

INSTALLATION KIT
KB-1401

BERYL FLIGHT EXTENDERS - WING FUEL
TIP TANKS - 30 GALLON

FOR
BEECH

MODEL A-35, B-35,
C-35, D-35, E-35,
F-35, G-35, H-35,
J-35, K-35, M-35,
P-35, S-35,

EAA APPROVED
Date 10/25/74 Initials *fc*
35-33, 35, 35R

BERYL AVIATION SPECIALTIES, INC.

ROUTE 1 BOX 127D
LEESBURG, FLA. 32748
(904) 787-0357

IN LOS ANGELES:
7646 HAYVENHURST
VAN NUYS, CA. 91406
(213) 988-5490
FROM OUTSIDE CALIFORNIA
— TOLL FREE —
(1) (800) 423 3178

REV _____
DATE _____

DWN <i>Burkow</i>
DATE 2-28-74
APPD 3-1-74

REVISION/CHANGE NOTICE

E.O. NO.

EFF. BEECH MODEL

DWG TITLE INST'L KIT-
WING TIP TANKS

DATE
2-28-74

A-35 THRU K-35, M-35,
N-35, P-35, -35-33, 535

REVISED & REDRAWN

FAA APPROVED

Date 11/25/74 Initials FJP

DWN Burkew

DATE 2-28-74

APPD H. Peterson

BERYL AVIATION SPECIALTIES, INC.
LEESBURG, FLA.

VAN NUYS, CA.

KB-
1401

NUMERICAL DWG LIST	D.C.N./	EFF. BEECH MODEL
DWG TITLE	INST'L KIT-WING FUEL TIP TANKS-30 GALLON	A-35 THRU K-35, M-35, N-35, P-35, 35-33, S-35

DRAWING NUMBER	DWG SIZE	NO. SHT	* E.O.	DESCRIPTION
KB-1401	A	10		INST'L KIT
S.T.C. SA 150	A			SUPPLEMENTAL TYPE CERTIFICATE
ME-1401	A	10	*	MASTER ELIGIBILITY LIST
B-1401	C(4) D(2)	6		INST'L DWG-WING FUEL TIP TANKS
B-1403	C	1		INST'L DWG-NAV. LITE WING TIP TANK

EBA APPROVED
 Date 10/25/74 Initials JLW

* INDICATES OUTSTANDING CHANGE(S) SEE E.O.-R/C N.

DWN <u>Barkow</u>	DATE <u>2-28-74</u>	APPD # <u>JLW</u>
BERYL AVIATION SPECIALTIES, INC. LEESBURG, FLA. VAN NUYS, CA.		REV KB-1401

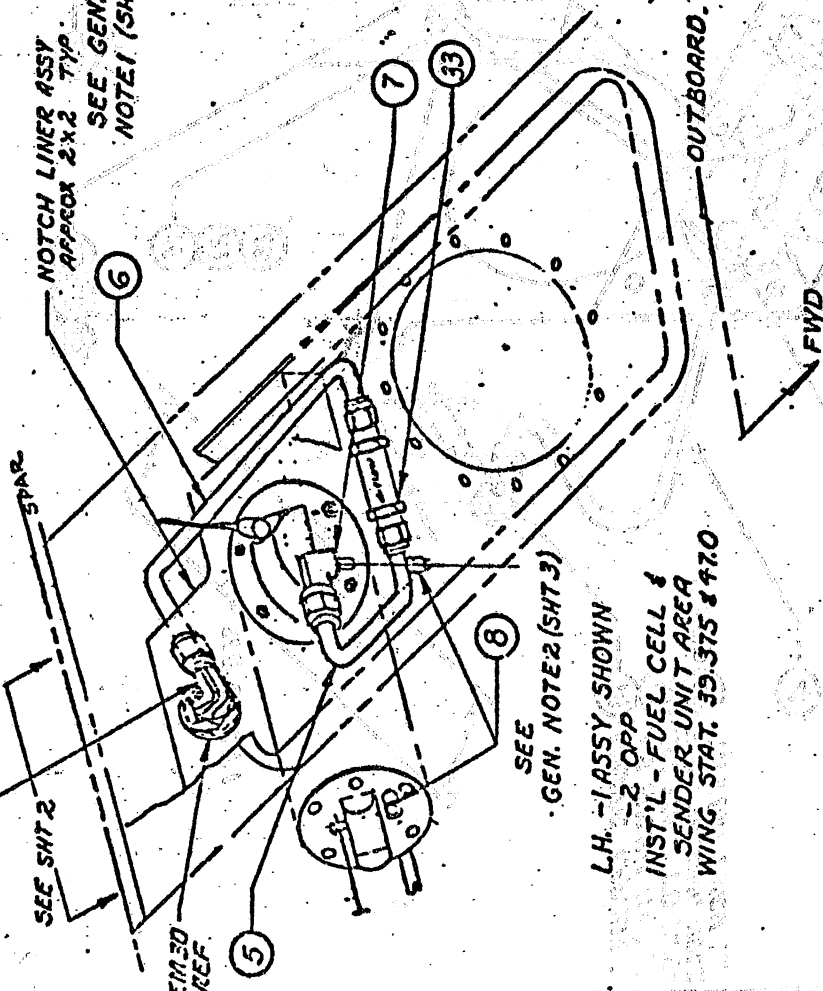
KB-1401

B-B O-R-D

ITEM 14 REF SEE GEN. NOTE 1 (SHT 3)

NOTCH LINER ASSY.
APPROX 2x2 TYP

SEE GEN. NOTE 1 (SHT 3)



