

CLARK THREE LIGHT GEAR POSITION INDICATOR SYSTEM

FOR

BEECHCRAFT

MODELS

35. A35. B35. C35. D35. E35. F35. G35. H35. J35. K35. M35
N35. P35. S35. V35. V35A. 35R.

35-33. 35-A33. 35-B33. 35-C33. 35-C33A. E33. E33A. E33C. F33
F33A. F33C. G33.

95. B95. B95A. D95A. E95. 95-55. 95-A55. 95-B55. 95-B55A
95-B55B. 95-C55. 95-C55A. D55. D55A. E55. E55A. 56TC. A56TC.

July 14, 1975

Revised 10-21-75

BY

HAROLD M. CLARK JR.
7703 BOBCAT DRIVE S.E.
OLYMPIA, WASHINGTON 98503
PHONE - 206-491-3279

Title- Three Light Gear Position Indicator System.

Model- CTLB-1

Application- Beechcraft models:

35, A35, B35, C35, D35, E35, F35, G35, H35, J35, K35, M35, N35
P35, S35, V35, V35A, 35R.

35-33, 35-A33, 35-B33, 35-C33, 35-C33A, E33, E33A, E33C, F33, F33A
F33C, G33.

95, B95, B95A, D95A, E95, 95-55, 95-A55, 95-B55, 95-B55A, 95-B55B
95-C55, 95-C55A, D55, D55A, E55, E55A, 56TC, A56TC.

Description-

System consists of three(3) individual Korry 71810GL Indicator Light assemblies with push-to-test and dimmer control features. One(1) each is connected to the nose, left main and right main landing gear systems.

The existing landing gear position lights show only the position of the gearbox. These three additional lights show when each gear is in the "safe for landing" position.

Mechanical-

1. The three(3) indicator light assemblies are installed in the instrument panel in a position convenient for the pilot to monitor.
2. Micro switches and adapters are installed in the forward area of each main wheel well on the lower skin stiffener channel. The switches are actuated by tabs clamped to the 35-815102, or equivalent, brace assembly("A" frame) in such a manner that the switches are actuated just prior to the gear coming to the full down position.
3. A micro switch and adapter are attached to the left hand side wall skin of the nose gear well. The switch is actuated by a tab that is clamped to the 35-825072, or equivalent, "V" brace assembly in such a manner that the switch is actuated just prior to the gear coming to the full down position.

Electrical-

1. Power is supplied from the circuit breaker* direct to each of the three micro switches. The switches are then wired direct to each of the respective indicator light assemblies.

* Landing gear position indicator light

D1 through D1500

Landing gear motor

D1501 through D6561

Fuel pump

D6562 through D9068

Landing gear warning horn

CD1 through CD387

Landing gear and flap indicator lights

CD388 through CD1234

CE180 through CE269

Model 55 Series
TC1 through TC1607
TE1 through TE942 less TE938
TH1 through TH384
Landing Gear Control

Model 56 Series
TG1 and On
Landing Gear Control

Model 95 Series
TD1 and On
Landing Gear Control

2. The light grounds are then connected to the negative terminal of the existing "Landing Gear Down" position light socket.
3. The new indicator light assembly "Push To Test" terminal shall be wired direct to the above listed circuit breaker.

Placards-

A placard shall be permanently installed adjacent to the Indicator Light Assemblies, identifying each light.

LEFT NOSE RIGHT
LANDING GEAR DOWN

Note:

This installation allows removal of the existing Nose Gear Pointer Assembly in the Nose Gear Well Cover by the owner, if desired.

CLARK CTLB-1
THREE LIGHT GEAR POSITION INDICATOR
SYSTEM

Revision Control Page

Revision	Date	Pages Affected	Remarks
A	10-21-75	Title	Added multiengine models
		1 of 16	Added multiengine information
		2 of 16(new pg)	Added multiengine information
		3 of 16	Added multiengine models
		4 of 16	Added multiengine models
		5 of 16	Added revision information
		6 of 16	Adapter P/N change. Added multi-engine models
		7 of 16	Adapter P/N change. Added multi-engine information
		9 of 16	Adapter P/N change. Added multi-engine parts
		10 of 16	Added multiengine circuit breaker information
		12 of 16	Adapter P/N change. Dwg. change to reflect new adapter
		13 of 16	Adapter P/N change. Single engine application only
		14 of 16(new pg)	Multiengine application only
		15 of 16	Adapter P/N change. Dwg. change to reflect new adapter
		B	11-16-75
5 of 16	Added Revision "B" information		
7 of 16	Renumber Ind. light terminals		
9 of 16	Indicator light P/N change		
10 of 16	Ind. light term. number change		

CLARK CTLB-1
Three Light Gear Position Indicator
System

REVISION CONTROL PAGE

Revision	Date	Pages Affected	Remarks
C	12-7-75	5A(new pg)	List Revision"C" changes
		6 of 16	Changed sequencing. Item#9 changed screw size.
		7 of 16	Item#16 & 17 changed screw and hole size.
		9 of 16	Removed#4 hardware & increased #6 hardware. Added #6 rivnuts.
		11 of 16	View B-B changed switch attach. hardware.
		12 of 16	View A-A changed switch attach. hardware.
		13 of 16	View A-A changed switch attach. hardware.
		14 of 16	View A-A changed switch attach. hardware.
		15 of 16	-1 Plate. Change all hole sizes to #30.
		16 of 16	Change hole size to $\frac{1}{8}$ ".

