

AD/A-002 859

A STRUCTURAL WEIGHT ESTIMATION PROGRAM
(SWEEP) FOR AIRCRAFT. VOLUME VI - WING
AND EMPENNAGE MODULE. APPENDIX A: GEN-
ERAL INFORMATION FOR MODULE FLOW CHARTS
AND LISTINGS. APPENDIX B: PROGRAM FLOW
CHARTS, OVERLAYS (8,0), (14,0), (15,0),
(16,0) AND (17,0)

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Three computer programs were written with the objective of predicting the structural weight of aircraft through analytical methods. The first program, the structural weight estimation program (SWEEP), is a completely integrated program including routines for airloads, loads spectra, skin temperatures, material properties, flutter stiffness requirements, fatigue life, structural sizing, and for weight estimation of each of the major		

20. ABSTRACT (CONTINUED)

aircraft structural components. The program produces first-order weight estimates and indicates trends when parameters are varied. Fighters, bombers, and cargo aircraft can be analyzed by the program. The program operates within 100,000 octal units on the Control Data Corporation 6600 computer. Two stand-alone programs operating within 100,000 octal units were also developed to provide optional data sources for SWEEP. These include (1) the flexible airloads program to assess the effects of flexibility on lifting surface airloads, and (2) the flutter optimization program to optimize the stiffness distribution required for lifting surface flutter prevention.

The final report is composed of 11 volumes. This volume (volume VI) contains the methods and program description for the wing and empennage module of SWEEP. Program listings and flow charts are included in the appendix to this volume.

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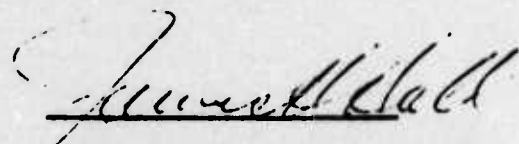

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104	Variable References, Subroutine SFSCH	644
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137	Variable References, Subroutine CKSFDH.	700
138	Variable References, Subroutine ACWRBS.	702
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203	STRESS Array	920
204	ENX Array.	922
205	EL Array	924
206	IEL Array.	927
207	SPB Array.	929
208	SPN Array.	931
209	TF Array	932
210	W Array, Subroutine WEIGH1	935
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APPENDIX A

GENERAL INFORMATION FOR MODULE FLOW CHARTS AND LISTINGS

GENERAL DESCRIPTION

Flow charts and listings for the wing and empennage module subprograms are contained in Appendixes B through F of this volume. Flow charts for the eight module overlays are presented in three separate books: Appendixes B, C, and D. Listings are contained in two books: Appendixes E and F. The contents of each appendix are:

- Appendix B: Program flow charts for overlays (8,0), (14,0), (15,0), (16,0), and (17,0).
- Appendix C: Program flow charts for overlays (9,0) and (10,0).
- Appendix D: Program flow charts for overlay (18,0).
- Appendix E: Program listings for overlays (8,0), (14,0), (15,0), (16,0), and (17,0).
- Appendix F: Program listings for overlays (9,0), (10,0), and (18,0).

The 128 subprograms for the wing and empennage module are listed in Table A-1. Each subprogram in this list is identified by overlay and appendix location for flow charts and listings. Similar summary tables for each overlay are included in Appendixes B through F.

Subprogram flow charts and listings contained in Appendixes B through F were created by the AUTOFLOW documentation system. They are automatically generated from program source decks as CRT outputs for each overlay of the module.

AUTOFLOW DESCRIPTION

AUTOFLOW output for each of the module overlays consists of two separate blocks of CRT outputs:

1. Listing of all program source cards, outputted as an 80-column listing, each card sequenced and grouped by routine in the overlay.
2. Program flow chart oriented output. The flow chart outputs contain overlay cross-reference information and flow charts for each subprogram included in the overlay.

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TABLE A-1. APPENDIX REFERENCES FOR WING AND EMPENNAGE MODULE ROUTINES

Routine	Overlay	Appendix Reference Pages	
		Program Flow Charts	Program Listings
ABDW	16	1476	2339
ABØXC	8	1199	2216
ACEIGJ	18	2096	2629
ACLØAD	18	1982	2561
ACMRSK	18	2074	2615
ACNSTR	18	2100	2632
ACPRØG	18	2000	2572
ACPRTA	18	2111	2642
ACSTRG	18	2079	2619
ACWFDH	18	2027	2590
ACWMS	18	2012	2580
ACWRBS	18	2044	2598
ACWSTR	18	2057	2606
ALØAD	16	1440	2319
ASTIFF	18	2090	2624
ATBØPT	18	1973	2554
AVLØAD	18	1996	2569
BHDJT	10	1878	2537
BHDJT	18	2128	2650
BØT	10	1780	2494
BØTC	10	1791	2497
CAERØ	8	1208	2220
CASE	8	1166	2193
CCNTL	8	1157	2186
CDL	15	1361	2286
CG3P	10	1894	2544
CKSFDH	18	2054	2594
CKSLAB	18	2006	2577
CNSTC	16	1465	2333
CNSTR	10	1737	2470
CSECW	9	1680	2453
CSECW	18	2138	2651
CTØT	17	1568	2350
CTØT1	14	1309	2266
CTØT2	15	1392	2305
DEADW	10	1638	2432
DEADW	18	2136	2651

TABLE A-1. APPENDIX REFERENCES FOR WING AND EMPENNAGE MODULE ROUTINES (CONT)

Routine	Overlay	Appendix Reference Pages	
		Program Flow Charts	Program Listings
DLPVT	9	1684	2455
DLPVT	18	2146	2652
DMAX	8	1203	2218
DWYBA	10	1633	2429
DWYBA	18	2134	2651
EIGJC	10	1860	2524
FDIS	15	1370	2291
GCNTL	14	1253	2234
GCØMP	8	1219	2224
GEØMC	8	1180	2203
GEØMW	8	1170	2195
GJCAL	16	1448	2324
GJSI	16	1457	2330
GJTT	16	1460	2331
LETEI	14	1295	2259
LEWT	14	1264	2240
MISCIT	15	1349	2278
MISCNT	15	1338	2271
MTLCW	16	1428	2313
MTLFW	16	1432	2315
MTLPW	16	1437	2318
ØLAY8	8	1154	2186
ØLAY9	9	1622	2424
ØLAY10	10	1734	2470
ØLAY14	14	1240	2230
ØLAY15	15	1332	2270
ØLAY16	16	1420	2310
ØLAY17	17	1510	2350
ØLAY18	18	1970	2554
PINTØ	17	1573	2389
PIVØT	9	1660	2443
PIVØT	18	2140	2651
PRØG	9	1625	2424
PRTA	9	1693	2461
PRTB	10	1902	2546
PRTB	18	2148	2652
PRTBK	10	1911	2550

TABLE A-1. APPENDIX REFERENCES FOR WING AND EMPENNAGE MODULE ROUTINES (CONT)

Routine	Overlay	Appendix Reference Pages	
		Program Flow Charts	Program Listings
PRTC	10	1907	2548
PRTC	18	2150	2652
PRTD	17	1525	2359
PRTG	8	1214	2221
PRTH	9	1703	2466
PRTH	18	2152	2653
PRTM	15	1397	2307
RTRIB	10	1887	2541
RTRIB	18	2130	2651
SECTD	10	1748	2477
SFSCH	10	1761	2485
SKWEB	10	1857	2523
SRRIB	10	1848	2520
SS	10	1899	2545
SS2	16	1488	2344
STBAR	10	1811	2507
STRG	10	1817	2509
STRGØ	10	1833	2514
STRIB	10	1842	2518
STRIL	10	1837	2516
STWEB	10	1851	2521
SWPXYP	8	1211	2220
TBFWI	17	1537	2367
TBFWI1	15	1382	2299
TBØPT	9	1646	2436
TBWDC	8	1193	2212
TEDEV	14	1279	2249
TEL	9	1672	2450
TEE	18	2142	2652
TEL	9	1676	2452
TEL	18	2143	2652
TEMPC	18	1990	2566
TEWT	14	1274	2246
TEWTI	14	1286	2253
TPINT	17	1563	2385
TSCH	10	1795	2498
VFCAL	10	1865	2528

TABLE A-1. APPENDIX REFERENCES FOR WING AND EMPENNAGE MODULE ROUTINES (CONCL)

Routine	Overlay	Appendix Reference Pages	
		Program Flow Charts	Program Listings
VLAD	9	1642	2434
VLAD1	16	1491	2345
VSCEM	8	1187	2207
WQNT	15	1335	2270
WDDATA	16	1423	2310
WEIGH1	18	2038	2595
WEIGH2	18	2086	2622
WFLDD	17	1547	2373
WLETE	14	1243	2230
WDATA	17	1513	2350
WTCAL	10	1871	2531
WTCAL	18	2126	2650
WTPIN	10	1890	2542
WTPIN	18	2132	2651
WVFDD	17	1552	2376
XN	18	2123	2650
YBSET	16	1481	2341

CROSS-REFERENCE LIST

The cross-reference list consists of separate lists for procedural and nonprocedural FORTRAN statements. All procedural statement references are summarized in the output table of contents and references, showing all interconnections that appear in the flow charts. Summary information outputted consists of the following from left to right:

- Source card identification, columns 73 through 80 identification or internal card sequence number. When the internal card sequence number is used, it is enclosed in parentheses.
- Flow chart page and box number where card information is displayed.
- FORTRAN statement number from columns 1 through 5.
- Card identification of all source cards referring to the listed card.
- Flow chart display page and box numbers for all source cards referring to the listed card.

Nonprocedural statements are summarized with the flow chart information of each subprogram. They are listed on the last flow chart page for the subprogram. FORTRAN statements summarized include TYPE, DIMENSION, EQUIVALENCE, COMMON, FORMAT, and DATA statements.

Introductory comments are listed on the first flow chart page of each subprogram, consisting of all source comment cards placed before the subprogram name card.

TABLE OF DIAGNOSTICS

The table of diagnostics are outputted after the table of contents and references. This table is included in Appendixes B, C, and D for each overlay. The information contained in this table identifies all cards where calls to library routines READMS and WRITMS are made, all listed as

unidentified external references. The table also identifies all BUFFER IN and BUFFER OUT statements as nonrecognizable syntax. This is due to the AUTOFLOW documentation system, which is IBM-oriented. However, these statements are correctly displayed in the flow charts.

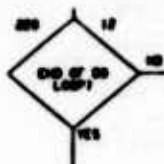
FLOW CHARTS

The flow charts produced by AUTOFLOW use USASI conventional symbols. Since the flow charts are mechanically drawn from the program source deck, there are no omissions or vague generalizations about the processing within the boxes.

Every box on each page is uniquely numbered and may be referred to from elsewhere in the program. The source of a reference to a box will be indicated by showing the page and box number. If the number is followed by an asterisk, there are multiple references to this point, and the others may be found by using the cross-reference list.



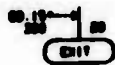
The most-often-used symbol is the decision box. Like all boxes, its box number is above and to the right of the box. Its FORTRAN statement number is above and to the left of the box. The decision choices for the paths are printed.



The unconditional transfer connector has its page number destination printed above or to the left of the box number destination within the connector. If there is a FORTRAN statement number at the destination, it is printed below the connector.



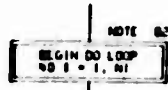
The exit box example shows a connector from page 9, box 15.



The subroutine call box includes the calling sequence. The page and box numbers of the flow chart of the called subroutine are shown on the left-hand side of the box. The page number is above the box number.



The note box encloses comments of a functional nature,



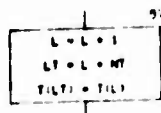
as differentiated from the 21 column comments, which are left justified without a box, that show the comment cards included in the FORTRAN deck.

```

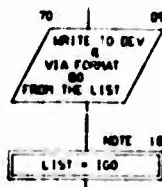
-----100-1
CALLING PROGRAM
A(1) = L(1) * R(1)
C(1) = L(1) * R(1)
OPERATION
C(1) = L(1) * R(1)
C(1) = L(1) * R(1)
-----100-2
CALLING PROGRAM
A(1) = L(1) * R(1)
C(1) = L(1) * R(1)
OPERATION
C(1) = L(1) * R(1)
C(1) = L(1) * R(1)

```

The process box is used to enclose FORTRAN arithmetic statements.



Input and output are shown as communicating with a device. The list used follows, if appropriate:



The computed GØ TØ becomes a branch table showing the page and box number of each of the ordered brances.

COMPUTED GO TO FOR 100	
10 20	20.00 20.10

The column connectors and initial connectors are the only boxes without external box numbers. The function of the initial connector is always clear, but the label given is the symbol in the next FORTRAN card, which is often blank.



The column connector identifies the page and box number to which it connects.



APPENDIX B

PROGRAM FLOW CHARTS, OVERLAYS
(8,0), (14,0), (15,0), (16,0) AND (17,0)

TABLE B-1. APPENDIX REFERENCES FOR OVERLAY (8,0) ROUTINES

Routine	Appendix Reference Pages	
	Program Flow Charts	Program Listings
ØLAY8	1154	2186
ABØXC	1199	2216
CAERØ	1208	2220
CASE	1166	2193
CCNTL	1157	2186
DMAX	1203	2218
GOØMP	1219	2224
GEØMC	1180	2203
GEØMW	1170	2195
PRTG	1214	2221
SWPXYP	1211	2220
TBWDG	1193	2212
VSGEØM	1187	2207

TABLE B-2. APPENDIX REFERENCES FOR OVERLAY (14,0) ROUTINES

Routine	Appendix Reference Pages	
	Program Flow Charts	Program Listings
ØLAY14	1240	2230
CTØT1	1309	2266
GCNTL	1253	2234
LETEI	1295	2259
LEWT	1264	2240
TEDEV	1279	2249
TEWT	1274	2246
TEWTI	1286	2253
WLETE	1243	2230

TABLE B-3. APPENDIX REFERENCES FOR OVERLAY (15,0) ROUTINES

Routine	Appendix Reference Pages	
	Program Flow Charts	Program Listings
ØLAY15	1332	2270
CDL	1361	2286
CTØT2	1392	2305
FDIS	1370	2291
MISCIT	1349	2278
MISCNT	1338	2271
PRTM	1397	2307
TBFWI1	1382	2299
WCØNT	1335	2270

TABLE B-4. APPENDIX REFERENCES FOR OVERLAY (16,0) routines

Routine	Appendix Reference Pages	
	Program Flow Charts	Program Listings
ØLAY16	1420	2310
ABDW	1476	2339
ALØAD	1440	2319
CNSTC	1465	2333
GJCAL	1448	2324
GJSI	1457	2330
GJTT	1460	2331
MTLCW	1428	2313
MTLFW	1432	2315
MTLPW	1437	2318
SS2	1488	2344
VLØAD1	1491	2345
WDDATA	1423	2310
YBSET	1481	2341

TABLE B-5. APPENDIX REFERENCES FOR OVERLAY (17,0) ROUTINES

Routine	Appendix Reference Pages	
	Program Flow Charts	Program Listings
ØLAY17	1510	2350
CTØT	1568	2387
PINTØ	1573	2389
PRTD	1525	2359
TBFWI	1537	2367
TPINT	1563	2385
WFLDD	1547	2373
WØDATA	1513	2350
WVFDD	1552	2376

OVERLAY (8,0)

INPUT DATA PROCESSING AND GEOMETRY ANALYSIS

**PROGRAM TABLE OF CONTENTS AND REFERENCES,
AND TABLE OF DIAGNOSTICS**

FORTRAN MODULE WING AND EMPENNAGE MODULE -

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - PROCEDURES

(000021)	2.04	10	(000010)	2.03	(000019)	2.03
(000029)	2.08	20	(000027)	2.07	(000027)	2.07

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE CCNTL

(000041)	5.01	CCNTL	(000021)	2.04-X
(000050)	5.02		(000051)	5.03
(000051)	5.03	100		
(000055)	5.09		(000057)	5.10
(000057)	5.10	101		
(000059)	5.11	110		
(000101)	5.14	111		
(000103)	5.15	112	(000100)	5.13
(000104)	5.16	113	(000100)	5.13
(000112)	5.20	1130	(000102)	5.14
(000120)	5.22		(000122)	5.25
(000122)	5.25	1134		
(000125)	5.26		(000125)	5.31
(000126)	5.31	1135		
(000132)	5.35		(000134)	5.01
(000134)	5.01	1136		
(000140)	5.02	1139	(000111)	5.19
(000141)	5.03	114		
(000143)	5.05	115		
(000144)	5.06	116	(000142)	5.04
(000145)	5.07	117		
(000146)	5.08	118	(000144)	5.05
(000147)	5.09	119		
(000148)	5.10	120	(000146)	5.08
(000149)	5.11	121	(000148)	5.10
(000150)	5.12	122		
(000151)	5.13	123	(000150)	5.12
(000152)	5.14	124		
(000153)	5.15	125	(000152)	5.14
(000154)	5.16	126		
(000155)	5.17	127	(000154)	5.16
(000156)	5.18	128		
(000157)	5.19	129	(000156)	5.18
(000158)	5.20	130		
(000159)	5.21	131	(000158)	5.20
(000160)	5.22	132		
(000161)	5.23	133	(000160)	5.22
(000162)	5.24	134		
(000163)	5.25	135	(000162)	5.24
(000164)	5.26	136		
(000165)	5.27	137	(000164)	5.26
(000166)	5.28	138		
(000171)	5.29	139	(000166)	5.28
(000172)	5.30	1391		
(000174)	5.31	1392		
(000177)	5.32	1393	(000172)	5.30
(000180)	5.34	140		
(000183)	5.35	141	(000179)	5.33
(000184)	5.36		(000185)	5.37
(000185)	5.37	142		
(000188)	7.01		(000187)	7.05
(000189)	7.04	143		
(000195)	7.05	144	(000193)	7.03
(000197)	7.06	145	(000195)	7.03
(000205)	7.09	146		

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(000208)	7.12 1470		(000205)	7.10		
(000209)	7.13 1471					
(000210)	7.14 1472		(000208)	7.12		
(000212)	7.16 1473					
(000213)	7.17 1474		(000211)	7.15		
(000214)	7.18 1475					
(000215)	7.19 1476		(000213)	7.17		
(000220)	7.20 150		(000100)	6.20		
(000221)	7.21 155					
(000222)	7.22 156		(000220)	7.20		
(000223)	7.23 1501					
(000224)	7.24 1502					
(000227)	7.25 1503		(000223)	7.23		
(000231)	7.27		(000232)	7.28		
(000232)	7.28 151					
(000235)	7.30		(000244)	7.35		
(000241)	7.33 152					
(000243)	7.34 153		(000240)	7.32		
(000244)	7.35 154		(000240)	7.32		
(000253)	8.01 160		(000100)	6.20		
(000256)	8.02 1610					
(000257)	8.03 1611					
(000258)	8.04 1612		(000256)	8.02		
(000259)	8.05 1613					
(000260)	8.06 1614					
(000261)	8.07 1615		(000259)	8.05		
(000262)	8.08 1616					
(000265)	8.09 162		(000258)	8.04	(000261)	8.07
(000273)	8.13 163					
(000274)	8.14 164		(000270)	8.12		
(000275)	8.15 165					
(000276)	8.16 166		(000274)	8.14		
(000277)	8.17		(000276)	8.16		
(000278)	8.18 167					
(000279)	8.19 168		(000277)	8.17		
(000285)	8.21 170		(000240)	7.32	(000273)	8.13
(000287)	8.22		(000280)	8.23		
(000289)	8.23 171					
(000295)	8.25 180		(000294)	7.08	(000215)	7.10
(000301)	8.27 181					
(000305)	8.29 182		(000300)	8.26		
(000307)	8.29 183					
(000308)	8.30 184					
(000309)	8.31 185		(000307)	8.29		
(000310)	8.32		(000315)	8.37		
(000311)	8.33 186					
(000312)	8.34 187		(000310)	8.32		
(000313)	8.35 188					
(000314)	8.36 189					
(000315)	8.37 190		(000312)	8.34	(000313)	8.36
(000317)	8.39 191					
(000318)	8.40 192		(000316)	8.39		
(000319)	8.41 193					
(000320)	8.01 194		(000318)	8.40		
(000321)	8.02 195					
(000322)	8.03 196		(000320)	8.01		
(000323)	8.04 197					
(000325)	8.06 198		(000326)	8.08	(000322)	8.03
(000327)	8.06 199					
(000329)	8.08		(000330)	8.09		
(000330)	8.09 200					
(000333)	8.10 201		(000325)	8.06		
(000334)	8.11		(000335)	8.12		
(000336)	8.12 202					
(000338)	8.13 203		(000334)	8.11		
(000339)	8.15 204					
(000339)	8.16 205		(000337)	8.14		
(000340)	8.17 204					
(000343)	8.18 205		(000339)	8.16		
(000346)	8.19 206					

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(000349)	9.22	209	(000347)	9.20
(000350)	9.23	210		
(000351)	9.25	211	(000349)	9.22
(000352)	9.26	2112		
(000353)	9.27	2114	(000350)	9.25
(000354)	9.28		(000377)	9.37
(000370)	9.32	212		
(000373)	9.33		(000376)	9.36
(000375)	9.35	213		
(000376)	9.36	214	(000374)	9.34
(000377)	9.37	215	(000371)	9.31
(000384)	10.02		(000405)	10.12
(000387)	10.04	216		
(000390)	10.05	217		
(000400)	10.07	218	(000388)	10.05
(000401)	10.08	219		
(000402)	10.09	2190	(000400)	10.07
(000404)	10.11	2191		
(000405)	10.12	220	(000395)	10.03
(000406)	10.14		(000423)	10.23
(000412)	10.16	221		
(000415)	10.18		(000419)	10.21
(000418)	10.20	222		
(000419)	10.21	223	(000417)	10.19
(000423)	10.23	224	(000411)	10.15
(000427)	10.25	225		
(000429)	10.27	226		
(000430)	10.28	227	(000428)	10.26
(000431)	10.29	228		
(000432)	10.30	229	(000430)	10.28
(000434)	10.32	2290		
(000435)	10.33	230	(000425)	10.24
(000438)	10.34	234	(000432)	10.31
(000439)	10.35	235		
(000440)	10.36	236	(000438)	10.34
(000441)	10.37	237		
(000442)	10.38	238	(000440)	10.36
(000443)	10.39	239	-	
(000445)	10.40	240	(000442)	10.38
(000451)	11.01	240		
(000452)	11.02	241		
(000460)	11.07		(000462)	11.10
(000461)	11.08	246		
(000462)	11.10	247		
(000463)	11.15		(000470)	11.10
(000465)	11.16	248		
(000470)	11.18	249		
(000477)	11.21		(000470)	11.24
(000478)	11.24	251		
(000487)	11.25	255	(000451)	11.01
(000484)	11.26		(000480)	11.27
(000488)	11.27	256		
(000493)	11.28	258		
(000495)	11.29	259		

CHART TITLE - NON PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE CASE

(000507)	14.01	CASE	(000493)	11.28-X
(000509)	14.02		(000506)	14.03
(000516)	14.03	100		
(000560)	14.05		(000509)	14.09
(000562)	14.07	101		
(000564)	14.08	1020	(000501)	14.05
(000565)	14.09	102	(000503)	14.07
(000570)	14.12		(000570)	14.14

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(000572)	14.14	104	(000570)	14.12		
(000577)	14.17	105				
(000578)	14.18	106	(000578)	14.16		
(000584)	14.19	107	(000578)	14.16		
(000585)	14.21	108				
(000587)	14.22	109				
(000590)	14.23	110	(000585)	14.20	(000585) 14.21	
(000591)	14.24		(000584)	14.25		
(000594)	14.25	111				
(000601)	14.27	200				
(000613)	14.32	210				
(000614)	14.33	211	(000612)	14.31		
(000616)	14.35	212				
(000617)	14.36	213	(000615)	14.34		
(000620)	14.38	214				
(000621)	14.39	215	(000619)	14.37		
(000624)	15.02	216				
(000625)	15.03	217	(000623)	15.01		
(000628)	15.05	218				
(000629)	15.06	219	(000627)	15.04		
(000630)	15.07	220	(000628)	15.05		
(000634)	15.09		(000637)	15.12		
(000638)	15.11	221				
(000637)	15.12	222	(000635)	15.10		
(000641)	15.13	200				
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CHART TITLE - INTRODUCTORY COMMENTS						
CHART TITLE - SUBROUTINE GEOM						
(000752)	10.01	GEOM	(000601)	14.27-X		
(000757)	10.02	2040				
(000760)	10.04	2041				
(000710)	10.05	2042				
(000711)	10.06	2043				
(000717)	10.07	205	(000708)	10.03	(000708) 10.04	(000710) 10.05
(000719)	10.09		(000721)	10.10		
(000721)	10.10	2050				
(000724)	10.11	100				
(000731)	10.13	101				
(000740)	10.15	102				
(000747)	10.16	1020				
(000748)	10.19	1021	(000745)	10.17		
(000750)	10.21	1022				
(000751)	10.22	1023	(000749)	10.20		
(000753)	10.24	1024				
(000754)	10.25	1025	(000752)	10.23		
(000776)	10.32	103				
(000777)	10.34	104				
(000779)	10.36	105				
(000780)	10.37	106	(000776)	10.33	(000776) 10.35	
(000782)	10.38	107				
(000784)	10.39	108	(000781)	10.01		
(000785)	10.44		(000787)	10.05		
(000787)	10.45	109				
(000790)	10.46		(000785)	10.11		
(000793)	10.11	1001				
(000795)	10.11		(000795)	10.09		
(000801)	10.14		(000811)	10.23		
(000802)	10.15	110				
(000803)	10.16	111	(000811)	10.14		
(000805)	10.16	112				
(000806)	10.16	113	(000804)	10.17		
(000808)	10.21	1130				
(000809)	10.22	1.31	(000807)	10.26		
(000811)	10.23	114				
(000815)	10.25		(000805)	10.32		
(000819)	10.28	1151				

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(000020)	19.20	1152	(000010)	19.27			
(000023)	19.31	1153	(000010)	19.27	(000010)	19.20	
(000026)	19.32	115	(000022)	19.30			
(000028)	19.33	116					
(000033)	19.35	117					
(000035)	19.36	118	(000032)	19.34			
(000039)	19.38	119					
(000040)	19.39	120	(000030)	19.37			
(000041)	19.40	121					
(000043)	20.02	122					
(000044)	20.03	123	(000040)	19.39	(000042)	20.01	
(000044)	20.07	130					
(000057)	20.08	140					
(000064)	20.11	150					
(000069)	20.14		(000067)	20.24			
(000073)	20.16	151	(000070)	20.15			
(000075)	20.17	152	(000070)	20.15			
(000076)	20.18	153					
(000084)	20.22	154					
(000085)	20.23	155	(000083)	20.21			
(000087)	20.24	156	(000075)	20.17	(000085)	20.22	
(000099)	20.29	160					
(000900)	20.30		(000927)	21.14			
(000910)	21.03		(000913)	21.05			
(000913)	21.06	161					
(000915)	21.08	162					
(000924)	21.13	163	(000914)	21.07			
(000927)	21.14	164					
(000930)	21.15	160					
(000933)	21.17		(000936)	21.18			
(000936)	21.18	201					
(000945)	21.21	202					
(000956)	21.24	300	(000954)	21.23			
(000956)	21.25	300	(000954)	21.23			
(000991)	22.01	203					
(000996)	22.03	216					
(001000)	22.04		(001004)	22.05			
(001004)	22.05	217					
(001050)	22.21	218					
(001050)	22.24	219					
(001053)	22.25	220	(001050)	22.23			
(001064)	22.26		(001065)	22.27			
(001066)	22.27	221					
(001069)	22.28	214					
(001070)	23.01		(001070)	23.04			
(001070)	23.04	219					
(001081)	23.08	222					
(001082)	23.09	223	(001080)	23.07			
(001095)	23.10	224	(001081)	23.08			
(001100)	23.12		(001102)	23.13			
(001102)	23.13	225					
(001103)	23.14	226	(001094)	23.09			
(001105)	23.19	227					
(001130)	24.01	400					
(001100)	24.12	401					
(001109)	24.13	402	(001107)	24.11			
(001175)	24.15		(001171)	24.17			
(001181)	24.17	403					
(001187)	24.19	410	(001184)	24.18			
(001189)	24.21	411					
(001190)	24.22	412	(001180)	24.20			
(001191)	24.23	413					
(001192)	24.24	414	(001190)	24.22			
(001193)	24.25	415					
(001195)	24.26	416	(001192)	24.24			
(001196)	24.27	417					
(001198)	24.28	418	(001195)	24.26			
(001201)	24.28		(001204)	25.01			
(001204)	25.01	419					
(001207)	25.03	420					
(001233)	25.05	430	(001184)	24.18	(001205)	25.02	
(001238)	25.07	431					

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(001245)	25.09		(001247)	25.12
(001247)	25.12	4302		
(001251)	25.15		(001253)	25.18
(001253)	25.18	4303		
(001256)	25.19	430	(001237)	25.06

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE SCENE

(001257)	26.01	SCENE	(000004)	26.07-1
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(001265)	26.04	101		
(001268)	26.06		(001269)	26.07
(001269)	26.07	102		
(001267)	26.10	103	(001265)	26.06
(001268)	26.11	104	(001265)	26.06
(001269)	26.12	105	(001265)	26.06
(001312)	26.13	110		
(001313)	26.14		(001323)	26.23
(001314)	26.15	111		
(001316)	26.17	112		
(001317)	26.18	113	(001316)	26.16
(001320)	26.20	116		
(001321)	26.21	117	(001319)	26.19
(001322)	26.22	118	(001319)	26.19
(001323)	26.23	119		
(001326)	26.24	120	(001313)	26.14
(001327)	26.26		(001333)	26.26
(001331)	26.27	121		
(001333)	26.28	122	(001336)	26.28
(001336)	26.29	130		
(001338)	26.31	131		
(001339)	26.32	132	(001337)	26.30
(001340)	26.33	133	(001337)	26.30
(001342)	26.34	134		
(001343)	26.36		(001334)	26.32
(001344)	26.38	136		
(001346)	26.39	138		
(001347)	26.39	137	(001346)	26.37
(001351)	26.42	139		
(001352)	26.43	138	(001360)	26.41
(001353)	26.01	139	(001350)	26.41
(001354)	26.02	139		
(001357)	26.03	140	(001343)	26.36
(001360)	26.04		(001364)	26.07
(001362)	26.06	141		
(001364)	26.07	140	(001361)	26.05
(001368)	26.09		(001360)	26.10
(001369)	26.10	1500		
(001370)	26.11	150		
(001377)	26.13		(001360)	26.14
(001380)	26.14	151		
(001383)	26.16	152		
(001387)	26.18		(001404)	26.28
(001388)	26.19	153		
(001390)	26.21	154		
(001391)	26.22	155	(001390)	26.20
(001397)	26.26	156		
(001403)	26.27	157	(001396)	26.24
(001404)	26.28	158	(001401)	26.26
(001407)	26.29	160	(001397)	26.18
(001408)	26.30		(001412)	26.33
(001410)	26.32	161		
(001412)	26.33	160	(001409)	26.31
(001416)	26.34	200	(001392)	26.15
(001417)	26.35	2000		
(001421)	26.01		(001423)	26.04

(001423)	30.04	203		
(001420)	30.07		(001430)	30.10
(001430)	30.10	205		
(001440)	30.12	210	(001410)	20.34
(001443)	31.01	211	(001440)	30.12
(001444)	31.02		(001445)	31.03
(001445)	31.03	212		
(001447)	31.05		(001448)	31.06
(001440)	31.06	213		
(001450)	31.07	214		
(001450)	31.09		(001450)	31.10
(001450)	31.10	2140		
(001460)	31.12	2141	(001495)	32.17
(001405)	31.13	215	(001462)	31.12
(001466)	31.14	2150		
(001505)	31.15	250	(001405)	31.13
(001500)	31.17		(001511)	31.10
(001511)	31.10	251		
(001514)	31.19	260	(001502)	32.21
(001515)	31.20		(001516)	31.21
(001516)	31.21	261		
(001400)	32.01	216	(001462)	31.12
(001471)	32.03	217		
(001472)	32.04	218	(001407)	31.14
(001470)	32.07	219	(001470)	32.02
(001400)	32.08	221	(001470)	32.07
(001401)	32.09	222	(001477)	32.06
(001403)	32.11	223	(001470)	32.07
(001404)	32.12	224		
(001407)	32.13	225	(001407)	32.10
(001400)	32.14		(001401)	32.15
(001401)	32.15	226		
(001400)	32.18	240	(001405)	32.17
(001500)	32.20		(001501)	32.21
(001501)	32.21	241		
(001521)	32.22	270	(001510)	31.22
(001525)	32.25		(001520)	32.20
(001520)	32.26	273		
(001530)	32.29	299	(001440)	30.12
			(001519)	31.02

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE VSGOCH

(001541)	35.01	VSGOCH	(000950)	21.22-1
(001505)	35.01	100		
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(001500)	35.03	101		
(001573)	35.05	110		
(001570)	35.06	120	(001573)	35.05
(001570)	35.08	121		
(001570)	35.09	122	(001577)	35.07
(001504)	35.12	123	(001000)	35.14
(001507)	35.13	124	(001503)	35.11
(001509)	35.15	125		
(001500)	35.16	126	(001500)	35.14
(001501)	35.17	127	(001503)	35.11
(001506)	35.19	128	(001505)	35.12
(001600)	35.21	129	(001575)	35.10
(001603)	35.23		(001604)	35.24
(001604)	35.24	130		
(001612)	35.26		(001613)	35.29
(001613)	35.29	131		
(001610)	35.31		(001620)	35.33
(001620)	35.33	132		
(001624)	35.01		(001625)	35.02
(001625)	35.02	133		
(001631)	35.05		(001637)	35.00
(001637)	35.00	134		

(001005)	36.29	(001099)	36.31
(001099)	36.31 135		
(001711)	36.36 136		
(001714)	36.37 137	(001710)	36.35
(001715)	36.38	(001709)	37.07
(001721)	37.04 138		
(001725)	37.06 139	(001722)	37.03
(001728)	37.07 140		
(001753)	37.17 141		
(001757)	37.19 143	(001752)	37.16
(001758)	37.20	(001755)	37.24
(001759)	37.21 144		
(001762)	37.23 145	(001758)	37.24
(001765)	37.24 146		
(001766)	37.25 148		
(001799)	38.01	(001803)	38.05
(001800)	38.02 151		
(001801)	38.03 152	(001799)	38.01
(001803)	38.05 153		
(001836)	38.16	(001842)	38.18
(001842)	38.18 154		
(001851)	38.22 155		
(001852)	38.23 156	(001850)	38.21
(001857)	38.25 157		
(001858)	38.26 158		
(001860)	38.27 159	(001857)	38.25
(001866)	38.29 160	(001856)	38.24
(001874)	38.32 5000		
(001880)	38.34	(001882)	38.37
(001882)	38.37 510		
(001885)	38.38 299	(001870)	35.04
		(001873)	35.05
		(001872)	38.31

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE TENDC

(001897)	41.01 TENDC	(000897)	20.20-X
(001824)	41.01 500		
(001825)	41.03 501		
(001826)	41.03	(001826)	41.04
(001830)	41.05	(001831)	41.07
(001831)	41.07 502		
(001845)	41.10 503		
(001852)	41.12 5030		
(001854)	41.14 5031		
(001857)	41.15 504	(001851)	41.11
(001858)	41.16 5040	(001853)	41.13
(001859)	41.17	(001860)	41.18
(001860)	41.18 5041		
(001864)	41.20 505	(001861)	41.19
(001866)	41.22 5051		
(001868)	41.24 5052		
(001871)	41.25 506	(001861)	41.19
(001872)	41.26 507	(001865)	41.21
(001874)	41.28	(001867)	41.23
(001875)	41.29 5080	(001861)	41.19
(001877)	42.01 508	(001870)	42.02
(001878)	42.02 509	(001874)	41.28
(001881)	42.03 510	(001876)	41.29
(001882)	42.04	(002071)	43.13
(002015)	42.14 5100		
(002020)	42.16	(002035)	42.24
(002032)	42.23 5101		
(002035)	42.24 5102	(002031)	42.22
(002038)	42.25 5103	(002014)	42.13
(002039)	42.26	(002040)	42.27
(002040)	42.27 5104		
(002045)	43.01 511		
(002046)	43.02 5110		

08/18/74	TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP			PAGE 9
CARD ID	PAGE/BOX	NAME	REFERENCES	(SOURCE	SEQUENCE NO. AND PAGE/BOX)	
(002094)	43.05	9111				
(002095)	43.06	9112				
(002096)	43.08	910	(002095)	43.01	(002093) 43.04 (002094) 43.05	
(002071)	43.13	919				
(002077)	43.15	920				
(002078)	43.16	921				
(002084)	43.18	922	(002081)	43.17		
(002086)	44.01	923	(002081)	43.17		
(002087)	44.02	924	(002085)	43.18		
(002095)	44.04	925				
(002097)	44.05	926	(002094)	44.03		
(002100)	44.07	927				
(002101)	44.08	928	(002098)	44.06		
(002102)	44.09	929	(002094)	44.03	(002095) 44.04	
(002103)	44.10	930	(002081)	43.17		
(002107)	44.11	940	(002077)	43.15		
(002112)	44.13	9001	(002110)	44.12		
(002116)	44.15	9003				
(002120)	44.16	9005	(002110)	44.12	(002115) 44.14	
(002132)	44.21		(002134)	44.22		
(002174)	44.22	941				
(002135)	44.23	99				

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE ABOVE

(002190)	47.01	ABOVE	(001033)	22.15-X	(001046)	22.19-X	(001089)	42.06-X
(002172)	47.01	100						
(002177)	47.04	110						
(002184)	47.07	120	(002176)	47.03				
(002189)	47.09	302						
(002200)	47.12	390	(002197)	47.11				
(002200)	48.01	398	(002206)	47.15				
(002214)	48.02	303	(002197)	47.11	(002208)	47.15		
(002229)	48.06	304						
(002231)	48.08		(002240)	48.16				
(002247)	48.15	305						
(002248)	48.16	309	(002246)	48.14				
(002251)	48.17	310						
(002267)	48.22	319	(002265)	48.21				
(002271)	48.24	99	(002265)	48.21				

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE DMAX

(002282)	51.01	DMAX	(002311)	51.04-X	(002120)	44.16-X	(002125)	44.18-X	(002210)	48.03-X	(002238)	48.10-X
			(002296)	48.10-X								
(002303)	51.01	99										
(002312)	51.04	101	(002314)	51.06								
(002313)	51.05	102										
(002315)	51.07	103	(002310)	51.04								
(002322)	51.09	104	(002310)	51.08								
(002324)	51.11		(002326)	51.12								
(002326)	51.12	105										
(002329)	51.15	106										
(002332)	51.18	110	(002329)	51.14	(002392)	52.25	(002416)	53.08				
(002330)	51.18	9001	(002330)	51.17								
(002340)	51.19	9002	(002330)	51.18								
(002344)	51.20	97	(002330)	51.18								
(002351)	52.01	200	(002319)	51.08								
(002353)	52.03	201										
(002354)	52.04	202	(002356)	52.06								
(002356)	52.05	203										
(002357)	52.07	204										
(002358)	52.08	205	(002354)	52.04								

TABLE OF CONTENTS AND REFERENCES			AUTOFLOW CHART SET - SHEEP		
CARD ID	PAGE/BOX	NAME	REFERENCES	SOURCE	SEQUENCE NO. AND PAGE/BOX
(002362)	52.09	206	(002353)	52.03	
(002363)	52.10	207	(002352)	52.02	(002354) 52.04
(002368)	52.11	210	(002361)	52.08	
(002371)	52.13	211	(002374)	52.16	
(002372)	52.14	212			
(002373)	52.15	213			
(002375)	52.17	214			
(002377)	52.18	220	(002371)	52.13	(002372) 52.14
(002381)	52.19	221	(002378)	52.12	(002371) 52.13
(002387)	52.20	230	(002380)	52.18	
(002390)	52.21	231	(002385)	52.23	
(002394)	52.23	232			
(002398)	52.24	240	(002393)	52.22	
(002400)	52.25	241			
(002404)	52.28	120			
(002405)	52.29	122			
(002411)	53.01	124	(002404)	52.28	(002405) 52.29
(002413)	53.02	5008	(002411)	53.01	
(002418)	53.06	140	(002403)	52.27	(002404) 52.28 (002405) 52.29
(002420)	53.07	99	(002336)	51.17	(002347) 51.21 (002411) 53.01

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE CAERO

(002436)	56.01	CAERO	(000902)	29.31-X	(001394)	29.23-X	(002388)	51.02-X
(002446)	56.01	100						
(002447)	56.02		(002448)	56.03				
(002448)	56.03	101						
(002453)	56.05	110						
(002454)	56.06	111	(002456)	56.08				
(002455)	56.07	112						
(002457)	56.09	113	(002454)	56.06				
(002460)	56.10	120						
(002461)	56.11	121	(002463)	56.13				
(002462)	56.12	122						
(002464)	56.14	123	(002461)	56.11				
(002466)	56.15	130						
(002470)	56.16	99						

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE SHXP(Y,X,YP,XP)

(002481)	59.01	SHXP	(001618)	35.31-X	(001619)	35.32-X	(001624)	35.01-X	(001802)	38.04-X

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE PRTO

(002548)	62.01	PRTO	(000936)	21.24-X				
(002554)	62.01	198						
(002555)	62.02		(002556)	62.03				
(002556)	62.03	199						
(002512)	62.20	250						
(002513)	62.21		(002600)	62.37				
(002555)	62.35	251						
(002600)	62.37	259	(002604)	62.34				
(002671)	63.01		(002675)	63.04				
(002675)	63.04	263						
(002683)	63.08		(002687)	63.11				
(002687)	63.11	266						
(002699)	63.17		(002703)	63.20				
(002703)	63.20	269						

06/10/74	TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP		PAGE 11
CARD ID	PAGE/BOX	NAME	REFERENCES	SOURCE SEQUENCE NO. AND PAGE/BOX	
(002707)	03.21	300			
(002708)	03.22	301			
(002709)	03.23	302			
(002705)	04.12		(002720)	04.14	
(002706)	04.14	304			
(002731)	04.15	000	(002707)	03.21	(002708) 03.22
(002733)	04.16	000	(002731)	04.15	
(002737)	04.17	002			
(002738)	04.18		(002741)	04.21	
(002741)	04.21	004			
(002743)	04.22	000	(002731)	04.15	

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE OCOP

(002794)	07.01	OCOP	(002563)	02.06-X
(002777)	07.01	1000		
(002778)	07.02		(002786)	07.04
(002786)	07.04	1001		
(002788)	07.06		(002791)	07.07
(002791)	07.07	100		
(002793)	07.09		(002811)	07.15
(002805)	07.13	101		
(002811)	07.15	100	(002804)	07.12
(002830)	07.22		(002831)	07.23
(002831)	07.23	110		
(002947)	07.29	200		
(002948)	07.29		(002888)	08.10
(002970)	08.02	201		
(002888)	08.10	200	(002889)	08.01
(002992)	08.13		(002895)	08.14
(002995)	08.14	210		
(002998)	08.15	220		
(002920)	08.22		(002920)	08.27
(002926)	08.25	221		
(002927)	08.26	222	(002925)	08.24
(002928)	08.27	223		
(002932)	08.29		(002933)	08.30
(002933)	08.30	230		
(002937)	08.32		(002938)	08.33
(002938)	08.33	231		
(002945)	08.35	232		
(002946)	08.37		(002947)	08.38
(002947)	08.38	233		
(002950)	08.39	200	(002944)	08.35

CHART TITLE - NON-PROCEDURAL STATEMENTS

LOCATION		DIAGNOSTIC
CARD ID	PAGE/BOX	
(000017)	2.02	UNRECOGNIZED SYNTAX
(000025)	2.06	UNRECOGNIZED SYNTAX
(000104)	9.16	UNDEFINED - 'READMS' EXTERNAL REFERENCE
(000105)	9.17	UNDEFINED - 'READMS' EXTERNAL REFERENCE
(000106)	9.18	UNDEFINED - 'READMS' EXTERNAL REFERENCE
(000408)	14.20	UNDEFINED - 'WRITHS' EXTERNAL REFERENCE
(000704)	18.01	UNDEFINED - 'READMS' EXTERNAL REFERENCE
(001233)	25.05	UNDEFINED - 'WRITHS' EXTERNAL REFERENCE

PROGRAM FLOW CHARTS

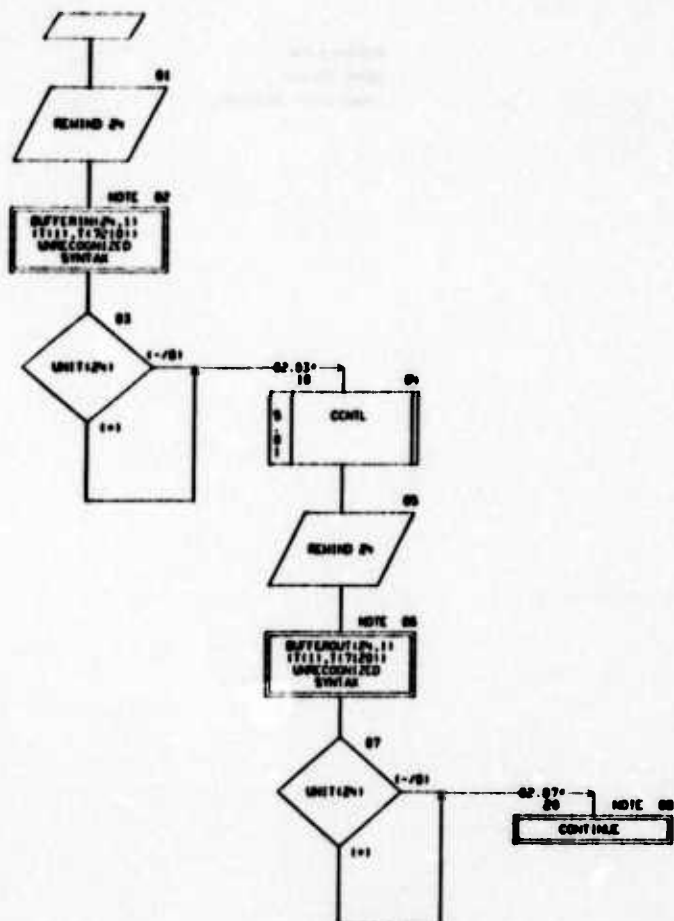
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CHART TITLE - INTRODUCTORY COMMENTS

*****PROGRAM BLANK*****

PROGRAM FOR FIRST OVERLAY OF WIND/EMPERORAGE MODULE
INPUT DATA PROCESSING AND GEOMETRY CALCULATIONS.

CHART TITLE - PROCEDURES



08/10/74

AUTOFLW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 03

CHART TITLE - NON-PROCEDURAL STATEMENTS

PROGRAM BLATB
COPDEN 1171201
COPDEN /MISC/ 1015C11001

05/10/74

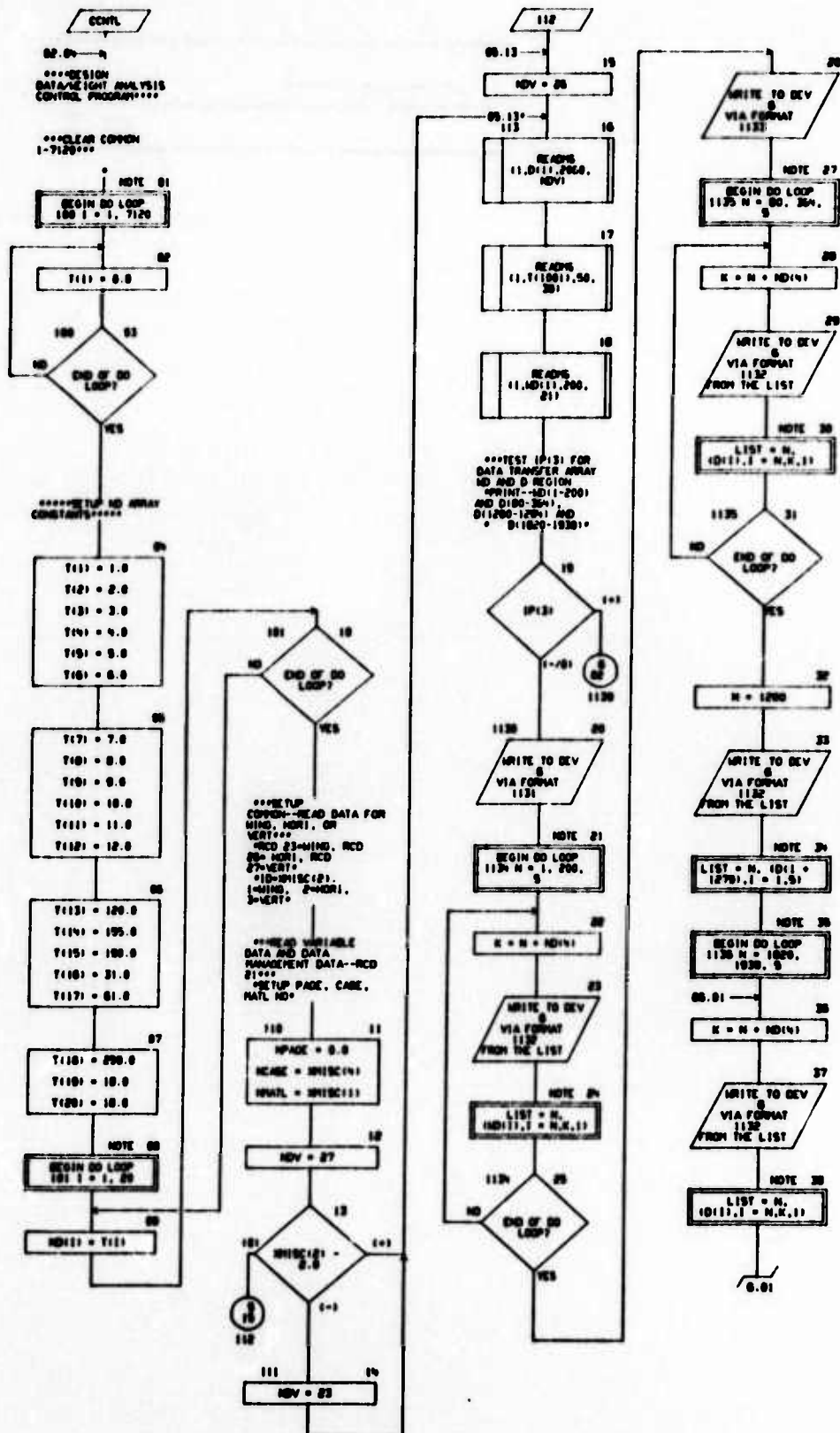
AUTOFLIGHT CHART SET - SHEEP HING AND EXPERIMENTAL FIDDLE - PAGE 04

CHART TITLE - INTRODUCTION CONTENTS

*****SUBROUTINE CCHL*****

INITIALIZATION - DATA TRANSFER FROM GENERAL DATA

CHART TITLE - SUBROUTINE CCHNL



```

05.95--
      |
      v
    1136 01
      / \
     /   \
    /       \
   /         \
  /           \
 /             \
/               \
END OF DO LOOP?
|               |
YES            NO
|               |
v               v
                ( )
                9
                38

```

***GENR DATA..MOVE
 DATA ONLY IF
 INPUT=0***
 ***OIBI+CONTROL WORD.
 IF NOT ZERO, SAIP
 MOVE FOR GENR
 * DATA *
 BLOCK=0-01,09,01,93,
 04,95,96,100,07,06,
 07,1280
 IF 0, MOVE DATA
 ONLY IF INPUT=0

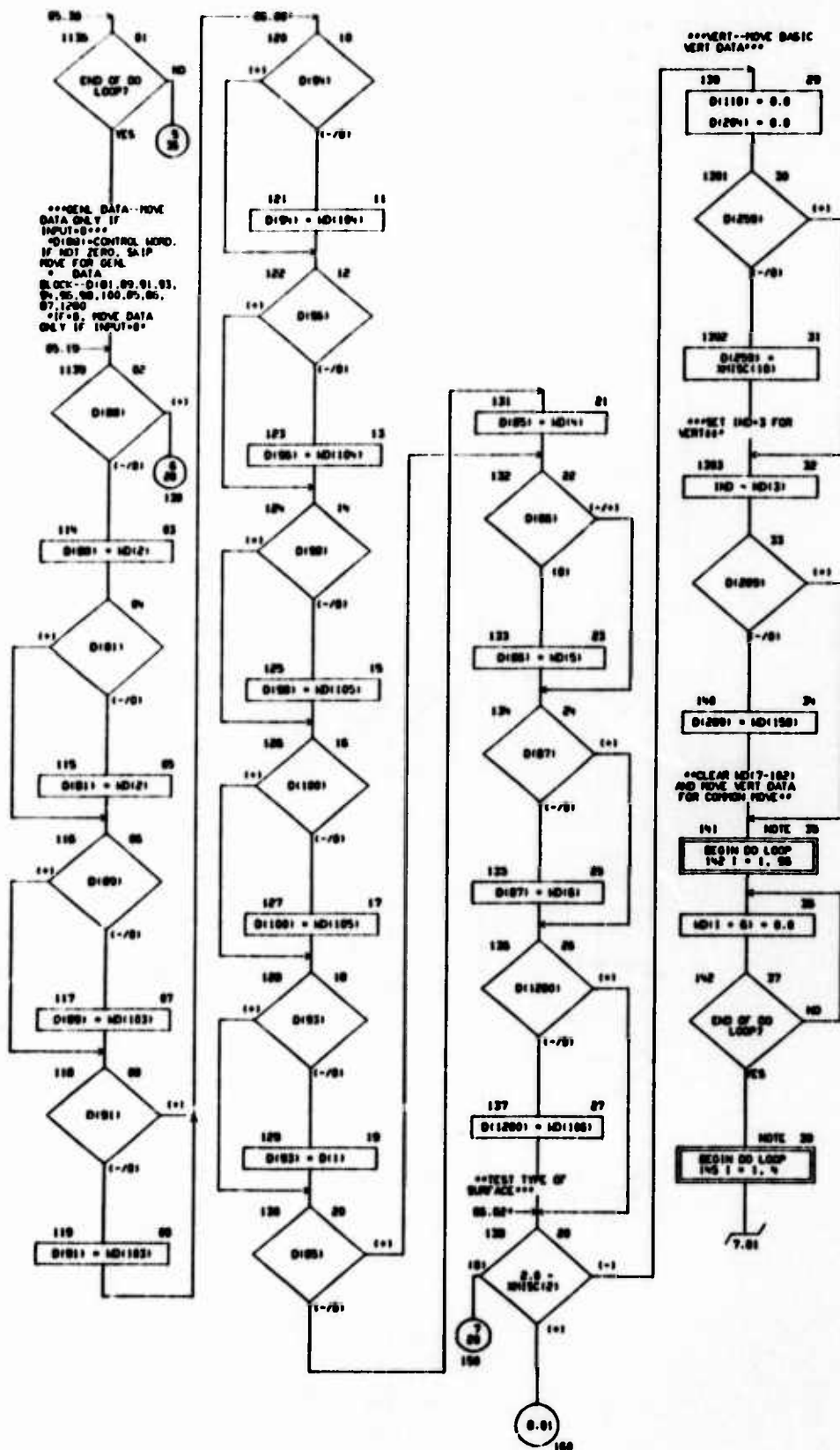


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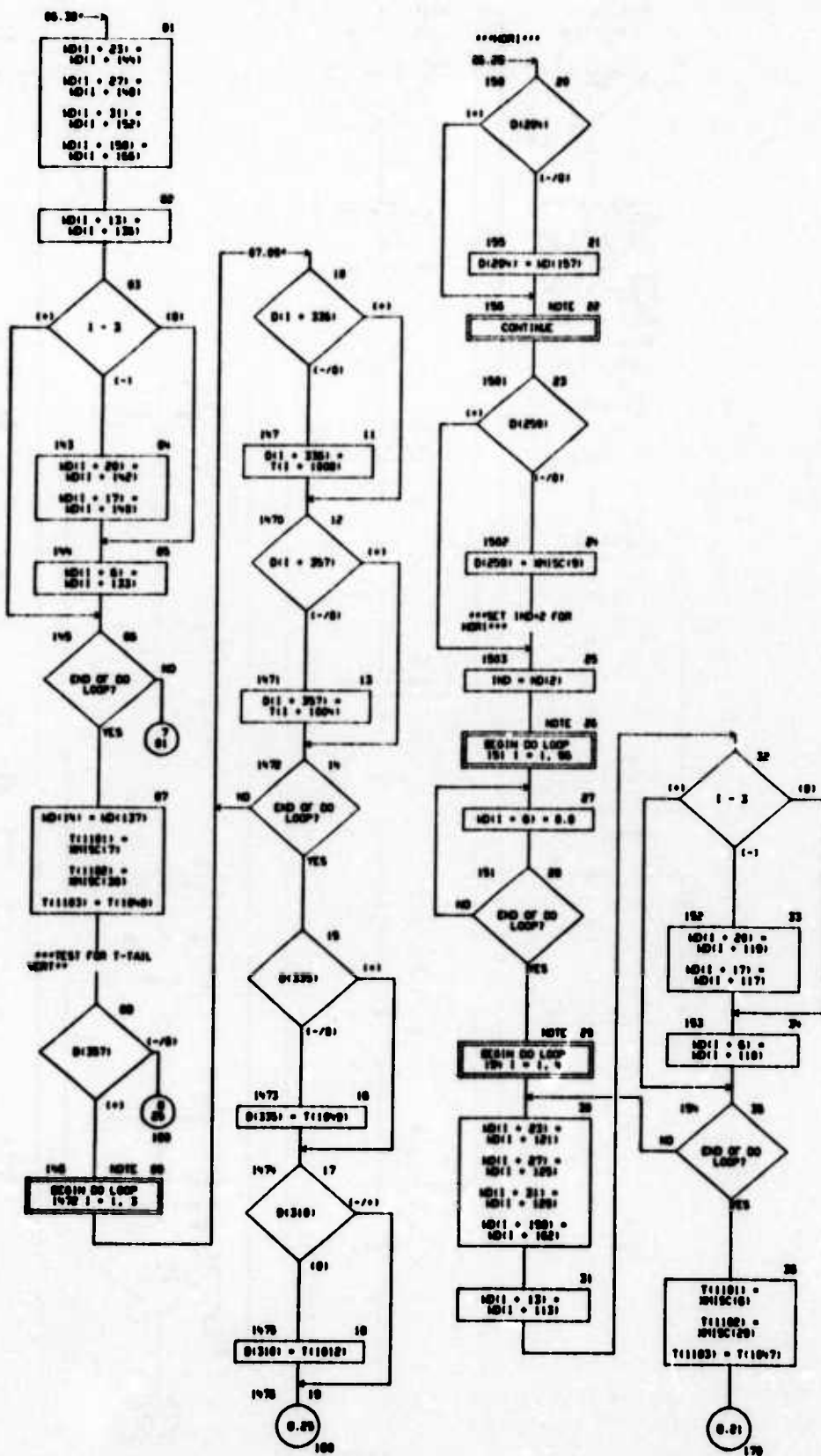