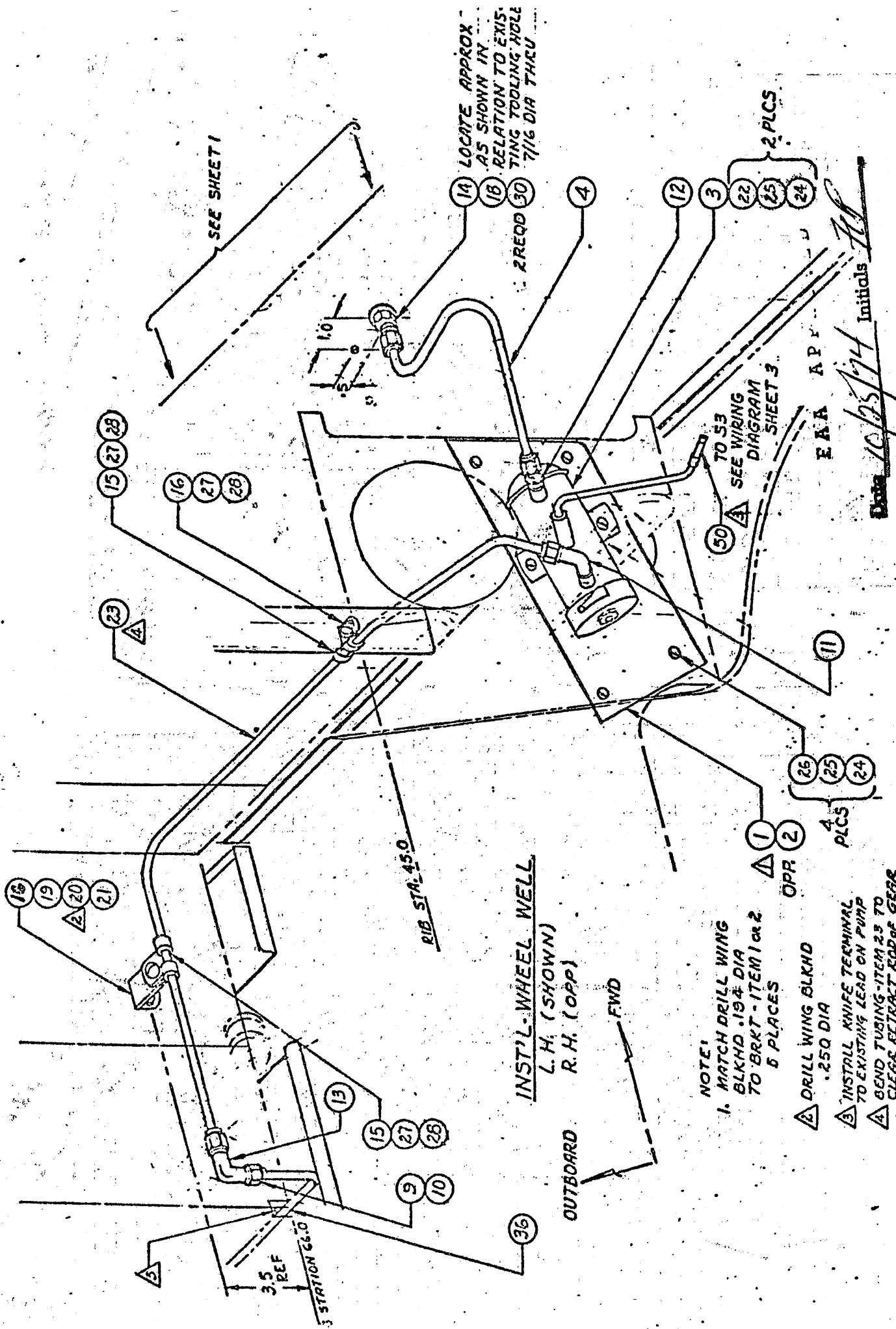
SEE GEN. NOTE 2 (SHT 3)

L.H. - 1 ASSY SHOWN
- 2 OPP
INST'L - FUEL CELL &
SENDER UNIT AREA
WING STAT. 39.375 & 470.

ITEM NO.	DESCRIPTION	PART NO.	MFR
50 16	TERMINAL, KNIFE CONN.	AMP MFG	AMP MFG
49 0R	SAFETY WIRE	AN 995C32	HOFFMAN IND. PROD.
48 12	TERMINAL # 6	V2216-M3	WOOD ELECTRIC
47 1	CIRCUIT BREAKER	109-205-101	AMP MFG. CO.
46 9	TERMINAL # 10	3294B	WTL-W-SCHG
45 0R	WIRE, 18 AWG		
44 2	SWITCH, SPST (52153)	4537053-22	
43 1	SWITCH, SPDT (51)	M555053-21	
42 1	INDICATOR (MI)	B-1922	BERYLAV SPEC. INC.
41 1	PANEL, IND. & SW.	B-119	BERYLAV SPEC. INC.

ITEM NO.	NO. REQD	QTY	DESCRIPTION	DATE	SCALE	DWG NO.
40	4	1	AN 364-632	12-12-73	1:1	B-140
39	4	1	AN 526-632-R10		1:1	
38	1	1	AN 815-4D		1:1	
37	1	1	UNION		1:1	
36	1	1	AL ALY, 505250		1:1	
35	1	1	ASSY, TANK, R.H.		1:1	
34	1	1	ASSY, TANK, L.H.		1:1	
33	1	1	CHECK VALVE		1:1	
32	2	2	COUPLING, HOSE		1:1	
31	1	1	HOSE, RUBBER, MULTI-PURPOSE		1:1	
30	3	3	WASHER		1:1	
29	28	28	AN 525-832-R16		1:1	
28	3	3	AN 364-832		1:1	
27	3	3	AN 526-832-R6		1:1	
26	4	4	AN 526-1032-R6		1:1	
25	6	6	AN 364-1032		1:1	
24	7	7	AN 970-3		1:1	
23	1	1	B-1415-		1:1	
22	3	3	AN 526-1032-R8		1:1	
21	1	1	M555333-38		1:1	
20	1	1	A6-75		1:1	
19	1	1	AN 526-832-R8		1:1	
18	1	1	AN 924-4D		1:1	
17	1	1	NUT		1:1	
16	2	2	AN 743-812		1:1	
15	3	3	MS 21919-DG4		1:1	
14	1	1	AN 833-4D		1:1	
13	1	1	AN 821-4D		1:1	
12	1	1	AN 816-4D		1:1	
11	1	1	AN 822-4D		1:1	
10	2	2	AN 819-4D		1:1	
9	2	2	AN 818-4D		1:1	
8	1	1	B1418		1:1	
7	1	1	B1417		1:1	
6	1	1	B1415-		1:1	
5	1	1	B1415-		1:1	
4	1	1	B1415-		1:1	
3	1	1	476459		1:1	
2	1	1	B-1416-2		1:1	
1	1	1	B-1416-1		1:1	

