TEST AND EVALUATION PROJECT STATUS SHEET

PROJECT NUMBER	PROJECT TITLE
E-5	Service test of the Improved Magnetron (L-1951/7208 for the B-58 Search Radar. (U)
REPORT SECTION	PROJECT OFFICER
C-3 of Part IV	SMS James R. Freeman

PROBLEM

An excessive number of magnetron failures are being experienced on the search radar system of the B-58 aircraft (U)

REQUEST AGENCY	DATE INITIATED	COMPLETION DATE	AUTHORIZATION
B-58 Test Force	June 1960	Est Jan 61	AFR 80-14 SACR 80-2

STATUS

1 Jun 60:

Experience to date on search radar magnetrons delivered with the tactical aircraft shows that magnetron failures have occurred at 16, 25, 56, and 72 hours. This time includes only operating time (standby and transmit) on the aircraft. One of these magnetrons has operated 76 hours without a failure. (U)

Ten improved magnetrons, developed by Bell Laboratories and manufactured by Western Electric Company, have been provided for testing. Three magnetrons have been evaluated, for a total of 61:00 operating hours, of which 26:55 hours has been airborne time. Approximately 75% of the airborne time is transmit time. (U)

31 August 1960: Results through 31 August 1960 are as follows: (U)

RTM Serial #	Magnetron Serial #	Total Transmit Time	Total Air Transmit Time	Total Long Pulse Time	Total Standby Time (Transmitter off)
17	14BH	47:37	27:32	11:30	31:55
14	3AH	35:00	30:15	8:00	24:20
18	11AH	27:02	21:17	7:24	20:24
15	5AH	19:05	14:20	5:20	7:15
13	6BH	1:00	0:00	0:15	0:00
15	* 15BH	28:00	19:14	12:42	2:48
13	* 14AH	10:35	4:44	3:30	4:50
TOTALS		168:19	117:22	48:41	91: 32

* Magnetrons serial numbers 15BH and 14AH failed after a total of 28:00 and 10:35 transmit time and were replaced with serial numbers 5AH and 6BH respectively. Both

CARS FORM SEP 69 PC: 2780

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
E-5	Service test of the Improved Magnetron (L-1951/7208) for the B-58 Search Radar. (U)

STATUS

failed magentrons have been returned to Bell Telephone Labs for analysis. (U)

30 September 1960:

Total accumulated times through 30 September 1960 are as follows: (U)

RTM Ser Nr	Magnetron Serial Nr	Total Transmit Time	Total Air Transmit Time	Total Long Pulse Time	Total Standby Time (Transmitter Off)
17	14BH	52:22	32:17	12.54	31:55
14	3AH	35:00	30:15	8:00	24:50
18	11AH	50:39	36:52	13:06	24:39
15	5AH	36:10	27:40	9:20	18:30
13	6BH	8:50	7:35	2:33	:45
15	15BH*	28:00	19:14	12:42	2:48
13	14AH*	10:35	4:44	3:30	4:50
	TOTALS	221:36	158:37	62:05	108:17

*Preliminary reports from Bell Telephone Labs on magnetrons 15BH and 14AH indicate that one tube was ruined by an external arc in the wave guide which sucked the window out of the magnetron. The other tube was arcing during initial tests but after some conditioning appears to be satisfactory for further service and will be returned.

A change effective production Aircraft Nr 55 will incorporate a magnetron bushing heat transfer clip. This change will allow the magnetron cathode to operate at a temperature of approximately 250° C opposed to the present 325° C. The magnetron life is expected to be increased by approximately 100%. ECP 21 CW, yet to be approved, will retrofit production Aircraft Number 39 through 54.

CARS FORM SEP 60 69a PC: 2790

TEST AND EVALUATION PROJECT STATUS SHEET

PROJECT NUMBER	PROJECT TITLE
E-5	B-58 Sensitivity Time Control (STC) Analysis (U)
REPORT SECTION C-3 of Part IV	PROJECT NCO SMS James R. Freeman

PROBLEM

To evaluate an improved method of sensitivity time control (STC). (U)

REQUEST AGENCY	DATE INITIATED	COMPLETION DATE	AUTHORIZATION
B-58 Test Force	June 1960	Estimated January 1961	AFR 80-14 SACR 80-2

STATUS

1 June 1960:

Convair's first method to achieve an STC effect was tested during two flights on Aircraft Nr 37 by the Test Force and was found to be unsatisfactory. The prime contractor has modified one indicator console unit (ICU) to incorporate a new Convair STC modification. Preliminary testing has been accomplished on the bench and during preflight with satisfactory results. Further testing will be accomplished by flight crews to determine the effectiveness of this modification during airborne operation. (U)

31 August 1960:

Flight evaluation results through 31 August 1960 are as follows:

Date	A/C Nr.	Comments
5 Jul 60	2434	Sensitivity time control was used during low level landing approach with unsatisfactory results.
12 Jul 60	2434	Sensitivity time control offered some improvement although the variable threshold pot gave practically the same results. Pictures were taken of the main indicator.
19 Jul 60	2434	STC was used at 30,000 ft altitude on Hl setting without a noticeable

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

OJECT NUMBER	PROJECT TITLE
E-6	B-58 Sensitivity Time Control (STC) Analysis (U)

STATUS

effect. Pictures were taken of the main indicator.

25 Jul 60 2434 STC was evaluated at high altitude. The STC effect reduced the video and background presentation in the same proportion.

The operators took pictures of the main indicator with a 35mm. handheld movie camera. The developed film was of no value for this evaluation. The STC effect is a definite aid for low altitude. (U)

30 September 1960

Additional Sensitivity Time Control (STC) data was not obtained during this reporting period. Efforts are constantly being made to obtain low level missions, necessary for this evaluation.

A Convair-Sperry-Raytheon proposal, ECP 21CX, includes a true Sensitivity Time Control (STC) circuit effective Aircraft 97.

TEST AND EVALUATION PROJECT STATUS SHEET

PROJECT NUMBER	PROJECT TITLE
E-7	Ammunition Feed System Analysis for the MD-7 Active Defense System (U)
REPORT SECTION	**PROJECT OFFICER**
C-3 of Part IV	Maj V. L. Peterson

PROBLEM

Ammunition Feed System failures have been the primary cause of the unsatisfactory fire-out rate of the E-58 Active Defense System. (U)

REQUEST AGENCY	DATE INITIATED	COMPLETION DATE	AUTHORIZATION
4750TS	1 August 1960	Estimated January 1961	AFR 80-14 SACR 80-2

STATUS

31 August 1960:

ARDC Project #102AW6 was established July 1960 at Eglin AFB to test the production ammunition feed system components. These components consist of the M-17 (T-99) links, M-3 (T-15) feeder, ammunition box, booster motor and the M-61 gun. This project requires ground firing of 100,000 rounds of production ammunition. Approximately 15,000 rounds have been fired through 31 August 1960 with the following ammunition feed system failure results. (U)

Date	Effect	Cause
19 Jul	Damaged M-3 Feeder Serial Nr 1011	Ammunition chute jam
27 Jul	Damaged M-3 Feeder Serial Nr 1002	(Last round switch) Failure
28 Jul	Damaged M-3 Feeder Serial Nr 1010	Stiff M-17 Link
26 Aug	Damaged M-3 Feeder Serial Nr 1014	Ammunition chute jam (U)

Carswell AFB ammunition feed system failure results from 1 June 1960 through 31 August 1960. (U)

Date	Effect	Cause
12 Jul	Extensive damage to front and rear T-15 feeder sprockets	Ammunition box jam caused by a stiff T-99 link
25 Jul	Damage to front and rear T-15 feeder sprockets	(Last round switch) Intermittent

CARS FORM DSP 69 FC: 8720

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
E-7	Ammunition Feed System Analysis for the MD-7 Active Defense System

STATUS

24 Aug	No ammunition feed system failure experienced

The 43rd DTE will monitor the Eglin Ammunition Feed System Project results and all aerial gun firing missions in the Wing. (U)

30 September 1960:

Eglin AFB Test Experience

Approximately 11,000 rounds of ammunition were fired during this period. To date a total of 25,000 rounds have been fired during the Eglin test. The following is a summary of ammunition feed stoppages by feeder serial number and the cause.

FEEDER S/N	CAUSE
401	Ammunition chute jam
27	Nose guide stud jammed sprocket
1014R	Ammunition Chute Jam
27	Ammunition Chute jam
CE*	Links and cases jammed in turret

*This has been the only ammunition feed stoppage since the flexible ammunition chute was fastened to the firing stand. The stoppages caused by ammunition chute jams have been primarily attributed to booster lag. A study is presently in progress to determine the effects of this problem.

Carswell AFB Experience

Date		
21 September 1960	Damage to T-15 Feeder rear sprocket and shaft	Ammo Box Jam Cause unknown
26 September 1960	Damage to front & rear T-15 feeder sprockets	Belt separation Caused by ammo box jam
26 September 1960	Damage to front & rear	Suspect feeder timing
29 September 1960	No feed system failure experienced.	

TEST AND EVALUATION PROJECT STATUS SHEET

PROJECT NUMBER	PROJECT TITLE
E-9	Operational Evaluation of the B-58 Bomb-Nav Quick Take-Off Capability (U)
REPORT SECTION: C-3 of Part IV	PROJECT OFFICER: Capt J. F. Brohn

PROBLEM

To determine the following:

a. System reaction time.

b. Airborne time required prior to "switch-over" to the Primary Navigation Stabilization Unit (PNSU). (U)

REQUEST AGENCY	DATE INITIATED	COMPLETION DATE	AUTHORIZATION
B-58 Test Force	June 1960	Estimated Indefinite	AFR 80-14 SACR 80-2

STATUS

1 June 1960:

An evaluation of the B-2 auxiliary reference (ARU) quick take-off capability has been completed as a part of Category II testing. The results of this evaluation are tabulated in the B-58 Test Force monthly progress reports of January, February and March 1960. (U)

The B-4 auxiliary reference unit (ARU) was flown on Acft Nr 31 during the special flight to Andrews AFB on 6 May 1960. The data collected peculiar to the B-4 ARU on the flight of 6 June 1960 and on the return flight to Carswelll AFB on 16 June 1960 is considered to be insignificant. Inasmuch as Aircraft Nr 31 is being scheduled for a considerable amount of aircraft maintenance, it is planned that the B-4 be installed on Acft Nr 37. (U)

31 August 1960:

Five (5) quick take-offs have been accomplished utilizing the B-4 Auxiliary Reference Unit (ARU). (U)

FLIGHT TEST DATA

Date	Acft Nr	System Turn-on	Satisfactory Vertical Reference	Correct System Heading	Doppler Lock	Astro Lock	Usable PNSU
5 Jul 60	2434	-2 1/4 Min	Yes	Yes	+2 Min	+28 Min	+57
12 Jul 60	2434	-1 Min	Yes	Yes	+9 1/2	+41 1/2 M	*
24 Jul 60	2429	-3 Min	Yes	No	+ 4 Min	+16 Min	+96
22 Aug 60	2431	-3 Min	No	No	+3 Min	+15 Min	+40
25 Aug 60	2431	-3 Min	Yes	No	+2 Min	+60 Min	+19

(All times tabulated above refer to aircraft take-off)

*The PNSU could not supply a usable vertical because of a malfunction within this unit. (U)

CARS FORM REP 60 69 FC: 2730

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
E-9	Operational Evaluation of the B-58 Bomb Nav Quick Take-off Capability (U)

STATUS

The B-4 ARU did provide a satisfactory vertical reference during four (4) of the five (5) quick take-offs executed. (U)

System heading was in error during three (3) quick take-offs. Preliminary analysis indicates that the normal drive rate of the heading loop will not, in all cases, supply an accurate system heading by the end of the B-4 ARU rapid erect cycle. (U)

A thorough study is in progress to determine the system parameters and configuration which contribute to this condition of system heading error. (U)

30 September 1960:

During this reporting period, three (3) quick take-offs have been accomplished utilizing the B-4 ARU. (U)

FLIGHT TEST DATA

Date	Ac# No.	System Turn-on	Satisfactory Vertical Reference	Correct System Heading	Doppler Lock	Astro Lock	Usable PNSU
8 Sep 60	2437	-2 1/2 Min	Yes	Yes	+2 Min	0 Min	Unknown
20 Sep 60	2437	-3 Min	Yes	Yes	+1 Min	0 Min	+31 1/2 Min
29 Sep 60	2437	-3 Min	Yes	Yes	+2 Min	0 Min	+60 Min

(All times tabulated above refer to aircraft take-off)

The B-4 ARU did provide a satisfactory vertical reference during the three (3) quick take-offs executed. (U)

System heading, during the three quick take-offs executed, was in error after completion of the B-4 ARU rapid erect cycle. However, correct system heading was available for take-off by utilizing Manual Heading Trim. (U)

Study of the heading problem indicates that system heading cannot slew to the correct value in the short rapid erect time of the B-4 ARU. The B-4 ARU does, in fact, supply a vertical reference in approximately the same time that system heading error slew would be initiated. Solution of the problem appears to be that of extending error slew beyond the rapid erect cycle or manually slewing heading after the rapid erect cycle has been completed. (U)