END

CLARK CTLB-1
Three Light Gear Position Indicator
System

Applicable to: Beechcraft models:

35, A35, B35, C35, D35, E35, F35, G35, H35, J35, K35, M35, N35, P35
S35, V35, V35A, 35R.

35-33, 35-A33, 35-B33, 35-C33, 35-C33A, E33, E33A, E33C, F33, F33A
F33C, G33.

95, B95, B95A, D95A, E95, 95-55, 95-A55, 95-B55, 95-B55A, 95-B55B
95-C55, 95-C55A, D55, D55A, E55, E55A, 56TC, A56TC.

INSTALLATION INSTRUCTIONS

1. Remove forward jack pad covers on lower wing surface. (Before jacking airplane.)
2. Place airplane on jacks.
3. Raise gear until inboard gear doors are about 60 degrees open.
4. Loosen cabin upholstery side panels forward of the front wing truss.
5. Remove front seats and fuel unit cover (as applicable). Remove nose wheel well cover in cabin between pilots and copilots rudder pedals.
6. Locate -1 Plate per view A-A and B-B on drawing page 11, on aft face of forward flange of existing wheel well channel. Drill (2) #30 (.136 Dia) mounting holes through channel from -1 Plate.
7. Install -1 Plate using AN526-6-8 screw, AN960-6 washer, and AN365-6 nut at two locations.
8. Complete items #6 and #7 on opposite side of airplane.
9. Assemble AN3210-1 (BZ-R31) Micro switch and AD5721R adapter assembly, and attach to -1 Plate using AN526-6-16 screw, AN960-6 washer, and AN365-6 nut (two locations). See view A-A and B-B on drawing page 11.
10. Complete item #9 on opposite side of airplane.
11. Attach wires (#20) to "NO" and "COM" terminals of each Micro switch. Route wires carefully on aft side of wing front spar in existing bundles to wing root. Pass through root rib grommet and down and out through the jack pad area. Install and secure sleeving on wires where they will pass through center section fuselage outout.
12. Complete wire attachment and routing this far on opposite side of airplane.

13. Lower landing gear.

14. Install steel AN742-16 (or equivalent) clamp on landing gear "A" frame (35-815102 or equivalent) with -2 Tab, using AN526-10-8 screw, and AN365-10 nut. Locate so that -2 Tab will strike and actuate Micro switch 1/16" before "A" frame is in full down position.

NOTE: This clamp must be secure. See drawing page 12.

15. Complete item #14 for opposite side of airplane.

16 Models 33 and 35 only-

Locate AN3210-1 (BZ-R31) Micro switch, -4 tab, and AD5721R adapter assembly in nose wheel well on left side web so that front attach screw is 1.375" aft of fuselage station 33 frame centerline, and .75" above skin break. See drawing page 13. Drill (2) #30 (.136) Dia. holes through wheel well skin from switch holes. Attach switch and adapter assembly to skin with (2) AN526-6-16 screws, (2) AN960-6 washers, and (2) AN365-6 nuts.

17. Models 55, 56 and 95 only-

Locate AN3210-1 (BZ-R31) Micro switch, -4 tab, and AD5721R adapter assembly in nose wheel well on left side web so that aft attach screw is 3.875" forward of "A" frame hinge bolt centerline, and .75" above skin break. See drawing page 14. Drill (2) #30 (.136 Dia) holes through wheel well skin from switch holes. Remove switch and adapter assembly. Enlarge (2) holes in wheel well skin with #12 drill (.189 Dia), and install #6 rivnut at each location. Attach switch and adapter assembly to skin with (2) AN526-6-16 screws, and (2) AN936-6 washers.

18. Attach wires (#20) to "NO" and "Com" terminals on switch. Route up and aft to the fire wall on the left wheel well skin. Secure well so as not to interfere with landing gear or controls. If there is no existing hole through the fire wall through which to pass these wires, carefully select a location on the firewall which is clear on both sides. Drill a $\frac{1}{4}$ " hole through the fire wall at this spot and install AN931-2-4 grommet. Pass wires through this grommet.

19. Install steel AN742-12 (or equivalent) clamp on left leg of nose gear "A" frame, 35-825072 (or equivalent), with -3 tab located so as to strike and actuate the Micro switch 1/16" before the frame is full down.

20. Route one wire from each of the Micro switches (3) to its respective light and attach to terminal #2. Route the other wire from each of the Micro switches (3) to the proper circuit breaker. Make all necessary connections.

21. Route and connect (#20) wire from circuit breaker to #3 terminal on each of the light assemblies (3).

22. Route and connect (#20) wire from each of the light assemblies (3) to the terminal on the existing Green Gear Down light socket that comes from the "Gear Down" limit switch.

23. The light assemblies (3) should be mounted in a position on the instrument panel that is convenient for the pilot to see. Refer to drawing page 16.

