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CHAL 0043
Copy 2 of 6

2 May 1958

MEMORANDUM FOR: Project Director
THROUGH: Deputy Project Director
SUBJECT: Status of Equipment Changes Suggested by
[REDACTED]
REFERENCE: SAPC 25306, 12 March 1958

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1. In response to the referenced memorandum, the following action has been taken on the recommendations contained therein:

a. Fuel Flow Meter. P & W has approved the use of a fuel flow meter in the U-2 in place of the present pressure-ratio gauge. Lockheed Aircraft Corporation is at present taking steps to procure suitable flow meters that will be of the same size as the present P/R gauge. The exact status of procurement is unknown at the present time, but during [REDACTED]'s visit to LAC next week, he will endeavor to determine the date at which these will be available for installation in the U-2.

25X1A

b. Speed Brake Control. This modification has already been authorized by [REDACTED] and is presently being installed in the U-2's as mod kits become available.

25X1A

c. Milk Wagon. The staff visit to EAFB in early April 1958 revealed that the pilot conveyance vehicle had been completed to the exception of a 28 V electrical generator to operate the UHF radio equipment. Air conditioning, seating and oxygen facilities had been installed and, at that time, the vehicle could have adequately been used for its primary function. In a telephone conversation with the EAFB Physiologist on 25 April 1958, information revealed that the 28 V generator had been purchased and installed and that the vehicle now completely functional was well accepted by the pilots.

d. Dual Oxygen System. The document outlining requirements and plans for a dual aircraft oxygen system, "High Altitude O₂ System and Pilots' Equipment" dated 14 February 1958, submitted by WRSP IV pilots

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was discussed during the staff visit. The schematic available at that time lacked certain features considered necessary for a functional emergency oxygen system. Several improvements were brought out during the discussion, and it was agreed that an improved schematic could be engineered by the physiologist and LAC engineers. The improved system schematic will be forwarded to headquarters for evaluation. Headquarters feels, as the pilots do, that an emergency oxygen system in the aircraft would be desirable.

Approval was granted to the physiologist to parallel 2 each f-2400 oxygen regulators in one seat pack. These regulators would be connected to a selector switch permitting choice of #1 or #2 or both regulators. This modification was approved for one seat pack as an R & D endeavor. If it should prove satisfactory, all project seat packs may be so modified. The pilots have always expressed a desire for a second oxygen metering device to preclude serious results ensuing from the loss of the only regulator, as presently provided.

e. Face Plate Latch String. The problem of the face plate latch string entangling in diversified equipment is not a serious one. Shortening the string to provide a loop large enough for the pilot to insert two fingers for operation and short enough to ride over "wires and connections" is the common and effective solution. The present face piece has a multitude of shortcomings. Replacing the entire head gear is the only true solution. A new type helmet is being secured for EAFB evaluation. Pending results, we are forced to use the MB-5 helmet -- the best available at this time. If the new helmet proves successful, a quantity adequate to satisfy all of our pilots will be requisitioned.

The in flight feeding port was not a factor in purchasing the MB-5 face piece. The emergency face heat circuit was the primary advantageous consideration. It is agreed that the feeding orifice is a badly engineered and leaking device. All Project feeding orifices have been sealed off and the manufacturer has been encouraged to redesign pressure flight feeding facilities. In the meantime, there is no safe method of taking food or liquids during flight. Adequate pre flight intake indulgences at this time will have to suffice. We will continue to seek improved designs and methods.

f. Flying Boots. The Project issue flying boot is of less than mediocre acceptability. Consequently, Headquarters has approved and financed

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- 3 -

the purchase of pilots' individual choice of flying boot. The type boot mentioned in the referenced report is being procured for the pilots who desire them.

g. Cold Weather Gloves. Each Personal Equipment section has been provided with an ample supply of cold weather ground wear mittens (wool and leather). A pair of these is included in the pilots' survival gear for winter survival. A supply is also available in the P. E. stocks for pilot used as they deem necessary.


Acting Director Operations

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