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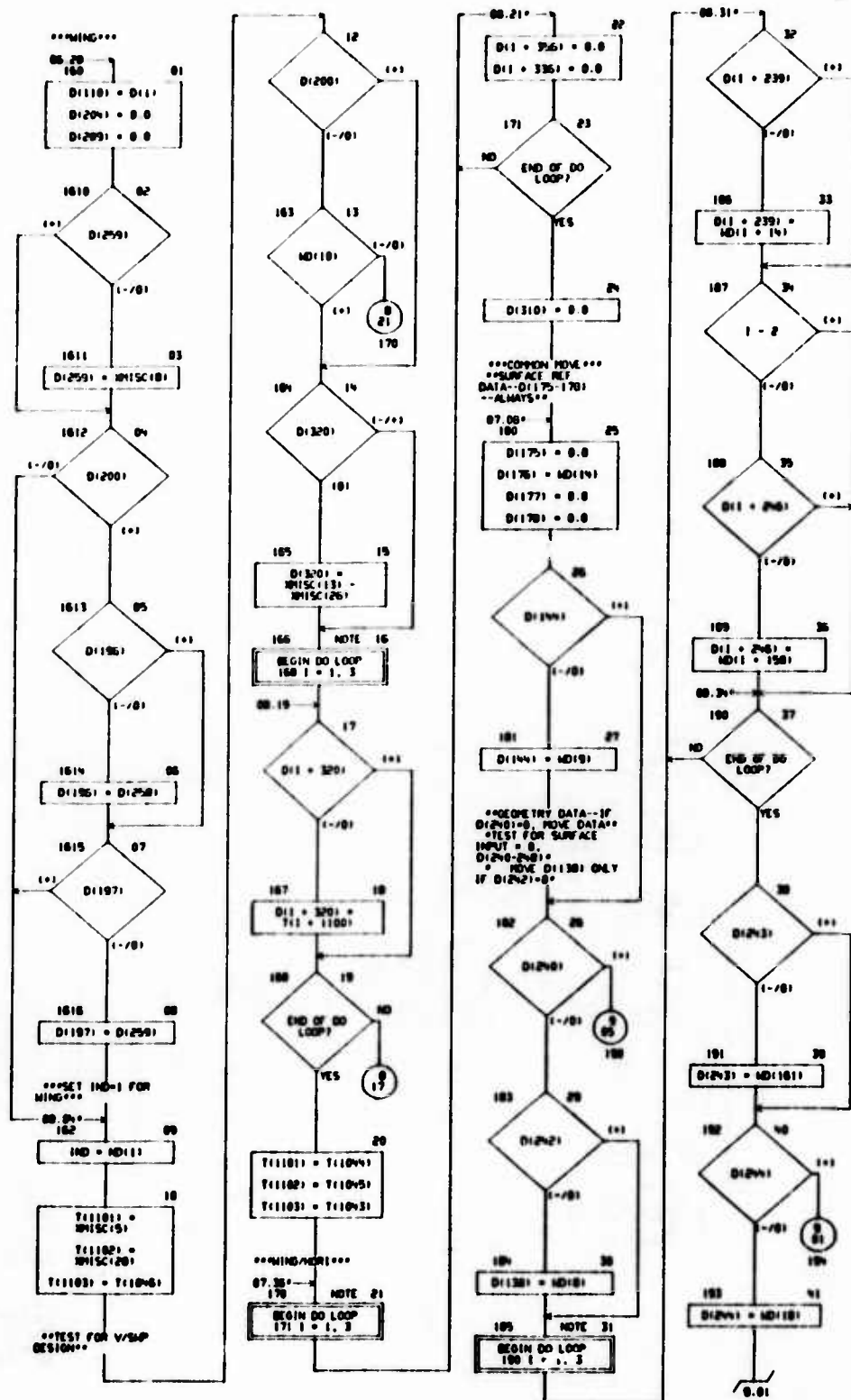


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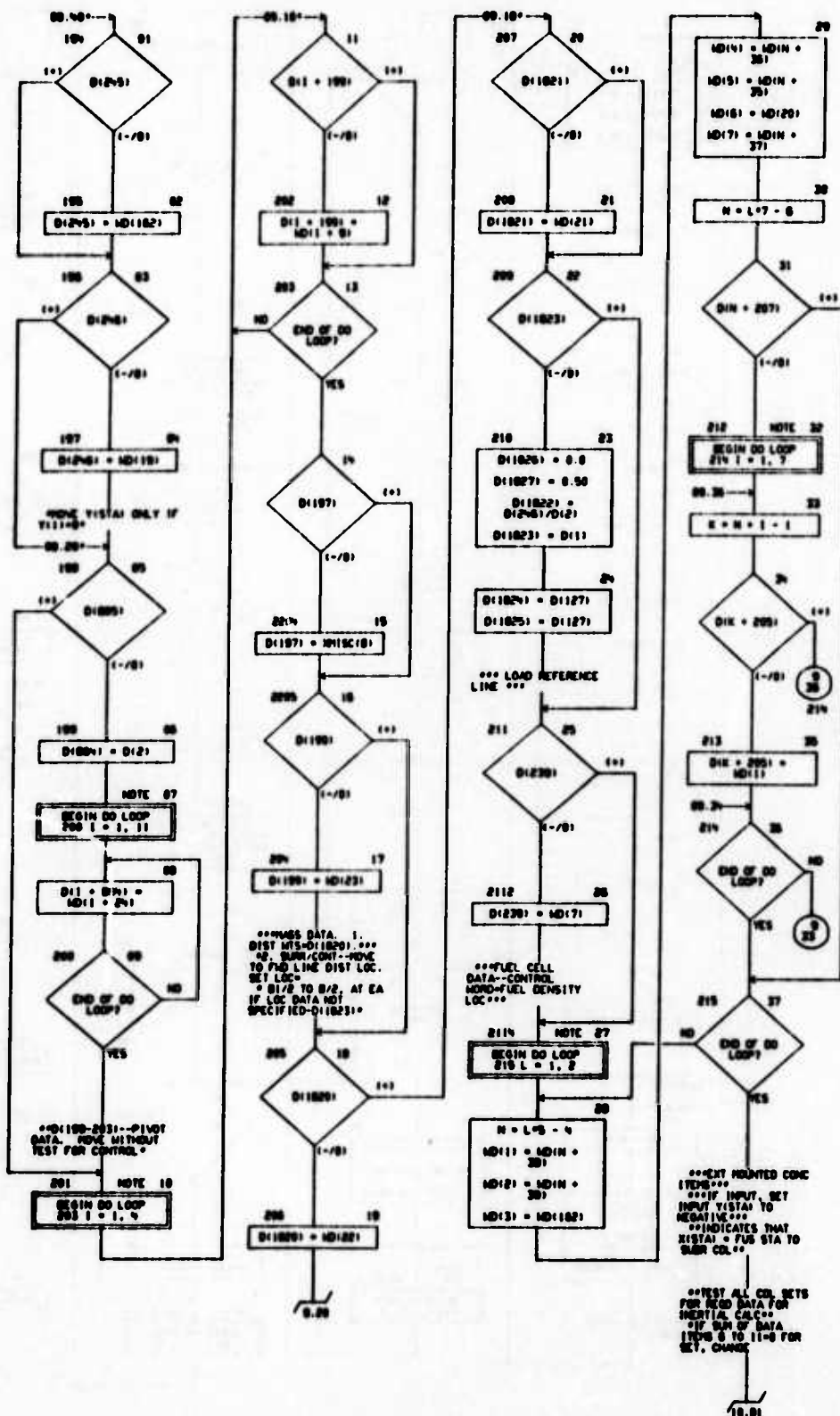
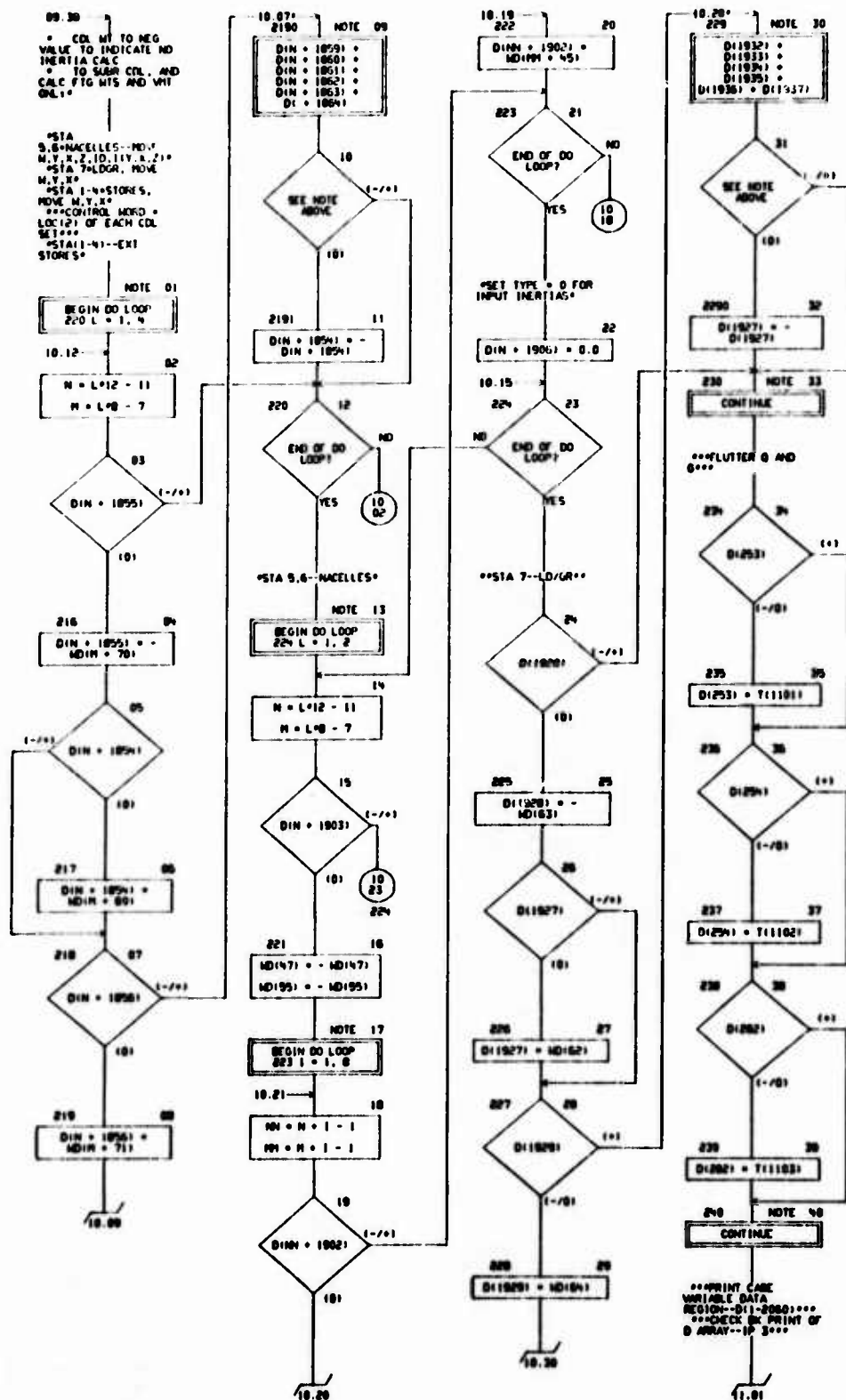


CHART TITLE - SUBROUTINE CCNTL



1164

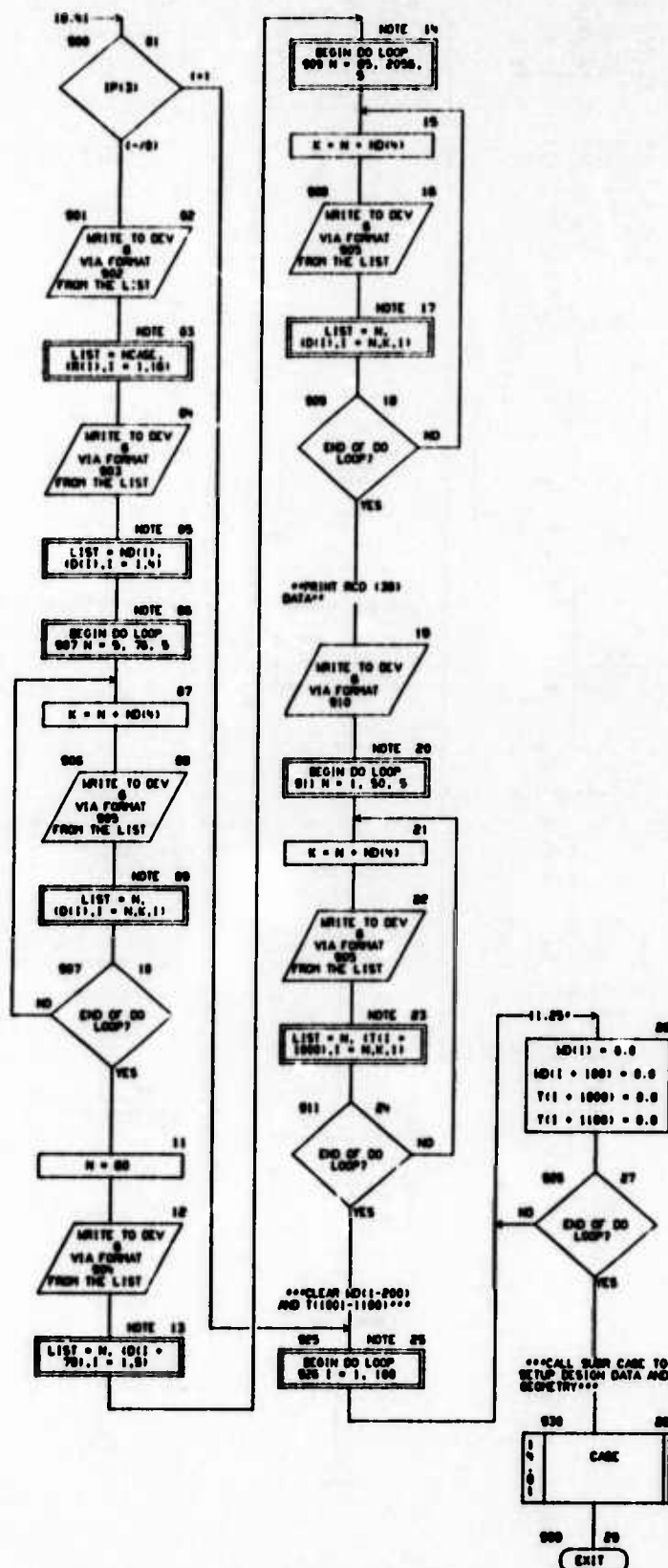


CHART TITLE - NON-PROCEDURAL STATEMENTS

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COMMON /PRINT/ IP(80)
COMMON /MISC/ NMISC(100)
DIMENSION D(1,60),CD(2000),ND(100),TM(900),
R(10),MD(200),
DC(100)
EQUIVALENCE (D(1),T(206)),(CD(1),T(412)),(ND(1),T(612)),
(TM(1),T(621)),(DC(1),D(140)),
(R(1),NMISC(95)),(ND(1),T(1)),
(MAREC,D(240)),(VTID,D(289)),
(INCAGE,ND(80)),(INPAGE,ND(85)),(INMATL,ND(59))
1131 FORMAT (1H,10X,47H--DATA MANAGEMENT TRANSFER DATA--MD ARRAY--*,
.33X,12H** CCNTL - IP(3) **/6H MD 1
1132 FORMAT (1H 14,5E10.0)
1133 FORMAT (1H0,10X,63H--INITIAL STATUS OF VARIABLE DATA--D ARRAY BE
FORE DATA TRANSFER--*,6X,19H** CCNTL - IP(3) **/6H D 1
902 FORMAT(7H) CASE,13,81X,19H** CCNTL - IP(3) **/10X,8A10/10X,8A10/)
903 FORMAT (1H014,4E10.0)
904 FORMAT (1H014,5E10.0)
905 FORMAT (1H 14,5E10.0)
910 FORMAT (1H0,7720H ***SPAL ARRAY. RCD 30***,60X,20H ** CCNTL - I
P(3) **/6H SPAL)

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CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE CASE*****

GENERAL DATA INITIALIZATION AND CONTROL

CHART TITLE - SUBROUTINE CASE

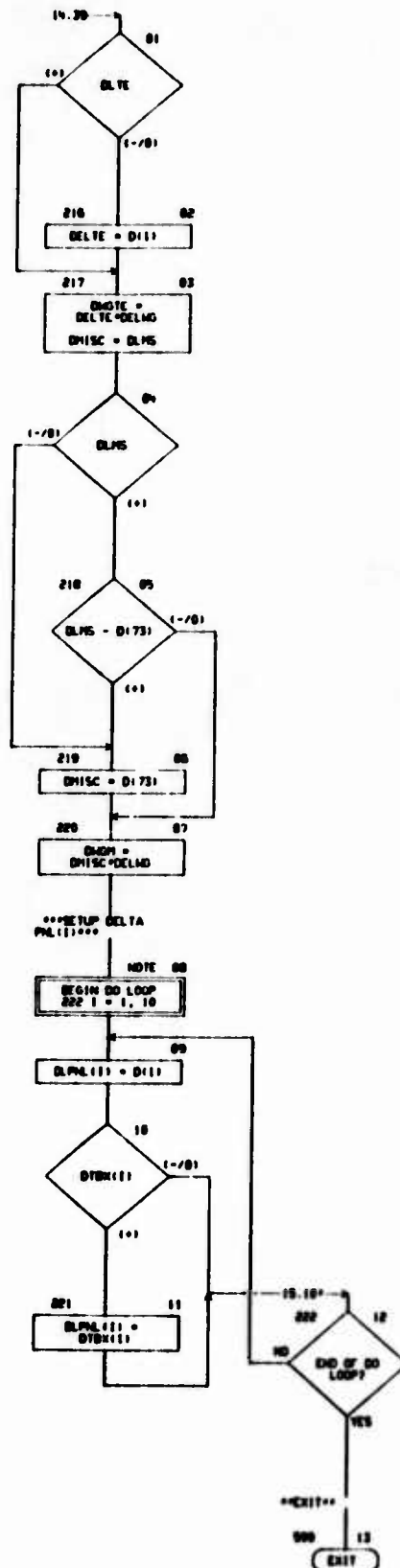


CHART TITLE - NON PROCEEDURAL STATEMENTS

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COMMENT
DIMENSION T(620),D(2060),CD(2000),ND(100),DL(100),
TOGM(4),TOFL(4),DLFL(4),DLLE(4),DWE(4),
UPM2(2),ZPM2(2),OPM2(2),OPM2(2),
DLTB(30),
DTBK(32),DLPH(10),
TRY(500),YC(200),YTC(60)
EQUIVALENCE (D(1),T(206)),(CD(1),T(121)),(ND(1),T(612)),
(DC(1),D(140)),(TRY(1),T(80)),(YC(1),T(20)),
(YTC(1),T(35)),
(TOGM(1),D(80)),(TOFL(1),D(89)),(DLFL(1),D(94)),
(DGM(1),D(102)),(DWIN(1),D(29)),(DWIN(1),D(157)),(DLT(1),D(122)),
(UPM2(1),D(205)),(ZPM2(1),D(85)),(OPM2(1),T(18)),(OPM2(1),T(20)),
(DLLE(1),D(98)),(DLFL(1),D(93)),(OGM2(1),D(40)),(DL(1),D(105)),
(DWL(1),D(87)),(DGL(1),D(207)),(DL(1),D(666)),
(LFB,ND(97)),
(L1,ND(26)),(L1D,ND(154))
EQUIVALENCE (DLMS,D(250)),(DLB(1),D(600)),(DLLE,D(601)),
(DLTE,D(602)),(DLMS,D(603)),
(DLMS,T(107)),(DLBK,T(108)),(DLLE,T(109)),(DLTE,T(190)),
(DMISC,T(110)),(DMGTR,T(112)),(DMKE,T(113)),(DMTE,T(194)),
(DLPH(1),T(177)),(DTBK(1),D(1088)),
(DMGM,T(195))

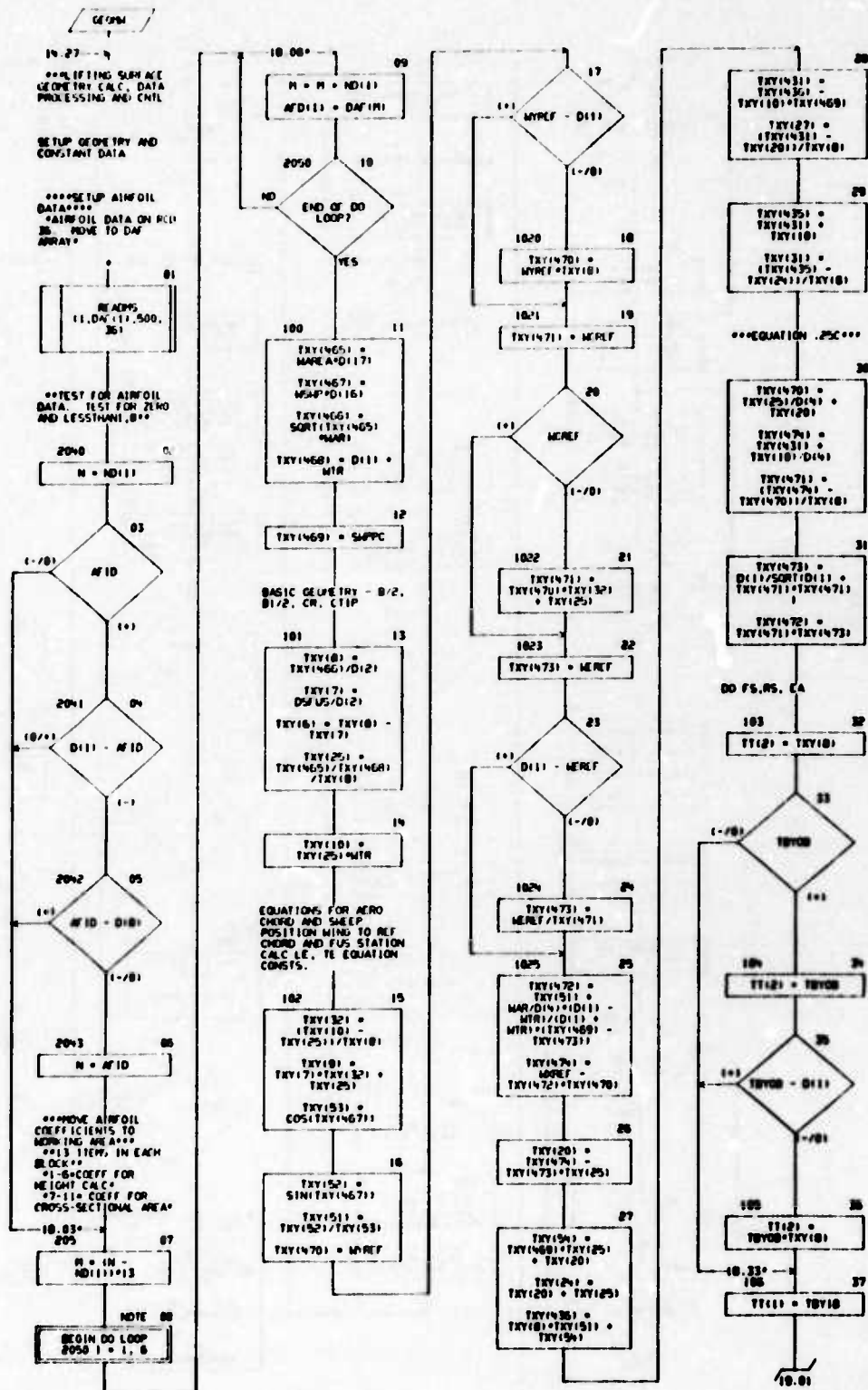
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CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE GEOM*****

GEOMETRY EVALUATION AND CONTROL

CHART TITLE - SUBROUTINE GEOM4



[illegible]

```

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    01 --> 122[122]
    122[122] --> 02[02]
    02[02] --> 123[123]
    123[123] --> 03[03]
    03[03] --> 04[04]
    04[04] --> 05[05]
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    06[06] --> 07[07]
    07[07] --> 08[08]
    08[08] --> 09[09]
    09[09] --> 10{10}
    10 --> 11[11]
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    12[12] --> 13[13]
    13[13] --> 14[14]
    14[14] --> 15{15}
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    19[19] --> 20{20}
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CHART TITLE - SUBROUTINE GEOM

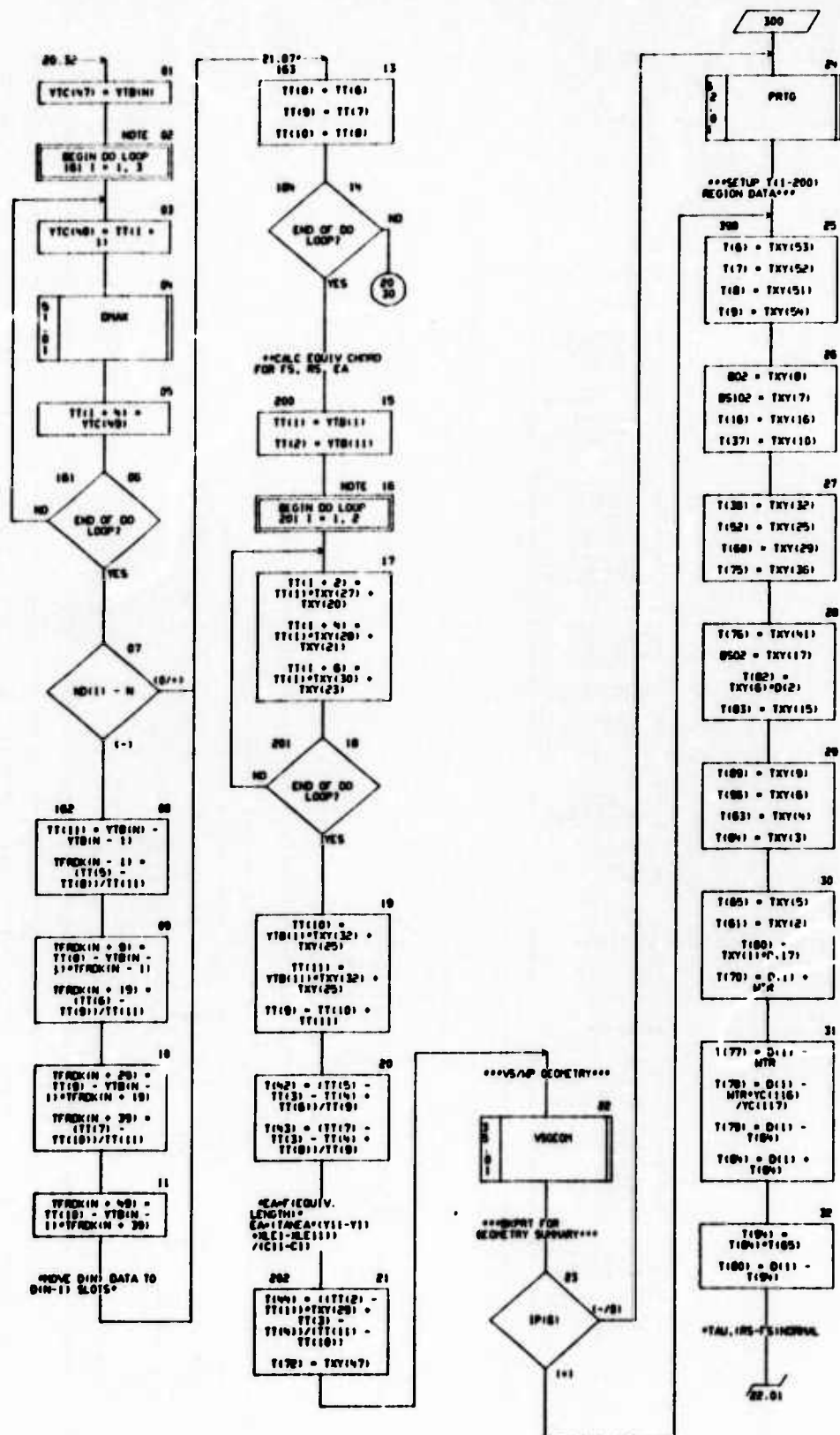


CHART TITLE - SUBROUTINE GEOPM

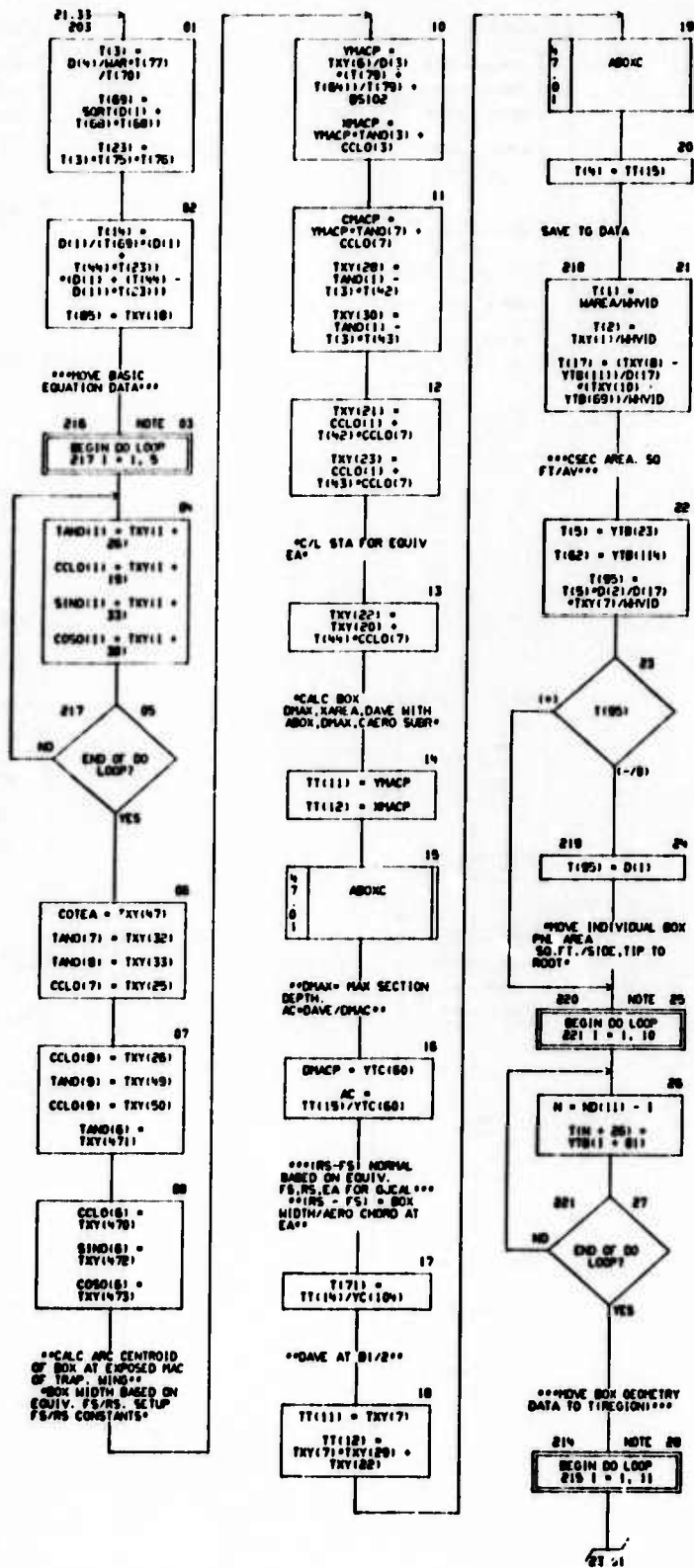


CHART TITLE - SUBROUTINE GEOPM

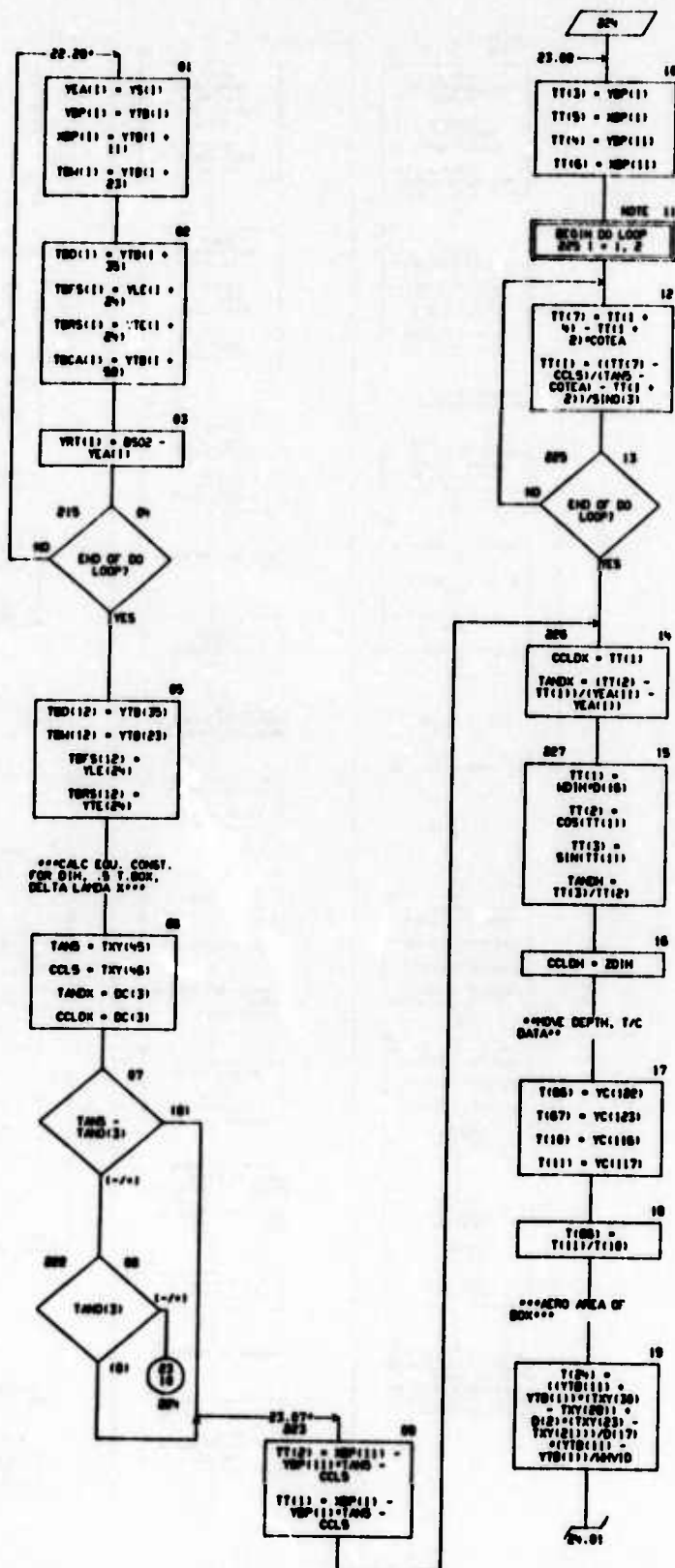


CHART TITLE - SUBROUTINE GEOM

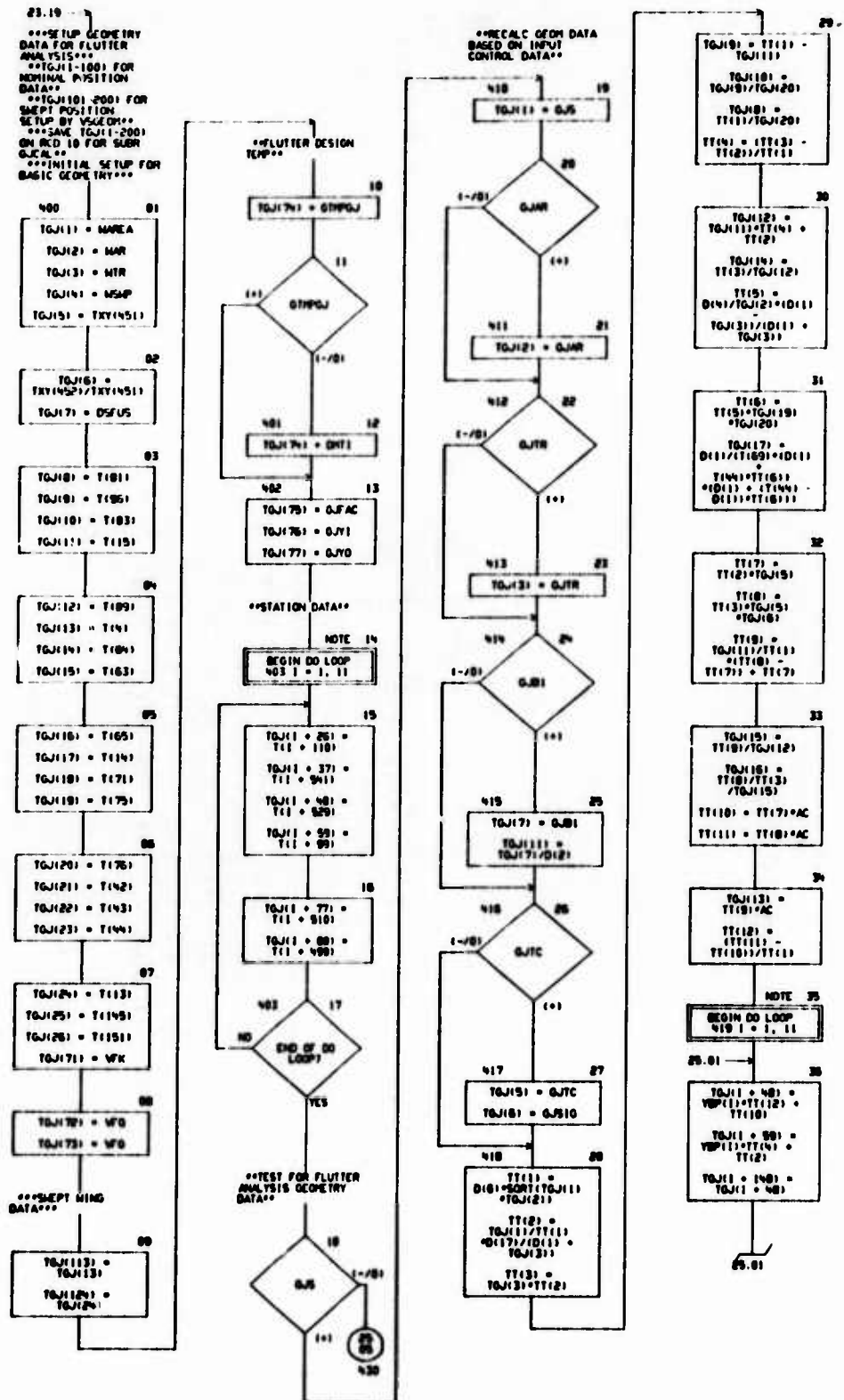


CHART TITLE - SUBROUTINE GEOM

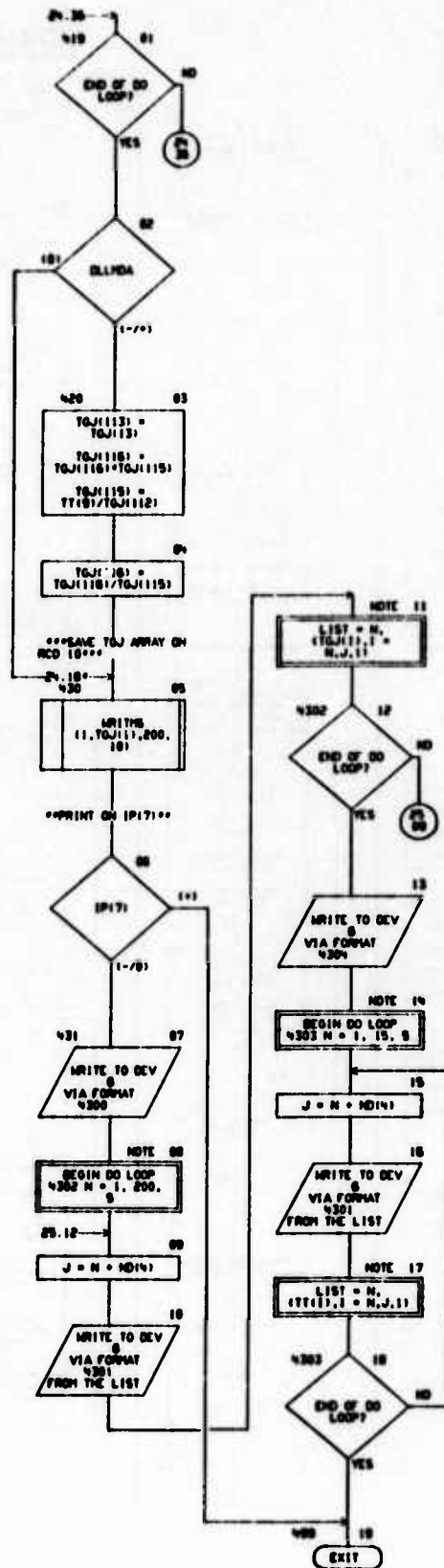


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T(6320)
COMMON /IPRINT/ IP(80)
DIMENSION D(206), DC(100), TXY(500), TT(20), ND(100)
, TB(8)(3), TB(8)(3), YTB(12), TDB(12), TBM(12), XBP(11), YBP(11)
, VRT(11), TB(11), TBFS(11), TBRS(12), YEA(11), TAN(9), CCLO(9)
, SIND(6), COSO(6), YLE(10), YTE(10), YS(11)
, TFRDK(60)
, YC(150), YC(60)
, DAF(500), AFD(6)
, TGJ(200)
EQUIVALENCE (D(1),T(206)), (ND(1),T(612))
, (BO2,T(112)), (BO2,T(81)), (TBCA(1),T(100)), (VRT(1),T(111))
, (TAND(1),T(122)), (CCLO(1),T(131)), (SIND(1),T(140))
, (COSO(1),T(146)), (COTE(1),T(152)), (TBFS(1),T(153))
, (TBRS(1),T(165)), (XBP(1),T(140)), (YBP(1),T(150))
, (YEA(1),T(151)), (TDB(1),T(153)), (TBM(1),T(142))
, (TXY(1),T(80)), (TT(1),T(1317))
, (YTB(1),TXY(50)), (YLE(1),TXY(179)), (YTE(1),TXY(200))
, (YS(1),TXY(490)), (AFD(1),T(141)), (DAF(1),T(140))
, (TB(8)(1),D(125)), (TB(8)(1),D(135)), (TBYB,D(120))
, (TBYOB,D(120)), (TCIB,D(124)), (TMSIG,D(124)), (YBTC,D(141))
, (TGJ(1),T(170)), (GTMPGJ,D(202)), (DMT(1),D(250))
, (GJS,D(1340)), (GJAR,D(1341)), (GJTR,D(1342)), (GJB(1),D(1343))
, (GJTC,D(1344)), (GJSIG,D(1345))
, (WFK,D(1252)), (WFO,D(1253)), (WFG,D(1254)), (GFAC,D(1312))
, (GJY(1),D(1313)), (GJYO,D(1315))
EQUIVALENCE (CSHO,D(140)), (HNRV(1),T(157))
, (YBTC,D(142)), (DYPVT,D(200)), (DMPVT,D(201)), (HAREA,D(1240))
, (HAR,D(1241)), (HTR,D(1244)), (HSP,D(1242)), (SHPPC,D(134))
, (DSFJS,D(1246))
, (DC(1),D(140)), (AFD(1),D(143))
, (N,ND(30)), (NDCT,ND(50))
, (TANDX,T(87)), (CCLOX,T(88)), (TANDH,T(90)), (CCLOH,T(91))
, (TANDS,T(92)), (CCLOS,T(93)), (NDIH,D(1247)), (ZDIH,D(1248))
, (TFRDK(1),T(186))
, (YC(1),T(201)), (YTE(1),T(135))
, (MYREF,D(175)), (HREF,D(176)), (HREF,D(177)), (HREF,D(178))
, (YHACP,T(153)), (HACP,T(154)), (CHACP,T(155)), (DHACP,T(156))
, (AC,T(13)), (BSIO2,T(15))
, (LLPDA,D(1320))
4300 FORMAT (44H) ***GEOM SUBR. FLUTTER GEOMETRY DATA***,40X,20H**
GEOM - IP(7) ** ,/END TGJ
4301 FORMAT (3X,13,2E16.8)
4304 FORMAT (6H0 TT)

```

06/10/76

AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 27

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE GEOME*****

PLATFORM GEOMETRY AND T/C DATA SETUP

[illegible]

CHART TITLE - SUBROUTINE GEOMC

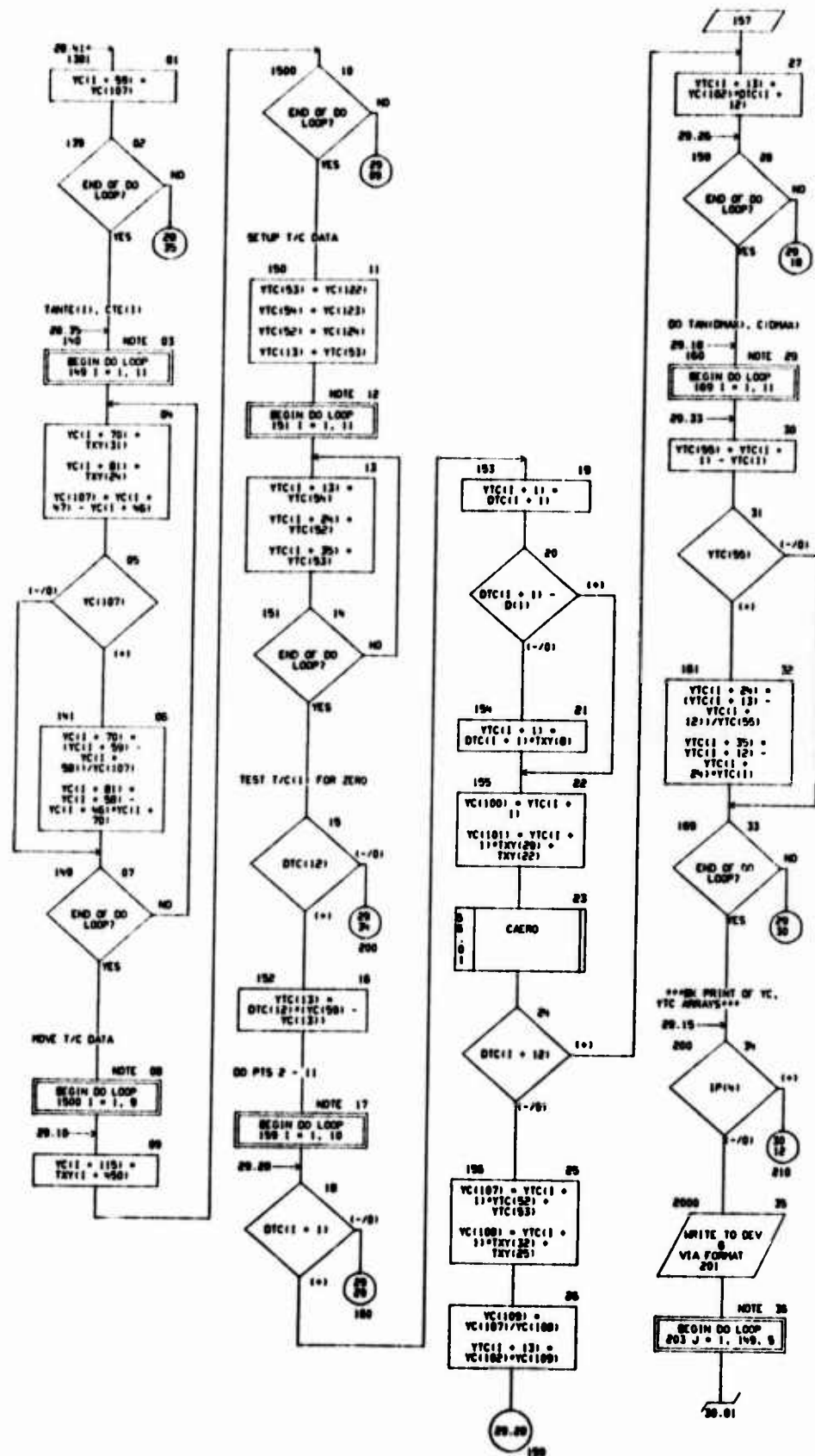


CHART TITLE - SUBROUTINE GEOPIC

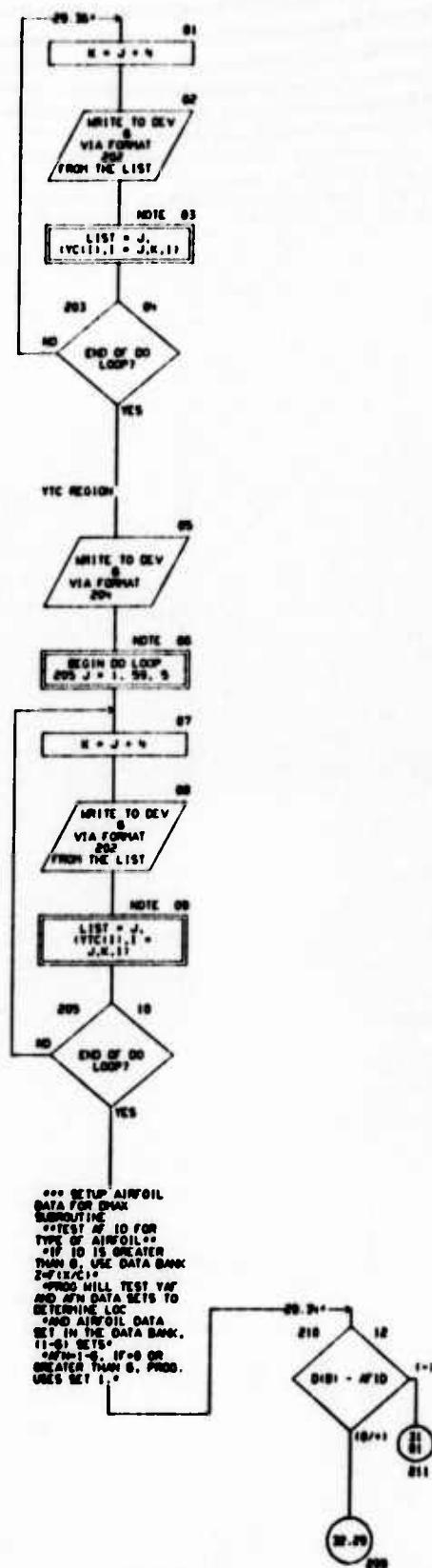
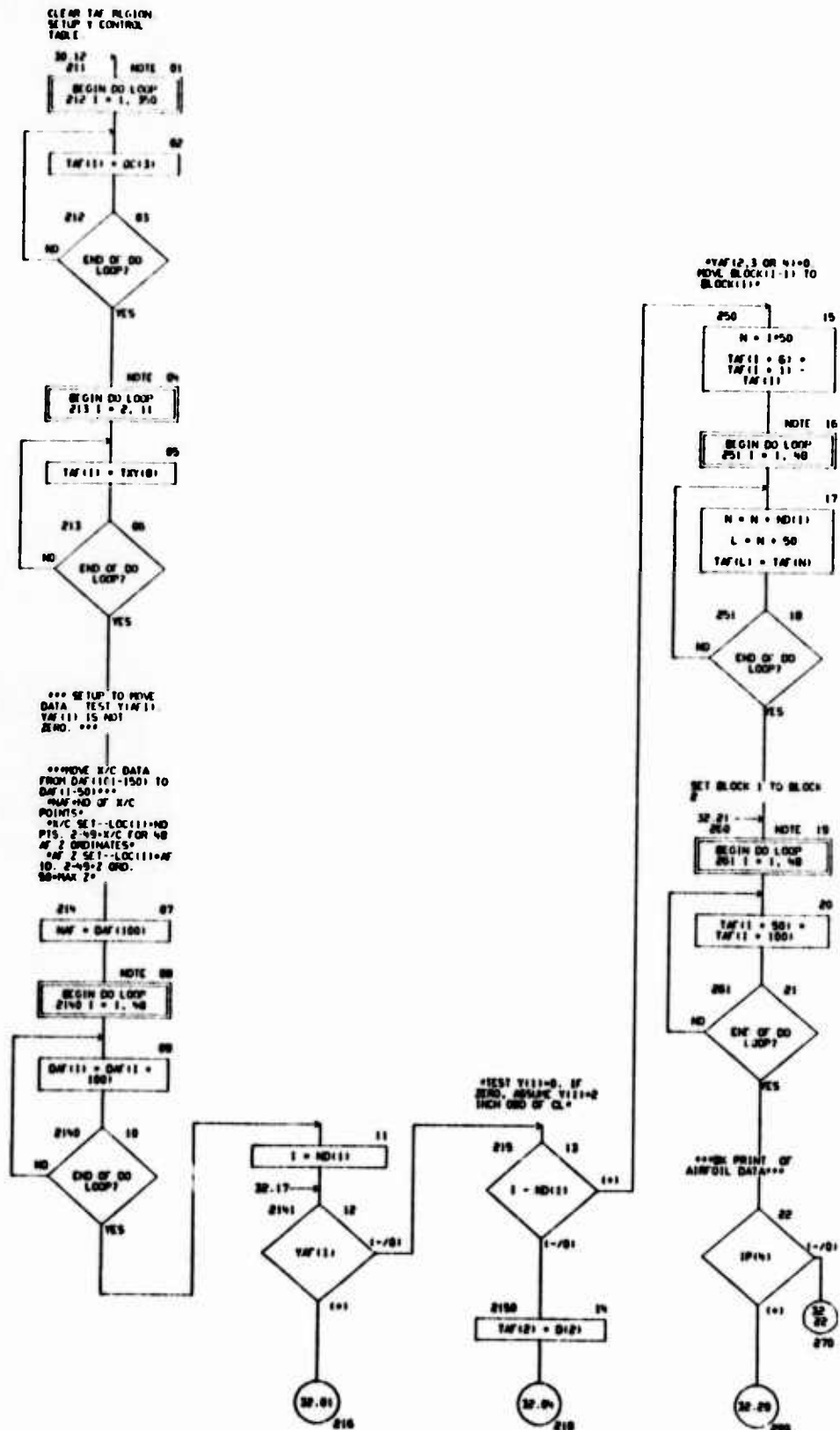


