LOCKHEED AIRCRAFT CORP.	ENGINEERING STUDY ☐ CHANGE PROPOSAL ☒	LAC-98
DATE 4-3-61	AFFECTS: WSPO ☒	PROJECT ☒

NAME OF MAJOR COMPONENT	PART OR LOWEST SUBASSEMBLY	PART NO. & MODEL OR TYPE
AIRPLANE	FUEL PUMP	

TITLE OF PROPOSAL : FUEL SYSTEM REVISION

NATURE OF PROPOSAL :

SEE PAGE 2

REASON FOR PROPOSAL :

1. To improve reliability of the existing hydraulically driven fuel boost pump by replacing the present chip catcher with a 200 mesh strainer.

2. To reduce the possibility of engine flameout due to loss of fuel pressure particularly at high altitudes by providing an electrically driven fuel boost pump as backup for the existing hyd. driven pump. The new pump will be controlled by the pilot and is to be turned on for all operations above 50M ft.

ES	ESTIMATED COST AND TIME INVOLVED :	- - -
	ADDITIONAL FUNDING REQUIRED :	- - -
CP	ESTIMATED COST FOR KITS OR PARTS :	See Pages 3 & 4
	ADDITIONAL FUNDING REQUIRED :	None

ITEMS AFFECTED BY PROPOSAL :

SAFETY	MISSION EFFEC-TIVENESS	PERFORM-ANCE	OPERATING PROCEDURE	INTER-CHANGE-ABILITY	WEIGHT OR WEIGHT & BALANCE	TOOLS & SUPPORT EQUIPMENT	MAINTE-NANCE PROCEDURE	SERVICE LIFE	FLIGHT MANUAL	MAINTE-NANCE MANUAL
☐	☒	☒	☒	☐	☒	☐	☒	☐	☒	☒

EST. MAN/HRS. REQ'D. TO ACCOMPLISH CHANGE IN FIELD

SOURCE OF PARTS FOR KIT	AVAILABILITY - - - WEEKS AFTER APPROVAL
LAC	See Page 4

DISPOSITION OF SPARES AFFECTED The following will no longer be used:
H-80 Chip Catcher; Revere Float Switch P/N F8300-8 (F8300-26 on U-2C a/c)

STATINTL

INITIATED BY :	APPROVED : WSPO
LAC	

4/10/61

NATURE OF PROPOSAL:

Design Study

1. Modify the fuel system in one aircraft (692/359) by installing an electrically driven fuel boost pump with related plumbing, wiring and cockpit controls. This has been accomplished as Contract SP-1918 Product Improvement.
2. Performance data to be obtained from operation of the aircraft at LAFB over a significant period (approximately 3 months).
3. This test installation will be replaced by the standard installation (outlined below) at a convenient time at the conclusion of operational tests.

Change Proposal

1. Modify the fuel system on all aircraft (except serials 342 & 358)* as follows:

   a. Replace the existing Chip Catcher (P/N H-80) with a 200 mesh strainer.

   b. Install a submerged A.C. electric motor driven boost pump in the right-hand sump tank. Install related plumbing to connect pump in parallel with the existing boost pump and bypass line. This includes the addition of two new check valves; one in each boost pump fuel out line, and a pressure switch between the check valve and the new pump (see attached diagram).

