

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

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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	3 of 16	Indicator light P/N change
		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 cutout.
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 #1/2 drill(.789 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 it's 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.

FROM : COMMONWEALTH SALES

PHONE NO. : 1 508 559 7860

Aug. 14 2000 05:14PM P9

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PARTS LIST

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

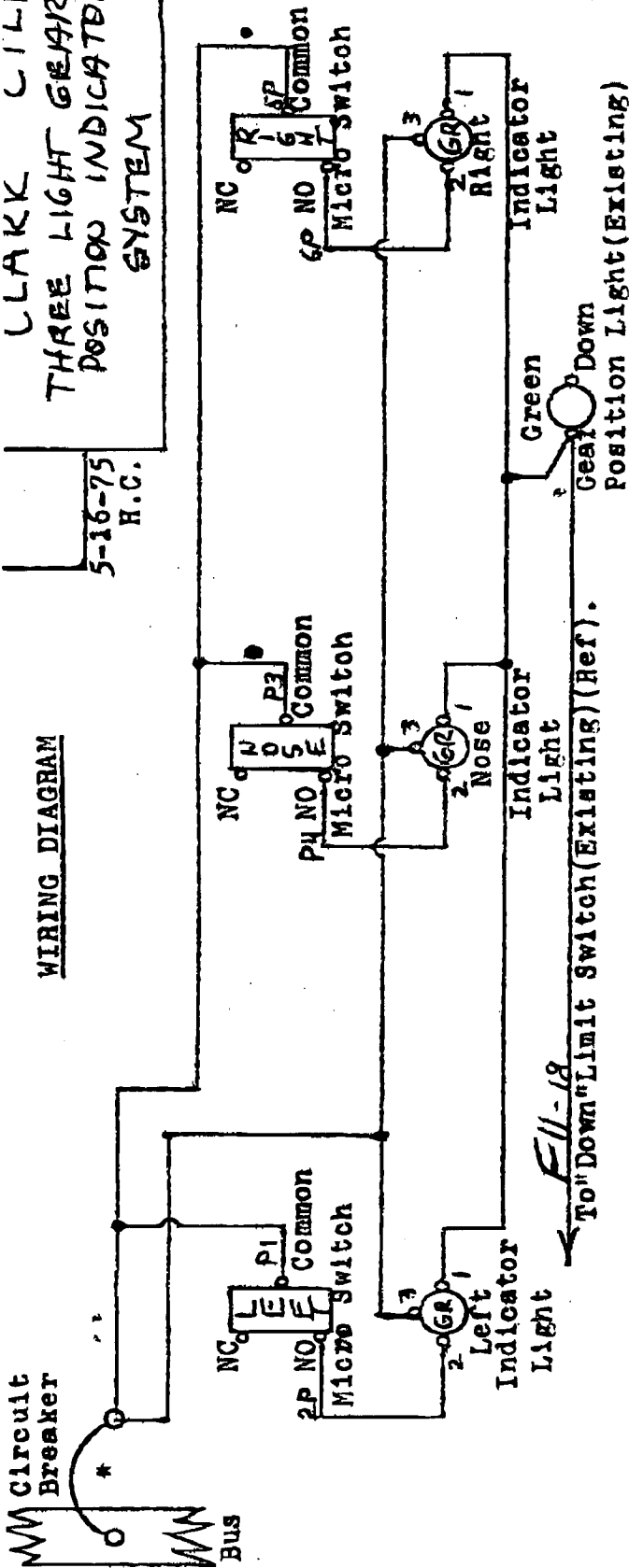
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98503
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Revision "C" 12-7-75