24. Install -5 Placard(or equivalent) adjacent to lights so as to identify the function of each light.
25. Operate the gear several times so as to verify that the system operates properly and wiring clearances are sufficient.
26. Remove jacks. Replace cabin upholstery, fuel unit cover and front seat(s). Replace all other items removed for this installation.
27. Complete FAA Form 337 and make entry in aircraft log book showing installation of this kit in accordance with STC# SA197NW. The weight change is negligible.

THREE LIGHT GEAR
POSITION INDICATOR
SYSTEM.

PARTS LIST

PART NUMBER	DESCRIPTION	VENDOR	MATERIAL	REMARKS
71810GL	Indicator Light Ass'y	Korry Mfg.		
BZ-R31	Switch-Micro (AN3210-1)	"		
AD5721R	Adapter-Switch	"		Install -4 Adapter Tab on one.
#20	Wire-Stranded A/C		Steel	
1/8" I.D.	Sleeving-Plastic		"	
AN742-12	Clamp-Support		Rubber	
AN742-16	"		Steel	
AN931-2-4	Grommet		"	
AN526-6-8	Screw		"	
AN526-6-16	"		"	
AN526-10-8	"		"	
AN960-6	Washer		"	
AN365-6	Nut		"	
AN365-10	"		"	
AN936-6	Lockwasher		"	
#6	Rivnut		Aluminum	8 ea on multiengine Installation
#6 Stud	Ring Terminal (red)			Multiengine Instl. only.
#10 Stud	"			Multiengine Instl. only.
-1	Plate		2024T3 Alum.X.051	
-2	Tab		2024T3 Alum.X.063	
-3	"		2024T3 Alum.X.063	
-4	Tab-Adapter		2024T3 Alum.X.063	
-5	Placard		Plastic Engraving Plate.	
CTLB-1	Drawings and Instructions- Installation	H. Clark		

Harold M. Clark Jr.
7703 Bobcat Drive S.E.
Olympia, Washington
98503

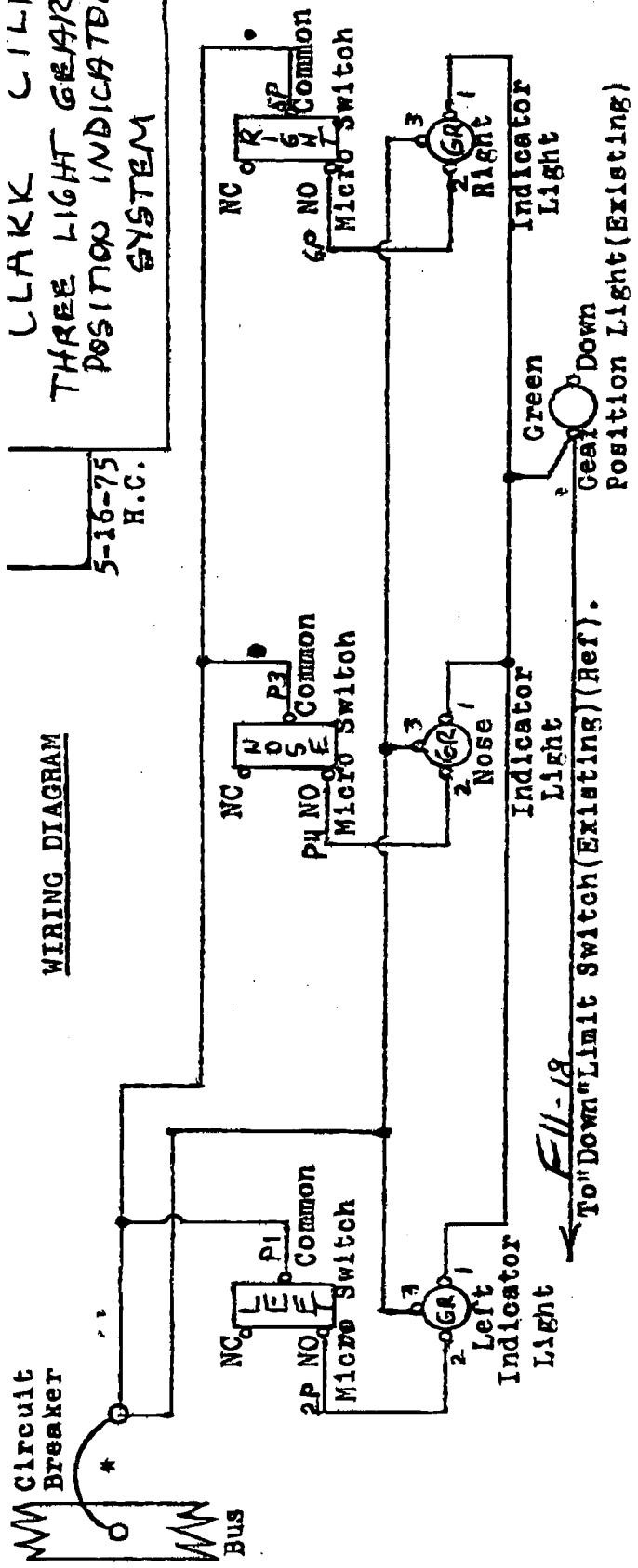
Phone-206-491-3279

Revision "C" 12-7-75

**CLARK CILB-1
THREE LIGHT GEAR
POSITION INDICATOR
SYSTEM**

5-16-75
H.C.