TEST AND EVALUATION PROJECT STATUS SHEET

PROJECT NUMBER	PROJECT TITLE
E-10	Tactical Evaluation of the Bomb-Nav System Effectiveness Based on Test Sortie Experience (U)
REPORT SECTION: C-3 of Part IV	PROJECT OFFICER: Capt R. E. Eberhard

PROBLEM

To evaluate the Bomb-Nav System effectiveness based on individual test sortie experience. (U)

REQUEST AGENCY	DATE INITIATED	COMPLETION DATE	AUTHORIZATION
B-58 Test Force	June 1960	Indefinite	AFR 80-14 SACR 80-2

STATUS

1 June 1960:

A sortie reporting format is being developed to meet the operational test requirements. (U)

31 August 1960.

During the Category II program the reliability data was presented as MTBF and satisfactory airborne operation data. This data has its limitations in that it does not take into account the maintenance manhours expended and the ability to turn the aircraft around. (U)

In order to obtain a more comprehensive measurement of the system effectiveness the basic approach used by ARINC Research Corporation is being studied to determine the best means of fitting it to the 43rd Bomb Wing. This method of measuring system effectiveness takes into account the reliability, repairability, maintainability, design adequacy, and the operational readiness. (U)

As an example of the type of information which this method gives, two charts are presented for the reliability of search radar. The first chart is the "Airborne Reliability" presented each month during Category II, showing the percent of the total flight time that the radar was satisfactory and useable. The second chart uses the same basic data but gives a "Reliability Function" curve which expresses the probability of satisfactory operation as a function of time. These curves are theoretically supposed to be exponential, and in fact, an exponential curve can be fit to agree with most of the data points. The equations for these curves are given on the graph. The constants shown

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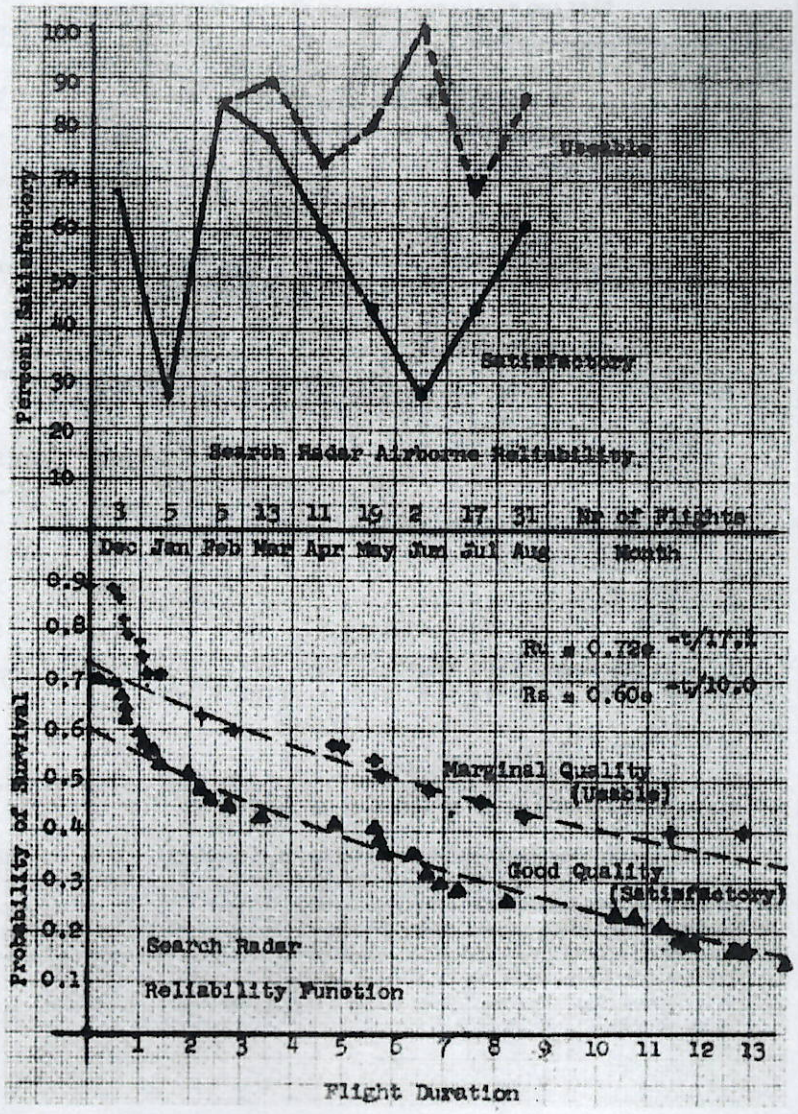

Figure 7
IV-99

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
E-10	Tactical Evaluation of the Bomb-Nav System Effectiveness Based on Test Sortie Experience (U)

STATUS

are what is termed an "Attrition Factor" and the "Mean Life." (U)

The "Attrition Factor" is a constant to allow for the heavy failure attrition in the system at take-off and for the first hour of flight. This effect can be caused by two things. One is that the system is adversely affected by environmental factors connected with turn-on, taxi and take-off. The other is that maintenance is not properly preparing the systems for flight. (U)

The "Mean Life" of the radar is the mean time to the next malfunction which will either degrade the radar or make it unusable. The following table summarizes the results for the search radar. (U)

	Good Quality Radar	Marginal Quality Radar
1. Probability of surviving for 10 hours	0.22	0.40
2. Attrition Factor	60%	72%
3. Mean Life	10.0 hrs	17.1 hrs
95% Upper confidence limit	17 hrs	30 hrs
95% Lower confidence limit	7.6 hrs	11 hrs

It must be emphasized that the mean life given is only applicable if the radar survives the first hour of flight. (U)

30 September 1960:

Reliability function curves for the rest of the Bomb-Nav sub-systems have been computed based on data from Aircraft Nrs 59-2428 through 59-2434. (U)

At the present time repairability and availability of the sub-systems are being computed. Repairability is defined as the probability that a failed system will be restored to operable condition within a specified active repair time. Figure 8 shows the repairability curve for the search radar. The gap between the two curves shows the improvement in maintenance skill levels and the decrease in malfunction complexity. The availability is defined as the probability that a system will be available for use out of the total time it may be required. For the Search Radar a significant improvement in this area is shown in the following table.

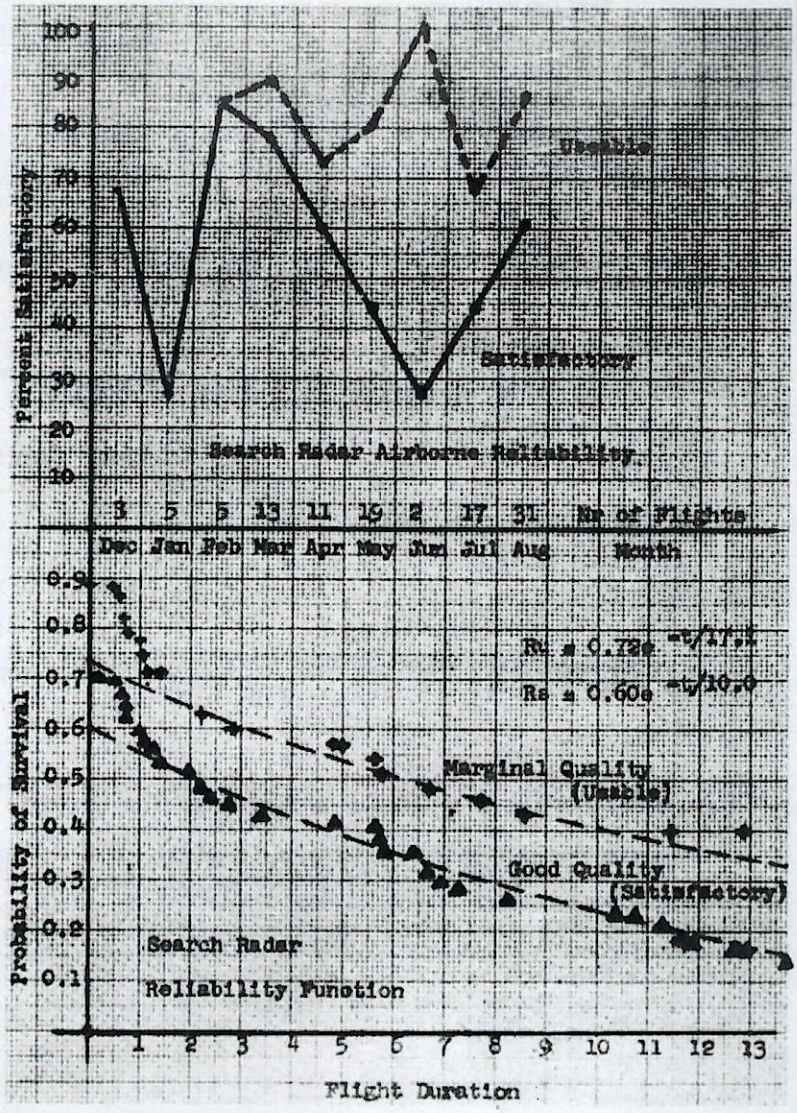

Figure 7
IV-99

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
E-10	Tactical Evaluation of the Bomb-Nav System Effectiveness Based on Test Sortie Experience (U)

STATUS

are what is termed an "Attrition Factor" and the "Mean Life." (U)

The "Attrition Factor" is a constant to allow for the heavy failure attrition in the system at take-off and for the first hour of flight. This effect can be caused by two things. One is that the system is adversely affected by environmental factors connected with turn-on, taxi and take-off. The other is that maintenance is not properly preparing the systems for flight. (U)

The "Mean Life" of the radar is the mean time to the next malfunction which will either degrade the radar or make it unusable. The following table summarizes the results for the search radar. (U)

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95% Upper confidence limit	17 hrs	30 hrs
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It must be emphasized that the mean life given is only applicable if the radar survives the first hour of flight. (U)

30 September 1960:

Reliability function curves for the rest of the Bomb-Nav sub-systems have been computed based on data from Aircraft Nrs 59-2428 through 59-2434. (U)

At the present time repairability and availability of the sub-systems are being computed. Repairability is defined as the probability that a failed system will be restored to operable condition within a specified active repair time. Figure 8 shows the repairability curve for the search radar. The gap between the two curves shows the improvement in maintenance skill levels and the decrease in malfunction complexity. The availability is defined as the probability that a system will be available for use out of the total time it may be required. For the Search Radar a significant improvement in this area is shown in the following table.

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
E-10	Initial Evaluation of the Bomb-Nav System Effectiveness Based on [illegible] Experience (C)

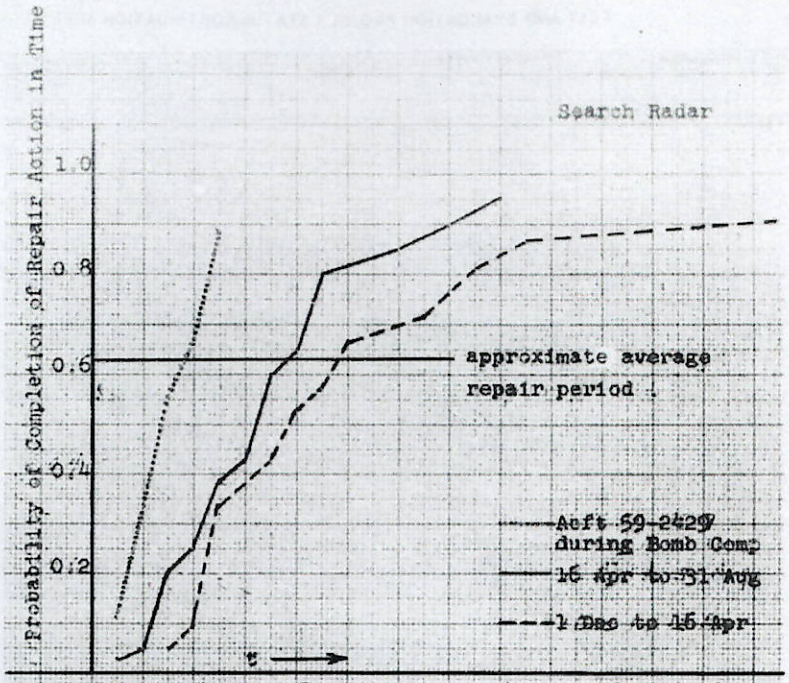
STATUS

Time Period	Total Time Aircraft Days	Total In-Commission Time %	Total Out-of-Commission Time %: Active Repair Time	Total Out-of-Commission Time %: Other
1 Dec - 15 Apr	[illegible]	[illegible]	16	36
16 Apr - 31 Aug	[illegible]	73	11	16
1 Dec - 31 Aug	[illegible]	65	13	22

A rise in the percentage of [illegible] In-Commission time is impressive, particularly since the number of flights and aircraft have more than doubled with no significant increases in trained Bomb-Nav maintenance personnel. It is [illegible] to note that this increase in In-Commission time was realized through a reduction of the time spent awaiting parts and administrative delays. Active repair time cannot be expected to decrease much further during the period of training of technicians and developing of operational [illegible].

When this study is completed a Specific [illegible] Report for the "B" model (aircraft [illegible]) Bomb-Nav System will be [illegible] on the AN/ASQ-42 Systems about March [illegible] if the required data is available at that time.