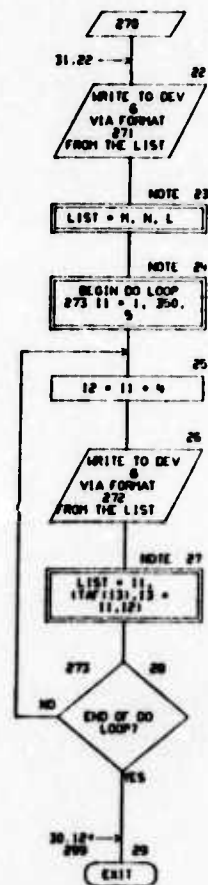
CHART TITLE - SUBROUTINE GEOM



The flowchart is divided into two main sections: the left section (blocks 01-08) and the right section (blocks 09-20). The left section initializes variables and sets up a loop for block 1. The right section contains a loop for block 2 and a final loop for block 3.

```

graph TD
    01[01: 21.12] --> 02[02: TAF(1) = 11 = TAF(1)]
    02 --> 03{03: TAF(1) = 0(1)}
    03 -- 1 --> 04[04: TAF(1) = 11 = TAF(1) * TRV(1)]
    03 -- 1 --> 05[05: 21.14 210]
    05 --> 06[06: N = AFN(1)]
    06 --> 07[07: TAF(1) = 0(1) = TAF(1)]
    07 --> 08[08: *TEST FOR AF NO. IF 0, OR GREATER THAN 6, USE AF SET 1*]
    08 --> 09[09: N = 150]
    09 --> 10{10: N}
    10 -- 1 --> 11[11: 21.16]
    11 --> 12{12: N = ND(1)}
    12 -- 1 --> 13[13: 21.18]
    13 --> 14[14: 21.19]
    14 --> 15{15: END OF DO LOOP?}
    15 -- NO --> 16[16: TEST FOR NEXT AF]
    16 --> 17[17: I = I + ND(1)]
    17 --> 18{18: ND(1) = 1}
    18 -- 1 --> 19[19: 21.10]
    18 -- 1 --> 20[20: 21.11]
    20 --> 21[21: 21.12]
    21 --> 22[22: N = N * 50 + 100]
    22 --> 23[23: 21.20]
    23 --> 24[24: TAF(12) = DAF(N) = 40]
    24 --> 25{25: TAF(12)}
    25 -- 1 --> 26[26: 21.21]
    26 --> 27[27: TAF(12) = 0(1)]
    27 --> 28[28: 21.22]
    28 --> 29[29: L = 1 * 50 + 50]
    29 --> 30[30: MOVE AF DATA BLOCK]
    30 --> 31[31: 21.23]
    31 --> 32[32: BEGIN DO LOOP 225 J = 1, 40]
    32 --> 33[33: 21.24]
    33 --> 34[34: L = L + ND(1)]
    34 --> 35[35: N = N + ND(1)]
    35 --> 36[36: TAF(L) = DAF(N) / TAF(12)]
    36 --> 37{37: 21.25}
    37 --> 38[38: 21.26]
    38 --> 39[39: SET BLOCK 6 = BLOCK 9]
    39 --> 40[40: 21.27]
    40 --> 41[41: TAF(1) = 0(1) = TAF(1)]
    41 --> 42[42: NOTE 10]
    42 --> 43[43: BEGIN DO LOOP 21.1 I = 1, 40]
    43 --> 44[44: 21.28]
    44 --> 45[45: TAF(1) = 300(1) = TAF(1) + 250(1)]
    45 --> 46{46: 21.29}
    46 --> 47[47: 21.30]
    47 --> 48{48: END OF DO LOOP?}
    48 -- YES --> 49[49: 21.10]
    48 -- NO --> 50[50: 21.31]
    50 --> 51[51: 21.32]
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    157 --> 158[158: 21.13
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SET BLOCK 6 - BLOCK 9

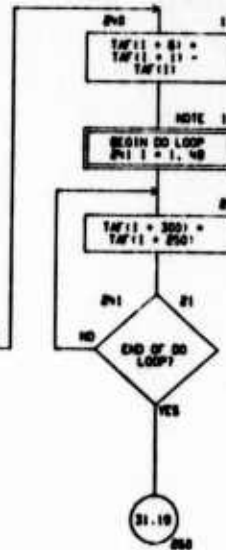


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T(6320)
COMMON /PRINT/ IP(80)
DIMENSION D(2000), CD(2000), ND(100), DC(100)
, TXY(500), VTC(60), YC(150)
, DAF(500), BLE(23), DTE(23), DTC(22), AFN(4), YAF(4)
, TAF(350)
EQUIVALENCE (D(1),T(2061)), (CD(1),T(4121)), (ND(1),T(6121))
, (AF10,D(143)), (YAF(1),D(145)), (AFN(1),D(149))
, (BLE(1),D(1805)), (DTE(1),D(2008))
, (DTC(1),D(2031)), (DC(1),D(1401))
, (YC(1),T(201)), (VTC(1),T(351)), (TAF(1),T(431))
, (TXY(1),T(601)), (DAF(1),T(1401))
, (NAF,ND(67))
201 FORMAT (5H1 YC,6X,15H** DECHC - (P(4) **))
202 FORMAT (1H 15,5C16.7)
204 FORMAT (6H0 YTC )
271 FORMAT (5H0 TAF,7X,3H1 =,15,5X,3H1 =,15,5X,3H1 =,15,45X,
15H** DECHC - (P(4) **))
272 FORMAT (1H , 15, 5C16.7)

```

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE VSCECH*****

ROTATED SURFACE PLATFORM GEOMETRY EVALUATION

CHART TITLE - SUBROUTINE VSGEOM

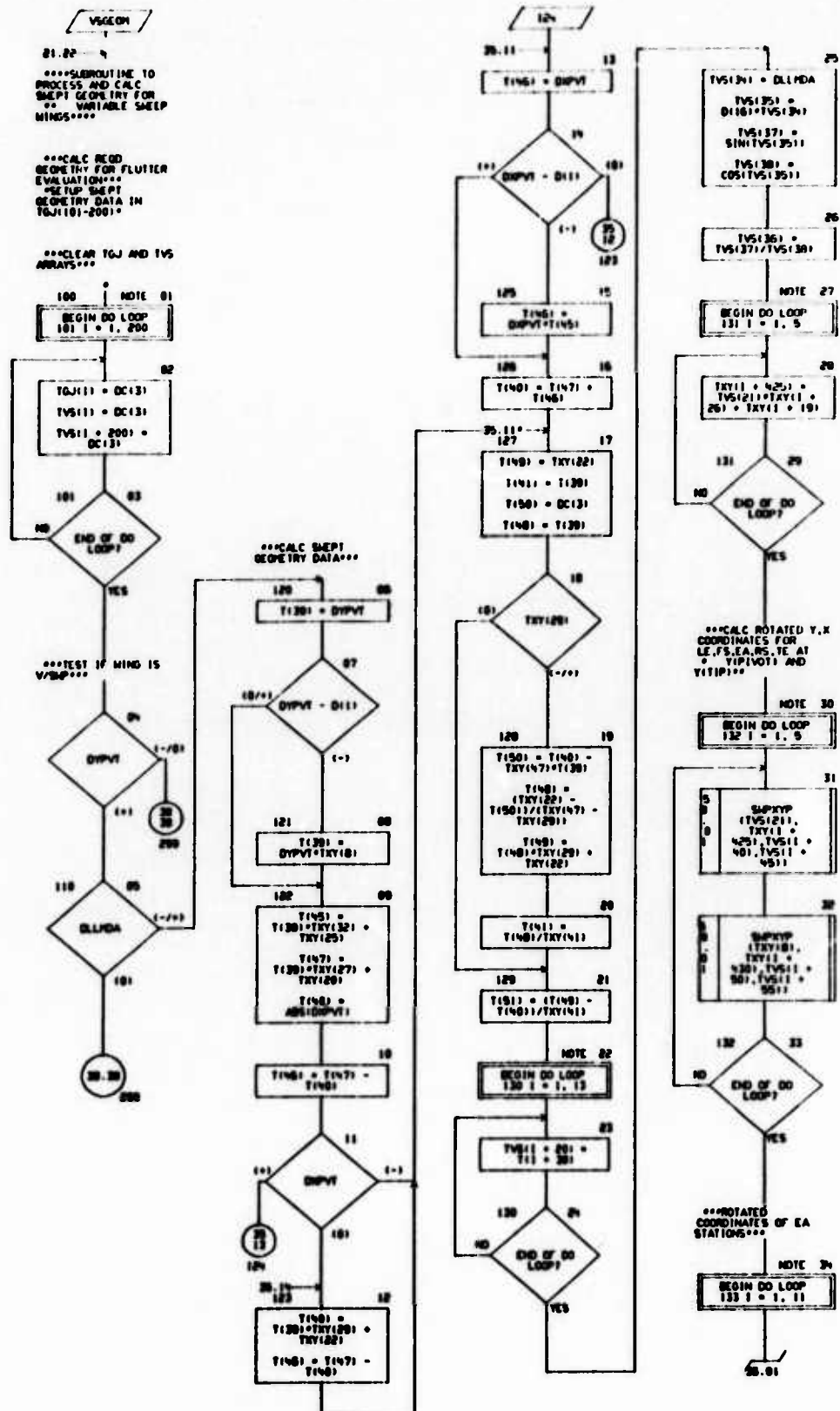
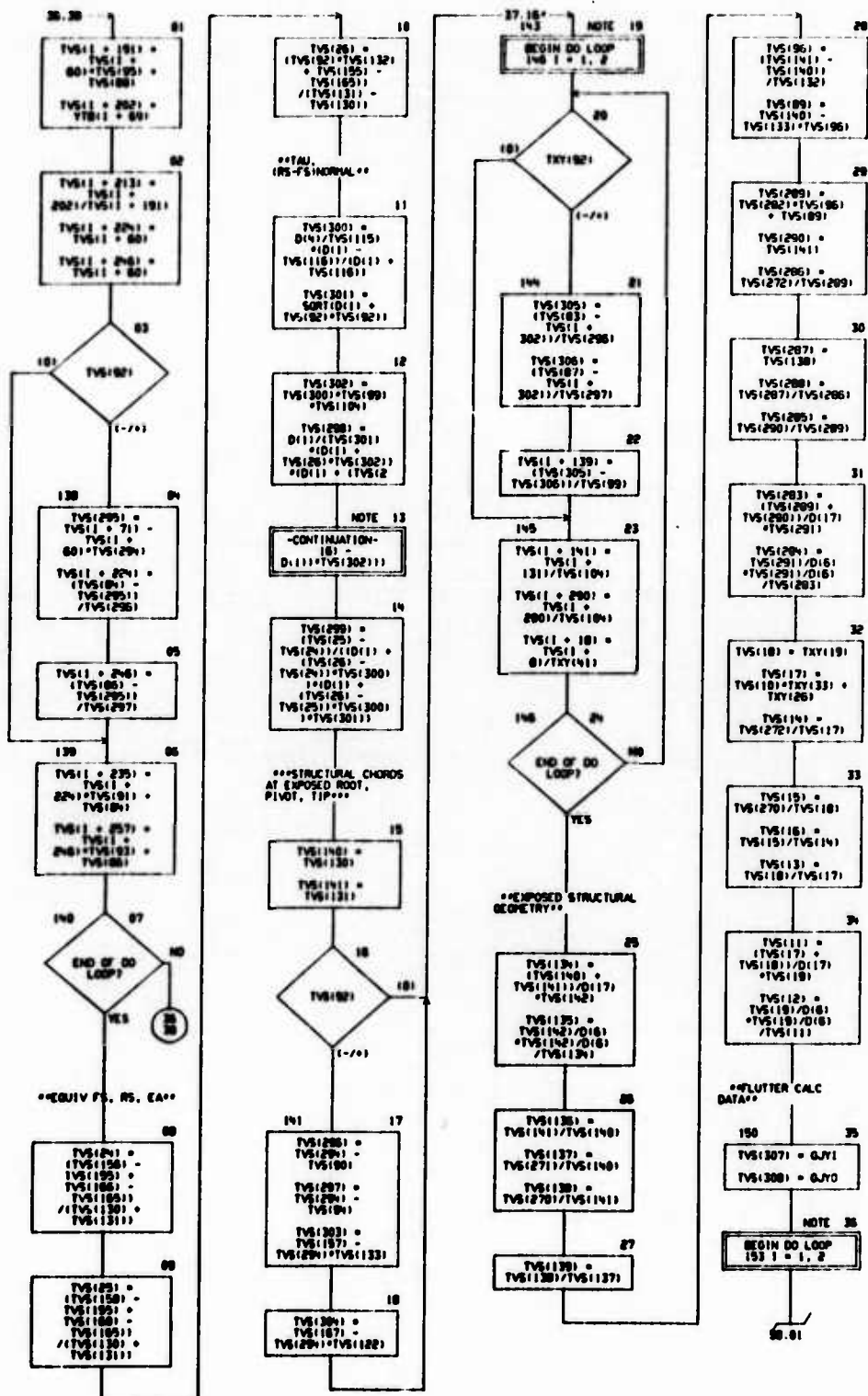


CHART TITLE - SUBROUTINE VS600H



```

graph TD
    Start(( )) --> 37_38[37. 38]
    37_38 --> D1{D1}
    D1 --> 151[151]
    151 --> 152[152]
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    153 -- YES --> 154[154]
    153 -- NO --> 155[155]
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CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T(2000),D(2000),CD(2000),ND(100)
COMMON /IPRINT/ IP(80)
DIMENSION TX(500),TVS(400),TGJ(200),
          YTB(124),YS(111),YEA(11),NEA(11),
          BC(100),TT(24)
EQUIVALENCE (TX(1),T(601)),(TVS(1),CD(601)),(TGJ(1),T(1761)),
          (YTB(1),TX(501)),(YS(1),TX(401)),
          (YEA(1),YTB(11)),(NEA(1),YTB(12)),
          (DYPVT,D(200)),(DIPVT,D(201)),(DLMDA,D(320)),
          (GJV(1),D(313)),(GJV(2),D(315)),(GJFAC,D(312)),(DMT(1),D(250)),
          (GLMDA,D(321)),(GLMDA,D(322)),(TLMDA,D(323)),(DKLMDA,D(324)),
          (GJS,D(340)),(GJB(1),D(343)),
          (DC(1),D(1401)),(TT(1),T(1317))
900  FORMAT (30H)  ***SHEEP MIND GEOMETRY*** .50X,20H** VSOCOM - IP(7)
      **/END TVS)
901  FORMAT (3X,13,5E16.0)

```

05/10/74

AUTOLOW CHART SET - SWEEP

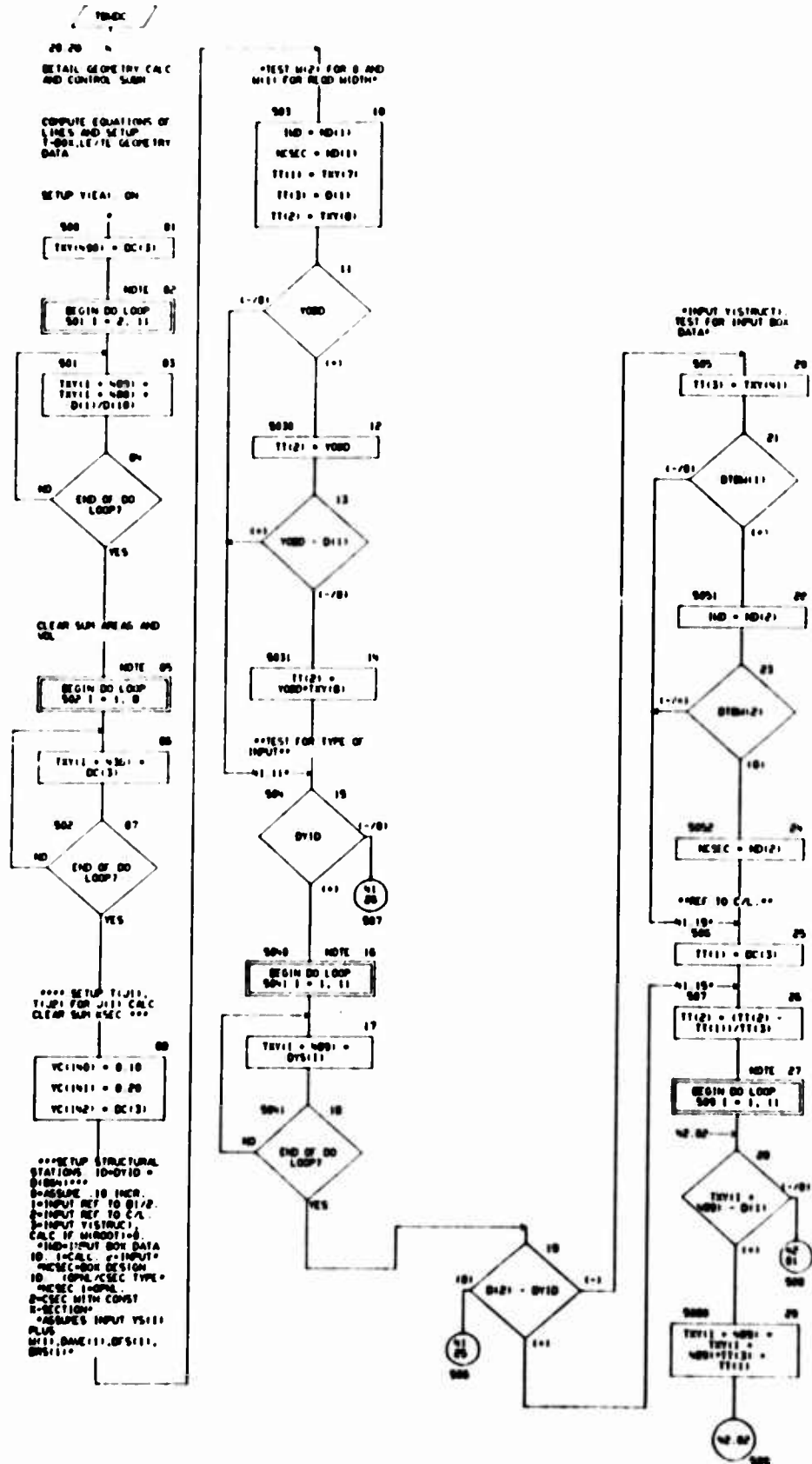
WING AND ENGINE NOISE MEAS

PAGE 40

CHART TITLE - INTERMEDIATE COMMENTS

*****SUBROUTINE TONEC*****

TORQUE-BOX SECTION GEOMETRY EVALUATION



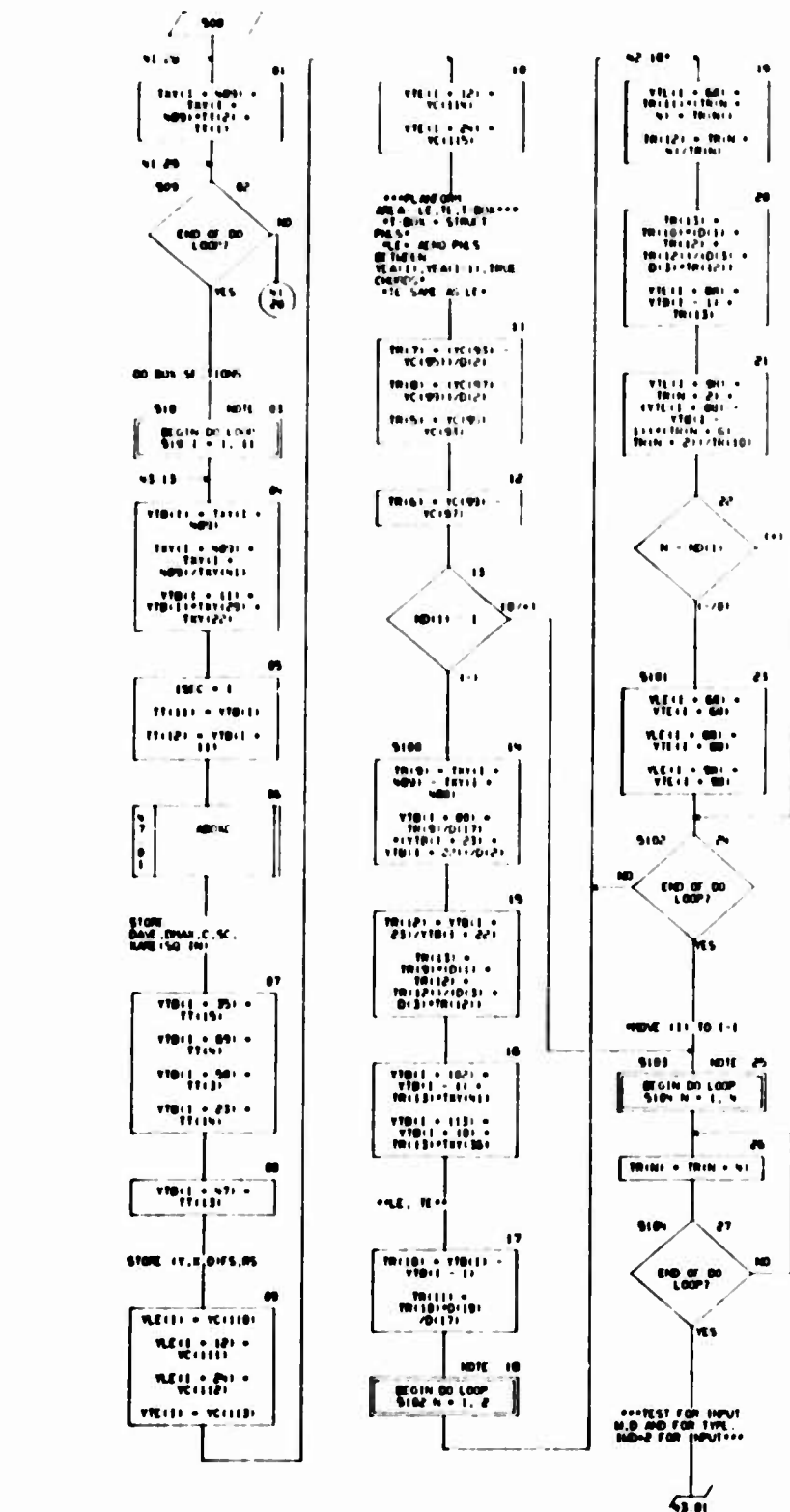


CHART TITLE - SUBROUTINE TONEK

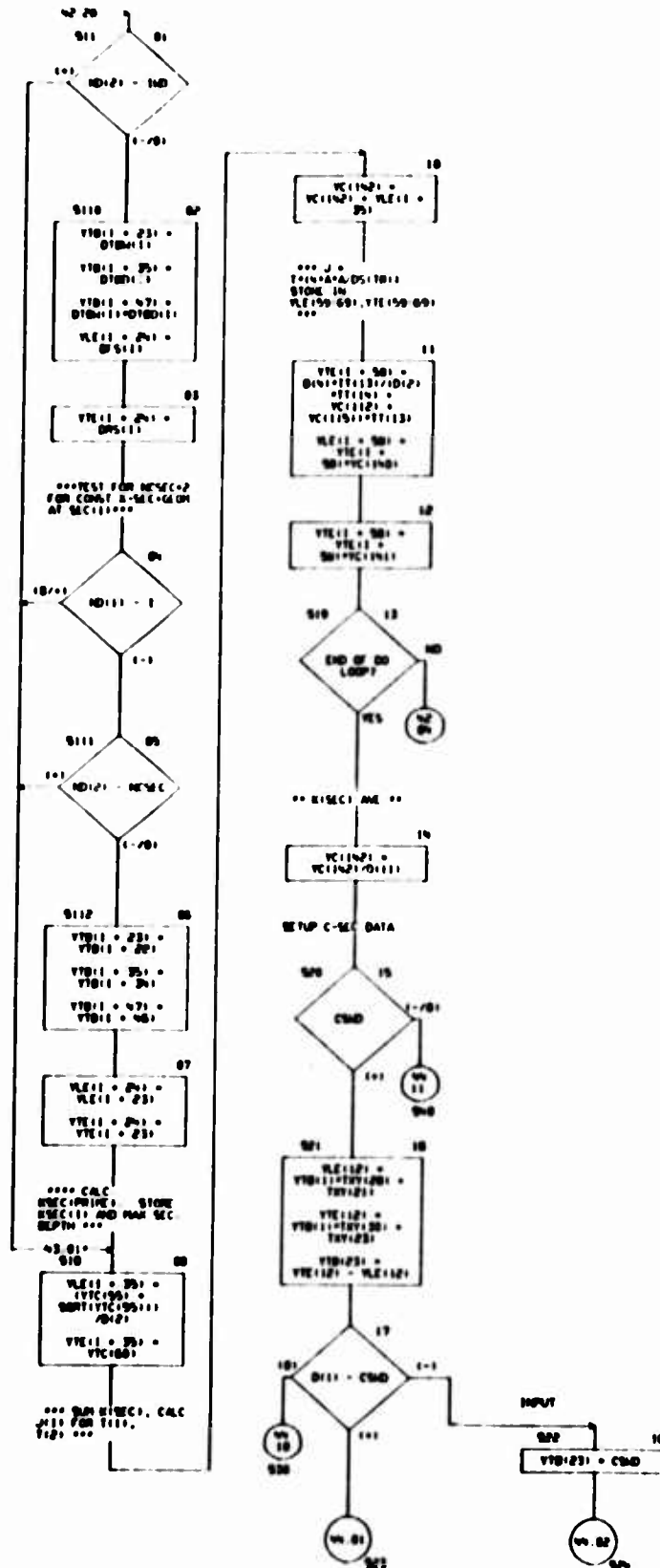
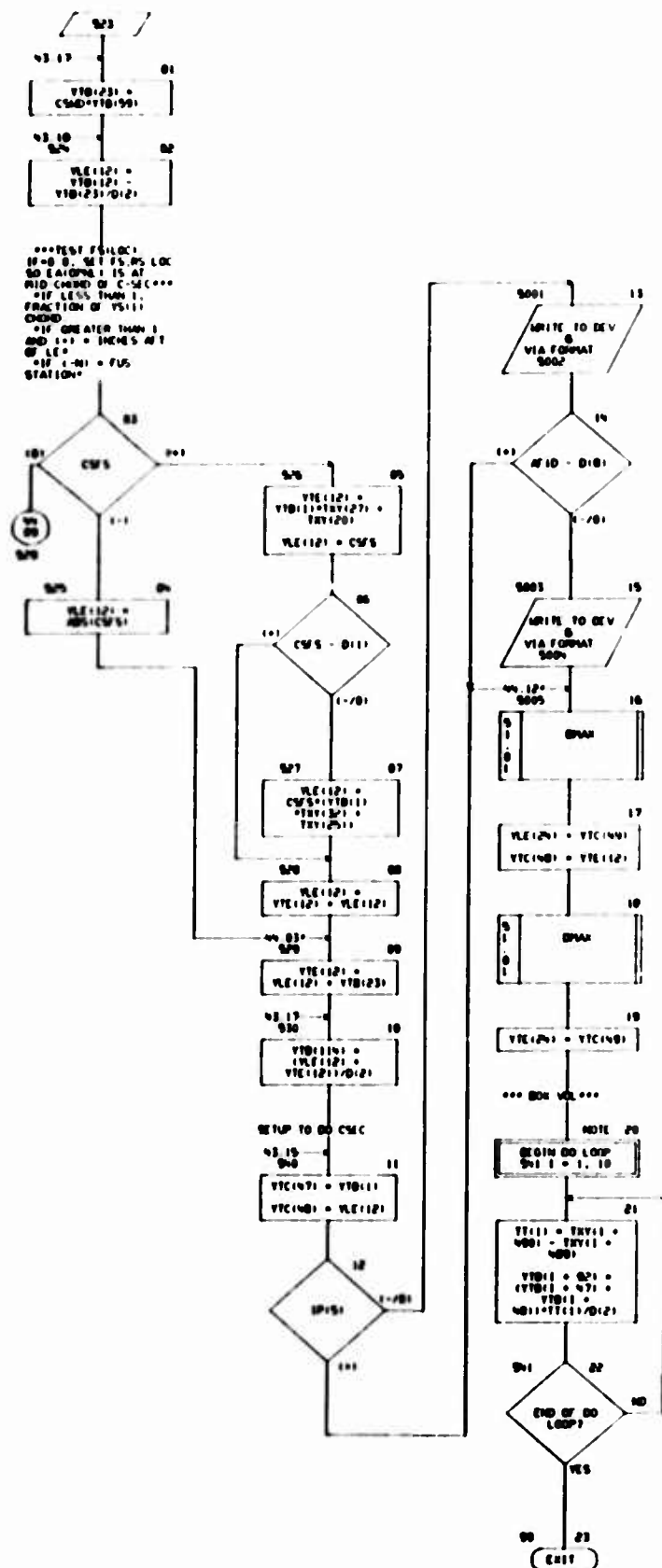


CHART TITLE - SUBROUTINE TONEC




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COPRIN 1:6120)
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, DP:PR11), D:5111), D:1011), D:5111), D:5111), D:1011)
, VC:100), VC:150), TV:150)
, VT:120), VL:100), VT:100), T:20)
, PR:10)
(D:1V:VL:RCE 101), T:20611), CD:11, T:1211), MD:11, T:61211)
, CX:11), D:14011), VT:MD, D:1391), DP:PR11), D:4711), CX:MD, D:14001)
, CX:5, D:15011), D:11D, D:0111), D:5111), D:0151)
, D:1011), D:0161), D:1011), D:0071), D:5111), D:0081)
, D:0511), D:0091), MD:10, D:1413)
, VT:170), TV:1501), VL:11), TV:1701), VT:11), TV:2001)
, VC:11, T:2011), VT:11), T:1511), TV:11), T:0011)
, T:11), T:13171)
, ME:EC, MD:1001), ME:EC, MD:1501), MD:MD:111)
, PR:11, T:13011)

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BOOK	FORMATION	TIME	DATE	CLASS	NAME
C/C	011	C101	C/C0	1	

06-10-76

ANTHONY CHART SET - SUBP MIND AND EXPENSE RECORD - PAGE 40

CHART TITLE - INTERIMINARY COMMENTS

*****SUBJECTING ADVICE*****

*****THE GROUPS SITUATION ARE A INDICATION*****

CHART TITLE - SUBROUTINE ABONE

ABONE
 OF 15
 FORMER BOX 1-12C
 AREA CALC. SUBR

REVISION -- 11-25-66
 -- CURVED LE. 1E.
 T/C
 09-14-66 -- NEW SUBR

COMPUTE BY STRUCTURAL
 SECTION AREA AT EA.
 OFS,OPS,DMA,EA,
 BAW
 A*
 SURDELTA(C)*D(J)
 D(J)*1/2
 DELTA(C)*C15C/10

SETUP CHORD DATA
 V1, B1 = OP AND P S
 T1(1)=1
 T1(2)=B1
 COORD AT P,S,OPS NORMAL
 TO EA

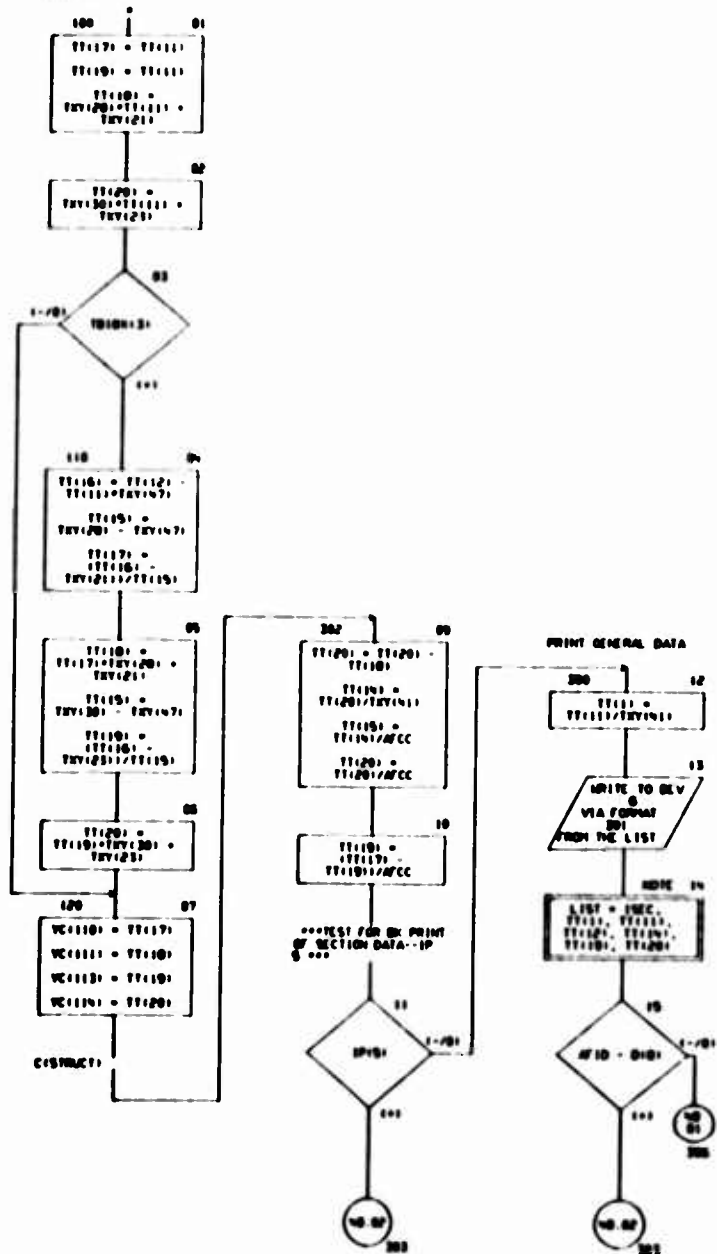
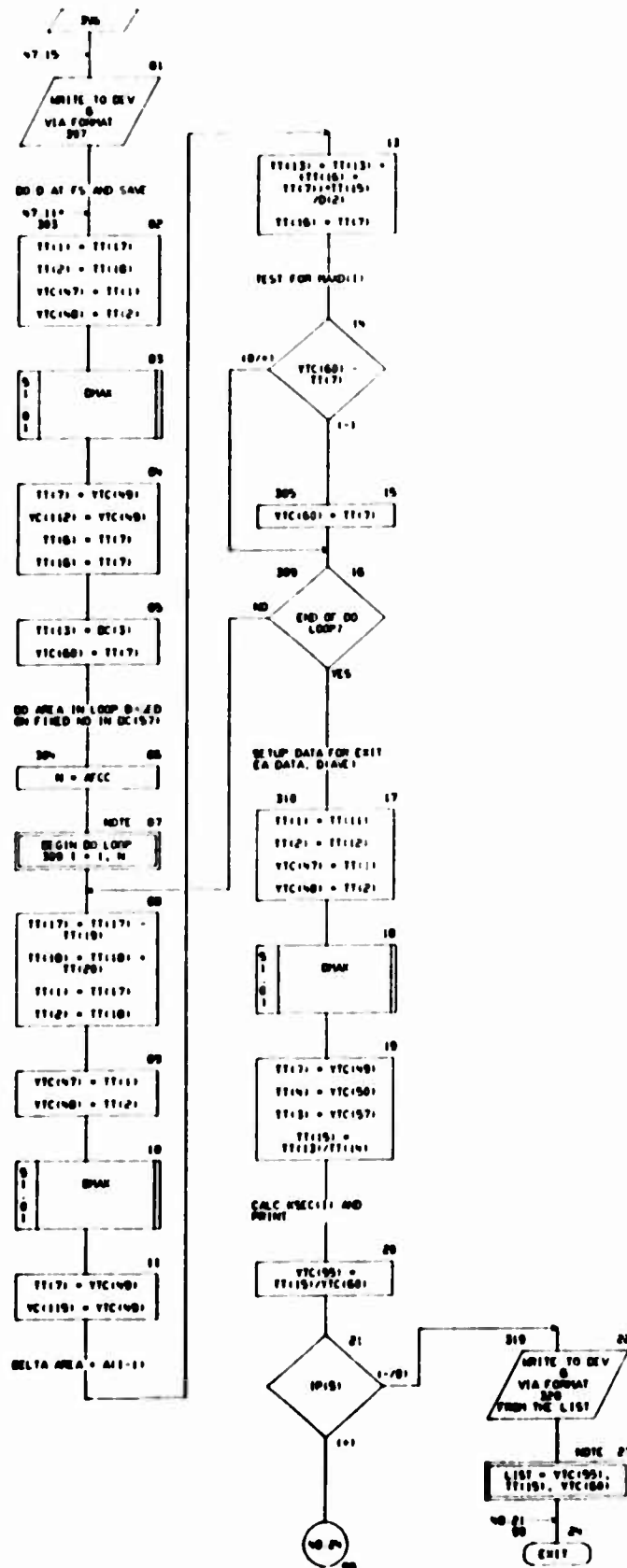


CHART TITLE - SUBROUTINE ADRAC



```

COPPON 1:6320
COPPON 1:PRINT// IP(00)
DIMENSION D(2063), CD(2000), MD(100), DC(100), TV(500)
, TT(20), VTC(00), VC(150)
, T010(3)
EQUIVALENCE (D(1),T(063)), (CD(1),T(1213)), (MD(1),T(6123))
, (T010(1),D(125)), (VTC(1),D(153))
, (VC(1),D(140))
, (VTC(1),T(201)), (VTC(1),T(351)), (TV(1),T(001))
, (TT(1),T(1317))
, (M,MD(30)), (SEC,MD(95)), (DK,MD(20))
EQUIVALENCE (AF(0),D(143))
FORMAT (10H) SECTION MD 13,018,20H** ABOVE AND BMAX - IP(5) :
/ 200,SHFT(1),F11 3/200,SHFT(11),F11 3/200,SHFT(12),F11 3/
200,SHFT(14),F11 3/200,SHFT(10),F11 3/200,SHFT(20),F11 3)
FORMAT(
END= V(4)
C(4) C(4) BMAX DC/C D(1) C(0)
C/C 1
FORMAT (20H) 11SEC= ' 9.01 DME=7.3.04 BMAX=7.3)

```

00:10:76

AUTOLON CHART SET - SARP MING. REF. EPOXIDIC RESIN - PAGE 50

CHART TITLE INTERLUCKY CURRENTS

*****SUBROUTINE DPAA*****

AIRFOIL DEPTH EVALUATION

CHART TITLE - SUBROUTINE DPAN

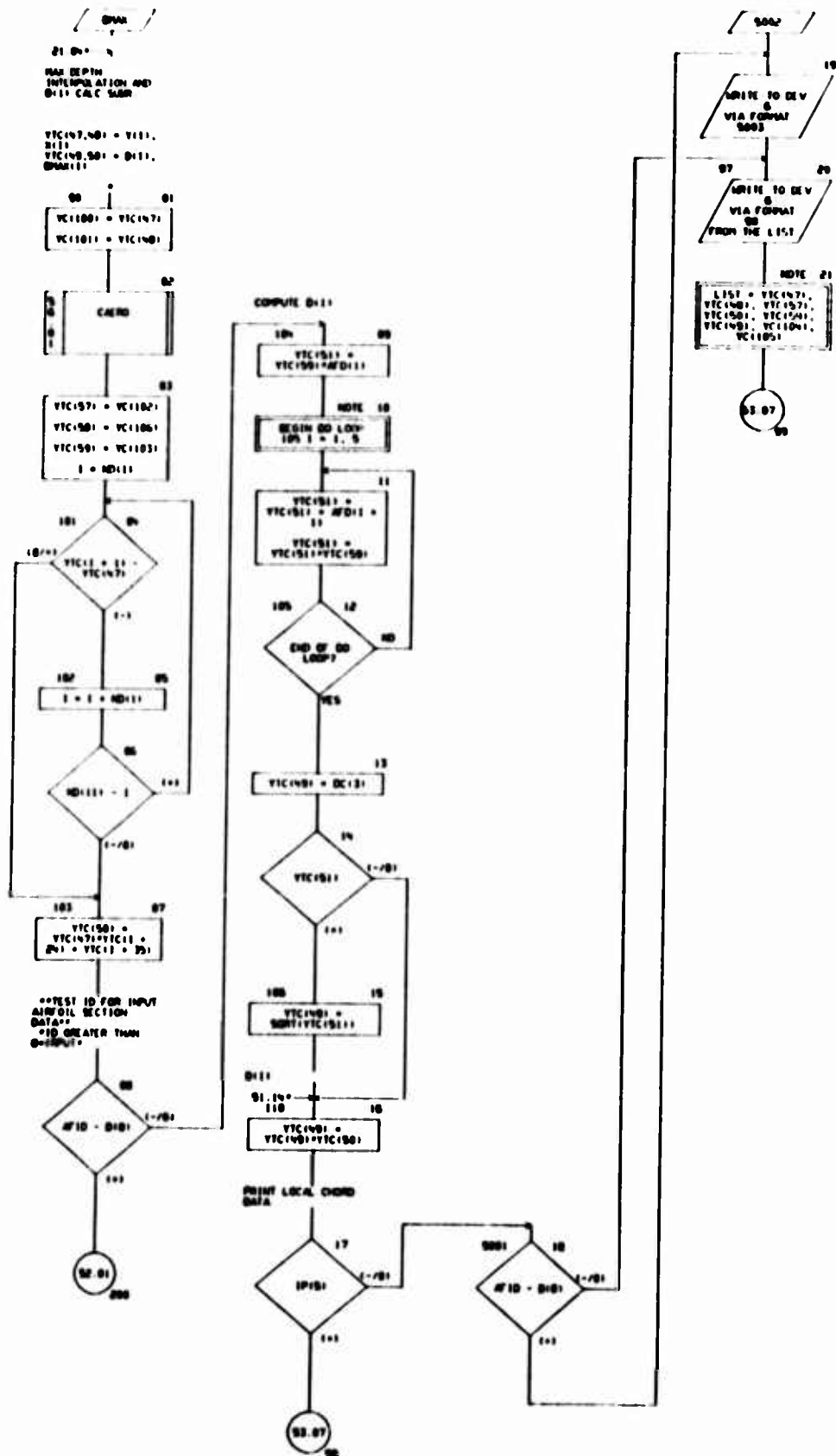


CHART TITLE - SUBROUTINE SWAP

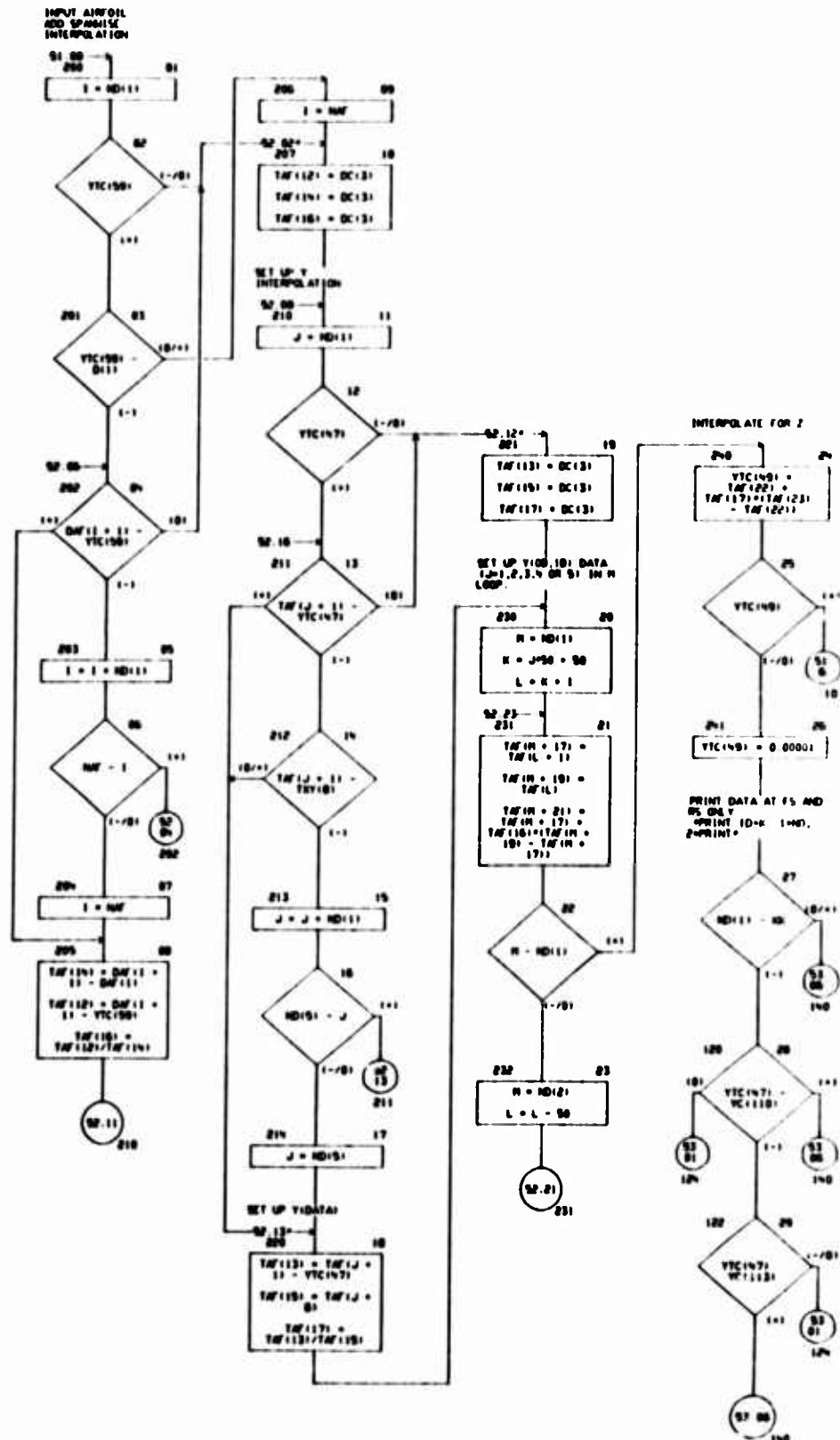


CHART TITLE - SUBROUTINE SPAN

PRINT LINES
 1=1, RUF, J, K, L
 2=TAF(1-5)
 3=TAF(7-11)
 4=TAF(12-17)
 5=TAF(18-23)
 6=TAF(24-30), TAF(1-40)
 ,TAF(11),TAF(1-11)

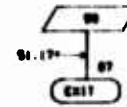
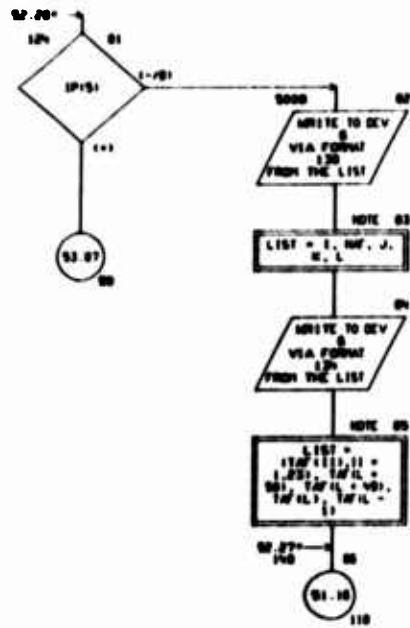


CHART TITLE - NON-PROCEDURAL STATEMENTS

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COMMON T161201
COMMON /IPRINT/ IP1001
DIMENSION D(2000), CD(2000), ND(100), BC(100)
, TV(1500), DAF(500), TAF(350), VC(150), VTC(100)
, AFD(6), DMPRT(4)
EQUIVALENCE (D(1),T1205(1)), (CD(1),T1412(1)), (ND(1),T1612(1))
, (BC(1),D(1401)), (AF(1),D(143)), (DMPRT(1),D(147))
, (VC(1),T1201(1)), (VTC(1),T125(1)), (AFD(1),T141(1))
, (TAF(1),T143(1)), (TV(1),T100(1)), (DAF(1),T140(1))
, (ND(1),ND(67))
, (ND(1),ND(20))
5001 FORMAT(50H, T1A) B1A) C1A) DPAK 0
C/C D(1) C(1) C/CO 1
00 FORMAT (14H 34, 011.3)
100 FORMAT (14H01,NAF,J,K,L), 10H, 917 1
104 FORMAT(8H,012 4 / 6H,012 4 / 6H,0112 6,012 4),012 6 /
0H, 012 6 / 6H, 012 6 1

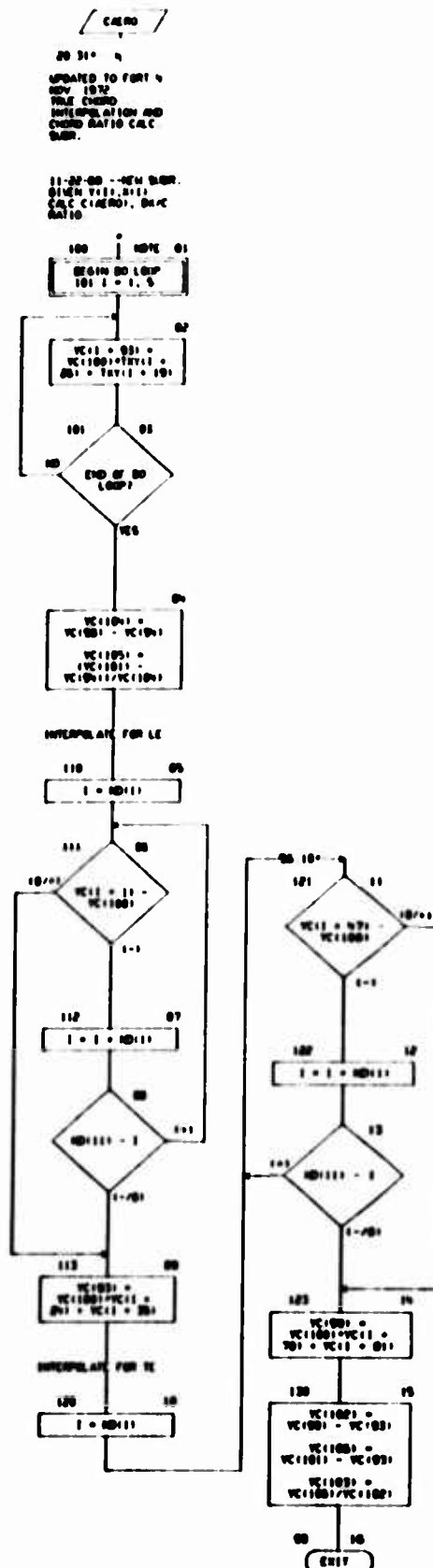
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CHART TITLE - INTERVIEW COMMENTS

*****SUBROUTINE CARE*****

TRAPEZOIDAL/TOTAL PLATFORM CHORD EVALUATION

CHART TITLE - SUBROUTINE CZERO



05/10/74

AUTOFLOW CHART SET - SHEEP - MING AND EMPLOYEE PERKIE - PAGE 57

CHART TITLE NEW PROCEDURAL STATEMENTS

COMMON F16320

DIMENSION D12000, CD12000, ND100, BC100,
FAY1500, VC150

EQUIVALENCE (D11,F12001), (CD11,F1211), (ND11,F161211
, (BC11,D14011), (VC11,F12011), (FAY11,F10011)

CHART TITLE - INTRODUCTORY COMMENTS

.....

*****SUBROUTINE SAFETY*****

EVALUATION OF S.Y. CORRS. OF RELATED POINT - V-TRAP PLACEMENT

.....