WIRING DIAGRAM



* Circuit Breaker Identification

- Model 33 Series
 - CD1 through CD387
 - Landing Gear Warning Horn C/B
 - CD388 through CD1234
 - CE180 through CE269
 - Landing Gear and Flap Indicator Lights C/B
- Model 35 Series
 - DA through D1500
 - Landing Gear Position Indicator Light C/B
 - D1501 through D6561
 - Landing Gear Motor C/B
 - D6562 and On
 - Fuel Pump C/B

- Model 55 Series
 - TC1 through TC1607
 - TE1 through TE942 less TE938
 - TH1 through TH384
 - Landing Gear Control C/B
- Model 56 Series
 - TG1 and On
 - Landing Gear Control C/B
- Model 95 Series
 - TD1 and On
 - Landing Gear Control C/B

Revision "A" 10-21-75
Revision "B" 11-16-75

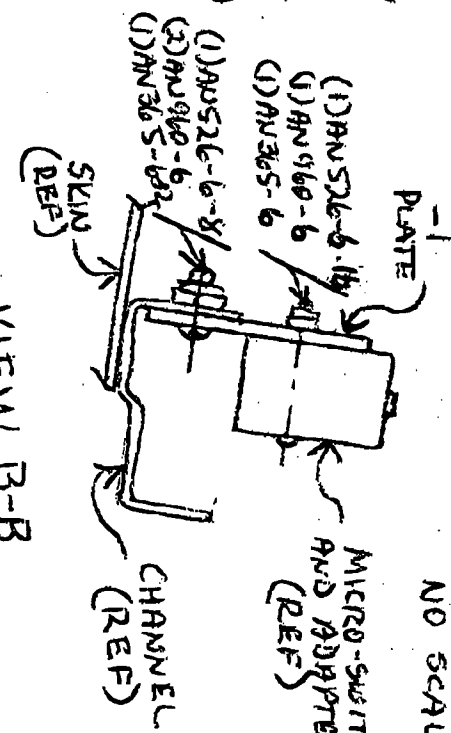
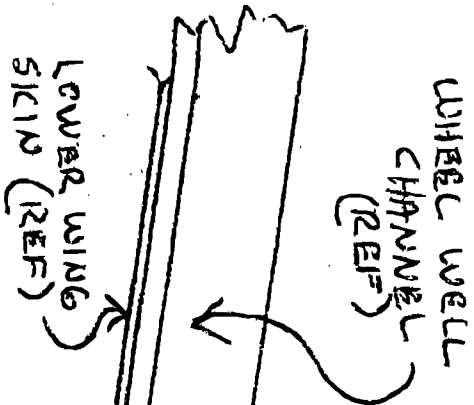
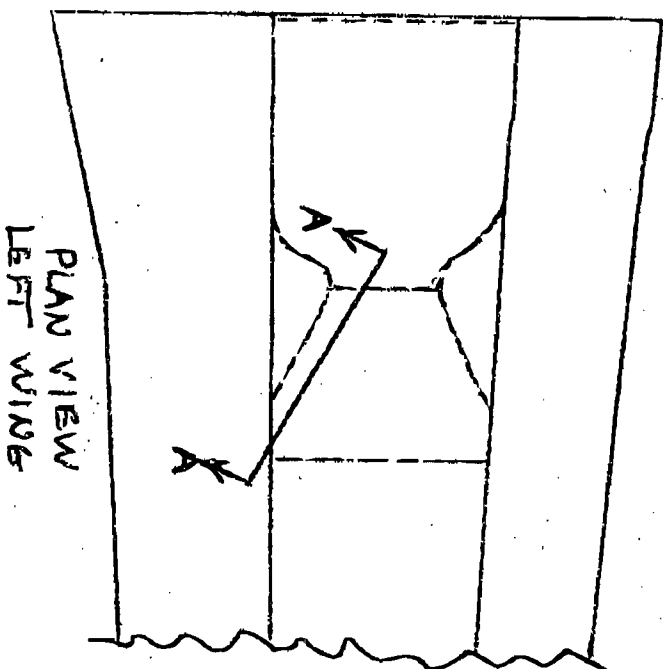
FORWARD