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

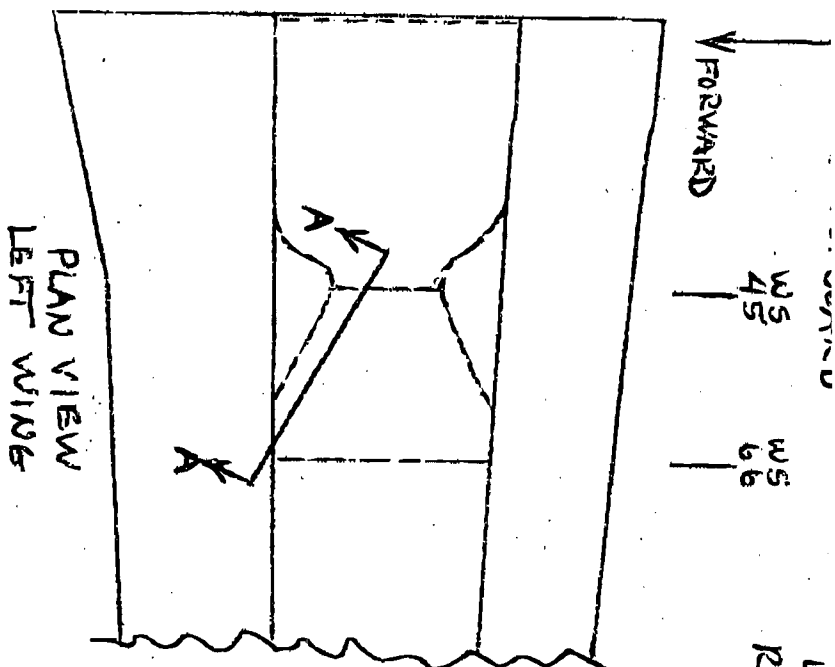
TG1 and On
Landing Gear Control C/B

Model 95 Series

TD1 and On
Landing Gear Control C/B

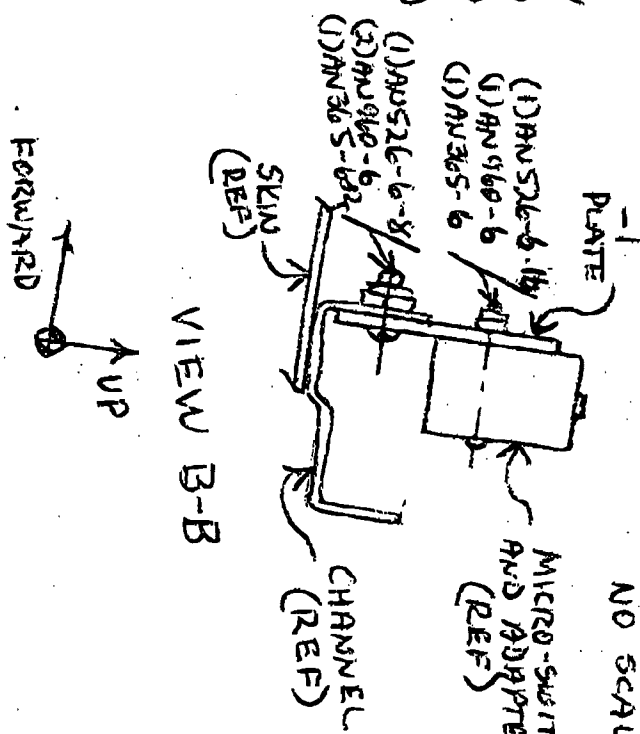
Revision "A" 10-21-75

Revision "B" 11-16-75