CHART TITLE - SUBROUTINE SHELPRV, L, WP, WP1

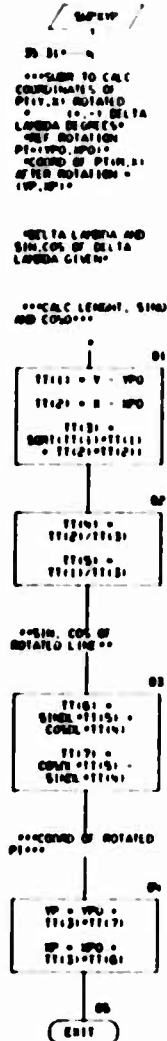


CHART TITLE - NON PROTECTORIAL STATEMENTS

COMMON T12000, D12000, CD12000, AD100
DIMENSION T12000, T12000,
T12000
COMMONWEALTH T12000, T12000, T12000, CD10000,
T12000, T12000, T12000, T12000,
T12000, T12000, T12000, T12000,
T12000, T12000, T12000, T12000,
T12000, T12000, T12000, T12000

CHART TITLE - INTERNAL COMMENTS

*****SUBROUTINE PRIG*****

GEOTECH SURVEY PRINTED OUTPUT

CHART TITLE - SUBROUTINE PRIG

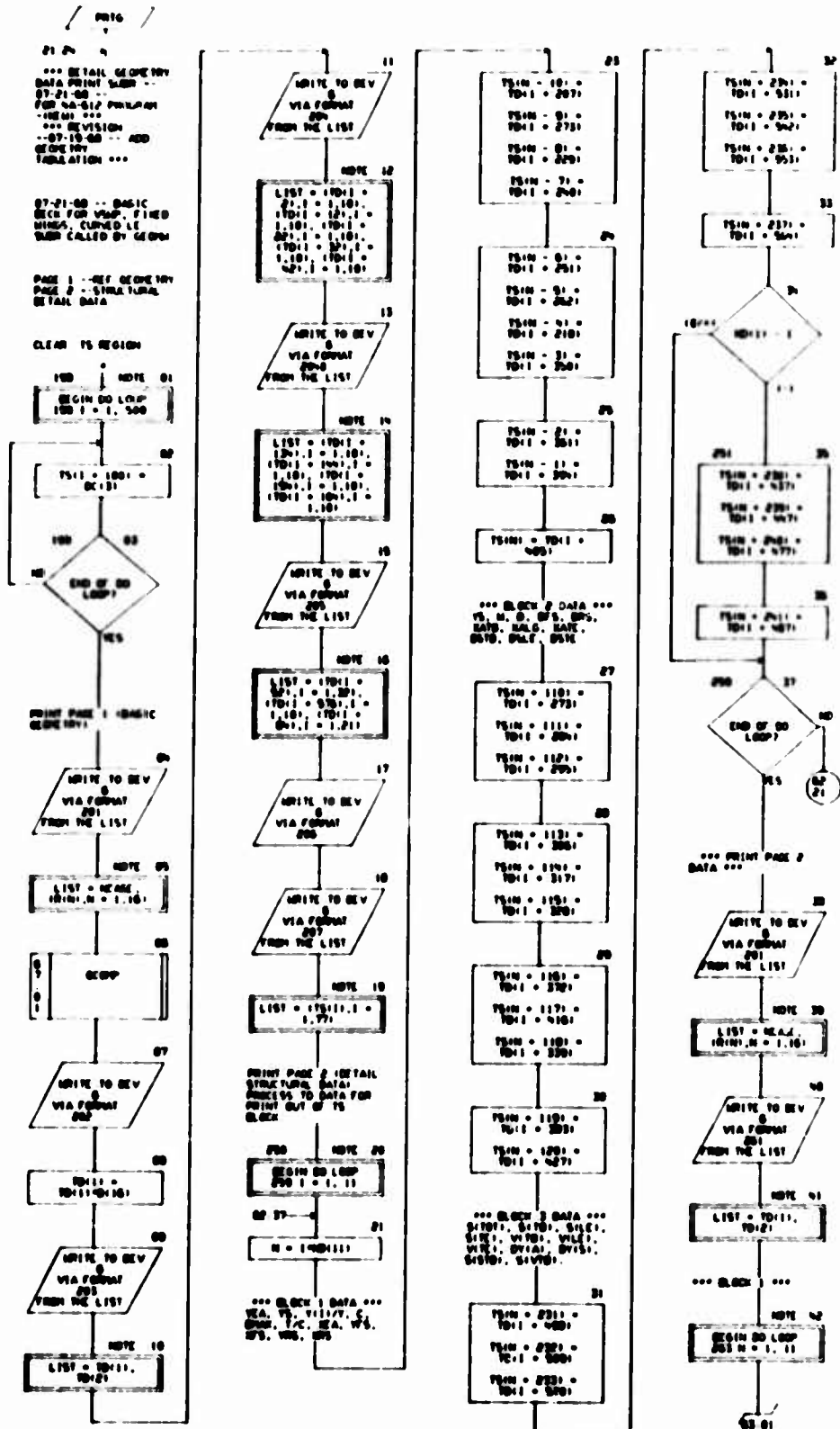
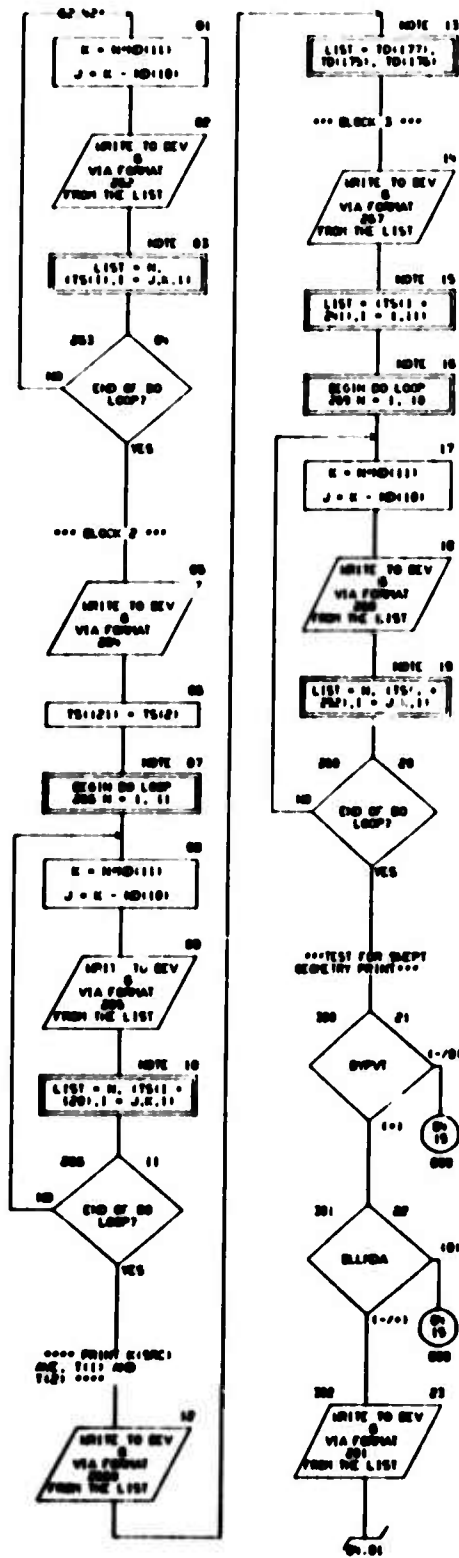


CHART TITLE - SUBROUTINE PR16



[illegible]

CHART TITLE - NON-PROCEDURAL STATEMENTS

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COMMON T(6320)
COMMON /MISC/ MISC(100)
COMMON /IPRINT/ IP(100)
DIMENSION D(2000), CD(2000), MD(100), DC(100)
, TD(600), TS(600), TXY(500), R(10)
, TV(1400)
EQUIVALENCE (D(1),T(2001)), (CD(1),T(4121)), (MD(1),T(6121))
, (TD(1),CD(1101)), (TXY(1),T(801)), (TS(1),CD(11))
, (DC(1),D(1401)), (R(1),MISC(95))
, (MEAS,MD(80)), (MPAGE,MD(95))
, (TVS(1),CD(601)), (DPPV,D(2001)), (ELLIPD,D(320))
201 FORMAT(1H,91X,10H** PRIO - IP(6) **
      10H CASE NO.,14,4X,DA10 /17X,DA10)
202 FORMAT(10H,FM,4H*** GEOMETRY DATA - HEIGHT ANALYSIS REFERENCE **
      1)
203 FORMAT(10H ** PLATFORM GEOMETRY PARAMETERS---SHEEP- FS.2,
      10H DEGREES AT FS.4,4H C. **)
204 FORMAT(10H4H PANEL AREA AR T.R. T/C(1) T
      /C(1) SIGMA C(1) C(TIP) SPAN/2 BL/DI /DH CROSS
      F11.3,F10.4,W10.5,F10.3,F0.3,F10.3,/DH EXPOSED F11.3,F10.4,W10.5
      /F10.3,F0.3,F10.3,/DH STRUCT.F11.3,F10.4,W10.5,F10.3,F0.3,F10.3
      /DH PIACED F11.3,F10.4,W10.5,F10.3,F0.3,F10.3,/DH PISTON F11.3,
      F10.4,W10.5,F10.3,F0.3,F10.3)
2040 FORMAT(10H CL-V1 F11.3,F10.4,W10.5,F10.3,F0.3,F10.3,/DH CL-V11
      F11.3,F10.4,W10.5,F10.3,F0.3,F10.3,/DH V1-V11 F11.3,F10.4,W10.5
      /F10.3,F0.3,F10.3,/DH V11-D/F11.3,F10.4,W10.5,F10.3,F0.3,F10.3
      )
205 FORMAT(10H4H ** PLATFORM EQUATIONS AND COORDINATES **
      /107H ITEM LE FS
      EA BS TE FS(1) .DS C AERO C SYN
      UC. C/DH TAN W11.6,/DH C/DH W11.3,/DH SIN W11.6,/DH
      COS W11.6,/DH ANGLE W11.3,/DH EDI K/C,11X,W11.6,/DH X-D1/2 ,7
      F11.3,/DH X-PIVOT,W11.3,/DH X-D/2 ,W11.3)
206 FORMAT(10H4H ** T/C, LE, TE CONTROL POINTS. ** //10H POINT
      (1) (2) (3) (4) (5) (6) (7)
      (8) (9) (10) (11) )
207 FORMAT(10H Y10 P.1 11F0.2,/DH T/C 11F0.4,/DH SWAN 11F0.3,
      10H VILE: 11F0.2,/DH XILE: 11F0.2, / 10H VITE: 11F0.2,/DH XITE:
      11F0.2)
208 FORMAT(10H4H *** STRUCTURAL SYSTEM GEOMETRY DATA -- REF SHEEP-
      FS.2,11H DEGREES AT FS.3,7H C. **/,10H4H POINT YEA(A) YISTRUC(
      V1/VO C1AERO) SWAN T/C XEA(A) YIFS) XIFS:
      Y100) X100))
209 FORMAT(14,F11.3,F10.3,F0.3,F0.3,F0.3,F0.3,F0.3,F0.3,F0.3)
2090 FORMAT(10H4H POINT YISTRUC: WIDTH D(10) D(15) D(16)
      XA(10) X100) PAH D D(10) J1(10) J2(10))
20900 FORMAT(14,F11.3,F10.3,F0.3,F10.3,F10.4,F10.3,F0.3)
209000 FORMAT(10H,11H4H K1REC1=,1F0.4, 10H, DMT1J1=, 1F0.3, 1F10.3 )
207 FORMAT(10H4H PANEL S1(10) S1(1) S1(1) S1(1) VOLT(1)
      VOL(1) VOL(1) DELV1(A) DELV1(S) S S1(1) SWOL1(1),/DH SWF11.
      3,F0.3,F10.4,W10.5,F0.3,F10.3,F10.4)
209 FORMAT(14,F11.3,F0.3,F10.4,W10.5,F0.3,F10.3,F10.4)
303 FORMAT(10H,FM,10H*** SHEEP POSITION GEOMETRY DATA **/,10H,10H4H
      LTA SHEEP-FS.2,10H DEG. LE SHEEP-FS.2)
301 FORMAT(10H) ***** GENERAL GEOMETRY DATA -- TTY REGION *****
      10H,10H*** PRIO - IP(1) **/10H TTY )
303 FORMAT(14,14,14,14,14)

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05/10/74

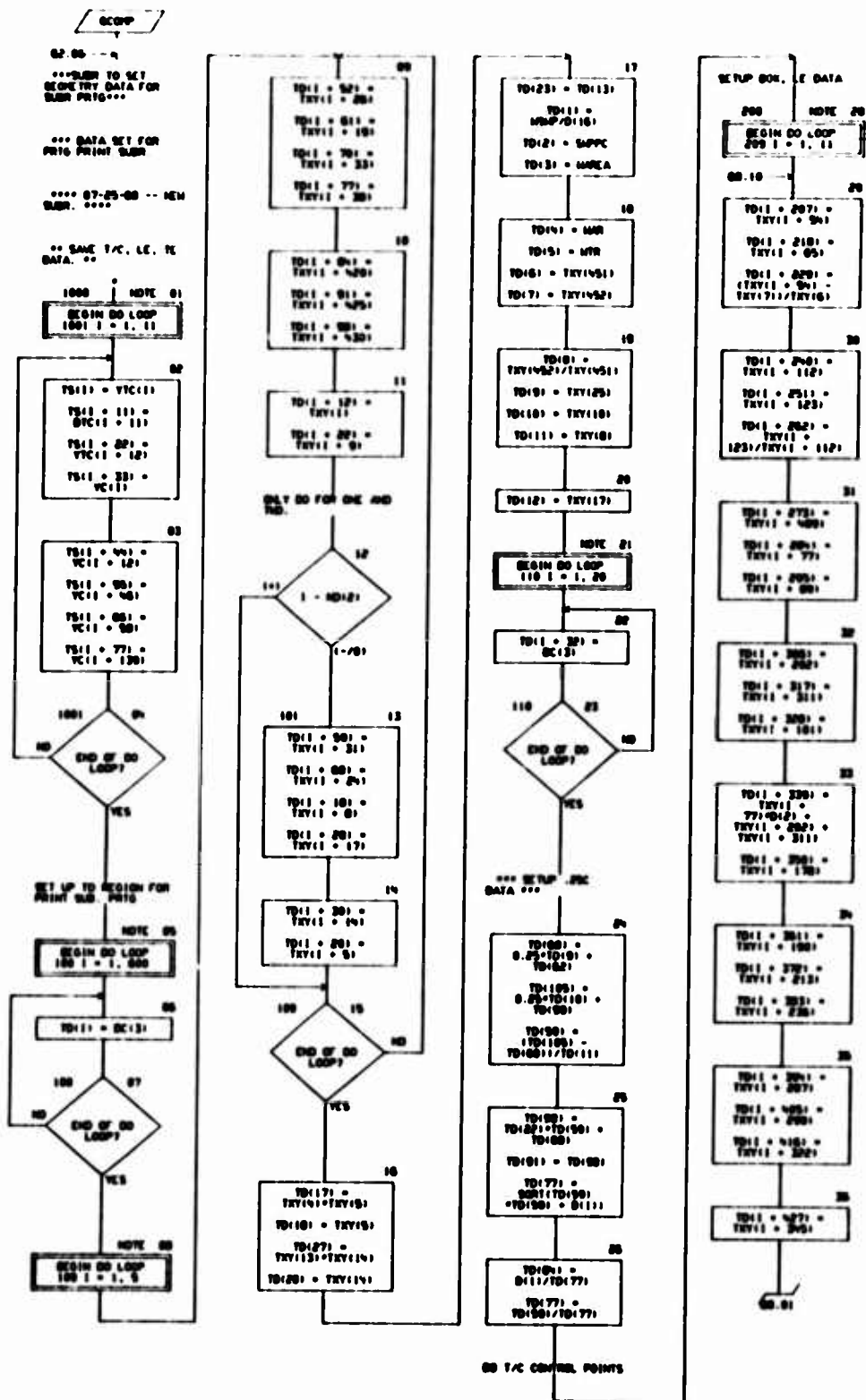
AUTOFLOW CHART SET - SHEEP HING AND ENPLANAGE MODULE - PAGE 04

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE SCOP*****

SECURITY DATA PROCESSING FOR OUTPUT

CHART TITLE - SUBROUTINE GCOMP



[illegible]

CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COPPERN T16120
DIMENSION D12050, CD12000, MD1100, DC1100
, VTC100, VC1150, DTC122, TD1000, TS1000, TRV1500
, TVB1400
EQUIVALENCE (D111,T120011), (CD111,T141211), (MD111,T101211)
, (DC111,D114011), (DTC111,D120311)
, (VTC111,T12011), (VTC111,T13011), (TRV111,T10011)
, (TS111,CD111), (TD111,CD11011)
, (TC10,D124311), (DTPVT,D12001), (DTPVT,D12011), (MAREA,D124011)
, (MWR,D12411), (MTR,D12411), (MSP,D12421), (MPPC,D113011)
, (MS10,D124511)
, (TVS111,CD10011)

```

OVERLAY (14,0)
LEADING AND TRAILING EDGE STRUCTURES,
WEIGHT AND MASS PROPERTIES ANALYSIS

**PROGRAM TABLE OF CONTENTS AND REFERENCES,
AND TABLE OF DIAGNOSTICS**

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PORTMAN PEARLE MINE AND EXPANSION POTENTIAL -

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CHART TITLE - PROCEDURES

(000071) 2 04 10 (000010) 2 03 (000010) 2 03
(000070) 2 00 00 (000027) 2 07 (000027) 2 07

CHART TITLE - NEW PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - DISTRIBUTIVE MEET

(000041) 5 01 MEETE (000021) 2 04 11
(000070) 5 01 100
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CHART TITLE - NEW PROCEDURAL STATEMENT.

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE CONTROL

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(002438)	04 03 210							
(002437)	04 04		(002433)	04 06				
(002443)	04 06 219							
(002448)	04 08 2100							
(002451)	04 10 2105		(002449)	04 09				
(002455)	05 01 2108		(002448)	04 08				
(002456)	05 02 2109		(002447)	04 10				
(002457)	05 04		(002450)	05 07				
(002459)	05 07 0070							
(002472)	05 09 020		(002447)	04 07				
(002473)	05 09 021							
(002474)	05 10		(002476)	05 11				
(002475)	05 11 002							
(002476)	05 13		(002480)	05 14				
(002480)	05 14 003							

06/10/74		TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP		PAGE 10	
CARD ID	PAGE/BOX	NAME	REFERENCES	SOURCE	SEQUENCE NO	AND PAGE/BOX	
(002403)	05 16		(002404)	05 17			
(002404)	05 17 2230						
(002405)	05 19		(002409)	05 20			
(002409)	05 20 224						
(002493)	05 22 225		(002490)	05 21			
(002497)	06 01 226		(002490)	05 21			
(002500)	06 02 227		(002490)	05 21	(002494)	05 22	
(002501)	06 03		(002502)	06 04			
(002502)	06 04 228						
(002506)	06 06 2290						
(002508)	06 08		(002510)	06 11			
(002510)	06 11 9072						
(002513)	06 14		(002515)	06 17			
(002515)	06 17 9071						
(002517)	06 18 2281		(002505)	06 05			
(002519)	06 20		(002521)	06 21			
(002521)	06 21 2282						
(002526)	07 01 230		(002522)	05 08			
(002527)	07 02		(002528)	07 03			
(002529)	07 03 231						
(002531)	07 05		(002533)	07 06			
(002533)	07 06 232						
(002536)	07 08		(002537)	07 09			
(002537)	07 09 2340						
(002541)	07 11		(002542)	07 12			
(002542)	07 12 233						
(002546)	07 14 234		(002543)	07 13			
(002550)	08 01 2340		(002543)	07 13			
(002553)	08 02 235		(002543)	07 13	(002547)	07 14	
(002554)	08 03 236						
(002556)	08 05		(002558)	08 08			
(002558)	08 08 9074						
(002561)	08 11		(002563)	08 14			
(002563)	08 14 9073						
(002567)	08 15 239		(002563)	08 02			

CHART TITLE - NON PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE C101

(002577)	71 01 C101	(002420)	15 10-X	(000810)	27 11-X	(000857)	28 14-X	(000900)	28 32-X	(000985)	30 11-X
(002580)	71 01 100	(001209)	26 10-X	(001317)	37 16-X	(001517)	42 19-X	(001836)	50 05-X		
(002589)	71 02	(002581)	71 03								
(002591)	71 03 101										
(002594)	71 04 110										
(002595)	71 05 111	(002587)	71 07								
(002596)	71 06 112										
(002598)	71 08 113	(002595)	71 05								
(002611)	71 09 120										
(002612)	72 01 121	(002614)	72 03								
(002613)	72 02 122										
(002615)	72 04 123	(002612)	72 01								
(002618)	72 05 130										
(002623)	72 06 131										
(002624)	72 07 132	(002626)	72 09								
(002625)	72 08 133										
(002627)	72 10 134	(002624)	72 07								
(002631)	72 11 135										
(002632)	72 12 137										
(002633)	72 13 138										
(002634)	72 14	(002636)	72 15								
(002638)	72 15 139										
(002639)	72 16 140	(002632)	72 12								
(002641)	72 18	(002644)	72 19								
(002644)	72 19 141										
(002648)	72 21 142	(002646)	72 20								
(002650)	72 23 143										
(002651)	72 24 144										
(002653)	72 25 1440	(002650)	72 23								

06/10/74		TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP		PAGE 11
CARD ID	PAGE NO.	NAME	REFERENCES	SOURCE	SEQUENCE NO.	AND PAGE NO.
1007054	72 26	144	1007052	72 24		
1007055	72 27	145	1007049	72 22	1007050	72 23
1007057	72 29	146				
1007058	72 30	147				
1007060	73 01	148	1007056	72 28	1007057	72 29
1007063	73 02	150				
1007064	73 03	151	1007075	73 12		
1007066	73 05	152				
1007067	73 06	153				
1007068	73 07	1530	1007066	73 05		
1007070	73 08	1531	1007068	73 06		
1007071	73 09	154	1007065	73 04	1007066	73 05
1007073	73 11	155				
1007074	73 12	156				
1007076	73 13	157	1007072	73 10	1007073	73 11
1007078	73 14	160	1007037	72 15		
1007085	73 15	170	1007031	72 11		
1007088	73 16	171				
1007091	73 19		1007095	73 22		
1007095	73 22	9040				
1007098	73 23	190	1007085	73 19		

CHART TITLE - NEW PROCEDURAL STATEMENTS

05/10/74

TABLE OF DIAGNOSTICS

AUTOFLOW CHART SET - SHEEP

PAGE 1

LOCATION		DIAGNOSTIC
CARD ID	PAGE/BOOK	
10000171	2 02	UNRECOGNIZED SYNTAX
10000275	2 05	UNRECOGNIZED SYNTAX
10000273	9 11	UNDEFINED - WITHIN EXTERNAL REFERENCE
10000274	9 12	UNDEFINED - WITHIN EXTERNAL REFERENCE

PROGRAM FLOW CHARTS

Preceding page blank

CHART TITLE - INTERLUATORY COMMENTS

*****PROGRAM CLATIN*****
PROGRAM FOR SECOND SECOND OVERLAY OF HING/EXTENSION MODULE
LEADING AND TRAILING STRIKE PLOTS - HEIGHT AND PAGES PROPERTIES

```

graph TD
    01((01)) --> REMOVAL_P1_1[/REMOVAL P1/]
    REMOVAL_P1_1 --> NOTE_02[NOTE 02  
SUBROUTINE P1  
11 11 11 11 11  
WRITE (UNIT 1, P1)]
    NOTE_02 --> UNIT_1_P1_1{UNIT 1 P1}
    UNIT_1_P1_1 -- NO --> 02_02_10_1[02 02 10  
P1  
11  
11]
    UNIT_1_P1_1 -- YES --> REMOVAL_P1_1
    02_02_10_1 --> REMOVAL_P1_2[/REMOVAL P1/]
    REMOVAL_P1_2 --> NOTE_03[NOTE 03  
SUBROUTINE P1  
11 11 11 11 11  
WRITE (UNIT 1, P1)]
    NOTE_03 --> UNIT_1_P1_2{UNIT 1 P1}
    UNIT_1_P1_2 -- NO --> 02_02_10_2[02 02 10  
P1  
11  
11]
    UNIT_1_P1_2 -- YES --> REMOVAL_P1_2
    02_02_10_2 --> CONV_HLE[CONV HLE]
  
```

00-10-74

AUTOLON COURT 01 - SLP - WING AND EPOHAWA PLATE - PAGE 01

COURT TITLE - NEW PROCEEDING STATEMENTS

PROGRAM 01.014

COURT 117120

COURT 117120 / 117120

05-10-74

AUTORELON CHART SET - SHEEP WING AND EXTENSIBLE WINDLIE - PAGE 04

CHART FILE - INTRODUCTION COMMENTS

*****ILLUSTRATION HERE*****

LEADING EDGE - TRAILING EDGE HEIGHT ESTIMATION CONTROL

$$\begin{array}{c} \text{PS}(1) = 91 = \\ \text{CCLO}(3) = \text{PS}(1) = \\ 91 \end{array}$$

```

graph TD
    Start([START]) --> Note5[NOTE 5  
TST(17) =  
TST(17) + TAND(3) +  
CCOL(3) - TST(1) +  
9  
TST(1) =  
TST(1) + COLD(3) -  
TST(17) + SIND(3)]
    Note5 --> Note6[NOTE 6  
TST(1) = 9  
TST(17) = COLD(3)]
    Note6 --> Note7[NOTE 7  
END OF DO  
LOOP?]
    Note7 -- YES --> Note8[NOTE 8  
WRITE NO REV  
S  
VIA FORMAT  
S15  
FROM THE LIST]
    Note7 -- NO --> Note9((3  
24))
    Note8 --> Note10[NOTE 10  
LIST = CCM(1),  
CCM(17), CCM(17),  
CCM(17), CCM(17),  
TST(1), TST(1)]
    Note10 --> Note11[NOTE 11  
WRITE TO REV  
S  
VIA FORMAT  
S15  
FROM THE LIST]
    Note11 --> Note12[NOTE 12  
LIST = CCM(3),  
CCM(1), CCM(19),  
CCM(1), CCM(19),  
TST(2), TST(7)]
    Note12 --> Note13[NOTE 13  
BEGIN DO LOOP  
DO M = 1, 5]
    Note13 --> Note14{COL IN = 03?}
    Note14 -- YES --> Note15((7  
24))
    Note14 -- NO --> Note16{CCM = 12?  
S14?}
    Note16 -- YES --> Note17((7  
24))
    Note16 -- NO --> Note18[NOTE 18  
WRITE TO REV  
S  
VIA FORMAT  
S15  
FROM THE LIST]
    Note18 --> Note19[NOTE 19  
LIST = N, TSTIN =  
101, COL IN = 001,  
TSTIN = 121,  
COL IN = 031,  
COL IN = 031,  
TSTIN = 21,  
TSTIN = 21]
    Note19 --> Note20((7  
24))
    Note18 --> Note21[NOTE 21  
LIST = N, TSTIN =  
101, COL IN = 001,  
TSTIN = 121,  
COL IN = 031,  
COL IN = 031,  
TSTIN = 21,  
TSTIN = 21]
    Note21 --> Note22((7  
24))

```


CHART TITLE - SLEUTHING ALERE

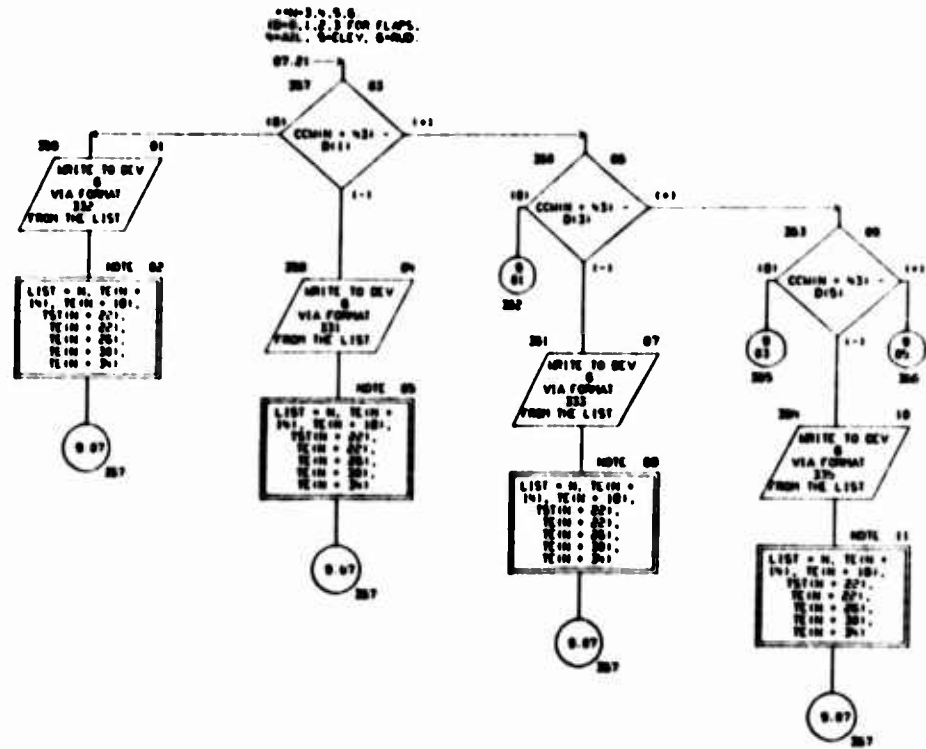


CHART TITLE - SUBROUTINE M100

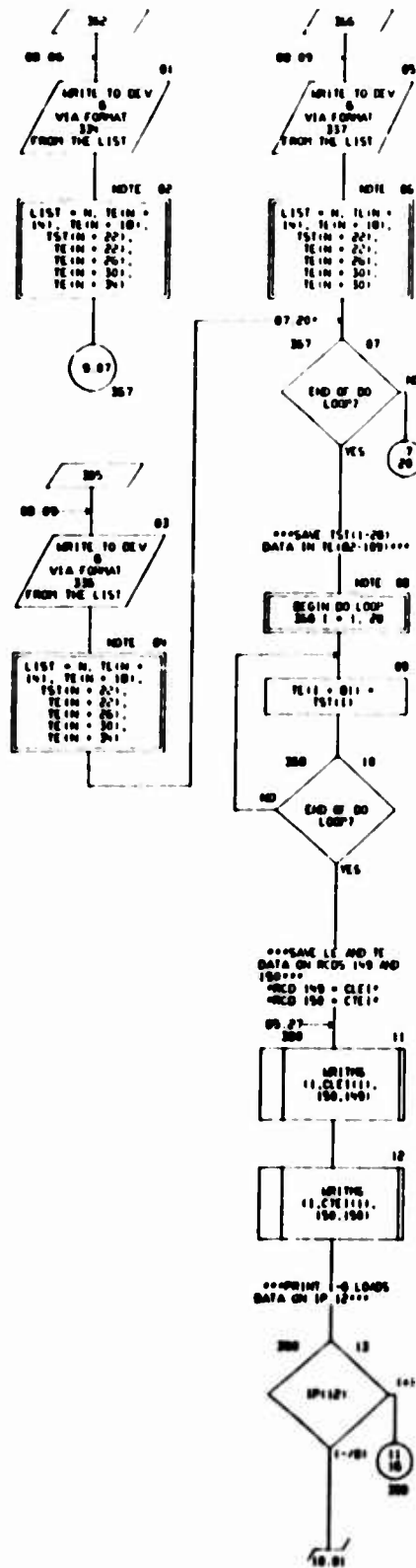


CHART TITLE - SUBROUTINE MEET

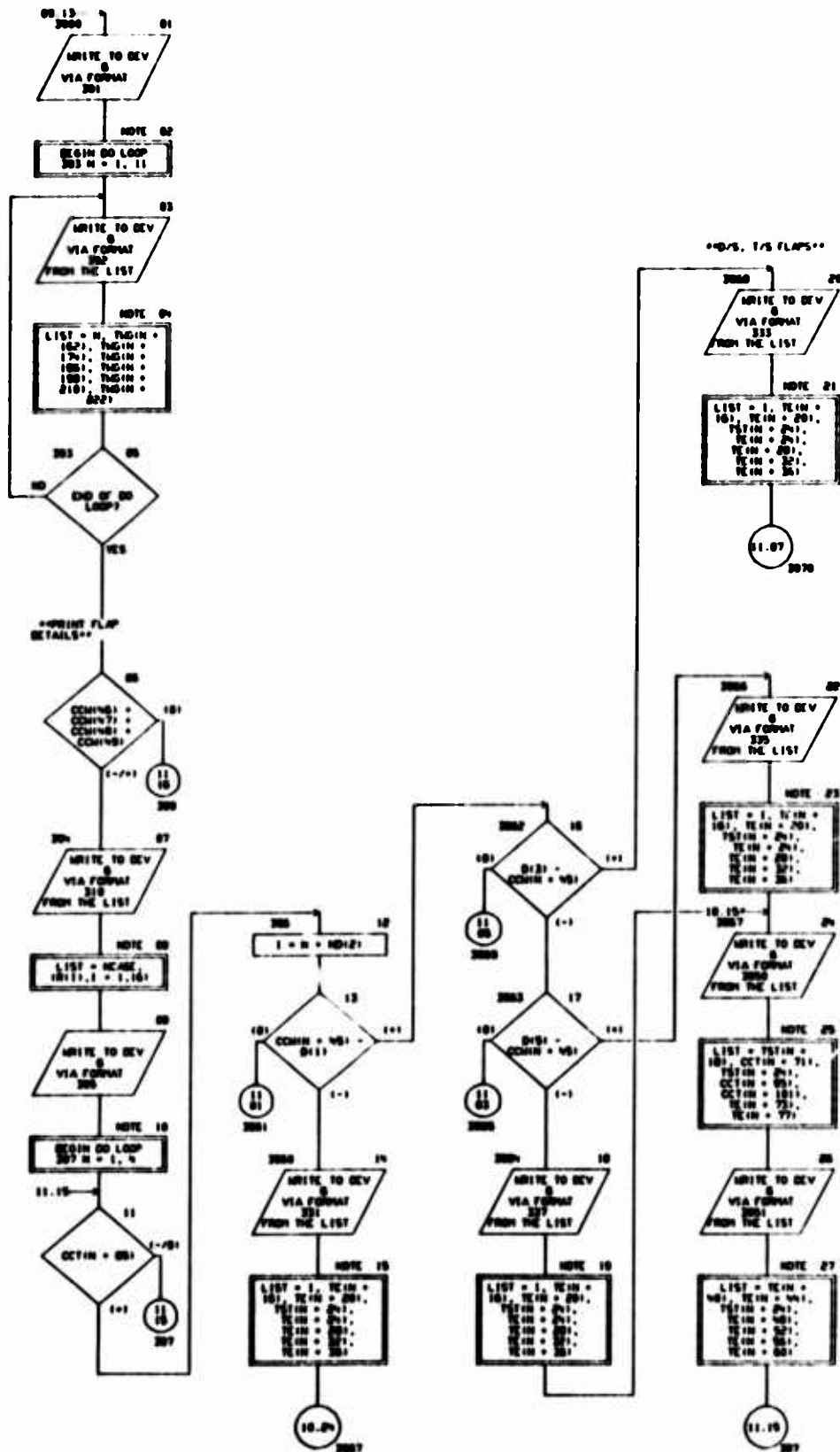


CHART TITLE - SUBROUTINE MLEK

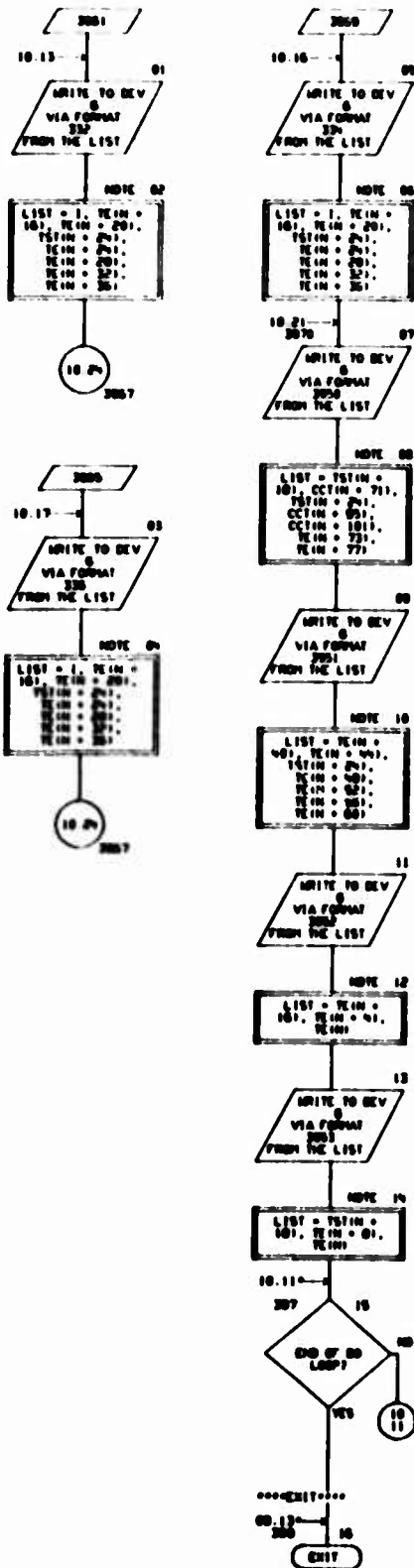


CHART TITLE - NON PROCEDURAL STATEMENTS

```

COPEN T
COPEN /PRINT/ IP(00)
COPEN /HISC/ HISC(100)
DIMENSION T(100),D(200),CD(200),ND(100),SC(100),
TBA(100),WTD(100),CCL(100),CCT(100),
TC(100),TXY(100),TXYD(100),
TE(100),H(10),
TAND(0),CCLD(0),SIND(0),COSD(0),
CCL(100),CCLD(0),TND(100),TS(100),
C10V(100),
CLE(100),CTE(100)
EQUIVALENCE (0(1),T(200(1)),CD(1),T(12(1)),ND(1),T(6(1)),
(CCL(1),D(14(1)),C10V(1),T(50(1)),
(TBA(1),T(10(1)),TWD(1),T(100(1)),CCL(1),CD(5(1)),
(TC(1),T(20(1)),TXY(1),T(8(1)),TXYD(1),T(50(1)),
(TAND(1),T(12(1)),CCLD(1),T(13(1)),SIND(1),T(14(1)),
(COSD(1),T(14(1)),CCTEA,T(15(1)),TND(1),T(130(1)),
(CCL(1),CD(10(1)),H(1),CD(1),TST(1),T(170(1)),
(TC(1),CD(12(1)),H(1),T(19(1)),H(1),HISC(100)),
(HISC(100),HISC(100)),
(CCT(1),CD(10(1)),CLE(1),CD(5(1)),CTE(1),CD(10(1)))
310 FORMAT (10H) CASE NO,IN,PA,POH//ALERE - IP(12) **
      10H,DA10/10H,DA10)
311 FORMAT (10H) ***LEADING EDGE AND TRAILING EDGE STRUCTURE M
      EIGHT AND DISTRIBUTION SUMMARY*** //10H
      M-LB/M M-S-LB/W AREA-W/M YC(10) H(10) TC
      0(1) H(10) //10H ***TOTAL L. EDGE STRUCTURES***,F10.2,F10.3,
      F12.3,W10.2)
312 FORMAT (10H) ***TOTAL T. EDGE STRUCTURES***,F10.2,F10.3,F12.3,W10
      .2)
313 FORMAT (10H) **F10.2,F10.3,F12.3,W10
      .2)
314 FORMAT (10H) **F10.2,F10.3,F12.3,W10
      .2)
315 FORMAT (10H) **LE DEV,12,10H. LE BLATS-//,F10.2,F10.3,F12.3
      ,W10.2)
316 FORMAT (10H) **LE DEV,12,10H. FLAPETS-//,F10.2,F10.3,F12.3
      ,W10.2)
317 FORMAT (10H) **LE DEV,12,10H. FLEP LE-//,F10.2,F10.3,F12.3
      ,W10.2)
318 FORMAT (10H) **TE DEV,12,10H. SPOILERS-//,F10.2,F10.3,F12.3
      ,W10.2)
319 FORMAT (10H) **TE DEV,12,10H. FLAPS-//,F10.2,F10.3,F12.3
      ,W10.2)
320 FORMAT (10H) **TE DEV,12,10H. F-S FLAPS-//,F10.2,F10.3,F12.3
      ,W10.2)
321 FORMAT (10H) **TE DEV,12,10H. T-S FLAPS-//,F10.2,F10.3,F12.3
      ,W10.2)
322 FORMAT (10H) **TE DEV,12,10H. FLETERS-//,F10.2,F10.3,F12.3
      ,W10.2)
323 FORMAT (10H) **TE DEV,12,10H. FLETERS-//,F10.2,F10.3,F12.3
      ,W10.2)
324 FORMAT (10H) **TE DEV,12,10H. FLETERS-//,F10.2,F10.3,F12.3
      ,W10.2)
325 FORMAT (10H) **TE DEV,12,10H. FLETERS-//,F10.2,F10.3,F12.3
      ,W10.2)
326 FORMAT (10H) **TE DEV,12,10H. FLETERS-//,F10.2,F10.3,F12.3
      ,W10.2)
327 FORMAT (10H) **TE DEV,12,10H. FLETERS-//,F10.2,F10.3,F12.3
      ,W10.2)
328 FORMAT (10H) ***1-L.E. AND T.E. LOADS SUMMARY***
      ,F10.2) **L.E. STRUCTURES** **T.E. STRUCT
      URES**TND STA DEAR 0-HEN T-HEN DEAR 0
      -HEN T-HEN 1
329 FORMAT (10H) **1-L.E. AND T.E. LOADS SUMMARY***
      ,F10.2) **L.E. STRUCTURES** **T.E. STRUCT
      URES**TND STA DEAR 0-HEN T-HEN DEAR 0
      -HEN T-HEN 1
330 FORMAT (10H) ***TRAILING EDGE SERVICE COMPONENT SUMMARY***
      ,//10H
      M-LB/M M-S-LB/W ARE

```

08/10/74

AUTOFLOW CHART SET - SHEEP WING AND EMPLOYMENT NEEDS - PAGE 13

CHART TITLE - HIGH-PROCEDURAL STATEMENTS

	A-W / AN	VEG:BP:	REG:FS:	VEG:ST:	REG:ST:	
3000	FORMAT 12M			PANELS /	.F10 2.F10 3.F12 3.W10	
				2)		
3001	FORMAT 12M			PLACEMENTS /	.F10 2.F10 3.F12 3.W10	
				2,1)		
3002	FORMAT 12M			REV AREA TOTAL *	.F10 2.F10 3.F12 3)	
3003	FORMAT 12M			-PANEL	.F10 2.F10 3.F12 3,1)	

05/10/74

AUTOFLOW CHART SET - SHEEP WING AND EMPLOYEE MODEL - PAGE 14

CHART TITLE - INTRODUCTORY COMMENTS

*****PRELIMINARY SCENARIOS*****

TABLE - CH. 12. RE GEOMETRY DATA SETUP FOR ST ANALYSIS

CHART TITLE - SUBROUTINE GCHNL

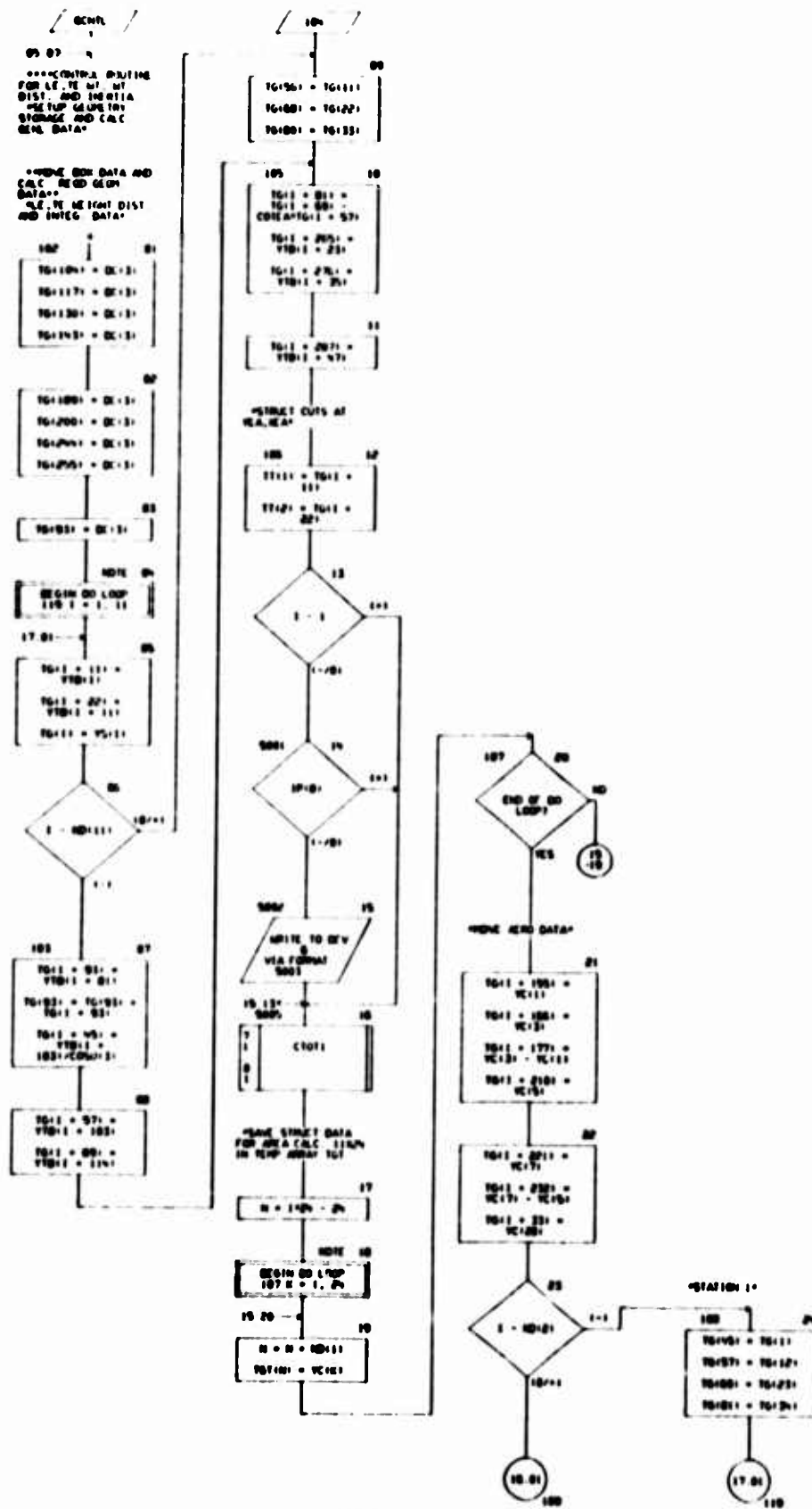


CHART TITLE - SUBROUTINE GENR

STATION 2-11 CALC
 AND THE
 00 17.01

10 02 - 5
 100 01
 TT(1) = 17041 *
 111 = 7041 *
 1011 = 10110 * 17
 7041 = 1001 *
 7111 = 7041 *
 1701 = 7041 *
 1771

7041 = 7041 *
 7111 = 7041 *
 7011 = 7041 *
 7701
 7041 = 1001 *
 7111 = 7041 *
 7011 = 7041 *
 7011 = 7041 *
 7011 = 7041 *

7041 = 7041 *
 7111 = 7041 *
 7011 = 7041 *
 7011 = 7041 *
 7011 = 7041 *
 7011 = 7041 *
 7011 = 7041 *

7041 = 7041 *
 7011 = 7041 *
 7011 = 7041 *
 7011 = 7041 *
 7011 = 7041 *
 7011 = 7041 *

STATION 2-11 CALC
 AND THE

110 01
 TT(1) = 17041 *
 7111 = 7041 *
 7011 = 7041 *
 7011 = 7041 *
 7011 = 7041 *

7041 = 1001 *
 7111 = 7041 *
 7011 = 7041 *
 7011 = 7041 *

7041 = 1001 *
 7111 = 7041 *
 7011 = 7041 *
 7011 = 7041 *

7041 = 1001 *
 7111 = 7041 *
 7011 = 7041 *
 7011 = 7041 *

STATION 2-11 CALC
 AND THE

17.01


```

graph TD
    A[END OF LOOP?] -- YES --> B[END OF LOOP?]
    A -- NO --> C[END OF LOOP?]
  
```

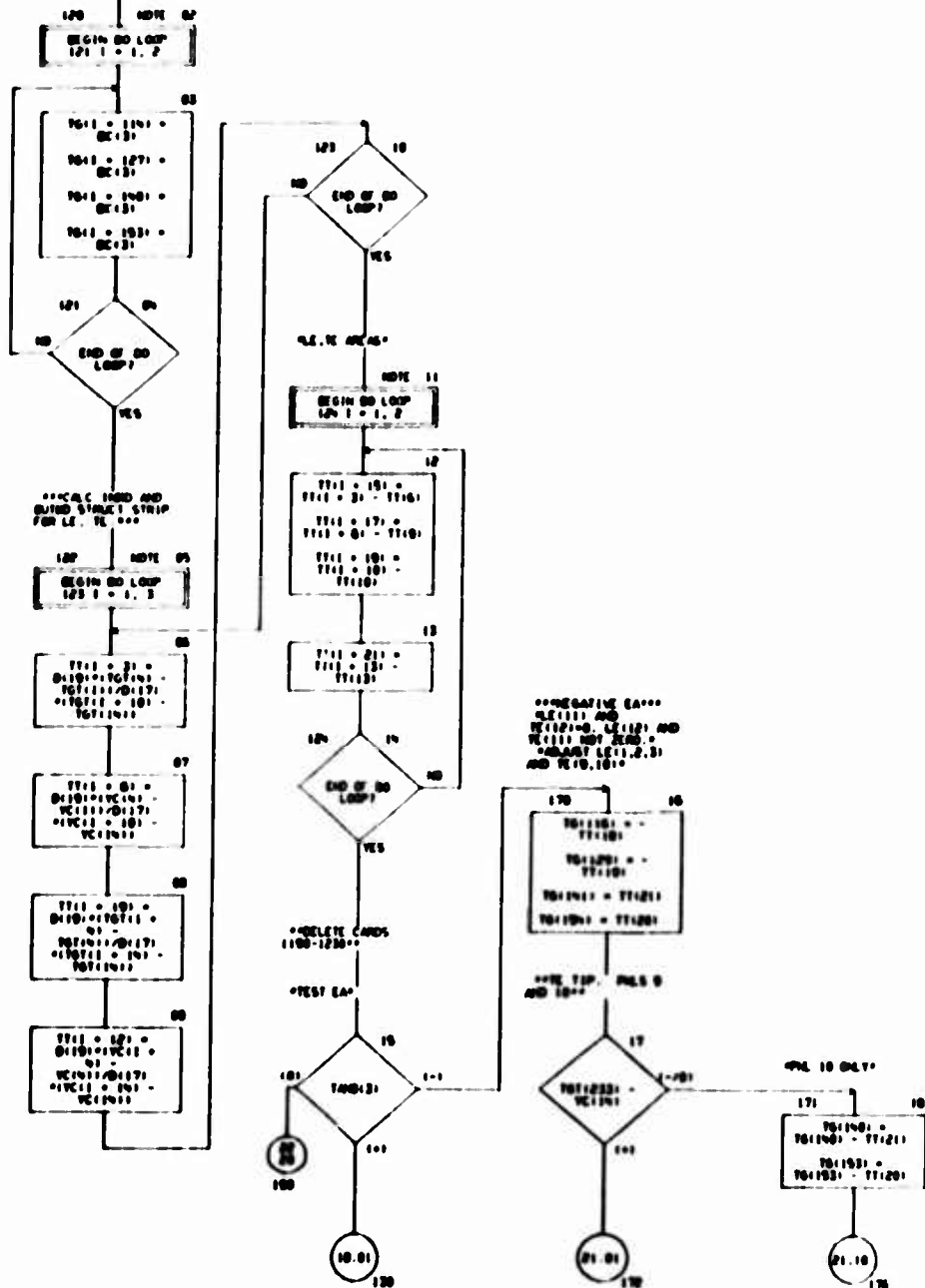


CHART TITLE - SUMMARY OF CHART

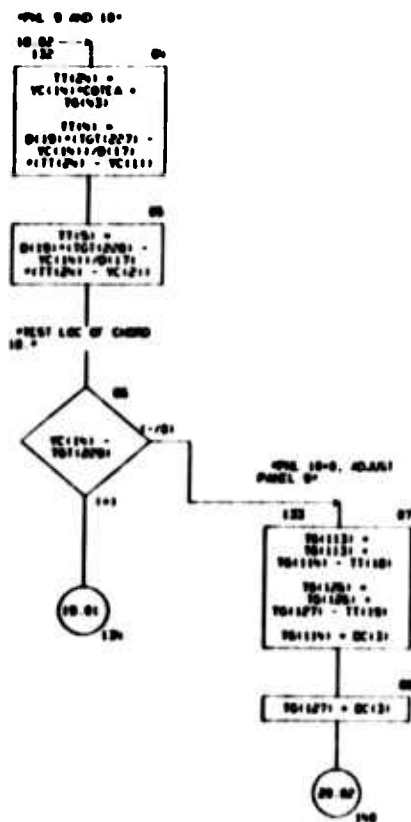
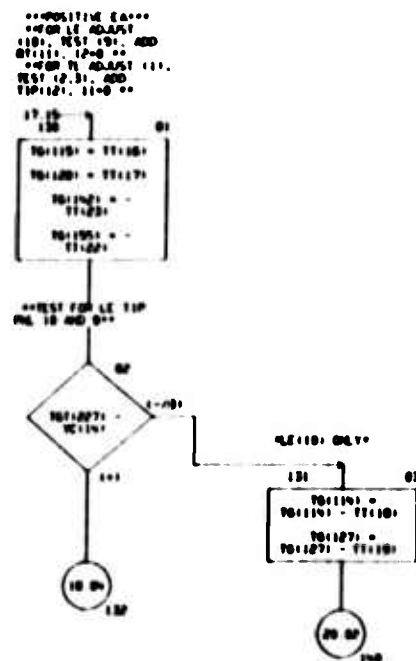
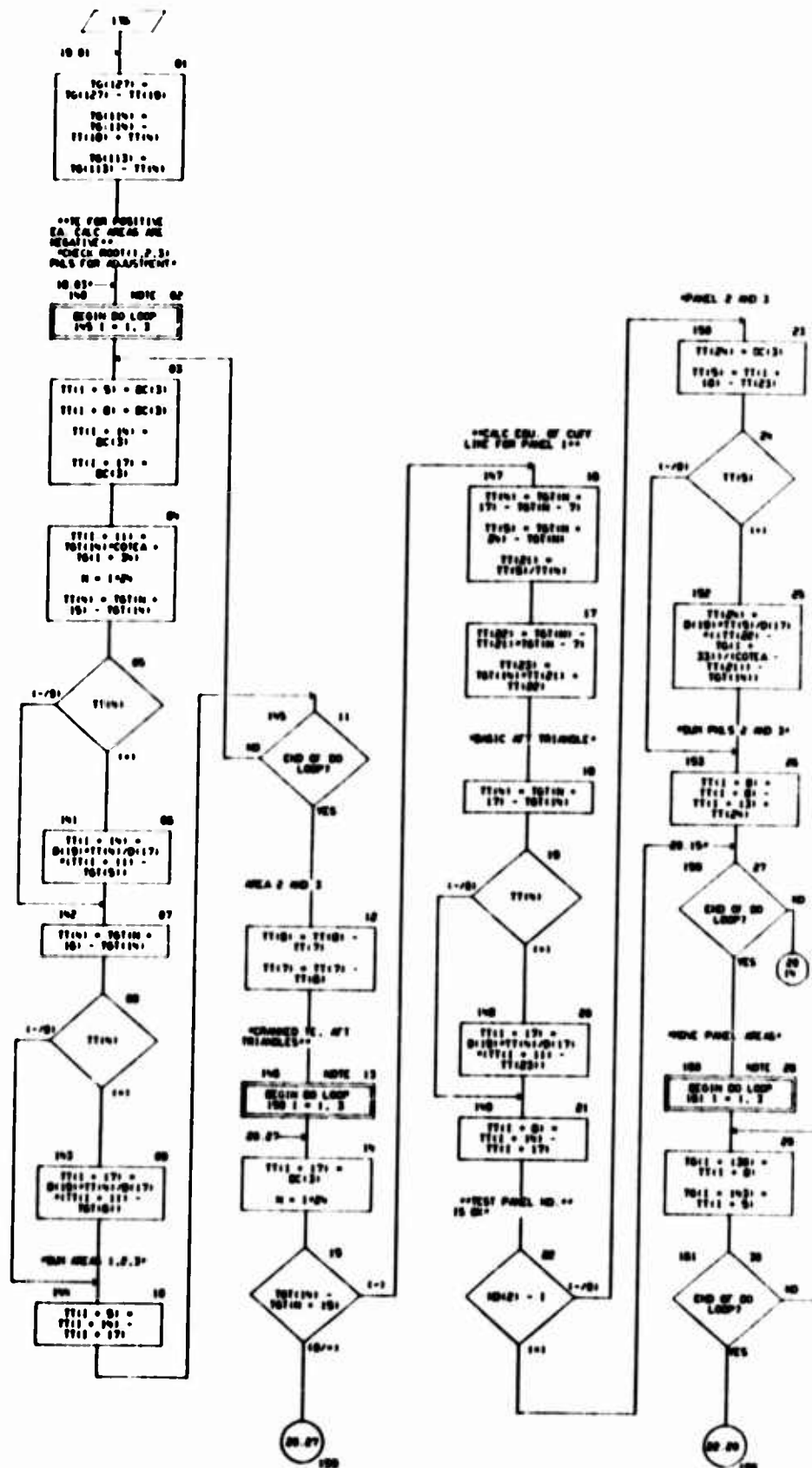


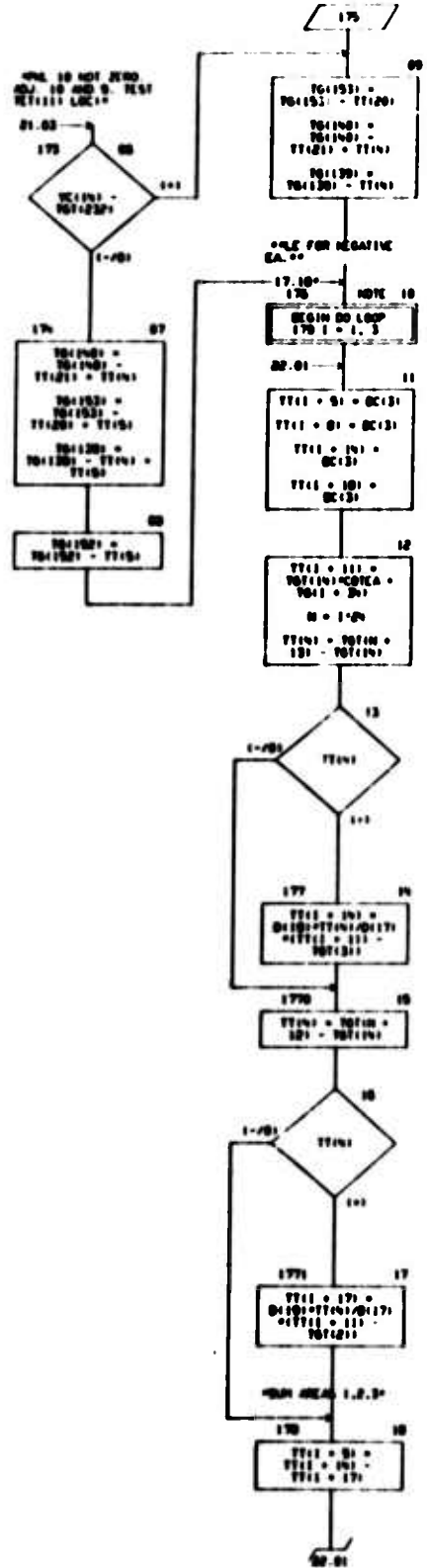
CHART TITLE - SUBROUTINE GENL



CHART TITLE - SUBROUTINE SCNTL



PHS 9.10 CAL
CHORD 10 INTERSECTION
WITH VEA1110