WS 45

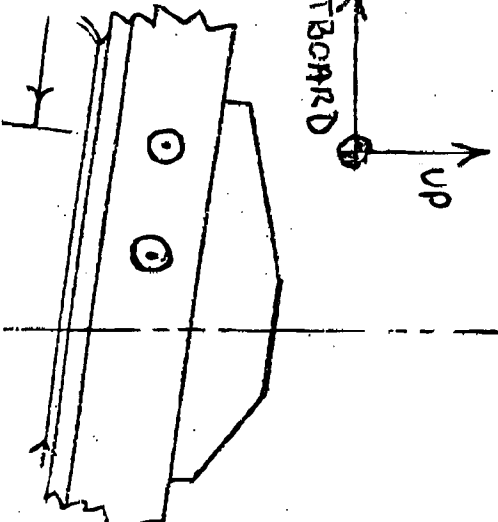
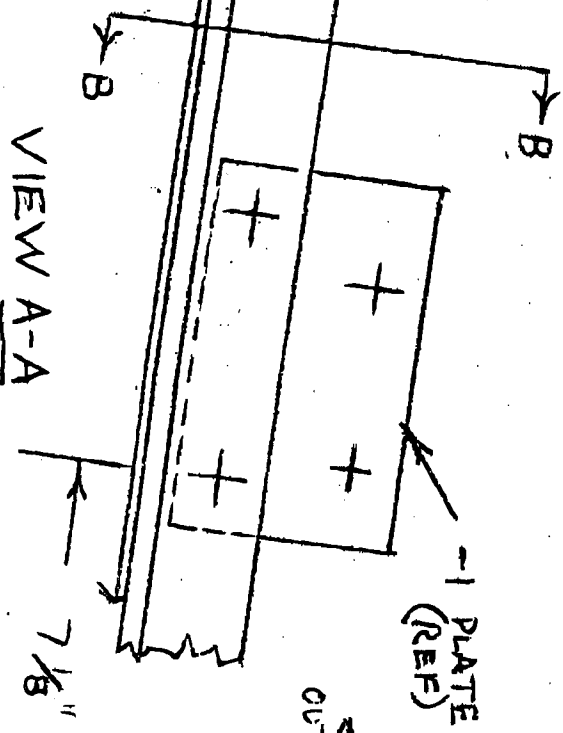
WS 66

LH, SHOWD

RH, OPPOSITE



- (1) ANUS26-6-14
- (1) ANUS26-6
- (1) ANUS35-6
- (1) ANUS26-6-8/8
- (2) ANUS26-6
- (1) ANUS35-6



CLARK CTLB-1

THREE LIGHT GEAR

POSITION INDICATOR

SYSTEM

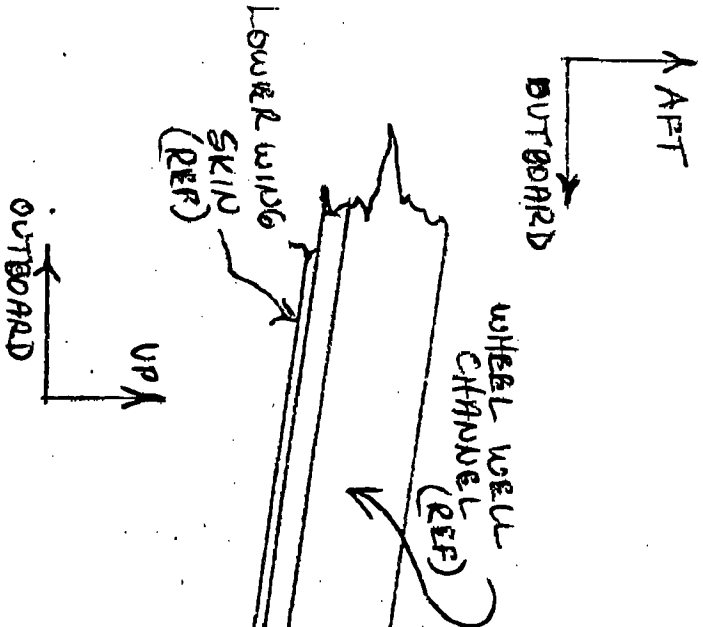
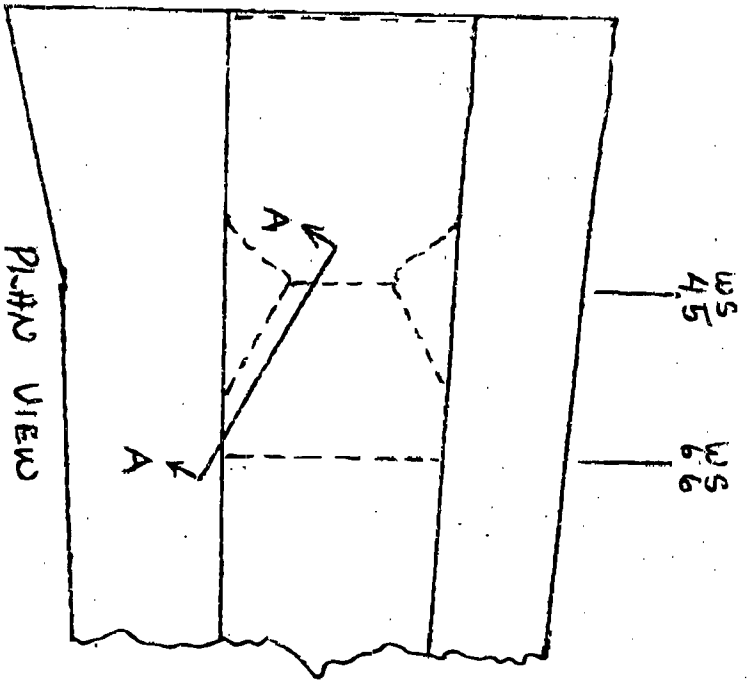
NO SCALE

5-15-75

H.C.

Revision "C"

12-7-75



VIEW A-A

- (1) AN 526-6-16 SCREW
- (2) AN 940-6 WASHER
- (2) AN 365-6 NUT
- AN 3210-1 MICRO SWITCH (B2-R3)
- AND ADAPTER (BDS2212)
- (OR EQUIV.)