CARS FORM SEP 58 69a FCI 2730



Repairability Chart for the Search Radar

Data from 20 repair periods 1 Dec to 15 Apr

39 repair periods 16 Apr to 31 Aug

8 repair periods on Acft 59-2429 during Bomb Competition Practice

Normal 2 shift maintenance operation

Bomb Comp 3 shift maintenance operation

Figure 8
IV-102

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
E-10	[illegible] Evaluation of the Bomb Nav System Effective-ness Based on [illegible] Experience (C)

STATUS

Time Period	Total Time Aircraft Days	Total In-Commission Time %	Total Out-of-Commission Time %: Active Repair Time	Other
1 Dec - 15 Apr	[illegible]	[illegible]	16	36
16 Apr - 31 Aug	[illegible]	73	11	16
1 Dec - 31 Aug	[illegible]	65	13	22

A rise in the percentage of [illegible] In-Commission time is impressive, particularly since the number of flights and aircraft have more than doubled with no significant increase in trained Bomb-Nav maintenance personnel. It is important to note that this increase in In-Commission time was realized through a reduction of the time spent awaiting parts and administrative delays. Active repair time cannot be expected to decrease much further during the period of training of technicians and developing of operational [illegible].

When this study is completed a Specific [illegible] Report for the "B" model (aircraft [illegible]) Bomb Nav System will be submitted on the AN/ASQ-42 Systems about March [illegible] if the required data is available at that time.

TEST AND EVALUATION PROJECT STATUS SHEET

PROJECT NUMBER	PROJECT TITLE
E-11	Evaluation of the Long Range Communications System (HACON) for the B-52 Aircraft (U)
REPORT SECTION	**PROJECT OFFICER**
C-3 of Part IV	2/Lt M. B. Veal

PROBLEM

To determine tactical capabilities of the HACON long range communications system and to determine the extent of radio frequency interference caused by HACON with other aircraft systems. (U)

REQUEST AGENCY	DATE INITIATED	COMPLETION DATE	AUTHORIZATION
43 DTE	1 August 1960	Estimated 1 March 1961	AFR 80-1-SAOR 80-2

STATUS

31 August 1960.

The name "HACON" is derived from a combination of the names of the two companies responsible for its development, Hughes Aircraft and Convair. HACON is a high frequency, high power, long range communications system capable of AM and single side band modes of operation. Twenty frequencies may be preset and selected by a channel switch. The antenna appears roughly as a dipole when looked at (electrically) from the transmitter. The nose boom is the primary radiator while the forward portions of the aircraft, particularly the front of the pod, the spikes, the wing leading edges, etc., contribute to the total antenna. (U)

Although no aircraft with HACON installed is programmed for delivery to the 43rd Bomb Wing prior to early September, the project was initiated on 1 August for system familiarization, with respect to problems and capabilities. To date the operating hazards considered for both maintenance and aircrews have been explored and a Wing regulation has been written which outlines safe procedures to be used in connection with HACON. In addition, action is being taken to revise Technical Orders in view of the study of HACON operating hazards. The fact that the aircraft skin radiates RF during HACON transmissions is the basis for all the operating hazards. The 43rd Bomb Wing is working closely with Convair on the radio frequency interference problems. The primary interference problem is with search radar during HACON transmission. (U)

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
B-11	Evaluation of the Long Range Communications System (HACON) for the B-58 Aircraft (U)

STATUS

30 September 1960

During September two aircraft with HACON installed were available. No formal testing was scheduled for September, however, some information was obtained and is tabulated below. Formal testing is scheduled to begin with three missions in October.

Six flights were made with HACON. Of these six:

1 - reported HACON not used.
1 - reported garbled reception, no attempted transmission.
1 - reported broken transmission and reception on the two channels tried. One radio contact was made at approximately 1000 miles.
3 - reported good communications capability with HACON and made contacts as follows:
3 contacts 800 - 1000 mile
2 contacts 1100 - 1500 mile
2 contacts approximately 1600 miles

The DSO on each of the above flights was contacted by the Project Officer after the flight. They reported isolated cases of interference apparently caused by HACON. One report of "stick-jitter" during auto-pilot, Mach-altitude mode was traced to lack of proper filters on certain amplifiers in the auto-pilot system. One case of operators not being able to transfer control of HACON from 3rd station to 1st station was attributed to a T.O. being out of date and the operator being unfamiliar with the system. One case of search radar scope clutter was reported during HACON transmission; however, it in no way completely blanked the scope. This effect is most pronounced at 15 mc and 30 mc.

The Technical Order discrepancy mentioned above has been corrected and was published in the 22 July revision to T.O. 1F-58A-1.

CARS FORM DEC 60 69a FCI 2780

TEST AND EVALUATION PROJECT STATUS SHEET

PROJECT NUMBER	PROJECT TITLE
E-14	Photo Recorder Unit Evaluation (U)
REPORT SECTION C-3 of Part IV	PROJECT OFFICER Capt. R.K. Markel

PROBLEM

The operation of the search radar photo recording equipment is unsatisfactory. (U)

REQUEST AGENCY	DATE INITIATED	COMPLETION DATE	AUTHORIZATION
DCB	1 Aug 60	1 Nov 60	AFR 80-14 SACR 80-2

STATUS

1. Fourty-four samples of photo recorder film were reviewed. These samples comprised approximately 1,000 ft. of film. (U)

2. Picture quality of the film as rated by the reviewer was: (U)

4 excellent
18 good
6 fair
16 poor or completely lacking video

3. All of the film with excellent picture quality was from bombing competition aircraft which had special modifications of the PRU which are being considered for application to all tactical B-58 aircraft. (U)

4. Other PRU troubles and their incidence in the reviewed samples were: (U)

a.	Picture intensity too high	18
b.	picture intensity too low	1
c.	range marks too bright	18
d.	range marks too dim	3
e.	range centering grossly incorrect	11
f.	azimuth marks too bright	8
g.	azimuth marks too dim	8
h.	azimuth centering grossly incorrect	8
i.	matrix lights too bright	6
j.	matrix lights missing	3
k.	bezel lights too bright	1
l.	bezel lights missing	2
m.	double exposures or sticking shutters	4

5. Two of the four film samples rated as having excellent picture quality had centering troubles, overly bright range marks, and matrix lights missing. (U)

CARS FORM 69 SEP 60

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
E-14	Photo Recorder Unit Evaluation

STATUS

30 September 1960:

Photo Recorder Unit Evaluation

1. Photo recorder film was examined from nine of the flights shown in September

2. Six of the nine samples examined were from bombing competition aircraft. The PRU's of these aircraft had been modified to the configuration outlined in Raytheon Search Radar Bulletin Nr 27. Results of these six samples were:

a. Five had excellent quality pictures. One of the five had a range mark which was too bright and too wide. Another suffered a film jam after two hours of flight.

b. The sixth sample had poor and over-exposed pictures. Both the range and azimuth marks were wide and over exposed. Azimuth centering was grossly in error.

c. Investigation of this failure disclosed that the PRU had been removed and replaced prior to flight. Required adjustments were not made.

3. The film from the other three samples was graded: (1) excellent in all respects for one; (2) poor and over-exposed pictures for the second; (3) under-exposed pictures with no video showing on the third. Picture quality and exposure settings were so poor for the third sample that centering and marker intensity could not be evaluated.

4. The problems with modified PRU's now appears to be predominantly maintainability. The units are difficult to mate to the aircraft and require excessively careful handling for installation. Adjustments made on the bench must be repeated and corrected after the unit is installed. To make the adjustments in the aircraft is difficult and the results are inaccurate.

A letter is being prepared to SAAMA requesting that kits be furnished so that the PRU's in B-58 aircraft Nrs 59-2428 through 59-2434 may be modified to the recommended configuration. (Note: B-58 Aircraft Nrs. 59-2429 and 59-2430 have already been modified.) All Air Force B-58 aircraft subsequent to Nr 59-2434 will have this configuration as standard equipment.

Redesign of the PRU is being considered for the B-58's with Convair production numbers of 96 and later. (Reference: Meeting on Discrepancies in Design and Handling of Radar Camera in AN/ASQ-42 System on 29 September 1960. Minutes by E. C. Cauthen, Convair Process Control.)

CARS FORM SEP 60 69a FC: 2780

TEST AND EVALUATION PROJECT STATUS SHEET

PROJECT NUMBER	PROJECT TITLE
E-15	B-58 Aircraft MD-7 Active Defense System Harmonization and Boresighting (U)
REPORT SECTION: C-3 of Part IV	PROJECT NCO: MSgt M. C. Weeb

PROBLEM

To determine (Part I) the compatibility of technical data, procedures and ground support equipment for harmonizing and boresighting the B-58 MD-7 Active Defense System; (Part II) the frequency of boresighting and harmonization by rechecking every fifty (50) flying hours until a realistic time schedule can be established. (U)

REQUEST AGENCY	DATE INITIATED	COMPLETION DATE	AUTHORIZATION
43 DTE	1 September 1960	Part I Dec 60 Part II Sep 61	AFR 80-14 SACR 80-2

STATUS

31 August 1960:

The tactical boresight and harmonization equipment was delivered February 1960. To date harmonization and boresight checks have not been accomplished on tactical B-58 aircraft. Part I of this project is scheduled to be accomplished during the Phantom Target Tester Evaluation Project. Part II will commence during the initial boresight and harmonization checkout of Aircraft Nr 2436 and continue as additional tactical aircraft are added to the inventory. (U)

30 September 1960:

Harmonization and boresight of the MD-7 Active Defense System began 12 September 1960 on Aircraft Nr 436. The harmonization and boresight procedures consist of optical, mechanical and radar alignments of the MD-7 Active Defense System. The optical and mechanical work was completed 15 September 1960. Aircraft availability was the primary reason the radar alignment was not completed. It was felt that the desired results could not be achieved with the present test equipment. ECP 82AQ, a modification to the test equipment designed to eliminate unwanted ground returns, will resolve this problem.

Following are the discrepancies noted and corrective actions to be taken:

Boresight and harmonization kits (hardware)

Discrepancies - none

CARS FORM SEP 69 FCI 2790

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
E-15	B-58 Aircraft MD-7 Active Defense System Harmonization and Boresighting

STATUS

Technical data (procedures)

Discrepancies	Corrective Action
T.O. 35D5-12-45-11 paragraph 4-5 page 4-2	Add ± 2 feet tolerance
Paragraph 48 page 4-2 sub-paragraph o	Add rotate gun so index pin of gun will drop in. Add comment that top right barrel looking aft is for telescope.
T.O. 1B-58A-2-14 paragraph 3-104 page 3-32 sub-paragraph d	Change ± 2 inches to ± 2 feet
Page 2-66	Revise drawing to include changes noted under T.O. 33D5-12-45-1, number 3.
Paragraph 3-104 Page 3-32	Reference T.O. 33D5-12-14-11 in that paragraph
T.O. 1B-58A-8-1-1 Tape Instructions for 309 Tape	In 900 series tests, add comments to rotate gun so index pin of gun drops in place. Also, add comments that top right barrel looking aft is for telescope.

CAPS FORM 40a

TEST AND EVALUATION PROJECT STATUS SHEET

PROJECT NUMBER	PROJECT TITLE
E-16	Accuracy Evaluation of the B-58 MD-7 Active Defense System with the Phantom Target Tester (U)
REPORT SECTION	**PROJECT OFFICER**
C-3 of Part IV	Maj V. L. Peterson

PROBLEM

Accuracy evaluation of the MD-7 Active Defense System during airborne operations. (U)

REQUEST AGENCY	DATE INITIATED	COMPLETION DATE	AUTHORIZATION
43 DTE	1 September 1960	December 60	AFR 80-14 SACR 80-2

STATUS

31 August 1960:

Aircraft #58-1019 is at Convair where instrumentation for the Phantom Target Tester is being installed. Tests will be flown after checkout of the MD-7 system and the Phantom Target Tester (PIT). The MD-7 system of this aircraft now has a transistorized computer, bringing the system to tactical configuration. Flight dates will be established after delivery of the aircraft from Convair to Carswell. (U)

30 September 1960:

Limited progress has been made on checkout of the Phantom Target Tester and the MD-7 Active Defense System in the ship. Test aircraft No 58-1019 has flown two flights on higher priority engine noise tests and has not been available for P. T. T. tests during September. Airborne MD-7 and instrumentation checkout is planned for the first Phantom Target flight scheduled on 21 October 1960. Subsequently, two flights per week are planned throughout November.