PLAN VIEW
LEFT WING

L.H. SHOWED
R.H. OPPOSITE



VIEW B-B

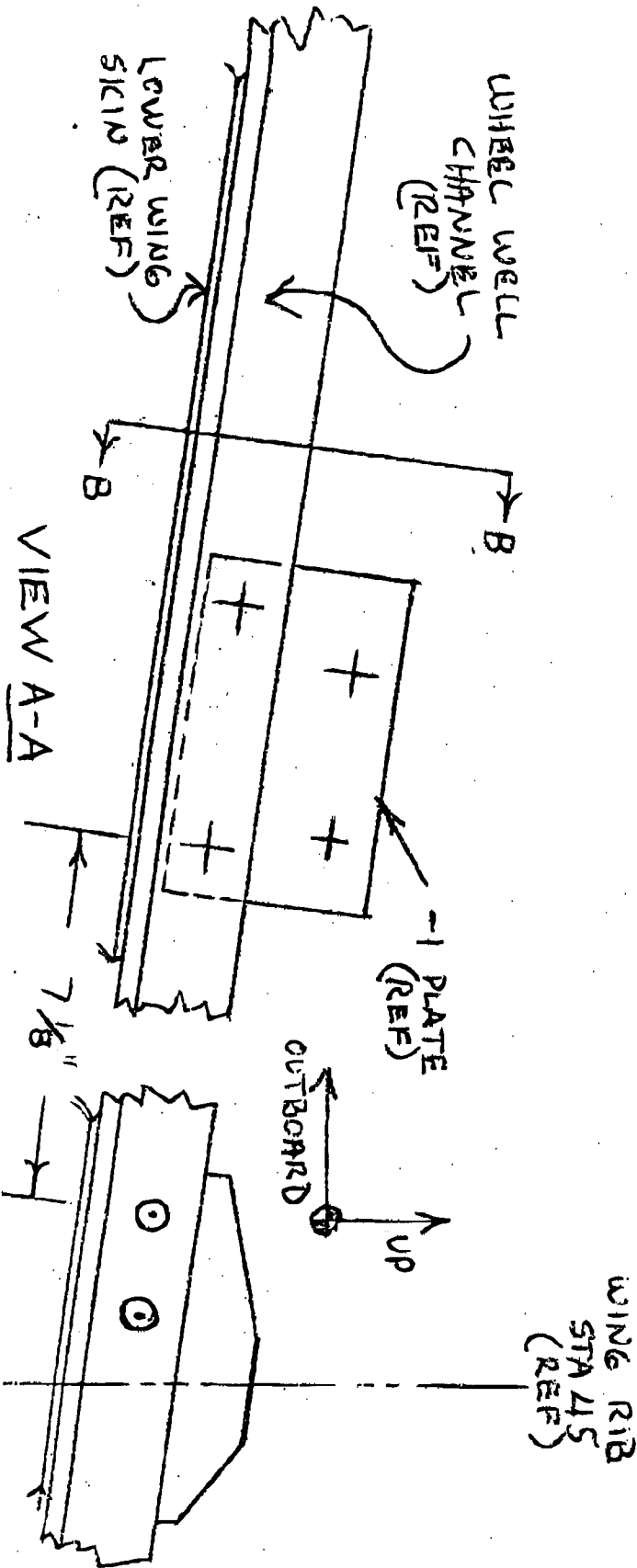
CLARK CTLB-1
THREE LIGHT GEAR
POSITION INDICATOR
SYSTEM

NO SCALE

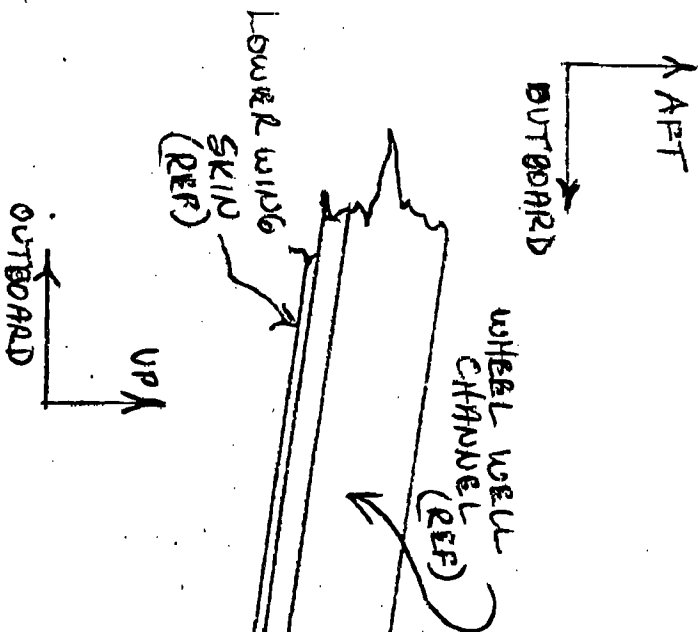
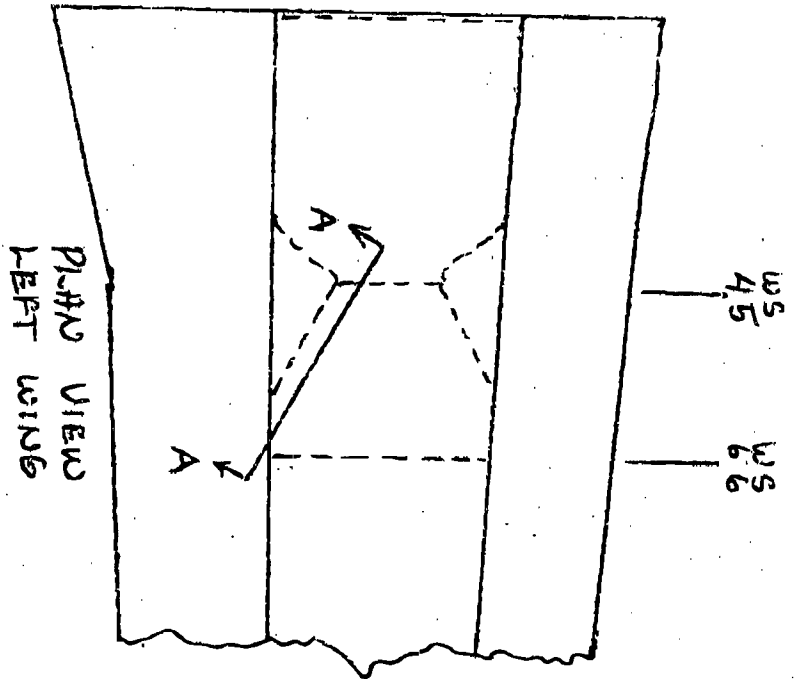
5-15-75