-1 PLATE (REF)

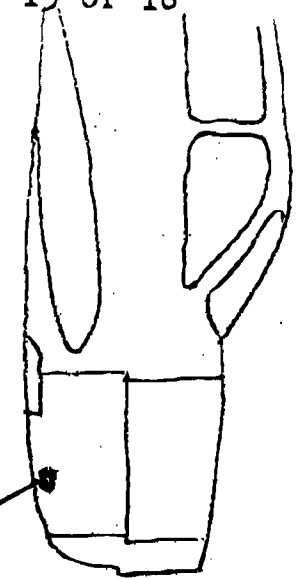
-2 THB

AN 742-16 CLU
ATTACH -
AN 526-10-B
AN 865-1032

BRACE ASSY.
MAIN GEAR
35-615102
OR EQUIV. (REF)

CLARK CTAB-
THREE LIGHT GEAR
POSITION INDICATION
SYSTEM

NO SCALE 5-15-75
N.C.
REVISION "A" 10-21-75
Revision HGM 12-7-75



DRILL #30 (.136 DI) HOLES
2 LOC. THROUGH WEB FROM
SWITCH HOLES.
ATTACH-

- (2) ANU526-6-16 SCREW
- (2) ANU960-6 WASHER
- (2) ANU365-6 NUT

NACELLE SKIN (REF)

UP ↑
OUTBOARD ←

CLARK CTLB-
THREE LIGHT GEM
POSITION INDICATOR
SYSTEM

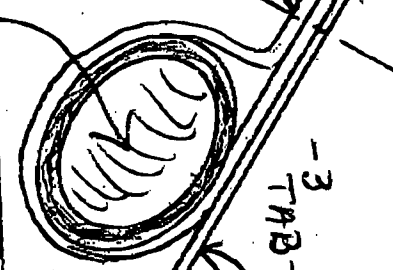
NO SCALE

VIEW
A-A

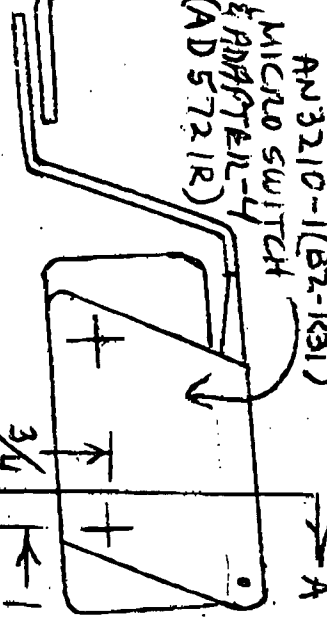
MICRO
SWITCH
(REF)



-379B
ANU742-12 CLAMP
ATTACH:-
ANU526-10-8 SCREW
ANU365-1032 NUT



ANU3210-1(BZ-R31)
MICRO SWITCH
& ADAPTER
(AD5721R)



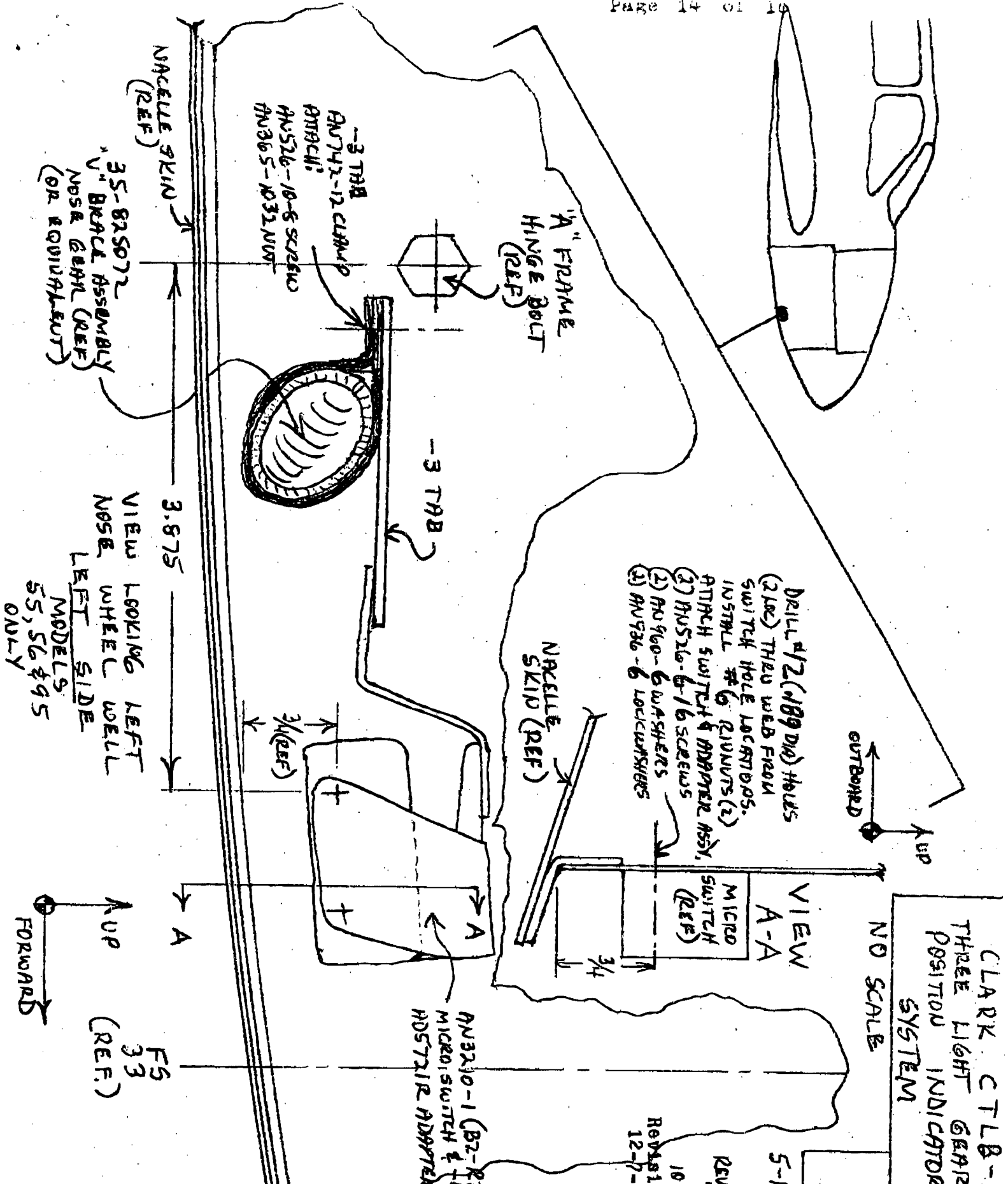
NACELLE SKIN
(REF)