CARS Form [illegible]

SECTION C PROJECTS

3. Active Projects being conducted

Tactical Ground Support Series

Proj No	Title	Page
G-1	Air Conditioning System TGSE	IV-111
G-2	Airframe System TGSE	IV-115
G-3	Communications System TGSE	IV-120
G-4	CNAS, TGSE	IV-124
G-5	Central Power System TGSE	IV-126
G-6	DECM System TGSE	IV-128
G-7	Electrical System TGSE	IV-133
G-8	Bomber Recording System TGSE	IV-135
G-9	Fire Control System TGSE	IV-137
G-10	Flight Control System TGSE	IV-141
G-11	Hydraulic System TGSE	IV-154
G-12	IBDA System TGSE	IV-157
G-13	MNAS TGSE	IV-159
G-14	Pod System TGSE	IV-162
G-15	Weapon Control System TGSE	IV-164
G-16	Spike Positioning System TGSE	IV-170
G-17	Radar Beacon System TGSE	IV-172
G-18	AF Standard and Commercial Common TGSE	IV-174
G-19	Special Projects TGSE	IV-177
G-20	Technical Data TGSE	IV-179

TEST AND EVALUATION PROJECT STATUS SHEET

PROJECT NUMBER	PROJECT TITLE
C-4	B-58 Air Conditioning System TCSE (U)
REPORT SECTION	**PROJECT OFFICER**
C-3 of Part IV	Capt Southerland

PROBLEM

To evaluate the TCSE associated with the B-58 Air Conditioning System (U)

REQUEST AGENCY	DATE INITIATED	COMPLETION DATE	AUTHORIZATION
B-58 Test Force	May 1960	Est. Feb 61	AFR 80-14

STATUS

Eight Key Items: 6 Testers, 2 Ground Handling, 0 Tools (U)

GSEL		P/N	1st Art Del Date	Est Comp Date
1009	Test Set - A/C Temp Cont Bench	HS7495	Jul 60	Jan 61
1012	Test Set - A/C Temp Cont Sys	HS7495	Dec 59	Dec 60
1013	Test Set - Air Cond Remote SS	HS7497	Nov 59	Dec 60
1014	Test Stand Assy - A/C Sys Comp	SE2905	Mar 60	Jan 61
1015	Kit-Adpts and Fittings, A/C	SE8793	Feb 60	Jan 61
1016	Adapter Assy - A/C Sys Checkout	SE8783	Dec 59	Dec 60
3001	Lubrication Assy - Air Cond	SE2740-3	May 60	Sep 60
3006	Air Conditioner-Ground, Eng Dr	SE2935	Dec 59	Feb 61 (U)

31 May 60:

1. Items in use without reported discrepancies: 1012, 1013, 1016, 3001. (U)

2. Discrepancies:

a. 1009 - Returned to Convair to repair major deficiencies discovered during Test Force initial check. (U)

b. 3006 - (1) Servo blower completely unsatisfactory (Ref TF UR's 60-178, 60-179, 60-180, 60-257, 60-438, 60-582). (U)

(2) Four magnetic clutch failures (compressor clutch). Two failures after vendor modification of gear case. (U)

CARS FORM 69 FSC 2750

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
G-1	B-58 Air Conditioning System TGSE

STATUS

(3) Insulation on upper section of engine compartment ignited during operation on 27 May 60. TF UR 60-642 submitted regarding combustible insulation. (U)

(4) Emergency U.R. TF 60-646 submitted on Packette engine manifold extension (P/N SE8444-53) causing blockage of manifold and creating excessive heating stack resulting in fire and heat damage. (U)

3. Items not utilized:

a. 1014 - No electrical power available to operate. Work order request submitted o/a 1 Mar 60. (U)

b. 1015 - Requires 1014 to be utilized. (U)

c. GSEL 3004 Trailer, Tank Water Servicing, P/N 7-16-416 non-key item; has not been used. It will be recommended that this item be deleted as a GSEL item as Base Facilities are utilized for this function. (U)

31 Aug 1960:

1. 1009 - Returned from Convair and put into operation 18 July 1960. 13 diodes, 2 resistors, 1 potentiometer, 2 fuses and 1 vacuum tube replaced prior to return. Total of 46.2 hours of operation. 1 complete check of A/C Temp Cont. and several partial checks. Requires appx. 16 hours for complete A/C Temp Cont. Check. (U)

2. 1012 - 2 items have been used once each. Satisfactory fit and function has been demonstrated Requires appx. 4 hours for complete system check. (U)

3. 1013 - Has been used at the rate of appx. 1 time per month. Requires appx. 30 min for complete system check. (U)

4. 1014 - Used once. Satisfactorily located malfunction. Connected to electrical power 12 July 60. (U)

5. 1015 - Used with 1014. No malfunctions reported. (U)

6. 1016 - Used with 1012. No malfunctions reported. (U)

7. 3001 - Used many times daily on preflights. Item is satisfactory for B-58 tactical operation. (U)

8. 3006 -

a. Compressor magnetic clutches - ACA 4-102-70518 replaces the old type clutch to engine coupling with a Falk coupling to reduce axial loading on the clutch. Average time on clutches

CARS FORM 69a FC: 2790

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
G-1	B-58 Air Conditioning System TCSE

STATUS

prior to failure with old coupling was 102.8 hours. Average time on clutches with new couplings is 55.9 hours. (High time 187 hours). One clutch failed at 13.4 hours, however a faulty bearing was found on clutch teardown. A faulty bearing was found in the new replacement clutch. 9 new bearings from spares were found to be faulty. Convair is investigating this problem area with the manufacturer of the clutch (Vickers). (U)

b. Servo Blowers - No failures on Tactical Units since ACA 4-102-70002 addition of check valve in servo air line. ACA 4-102-70549, replacement of old type servo blower with Dexter Conde blower has been accomplished on five units. This removes the fuel tank pressurization feature from the air cond., however this ACA is on stop for further evaluation by B-58 WSPO and Convair. (U)

c. Combustible Sound Insulation. Presently being replaced by Convair with non-combustible type insulation as units are made available by 43rd B.W. (U)

d. D.C. Generators: A total of 15 D.C. Generators have failed on tactical units. There have been 6 simultaneous failures of D.C. Generators and Compressor Magnetic Clutches. This represents 33 1/3% of the Magnetic Clutch failures. This problem is under investigation. (U)

30 September 1960:

1. The Category III TCSE Evaluation plan that became effective 1 August 1960 designates data collection and TCSE evaluation during normal maintenance usage of the Air Conditioning System peculiar TCSE. The following exceptions require a special effort to evaluate through all possible modes of operation in the limited time available for the evaluation: CSEL: 1009, 1012, 1013, 1014, 3006. (U)

2. 1009: Item has a total of 57.2 hours operation with no further reported discrepancies. (U)

3. 1012: Three items have been used a total of 27.8 hours. Utilization has been insufficient to evaluate this item. (U)

4. 1013: Three items have been used a total of 11 times during this reporting period. One item has electrical cable in repair. (U)

5. 1014: Item used once for a partial check out of cabin temperature controller. No reported discrepancies. (U)

6. 1015: Used with 1014. No discrepancies reported. (U)

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
G-1	B-58 Air Conditioning System TCSB

STATUS

7. 1016: Used with 1012. No discrepancies reported. (U)

8. 3001: No change in status. (U)

9. 3006:

a. Compressor Magnetic Clutches: Ten (10) units with the Falk coupling have been used a total of 1276 hours (high time 265 hours) without a compressor magnetic clutch failure. (U)

b. Servo Blowers: There have been a total of five failures of the Dexter Conde servo blower on the three (3) units at CAFB that have had ACA 4-102-70549 accomplished. High time 71.2 hours, low time 0.8 hours. Average time 33.2 hours. There have been no additional failures of the old type blower on tactical units. (U)

c. D.C. Generators: Standard Products, Inc., Wichita, Kansas is scheduled to have a representative at Carswell AFB 5 October 1960 to investigate this problem.

d. Engine low oil pressure and engine hour meter pressure switch mounting nipple. This nipple is a threaded pipe that screws into the accessory case P/N 533659. Item broke at accessory case and oil sprayed on exhaust shroud and caused fire. Subject switches have been mounted on the air conditioner's frame work with a suitable bracket and a flexible oil line run from the accessory case to the switches. (U)

TEST AND EVALUATION PROJECT STATUS SHEET

PROJECT NUMBER	PROJECT TITLE
C-2	B-58 Airframe System TCSE (U)
REPORT SECTION	**PROJECT OFFICER**
C-3 of Part IV	Capt Southerland

PROBLEM

To evaluate the TCSE associated with the B-58 Airframe System (U)

REQUEST AGENCY	DATE INITIATED	COMPLETION DATE	AUTHORIZATION
B-58 Test Force	May 1960	Est Jun 61	AFR 80-14

STATUS

Forty-four Key Items: 7 Tenants, 22 Ground Handling, 15 Tools (U)

GSEL	Nomenclature	P/N	Iot Act Del Date	Est Comp Date
1101	Programmer Assy-NLG Checkout	SE7857	Jan 60	Sep 60
1115	Test Set-Center of Grav Sys	SE2997	Dec 59	Dec 60
1116	Test Set-Engine Vibration	None	------	Jun 61
1119	Stand Assy-Pneu Comp Test	S-421-76599	Nov 59	Feb 61
1121	Test Set, Nose Steer Ctrl Sys	SE2990	Dec 59	Dec 60
1134	Inspection Standard Kit-Panel	SE8796	Dec 59	Dec60
1141	Fixture Assy-Pneu Comp Test	SE8810	Mar 60	Feb 61
3102	Link Assy-MLG Oleo Strut Re	SE2897	Feb 60	Feb 61
3104	Net Assy-Preservation SAF	SE2523-	Feb 60	Sep 60
3105	Sling Assy-Elevon Spacer Retaining	SE2527	Mar 60	Sep 60
3108	Platform Assy-Crimpers Xmtr	SE2624-	Feb 60	Dec 60
3109	Cover Assy-Turret	SE2953-1	Dec 59	Dec 60
3110	Sling Assy-Engine Seal	SE2531-1	Feb 60	Sep 60
3111	Adapter Kit Assy-Fuel Sys	SE2907	Feb 60	Feb 61
3113	Retainer Assy-Lg Cont Valve	SE2610	Jul 59	Dec 60
3114	Link Assy-Brake System Rigg	SE2595-1	Feb 60	Feb 61
3115	Pin Assy-Elevator Rod Saf	SE2525-5	Feb 60	Sep 60
3119	Adapter Assy-MLG Wheel Jacking	SE2512-803	Feb 60	Sep 60
3129	Cover Assy-Rod Umbilical Plug	SE2906	Feb 60	Sep 60
3130	Brace Assy-Canopy Nav DSO Sta	SE8804	Dec 59	Dec 60
3150	Jack Assy-Engine Nacelle	SE2856	Apr 60	Dec 60
3152	Crane Assy-Main Stand	SE2833-1	Jan 60	Dec 60
3155	Adapters-Fuel Tank Purging	SE2877	Apr 60	Feb 61
3156	Compressor Pack-Air, Gas Tur	377360	Nov 59	Jan 61

CARS FORM 69 FC: 2730

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
G-2	B-58 Airframe System TGSE

STATUS

CSEL	NOMENCLATURE	P/N	1st Art Del Date	Est Comp Date
3163	Dolly Assy-MLG Positioning	SE2923	Feb 60	Dec 60
3175	Adapter Kit-Engine Rollover	106397	Jan 60	Dec 60
3176	Adapter-Engine Instl & Rem	106395	Dec 59	Dec 60
3177	Air Lift Adapter-jet Engine	106481	Dec 59	Dec 60
3198	Safety Lock-Door, Inflt Refuel Recept	SE8920-1	---	Jun 61
5102	Adapter-MLG Trunnion Torqueing	SE2736	Feb 60	Dec 60
5103	Wrench Assy-NLG Wheel Ret Nut	SE2828	Apr 60	Mar 61
5104	Jack Assy-Landing Gear Wheel	SE2864-1	Jan 60	Dec 60
5107	Fix Assy-Adj, NLG Door Uplatch	SE2646	Apr 60	Mar 61
5109	Kit Assy-Hinge Pin Instl	SE2647-1	Feb 60	Dec 60
5110	Adapter Assy-Wing Drain, Fuel	SE2927	Mar 60	Dec 60
5113	Fix Assy-LG Wheel Demount	SE2863-1	Jan 60	Comp May 60 Rpt G-2-1 31 May 60
5169	Wrench-MLG Gland Nut	SE8801	Nov 59	Jun 61
5170	Wrench-NLG Gland Nut	SE8800	Nov 59	Dec 60
5171	Tool Assy-Brzg, High Temp Pan	SE8795	Feb 60	Jun 61
5173	Ejector Assy-Air, Struct Rep	SE8786	May 60	Dec 60
5174	Tool Kit-Preparation, Struct	SE8787	Feb 60	Dec 60
5175	Tool Kit-Pressure, Struct Rep	SE8788	Mar 60	Dec 60
5179	Temp Control Unit-Struct Repair	Mod70323	Apr 60	Jun 61
5188	Back-up Fixture-High Temp Panel Rpr	SE8919-1	Jul 60	Jun 61 (U)

31 May 60

1. Items in use with no reported discrepancies: 1101, 1121, 1134, 3104, 3105, 3108, 3109, 3110, 3113, 3115, 3119, 3129, 3150, 3152, 3175, 3176, 3177, 5102, 5104, 5109, 5110, 5170, 5173, 5174, 5175. (U)

2. Discrepancies:

a. 1115 - Unable to zero totalizer with methods and procedures in TO 1B58A-2-10, TF UR 60-506. (U)

b. 3156 - Problem areas - bleed air duct, load control valve, and random failures of other items: Reference TF UR's 59-1702, 60-155, 60-157, 60-244, 60-255, 60-256, 60-430, 60-447, and 60-511. T.O. 35D12-2-2-71 calls out 18 items of special equipment not ECL listed. (U)

CARS FORM 69a

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
C-2	B-58 Airframe System TPSE

STATUS

c. 5103 - UR is being written recommending that ear type handles be replaced with "Tee" type handles. (U)

d. 5113 - Completely unsatisfactory. Reference specific item report number C-2-1, dated 31 May 60. (U)

e. 5179 - Calibration instructions for indicator not adequate. (U)

3. Items not Utilized.

a. 1116 - To be replaced by Standard Air Force item when available - Interim Equipment in use. (U)

b. 1119 - No electrical power in shop. W.O. 630-60. (U)

c. 1141 - Used with OSEL 1119 (see b above) (U)

d. 3102 - No aircraft maintenance has required the use of this item. (U)

e. 3111 - Tactical aircraft maintenance has not required use of this item. (U)

f. 3114 - Tactical aircraft maintenance has not required use of this item. (U)

g. 3130 - Maintenance personnel state this item is not required. OSEL 3130.01 for Aircraft 48-56 has been cancelled. (U)

h. 3155 - Tactical aircraft maintenance has not required use of this item. (U)

i. 3163 - Tactical aircraft maintenance has not required use of this item. (U)

j. 5107 - Tactical aircraft maintenance has not required use of this item. (U)

k. 5169 - Tactical aircraft maintenance has not required use of this item. (U)

l. 5171- Required OSEL 9146, 9147 and 9148 which have not been received. (U)

31 Aug 60:

1. Items used without reported discrepancies: (U) 1101, 1115, 1121, 1134, 3102, 3104, 3105, 3109, 3110, 3113, 3134, 3115, 3119, 3129, 3150, 3152, 3175, 3176, 3177, 5102, 5107, 5110, 5113, 5170, 5173, 5174, 5175, 5179.