DESCRIPTION
DATE 12-12-73
SCALE 1:1
DWG TITLE
INST'L - WING TIP
FUEL TANKS - 30 GAL
DWG NO. B-140



LOCATE APPROX AS SHOWN IN RELATION TO EXISTING TOOLING HOLE 7/16 DIA THRU

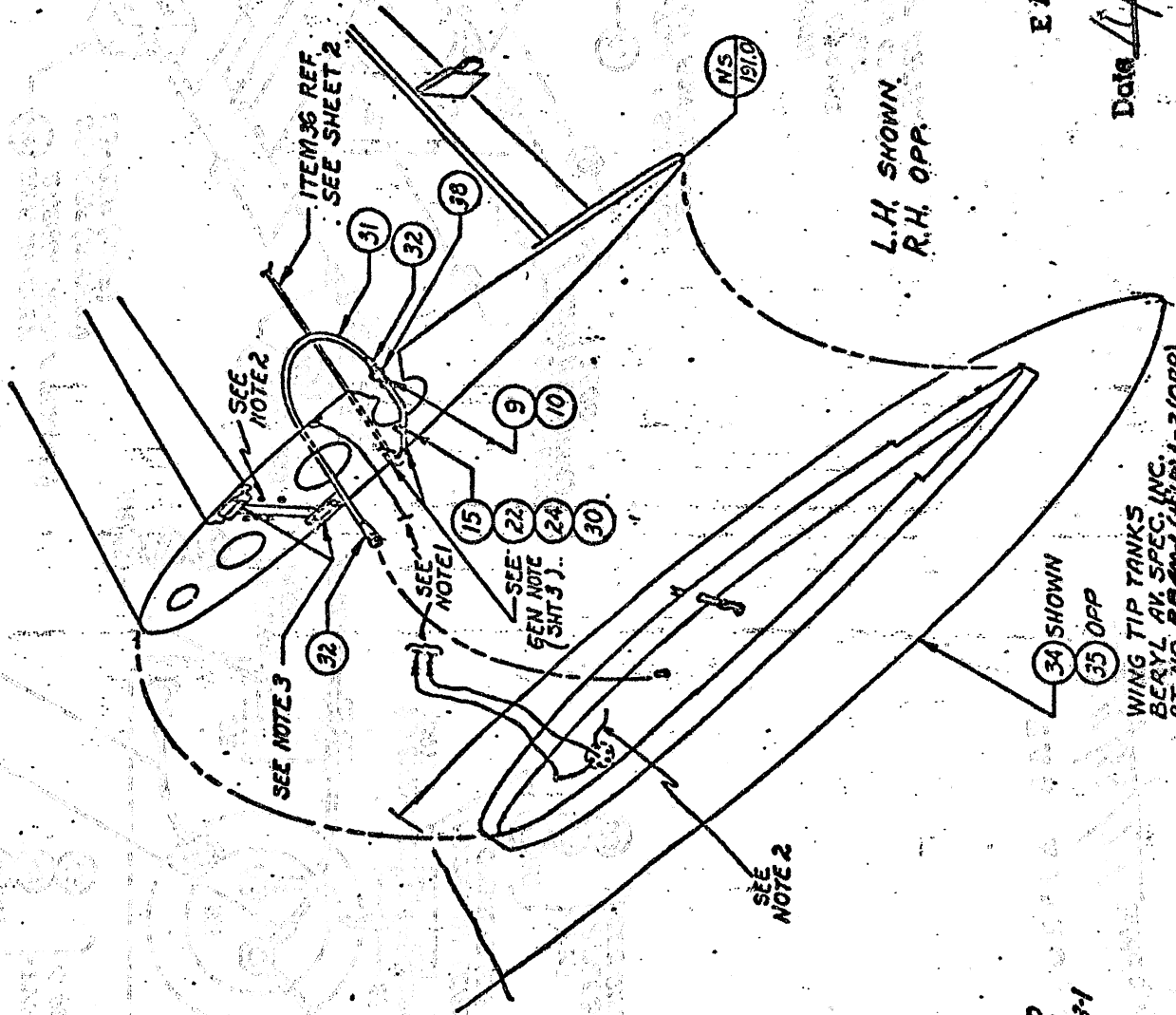
INST'L - WHEEL WELL
L.H. (SHOWN)
R.H. (OPP)

NOTE:
1. MATCH DRILL WING BLKHD .194 DIA TO BRKT - ITEM 1 or 2 5 PLACES

- △ DRILL WING BLKHD .250 DIA
- △ INSTALL KNIFE TERMINAL TO EXISTING LEAD ON PUMP
- △ BEND TUBING - ITEM 25 TO CLEAR RETRACT ROD OF GEAR
- △ SEAL

EKA APP
Initials
Date 10/25/74

BERYL AVIATION SPECIALTIES, INC. VAN NUYS, CA.	SCALE NONE
DRAWING TITLE INST'L - WING TIP	DWG NO. R-1401



- NOTE:**
1. SOLDER TRANSMITTER AND SIGNAL LIGHT WIRES TO EXISTING SIGNAL LIGHT. LEADS AND DRAW BACK THRU WING. LUBRICATE WIRES WITH SOAP. FURNISHED IN KIT.
 2. ATTACH NEW GND WIRE TO TRANSMITTER AND WING RIG SCREWS. SEE SHEET 6 FOR ELECTRICAL INST'L.
 3. TRIM WING ASSY WIRES & BEND TIGHT AGAINST RIG-COVER ENDS WITH MULTI-CELL TUBE SA-V-033-1