35-825072
"V" BRACE ASSEMBLY
NOSE GEAR
(REF)

VIEW LOOKING LEFT
NOSE WHEEL WELL
LEFT SIDE
MODELS 33 & 35
ONLY

UP ↑
FORWARD →

FS
33
(REF)



CLARK CTLB-3
THREE LIGHT GEAR
POSITION INDICATOR
SYSTEM

NO SCALE

- DRILL #1/2 (189 DIA) HOLES
- (2 LOC) THEN WEB FROM SWITCH HOLE LOCATIONS. INSTALL #6 RIVNUTS (2)
- ATTACH SWITCH & ADAPTER ASSY.
- (2) #1516-6-16 SCREWS
- (2) #1096-6 WASHERS
- (2) #10936-6 LOCKWASHERS

VIEW A-A
MICRO SWITCH (REF)

1" FRAME HINGE BOLT (REF)

-3 TRB
#10742-12 CLAMP
ATTACH:
#1526-10-8 SCREWS
#10365-1032 NUT

NACELLE SKIN (REF)

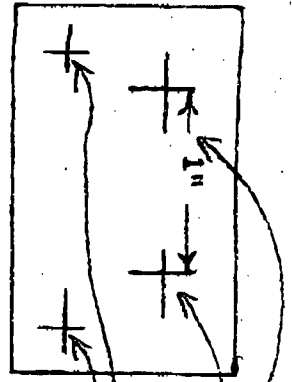
3.5-825072
1/2" BRACE ASSEMBLY
NOS& GEAR (REF)
(OR EQUIVALENT)

3.875
VIEW LOOKING LEFT
NOS& WHEEL WELL
LEFT SIDE
MODELS:
55, 56 & 95
ONLY

VIEW A
F5 33 (REF.)
FORWARD

#103210-1 (B2-R)
MICRO SWITCH &
#105721R ADAPTER

REV 10
5-1
REV 10
REV 10
12-7-



Drill #30(.136 Dia) holes(2 Locs)
 Drill #30(.136 Dia) holes(2 Locs)

-1 PLATE

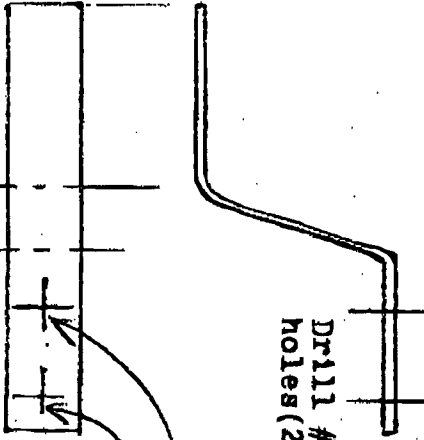
Bend as necessary to match Micro switch adapter



Revision "A"
 10-21-75
 Revision "C"
 12-7-75

Drill #10(.189 Dia) hole

CLARK CTLB-1
 THREE LIGHT GEAR
 POSITION INDICATOR
 SYSTEM
 SCALE ~ FULL SIZE



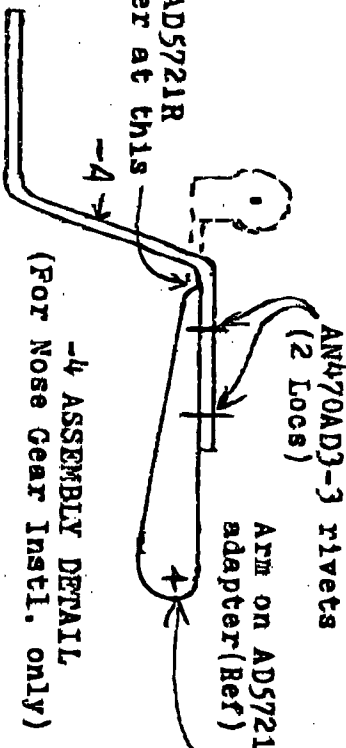
Drill #40(.098 Dia) holes(2 Locs)