```

graph TD
    Start([START]) --> 01{01.10}
    01 -- YES --> 02[02.00]
    01 -- NO --> 01_11((01.11))
    02 --> 03[03.00]
    03 --> 04[04.00]
    04 --> 05{05.00}
    05 -- YES --> 06[06.00]
    05 -- NO --> 07[07.00]
    06 --> 08[08.00]
    08 --> 09[09.00]
    09 --> 10[10.00]
    10 --> 11{11.00}
    11 -- YES --> 12[12.00]
    11 -- NO --> 13[13.00]
    12 --> 14[14.00]
    14 --> 15[15.00]
    15 --> 16{16.00}
    16 -- YES --> 17[17.00]
    16 -- NO --> 18[18.00]
    17 --> 19[19.00]
    19 --> 20[20.00]
    20 --> 21{21.00}
    21 -- YES --> 22[22.00]
    21 -- NO --> 23[23.00]
    22 --> 24[24.00]
    24 --> 25[25.00]
    25 --> 26[26.00]
    26 --> 27{27.00}
    27 -- YES --> 28[28.00]
    27 -- NO --> 29[29.00]
    28 --> 30[30.00]
    30 --> 31[31.00]
    31 --> 32[32.00]
    32 --> 33[33.00]
    33 --> 34[34.00]
    34 --> 35[35.00]
    35 --> 36[36.00]
    36 --> 37[37.00]
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    88 --> 89[89.00]
    89 --> 90[90.00]
    90 --> 91[91.00]
    91 --> 92[92.00]
    92 --> 93[93.00]
    93 --> 94[94.00]
    94 --> 95[95.00]
    95 --> 96[96.00]
    96 --> 97[97.00]
    97 --> 98[98.00]
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    99 --> 100[100.00]
    100 --> 101[101.00]
    101 --> 102[102.00]
    102 --> 103[103.00]
    103 --> 104[104.00]
    104 --> 105[105.00]
    105 --> 106[106.00]
    106 --> 107[107.00]
    107 --> 108[108.00]
    108 --> 109[109.00]
    109 --> 110[110.00]
    110 --> 111[111.00]
    111 --> 112[112.00]
    112 --> 113[113.00]
    113 --> 114[114.00]
    114 --> 115[115.00]
    115 --> 116[116.00]
    116 --> 117[117.00]
    117 --> 118[118.00]
    118 --> 119[119.00]
    119 --> 120[120.00]
    120 --> 121[121.00]
    121 --> 122[122.00]
    122 --> 123[123.00]
    123 --> 124[124.00]
    124 --> 125[125.00]
    125 --> 126[126.00]
    126 --> 127[127.00]
    127 --> 128[128.00]
    128 --> 129[129.00]
    129 --> 130[130.00]
    130 --> 131[131.00]
    131 --> 132[132.00]
    132 --> 133[133.00]
    133 --> 134[134.00]
    134 --> 135[135.00]
    135 --> 136[136.00]
    136 --> 137[137.00]
    137 --> 138[138.00]
    138 --> 139[139.00]
    139 --> 140[140.00]
    140 --> 141[141.00]
    141 --> 142[142.00]
    142 --> 143[143.00]
    143 --> 144[144.00]
    144 --> 145[145.00]
    145 --> 146[146.00]
    146 --> 147[147.00]
    147 --> 148[148.00]
    148 --> 149[149.00]
    149 --> 150[150.00]
    150 --> 151[151.00]
    151 --> 152[152.00]
    152 --> 153[153.00]
    153 --> 154[154.00]
    154 --> 155[155.00]
    155 --> 156[156.00]
    156 --> 157[157.00]
    157 --> 158[158.00]
    158 --> 159[159.00]
    159 --> 160[160.00]
    160 --> 161[161.00]
    161 --> 162[162.00]
    162 --> 163[163.00]
    163 --> 164[164.00]
    164 --> 165[165.00]
    165 --> 166[166.00]
    166 --> 167[167.00]
    167 --> 168[168.00]
    168 --> 169[169.00]
    169 --> 170[170.00]
    170 --> 171[171.00]
    171 --> 172[172.00]
    172 --> 173[173.00]
    173 --> 174[174.00]
    174 --> 175[175.00]
    175 --> 176[176.00]
    176 --> 177[177.00]
    177 --> 178[178.00]
    178 --> 179[179.00]
    179 --> 180[180.00]
    180 --> 181[181.00]
    181 --> 182[182.00]
    182 --> 183[183.00]
    183 --> 184[184.00]
    184 --> 185[185.00]
    185 --> 186[186.00]
    186 --> 187[187.00]
    187 --> 188[188.00]
    188 --> 189[189.00]
    189 --> 190[190.00]
    190 --> 191[191.00]
    191 --> 192[192.00]
    192 --> 193[193.00]
    193 --> 194[194.00]
    194 --> 195[195.00]
    195 --> 196[196.00]
   
```

CHART TITLE - SUBROUTINE 0004

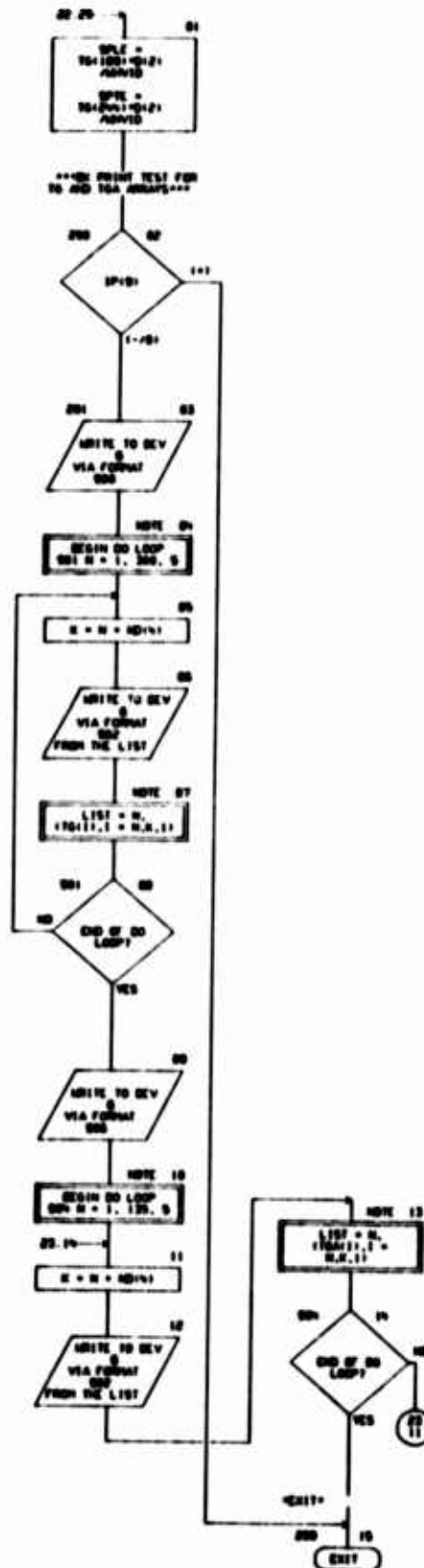


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T
COMMON /PRINT/ IP(80)
DIMENSION T(6220),D(2050),CD(2000),ND(100),EC(100),
VS(11),TV(124),TKV(1500),
TG(1300),TGT(1400),VC(150),TT(24),TGA(135),
TAND(9),CCL(9),SIND(9),COS(9),
EQUIVALENCE (D(1),T(2051)),(CD(1),T(4121)),(ND(1),T(6121)),
(EC(1),D(1401)),(TKV(1),T(501)),(VS(1),TKV(1400)),
(TV(1),TKV(155)),(TG(1),T(1001)),(TGT(1),T(1301)),(TT(1),T(411)),
(VC(1),T(201)),(COS(1),T(152)),(TAND(1),T(122)),(CCL(1),T(131)),
(SIND(1),T(140)),(COS(9),T(145)),(TGA(1),T(1051)),
(CCL(1),T(121)),(SIND(9),T(15)),
(MDV(9),T(571)),(SPLE(1),T(251)),(SPTE(1),T(251)),
(I,ND(251)),(IN,ND(271)),(K,ND(201))
0003 FORMAT(1H1,70X,30H** C101: (CALLED FROM SCHTL) - IP(8) **
000 FORMAT(130H1 **SCHTL SUBR. TG AND TGA ARRAYS**,52X,
10H** SCHTL - IP(8) **,//8H TG )
002 FORMAT(1H14,8E10.0)
005 FORMAT(10H TGA )

```


CHART TITLE - INTRODUCTORY COMMENTS

*****ROUTINE LEFT*****

LE HEIGHT AND DISTRIBUTION EVALUATION

CHART TITLE - SUBROUTINE LEW

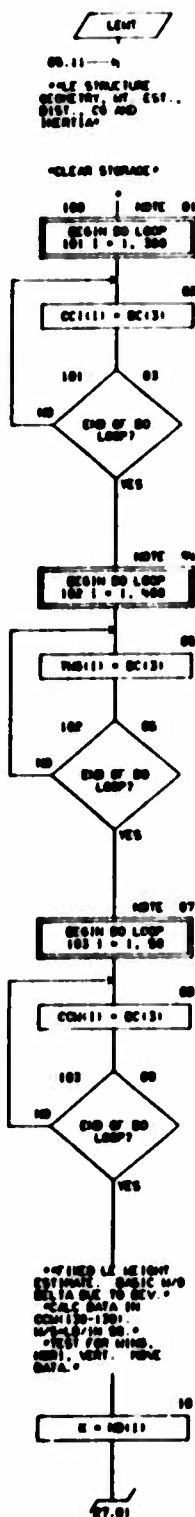


CHART TITLE - SUBROUTINE LEW

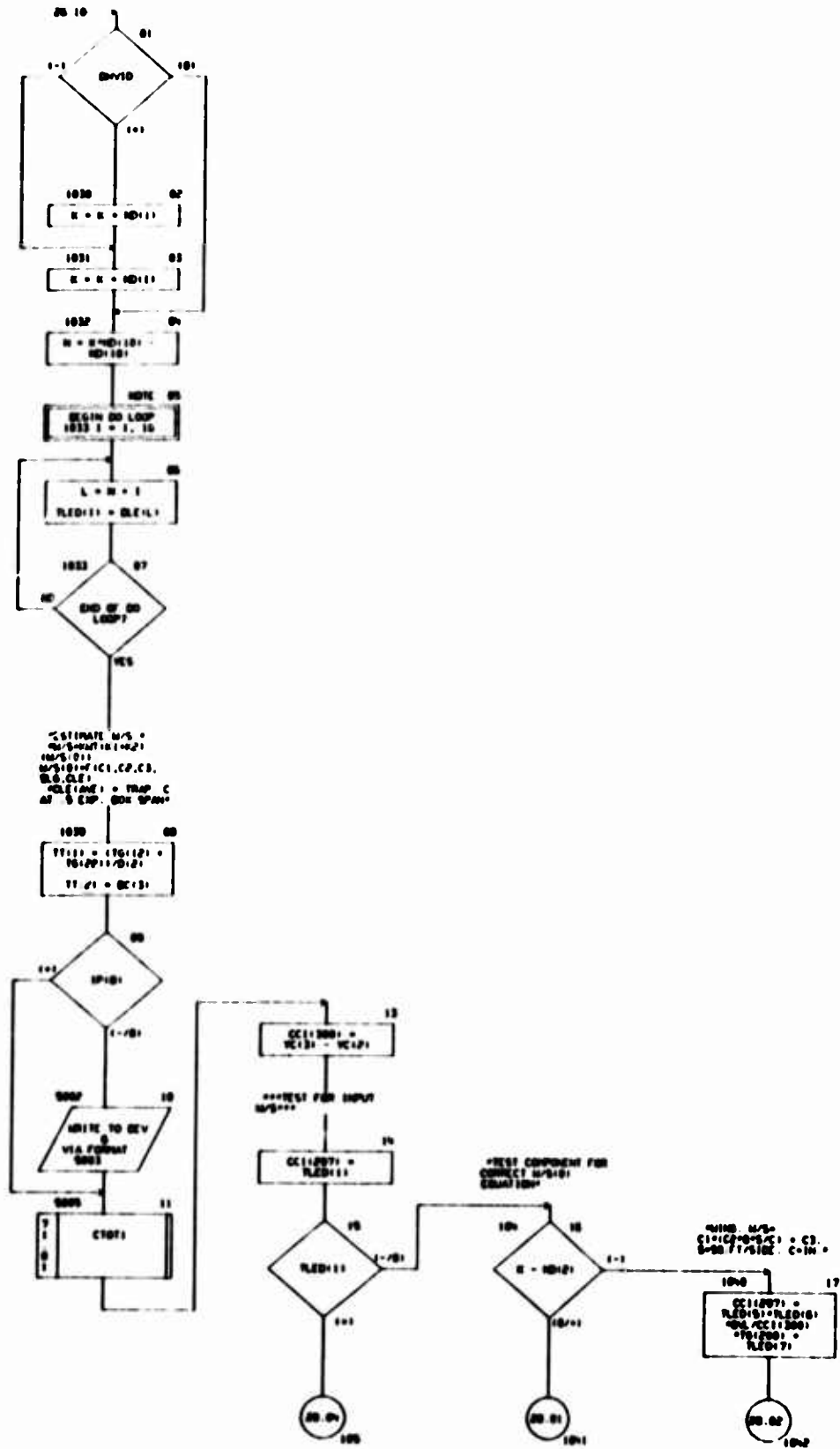
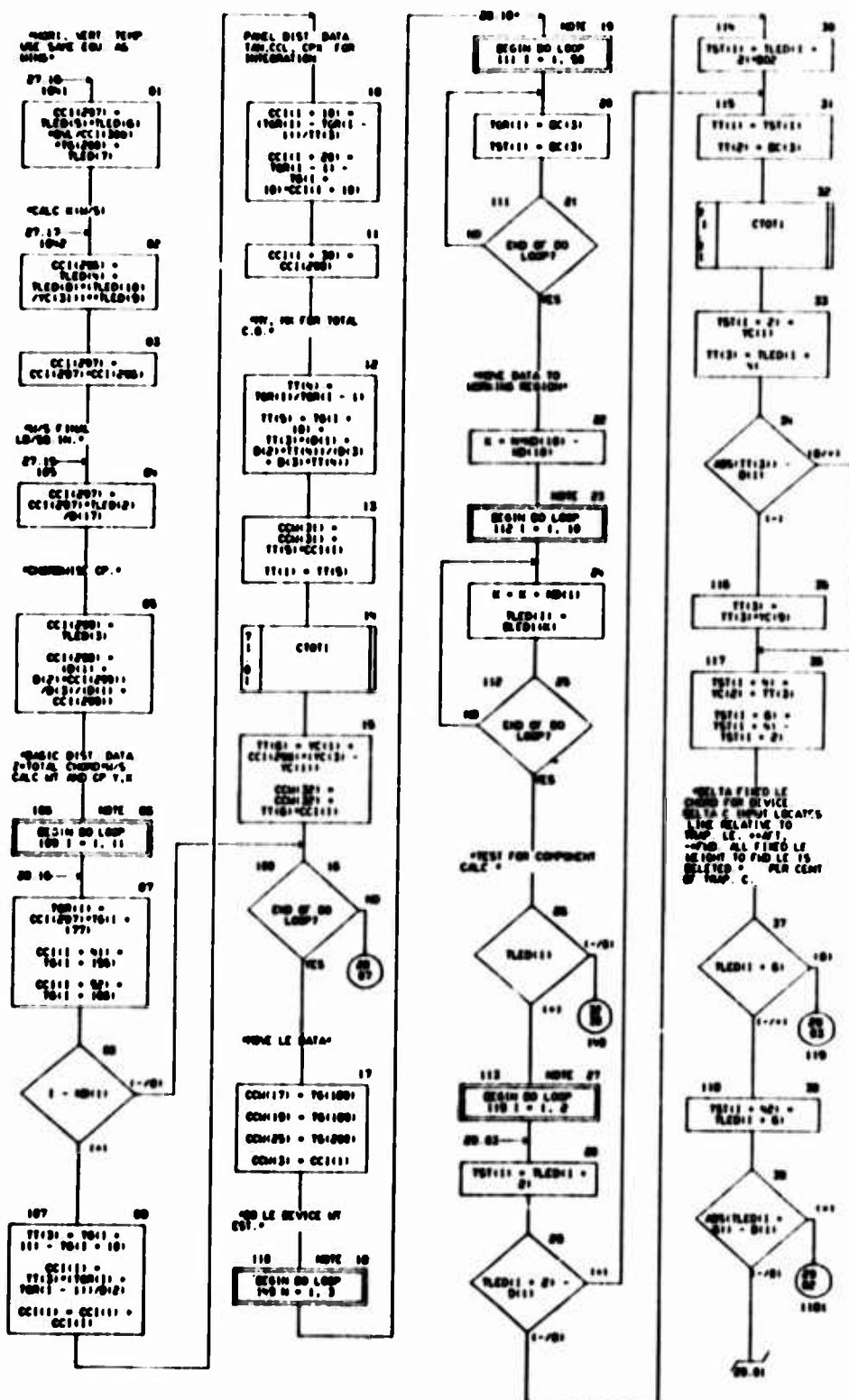


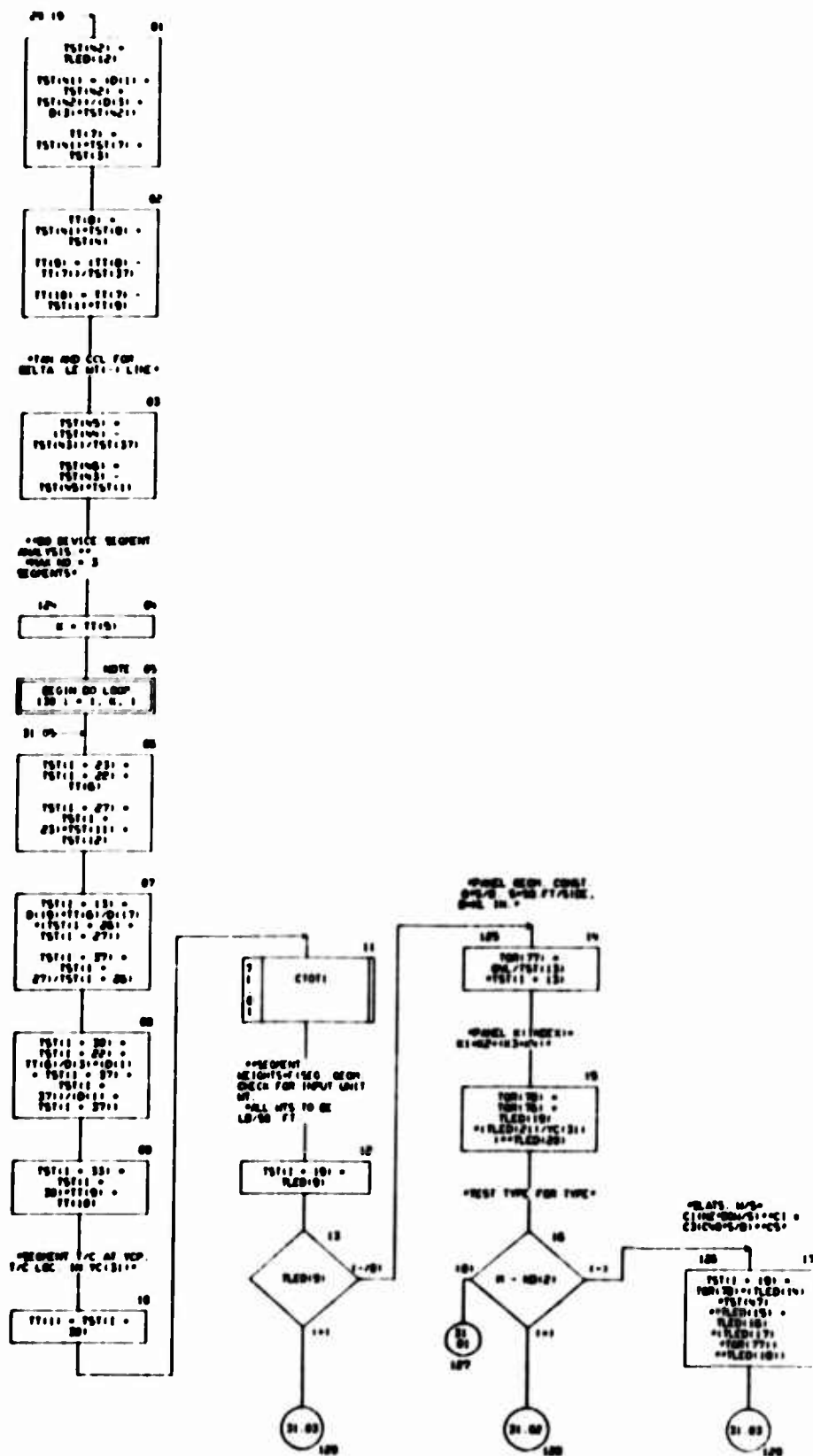
CHART TITLE - SUBSTITUTION LEAD



```

    graph TD
      00[00 29  
1000  
TST(1) = NZ?  
VC(1) = RLED(1) + 0] --> 01[01  
TST(1) = NZ?  
VC(1) = VC(1) + NZ?  
TST(1) = 10?  
VC(1) = VC(1)]
      01 --> 02[02 30  
1001  
TST(1) = NZ?  
VC(1) = VC(1) + NZ?  
TST(1) = 10?  
VC(1) = VC(1)]
      02 --> 03[03 37  
110  
END OF DO LOOP?]
      03 -- NO --> 04[04  
120  
TST(37) =  
TST(2) - TST(1)  
TST(1) =  
0(10) + TST(37)  
VC(1) = TST(1) +  
TST(1)  
TST(11) =  
TST(10) +  
TST(1) / TST(37)]
      04 --> 05[05  
TST(12) =  
TST(1) -  
TST(11) / TST(11)  
CC(10) = 120 +  
TST(10) +  
TST(1) / TST(37)]
      05 --> 06[06  
CC(10) = 120 +  
TST(1) -  
TST(11) / CC(10) +  
120  
CC(10) = 120 +  
TST(1) / TST(37)]
      06 --> 07[07  
CC(10) = 101 +  
TST(1) -  
TST(11) / CC(10) +  
120  
CC(10) = 100 +  
CC(10) + 120  
CC(10) = 201 +  
CC(10) + 120]
      07 --> 08[08  
CC(10) = 207 +  
TST(100) +  
TST(101) / TST(37)  
CC(10) = 213 +  
TST(10) +  
TST(11) / CC(10) +  
207  
TST(1) = TST(10) -  
TST(1)]
      08 --> 09[09  
TST(1) =  
TST(1) - TST(1)  
TST(1) =  
TST(100) +  
TST(101)  
TST(10) =  
0(10) + TST(37)  
TST(37) =  
TST(10) / TST(1)]
      09 --> 10[10  
TST(1) = RLED(1)  
TST(10) =  
TST(17) / TST(1)  
TST(12) = TST(1)  
TST(27) = TST(1)]
      10 --> 11{11  
RLED(1)}
      11 -- NO --> 12[12  
TST(1) = 0(1)]
      12 --> 13[13  
TST(13) =  
TST(10) / TST(1)  
TST(1) =  
TST(17) / TST(1)  
TST(12) = TST(1)  
TST(27) = TST(1)]
      13 --> 14[14  
R = RLED(1)  
CC(10) = NZ?  
RLED(1)]
      14 --> 15[15  
R = R(1) - 10  
NOTE 10  
BEGIN DO LOOP  
1230 I = 1, 15]
      15 --> 16[16  
L = R + 1  
RLED(1) = 10 +  
RLED(1)]
      16 --> 17{17  
END OF DO LOOP?}
      17 -- NO --> 18[18  
RLED(1) = 10  
RLED(1)]
      18 --> 19[19  
TST(1) =  
TST(1) -  
RLED(1)  
RLED(1) =  
RLED(1) +  
0(1) + RLED(1)]
      19 --> 20[20 01]
  
```

CHART TITLE - SUBROUTINE LEW1



000000 0000
 000000 0000
 000000 0000

00 0000 0000
 01 0101 0101 0101 0101
 02 0202 0202 0202 0202

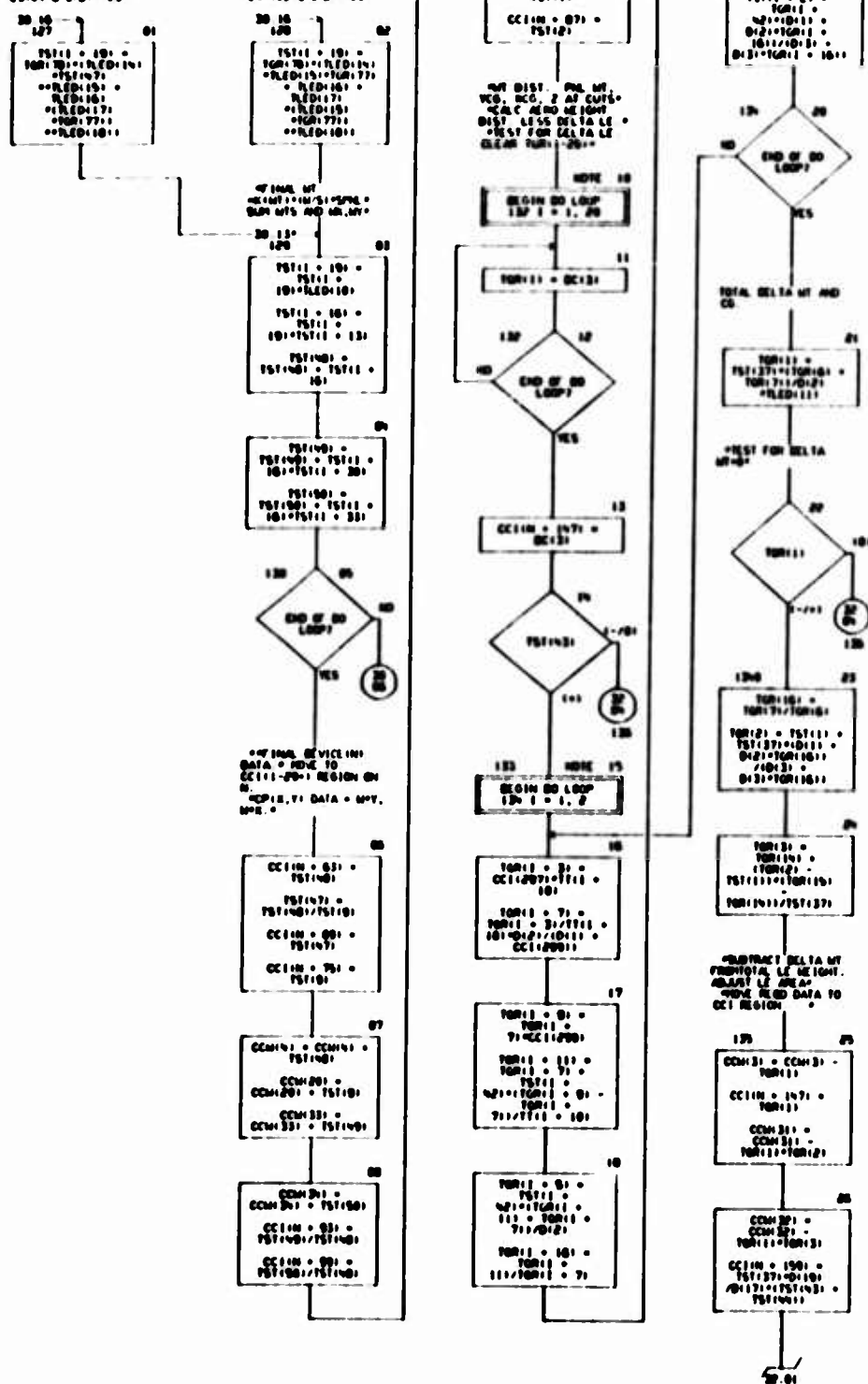


CHART TITLE - SUBROUTINE LEVI

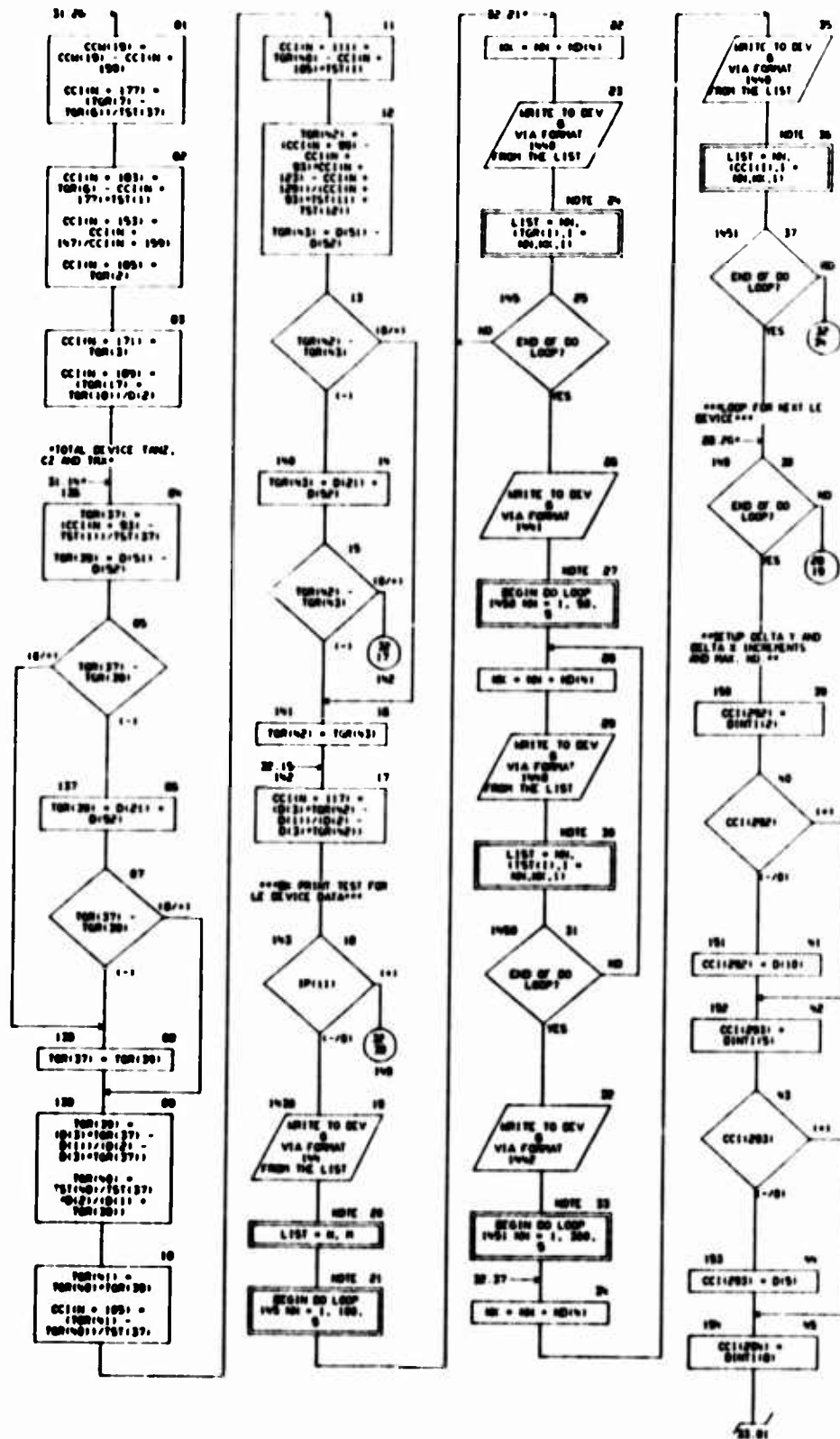


CHART TITLE - SUBROUTINE LEWT

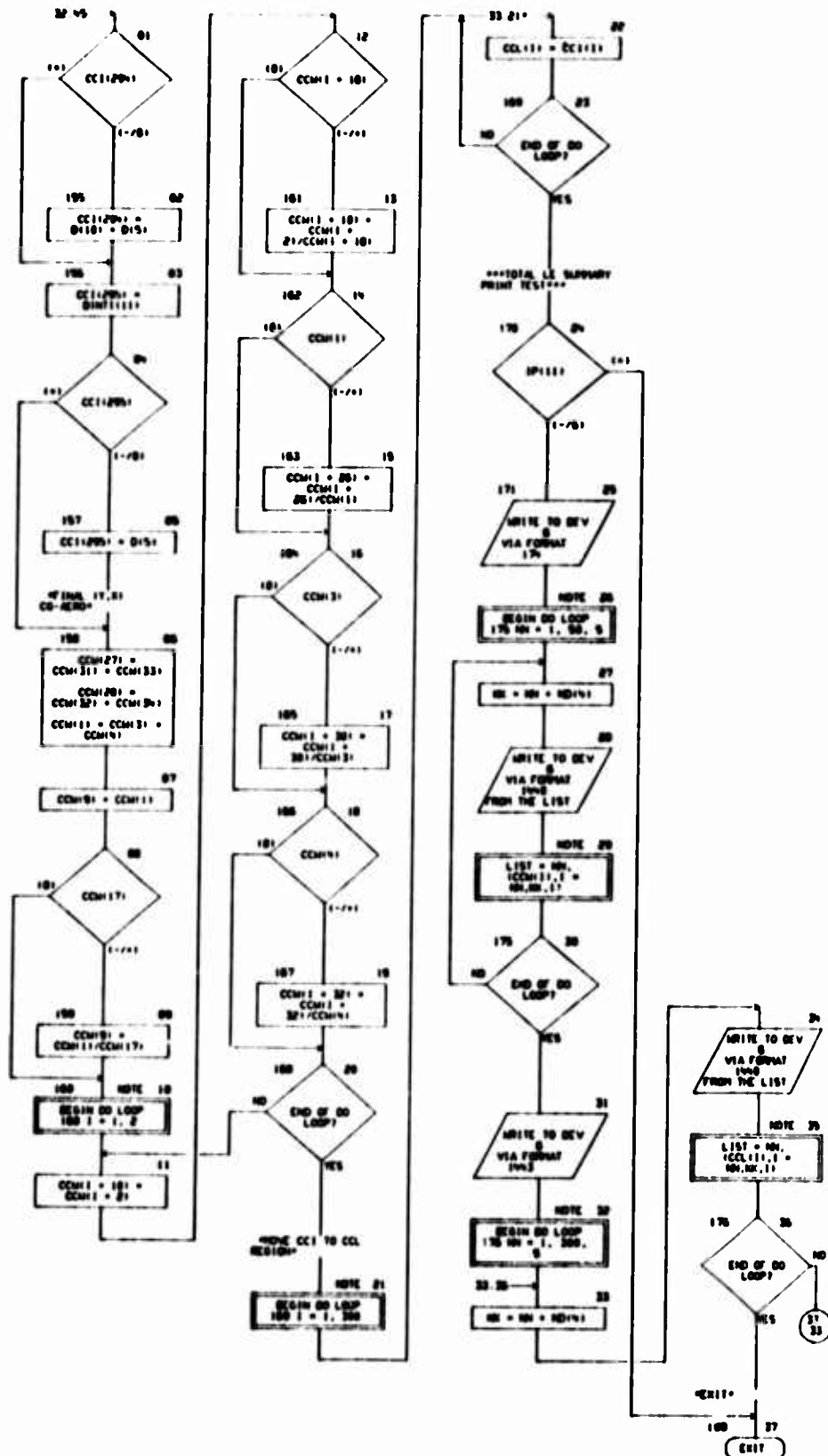


CHART TITLE - NON PROCEDURAL STATEMENTS

```

COMMON 1
COMMON /IPRINT/ IP(100)
DIMENSION T(16270),D(2000),CD(2000),ND(100),DC(100),
VC(150),T1(24),T6(300),TNG(400),VTC(60),
TST(50),TOR(100),CCM(50),CC(300),CCL(300),
TAND(0),CCL0(0),SIND(0),COS0(0),
BLE(30),BLE0(30),BLEK(50),D1(112),PLED(15)
EQUIVALENCE (D(1),T(200)),(CD(1),T(412)),(ND(1),T(612)),
(IC(1),D(140)),(VC(1),T(20)),(T1(1),T(41)),(T6(1),T(100)),
(TND(1),T(130)),(TST(1),T(170)),(TOR(1),T(175)),
(CCM(1),CD(1)),(CC(1),CD(105)),(CCL(1),CD(51)),(VTC(1),T(35)),
(BLE(1),D(1205)),(BLE0(1),D(1500)),(BLEK(1),D(1530)),
(ORNT(1),D(113)),
(PLED(1),TOR(51)),(D(410),D(200)),
(OR2,T(12)),(OS102,T(15)),
(TAND(1),T(127)),(CCL0(1),T(131)),(SIND(1),T(140)),
(COS0(1),T(146)),(COTEA,T(152))
EQUIVALENCE (N1,T6,D(205)),(N1EA,D(240)),(N4,D(187)),
(ORND,D(105)),
(I,ND(20)),(N,ND(27)),(K,ND(30)),(R,ND(31)),(L,ND(20))
9993 FORMAT(1H,70X,20H** C701 (CALLED FROM LEWT) - IP(0) **)
144 FORMAT (00H) **LEWT SUBR. LE SERVICE SUMMARY DATA ARRAYS--TOR,
TST, CC1***,PSK,10H** LEWT - IP(11) **/10H **LE SERVICE,12,
ON TYPE,12,1H**END TOR)
1440 FORMAT (1H 24,2X10 0)
1441 FORMAT (0H TST)
1442 FORMAT (0H CC1)
1443 FORMAT (0H CCL)
174 FORMAT (70H) **LEWT SUBR. LE HEIGHT AND DISTRIBUTION SUMMARY A
RRAYS--CCM, CCL***,10H,10H** LEWT - IP(11) **/10H CCM)

```

08/10/74

AUTOLON CHART SET - SLEEP WING AND EXPENDABLE REAR - PAID 25

CHART TITLE - INTRODUCTORY COMMENTS

.....

*****ROUTINE PLAN*****

RE STRUCTURE EVALUATION AND CONTROL

.....

7-10

00 13--4
•••••
GEORGETOWN, WY. EST.
DIST. CO. AND
INTERIOR

• ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED •

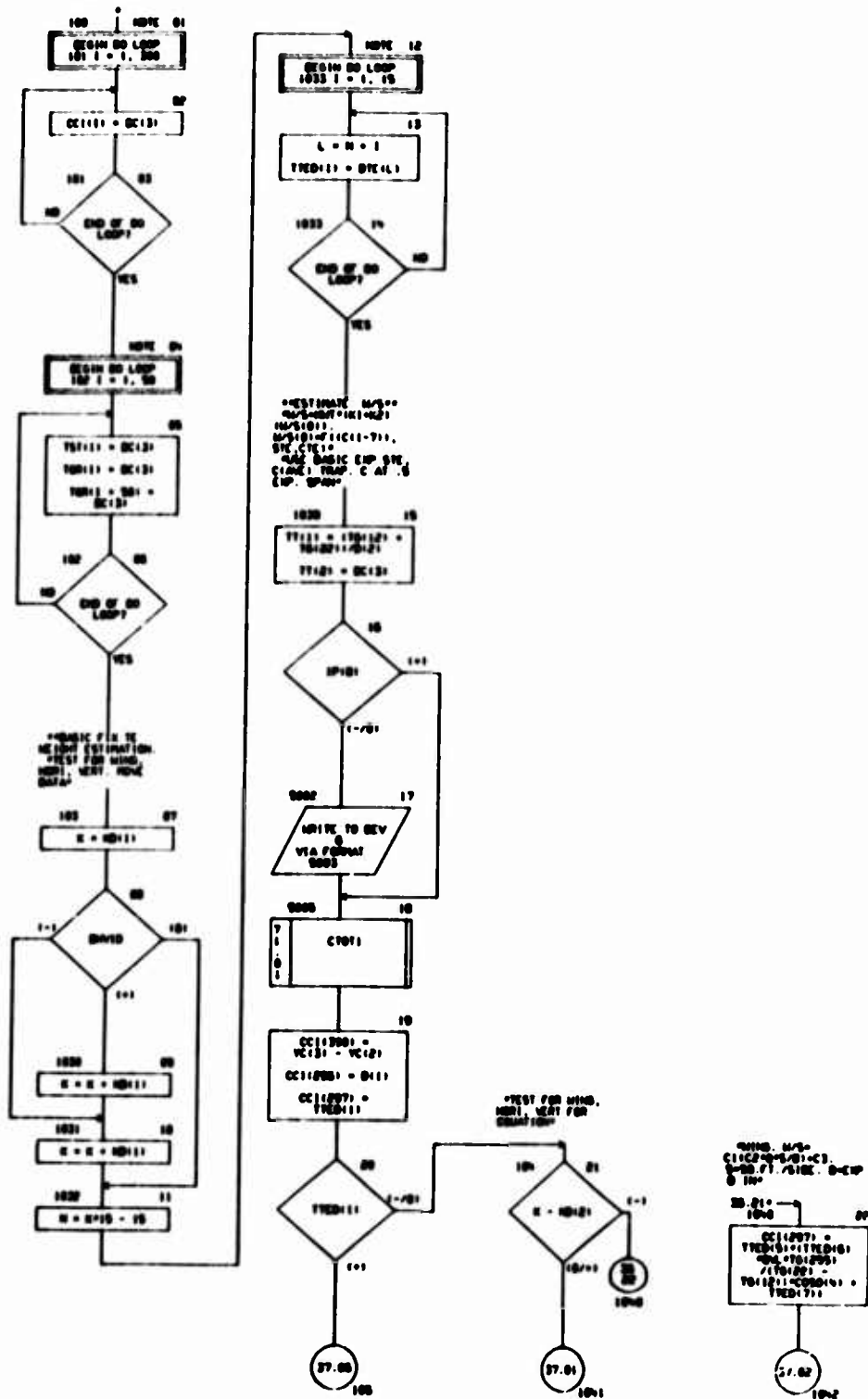
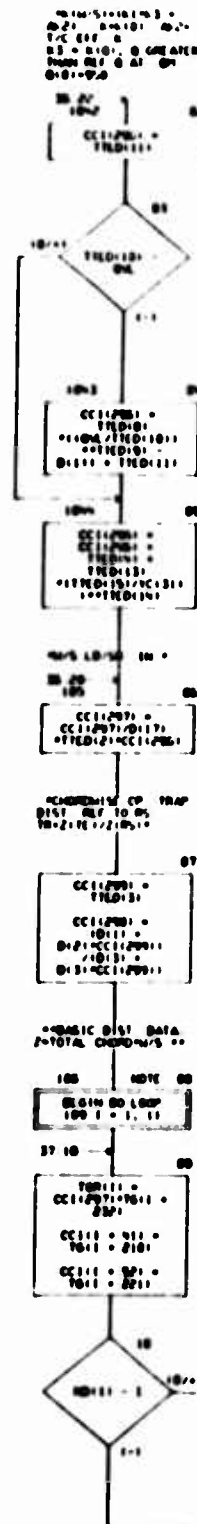
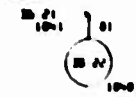


CHART TITLE - SUBROUTINE TEND

REMARK: TEND TEND VET
SOME DATA FROM AS
SOME



1277

CHART TITLE - NEW PROCEDURAL STATEMENTS

```

COMMON /PRINT / IP=00
DIMENSION T(670),D(2000),CD(2000),ND(100),CC(100),
VC(150),T(120),TG(100),TNG(400),VTC(60),
TST(50),TGR(100),CCM(50),CC(100),CCT(100),
DTE(45),DTE(150),DTE(120),DINT(12),TTE(40),DTE(15),
DPL(20),DALL(50),DSP(25),
TE(150),
TAND(0),CCLO(0),SIND(6),COS(6)
EQUIVALENCE (D(1),T(200)),(CD(1),T(400)),(ND(1),T(600)),
(VC(1),D(100)),(VTC(1),T(200)),(T(1),T(400)),(TG(1),T(100)),
(TNG(1),T(100)),(TST(1),T(100)),(TGR(1),T(100)),
(CCM(1),CD(1)),(CC(1),CD(100)),(CCT(1),CD(100)),
(DTE(1),D(125)),(DTE(1),D(150)),(DTE(1),D(150)),
(DINT(1),D(12)),(TTE(1),TGR(1)),(DTE(1),D(150)),
(TAND(1),T(120)),(CCLO(1),T(100)),
(SIND(1),T(100)),(COS(1),T(100)),
NAME A,D(200),VOM,D(200),VTC(1),T(100),DPL(1),D(100),DALL(1),D(100),DSP(1),D(100)
EQUIVALENCE (1,ND(200)),(ND(200),1),ND(200),1,ND(200),
1,ND(200),
TE(1),CD(100)),
(ND(1),D(200))
9003 FORMAT(1H,70X,END** CTOI (CALLED FROM TEND) - IP(0) **)
933 FORMAT (7H) ***TEND SUBR TE WEIGHT AND DISTRIBUTION SUMMARY A
945S -CCM, CCT, TE***,14X,END** TEND - IP(1) **/END CCM
974 FORMAT (1H,14X,END)
975 FORMAT (6H,CCT)
976 FORMAT (6H,TE)

```

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE TEST*****

SERVICE DESIGN AND DISTRIBUTION EVALUATION

PLATE V

00 00 - 4
••••• STRIKE FORCE
SECURITY, W/ CST..
DIST. CO AND
INERTIA

$W = 20 \times 15 = 30$
 $TRED(15) =$
 $DRED(15) = 0$
 $TRED(20) =$
 $DRED(15) = 0$

NOTE 1
BEGIN DO LOOP
113 1 = 1. 10

L E I
TWELVE 11

1120

TYPED: 1 • 201 •
 EXPON: 11
 TYPED: 1 • 201 •

170011 • 241 •



15

1280

```

***-3.4.5.6 MOVE
PAGE DATA (20)
FLAP-3.4.5.6 ***
**ALL-6. CHECK FOR
ELEV. ON FLAP FOR
HOLD ON VERT.
FOR 0-6. TYPE 00
PAGE 00-4.4.
ELEV. 0-6. FLAP.
IF 0-6.1.2.3.
SERVICE 0-6. FLAP.
INFO-1 FOR FLAP. 2
FORALL. 3 FOR ELEV. 4
FOR FLAP.

```

11-01-114 60

2 - 11-20 - 60

NOTE 10
BEGIN DO LOOP

FIELD NO. 201 -
SPLASH

CHECK FOR NO CALC AND DEVICE NO 8 FOR ALL JLEV AND *

100	100
E = 100	

170 = 2041

10

$E = 00$
 $H = 20$
 $WFO = 00 \times 31$

```

110      MOVE 17
      BEGIN DO LOOP
110 1 = 1.20

```

1

1280

TEST IF ALL DATA IS
FOR FLAP TYPE.

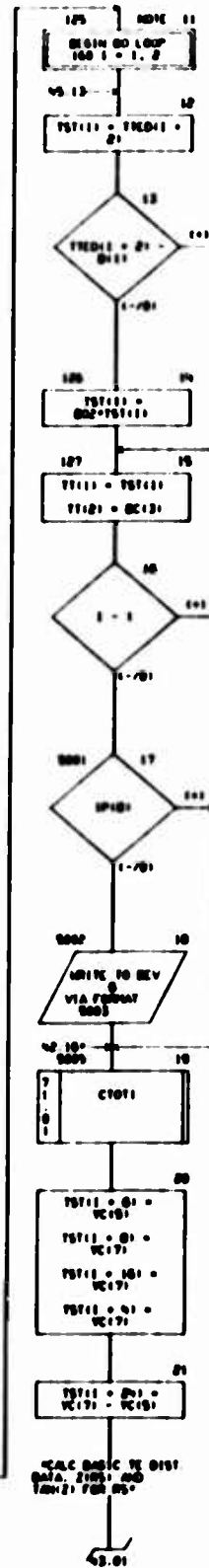
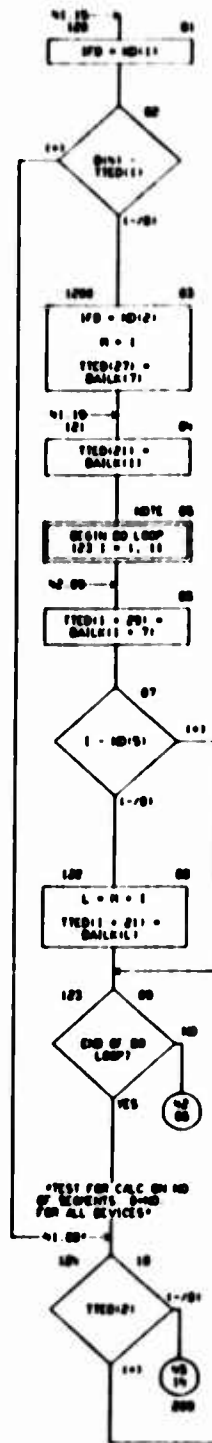
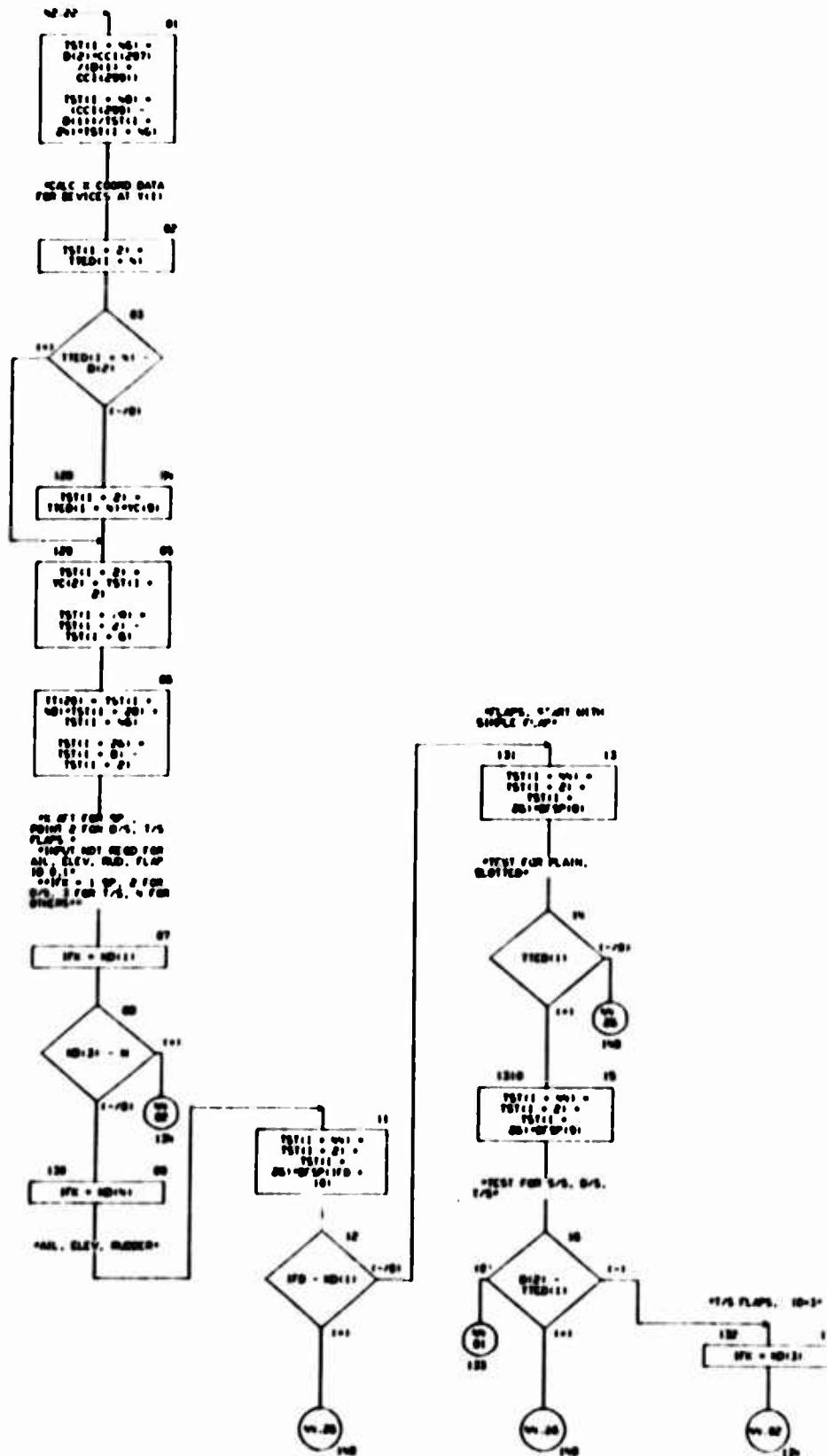
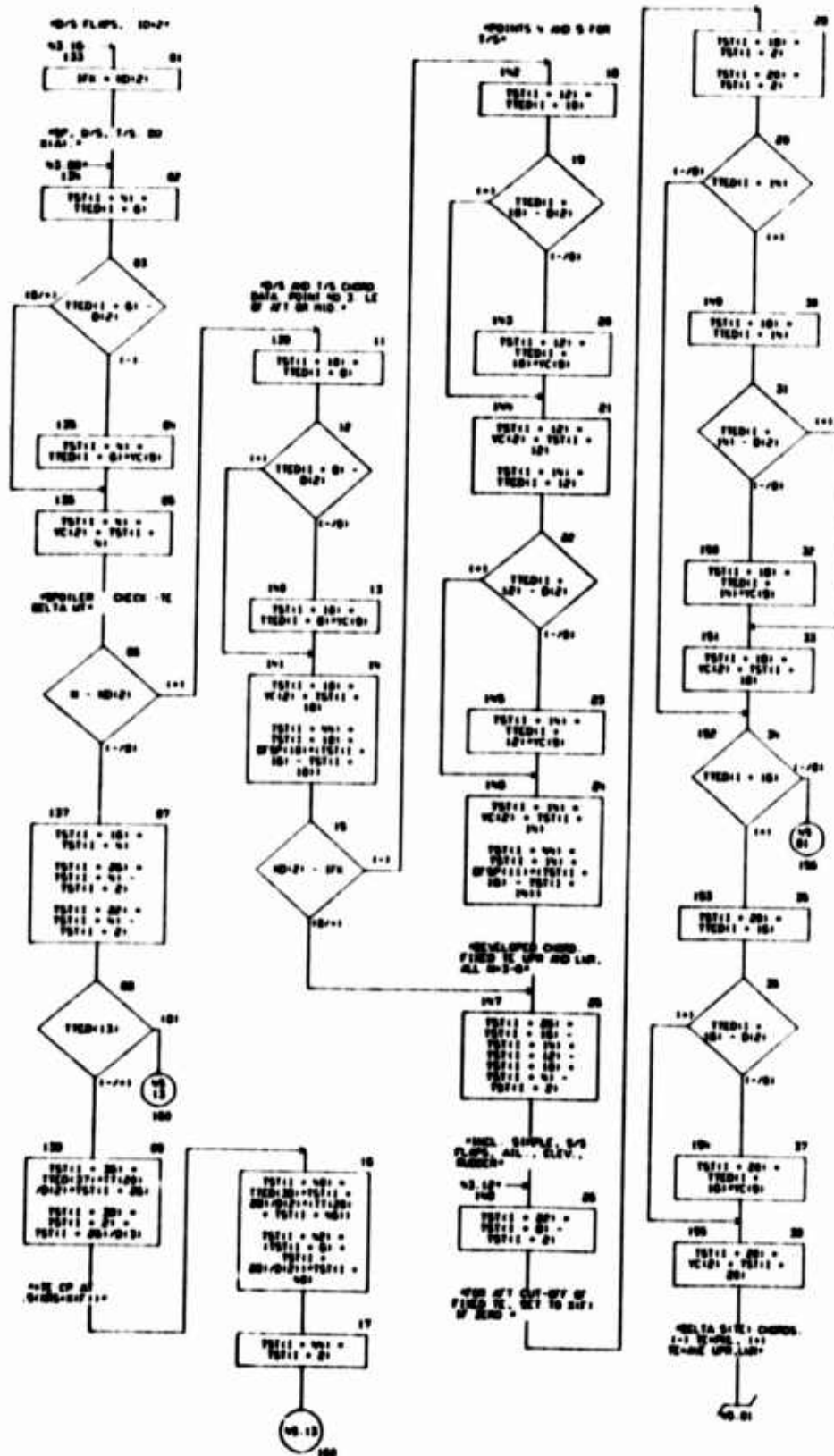


CHART TITLE - SUBROUTINE PAGE 4



COURT FILE - SUPERIOR COURT



[illegible]

CHART TITLE - NON-PROLIFERATION STATEMENTS

```

COPPER 1
COPPER 1/PRINT 1P1001
DIRECTION 1161201, D120101, CD12001, ND11001, DC11001,
VC11001, T11201, T112001, T112001, T112001,
T11201, T112001, CC11201, CC112001, CC112001,
DTE1101, DTE1101, DTE1101, DTE1101, DTE1101, DTE1101,
DTE1101, DTE1101, DTE1101, DTE1101,
TAND101, CC10101, SINE101, COS101,
EQUILIBRIUM 1011, T120111, 1011, T120111, 1011, T120111,
1011, D114011, VC111, T12011, T111, T12011, T12011, T12011,
T12011, T12011, T12011, T12011, T12011, T12011,
10011, CD111, CC111, CD11011, CC111, CD111,
1011, D112011, DTE111, D115011, DTE111, D1161011,
DTE111, D114311, TTE11, T11511, DTE11, D1173011,
1001, T11211, 10101, T11511, TAND11, T112011, CC1011, T11311,
101011, T114011, 1001011, T114011,
10011, D112011, 1001, D11011, VC111, T11511, DTE11, D1173011, DAI
LE11, D1173011, DTE11, D1173011
EQUILIBRIUM 11, D112011, 10, D112711, 11, D112011, 10, D113011,
10, D11311, 1010, D112711, 1010, D11311,
10010, D112011
0001 FORMAT(1H1, 70H, 30H) C1011 CALLED FROM T1011 - 1P1011

```

CHART TITLE - INTRODUCTORY COMMENTS

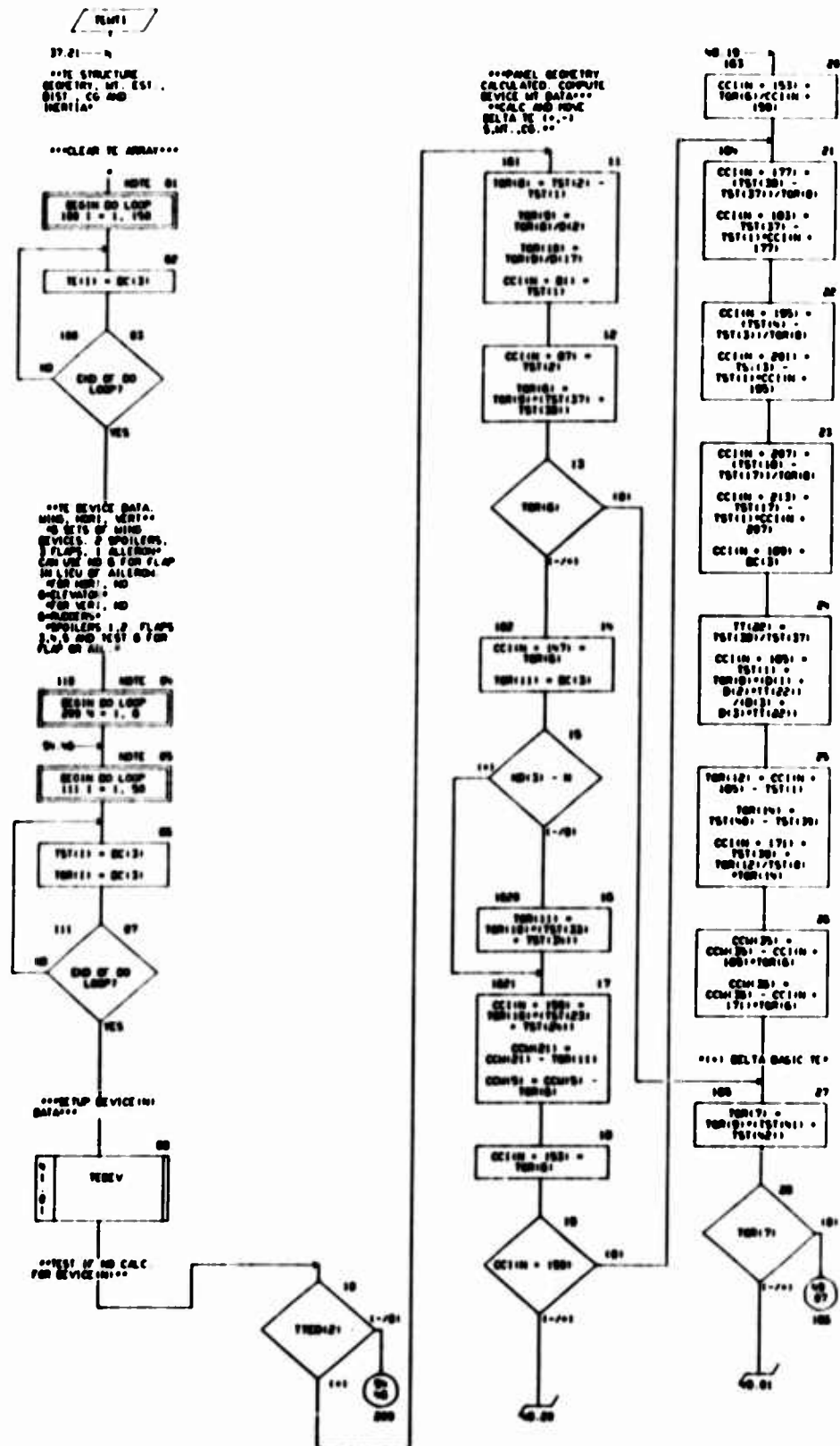
.....