L.H. SHOWN
R.H. OPP

EAA APPROVED

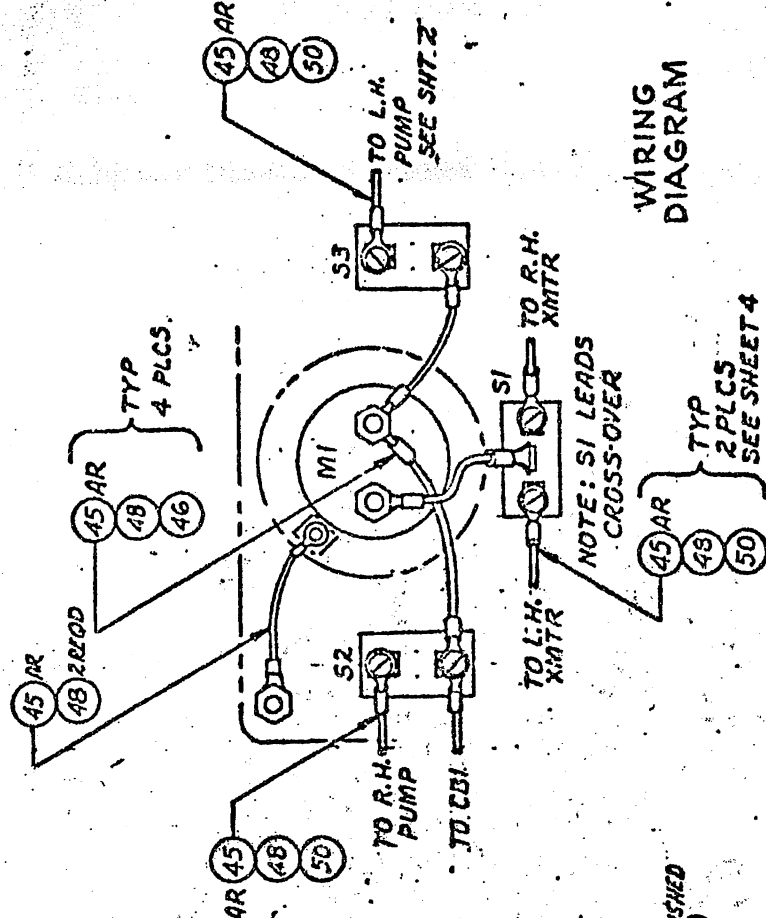
Date 4/25/74 Initials FJR

34 SHOWN
35 OPP
WING TIP TANKS
BERYL AV. SPEC. INC.
PT. NO. AB 4001 (REV) 1-2 (OPP)

EAA APPROVED

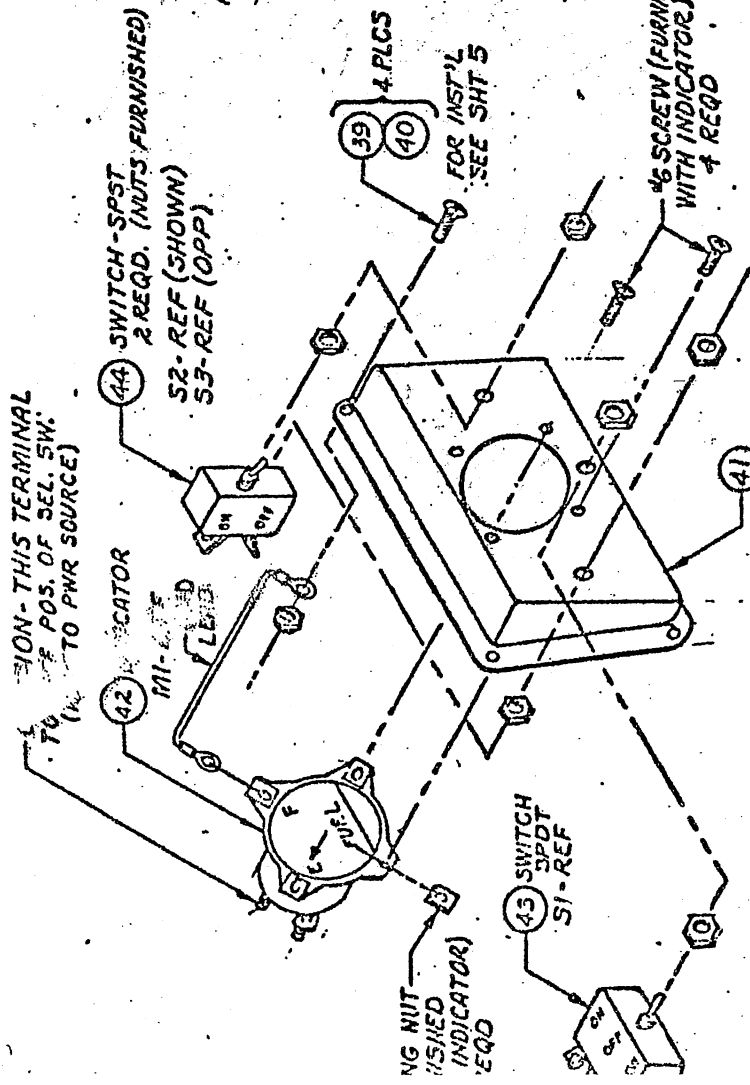
Initials

BERYL AVIATION SPECIALTIES, INC. VAN NUYS, CA.	SCALE 1/1
DRAWING TITLE INST'L - WING TIP FUEL TANKS	DWG NO. B-14



WIRING
DIAGRAM

NOTE: S1 LEADS
CROSS-OVER



INST'L - INDICATOR & SELECTOR
SWITCH PANEL ASSY

ERAL NOTES:
COVER PARTS WITH FOAM PAD & SECURE WITH
DUCT TAPE TO PROTECT TANK OR AVOID DAMAGE
SECOND 1/8" SEAL USING EPOXY RESIN ADHESIVE
TYPE 1 SHELL EPON 934 FOR MIL-A-50900 OR EQUIV.
LENGTH TO BE DETERMINED AT MFR.
& LENG'R TO BE NOTIFIED

