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NAVAL AIR TEST CENTER
REPORT OF TEST RESULTS

FROM
Commander, Naval Air Test Center, Patuxent River, Maryland 20670

TO
Commander, Naval Air Systems Command, Washington, D.C. 20361

AIRTASK	WORK UNIT	AIRCRAFT BUNO
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	REPORT SEQUENCE UNDER WORK UNIT: First Interim Report	EFFORT LEVEL: Normal

TITLE

Test and Evaluation of the Lug, Dummy, MAK-79C Store Gone Switch Override (P/N A51S63980-1)

DATES OF TESTS	LOCATION OF TESTS	COGNIZANT NAVAIRSYSCOM DIVISION
5 December 1975	NAVAIRTESTCEN	AIR-534/AIR-417
NATC PROJECT OFFICER/ENGINEER	NATC DIVISION	COGNIZANT NAVAIRSYSCOM ENGINEER
Mr. M. E. Clark	Systems Engineering	Mr. VanMater/Mr. Strawhun

ENCLOSURES

Ref: (a) F-14A Consolidated Ground Support Equipment List (CGSEL) of 15 Sep 1975
(b) F-14 Support Equipment Requirement Sheet 2035
(c) NAVAIR 01-F14AAA-75, Airborne Weapons/Stores Loading Manual
(d) NAVAIR 01-F14AAA-2-3-13, Armament Systems Testing and Troubleshooting, Organizational Maintenance

INTRODUCTION

1. In accordance with the AIRTASK/Work Unit, the MAK-79C Store Gone Switch Override Dummy Lug (P/N A51S63980-1, reference (a), item number 2035) was evaluated to determine its suitability and supportability for use in support of the F-14A aircraft at the Organizational level of maintenance. The Dummy Lug was designed to simulate the presence of a store lug in the aft hook of each MAK-79C/A37B ejector rack on the weapon rails during checkout of the AWG-15 fire control system. The MAK-79C/A37B racks were designed so that the external Store Gone Switch senses the presence of the bomb lug rather than the rack hook position. The MAK-79C/A37B racks will be replaced by BRU-24/25 racks, which are modified versions of the MAK-79 series racks. The design of the replacement racks has been changed so that the internal Store Gone Switch senses the open/closed position of the forward rack hook, and the switch is operated by opening and closing that hook. Due to the design change, the Dummy Lug will not be required for testing the BRU-24/25 racks. The replacement racks are scheduled for delivery to the Navy commencing early 1976.

Part I indicates a deficiency, the correction of which is necessary because it adversely affects:

a. Airworthiness of the aircraft.

b. The ability of the aircraft (or piece of equipment) to accomplish its primary or secondary mission (or intended use).

c. The effectiveness of the crew as an essential subsystem.

d. The safety of the crew or the integrity of an essential subsystem. In this regard, a real likelihood of injury or damage must exist. Remote possibilities or unlikely sequences of events shall not be used as a basis for safety items.

Part II indicates a deficiency of lesser severity than a Part I which does not substantially reduce the ability of the aircraft or piece of equipment to accomplish its primary or secondary mission, but the correction of which will result in significant improvement in the effectiveness, reliability, maintainability, or safety of the aircraft or equipment. A Part II deficiency is a deficiency which either degrades the capabilities of the aircraft or equipment or requires significant operator compensation to achieve the desired level of performance; however, the aircraft or equipment being tested is still capable of accomplishing its mission with a satisfactory degree of safety and effectiveness.

Part III indicates a deficiency which is minor or slightly unpleasant or appears too impractical or uneconomical to correct in this model, but should be avoided in future designs.

2. The Dummy Lug is a steel casting 6 inches (152.4 millimeters) long. The portion of the lug that engages the rack hook is identical to the MS3314 bomb lug. The handle portion of the Lug is 4.0 inches (101.6 millimeters) long and 0.5 inch (12.7 millimeters) in diameter. The handle aids in installation and removal of the Lug from the rack. A "REMOVE BEFORE FLIGHT" streamer is attached to the handle.

3. The Dummy Lug (serial numbers 151 through 154 tested) proved to be suitable in performing the intended function. No scheduled or unscheduled maintenance of the Lug is anticipated due to the simple design; therefore, the Lug is considered supportable.

4. During the tests, a conflict in part numbers was noted. Part Number A51S63980-11 was embossed on the Dummy Lug. The streamer attached to each lug was identified as A51S63980-1. References (a) through (d) also refer to the latter number. The conflict in part numbers is a Part II deficiency which should be corrected as soon as possible.

5. While performing the evaluation, MS3314 and MK6 bomb lugs were used to supplement the Dummy Lugs. The bomb lugs performed the intended function as effectively as the Dummy Lug. Therefore, the intended function of the Lug can be performed efficiently and economically (without modification) by the bomb lugs until all of the MAK-79C racks have been replaced and requirement for the Dummy Lug no longer exists. Consequently, the Dummy Lug, P/N A51S63980-1, is a nonessential item of equipment.

CONCLUSIONS

6. The Dummy Lug Store Gone Switch Override is capable of performing its intended function without modifications and is supportable.

7. The Dummy Lug is a nonessential item of equipment.

8. The conflict in part numbers between what is embossed on the Dummy Lug and what is shown in the applicable documentation and on the attached streamer is a Part II deficiency.

RECOMMENDATION

10. If future procurement of the Lug is not cancelled, correct the Part II deficiency cited in paragraph 3.

C. J. BERTHE, JR.
By direction

SY-202R-75

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