CARS FORM 0&P 00 69a FC: 2700

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
G-2	F-5B Airframe System TGSE

STATUS

2. 1119 - Item AWP (Gages) (U)

3. 1141 - Used with 1119 (U)

4. 3108 - Not required with GSEL 2414 in use (U)

5. 3156 - All units have the new high Temp (600°F) hose, 90° elbows and new gamah fittings installed. There have been no failures to date, however the maximum time accumulated to date on a hose is 14 hours. (U)

6. 5104 - Ref TFUR 60-557 Screw extension could be screwed too far out allowing screw extension to collapse. ACA-4-102-70553 should correct this problem. (U)

7. 5109 - Item has proved unsatisfactory on interim aircraft; however, it has not been used on tactical aircraft with new hinge pins and/or bussings. (U)

8. Status of other items (3111, 3130. 3155, 3163, 5103, 5169, 5171) unchanged from May 1960 report. (U)

9. 5188 - Used with 5171 (U)

30 September 1960:

1. The Category III TGSE Evaluation plan that became effective 1 August 1960 designates data collection and TGSE evaluation during normal maintenance usage of the airframe system peculiar TGSE. The following exceptions require a special effort to evaluate through all possible modes of operation in the limited time available for the evaluation. GSEL: 1115, 1116, 1119, 1121,. 3156, 5171. (U)

2. Items in use without reported discrepancies: (U) 1101, 1115, 1121. 1134, 3102, 3104, 3105, 3109, 3110, 3111, 3113, 3114, 3115, 3119, 3129, 3150, 3152, 3175, 3176, 3177, 5102, 5104, 5107, 5109, 5110, 5173, 5174, 5175, 5179 (U)

3. No change from 31 August Status GSEL: 1119, 1141, 3108, 3130. (U)

4. 3155: Convair has recommended an engineering study be made of the hose adapters as they are not compatible with the air hoses available. (U)

5. 3156: This item has operated satisfactorily with the exception of standard switch (start and load) failures. No discrepancies have been reported on new high temp. (500°F) hose. (U)

CARS FORM [illegible] FEB 1959

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
G-2	B-58 Airframe System TGSE

STATUS

6. 3163: No change from 31 May 1960 status. (U)

7. 5103: U.R. TF 60-780, 9 September 1960, submitted recommending that "ear" type handles be replaced with "T" handle. (U)

8. 5169 & 5170: Convair report 85-R-18, 14 September 1960 states that these items are to be replaced with CSEL 9166 Standard AF Wrench FSN 5120-513-1754 for 2nd Wing. (U)

9. 5171: Item still requires ancillary equipment. (U)

10. 5188 used with 5171. (U)

CARS FORM SEP 65 69a PG: 3730

TEST AND EVALUATION PROJECT STATUS SHEET

PROJECT NUMBER	PROJECT TITLE
G-3	B-58 Communications System TGSE (U)
REPORT SECTION	Project NCO:
C-3 of Part IV	QMS Kiff

PROBLEM

To evaluate the TGSE associated with the B-58 Communications System

REQUEST AGENCY	DATE INITIATED	COMPLETION DATE	AUTHORIZATION
B-58 Test Force	May 1960	Est Aug 61	AFR 80-14

STATUS

Nine Key Items Authorized: 8 Testers, 1 Ground Handling (U)

GSEL	NOMENCLATURE	P/N	1st Art Del Date	Est Comp Date
1201	Test Set-Radio, Preflight	708240-1	Dec 1959	April 61
1202	Test Set-Radio, RT Unit	708241-1	Dec 1959	May 60
1203	Test Set-Radio Subassembly	708242-1	May 1960	June 61
1204	Test Set-Radio, Intercomm	708243-1	Dec 1959	Feb 61
1205	Test Set-Radio, Plug-In Unit	708 269-1	Jan 1960	June 61
1250	Test Set-Port Anlyzr, LRC	310700	Sep 1960	Aug 61
1251	Test Set-Comp Maint, LRC	310501	May 1960	Aug 61
1252	TestSet - Plug-In, LRC	310600	May 1960	Aug 61
3202	Cooling Kit - Radio Set	708278-1	Apr 1960	Sep 60 (U)

31 May 1960:

1. Items in use without reported discrepancies: 1201 and 3202. (U)

2. Discrepancies:

a. 1202 - Has had random power supply failures which have kept the tester out of commission approximately 70% of the time. One wire in emergency guard receiver circuits had been omitted by manufacturer and has since been installed. The master function switch has been broken and replaced. No provision was made for monitoring audio (UR TF 60-445). Monitor jack has since been installed. Tech data is inadequate and technicians are using blue line T.O.'s as an interim measure. Performance meters installed on delivered tester were not those called out in associated technical orders and have been replaced by Convair. Tester has operated approximately 150 hours and has satisfactorily checked out nine receiver transmitter units. (U)

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
G-3	B-58 Communications System TGSE

STATUS

b. 1204 - Technical data inadequate - Convair has supplied a blue line copy of technical order for interim use. Lack of ancillary equipment (distortion analyzer TS-723/4) prevents module trouble shooting and repair. Approximately 20 intercom panels have been checked on the tester. (U)

c. 1206 - Technical data inadequate. Minimum Band-pass gives erroneous scope presentations that are not compatible with figures in T.O. 33D7-4-5-11. Convair has personnel working on the problem in the A-E Shop.

3. Items not utilized:

a. 1203 - Technical data is inadequate. Tester had been returned to Convair for modification and was returned 27 May 1960 with digital ohmmeter and volt meters and ARC-74 test panels installed. No spare receiver-transmitter has been available to evaluate the tester; however, Convair has loaned a unit for checkout when the modified tester was returned.

b. 1251 and 1252 were received 27 May 1960 without technical orders. No technical data available. No aircraft systems are installed in assigned aircraft.

<u>31 August 1960:</u>

1201 - Tester will not check AN/ARC-74 due to either design deficiency or incorrect wiring. UR (TF 60-271) submitted. (U)

1202 - The first article demonstration was completed 22 July 60. R.F.A.'s 4, 5, 6, 7, 8, 10, 12, 13, 14, 15 and 18 were submitted on applicable technical orders and the following specific problems noted: (U)

(a) Discriminator voltage test difficult to perform due to the rapid meter movement (R.F.A. 16) (U)

(b) I.F and Audio Test calls for an output of 1.5-1.8 V which cannot be met (RFA 9) (U)

(c) In general, most test voltages and currents called out in applicable technical orders are not specific and/or have no tolerances. (U)

(d) Modulator adjustment is not compatible with either the technical orders or the tester (RFA 11) (U)

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
G-3	B-58 Communications System TGSE

STATUS

1203 - The tester was operated extensively by both Convair and Air Force personnel in an effort to prepare the tester for a first article demonstration scheduled for 19 July 60. Lack of adequate technical data and the erratic operation of the tester caused cancellation of the demonstration. Limited usage with some ARC-57 modules is possible until tech. data and condition of the tester is improved. (U)

1204 - The first article demonstration of this tester was completed 19 July 60. RFA's #25 thru 35 were submitted on applicable technical orders and minor deficiencies. Tester is in use and can be used to perform most of its designed tests. (U)

1206 - The first article demonstration of this tester was completed 20 July 60. A modification of the tester horizontal input circuit was made by a Convair engineer and Air Force technician to allow the demonstration to be completed (RFA #22). RFA's #19, 20, 21 and 23 were submitted on applicable technical orders. Tester is unusable until the horizontal input deficiency is officially resolved.

1251 - Vendor engineering personnel have been working with the tester since 18 Aug 60. Modifications have been made and Convair personnel have been reviewing applicable technical data in preparation for a first article demonstration. Convair has supplied an aircraft system as none are presently installed on assigned aircraft. (U)

30 September 1960:

1. The Category III Evaluation Plan that became effective 1 August 1960 designates data collection and TGSE evaluation during normal maintenance usage of the peculiar TGSE. The following exceptions require a special effort to evaluate through all possible modes of operation the limited time available for the evaluation: GSEL 1201, 1202, 1203, 1204, 1205, 1206, 1250, 1251, & 1252. (U)

2. SIR G-3-1 dated 30 September 1960 provides a detailed progress report of the Communications System TGSE. (U)

3. GSEL 1201 - The tester has been used to support the normal maintenance activities with the AN/ARC-57; however, the deficiencies in AN/ARC-74 Test Functions have not been resolved.

4. GSEL 1202 - The Tester has been in daily use supporting routine maintenance (through the use of local procedures) and overall RT unit performance. Deficiencies noted in the August 1960 report have not been corrected. The following RFA's have been referred by Convair to the vendor for recommendations but no solutions have resulted in the 72 days since the first article demonstration: 6, 7, 10, 11, 14, 15, 16 and 18. (U)

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PD CT NUMBER	PROJECT TITLE
G-3	B-58 Communications System TCSE

STATUS

5. GSEL 1203 - A vendor engineer checked out the tester and assisted Convair and Air Force personnel in reviewing applicable technical orders and procedures. Penciled corrections were made to the T.O.'s and Convair will supply "slip sheets"until the corrections are included in the next T.O. revision. The tester was put in commission 17 September 1960 and has appeared to function properly since. (U)

6. GSEL 1204 - The Distortion Analyzer TS-723 is still not available although the item is included on the 43 AEMS U.A.L. The tester continues to support routine maintenance of the intercommunications system with the exception of some module maintenance and adjustment which requires the use of the analyzer. (U)

7. GSEL 1206 - No progress has been made with this tester and it was not used during the month of September. (U)

8. GSEL 1250 - Test Set was delivered to the 43 AEMS on 7 September 1960. Convair and vendor engineers reviewed applicable technical orders and procedures and Convair has supplied "slip sheets" to correct deficiencies noted. The corrections, with the exception of schematic diagrams, are usable to support operation of the tester until the next T.O. revision. The mag-meter detector circuit became inoperative and the tester was sent to Convair for repair. (U)

9. GSEL 1251 - Two aircraft were assigned this month with HACON systems installed. Convair and vendor personnel reviewed applicable tech data and procedures while checking out the tester. Corrections to some of the technical orders have improved the tech data to the point where they allow system checkout and trouble shooting with the tester but not sufficient to provide adequate alignment instructions. The tester has been in commission since 1 September 1960. (U)

10. GSEL 1252 - The tester has been in commission since 1 September 1960. Status of applicable tech data has not been determined. Due to the small number of installed HACON systems, the tester has not been required for support of system maintenance. (U)

CARS FORM [illegible]

TEST AND EVALUATION PROJECT STATUS SHEET

PROJECT NUMBER	PROJECT TITLE
C-4	B-58 CNAS TGSE (U)
REPORT SECTION	Project NCO:
C-3 of Part IV	CMS Kiff

PROBLEM

To evaluate the TGSE associated with the B-58 CNAS (U)

REQUEST AGENCY	DATE INITIATED	COMPLETION DATE	AUTHORIZATION
B-58 Test Force	May 1960	Est Sep 61	AFR 80-14

STATUS

Three Key Items Authorized: 3 Testers (U)

GSEL	NOMENCLATURE	P/N	1st Art Del Date	Est Comp Date
1306	Test Meter - CNAS	N658043-1	Jan 60	Jul 60
1307	Test Panel - CNAS	R650309-1	Apr 60	Dec 60
1350	Simulator - Radio Beacon (GFP)	HLI 103B	May 60	Sep 61

31 May 60:

1. Items in use without reported discrepancies: 1306 and 1307. (U)

2. Discrepancies:

a. 1350 Tester has just arrived on base but has not been used. Required ancillary equipment has not been delivered and no systems are installed in present aircraft. (U)

31 Aug 60:

1307 - The first article demonstration of this tester was completed on 21 July 60. RFA's #37 thru 62 were submitted primarily on applicable technical data. Tester is used daily and functions properly. (U)