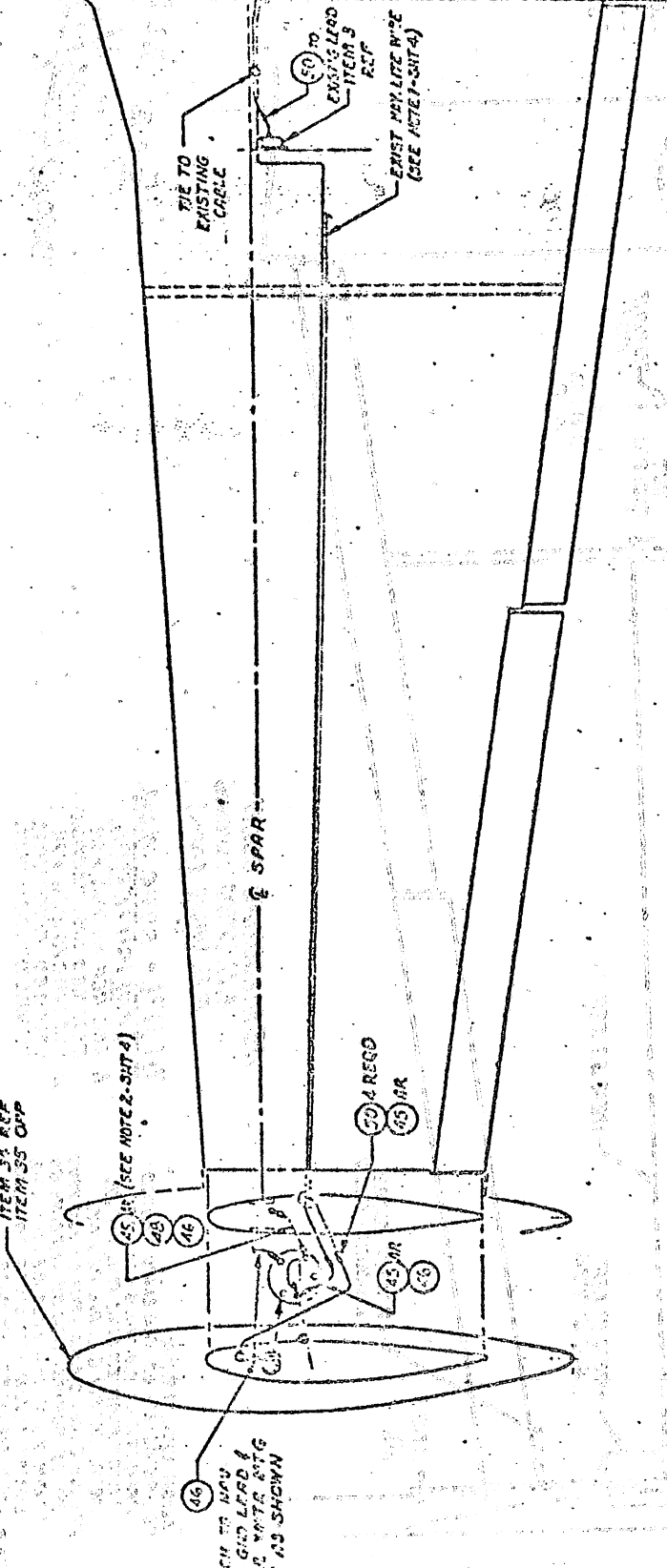
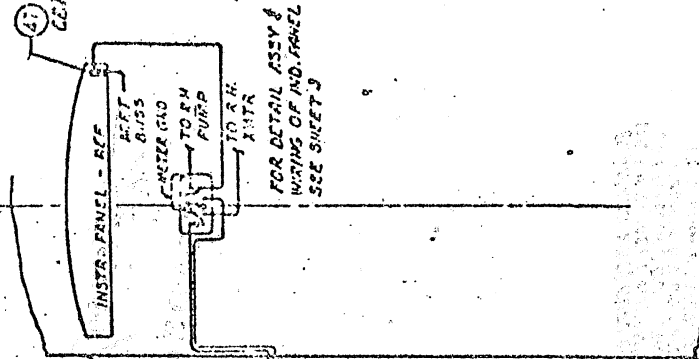
EAA APPROVAL

10/25/74 Initials ZCR

SCALE	NONE
BERYL AVIATION SPECIALTIES, INC. VAN NUYS, CA.	
DRAWING TITLE	INST'L - WING TIP FUEL TANKS
DWG NO.	3-1401
PAGE NO.	1 OF 2

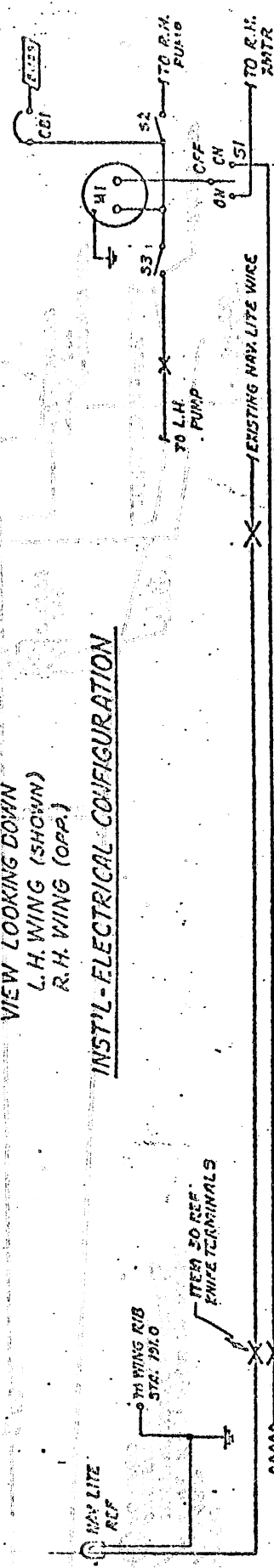
KB-1901 SHIT 90710

SYM ABOUT
EXCEPT
AS NOTED



VIEW LOOKING DOWN
L. H. WING (SHOWN)
R. H. WING (OPP.)