H.C.

Revision "C"
12-7-75



VIEW A-A



VIEW
A-A

BRACE ASSY.
MAIN GEAR
35-815102
OR EQUIV. (REF)

- (2) AN 526-6-16 SCREW
- (2) AN 910-6 WASHER
- (2) AN 365-6 NUT
- AN 3210-1 MICRO SWITCH (B2-R3)
- AND ADAPTER (AD52212)
- (OR EQUIV.)

-1 PLATE
(REF)

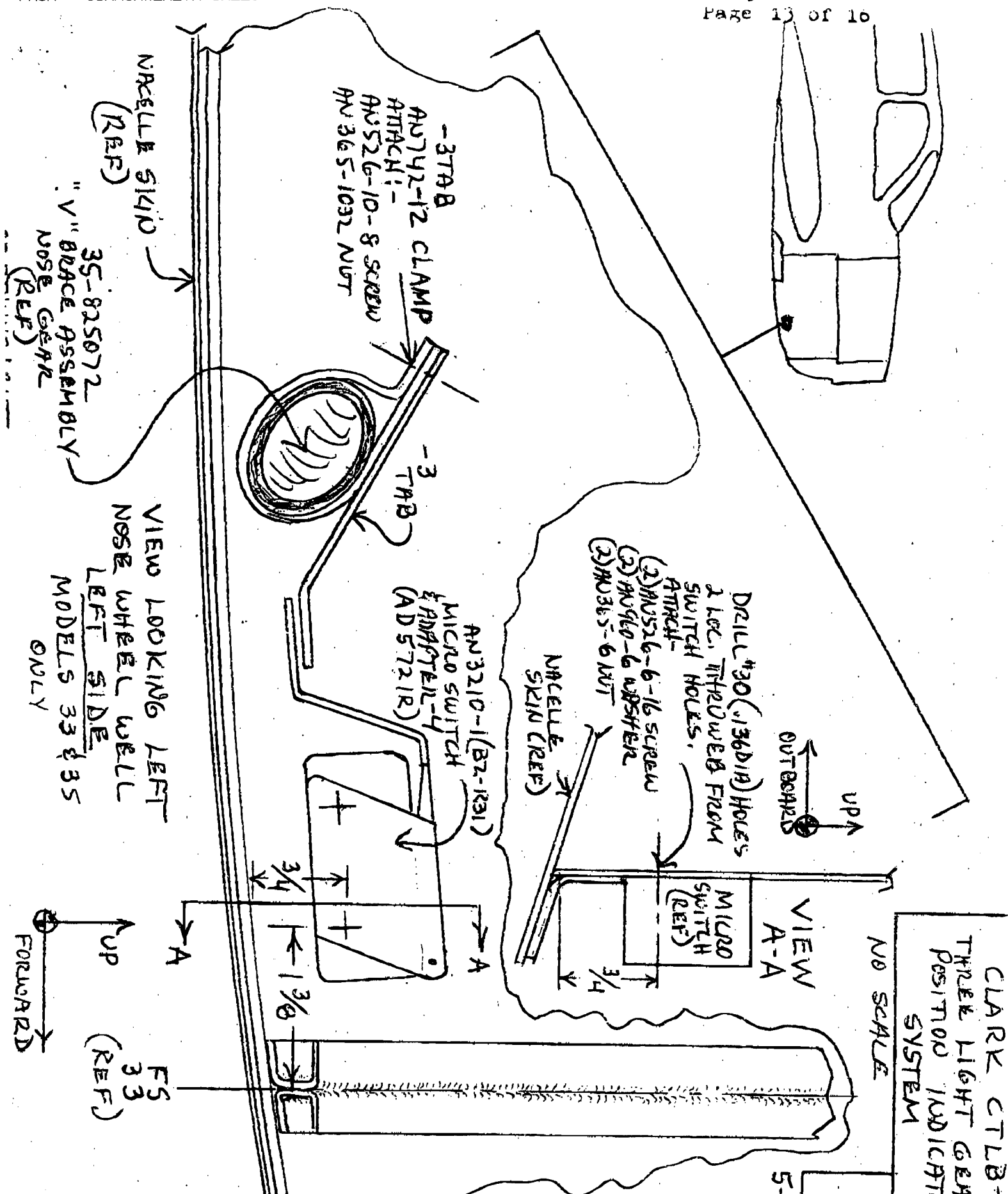
-2 THB

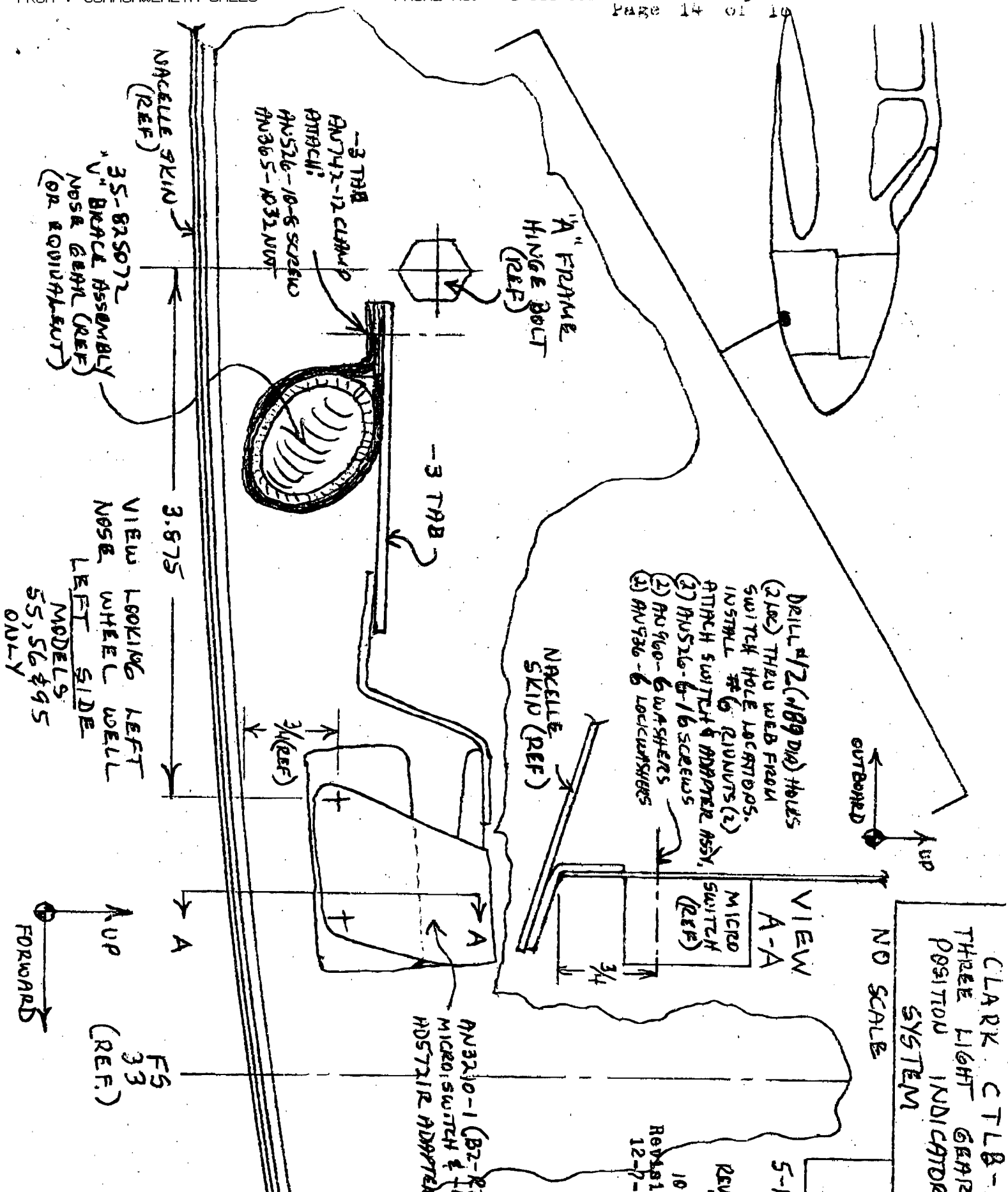
-2 THB
AN 742-16 CL
ATTACH -
AN 526-10-B
AN 865-1032

