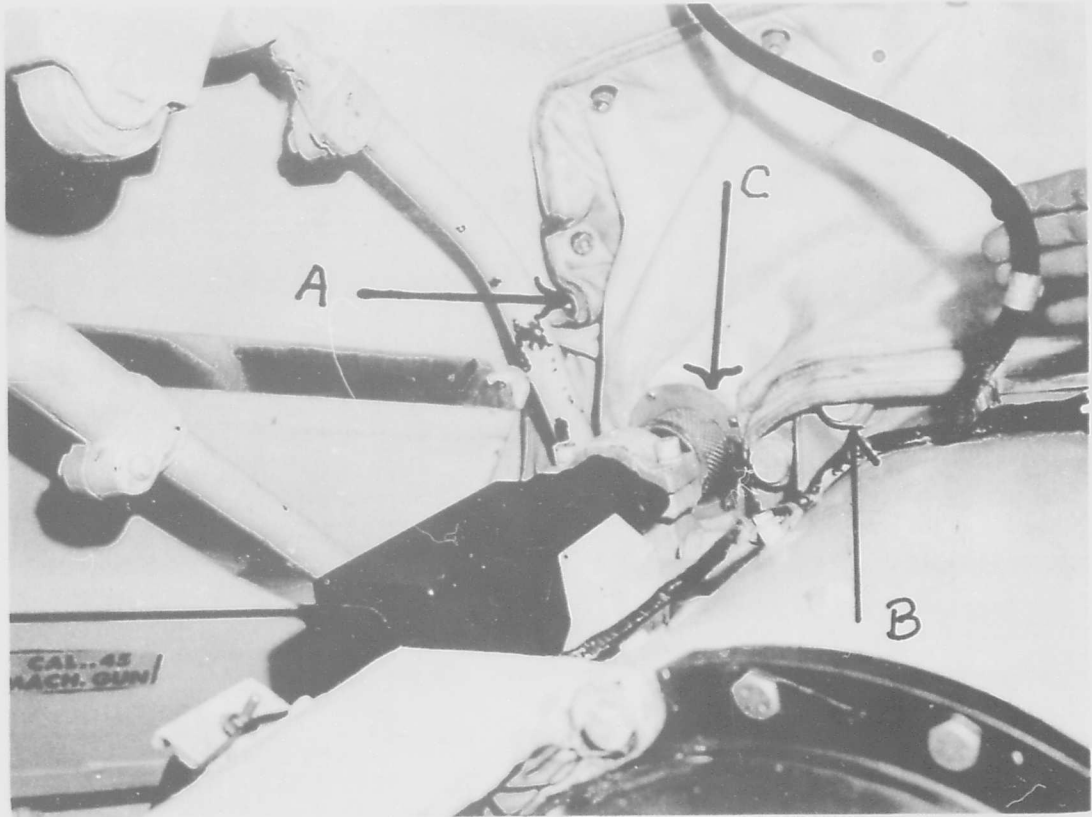


UNITED STATES ARMY ARMOR BOARD P-2202-4 PHOTO NO 62-363 FT KNOX, KY

NYLON BALLISTIC SHIELD FOR M60A1 TANKS

ARROWS INDICATE MISFIT OF NYLON BALLISTIC SHIELD CAUSED BY  
IMPROPER LOCATION OF MOUNTING STUDS IN M60A1 TANK PILOT NO  
3.

Incl 1



UNITED STATES ARMY ARMOR BOARD P-2202-4 PHOTO NO62-363AFT KNOX, KY

NYLON BALLISTIC SHIELD FOR M60A1 TANKS

ARROWS A AND B INDICATE MISFIT OF NYLON BALLISTIC SHIELD  
IN M60A1 TANK PILOT NO 3.

- ARROW C INDICATES HEAT SHIELD AROUND COAXIAL MACHINE GUN  
BARREL.

Incl 2

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