INST'L - ELECTRICAL CONFIGURATION



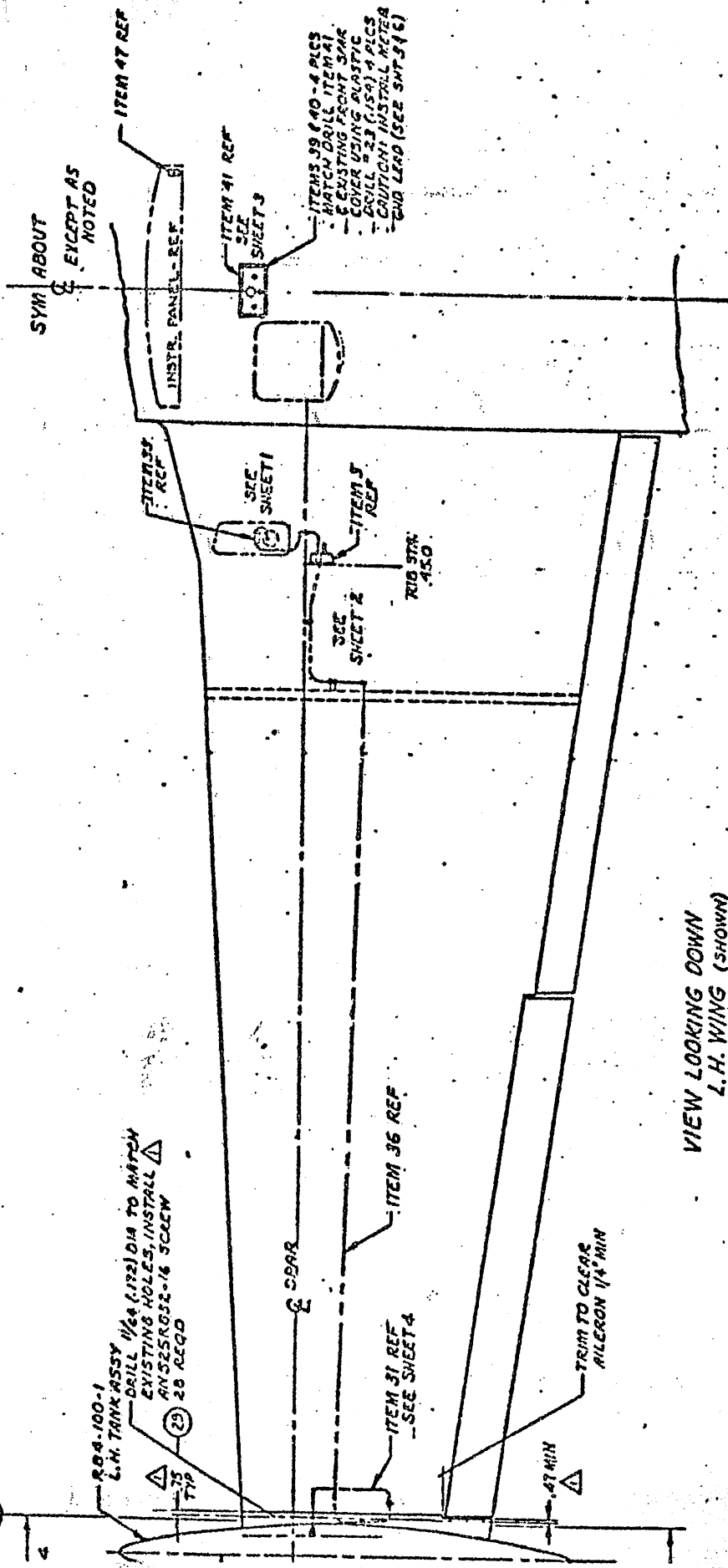
FOR WIRING DIAGRAM SEE. SHT 3

EAB APPROVED

Date 10/25/74 Initials fil

BEHYL AVIATION SPECIALTIES, INC. SAN JOSE, CA DRAWING TITLE	DATE
INST'L - WING TIP FUEL TANKS	2-14-61

NS 2970



SYM ABOUT
& EXCEPT AS
NOTED

VIEW LOOKING DOWN
L.H. WING (SHOWN)
R.H. WING (OPPOSITE)

- ALIGN WING & TANK:
 SCRIBE SCREW CENTER LINES INBOARD
 APPROX 3 IN. ON WING - 56 PLCS
 & MARK ANOTHER LINE FWD/AFT .75
 REMOVE SCREWS & WING TIP & ALIGN TANK
 TO .75 SCRIBES. SCRIBE .75 LINE ON
 TANK TO MATCH HOLE C.L. ON WING.
 SCRIBE EXTENSION LINES TO WING
 MARKED LINES - 56 PLCS.
 DRILL HOLES IN TANK CUFF AS NOTED
 USING PLASTIC DRILL.
 CENTERING RUGH TANK, TOP & BOTTOM
 TO DIMS. NOTED

- INST'L - BASIC MECH.
 CONFIGURATION
 1. SEE REF SHEETS FOR
 DETAILED INSTALLATION.
 2. SEE SHEETS 36 G FOR
 DETAILED ELECTRICAL
 INSTALLATION & HOWRE.

E.A.A. APPROVED

Date 11/25/74 Initials [Signature]

DATE 11/25/74	APPROVED
BERRY AVIATION SPECIALTIES, INC. CALL	
VAN HUSEN	
DRAFTING	
NO. 90	8-14C
INST'L - WING FUEL TANKS	

1 CHARACTERS TO BE BOLD FACE
 VERMONT GOTHIC,
 COLOR: BLACK
 \$ SYM. CENTERED

2 MAT'L: CLEAR MYLAR
 SELF-ADHESIVE & BRACKETED
 SIZE:

- 1 .75x6
 - 2 .75x6
 - 3 .53x6
 - 4 .25x6
 - 5 .25x6
 - 7 .25x3
 - 8 .25x3
 - 9 .53x3
 - 10 .25x3
 - 14 .25x1
- NOTE 2

- 1 Replicate only and ALL
 PLACARDS REFERING TO
 UTILITY / CONTINGENCY

LEFT SIDE OF INSTRUMENT PANEL
 Speed

- 11 141
- 12 132
- 13 135
- 14 145

1 TH'S AIRPLANE IS TO BE OPERATED AS A NORMAL
 CATEGORY AIRPLANE IN COMPLIANCE WITH THE
 AFM AND BERYL AVIATION SPECIFICATIONS

- 2 FUEL CONSUMPTION MAY EXCEED TIP TANK TRANSFER
 RATE. MONITOR MAIN TANK GAUGE TO PREVENT OVERFILL
 SELECT ENGINE USE FROM MOST FULL TANK

- 3 NO ACROBATIC MANEUVERS INCLUDING SPINS ARE
 APPROVED

- 4 USE AUXILIARY FUEL IN LEVEL FLIGHT ONLY

- 5 80, OBTAIN MIN

- 6 100, OBTAIN MIN

- 7 15 GAL.