*****SUBROUTINE TEST*****

TRAILING SPACE SERVICE MILEAGE ESTIMATION

.....

CHART TITLE - SUBROUTINE RENT1



The flowchart is divided into two main vertical sections. The left section contains a series of rectangular process blocks, each with a unique identifier (e.g., 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827

[illegible]

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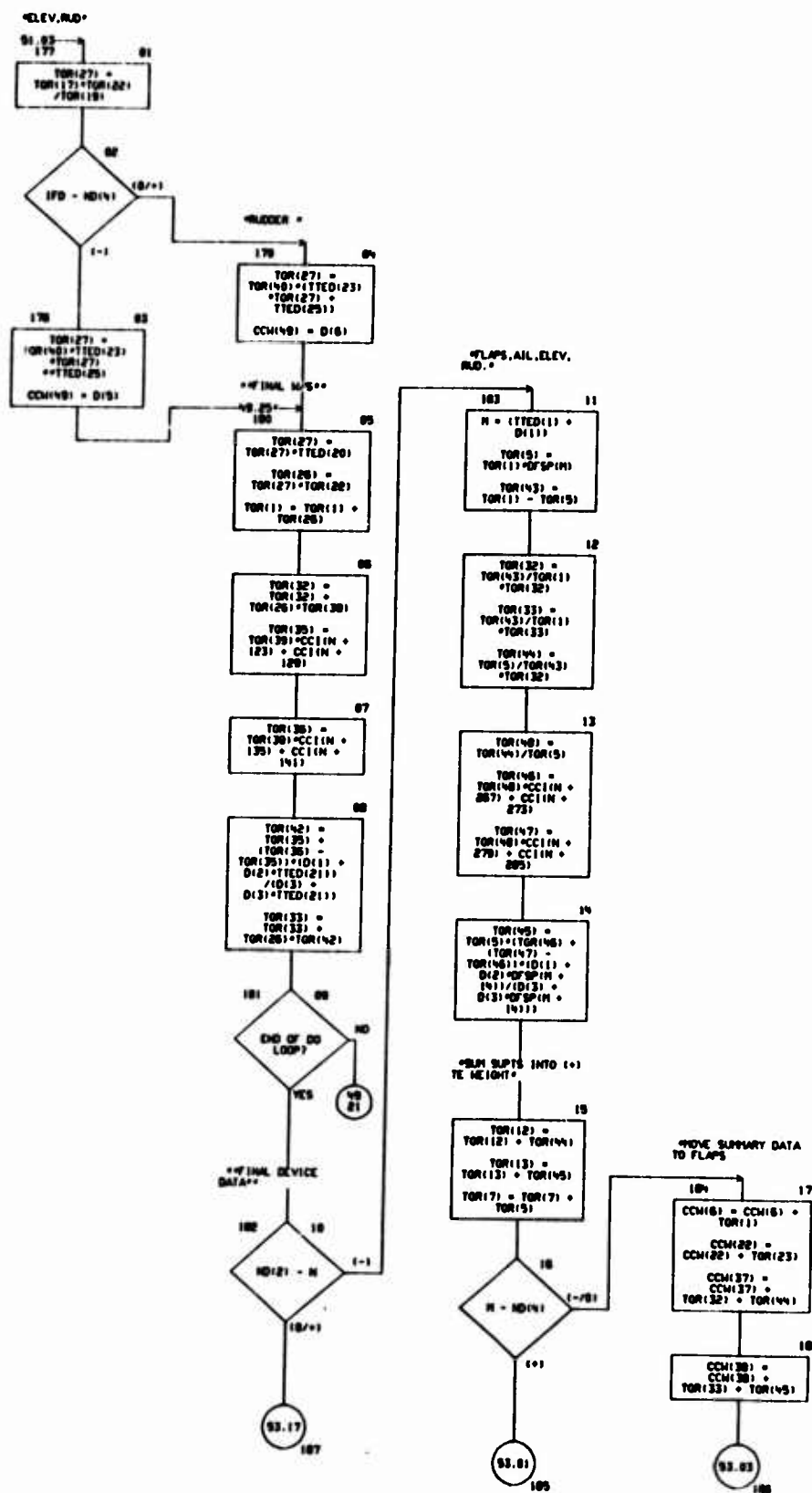


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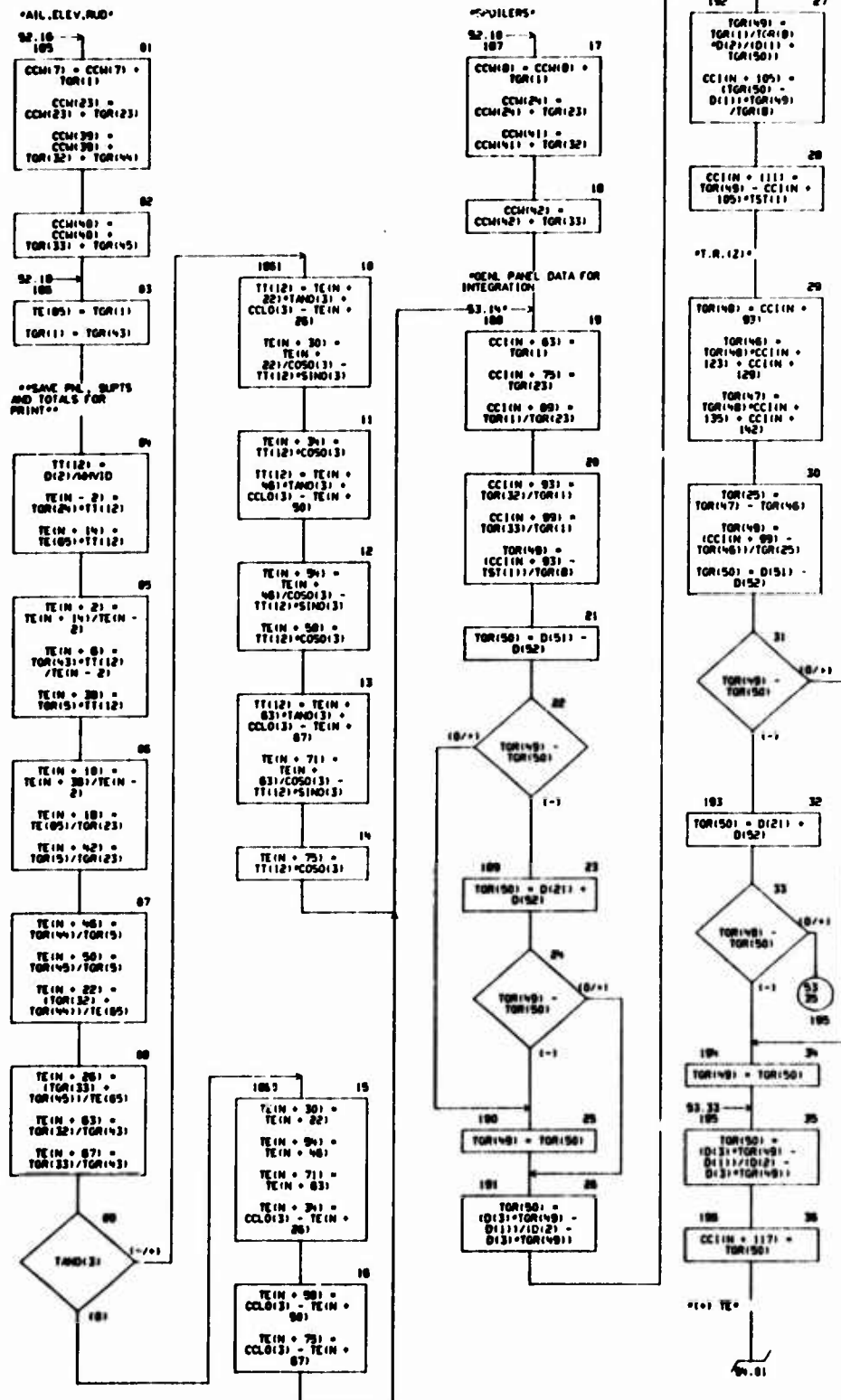


CHART TITLE - SUBROUTINE TEST1

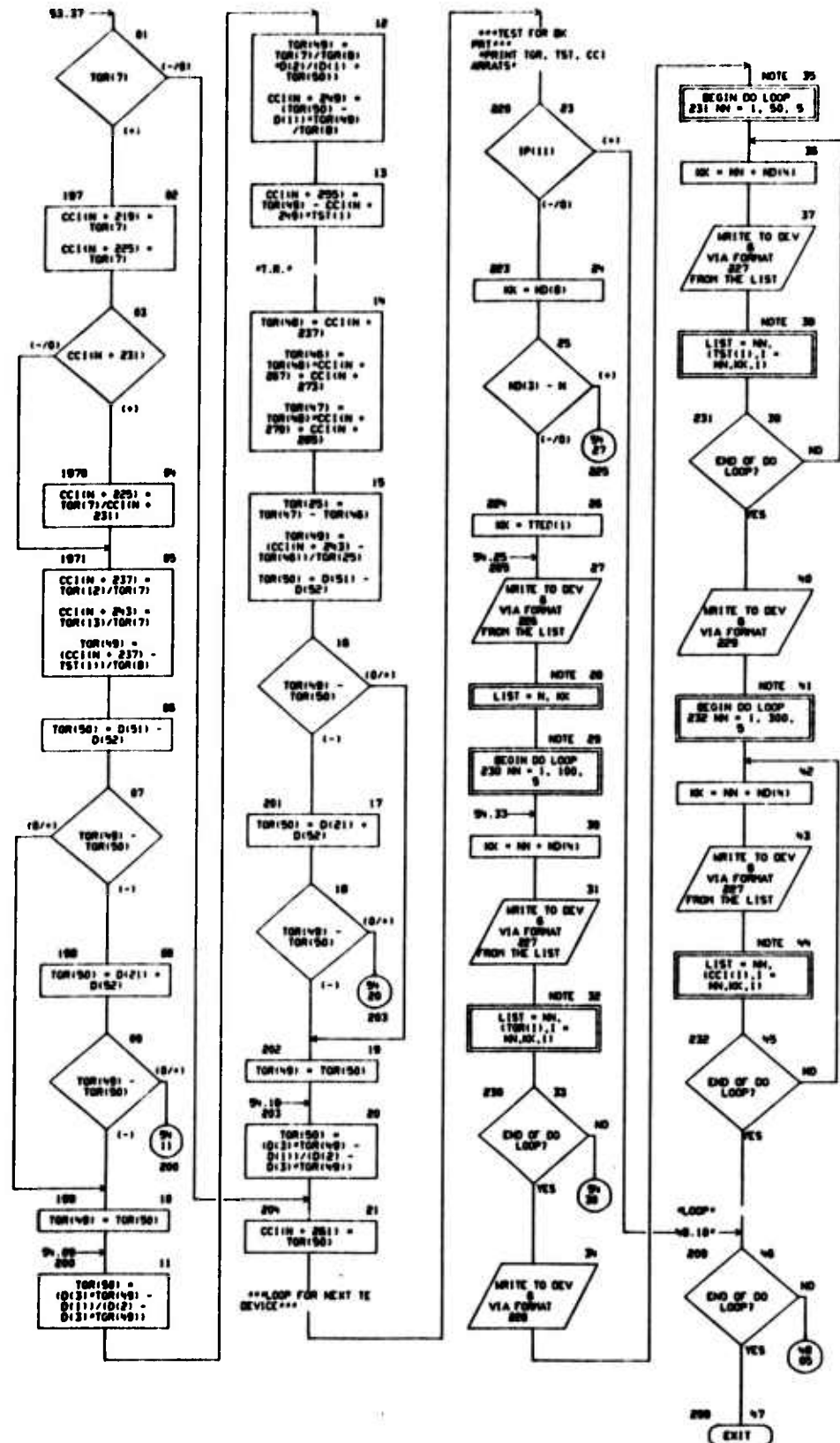


CHART TITLE - NON-PROCEDURAL STATEMENTS

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COMMON /IPRINT/ IP(100)
DIMENSION T(1620),D(2000),CD(2000),ND(100),DC(100),
VC(150),TT(24),TG(300),TND(400),VTC(60),
TST(50),TGR(100),CCM(50),CC(300),CCT(300),
DTE(40),DTED(30),DTED2(20),DINT(12),TTED(40),DSPDK(15),
DFLPK(20),DAILK(30),DFSP(25),
TE(150),
TAND(0),CCLO(0),SIND(0),COSD(0)
EQUIVALENCE (D(1),T(205)),(CD(1),T(412)),(ND(1),T(612)),
(CD(1),D(140)),(VC(1),T(201)),(TT(1),T(411)),(TG(1),T(1001)),
(TND(1),T(1301)),(TST(1),T(1701)),(TGR(1),T(1751)),
(CCM(1),CD(1)),(CC(1),CD(105)),(CCT(1),CD(351)),
(DTE(1),D(1295)),(DTED(1),D(1500)),(DTED2(1),D(1610)),
(DIN(1),D(1143)),(TTED(1),TGR(51)),(DSPDK(1),D(1730)),
(B02, 12), (B5102,T(151)),(TAND(1),T(122)),(CCLO(1),T(131)),
(SIND(1),T(140)),(COSD(1),T(146)),
INAREA,D(1240), (QAL,D(87)),(VTC(1),T(351)),(DFLPK(1),D(1745)),(DAI
LK(1),D(1705)),(DFSP(1),D(1705))
EQUIVALENCE (I,ND(20)),(N,ND(27)),(L,ND(28)),(K,ND(30)),
(IK,ND(31)),(IFD,ND(32)),(IFK,ND(33)),
(TE(1),CD(125)),(HAWID,T(57)),
(HAWID,D(205))
9003 FORMAT(1H1,70X,30H** CTOT) (CALLED FROM TEND) - IP(0) **
925 FORMAT (67H1 ***TEND) SUBR. TE DEVICE SUPPLY DATA ARRAYS--TGR,
TST, CC***,E3X,P0H** TEND - IP(1) **/16H0 *TE DEVICE,12,
ON TYPE,12,1H*/0H0 TGR )
927 FORMAT (1H 14,3C10.0)
928 FORMAT (6H0 TST )
929 FORMAT (6H0 CC )

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08/18/74

AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE RODDLE - PAGE 56

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE LETE*****

*****LE/TE HEIGHT INTEGRATION*****

CHART TITLE - SUBROUTINE LETE1

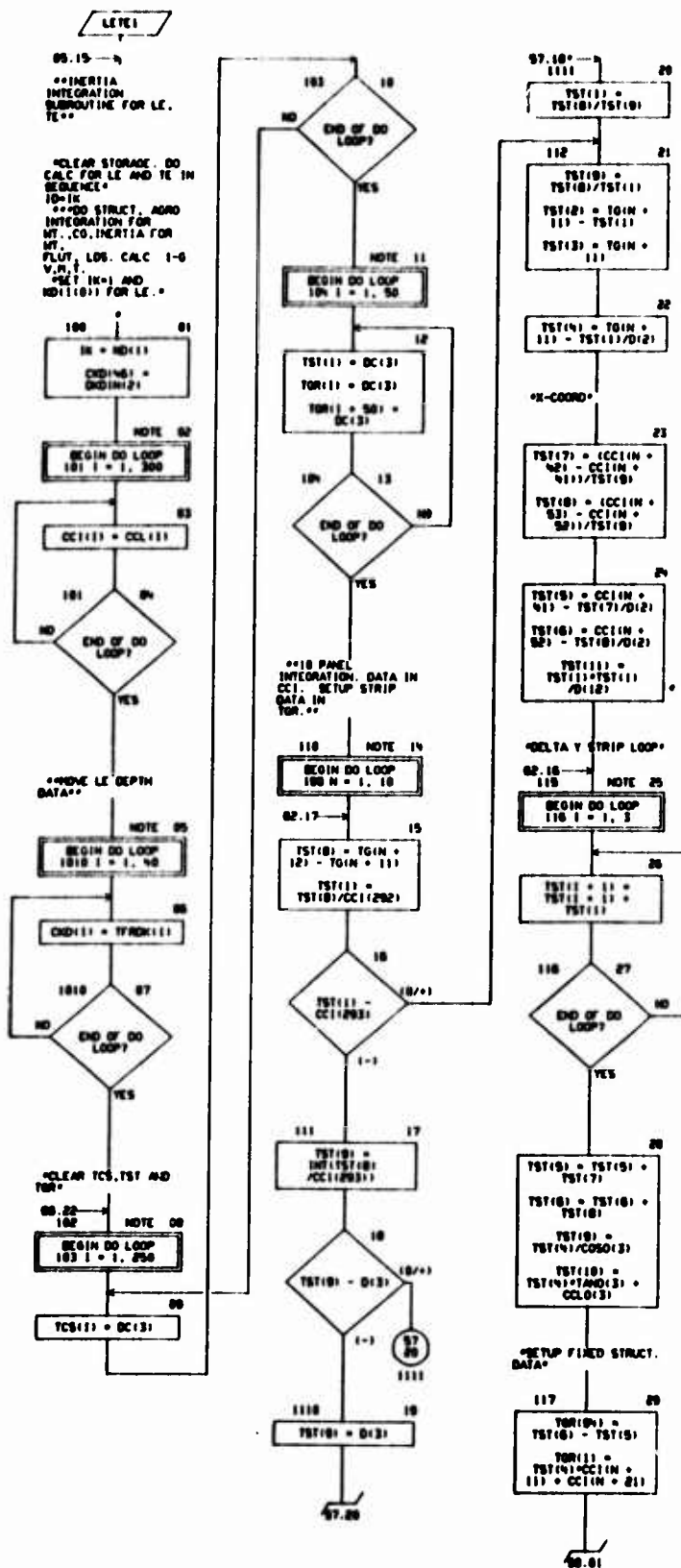
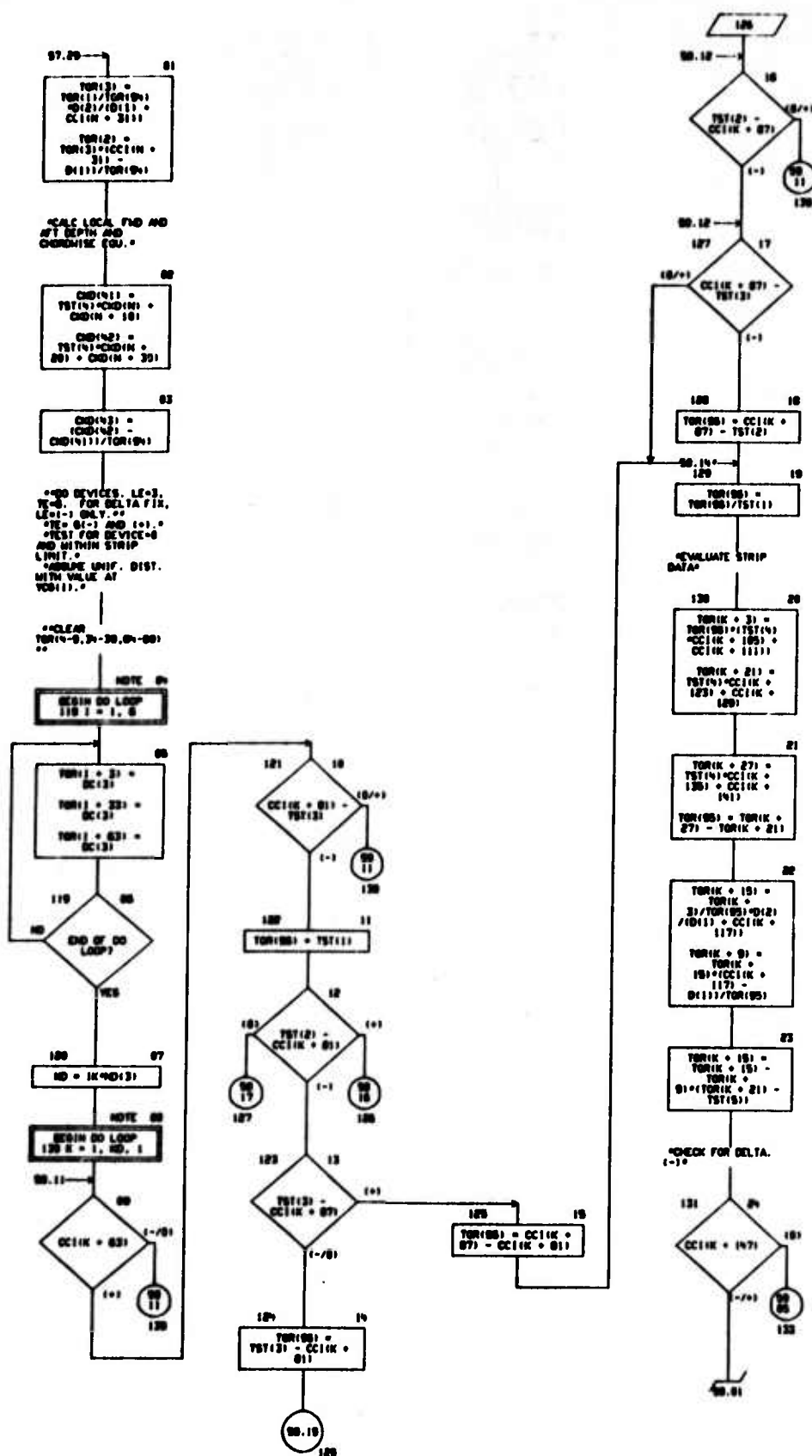
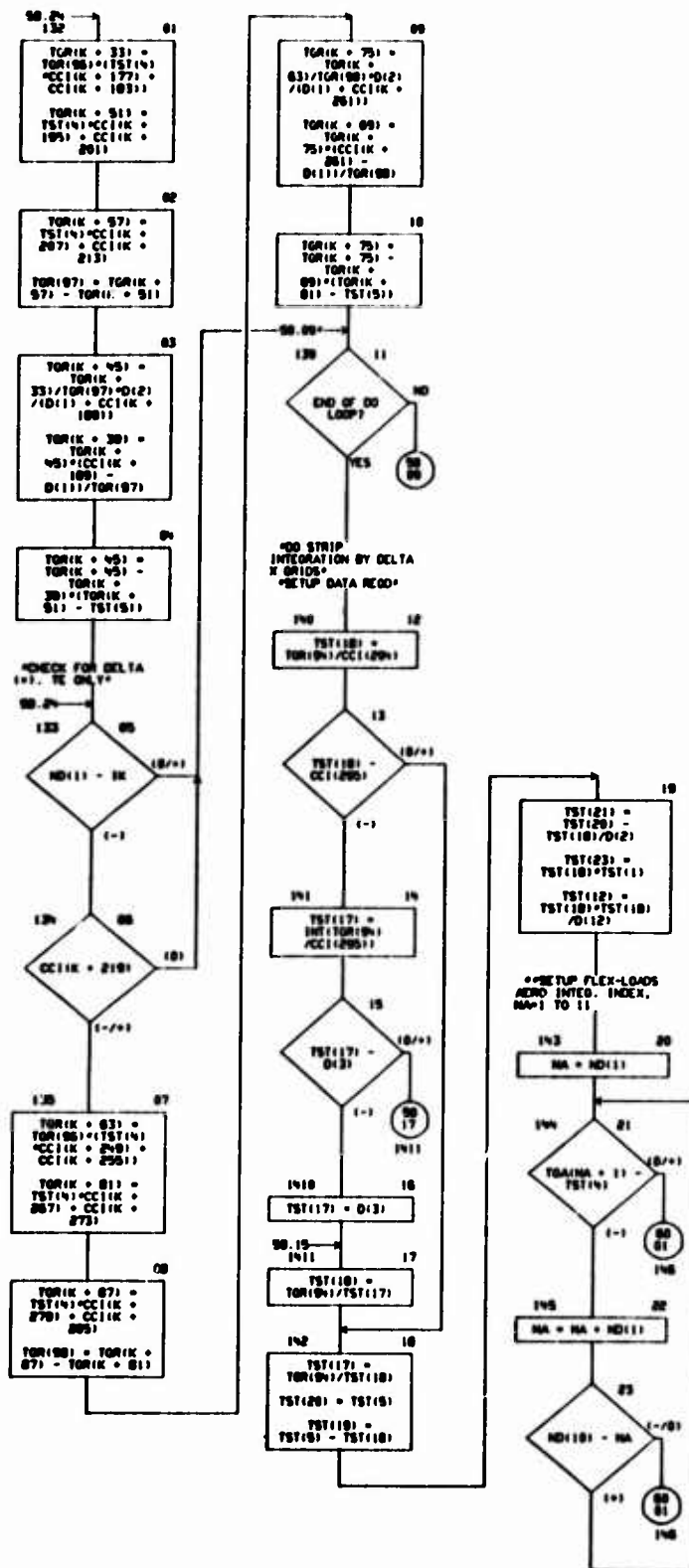


CHART TITLE - SUBROUTINE LEVEL



1298



LOOP ON DELTA X
BRIDG.

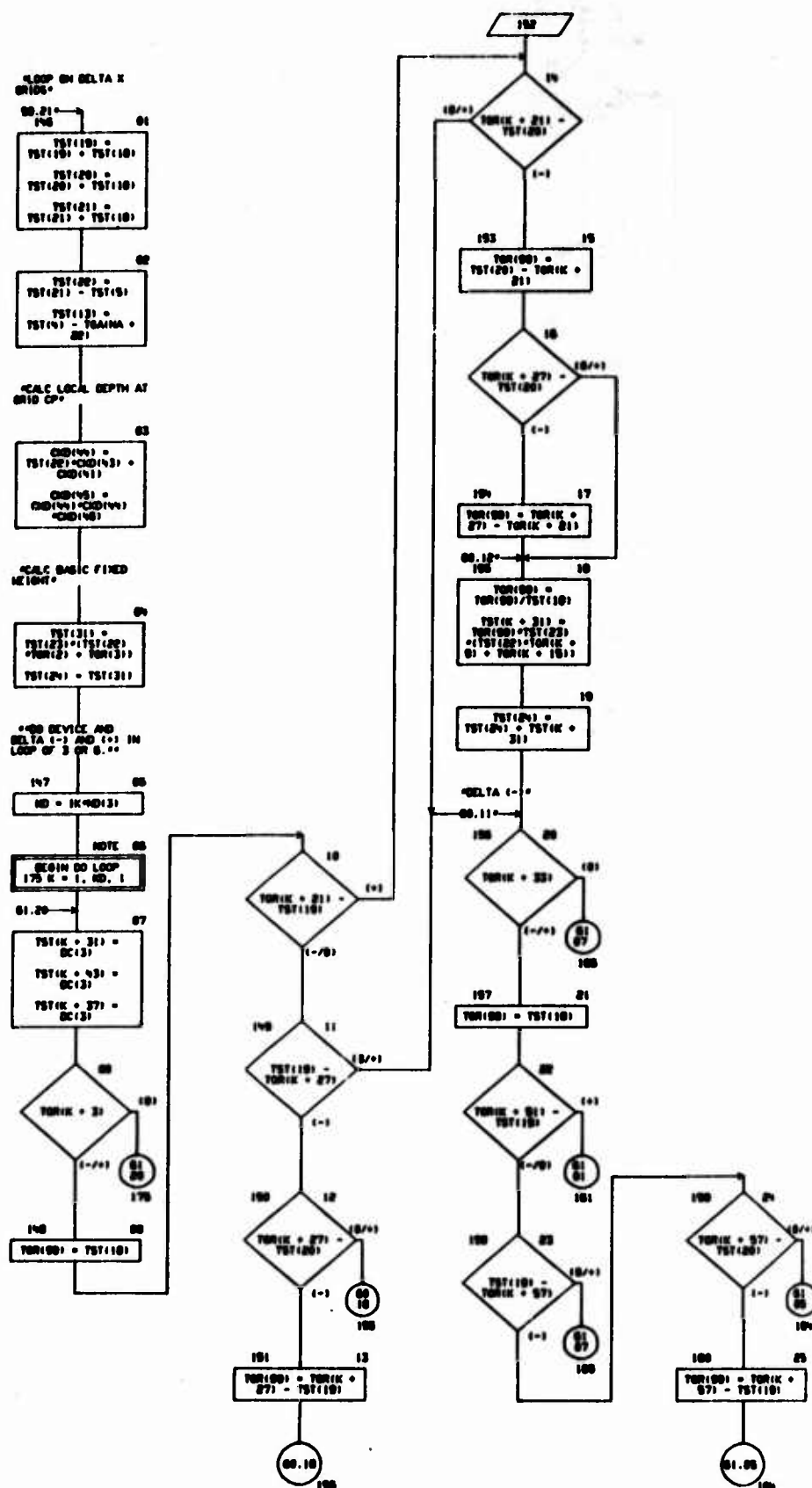


CHART TITLE - SUBROUTINE LEVEL

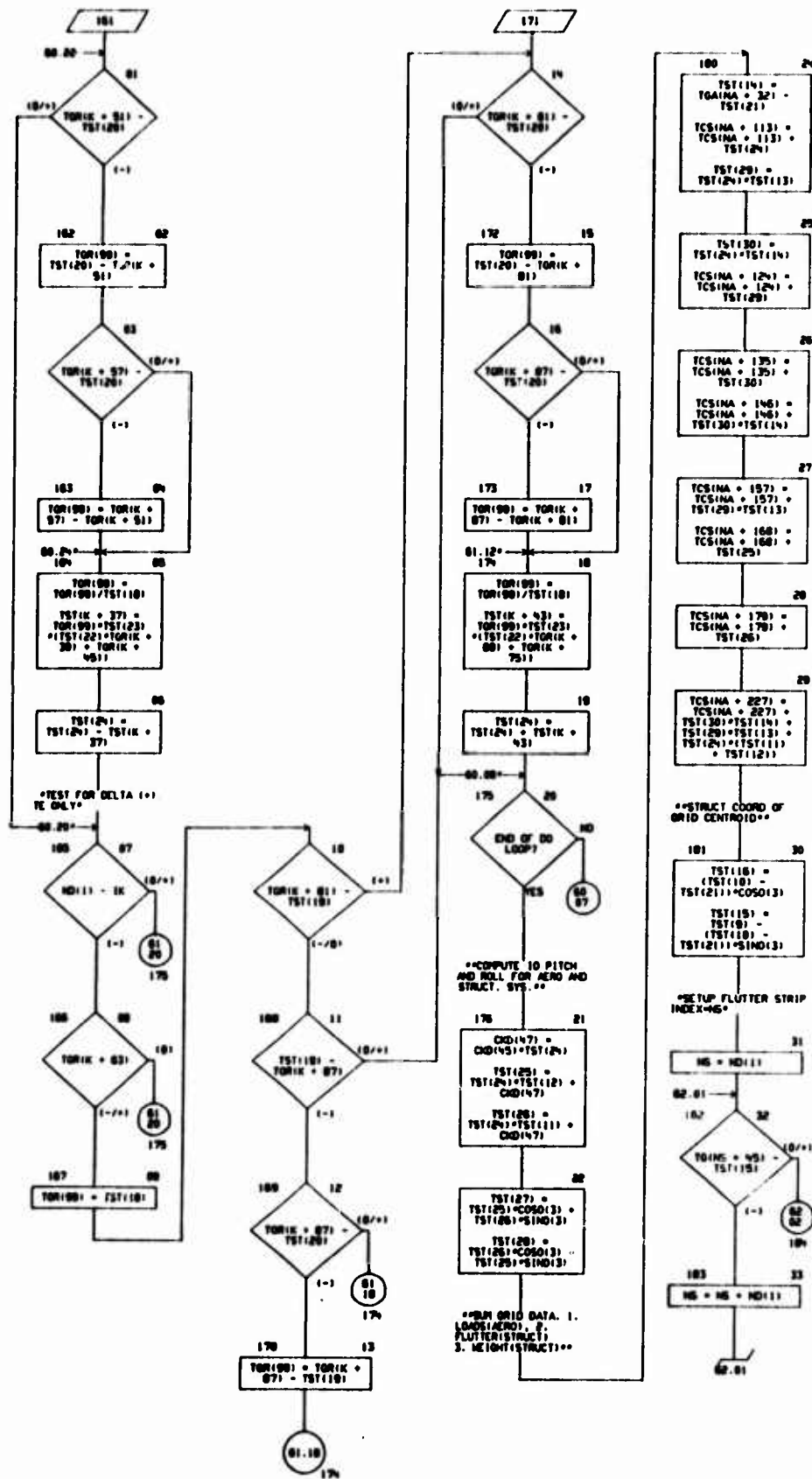


CHART TITLE - SUBROUTINE LETCI

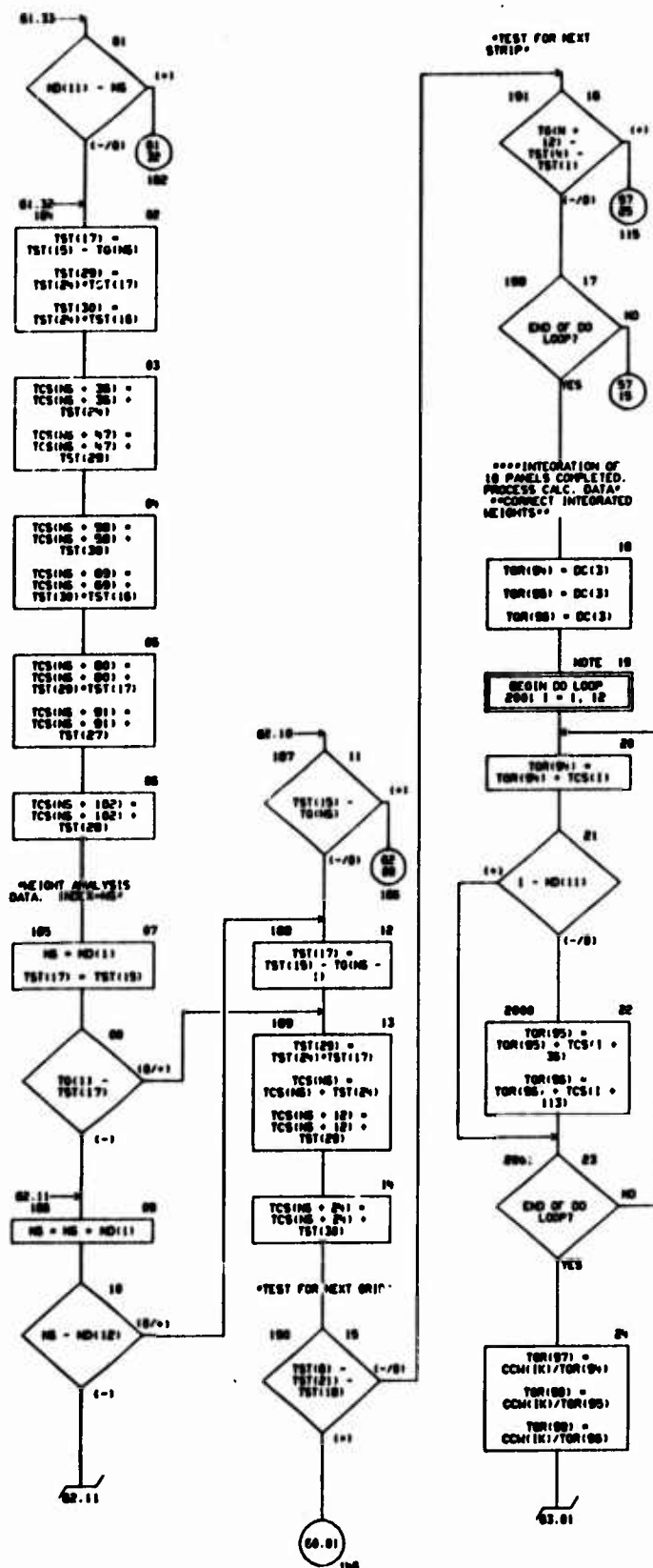


CHART TITLE - SUBROUTINE LETEI

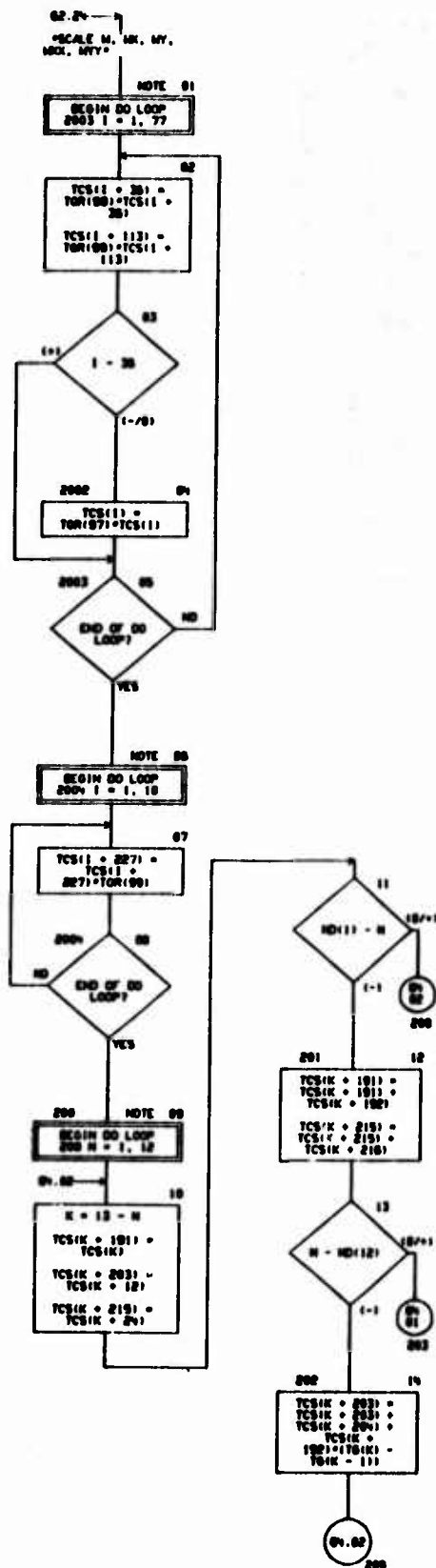


CHART TITLE - SUBROUTINE LEVEL

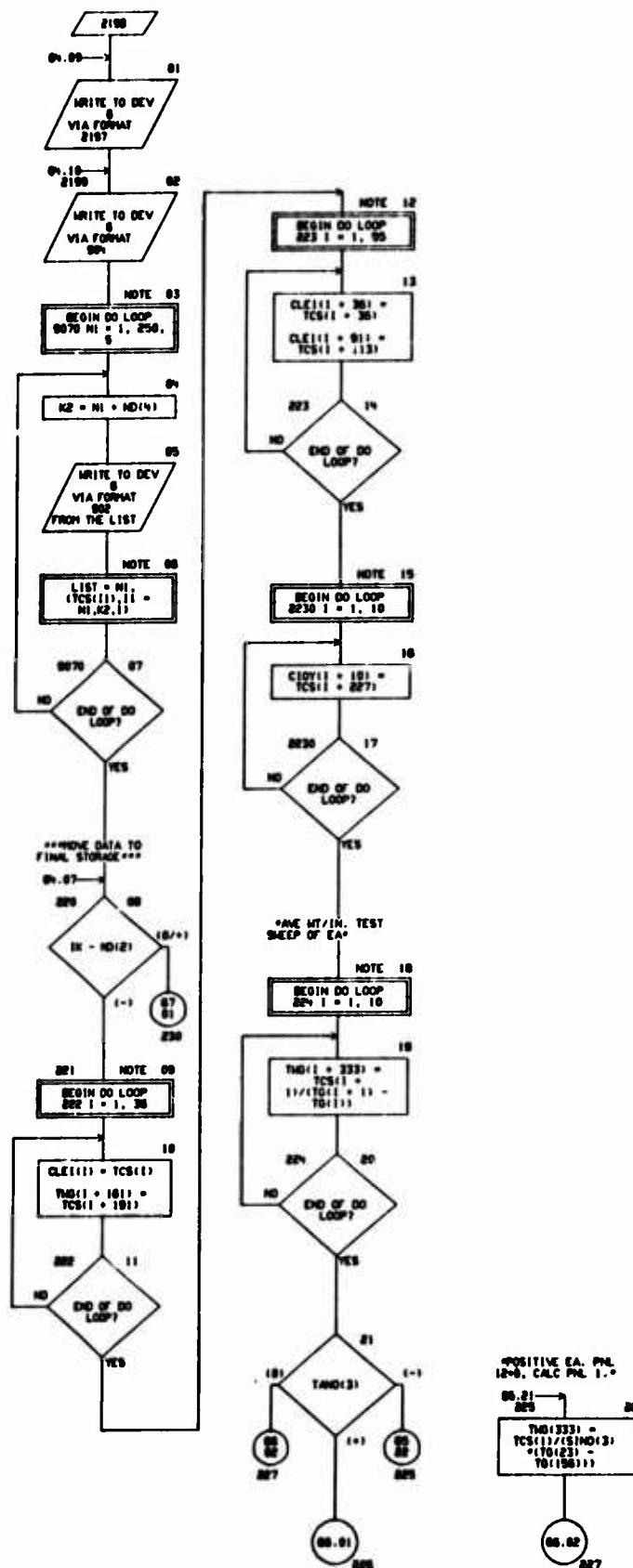


CHART TITLE - SUBROUTINE LETCI

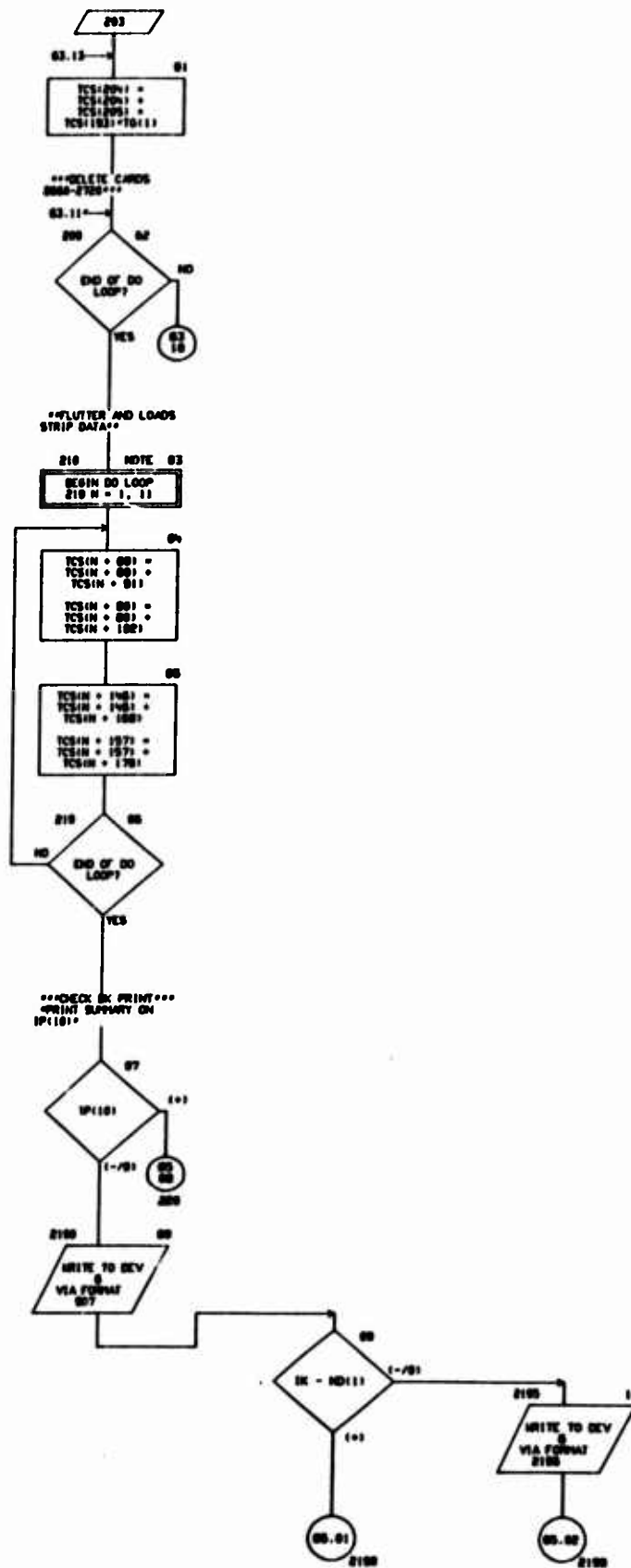
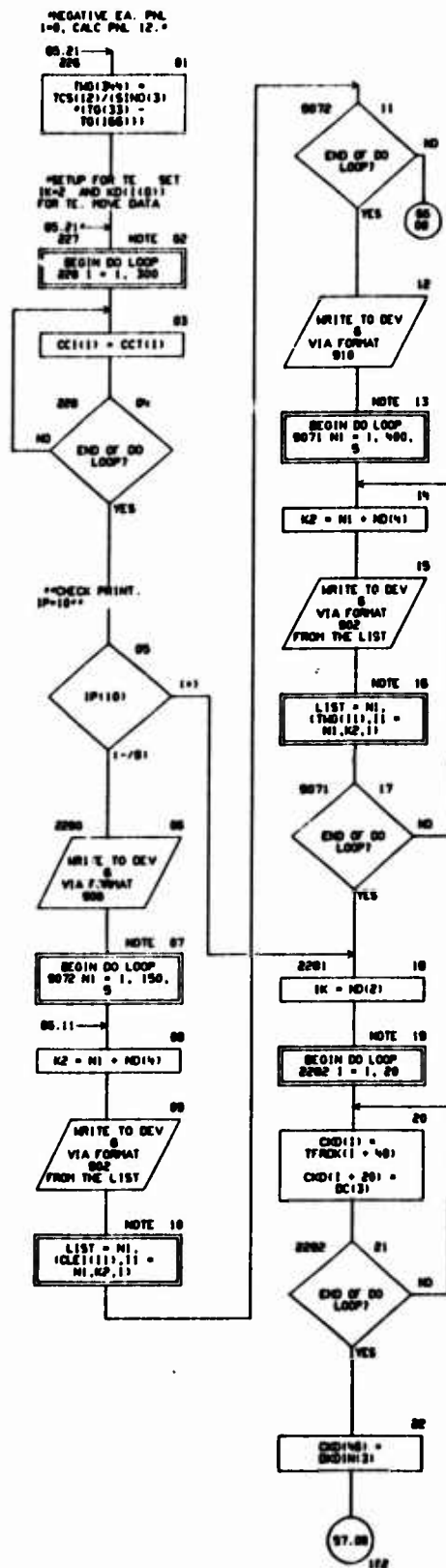
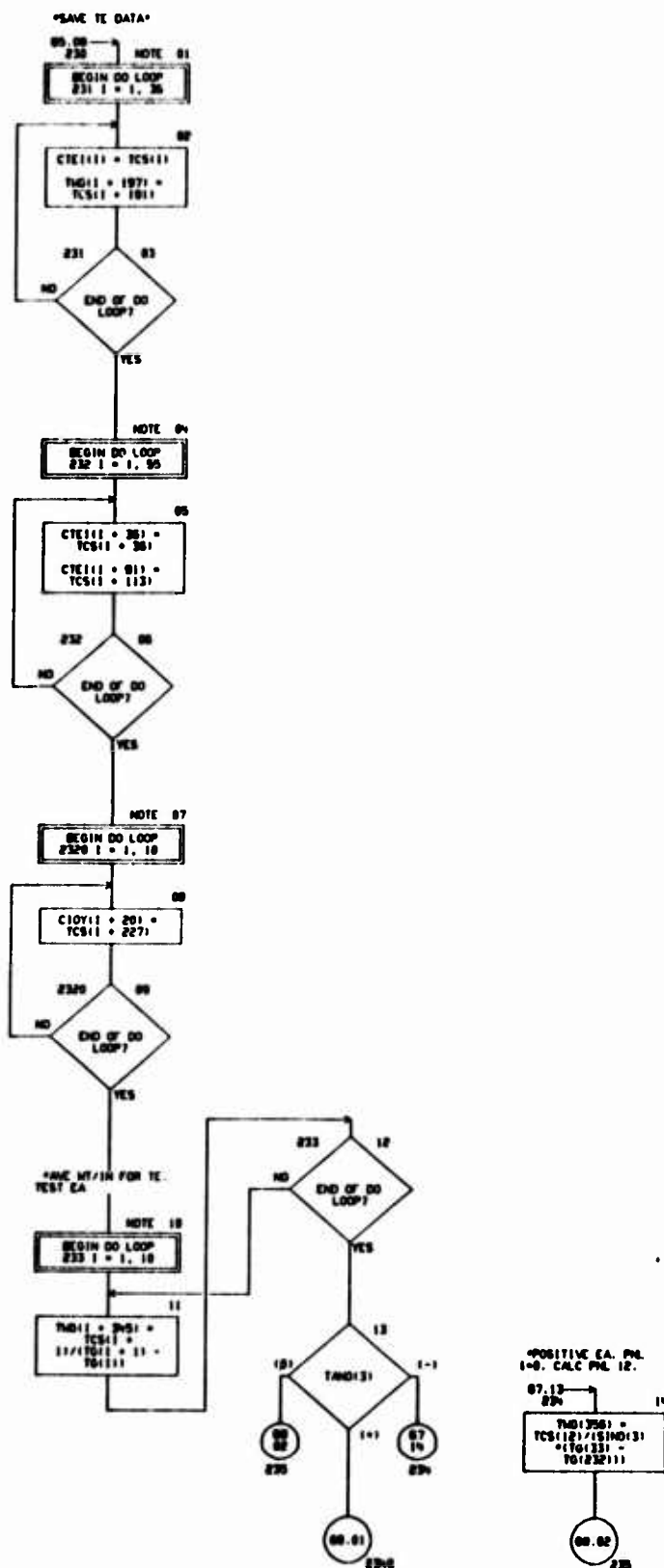


CHART TITLE - SUBROUTINE LCTEI



CNMT TITLE - SUBROUTINE LETEI



REC. EA. FILE 12-8.
CALC FILE 1.