1350 - Convair technicians are repairing and calibrating the tester in the A-E Shop. Required ancillary equipment (GSEL 1351) has not been delivered and no systems are installed in assigned aircraft. (U)

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
G-4	B-58 CNAS TGSE (U)

STATUS

30 September 1960:

1. The Category III evaluation plan that became effective 1 August 1960 designates data collection and TGSE evaluation during normal maintenance usage of the peculiar TGSE. GSEL 1350 is an exception which will require a special effort to evaluate through all possible modes of operation in the limited time available for the evaluation. (U)

2. GSEL 1350 - Convair completed calibration of the tester this month and it has been in daily use supporting TF-102 TACAN Maintenance. (U)

3. GSEL 1351 was delivered 29 September 1960 without technical data and indicators ID 387 and ID 526. When these shortages are made up, the maintenance activity will have the required test equipment to check out B-58 TACAN systems as they become available. No systems are installed in aircraft presently assigned. (U)

CARS FORM SEP 65 69a FCI 2700

TEST AND EVALUATION PROJECT STATUS SHEET

PROJECT NUMBER	PROJECT TITLE
C-5	B-58 Central Power System TGSE (U)
REPORT SECTION	PROJECT OFFICER
C-3 of Part IV	Capt Southerland

PROBLEM

To evaluate the TGSE associated with the B-58 Central Power System. (U)

REQUEST AGENCY	DATE INITIATED	COMPLETION DATE	AUTHORIZATION
B-58 Test Force	May 1960	Est Jan 61	AFR 80-14

STATUS

Two Key Items: 2 Testers (U)

GSEL	NOMENCLATURE	P/N	1st Art Del Date	Est Comp Date
1401	Test Set - Central Power Sup	SE2909	May 60	Jan 61
1402	Load Bank - Central Power	SE8797	May 60	Jan 61

31 May 60:

1. 1401 and 1402 received during month of May. (U)

31 Aug 60:

1. 1401 & 1402 in daily use with no reported discrepancies. (U)

30 September 1960:

1. The Category II TGSE Evaluation Plan that became effective 1 August 1960 designates data collection and TGSE evaluation during normal maintenance usage of the Central Power System peculiar TGSE. The following exception requires a special effort to evaluate through all possible modes of operation in the limited time available for the evaluation: GSEL 1401. (U)

2. 1402: No reported discrepancies.

CARS FORM NO. 69 FC: 2730

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
G-5	B-58 Central Power System TGSE (U)

STATUS

3. 1401: Used a total of six times this reporting period. Item EOCP 50% of reporting period for paralleling potentiometer, Part Number AJRKL5 (P/N now 7221 RKL. 5). Reason for failure unknown at this time, however the failure appears to be of a mechanical nature rather than faulty circuit design. (U)

CARS FORM DEP 69a FC: 2790

TEST AND EVALUATION PROJECT STATUS SHEET

PROJECT NUMBER	PROJECT TITLE
G-6	B-58 DECM System TGSE (U)
REPORT SECTION	Project NCO:
C-3 of Part IV	CMSgt Kiff

PROBLEM

To evaluate the TGSE associated with the B-58 DECM System (U)

REQUEST AGENCY	DATE INITIATED	COMPLETION DATE	AUTHORIZATION
B-58 Test Force	May 1960	Sep 61	AFR 80-14

STATUS

Fifteen Key Items Authorized: 12 Testers, 3 Ground Handling

GSEL	NOMENCLATURE	F/N	1st Art Del Date	Est Comp Date
1501	Test Set - AN/ALR 12, Conf	02-187000	Nov 59	Sep 61
1505	Test Set - AN/ALQ-16, T2 Conf	02-187400	Nov 59	Apr 61
1507	Test Set - AN/ALQ-16 T4, Conf	02-187800	Nov 59	Apr 61
1508	Test Set-C-1857, Conf	02-187200	----	Sep 61
1509	Test Set-DECM SS, Mobile	02-188600	5 Jul 60	Sep 61
1516	Test Set-Comp, ALQ-16 RCVR	02-198100	Dec 59	Sep 61
1517	Test Set-Comp, ALQ-16 DP/FR	02-198200	Nov 59	Sep 61
1519	Generator-Signal RF/B2	02-198400	Nov 59	Sep 61
1521	Generator-Signal RF/B4	02-198600	Nov 59	Sep 61
1523	Test Set-Comp, ALR-12 Amp	02-186800	----	Sep 61
1524	Test Set-Comp, ALR-12 Ant	02-186500	----	Sep 61
1525	Test Set-DECM solenoid power	SE2995	Aug 60	Mar 61
3502	Handle Assy-DECM SysRvl	SE2788-1	Nov 58	Sep 60
3503	Handling Fixture-DECM Pkg	SE2763	Apr 60	Sep 60
3504	Case, DECM LRU, Handling	SE8807	May 60	Sep 60

31 May 60:

1. Items in use without reported discrepancies: None. (U)

2. Discrepancies: (U)

a. 1505 - Mechanic has difficulty connecting RF plugs on tester cables to system drawers. The locking sleeves on the plugs appear too short for use in drawer access panel. Recommendation will follow further study; tester is used frequently and has had no maintenance difficulties.

CARS Form 69 FC: 2750

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
C-6	B-52 DECM System TCSE (U)

STATUS

b. 1507 - Mechanic has difficulty connecting RF plugs on tester cables to system drawers. The locking sleeves on the plugs appear too short for use in drawer access panel. Recommendations will follow further study. Tester is used frequently and without maintenance difficulties. (U)

c. 1516 - Tech data inadequate - RFA's filed. Full utility of the tester is limited by lack of ancillary equipment (Sanborn recorder Mod 60 - two channel). Recorder is required for checking frequency and power vs frequency through the spectrum of both system and tester. Calibration by vendor and first article demonstration have been completed. Tester has operated approximately 150 hours and has satisfactorily checked five Rcvr-LO-OSC Drawers. (U)

d. 1517 - RF cables from tester to RF heads are difficult to connect due to length and access (UR TF 59-1567). Considerable random alignment has been required to keep the tester in commission. Calibration by vendor and first article demonstration have been completed. Tech data inadequate - RFA's filed. Tester operated approximately 25 hours and has satisfactorily checked out three system drawers. (U)

e. 1519 - Reported failure rate of the backward wave oscillator tubes (BWO) has been 15 failures on three testers in one year. RFA has been submitted requesting further BWO reliability study. Random component failure has kept tester out of commission approximately 25% of the time. Total operating time of tester is 545 hours. Four units checked out since first article demonstration. Calibration and first article demonstration have been completed. Tech data is inadequate. RFA's submitted. (U)

f. 1521 - Wave Guide Switch (4920-715-4629) has failed twice. There appears to be a design deficiency and a U.R. has been written. Calibration and first article demonstration have been completed. Tech data is inadequate - RFA's submitted. Tester has operated 321 hours and has functioned satisfactorily since first article demonstration. (U)

g. 3502 - Handle cannot be used on all Dzus fasteners on System drawers and experience of flight line maintenance personnel indicates that the handle is not required to pull the drawers from aircraft racks. It will be recommended that item be dropped from inventory (U.R. TF 60-539). (U)

3. Items not Utilized:

a. 1501 - Tester cannot be used at Carswell AFB since inherent sensitivity of tester to local area radar renders use of the test set both ineffective and of no significance. (U)

b. 3503 - Required ancillary equipment has not been delivered to date. (U)

CARS FORM [illegible] 69a FC: 2730

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
C-5	[illegible] DECM System TCSE (U)

STATUS

c. 3504 - Twenty-five cases have been delivered during the past ten days but none have been used. The cases have been unpacked and a storage area prepared for them. (U)

31 August 1960.

1505 - RF output plug-in accessibility was requested on RFA 3-29 on 27 Jan 60. ACA 4-101 50846 is effective on production unit #5 and an ECP has been submitted to the Air Force to correct the discrepancy. However, seven months have passed since the RFA was submitted and the testers at Carswell have not been modified. (U)

1507 - RF output plug-in accessibility is very poor for this tester also but no RFA's or U.R.'s have been submitted. (U)

1509 - Tester was received 8 July 60, random modifications were corrected and all self checks were run successfully. The tester has been used three times to check installed aircraft systems. None of the systems have passed the test checks and preliminary investigation has not determined whether the cause is due to the system, shop testers, or the mobile tester. Calibration status of the tester has not been determined since the trailer was modified by the vendor. The tester will be calibrated and an evaluation of each individual test is programmed. (U)

1516, 1517, 1519, 1521 - Technical data for all four testers has been brought to a satisfactory level as a result of RFA corrective action since the first article demonstration and a team review of the technical orders by Convair, Sylvania and military personnel. All testers have been in daily use and appear to be functioning properly. An apparent incompatibility between drawer checks with these testers and a system check with the 1509 tester has been noted. An evaluation of each individual test is programmed. Due to a lack of test equipment, only a partial calibration of the testers is possible at this time. Shortage of test equipment has resulted from changes in the equipment prescribed in technical orders, items not appearing on the U.A.L., quantity listed in U.A.L.'s not realistic and non-availability of items submitted on the U.A.L. (U)

1525 - Tester was received 12 Aug 60 and has been in daily use for an initial checkout. The AC meter on the panel is to be replaced by Convair to provide a 200 volt full scale meter instead of the 300 volt meter presently installed, which will allow closer monitoring of the AC voltage. Some discrepancies in applicable technical data are to be corrected by Convair. A&E shop is short of ancillary equipment required to trouble shoot the solenoid power supplies under test. (U)

3503 - The fixture was given a fit and function test on one aircraft and has had no further use. The fixture functions satisfactorily except when used with the receiver-locked oscillator drawer. When used with this drawer, it hangs up on the seat and/or console in the third station and prevents installation of the drawer in the rack. No difficulty was

IV-130

CARS FORM 48a

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
G-6	B-58 DECM System TGSE (U)

STATUS

experienced raising the DECM drawers from the floor to the platform of the maintenance stand but considerable difficulty was experienced when the fixture was lowered into the third station. Now that cranes are available on some maintenance stands, it is possible to effectively use the fixtures. (U)

3504 - The cases have been in daily use the past three months and have functioned properly. The weight of a case when used with a receiver-locked-oscillator drawer exceeds 150 lbs. and is awkward for two men to handle. (U)

<u>30 September 1960:</u>

1. The Category III evaluation plan that became effective 1 August 1960 designates data collection and TGSE evaluation during normal maintenance usage of the peculiar TGSE. The following exceptions require a special effort to evaluate through all possible modes of operation in the limited time available for the evaluation: GSEL 1501, 1505, 1507, 1508, 1509, 1516, 1517, 1519, 1521, 1523, 1524 & 1525. (U)

2. GSEL 1501 - No change in status. (U)

3. GSEL 1505 and 1507 - Each tester was used four times this month to check installed systems and functioned properly. No maintenance was required on the testers. The low rate of use was due to the limited flight operation of the systems and consequently little maintenance was required. (U)

4. GSEL 1509 - Tester was used to check out four aircraft with T-4 systems during the month of September. After six test runs on the systems it was found that the following tests were consistently reading "no-go": 10, 11, 15, 16, 17, 18, 25 and 26. Convair was advised of this condition and requested to investigate the validity of the tests and system specifications to determine the cause of the "no-go's". No information has been made available yet. A special project was completed 12 - 15 September when an AN/ALQ-16 T-4 System was checked with the tester operated by 43 AEMS personnel with the assistance of Convair technical writers and engineers. The purpose of the project was to check out <u>operating</u> procedures in the latest available technical orders and to make on-the-spot corrections to the data. "Slip sheets" were provided by Convair to correct twenty-three deficiencies in the tech data until the next revision of the technical orders. Tech data for <u>maintenance</u> of the tester is both incomplete and inadequate. (U)

5. GSEL 1516 - As a result of maintenance and apparent incompatibility of tests performed by shop and flight line testers, a calibration of the tester was begun. The tester has been out of commission for ten days for calibration and the calibration is still incomplete.