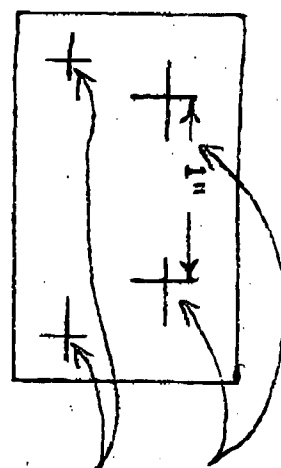
CLARK CTAB-
THREE LIGHT GEAR
POSITION INDICATION
SYSTEM

NO SCALE 5-15-75
H.C.

REVISION "A" 10-21-75
Revision HCN 12-7-75







-1 PLATE

Drill #30(.136 Dia)
holes(2 Locs)Drill #30(.136 Dia)
holes(2 Locs)Bend as necessary
to match Micro
switch adapter

-2 TAB

-3 TAB (SAME AS -2)

5-19-75
K.C.CLARK CTLB-1
THREE LIGHT GEAR
POSITION INDICATOR
SYSTEM

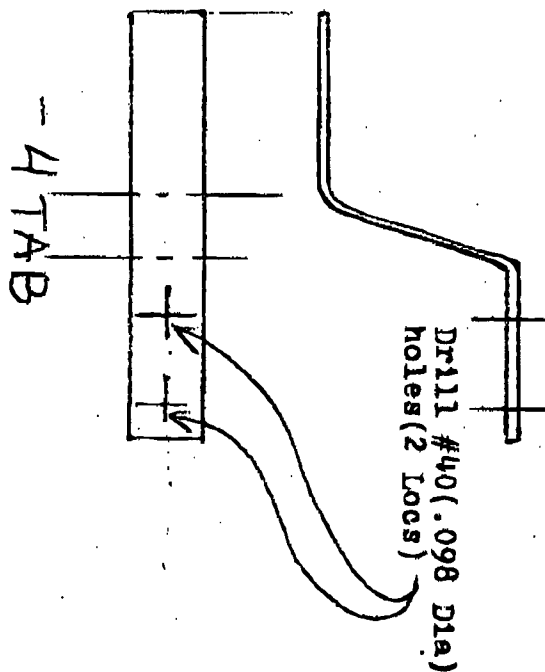
Revision "A"

10-21-75

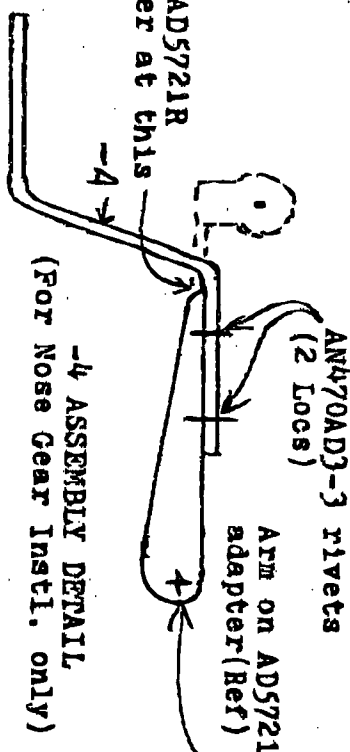
Revision "C"