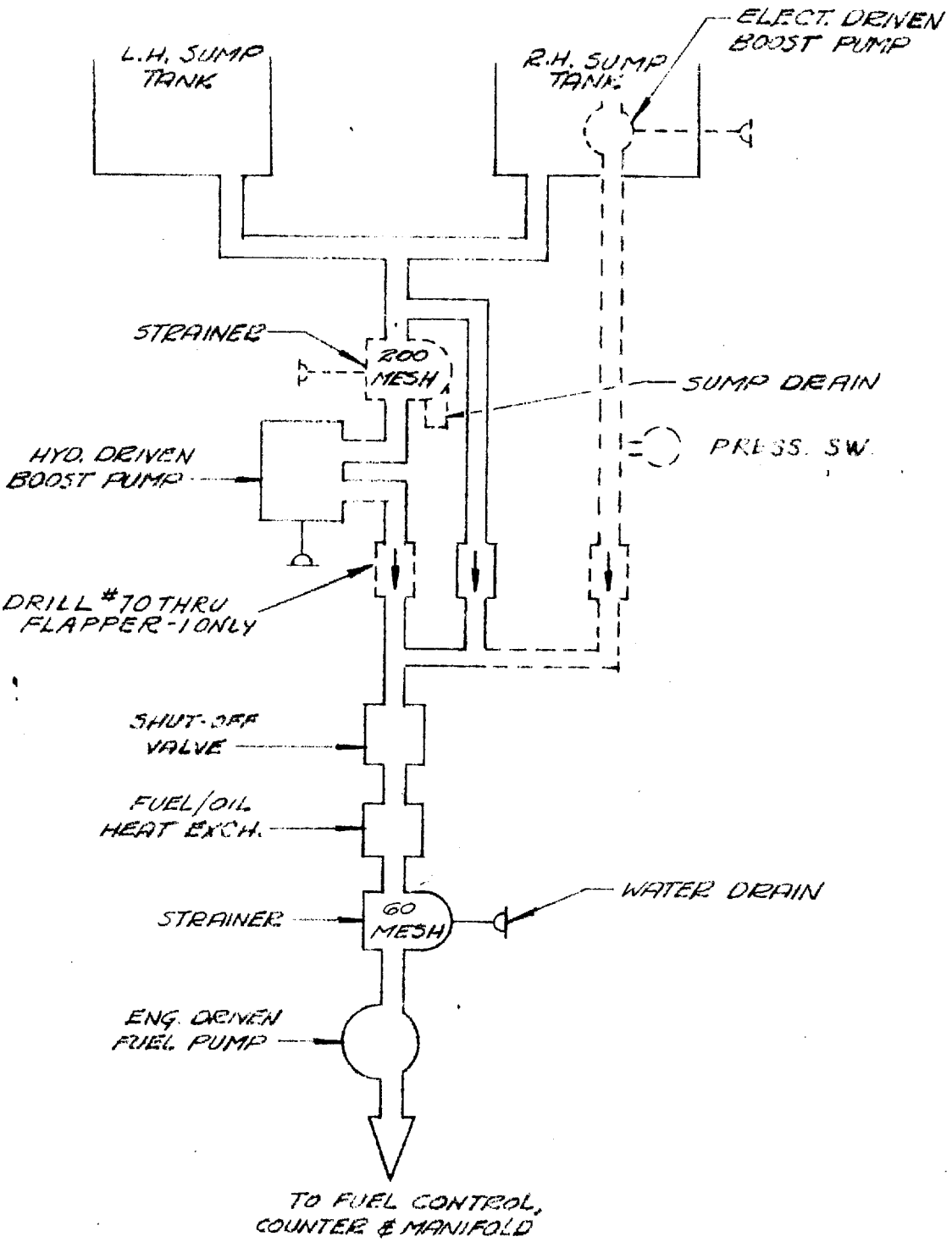
   c. Replace the existing sump tank overflow light in the cockpit with a fuel pressure indicator light (elec. boost pump only) and install pilot's control switch. Install power relay on Q-bay "CB & Relay" panel and install system wiring.

   d. On all aircraft remove the overflow float switch from the sump tanks.

   * NOTE: These fuel system modifications previously authorized for incorporation on a/c serials 342 and 358 in conjunction with In-Flight Refueling provisions under approved ECP No. LAC-101.

2. Prepare and issue a Service Bulletin.
3. Fabricate appropriate aircraft provisioning kits.
4. Installation of kits can be accomplished in the field. Modification of sump tanks to incorporate pump flange must be done at the factory on a turn around basis unless the entire program is scheduled for IRAN.

Next 1 Page(s) In Document Exempt



FUEL SYSTEM DIAGRAM

SHOWING ADDED ELECTRICALLY DRIVEN SUBMERGED BOOST PUMP & 200 MESH STRAINER

— EXISTING SYSTEM

— ADDED COMPONENTS

STATINTL

ROUTING

TO	NAME AND ADDRESS	INITIALS	DATE
1.		OTM	4/10/61
2.			
3.			
4.			
5.			
6.			
7.			
	RETURN TO SENDER		

	ACTION		CONCURRENCE		INFORMATION
	COMMENT		FILE		SIGNATURE

REMARKS

LAC-95 for approval

FROM	
NAME AND ADDRESS	DATE
	10 April 61

STATINTL

STATINTL

FORM 1-59 1582

(40)