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
G-6	B-58 DECM System TGSE (U)

STATUS

Considerable delay was experienced due to the requirement for test equipment not specified in the maintenance technical orders. This equipment was loaned to the 43 AEMS by Convair because of the shortage of specified testers. Further delay was due to the lack of previous experience and the necessity to accomplish training on the calibration as the work progressed. Calibration was discontinued to allow Convair to install modification kits outstanding. Calibration will continue next month. Interim shop testers are being used to support system maintenance until the test is operational. The tester was also out of commission for five days for random maintenance and one day awaiting parts. (U)

6. GSEL 1517 - The tester was used to support routine system maintenance with the following exceptions: Out of commission for calibration for two days, out for random maintenance for five days and out awaiting parts for four days. (U)

7. GSEL 1519 - Two of these testers are on hand. Serial number one was operated 13.6 hours this month and was out of commission for maintenance one day. Serial Number two was operated 3.7 hours and was out of commission four days for maintenance and fourteen days awaiting parts. Much of the down time on tester #2 was due to a lack of readily available parts. Maintenance would progress to a bad component, then wait a few days for the part, trouble-shoot to another component, wait for another part, etc. (U)

8. GSEL 1521 - Two of these testers are on hand and were operated a total of 41.6 hours this month and required no significant maintenance. (U)

9. GSEL 1525 - Tester was operated ten hours this month in support of a routine maintenance work load. Utility of the tester is limited to about 70% of its capability due to a lack of ancillary test equipment, however, all remaining functions appear very satisfactory. (U)

10. GSEL 1508, 1523 and 1524 - These items are still not available. (U)

TEST AND EVALUATION PROJECT STATUS SHEET

PROJECT NUMBER	PROJECT TITLE
-7	B-58 Electrical System TGSE (U)
REPORT SECTION	**PROJECT OFFICER**
C-3 of Part IV	Capt W. R. Southerland

PROBLEM

To evaluate the TGSE associated with the B-58 Electrical System. (U)

REQUEST AGENCY	DATE INITIATED	COMPLETION DATE	AUTHORIZATION
B-58 Test Force	May 1960	Est Dec 1960	AFR 80-14

STATUS

7 Key Items: 5 Testers, 1 Ground Handling, 0 Tools (U)

GSEL	NOMENCLATURE	P/N	1st Art Del Date	Est Comp Date
01	Junction Box-Electrical Power	SE2885	Dec 59	Sep 60
1626	Selector Assy-Elect Circuit	SE2926	Jan 60	Dec 60
1630	Test Set-AC Generator Cont Unit	T-170	Dec 59	Dec 60
1632	Power Cord-Three Phase	SE2892	Dec 59	Sep 60
1633	Test Set -A/C Circuit, Fad Related	SE2993	Mar 60	Dec 60
1651	Adapter Set-Test Stand	683829	Dec 59	Sep 60
3602	Priming Assy-A.C. Gen Drive	SE2925	Feb 60	Dec 60

31 May 1960:

1. Items in use with no reported discrepancy: 1601, 1626, 1632, 1633, 1651. (U)

2. Discrepancies:

   a. 1630 - Voltage Fluctuation, Reference TF UR 60-637. (U)

   b. 3602 - T.O. 35D28-2-2-1 Operation instructions inadequate and in error. (U)

31 August 1960:

1. 1601 - Item is in constant use. No discrepancies to date. Item is suitable for B-58 Tactical Operations. (U)

2. 1626 - This item is used approximately twice monthly by the mechanical acc. (air cond.) specialists. No reported discrepancies. (U)

CARS FORM NO. 69 FC-2750

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
G-7	B-58 Electrical System TGSE (U)

STATUS

3. 1630 - Vacuum Tube changes have corrected voltage fluctuation problem to date. (U)

4. 1632 - Used with 1601 and item is suitable for B-58 Tactical Operations. (U)

5. 1633 - Item was used satisfactorily 5 times; however, it failed on sixth use. Fuse holders were damaged when fuses called for in Technical publications were installed. Convair personnel are taking action to correct this discrepancy. Item is used daily with no further discrepancies reported. (U)

6. 1651 - Item is used approximately twice weekly with no reported discrepancies. Item is suitable for B-58 Tactical Operations. (U)

7. 3602 - Item used approximately once weekly with no further reported discrepancies. (U)

30 September 1960:

1. The Category II TGSE Evaluation Plan that became effective 1 August 1960 designates data collection and TGSE evaluation during normal maintenance usage of the Electrical System peculiar TGSE. The following exceptions require a special effort to evaluate through all possible modes of operation in the limited time available for the Evaluation: GSEL 1630, 1633, and 3602.

2. Items in use with no reported discrepancy during this reporting period: 1601, 1626, 1630, 1632, 1633, 1651, 3602.

CARS FORM 40a REV ITEM

TEST AND EVALUATION PROJECT STATUS SHEET

PROJECT NUMBER	PROJECT TITLE
J-8	Bomber Recording System TGSE (U)
REPORT SECTION	Project NCO:
C-3 of Part IV	CMSgt Kiff

PROBLEM

To evaluate the TGSE associated with the B-58 Bomber Recording System (U)

REQUEST AGENCY	DATE INITIATED	COMPLETION DATE	AUTHORIZATION
B-58 Test Force	May 1960	Dec 60	AFR 80-14

STATUS

Two Key Items Authorized: 2 Testers (U)

GSEL	NOMENCLATURE	P/N	1st Art Del Date	Est Comp Date
1703	Test Set-Bomber Record Sys	R 25347-1	Dec 59	Nov 60
1705	Test Set-Comp Bomb Rec Sys	R524996-1	Oct 59	Dec 60

31 May 1960

1. Item in use without reported discrepancy. 1703 has been used an average of once a week, has functioned properly and has required no maintenance. Test results compatible with 1705. (U).

2. Discrepancies: 1705

a. Repeat cycle timer, installed when tester was delivered, was defective. The timer was replaced with a redesigned item and T.R. submitted (TF 60-418). (U)

b. Tester has been used daily and has satisfactorily checked over thirty printer control units and inflight printers. (U)

31 August 1960

1705 - Tester operated 115 hours during the month of June, July and August. No difficulty encountered. First article demonstration completed 17 Aug 60. Eleven RFA's were submitted on technical data and random items. No serious discrepancies were noted. (U)
1703 - Tester was used ten times during June, July and August with no discrepancies. (U)

CARS FORM [illegible] PO: 2750

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
G-8	Bomber Recording System TGSE

STATUS

30 September 1960:

1. The Category III Evaluation Plan that became effective 1 August 1960 designates data collection and TGSE evaluation during normal maintenance usage of the peculiar TGSE. The following exceptions require a special effort to evaluate through all possible modes of operation in the limited time available for the evaluation: GSEL 1703 and 1705.

2. GSEL 1703 - Tester has continued to support routine flight line maintenance of the bomber recording system. It was used seven times during the month and required no maintenance. Total clock time on the tester is 258 hours.

3. GSEL 1705 - Tester was operated for a total of 33.6 hours during the month of September. Total clock time on the tester is 478.0 hours. The tester continues to operate satisfactorily in all functions and required no significant maintenance this month.

TEST AND EVALUATION PROJECT STATUS SHEET

PROJECT NUMBER	PROJECT TITLE
-9	B-58 Fire Control System TGSE (U)
REPORT SECTION: C-3 of Part IV	Project NCO: CMSgt Kiff

PROBLEM

To evaluate the TGSE associated with the B-58 Fire Control System (U)

REQUEST AGENCY	DATE INITIATED	COMPLETION DATE	AUTHORIZATION
B-58 Test Force	May 1960	Sep 61	AFR 80-14

STATUS

Twenty-eight Key Items Authorized: 14 Testers, 12 Ground Handling, 2 tools. (U)

CSEL	NOMENCLATURE	P/N	1st Art Del Date	Est Comp Date
800	Test Set-Fire Control Sys	511001-1	Apr 60	July 61
1805	Test Set-Controlled Line Pl	511005-1	Jan 60	Jun 61
1806	Test Set-Antenna	511006-1	Jan 60	Jun 61
1807	Test Set-Freq Converter-Tra	511007-1	Jan 60	Jun 61
1808	Test Set-Computer Assy	511008-1	Nov 59	Jun 61
1809	Test Set-Tracking Cont Assy	511009-1	Jan 60	Jun 61
1810	Test Set-Control Indicator	511010-1	Jan 60	Jun 61
1811	Test Set-Gun Control & FCS	511011-1	Feb 60	Jun 61
1819	Test Set-Boresight, Antenna	511019-1	Feb 60	Jun 61
1822	Test Set-Performance, FCS	511022-1	Apr 60	Sep 61
1823	Test Set-Elec Circuit Pl	511902	Dec 59	Jun 61
1832	Telescope Set-Fire Cont Sys	511032-1	Apr 60	Jun 61
1835	Fixture-Harmonization, FCS	511035-1	Feb 60	Jun 61
1838	Leveling Set-Precision	511038-1	Feb 60	Jun 61
3802	Truck Assy-Turret Tail Fkg	SE2534-3	Apr 60	Oct 60
3803	Sling Assy-Turret Tail Fkg	SE2533-1	Apr 60	Oct 60
3805	Fixture Hold & Carry, Fwd	511030	Feb 60	Sep 60
3806	Fixture Hold & Carry, Aft	511031-1	Feb 60	Sep 60
3807	Carrying Case-Control Ind	511036	Apr 60	Aug 60
3809	Instl Rack-Freq Conv-Xmtr	511043-1	Jan 60	Sep 60
3811	Chute Assy-Loading, 20mm Amm	SE2974	Oct 59	Sep 60
3812	Hoist Assy-M-61 Gun Handling	SE2970	Jan 60	Sep 60
3813	Boom Assy-M-61 Gun Instl & Rmvl	SE2975	Jan 60	Sep 60
3814	Adapter Assy-M-61 Gun	SE2976	Nov 59	Sep 60
3817	Hinge Assy-Turret Tail Fkg	SE2992	Nov 59	Dec 60
3818	Stand Assy-Turret Tail Work	SE8815	----	
5801	Extractor-Gyro	511033-1	Jan 60	Sep 60
5804	Wrench-Spanner, Spin Motor	511034	Jan 60	Sep 60

CARS FORM DSP 69 FC: 2750

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
G-9	B-58 Fire Control System TGSE

STATUS

31 May 1960

1. Items in use without reported discrepancies: 1800, 1809, 1811, 1819, 1823, 1832, 3805, 3806, 3807, 3809, 3811, 3812, 3813, 3814, 3817, 5801, 5802. (U)

2. Discrepancies: (U)

a. 1805 RFA's #1, 2, 3, 6 submitted during first article demonstration, 28 Apr 60. Tester in use and functioning satisfactorily.

b. 1806 - RFA #11 and 12 submitted during first article demonstration, 28 Apr 60 Tester in use and functioning satisfactorily.

c. 1807 RFA #10 submitted during First Article Demonstration. Tester in use and functioning satisfactorily.

d. 1808-RFA #7 submitted during First Article Demonstration. Random maintenance required. Tester in use and functioning satisfactorily.

e. 1810 - RFA's # 4 and 5 submitted during First Article Demonstration. Have had one relay malfunction (RTFR). Tester in use and functions satisfactorily.

3. Items not utilized: (U)

a. 1822 - Tester was delivered with instructions not to use the included boom before clearing with Convair. Considerable delay occurred before the status of the tester was cleared up. Still not in use.

b. 1835 and 1838 - No harmonization of the systems has been required to date to allow evaluation of these items.

c. 3802 and 3803 - No tail turret packages have been removed or installed on the aircraft to allow use and evaluation of these items.

31 August 1960

1800 - Tester has never been used to check out an installed aircraft system. The tester has been out of commission since 20 August due to a lack of parts (Shaft-Spool Tape P/N 575481-5, Bearing, Ball P/N ES 482-6C-ES-E5H24 and set screen ES 1992-ACO-256-H2). Tester was out of commission for 30 days for calibration and adjustment during July and August. (U)

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

OJECT NUMBER	PROJECT TITLE
G-9	B-58 Fire Control System TGSE

STATUS

1806, 1809 - Reader-Taper, perforated 4920-707-4600 has been on order for both of these testers since 14 July 1960. Testers have been kept in commission by using reader heads from other testers not in use. (U)

1819, 1832, 1835, 1838 - These items have not been used as no harmonization has been done by the A&E Squadron. (U)

1822 - An attempt was made three times during July 60 to check out installed systems with this tester. Each time excessive interference from local radars prevented checkout of the system. Convair ECF 582 BK should correct this difficulty as a prototype functioned satisfactorily during a QMI in January 60. As an interim solution, Convair supplied panels of echo-sorb to be used on the tail stand. However, the panels were too bulky and heavy to be of practical use and were returned to Convair. A set of modified panels should be available 1 Sept 60. The Radar Test Set, a part of 1822 is also required for harmonization and the same interference prevents its use with 1819, 1832, 1835, and 1838. (U)

3802, 3803 - Both items have been used with no discrepancies. (U)

3811 - The chute assembly has caused the ammunition links to bind, a U.R. has been submitted and use of the chute continued. (U)

3817 - Gear, P/N 2992-45 Broke on three hinges. All the hinges were returned to Convair for modification and U.R. TF 60-688 was submitted. Three modified hinges were returned from Convair 25 July 60 and were used successfully three times during the remainder of the month. The remaining eight hinges were received during August and have been in use daily. No further difficulty has been experienced. (U)

30 September 1960:

1. The Category III Evaluation Plan that became effective 1 August 1960 emphasizes data collection and TGSE evaluation during normal maintenance usage of the peculiar TGSE. The following exceptions require a special effort to evaluate through all possible modes of operation in the limited time available for the evaluation: GSEL 1800, 1805, 1806, 1807, 1808, 1809, 1810, 1811, 1819, and 1822.

2. GSEL 1800 - The assigned tester has still not been used to check out an installed aircraft system. A tester Serial Number 8 was loaned by Convair to allow a special project to be completed 12 - 13 September 1960. This tester had been upgraded by the installation of fourteen modification kits that had not been installed in tester #3 assigned to 43 AEMS. The purpose of the project was to check out an installed fire control system with the mobile tester using the latest available technical orders and

CARS FORM 69a PCL 2750

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
G-9	B-58 Fire Control System TGSE

STATUS

procedures. Convair technical writers and engineers and 43 AEMS personnel evaluated procedures and tech data and made on the spot corrections to deficiencies noted. "Slip Sheets" to the T.O.'s were provided by Convair to bring the operating data to a usable state. A complete system check was not performed due to delays caused by air conditioner break downs and lack of spare system LRU's. None of the radar checks were performed. Convair has been modifying trailer #3 since 26 September.