- 8 TIP TANK TRANSFER PUMPS

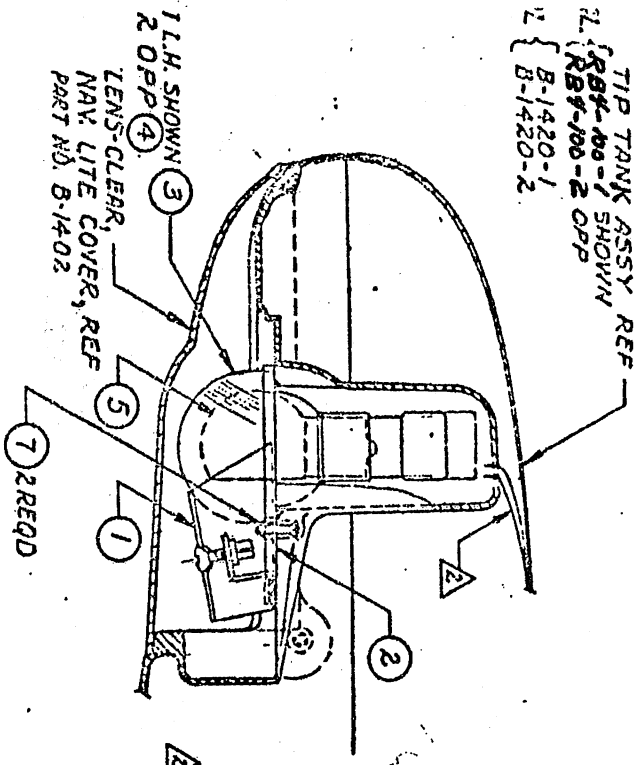
- 9 ON LEFT OFF RIGHT

EAA APPROVED
 Date 10/25/74 Initials *TR*

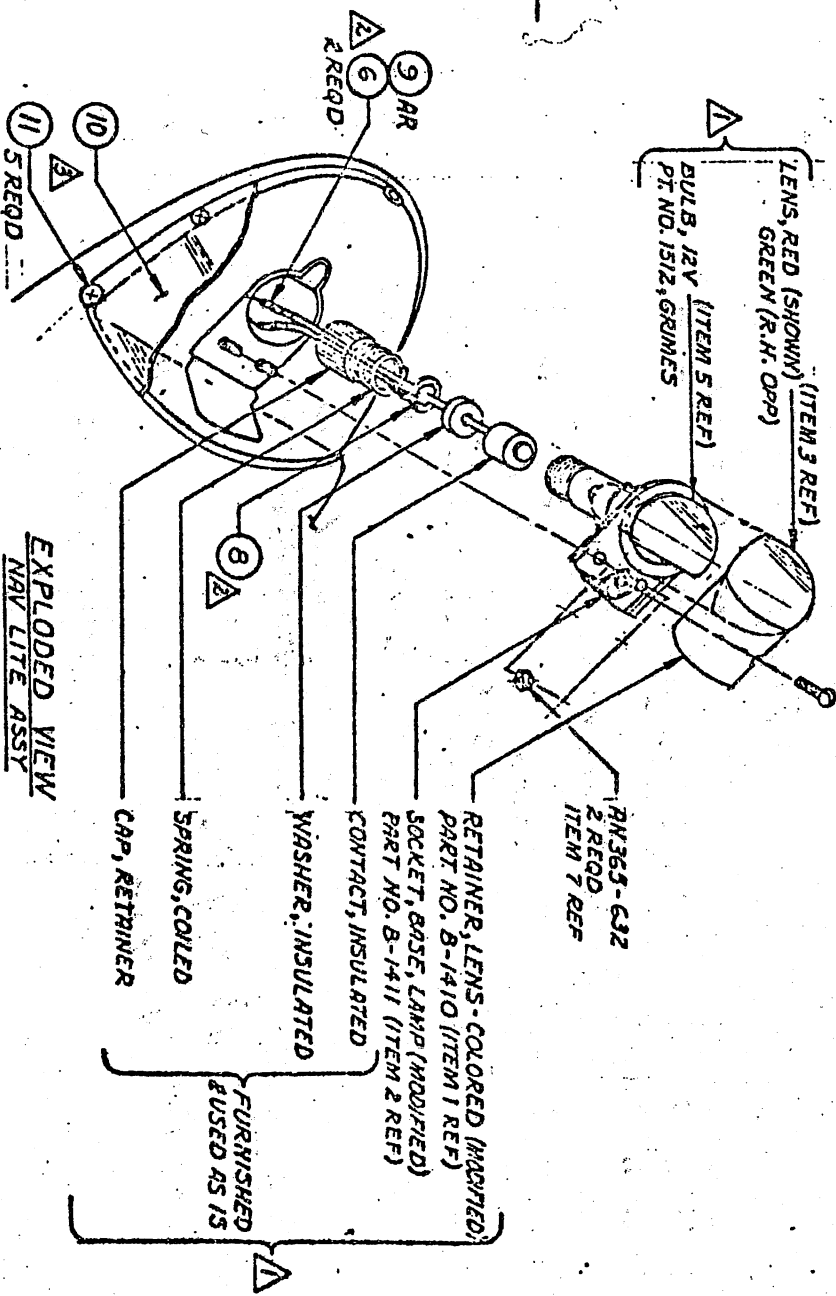
Sta. 7017

TOLERANCE	SCALE	BERYL AVIATION SPECIALTIES
.X ± .1	FULL	INC.
.XX ± .03	DATE 10/24/74	LEESURE FL.
.XXX ± .010	APPROVED By	32748
TITLE (Dwg.)	DECAL	PWG. NO E

TIP TANK ASSY REF
 1. (RBY-100-1 SHOWN)
 (RBY-100-2 OPP
 2. B-1420-1
 B-1420-2



LENS, RED (SHOWN) (ITEM 3 REF)
 GREEN (R.H. OPP)
 BULB, 12V (ITEM 5 REF)
 PT. NO. 1512, GRIMES



EXPLODED VIEW
 NAV LITE ASSY

BBA APPROVED

Date 10/25/72 Initials JLP

- IN NOTES
- 1. ITEMIZED PARTS, INCL. RETAINER (MODIFIED) & SOCKET (MODIFIED) ARE PART OF WING LITE ASSY PT. NO. A1285 - (COLOR CODE ROR G) - 12-14V, GRIMES
 - 2. TRIM EXISTING, 1/8" WING TANK LEADS TO APPROX 5.0 IN. LG. CONNECT TO NAV. LITE LEAD WITH ITEM 6 AFTER INSULATING TO WITH ITEM 9. 2ND LEAD IS SOLDERED TO GROUNDING WASHER ITEM 8 AFTER INSULATING WITH ITEM 9. CARE MUST BE TAKEN WHEN INSERTING LITE ASSY TO AVOID DAMAGING LEADS
 - 3. CALK ALL AROUND (INCL. SCREWS) USING GRAY OR WHITE STRIP CALK, 3-M CO., NO. 8575 OR SILICONE RUBBER, NO. SE-H03, G.E. CO., WATERFOORD, N.Y., OR EQUIV.