12-7-75

SCALE ~ FULL SIZE

Drill #10(.189 Dia)
hole

-4 TAB

Drill #40(.098 Dia)
holes(2 Locs)Trim AD5721R
adapter at this
point

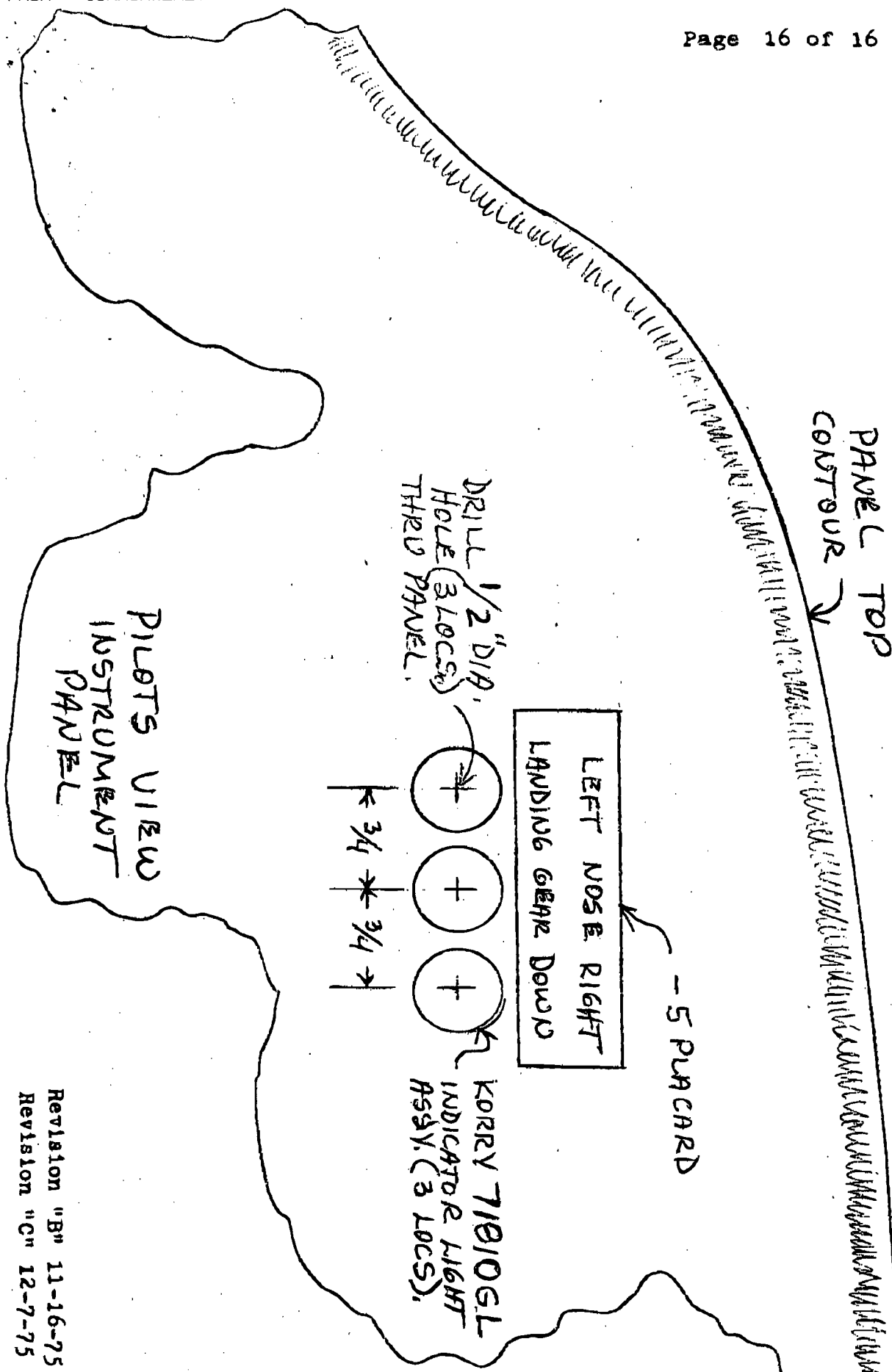
-4 ASSEMBLY DETAIL

(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.LEFT NOSE RIGHT
LANDING GEAR DOWN

-5 PLACARD

DETAIL
PARTS



5-20-75
M.C.

CLARK CTB-
THREE LIGHT GEAR
POSITION INDICATOR
SYSTEM

NO SCALE