3. GSEL 1805, 1807, 1809, 1810 and 1811 - These testers were all used to support the normal maintenance work load in a satisfactory manner and required no significant maintenance.

4. GSEL 1806 - No change from August 1960 status.

5. GSEL 1808 - This tester was out of commission for two days for calibration and four days for trouble-shooting the range simulator. The range simulator potentiometer on the main control panel was replaced and the difficulty corrected. A digital voltmeter was borrowed from Convair to calibrate the tester as none were available locally.

6. GSEL 1819 - This tester has still had no use.

7. GSEL 1822 - Ecco-sorb panels P/N DT-0100 were provided incomplete for the mobile tester check on 12 - 13 September. The radar checks of that test were not completed and the panels were not used. The panels were returned to Convair to allow fabrication to be completed and they have not been returned to CAFB to date. No use of the Performance Test set was scheduled due to the lack of ecco-sorb panels.

CARS FORM 69a

TEST AND EVALUATION PROJECT STATUS SHEET

PROJECT NUMBER	PROJECT TITLE
3-10	B-58 Flight Control System (U)
REPORT SECTION: C-3 of Part IV	PROJECT OFFICER: Engineer, CMS Berg

PROBLEM

To evaluate the TGSE associated with B-58 Flight Control System. (U)

REQUEST AGENCY	DATE INITIATED	COMPLETION DATE	AUTHORIZATION
B-58 Test Force	May 1960	Estimated 1 August 1961	AFR 80-14

STATUS

27 Key Items: 11 Testers, 10 Ground Handling, 6 Tools (U)

GSEL NR	NOMENCLATURE	P/N	1st Art Del Date	Est Comp Date
1901	Test Set-Amplifier-Computer	13935-1B	Jan 60	1 Aug 61
1902	Stand-Test, PCLA	13936-1B	Feb 60	1 Aug 61
1903.1	Test Set-Mobile, Flt Con Sys	13933-2B	Dec 59	1 Aug 61
1904	Test Set-Gyro/Accel Unit	13938-2A	Feb 60	1 Aug 61
1914	Test Set-Cont, Flt Cont Sys	SE2920	Feb 60	1 Dec 60
1922	Protractor Assy-Control Sur	SE2843-1	Apr 60	1 Nov 60
1931	Test Set-Zeroing, Trans Pos	SE2911	May 60	1 Nov 60
1932	Control Unit Assy-PCLA, Ground	SE2921-1	Feb 60	1 Mar 61
1933	Test Set-Air Data Comp Sys	13974-1A	Jul 60	1 Aug 61
1934	Test Set-Field Comp	13975-1A	Dec 59	1 Mar 61
3902	Sling Assy-Rudder	SE2837	May 60	1 Aug 61
3903	Support Assy-Elevon	SE2937	Feb 60	1 Nov 60
3905	Sling Assy-PCLA Handling	SE2565-1	Feb 60	1 Mar 61
3906	Hoist Assy-PCLA Installation	SE2942	Feb 60	1 Nov 60
3907	Cradle Assy-PCLA Handling	SE2581-1	Feb 60	1 Nov 60
3909	Cover Assy-PCLA Protective	SE2664-1	Apr 60	1 Dec 60
3910	Fixture Assy-PCLA, Maint	SE2754-1	Feb 60	1 Nov 60
3912	Test Fixture-Gyro & Accel.	SE-2836-1	Mar 60	1 Aug 61
3923	Lock Assy-Rud Feedback Arm	SE2963	Feb 60	1 Nov 60
3925	Block Assy-Tension Reg Ret	SE2903	Nov 59	1 Nov 60
3926	Fixture Assy-Ampl Computer Handl.	SE2913	Apr 60	1 Nov 60

CARS FORM SEP 60 69 FCI: 2750

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
G-10	B-58 Flight Control System (U)

STATUS

3944	Adapter, PCLA Handling	QB65679-1	Feb 60	1 Nov 60	
3945	Tester, Hydraulic Comp.	QB65677-1	Jul 60	1 Aug 61	
5901	Kit Assy-Rudder Act Pin	SE2652-1	Feb 60	1 Nov 60	
5902	Kit Assy-Flt Cont Rig Pins	SE2883	Feb 60	1 Nov 60	
5910	Fixture Assy-Belerk Pos. Elev.	SE2962	Feb 60	1 Nov 60	
5917	Kit Assy-Elevo Act & Hinge Pin	SE2934	Feb 60	1 Aug 61	(U)

31 May 60:

1. Items in use without reported discrepancy: (U)

1904	1932	3902	3906	3910	3925	3945	5910
1922	1933	3903	3907	3912	3926	5901	5917
1931	1934	3905	3909	3923	3944	5902	(U)

2. Discrepancies: (U)

a. 1901 - Several Convair RTFR reports were submitted regarding the tape reader head assembly which Air Force personnel have had trouble with. Corrective action has been taken by Convair. This tester has been modified for Jr Flash-up on tactical aircraft. The supersonic "Fix" modification has also been accomplished on this tester. (U)

b. 1902 - A Convair RTFR was initiated when the RMS voltmeter measurement panel failed to give any indication. UR (TF 60-326) was submitted for power cables on rear of tester. UR (TF 60-348) was submitted for fuse holders. Convair and Air Force personnel found the following deficiencies still remain unanswered: No-Go on the following tests with no answer as to why: (1) Elevator ratio changer response. (2) 7° available switch check. (3) Elevator ratio changer follow-up potentiometer. (4) Rudder sheave is misaligned and always has been. Convair personnel are trying to work out a "Fix" for the above problems. (U)

c. 1914 - RTFR submitted concerning tester burning out transformer (T-1) in CUA. Tester returned to Convair for repair.(U)

d. 1903.1 - RTFR's were submitted on the following discrepancies: Six RTFR's on the Tape Reader Head Assembly. Two RTFR's on the Analyzer Flight Control, and two RTFR's on the Connector Cable Assembly. One tester (S/N 5) has been returned to Convair because of the tape deficiencies and for Sr Flash-up modification. Vender of this tester recently gave a satisfactory informal demonstration of tester operation to Air Force personnel. (U)

CARS FORM 49a

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

OJECT NUMBER	PROJECT TITLE
G-10	B-58 Flight Control System (U)

STATUS

31 August 1960.

1. Items in use without reported discrepancy: (U)

1922	3903	3909	3925	5901	
1931	3906	3910	3926	5902	
1934	3907	3923	3944	5910	(U)

2. Discrepancies: (U)

a. 1901 - During this period tester was utilized approximately 150 hours for combined testing, training, and check-out functions. Tester was relocated in new A&E shop facility. Ten Convair RTFR's were written on tester components as follows: (U)

2 - Power Supply (1 - Power Transistor; 1 - Resistor)

2 - Programmer (2 - High Powered Driver)

3 - Voltage Insulator (1 - Squaring Amplifier; 1 - Relay Driver; 1 - Capacitor)

1 - Indicator (Storage Select Module)

2 - Tape Recorder (1 - Speed Idler Wheel; 1 - Latching Relay)

Tester was calibrated by combined efforts of Eclipse-Pioneer, Convair, and Air Force personnel in preparation for scheduled 1st Article Demonstration 15 August 1960. Conducted demonstration was felt to be inadequate because of the absence of new tape manual. New tape manual scheduled for release mid-September. Another demonstration will be scheduled convenient to agencies concerned. The following eleven RFA's were written and forwarded for immediate action by contractor: (U)

(1) RFA #34 - Amplifier Computer Mounting Table.

(2) RFA #35 - Field Maintenance T.O. 5A7-4-4-2 dated 1 August 1960.

(3) RFA #36 - Revisions to Field Maintenance Manual T.O. 5A7-4-4-2.

(4) RFA #37 - Revision to Tape Manual (Interim) FSE-4SD-QB89358-8A.

(5) RFA #38 - Storage of Patch Connectors.

CARS FORM 69a

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
G-10	B-58 Flight Control System (U)

STATUS

(6) RFA #39 - Rubber Gaskets

(7) RFA #40 - Winchester Connectors on Rear of Test Set.

(8) RFA #41 - Drawer Installation.

(9) RFA #42 - Tape Reader Unit Door (Front).

(10) RFA #43 - Test Equipment Required for Maintenance.

(11) RFA #44 - Tech Manual (Operation) T.O. 33D3-2-37-1.

Performance capability of this tester must be considered unsatisfactory at this time due to an inadequate systems test tape and the low degree of reliability of tester sub-assemblies, components and parts (i.e., reader head assembly, voltage simulators, resistors, capacitors, etc.). Present maintainability capability of this tester is also unsatisfactory due to incomplete T.O. coverage in the areas of tester trouble shooting and calibration procedures. Action is being taken on all problem areas and will be specifically reported upon by SIR at a later date. (U)

b. 1902 - Tester utilization approximately 388 hours. Relocated in new A&E facility and calibrated in preparation for 1st Article Demonstration 16 August 1960. The following fifteen RFA's were written: (U)

(1) RFA #19 - Wiring Diagrams for Test Stand.

(2) RFA #20 - Wiring Diagrams in Maintenance Manual.

(3) RFA #21 - Cables on Rear of Test Console.

(4) RFA #22 - Translator Matrix Panels 1A1, 2A1, 3A1.

(5) RFA #23 - Hydraulic Pressure Shut-off.

(6) RFA #24 - Microswitch Actuating Arms (P/N 15M1) Hydraulic Control Panel 4A2.

(7) RFA #25 - Flow Indicators Hi Press (4A12-12) and Low Press (4A2-11).

(8) RFA #26 - Rudder and Elevator Channel Rigging Pins for PCLA Test Stand.

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
G-10	B-58 Flight Control System (U)

STATUS

(9) RFA #27 - Return Pressure Indicator (4A2-9) and (2A4-2)

(10) RFA #28 - Hydraulic Return Line for PCLA Test Stand.

(11) RFA #29 - Revision to T.O. 33D3-12-2-1, Operation and Service Manual.

(12) RFA #30 - Revision to T.O. 5A33-2-2-2 Field Maintenance Manual.

(13) RFA #31 - Revision to Field Maintenance Manual T.O. 5A33-2-2-2.

(14) RFA #32 - Panel Milliammeter.

(15) RFA #33 - Test Bed P/N QB88090-1.

Exception was taken by both SAC and ARDC representatives at 1st Article Demonstration regarding the designation of Category III (desirable) to RFA #21. Location of present tester cables is felt to be inexcusable and the direct result of poor design and engineering evaluation on the part of both the contractor and vendor personnel concerned. Performance and maintainability reliability is presently considered no better than marginal. Action on RFA's submitted should improve present condition. (U)

c. 1903.1 - Utilization on three testers 691 hours. Five RTFR's were submitted as follows: (U)

4 - Tape Reader Head Assembly

1 - Power Supply

Convair technical reliability coverage on this tester has proven to be completely inadequate to date. The following is a list of four admittedly known tester problems which have not been covered by RTFR action: (U)

(1) Phase to DC converter logic unstable at 180° phase.

(2) SMT connectors need new potting compound.

(3) Rudder SMT slips off aircraft.

(4) Installation of interlock in blower circuit so that inlet and exhaust doors must be open.

CARS FORM 690 FC: 2750

JT1

TEST AND EVALUATION PROJECT STATUS CONTINUATION SHEET

PROJECT NUMBER	PROJECT TITLE
G-10	B-58 Flight Control System (U)

STATUS

Confidence in the performance capability of this tester has been extremely low due to the high number of no-go indications. Documentation and analysis of the no-go's indicated the need for a major revision of the system test tape, operating, and trouble shooting procedures. Special effort is being expended by contractor, vendor, and Air Force personnel in preparing new tapes and suitable supporting technical information. Specific details will be reported in an SIR at a later date. (U)

Present tester configuration lacks the capability of simulating known unstable dynamic characteristics of aircraft system. As a result repeated flight squawks of pitch and yaw oscillations have not been identified to a LRU replacement to date. Detailed system and tester studies are in progress to determine a means for isolating this reoccurring system discrepancy. (U)

d. 1904 - Tester utilization 32.3 hours. Tester relocated in new A&E facility. In preparation for 1st Article Demonstration 15 August 1960 the tester was modified in conformance with ECP 386C and then calibrated. Seven RFA's were submitted: (U)

(1) RFA #12 - Testing Procedure.

(2) RFA #13 - Test Equipment Required for Maintenance.

(3) RFA #14 - Test Procedure.

(4) RFA #15 - Test Procedure.

(5) RFA #16 - Revision of Interim T.O. FSE-4SD-33D3-6-13-1.

(6) RFA #17 - Phase Rotation Light.

(7) RFA #18 - Missing Equipment.

To date no discrepancies have been reported on this tester. Performance considered satisfactory. (U)

e. 1914 - Daily utilization. Tester was returned to Convair. Tear down revealed that the non-conformance with an earlier Convair E.O. was the contributing cause of transformer (T-1) burnouts. E.O. complied with. Tester also modified for Senior Flash-up configuration and returned to Carswell. Performance considered satisfactory. (U)

CARS FORM 69a