-4 TAB

LEFT NOSE RIGHT
 LANDING GEAR DOWN

-5 PLACARD

Trim AD5721R adapter at this point

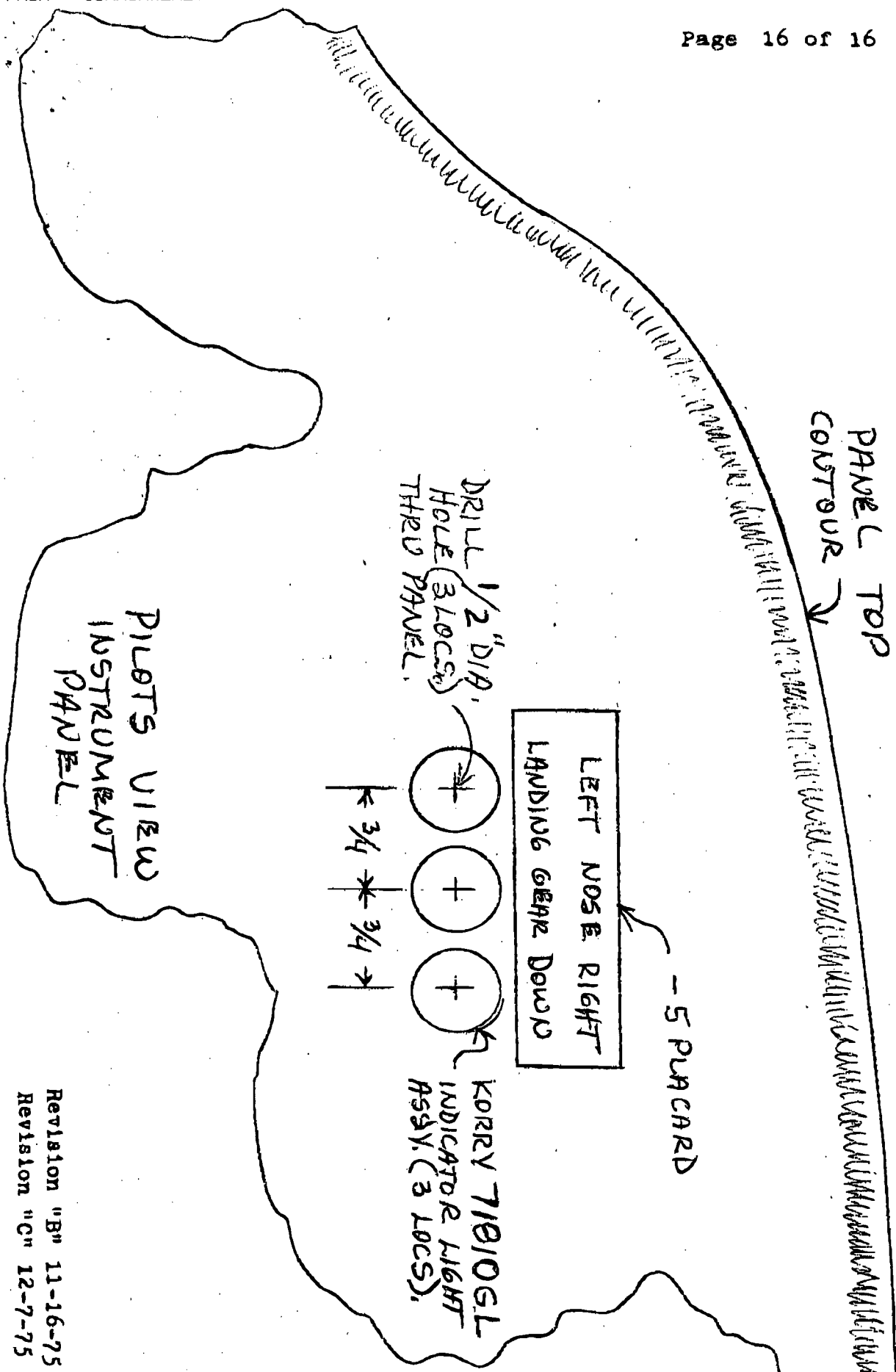


-2 TAB
 -3 TAB (SAME AS-2)

-4 ASSEMBLY DETAIL (For Nose Gear Instl. only)

Trim AD5721R adapter arm as shown to remove roller and extra length. Locate -4 Tab. Drill(2) #40(.098 Dia) holes through Adapter arm from pilots in -4 Tab. Install(2) AN470AD3-3 rivets.

DETAIL
 PARTS



5-20-75
M.C.

CLARK CTB-
THREE LIGHT GEAR
POSITION INDICATOR
SYSTEM

NO SCALE

Revision "B" 11-16-75
Revision "C" 12-7-75