11	5	5	ANS07-632-R5	SCREW	
10	1	1	B-1402	LENS, CLEAR	BERYL SPECIALTY
9	AR	AR			
8	1	1	AN360-616L	WASHER	
7	2	2	AN365-632	NUT	
6	2	2	34137C	TERMINAL	AMP
5	1	1	1512	BULB, 12V	GRIMES
4	1	1	A1285-G-12-14V	WING LITE ASSY	
3	1	1	A1285-R-12-14V	WING LITE ASSY	
2	1	1	B-1411	SOCKET, MODIFIED	BERYL AVIATION SPECIALTY, INC.
1	1	1	B-1410	RETAINER, MODIFIED	MER
ITEM NO.	QTY	UNIT	PART NO.	DESCRIPTION	
TOLERANCES	±.1				
DATE	1-17-74	APPROVED BY			
DWG TITLE	INST. NAV LITE TANK				DWG NO. B-1403
SCALE	NONE				SHEET 7 OF 7

**BERYL D'SHANNON
AVIATION SPECIALTIES
ROUTE 1, BOX 1270
LEESBURG, FLORIDA 32748**

FAA APPROVED

AIRPLANE FLIGHT MANUAL SUPPLEMENT

FOR

BEECH BONANZA MODEL F-35, G-35

REGISTRATION NO.

SERIAL NO.

This Supplement must be attached to the FAA Approved Airplane Flight Manual when two 15 gallon auxiliary wing tip fuel tanks are installed in accordance with STC SA153EA. The information contained herein supplements or supersedes the basic manual only in those areas listed herein. For limitations, procedures, and performance information not contained in this supplement, consult the basic Airplane Flight Manual.

FAA APPROVED

John F. Vogel
**Chief, Engineering and
Manufacturing Branch
Southern Region, FAA**

DATE December 11, 1975

BERYL D⁰ SHANNON
AVIATION SPECIALTIES
ROUTE 1, BOX 1270
LEESBURG, FLORIDA 32748

AFM SUPPLEMENT FOR
BEECH F-35, G-35

LIMITATIONS

The Airplane Flight Manual for this airplane lists limitations for operation in the UTILITY category. Since the tip tank installation is approved contingent on operation of the airplane in the NORMAL category only, the following Limitations supersede those of the basic Airplane Flight Manual.

Maneuvers: Normal category airplanes are limited to nonacrobatic operation. Nonacrobatic operation includes:

- (1) Any maneuver incident to normal flying
- (2) Stalls (except whip stalls)
- (3) Lazy eights, chandelles, and steep turns, in which the angle of bank is not more than 60°.

SPINS ARE PROHIBITED.

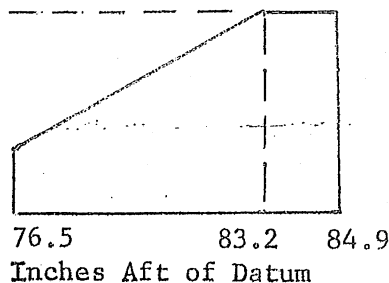
Design Structural Load Factor: 3.8G with flaps up
2.0G with flaps down
No inverted maneuvers permitted.

Maximum design maneuvering speed: 125 mph (109 knots)

Maximum weight: 2,950 pounds for F-35; 2,975 pounds for G-35
CG Limitations (wheels down)

2950 F, 2975 G

Gross
Weight
2265



Note:
CG of Tip Tank Fuel
is 87" Aft of Datum

Fuel: In addition to the basic airplane fuel system, two auxiliary wing tip fuel transfer tanks are installed with a capacity of 15 gallons each, all of which is usable. Takeoffs are prohibited with more than 1/4 difference in tip tank fuel quantity. During flight if tip tank fuel quantity gauges indicate more than 1/2 tank difference the landing should be made with flaps up.

BERYL D'SHANNON
AVIATION SPECIALTIES
ROUTE 1, BOX 1270
LEESBURG, FLORIDA 32748

AFM SUPPLEMENT FOR
BEECH F-35, G-35

Placards:

In full view of pilot

- (1) NORMAL category airplane. Operate in accordance with FAA approved Airplane Flight Manual. Intentional spins prohibited. No acrobatic maneuvers are approved.
- (2) Transfer tip tank fuel in level flight only.
- (3) Design maneuvering speed 125 mph.

NORMAL PROCEDURES

Before flight, check the tip tanks for unsymmetrical fuel loading. If fuel tank capacities differ more than 1/4 tank, relocate fuel prior to takeoff.

Tip tank fuel is transferred into its respective main tank by an electric pump at a rate of approximately 15 gallons per hour. At higher power settings, fuel consumption may exceed the fuel transfer rate to the main tank selected.

Normal tip tank fuel transfer should be accomplished simultaneously to maintain symmetrical wing tip tank fuel loading. Initiate transfer with the left main at 1/2 full and feeding the engine. During the transfer, monitor fuel gauges for both main tanks and stop transfer if gauge indicates full to prevent overflow of fuel through the main tank vent tubes.

EMERGENCY PROCEDURES

If for any reason it is necessary to land with more than 1/2 tank difference in tip tank quantities, the landing should be made with wing flaps in the "up" position.

PERFORMANCE

The performance listed in the basic Airplane Flight Manual is applicable to this airplane with the tip tank installation at the gross weight listed in the basic Airplane Flight Manual. Since the certification basis of the tip tank installation does not include a requirement that performance be made available in the AFM, and since the modifier did not choose to supply this information, no performance is listed at gross weights above that of the basic airplane.