CHART TITLE - NON-PROCEDURAL STATEMENTS

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COMMON T
COMMON /PRINT/ IP(80)
DIMENSION T(6220),D(2060),CD(2000),ND(100),DC(100),
CC(1300),TCS(250),TST(50),TOR(100),CLE(1150),CTE(1150),CCL(300),
TGA(125),TFRCK(80),CXD(50),DXDIN(15),
CCH(50),
C10Y(150),
TAND(0),CCLD(0),SIND(0),COSD(0),T0(300),TND(400),CCT(300)
EQUIVALENCE (D(1),T(200)),(CD(1),T(412)),(ND(1),T(612)),
(DC(1),D(140)),(T0(1),T(100)),(TND(1),T(130)),(TST(1),T(170)),
(TOR(1),T(175)),(TAND(1),T(122)),(CCLD(1),T(131)),
(SIND(1),T(140)),(COSD(1),T(146)),
(CC(1),CD(105)),(TCS(1),CD(140)),(CLE(1),CD(051)),
(TGA(1),T(105)),(TFRCK(1),T(1005)),
(CXD(1),CD(105)),(DXDIN(1),D(1070)),
(CCH(1),CD(1)),(C10Y(1),T(50)),
(ND(10),T(57)),
(CTE(1),CD(001)),(CCL(1),CD(51)),(CCT(1),CD(351))
EQUIVALENCE (1,ND(20)),(IN,ND(27)),(INA,ND(201)),(INS,ND(201)),
(ND,ND(30)),(IK,ND(31))
2186 FORMAT (20H          **LEADING EDGE**)
2187 FORMAT (20H          **TRAILING EDGE** )
002 FORMAT (1H 14,SE10.0)
004 FORMAT (04H TCS )
007 FORMAT (50H)      **PLE/TE INERTIA INTEGRATION SUBR FINAL DATA**,
      20H** LE TE - IP(10) **
008 FORMAT (04H CLE1)
009 FORMAT (04H CTE1)
010 FORMAT (04H TND )

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06/18/74

AUTOFLW CHART SET - SWEEP WING AND EMPENNAGE MODULE - PAGE 70

CHART TITLE - INTRODUCTORY COMMENTS

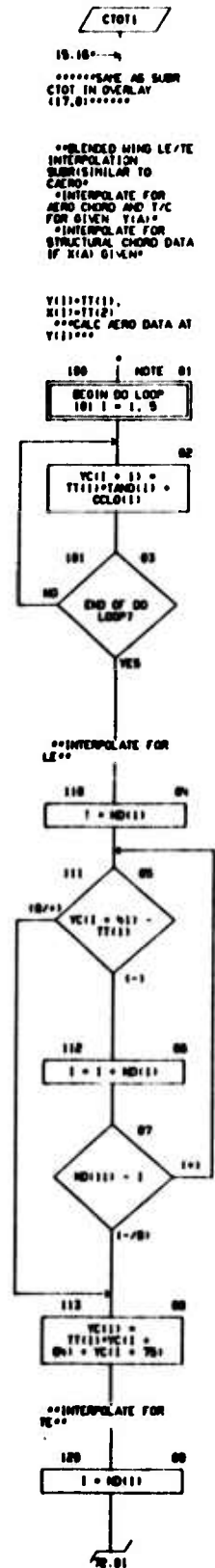
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*****SUBROUTINE C10T1*****

PLATFORM CHORD EVALUATION

.....

CHART TITLE - SUBROUTINE CTOT1



1311

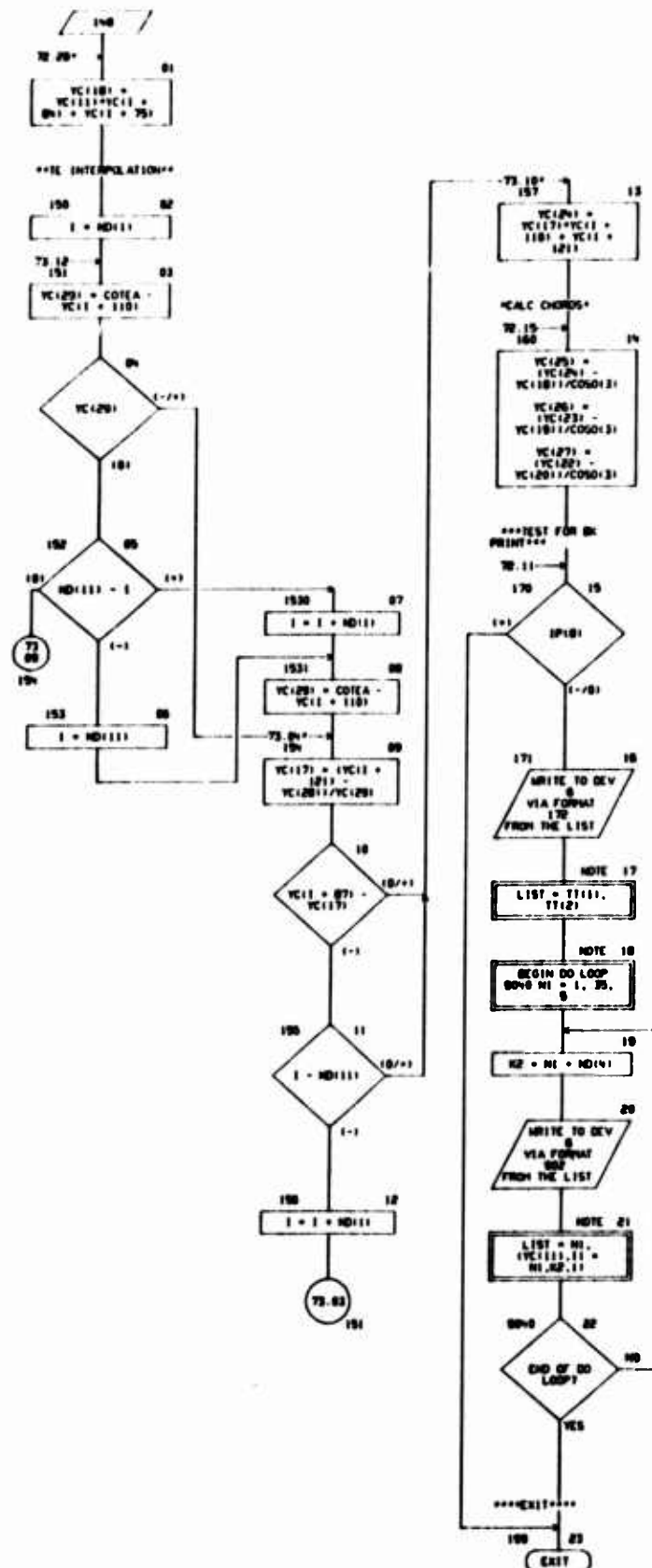


CHART TITLE - NON-PROCEDURAL STATEMENTS

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COMMON /SPRINT/ IP(80)
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VC(150),TT(24),VTC(60),
TAND(9),CCLO(9),SIND(9),COSD(9)
EQUIVALENCE (D(1),T(2001)),(CD(1),T(4121)),(ND(1),T(6121)),
(VC(1),T(201)),(TT(1),T(411)),(DC(1),D(1401)),(VTC(1),T(351)),
(TAND(1),T(1201)),(CCLO(1),T(131)),(SIND(1),T(1401)),
(COSD(1),T(1481)),
(ICDTEA,T(152))
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002 FORMAT(1H 14,9E10.0)

```

OVERLAY (15,0)

FUEL, CONTENTS AND CONCENTRATED MASSES,
WEIGHT AND MASS PROPERTIES ANALYSIS

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PROGRAM TABLE OF CONTENTS AND
REFERENCES, AND TABLE OF DIAGNOSTICS

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FORTRAN MODULE WING AND FEPPENAGE MODULE -

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - PROCEDURES

(000021) 2.04 10 (000019) 2.03 (000019) 2.03
 (000029) 2.00 20 (000027) 2.07 (000027) 2.07

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE MCON:

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 (000073) 5.04 (000074) 5.05
 (000074) 5.05 401
 (000070) 5.00 (000082) 5.11
 (000081) 5.10 402
 (000082) 5.11 403 (000080) 5.00
 (000080) 5.13 500
 (000112) 5.20 (000113) 5.23
 (000113) 5.23 501
 (000120) 5.25 400

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE MISCHT

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 (000162) 0.03 101
 (000104) 0.05 (000105) 0.06
 (000105) 0.06 102
 (000100) 0.00 (000170) 0.00
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 (000100) 0.11 103
 (000102) 0.12 1030
 (000103) 0.13 104
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 (000201) 0.17 9505 (000197) 0.15
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 (000211) 0.27 106
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 (000252) 0.00 (000270) 0.13
 (000270) 0.13 110
 (000273) 0.14 111
 (000277) 0.15 112 (000192) 0.12 (000193) 0.13 (000230) 0.40
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 (000280) 0.23 (000291) 0.26
 (000291) 0.26 0004
 (000294) 0.29 (000295) 0.32
 (000295) 0.32 0000
 (000290) 0.33 113 (000303) 0.10
 (000301) 0.30 (000404) 13.16
 (000303) 0.37 (000305) 0.30
 (000305) 0.30 114
 (000300) 0.40 115
 (000314) 10.02 116

05/10/7-	TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP				PAGE 2
CARD NO	PAGE/BOX	NAME	REFERENCES (SOURCE SEQUENCE NO. AND PAGE/BOX)				
(000315)	10.03	117	(000313)	10.01			
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(000318)	10.06	119	(000316)	10.04			
(000321)	10.08	9510					
(000322)	10.09	9512					
(000326)	10.10	9515	(000320)	10.07	(000321)	10.08	
(000329)	10.13	120					
(000330)	10.14	121	(000328)	10.12			
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(000340)	10.18	1214	(000332)	10.15			
(000342)	10.19	1215	(000333)	10.16	(000335)	10.17	(000337) 11.01 (000339) 11.02
(000348)	10.24	122					
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(000360)	11.03	1234	(000352)	10.26			
(000362)	11.04	1235	(000353)	10.27	(000355)	10.28	(000357) 10.29 (000359) 10.30
(000365)	11.19	124					
(000368)	11.21	125					
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(000406)	12.02	129	(000404)	11.23			
(000420)	12.10	1290					
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(000421)	12.13	1291					
(000427)	12.14	1294	(000419)	12.09			
(000429)	12.15	1295	(000420)	12.10	(000424)	12.11	(000426) 12.12 (000428) 12.13
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(000505)	14.05	136	(000503)	14.03			
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(000509)	14.08	9522					
(000513)	14.08	9525	(000507)	14.05	(000508)	14.07	
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 (000585) 15.25 (000586) 15.26
 (000588) 15.26 505
 (000590) 15.28 (000591) 15.29
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 (000593) 15.31 (000595) 15.32
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 (000614) 16.13 9104
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CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE MISCIT

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 (000670) 18.02 131
 (000673) 18.04 140 (000669) 18.01
 (000677) 18.06 (000678) 18.07
 (000679) 18.07 141
 (000686) 18.10 (000692) 18.13
 (000692) 18.13 1410
 (000697) 18.15 (001144) 27.17
 (000700) 18.18 9502
 (000711) 18.20 5505 (000707) 18.18
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 (000773) 20.14 144 (000733) 20.01
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 (000900) 22.09 156 (000876) 21.26 (000880) 22.01 (000881) 22.02
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 (000906) 22.14 1501 (000902) 22.11
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 (000911) 22.18 160
 (000919) 22.20 1600 (000908) 22.15 (000909) 22.16
 (000922) 22.21 1601 (000918) 22.19
 (000931) 22.24 1600
 (000935) 23.01 161 (000900) 22.09 (000903) 22.12 (000930) 22.23
 (000942) 23.02 162
 (000943) 23.03 (001119) 27.05
 (000944) 23.04 163
 (000945) 23.05 (000946) 23.06
 (000946) 23.06 164
 (000950) 23.08 1640
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(000965)	23.17	170					
(000967)	23.18	171					
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(000980)	23.25	177	(000977)	23.23			
(000985)	23.26	178	(001014)	24.14			
(000987)	24.02	1780					
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(001012)	24.13	1790					
(001013)	24.14	1791					
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(001031)	24.23	183					
(001038)	24.24	186	(001030)	24.22			
(001039)	24.25	187					
(001041)	24.27	188					
(001043)	24.28	189					
(001044)	24.29	190	(001034)	24.31			
(001032)	24.30	184					
(001047)	25.01	191	(001040)	24.26	(001043)	24.28	
(001048)	25.02	192					
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(001101)	26.23	1974					
(001102)	26.24	1975					
(001108)	27.01	1976	(001099)	26.21	(001100)	26.22	(001101) 26.23
(001115)	27.03	1978					
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CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE COL

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(001258) 31.16 403	
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(001277) 31.27 404	
(001278) 31.28 405	(001276) 31.26
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(001282) 32.02 0002	
(001285) 32.03 0005	(001280) 31.29 (001201) 32.01
(001288) 32.05 406	
(001290) 32.06 407	(001297) 32.04
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(001333) 32.24 417	(001332) 32.18 (001326) 32.22
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(001374) 33.09 421	(001394) 33.06
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(001395) 33.13 424	
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(001398) 33.16 4240	(001394) 33.12
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CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE FDIS

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(001694)	41.15	1121							
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(001702)	41.19	113							

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(001711)	41.23	116	(001703)	41.19	(001707) 41.21
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(001758)	42.17	124-8			
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(001767)	42.22		(001768)	42.23	
(001768)	42.23	125-0			
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(001772)	42.26	126			
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(001782)	43.02		(001783)	43.03	
(001783)	43.03	128			
(001785)	43.05		(001791)	43.07	
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(001794)	43.08		(001795)	43.10	
(001795)	43.10	129			
(001799)	43.12		(001800)	43.13	
(001800)	43.13	129-0			
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(001804)	43.16	130			
(001805)	43.18	130-0			
(001807)	43.19	1301	(001805)	43.17	
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(001847)	43.43	0002			
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(001899)	45.15	154			
(001913)	45.16	155			
(001922)	45.17	1562	(001913)	45.16	
(001924)	45.19	156			
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(001917)	45.21		(001919)	45.22	

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(001034)	45.07	162			
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(001038)	45.11	163			
(001040)	45.12	164	(001037)	45.10	
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(001054)	45.21	1653	(001052)	45.10	
(001058)	45.23		(001073)	45.31	
(001057)	45.27	165			
(001060)	45.28	167	(001065)	45.25	
(001073)	45.31	168			
(001078)	45.33		(001080)	47.04	
(001080)	45.35		(001087)	47.01	
(001081)	45.35	169			
(001084)	45.38	170			
(001085)	45.39	171	(001083)	45.37	
(001087)	47.01	172	(001088)	45.35	(001083) 45.37
(001088)	47.03	1700			
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(001093)	47.05	180			
(001097)	47.08		(001098)	47.00	
(001098)	47.08	1800			
(002002)	47.11		(002003)	47.12	
(002003)	47.12	1801			
(002007)	47.14		(002008)	47.15	
(002008)	47.15	181			
(002012)	47.17		(002016)	47.00	
(002018)	47.20	182			
(002022)	47.23	183			
(002025)	47.25		(002029)	47.20	
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(002039)	47.40	0050			
(002041)	47.41	184	(002041)	47.02	
(002042)	47.42	185			
(002045)	47.44		(002048)	45.03	
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(002058)	48.10	1800	(002041)	47.41	
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(002060)	48.12	187			
(002107)	48.23		(002110)	48.25	
(002110)	48.25	186			
(002115)	48.29		(002117)	48.31	
(002117)	48.31	187			
(002120)	48.32	008	(002058)	48.10	(002058) 48.11

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE T0FM11

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(002160)	52.03	181		
(002162)	52.05		(002377)	00.01
(002165)	52.07	182		

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(002186)	53.02	110	(002202)	53.15	
(002197)	53.03		(002188)	53.04	
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(002227)	54.03	115			
(002228)	54.04	116	(002226)	54.02	
(002230)	54.05	1160	(002313)	57.00	(002310) 57.09
(002244)	54.10	1100	(002345)	56.13	(002374) 57.14
(002246)	54.12	117			
(002248)	54.14	1170			
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(002255)	55.01	119	(002286)	55.12	
(002270)	55.03	120	(002272)	55.05	
(002271)	55.04	121			
(002273)	55.06	122	(002270)	55.03	
(002280)	55.13	123	(002285)	55.12	
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(002323)	55.06	143	(002321)	55.04	
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(002386)	58.07	154			
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(002397)	58.15	159			
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(002434)	58.04	172			
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(002437)	58.07	1701			
(002438)	58.08	1702	(002436)	58.06	
(002440)	58.10	1703			
(002441)	58.11	1704	(002439)	58.09	
(002443)	58.13	1705			
(002445)	58.14	1706	(002442)	58.12	
(002446)	58.15		(002440)	58.10	
(002448)	58.17	173			
(002450)	58.18	174	(002448)	58.16	
(002452)	58.20		(002453)	58.21	

(002453)	00.21	174	
(002454)	00.23	175	
(002455)	00.25		(002405) 00.27
(002456)	00.27	176	
(002471)	00.29	180	
(002472)	00.30	181	
(002482)	00.32		(002404) 00.35
(002484)	00.35	187	
(002488)	00.38		(002408) 00.41
(002490)	00.41	188	
(002494)	00.42	189	(002471) 00.29

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE C7012

(002734)	02.01	C7012	(002761) 0.17-X (002707) 0.23-X (002710) 0.31-X (002725) 10.10-X (002740) 10.21-X (002717) 12.07-X (002713) 14.09-X (002711) 15.20-X (002723) 19.25-X (002750) 20.11-X (002775) 20.16-X (002765) 20.23-X (002705) 22.03-X (002704) 40.30-X (002751) 43.44-X
(002735)	02.01	100	
(002727)	02.02		(002700) 02.03
(002730)	02.03	101	
(002731)	02.04	110	
(002732)	02.05	111	(002734) 02.07
(002733)	02.06	112	
(002735)	02.08	113	(002732) 02.06
(002738)	02.09	120	
(002739)	03.01	121	(002741) 03.03
(002740)	03.02	122	
(002742)	03.04	123	(002739) 03.01
(002745)	03.05	130	
(002750)	03.06	131	
(002751)	03.07	132	(002753) 03.09
(002752)	03.08	133	
(002754)	03.10	134	(002751) 03.07
(002755)	03.11	135	
(002756)	03.12	137	
(002758)	03.13	139	
(002761)	03.14		(002753) 03.15
(002763)	03.15	139	
(002765)	03.16	140	(002760) 03.12
(002768)	03.18		(002771) 03.19
(002771)	03.19	141	
(002775)	03.21	142	(002765) 03.20
(002777)	03.23	143	
(002780)	03.24	144	
(002788)	03.25	144	(002777) 03.23
(002791)	03.26	144	(002780) 03.24
(002792)	03.27	145	(002785) 03.22 (002777) 03.23
(002794)	03.29	146	
(002795)	03.30	147	
(002797)	04.01	148	(002793) 03.28 (002794) 03.29
(002798)	04.02	150	
(002799)	04.03	151	(002802) 04.12
(002803)	04.05	152	
(002804)	04.06	153	
(002805)	04.07	153	(002803) 04.05
(002797)	04.08	153	(002795) 04.06
(002808)	04.09	154	(002802) 04.04 (002803) 04.05
(002809)	04.11	155	
(002801)	04.12	155	
(002803)	04.13	157	(002808) 04.10 (002809) 04.11
(002805)	04.14	160	(002804) 03.15
(002813)	04.15	170	(002798) 03.11
(002814)	04.16	171	
(002820)	04.19		(002822) 04.22
(002822)	04.22	0040	
(002825)	04.23	190	(002813) 04.16

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE PRTH

(002636)	07.01	PRTH	(000671)	10.03-X	(000009)	21.24-X	(000932)	22.25-X	(001116)	27.04-X	(001104)	28.11-X
(002690)	07.02	100										
(002662)	07.03	110	(002650)	07.02								
(002673)	07.05		(002675)	07.09								
(002676)	07.09	0030										
(002670)	07.10	120	(002650)	07.02								
(002604)	07.15		(002605)	07.10								
(002636)	07.10	0060										
(002609)	07.21		(002691)	07.24								
(002691)	07.24	0050										
(002694)	07.27		(002695)	07.30								
(002695)	07.30	0040										
(002700)	08.01	130	(002650)	07.01								
(002700)	08.05		(002700)	08.09								
(002700)	08.09	0051										
(002711)	08.12		(002713)	08.15								
(002713)	08.15	0041										
(002717)	08.10	140	(002650)	07.01								
(002703)	08.21		(002725)	08.24								
(002705)	08.24	0052										
(002700)	08.27		(002730)	08.30								
(002730)	08.30	0062										
(002733)	08.33		(002735)	08.36								
(002735)	08.36	0042										
(002730)	09.01	150	(002650)	07.02								
(002744)	04.04		(002740)	08.07								
(002740)	08.07	0047										
(002740)	08.10		(002751)	08.13								
(002751)	08.13	0033										
(002750)	08.14	009	(002670)	07.09	(002607)	07.30	(002714)	08.15	(002730)	08.30		

CHART TITLE - NON-PROCEDURAL STATEMENTS

LOCATION		DIAGNOSTIC
CARD NO	PAGE/BOOK	
1000017)	2.02	UNRECOGNIZED SYNTAX
1000025)	2.05	UNRECOGNIZED SYNTAX
1000000)	5.02	UNDEF INED - 'WRITING' EXTERNAL REFERENCE
1000003)	5.14	UNDEF INED - 'WRITING' EXTERNAL REFERENCE
1000102)	5.15	UNDEF INED - 'WRITING' EXTERNAL REFERENCE
1000103)	5.16	UNDEF INED - 'WRITING' EXTERNAL REFERENCE
1000104)	5.17	UNDEF INED - 'WRITING' EXTERNAL REFERENCE
1000105)	5.18	UNDEF INED - 'WRITING' EXTERNAL REFERENCE
1000106)	5.19	UNDEF INED - 'WRITING' EXTERNAL REFERENCE
1000110)	5.24	UNDEF INED - 'WRITING' EXTERNAL REFERENCE

PROGRAM FLOW CHARTS

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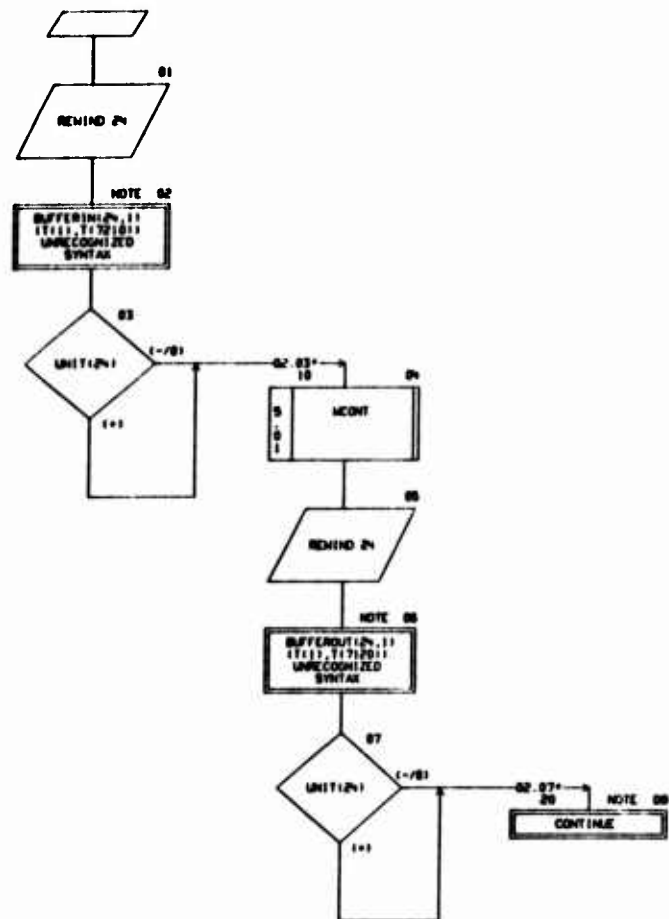
CHART TITLE - INTRODUCTORY COMMENTS

*****PROGRAM BLAVIS*****

PROGRAM FOR THIRD OVERLAY OF WING/EMPENNAGE MODULE

FUEL, CONTENTS, CONC MASS ITEMS - HEIGHT AND MASS PROPERTIES

CHART TITLE - PROCEDURES



06/10/79

AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 03

CHART TITLE - NON-PROCEDURAL STATEMENTS

PROGRAM OLAY15
COMMON T171201
COMMON /MISC/ XM15C11001

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE MCINT*****

FUEL, CONTENTS, CONC. MASS WEIGHT ESTIMATION CONTROL

CHART TITLE - SUBROUTINE MCONT

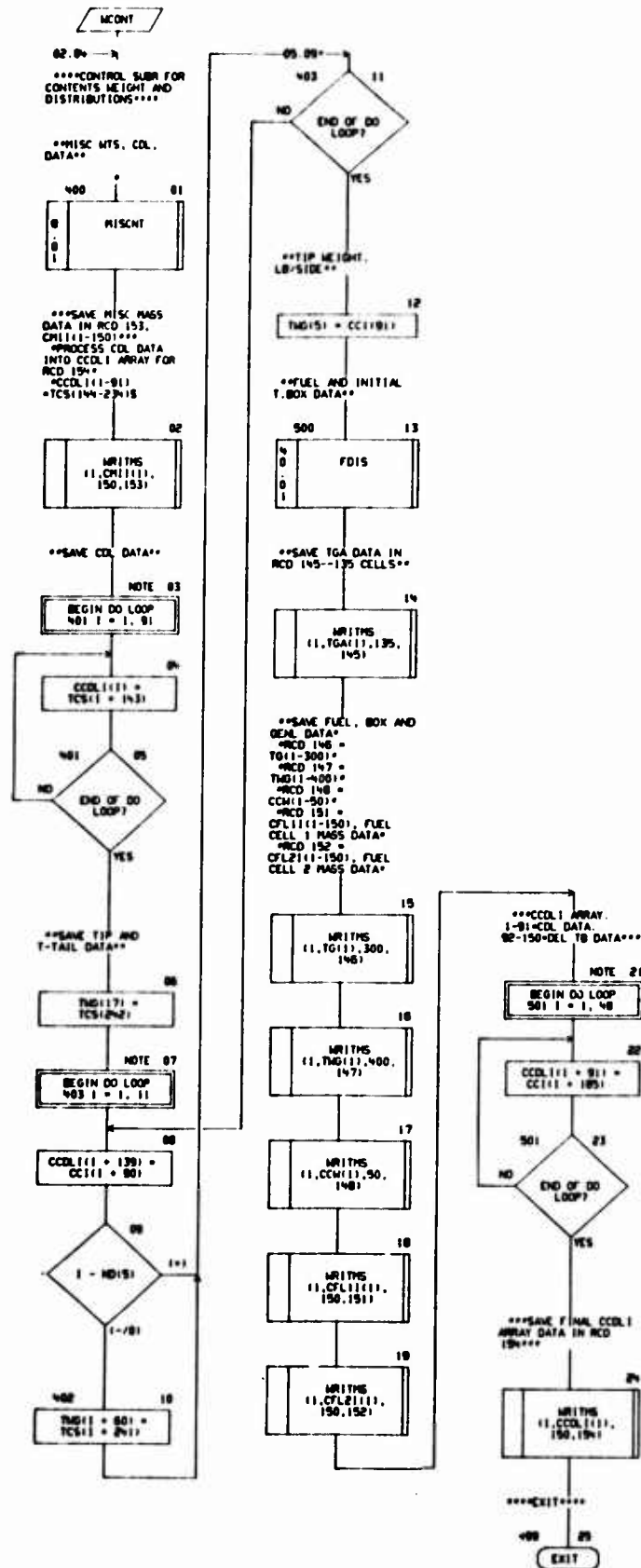


CHART TITLE - NON-PROCEDURAL STATEMENTS

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CCOL(1150),
CC(1300),
TBA(135),TFRCD(60),
CH(1150),CFL(1150),CFL2(1150)
EQUIVALENCE (D(1),T(2061)),(CD(1),T(1412)),(ND(1),T(812)),
(DC(1),D(1401)),
(T0(1),T(1001)),(TMD(1),T(1301)),(TVP(1),CD(51)),(CCM(1),CD(11),
CH(11),CD(1251)),(CFL(11),CD(951)),(CFL2(1),CD(1101)),
(CCOL(1),CD(501)),
(CC(1),CD(1051)),
(TBA(1),T(1051)),(TFRCD(1),T(1005)),
(TCS(1),CD(1401))
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CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE MISCH*****

MISC CONTENT HEIGHT/DISTRIBUTION EVAL/CONTROL

CHART TITLE - SUBROUTINE MISCHT

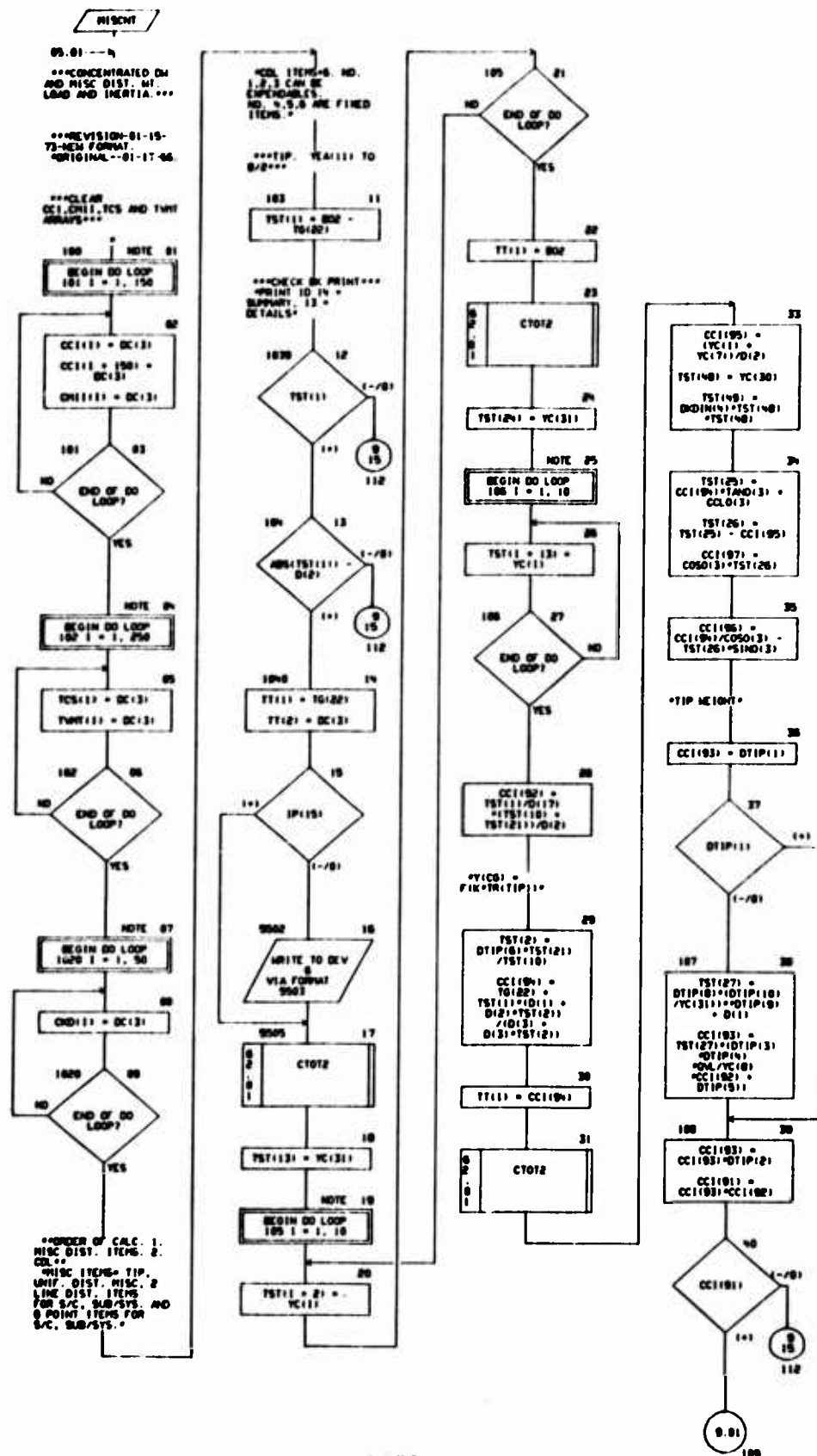


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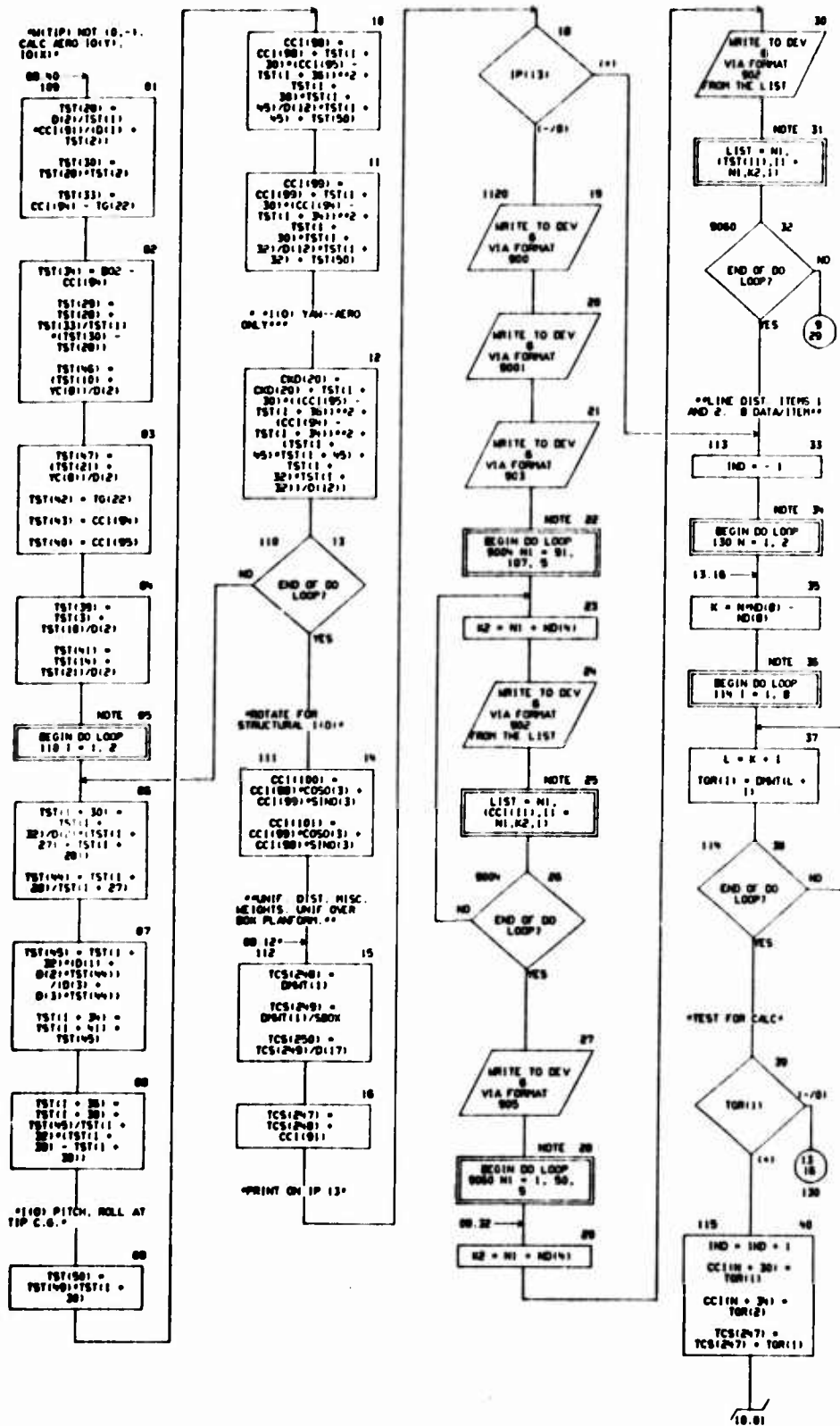


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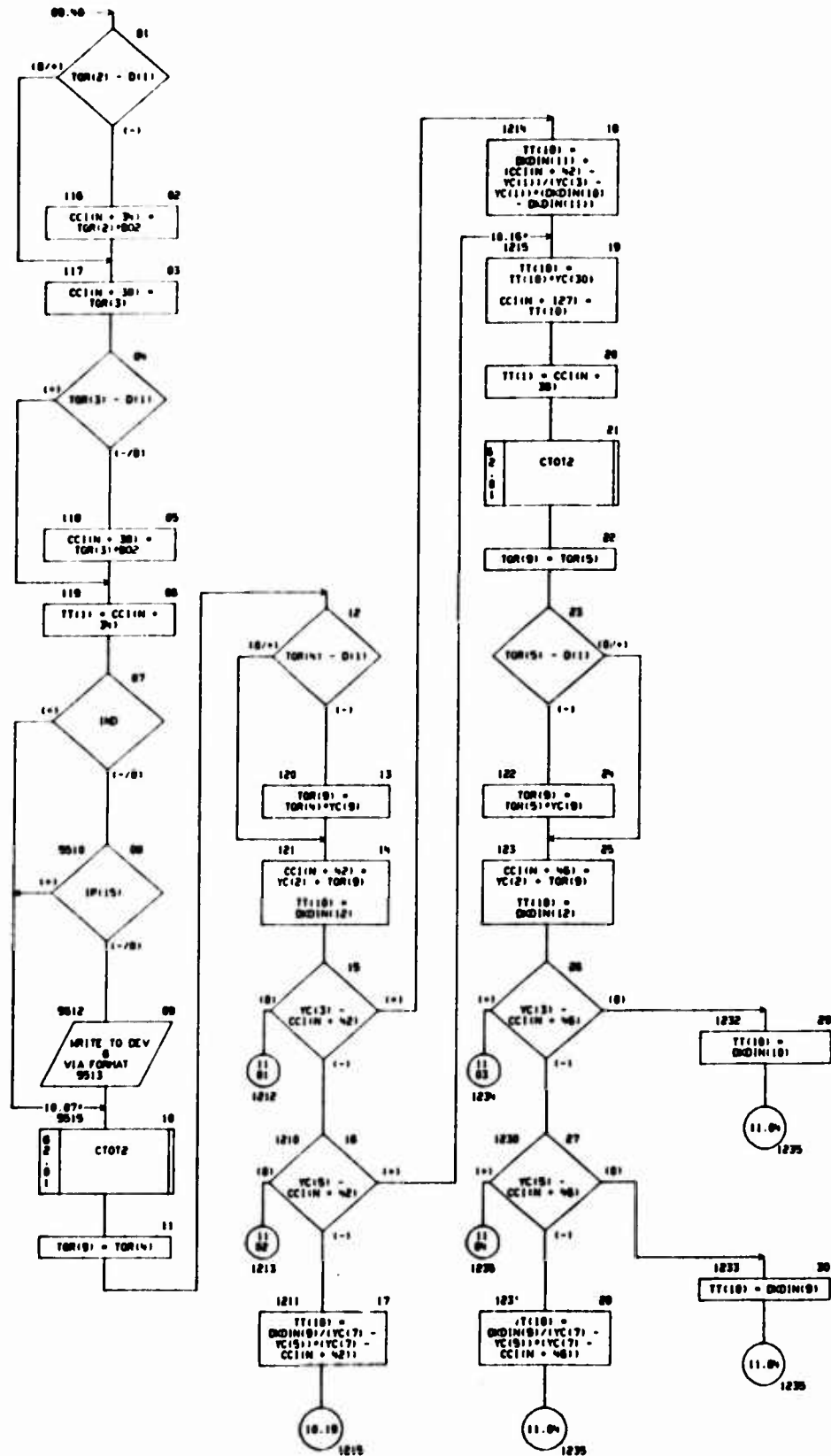


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CHART 2 - SUBROUTINE 2	2
CHART 3 - SUBROUTINE 3	3
CHART 4 - SUBROUTINE 4	4
CHART 5 - SUBROUTINE 5	5
CHART 6 - SUBROUTINE 6	6
CHART 7 - SUBROUTINE 7	7
CHART 8 - SUBROUTINE 8	8
CHART 9 - SUBROUTINE 9	9
CHART 10 - SUBROUTINE 10	10
CHART 11 - SUBROUTINE 11	11
CHART 12 - SUBROUTINE 12	12
CHART 13 - SUBROUTINE 13	13
CHART 14 - SUBROUTINE 14	14
CHART 15 - SUBROUTINE 15	15
CHART 16 - SUBROUTINE 16	16
CHART 17 - SUBROUTINE 17	17
CHART 18 - SUBROUTINE 18	18
CHART 19 - SUBROUTINE 19	19
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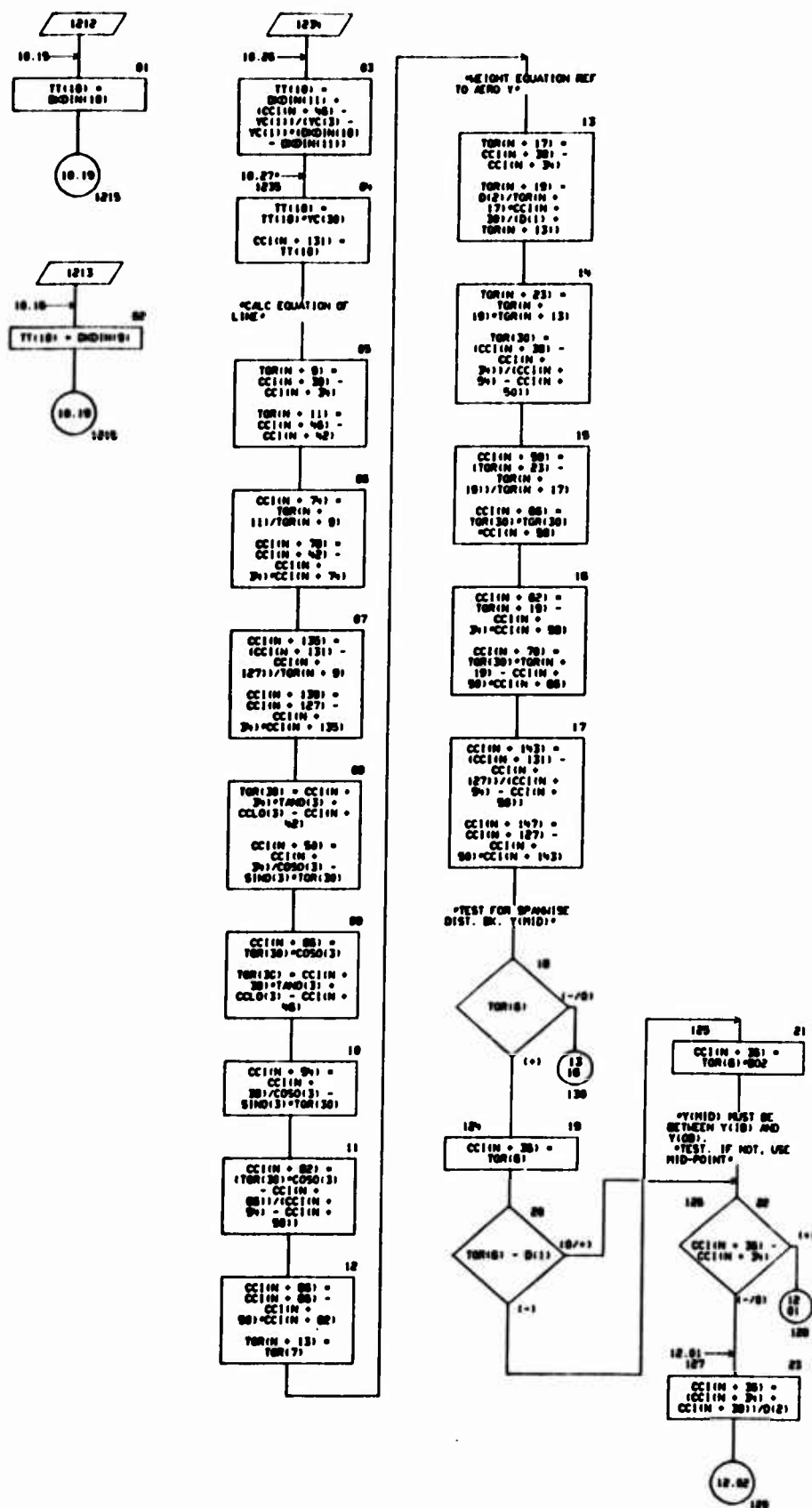


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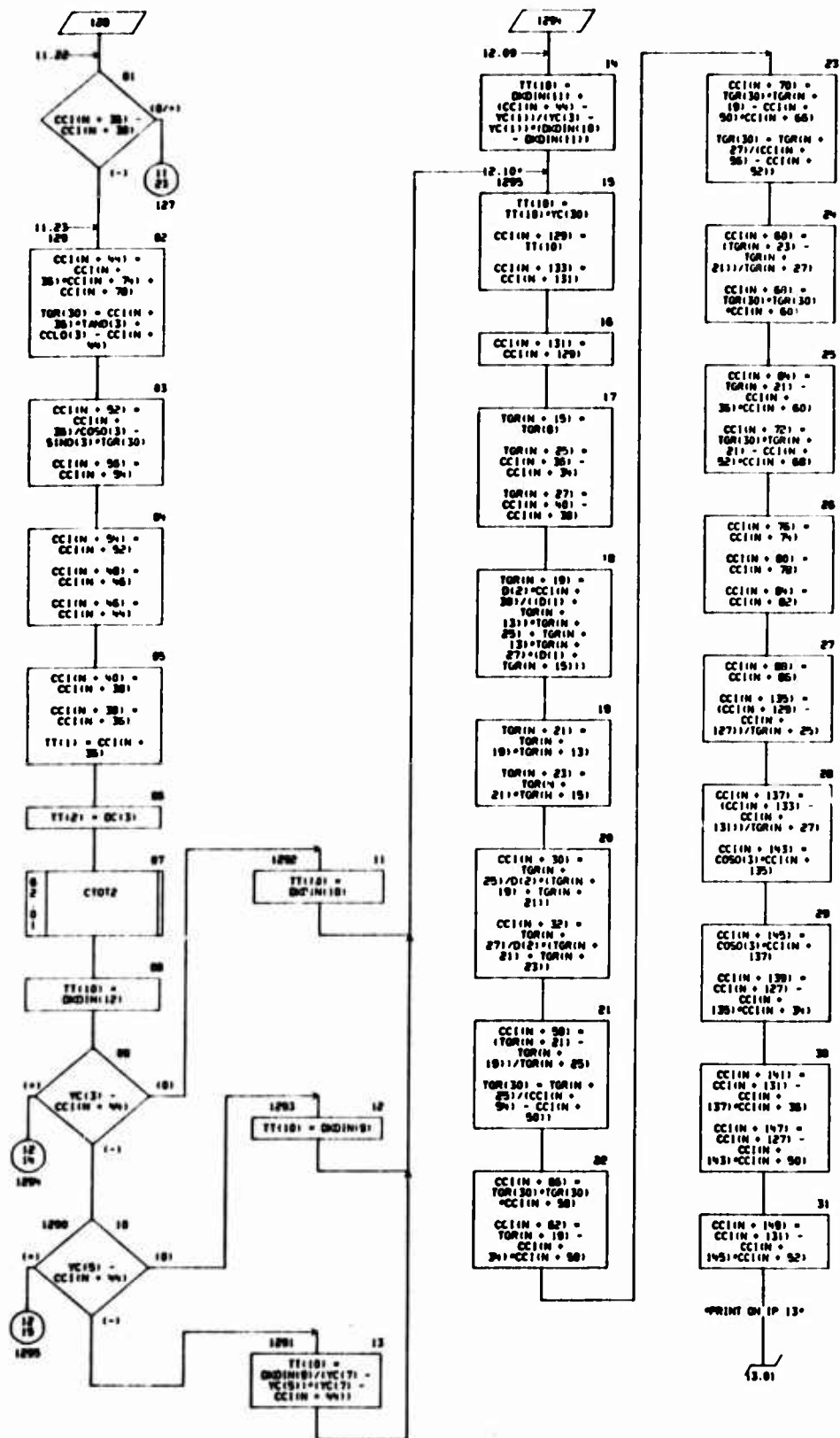


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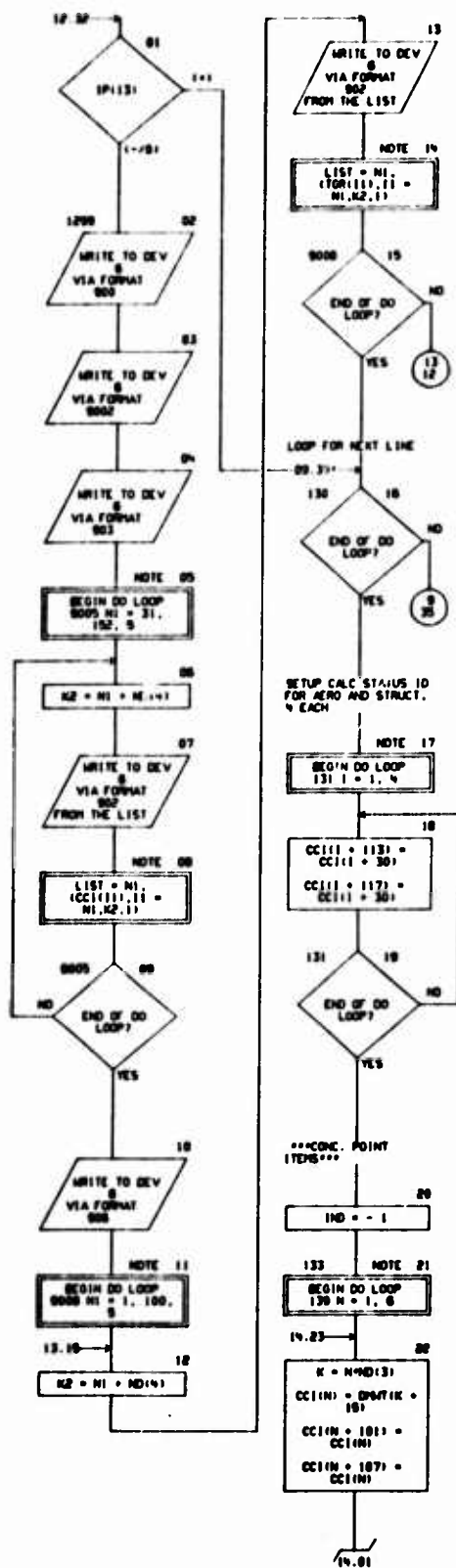


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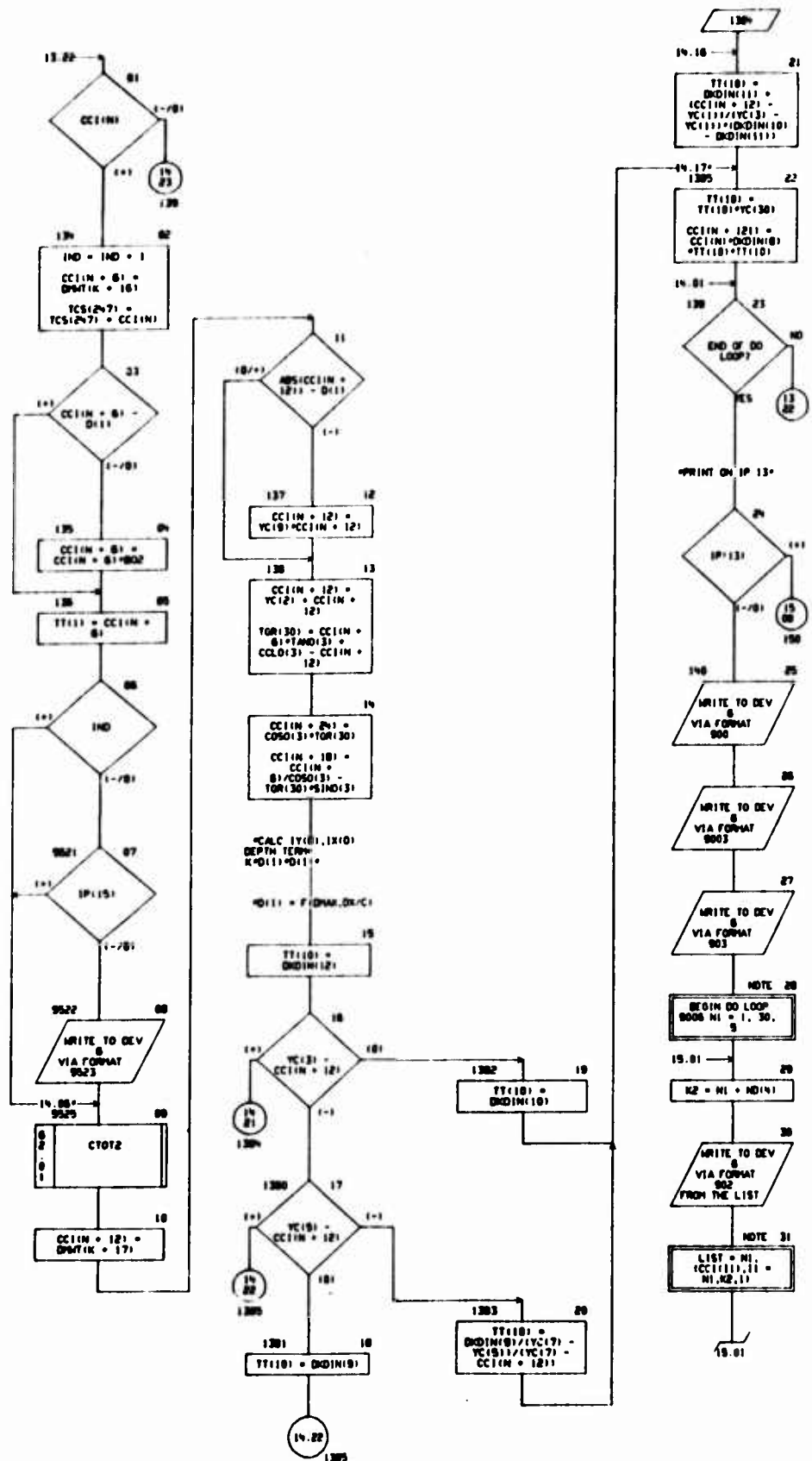


CHART TITLE - SUBROUTINE NISCIT

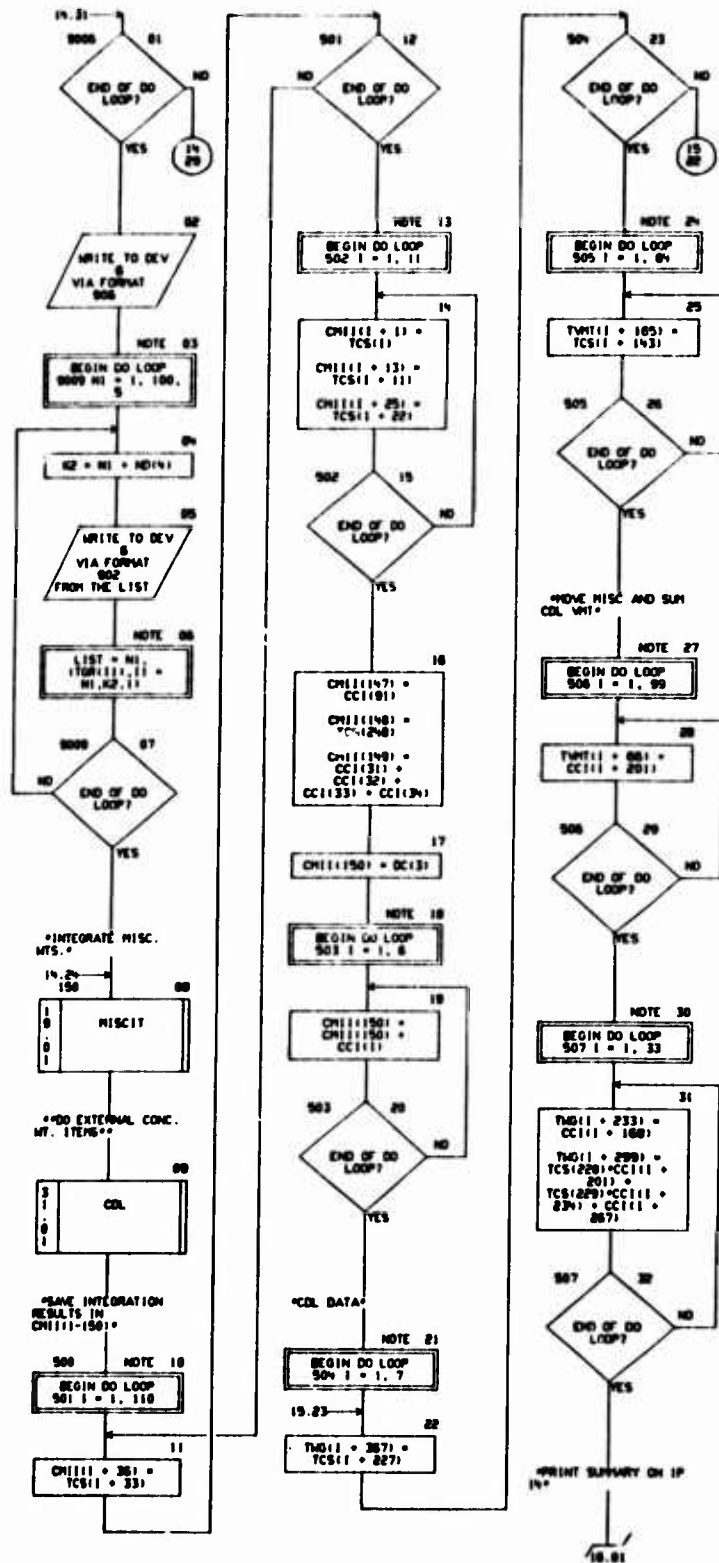


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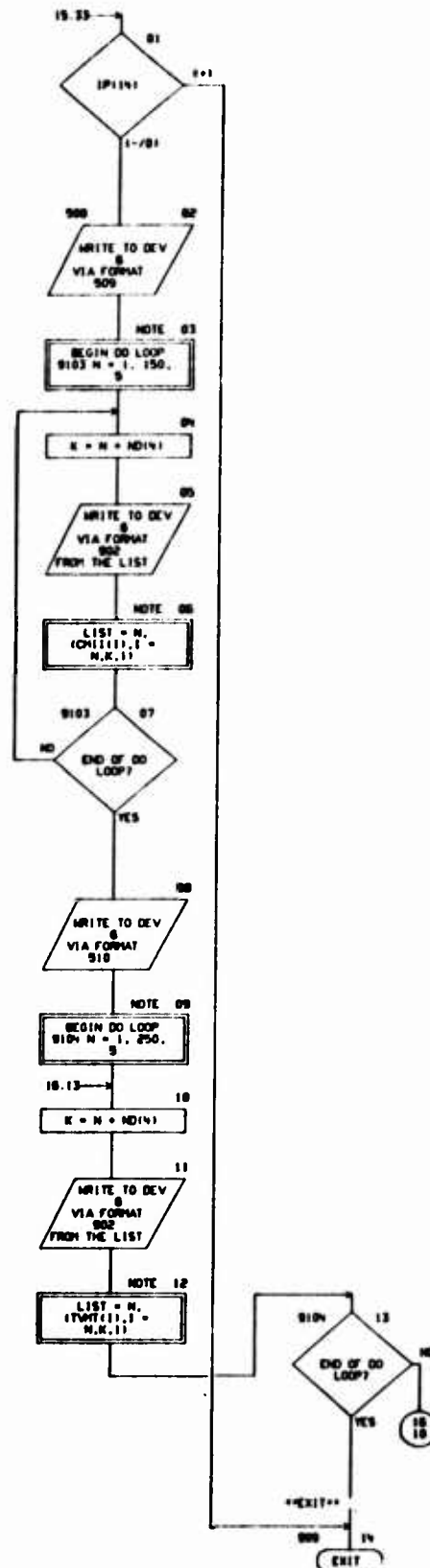


CHART TITLE - NON-PROCEDURAL STATEMENTS

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COMMON /IPRINT/ IP(80)
DIMENSION T(6220),D(2060),CD(2000),ND(100),DC(100),
TG(300),TNG(400),CC(1300),TCS(250),CH(1150),TST(50),TT(24),
YC(150),TAND(9),CCLO(9),SIND(6),COSD(6),TGR(100),TBM(11),TGA(135),
DHW(35),DCDL(100),DTIP(15),TWMT(250),DKDIN(15),CKD(50)
EQUIVALENCE (D(1),T(2061)),(CD(1),T(4121)),(ND(1),T(6121)),
(DC(1),D(1401)),(TG(1),T(1001)),(TNG(1),T(1301)),(TST(1),T(1701)),
(YC(1),T(201)),(TT(1),T(411)),(CC(1),CD(1051)),(TCS(1),CD(1401)),
(CH(1),CD(1751)),(TGR(1),T(1751)),(TAND(1),T(1931)),(CCLO(1),T(1931)),
(TAND(1),T(1221)),(CCLO(1),T(1311)),(SIND(1),T(1401)),(COSD(1),T(1401)),
(COSD(1),T(1401)),(COTEA,T(1521)),(BO2,T(1621)),(BS102,T(151)),
(CTIP,T(171)),(SBNX,TG(1931)),(TBM(1),TG(2661)),(TGA(1),T(1051)),
(DTIP(1),D(1951)),(DHW(1),D(1820)),(DCDL(1),D(1855)),
(DKDIN(1),D(1970)),(DKDIN(1),D(1970)),(CKD(1),CD(1951)),
(I,ND(261)),(N,ND(271)),(L,ND(281)),(K,ND(301)),(M,ND(311)),(J,ND(291)),
(TWMT(1),CD(151))
900  FORMAT (60H)  ***MISCNT SUBR--MISC CONTENT MTS--CCI, TST, TGR ARRAYS***,20X,21H** MISCNT - (P(13)) **
902  FORMAT (1H 14,5E10.0)
903  FORMAT (6H0 CCI )
905  FORMAT (6H0 TST )
906  FORMAT (6H0 TGR )
9503  FORMAT(11H)60X,41H** CTO12 (CALLED FROM MISCNT) - IP(15) **
9001  FORMAT (35H0  **TIP DATA.  TST AND CC(191-107**
9513  FORMAT(11H)57X,52H** CTO12 (CALLED FROM MISCNT - LOOP 130) - IP(15) **
9002  FORMAT (3H0  **DIST LINE DATA.  TGR AND CCI )
9523  FORMAT(11H)57X,52H** CTO12 (CALLED FROM MISCNT - LOOP 130) - IP(15) **
9003  FORMAT (3H0  **CONC ITEM DATA.  TGR AND CCI )
909  FORMAT (49H)  ***MISCNT SUBR.  FINAL CHII AND TWMT ARRAYS***,
      40X,21H** MISCNT - (P(14)) **/6H0 CHII)
910  FORMAT (6H0 TWMT)

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CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE MISCIT*****

MISC CONTENT WEIGHT INTEGRATION

CHART TITLE - SUBROUTINE MISC11

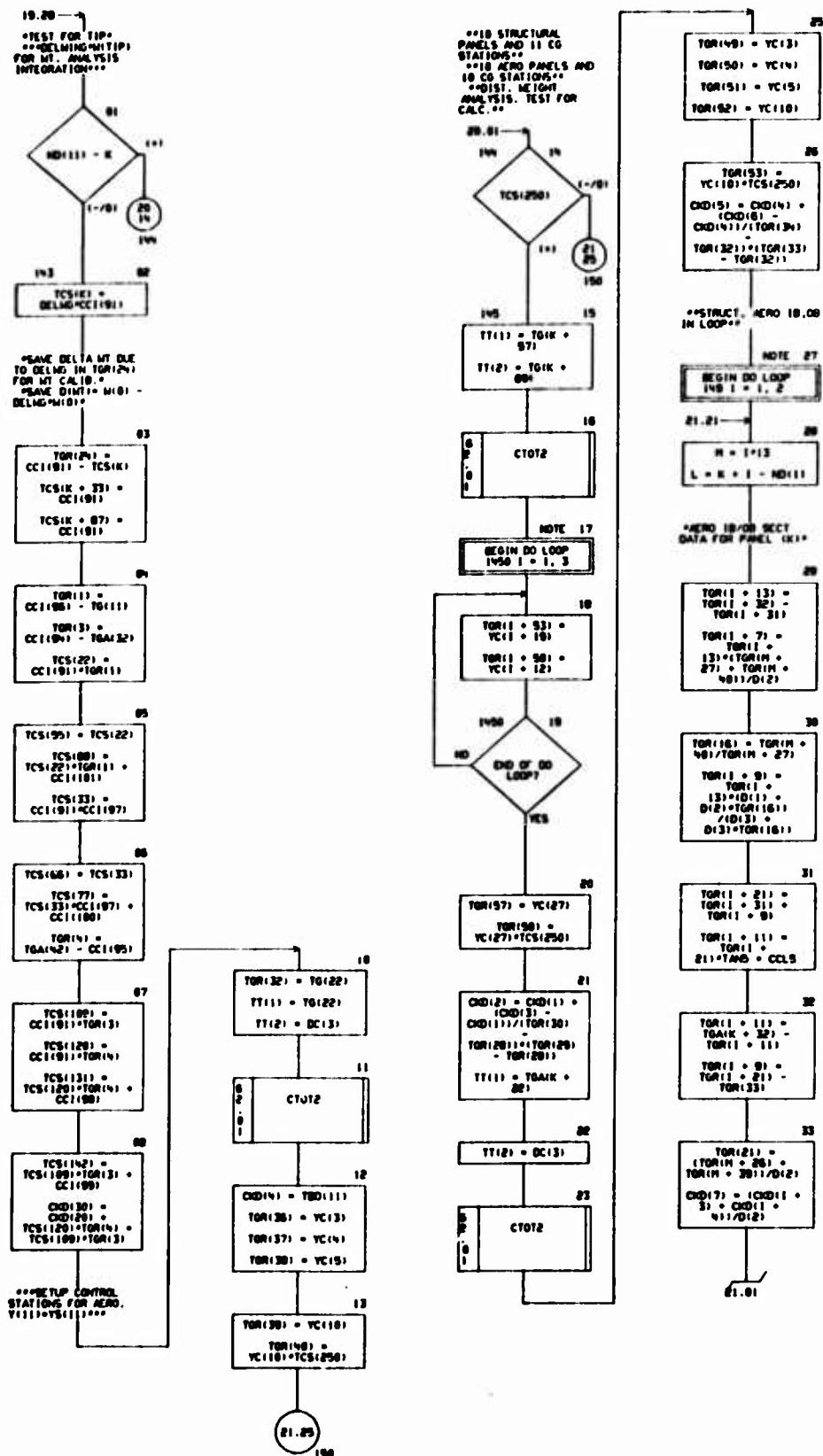


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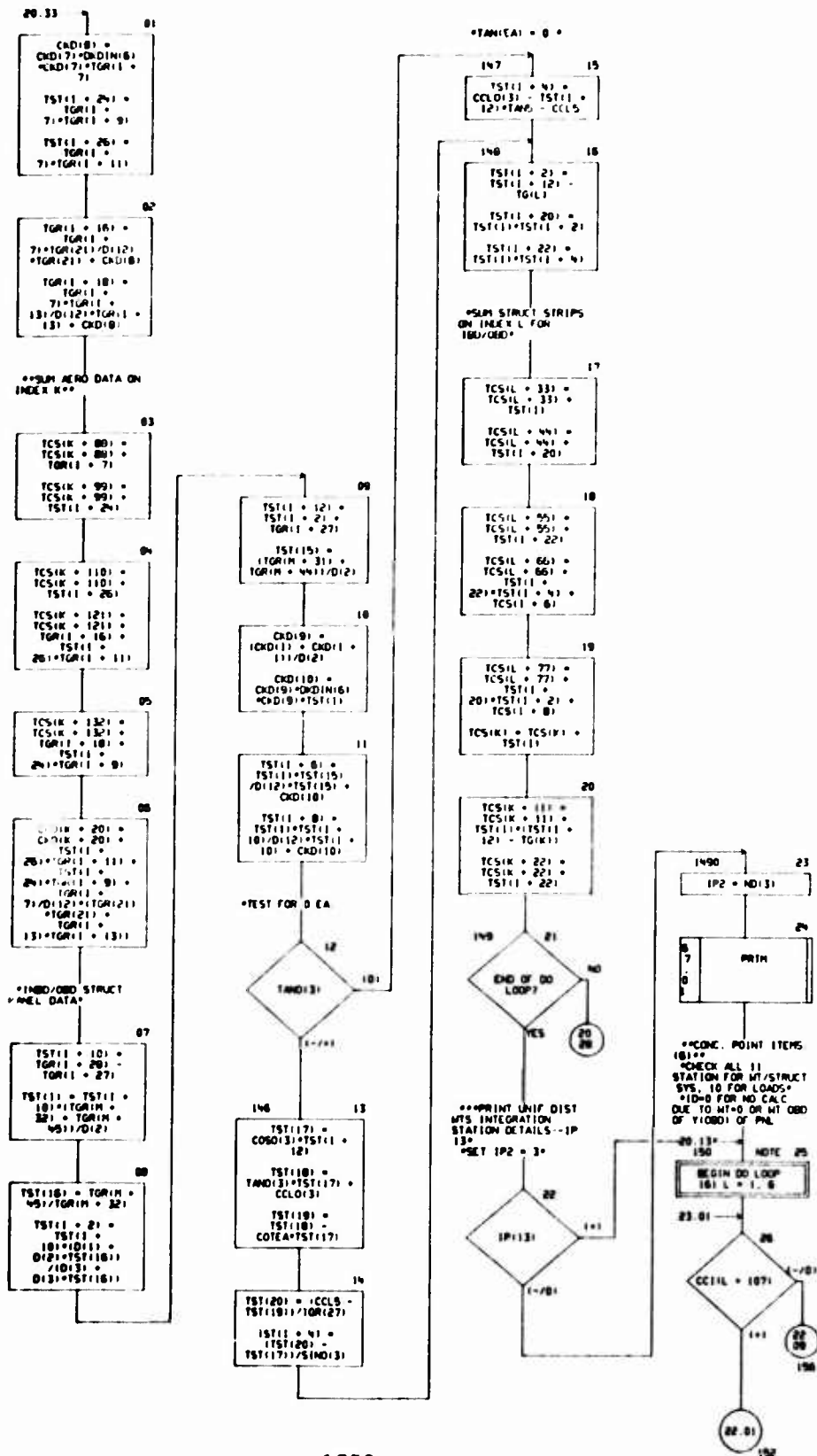


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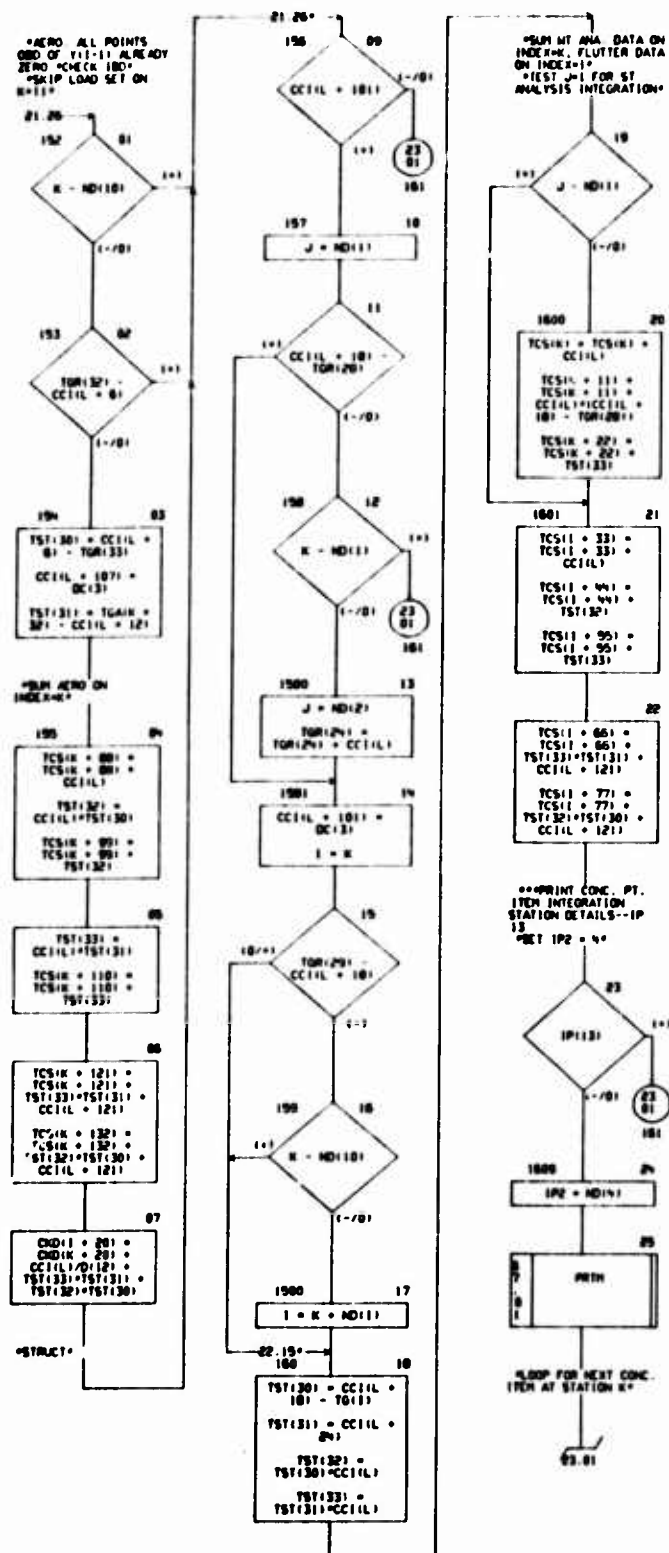
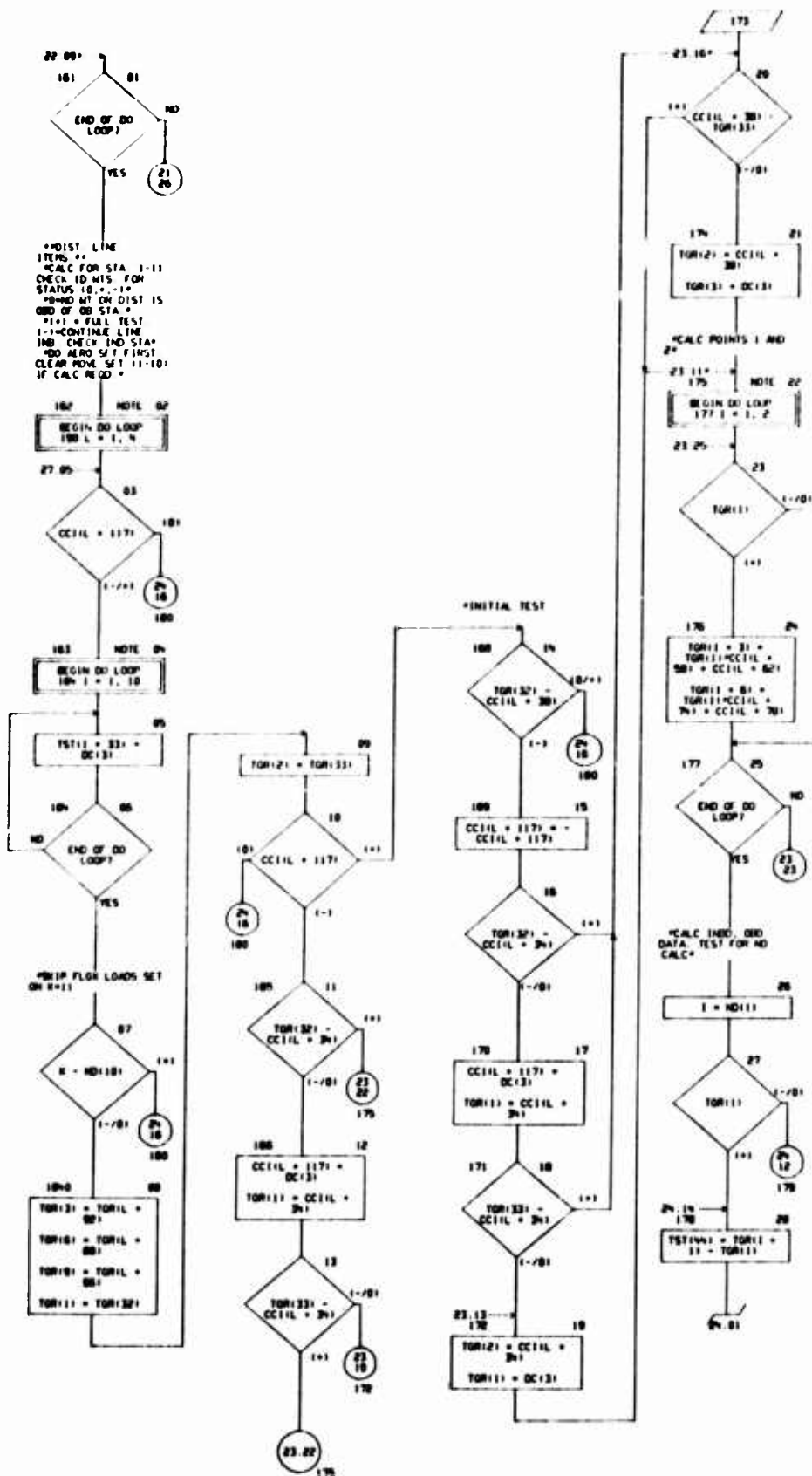


CHART TITLE - SUBROUTINE MISC11



[illegible]

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    110 -- NO --> 111[111]
    110 -- YES --> 112[112]
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    314 --> 
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graph TD
    Start(( )) --> 01{ }
    01 -- "1=0" --> 02[ ]
    01 -- "1=1" --> 03[ ]
    02 --> 03
    03 --> 04[ ]
    04 --> 05[ ]
    05 --> 06[ ]
    06 --> 07[ ]
    07 --> 08{ }
    08 -- "1=0" --> 09[ ]
    08 -- "1=1" --> 10{ }
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    17 --> 18{ }
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    18 -- "1=1" --> 20[ ]
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[illegible]

CHART TITLE - SUBROUTINE MISC11

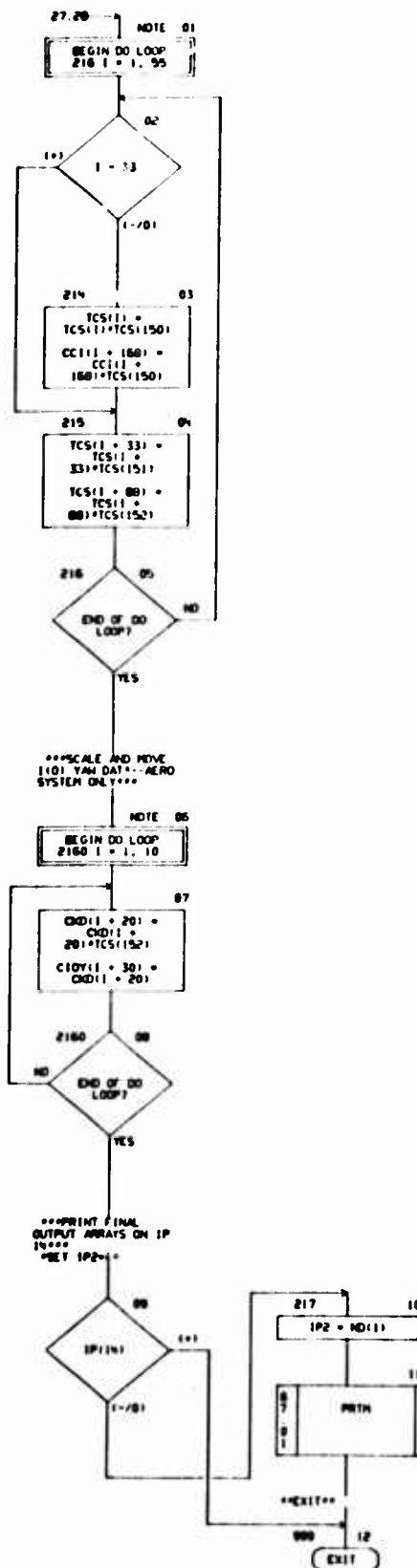


CHART TITLE - NON-PROCEDURAL STATEMENTS

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06/10/74

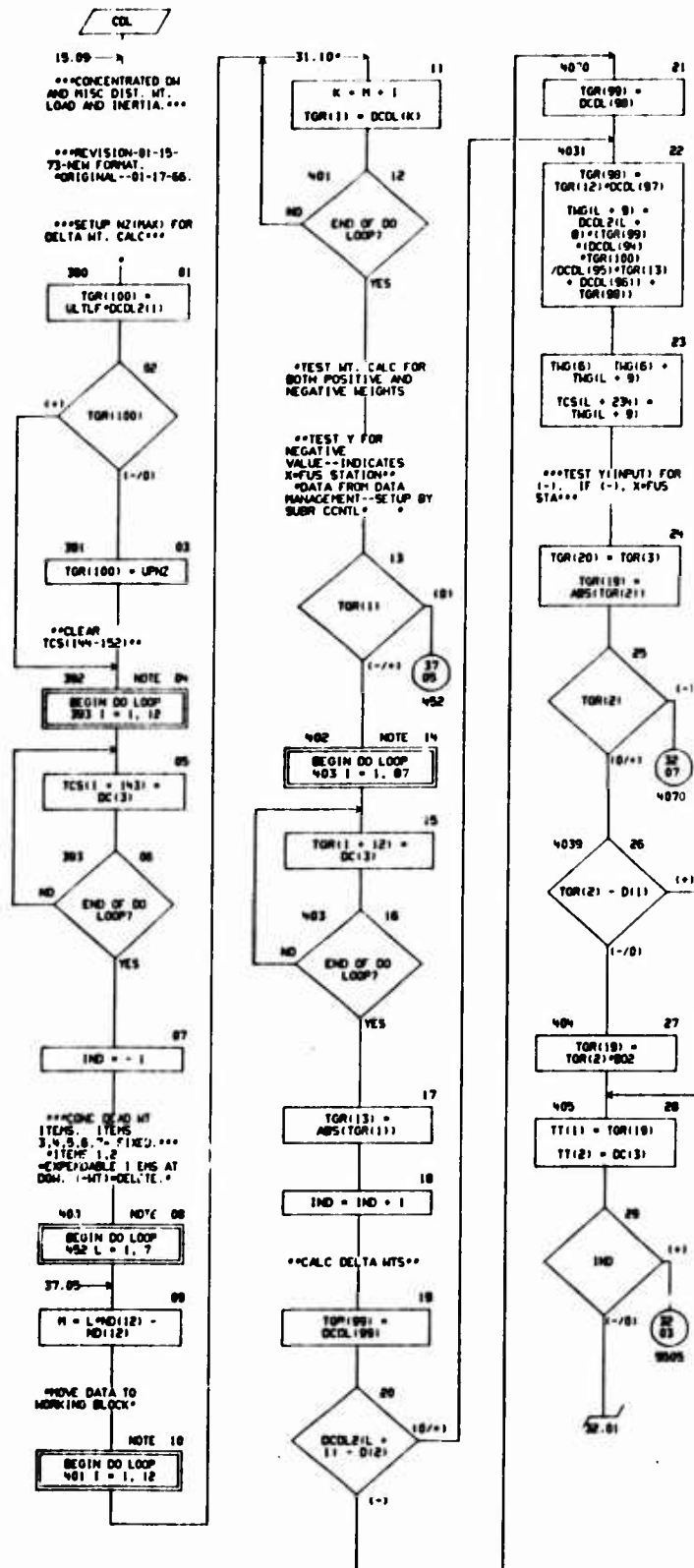
AUTOFLOW CHART SET - SLEEP WING AND EMPLOYMENT MODULE - PAGE 30

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE CDL*****

***EXTERNAL CONCENTRATED DEADWEIGHT EVALUATION**

CHART TITLE - SUBROUTINE COL



[illegible]

CHART TITLE - SUBROUTINE CDL

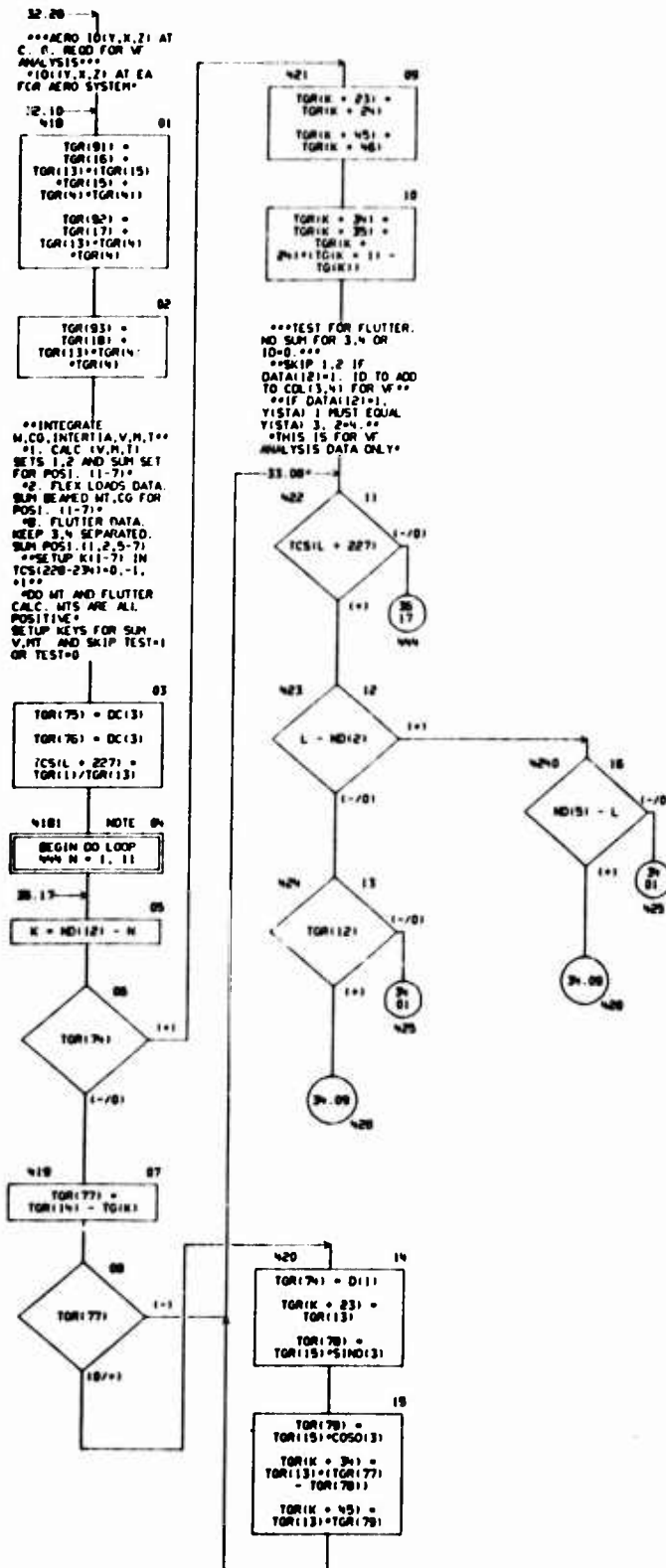
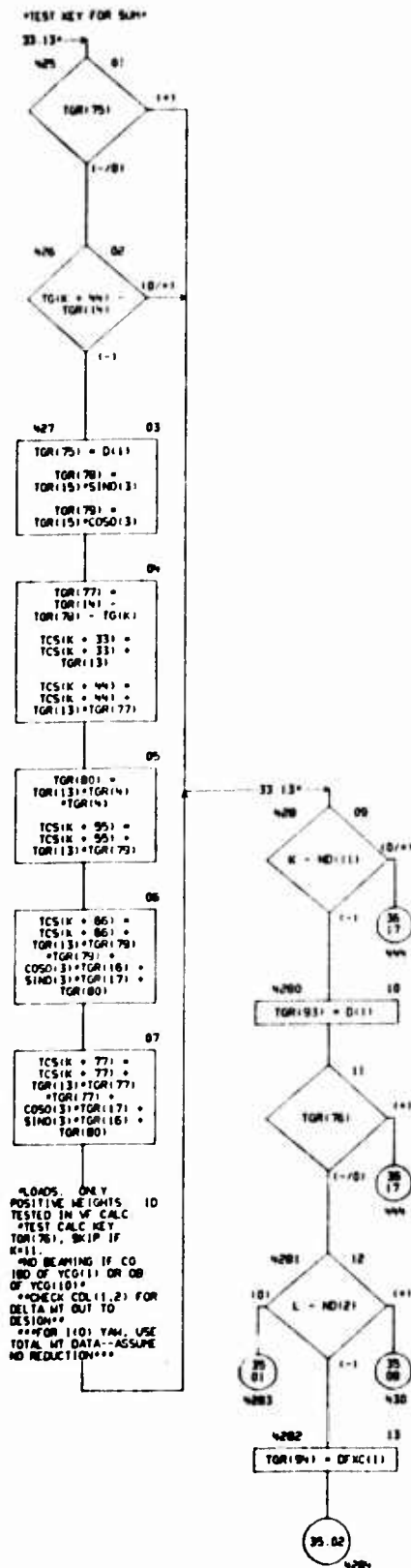
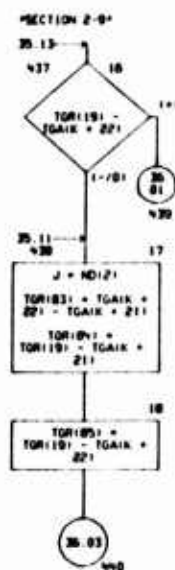


CHART TITLE - SUBROUTINE COL



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graph TD
    Start([START]) --> J1{J = NO(1)}
    J1 --> DC1[DC(1)]
    J1 --> J2{J = NO(2)}
    J2 --> DC2[DC(2)]
    J2 --> J3{J = NO(3)}
    J3 --> DC3[DC(3)]
    J3 --> J4{J = NO(4)}
    J4 --> DC4[DC(4)]
    J4 --> J5{J = NO(5)}
    J5 --> DC5[DC(5)]
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    J6 --> DC6[DC(6)]
    J6 --> J7{J = NO(7)}
    J7 --> DC7[DC(7)]
    J7 --> J8{J = NO(8)}
    J8 --> DC8[DC(8)]
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[illegible]

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graph TD
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    50 -- YES --> 52{52}
    51 --> 53[53]
    52 -- NO --> 54[54]
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    267 --> 270[270]
    268 --> 271[271]
    269 --> 272
```

CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T
COMMON /IPRINT/ IP(80)
DIMENSION T(6220),D(2060),CD(2000),ND(100),DC(100),
T0(300),TNG(400),CC(1300),TCS(250),TST(50),T1(24),
VC(150),TAND(9),CCLO(9),SIND(6),COSD(6),TGR(100),TGA(135),
DCOL(215),
C10Y(150),CRD(150),
DCOL(100),DFAC(2)
EQUIVALENCE (D(1),T(206)),(CD(1),T(121)),(ND(1),T(612)),
(DC(1),D(140)),(TGA(1),T(100)),(TNG(1),T(130)),(TST(1),T(170)),
(VC(1),T(201)),(TT(1),T(41)),(CC(1),CD(185)),(TCS(1),CD(140)),
(TGR(1),T(175)),(TGA(1),T(185)),
(TAND(1),T(122)),(CCLO(1),T(131)),(SIND(1),T(140)),
(COSD(1),T(146)),(BR2,T(121)),
(TANDH,T(90)),(CCLOH,T(91)),(DFAC(1),D(274)),
(DCOL(1),D(185)),
(DCOL(2),D(1200)),(ULF,D(122)),(UPWZ,D(205)),
(I,ND(26)),(IN,ND(27)),(L,ND(28)),(K,ND(30)),(M,ND(31)),(J,ND(29)),
(C10Y(1),T(50)),(CRD(1),CD(195))
9503 FORMAT(1H,71X,3H** C10Y (CALLED FROM CDE) - IP(15) **)
9504 FORMAT (37H1 **COL SLEN--TGH AND TCS ARRAYS**,95X,
10H** COL - IP(16) **/END TCS )
902 FORMAT (1H,14,5E10.0)
905 FORMAT (6H0 TGR )

```

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE FDIS*****

FUEL WEIGHT/DIST AND INITIAL T-BOX WT. EVALUATION

FOIS

00CLEAR FUEL DATA
OUTPUT SUMMARY
BLOCK00



CHART TITLE - SUBROUTINE F015

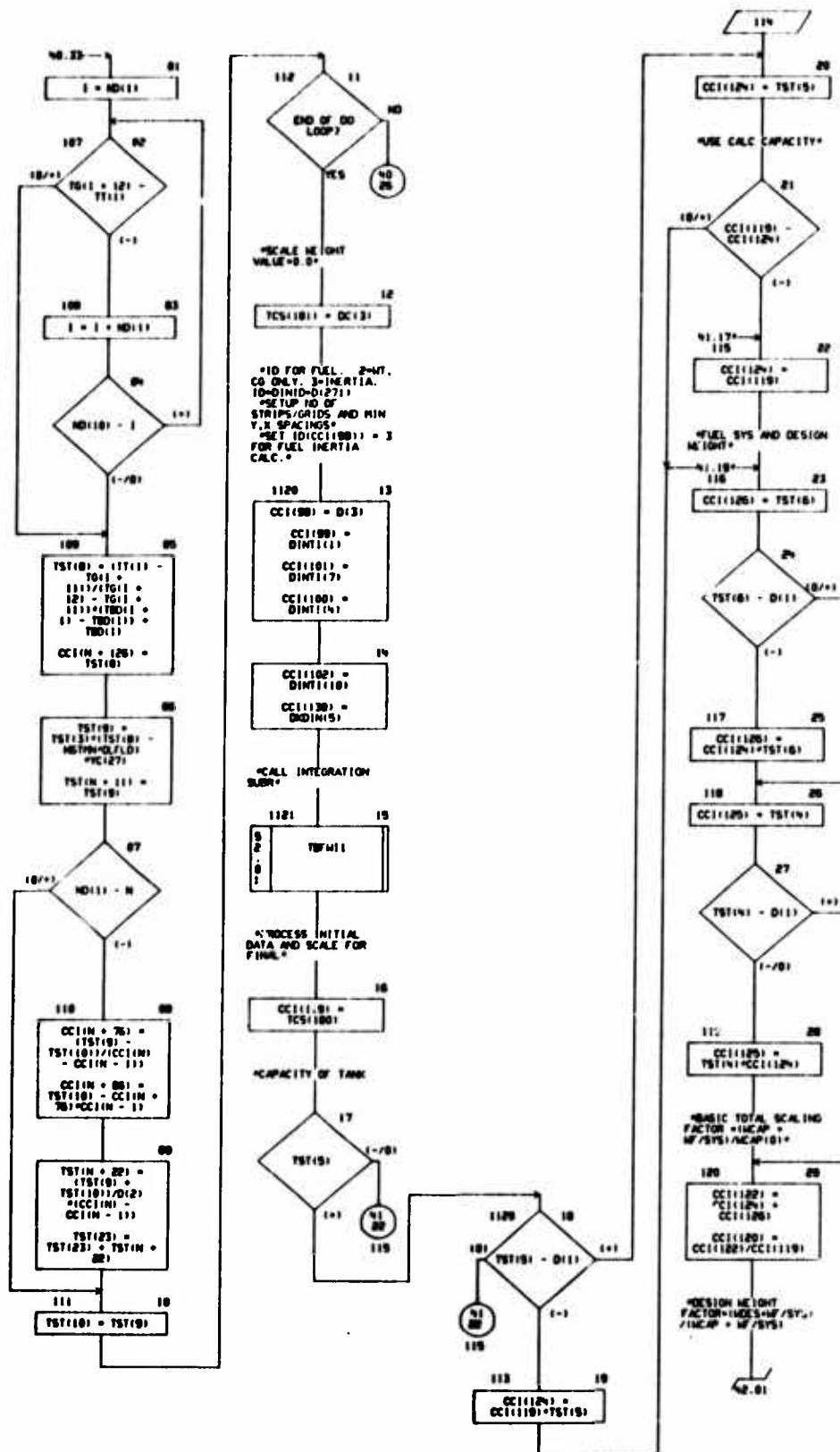
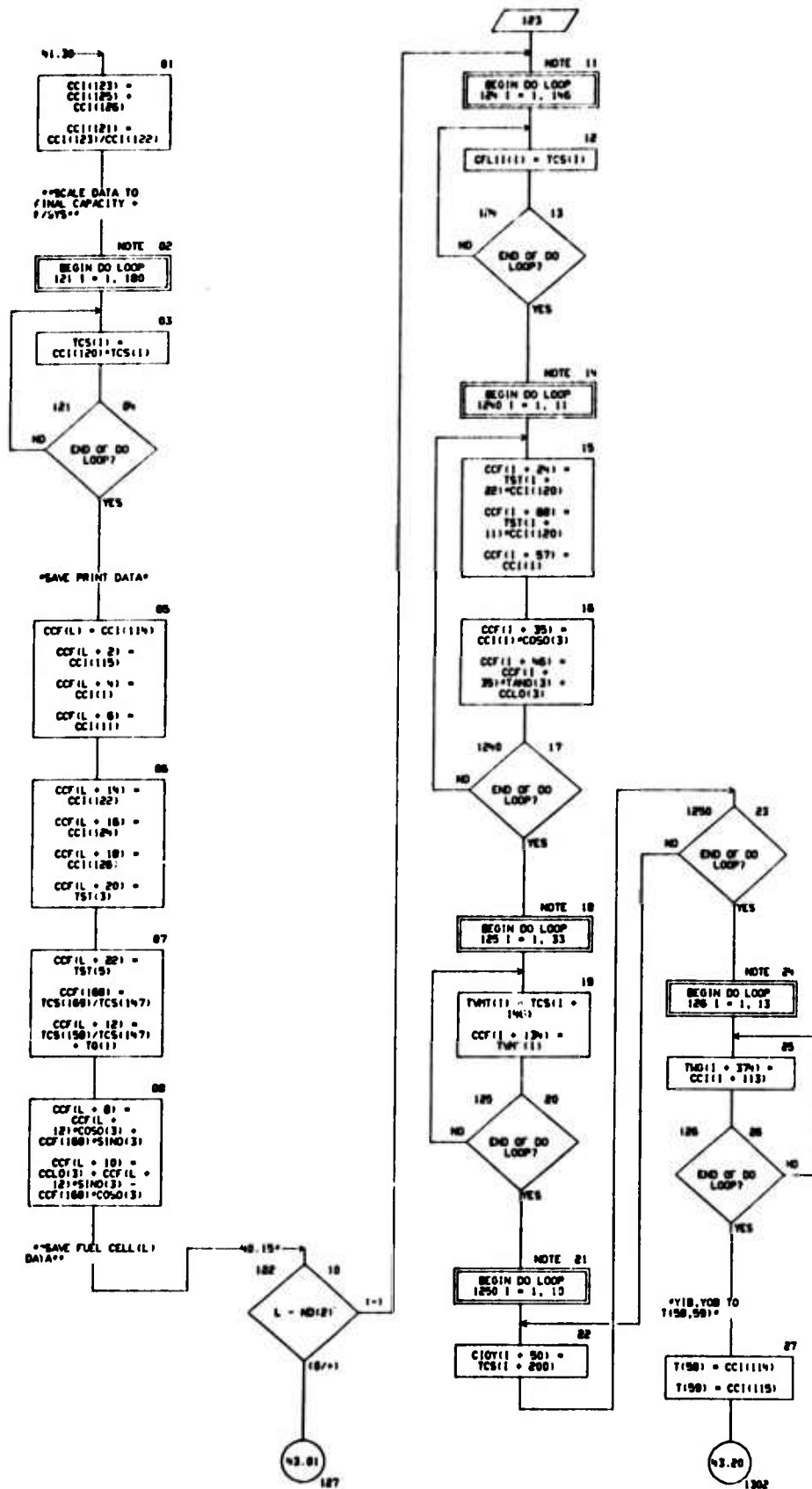
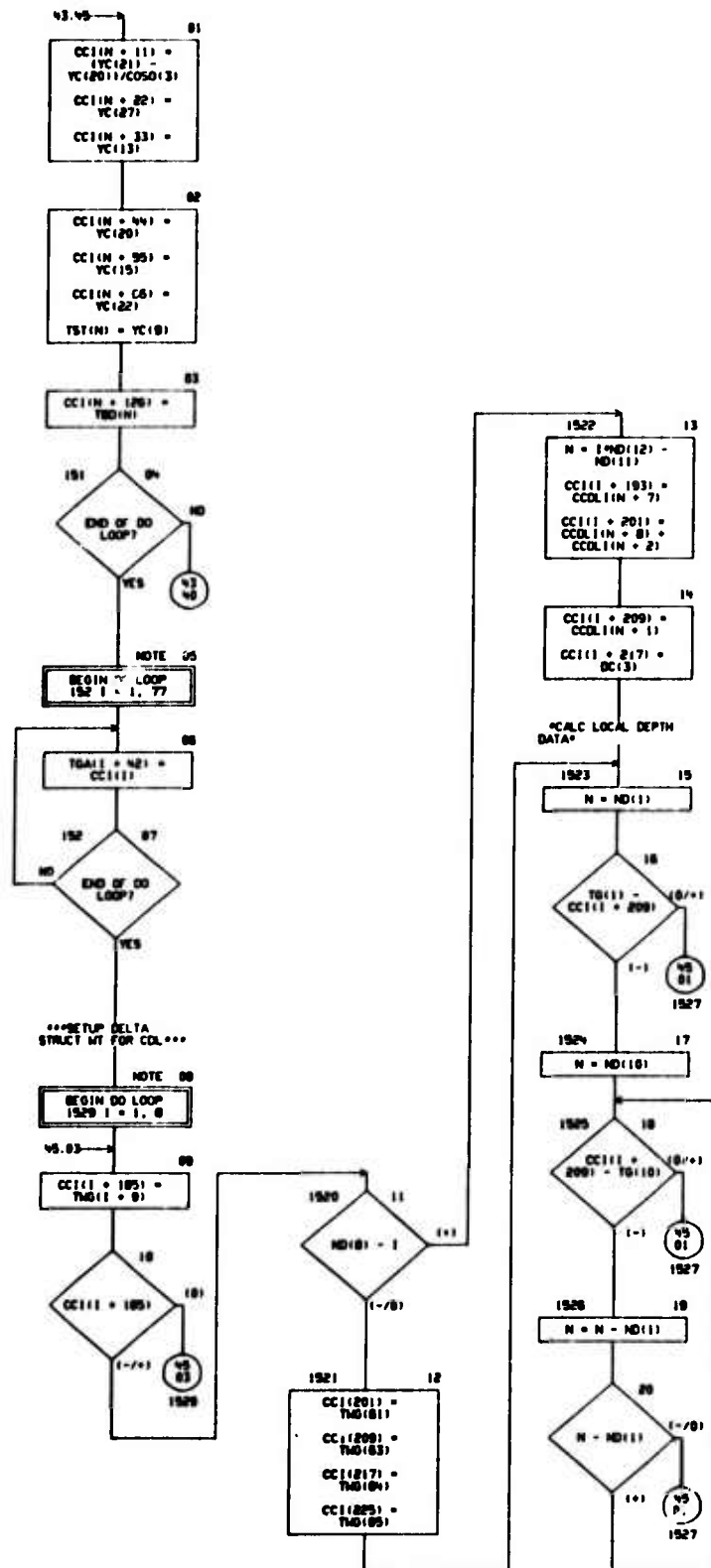


CHART TITLE - SUBROUTINE FDIS



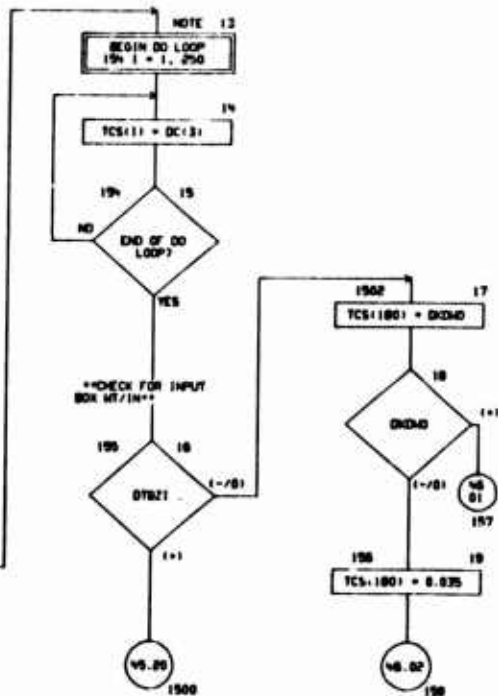
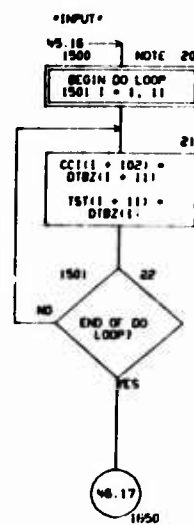
1374

CHART TITLE - SUBROUTINE FOIS



```

graph TD
    1527[/1527/] --> 1518[1518]
    1518 --> 81[81  
CC(1) = 225 =  
TODIN * 11 -  
TODIN / (TGIN *  
11 -  
TGIN) * CC(1) +  
209 = TODIN]
    81 --> 82[82  
CC(1) = 225 =  
CC(1) +  
225 * CC(1) +  
185 * DNDIN(8)]
    82 --> 1529[1529]
    1529 --> 83{83  
END OF DO  
LOOP?}
    83 -- NO --> 1529
    83 -- YES --> 84[84  
CC(100) = CC(3)  
CC(100) =  
DINT(1)  
CC(101) =  
DINT(17)  
CC(100) =  
DINT(4)]
    84 --> 85[85  
CC(102) =  
DINT(10)]
    85 --> 86[NOTE 86  
BEGIN DO LOOP  
1531 I = 1, 5]
    86 --> 87[87  
TGA(1) = 119 =  
CC(1) = 97]
    87 --> 153{153  
END OF DO  
LOOP?}
    153 -- NO --> 86
    153 -- YES --> 88[NOTE 88  
BEGIN DO LOOP  
1530 I = 1, 1]
    88 --> 1530[1530  
TGA(1) = 124 =  
CC(1) = 126]
    1530 --> 1531{1531  
END OF DO  
LOOP?}
    1531 -- NO --> 88
    1531 -- YES --> 1527[/1527/]
    
```



```

graph TD
    157[157] --> 158{VS 10}
    158 --> 159{DEND = D11}
    159 --> 160[TCS1801 = TCS1801 * DEND]
    160 --> 161[THG121 = TCS1801 * THG131 - THG151 * THG161]
    161 --> 162{THG121 = TCS1801 * D0}
    162 --> 163[THG121 = THG121 * D0]
    163 --> 164[THG111 = THG121 * THG131 + THG141 * THG151 + THG161 * THG171]
    164 --> 165[ABSOLUTE BOX DISTRIBUTION = FIMDHC/AERO * D1]
    165 --> 166{TST121 = DC131}
    166 --> 167{BEGIN DO LOOP 104 N = 1, 11}
    167 --> 168[TST1N = 111 * CC11N + 221 * TND1N * TST1N / D101]
    168 --> 169{ND111 = N}
    169 --> 170{N = 1}
    170 --> 171[TST1N = 221 * TST1N * TST1N / D121]
    171 --> 172[TST121 = TST121 * TST1N * 221]
    172 --> 173[CC11031 = CC11031 * CC111031]
    173 --> 1053((1053))

    1052[1052] --> 1053[CC11131 = CC11131 * CC111031]
    1053 --> 1054{VS 10}
    1054 --> 1055[TCS11571 = CC11131]
    1055 --> 1056[TCS11701 = TCS11571 * CC11221 - CC11351 / D121]
    1056 --> 1057{BEGIN DO LOOP 100 N = 1, 10}
    1057 --> 1058{N = ND111 - N}
    1058 --> 1059[TST1251 = CC11K + 11 - CC11K]
    1059 --> 1060[TST1301 = TST1K + 121 / TST1N + 111]
    1060 --> 1061[TST1371 = TST1351 / D121 * TST1K + 121 * TST1K + 111]
    1061 --> 1062[TST1301 = TST1351 * D121 * D121 * TST1301 / D131 * D131 * TST1301]
    1062 --> 1063[TST1301 = TST1301 * CC1111 * CC050131]
    1063 --> 1064[TST1ND1 = TST1301 * TND131 + CC010131]
    1064 --> 1065[TST1411 = TST1301]
    1065 --> 1066{THG131}
    1066 --> 1067{1 = 1}
    1067 --> 1068[TST1411 = TST1401 * COTE4 * TST1301 - CC0131 / TST1421]
    1068 --> 1069[TST1431 = TST1401 - TST1411 * TND1 - CC0131 / CC050131]
    1069 --> 1070[TCS1K = 1451 * TCS1K + 1471 * TCS1371 * CC11K + 1021]
    1070 --> 1071[TCS1K = 1571 * TCS1K + 1501 * TCS1K + 1471 * TST1301 * TST1371 * TST1301]
    1071 --> 1072{BEGIN DO LOOP 100 N = 1, 10}
    1072 --> 1073{N = ND111 - N}
    1073 --> 1074[TST1251 = CC11K + 11 - CC11K]
    1074 --> 1075[TST1301 = TST1K + 121 / TST1N + 111]
    1075 --> 1076[TST1371 = TST1351 / D121 * TST1K + 121 * TST1K + 111]
    1076 --> 1077[TST1301 = TST1351 * D121 * D121 * TST1301 / D131 * D131 * TST1301]
    1077 --> 1078[TST1301 = TST1301 * CC1111 * CC050131]
    1078 --> 1079[TST1ND1 = TST1301 * TND131 + CC010131]
    1079 --> 1080[TST1411 = TST1301]
    1080 --> 1081{THG131}
    1081 --> 1082{1 = 1}
    1082 --> 1083[TST1411 = TST1401 * COTE4 * TST1301 - CC0131 / TST1421]
    1083 --> 1084[TST1431 = TST1401 - TST1411 * TND1 - CC0131 / CC050131]
    1084 --> 1085[TCS1K = 1451 * TCS1K + 1471 * TCS1371 * CC11K + 1021]
    1085 --> 1086[TCS1K = 1571 * TCS1K + 1501 * TCS1K + 1471 * TST1301 * TST1371 * TST1301]
    1086 --> 1087{BEGIN DO LOOP 100 N = 1, 10}
    1087 --> 1088{N = ND111 - N}
    1088 --> 1089[TST1251 = CC11K + 11 - CC11K]
    1089 --> 1090[TST1301 = TST1K + 121 / TST1N + 111]
    1090 --> 1091[TST1371 = TST1351 / D121 * TST1K + 121 * TST1K + 111]
    1091 --> 1092[TST1301 = TST1351 * D121 * D121 * TST1301 / D131 * D131 * TST1301]
    1092 --> 1093[TST1301 = TST1301 * CC1111 * CC050131]
    1093 --> 1094[TST1ND1 = TST1301 * TND131 + CC010131]
    1094 --> 1095[TST1411 = TST1301]
    1095 --> 1096{THG131}
    1096 --> 1097{1 = 1}
    1097 --> 1098[TST1411 = TST1401 * COTE4 * TST1301 - CC0131 / TST1421]
    1098 --> 1099[TST1431 = TST1401 - TST1411 * TND1 - CC0131 / CC050131]
    1099 --> 1100[TCS1K = 1451 * TCS1K + 1471 * TCS1371 * CC11K + 1021]
    1100 --> 1101[TCS1K = 1571 * TCS1K + 1501 * TCS1K + 1471 * TST1301 * TST1371 * TST1301]
    1101 --> 1102{BEGIN DO LOOP 100 N = 1, 10}
    1102 --> 1103{N = ND111 - N}
    1103 --> 1104[TST1251 = CC11K + 11 - CC11K]
    1104 --> 1105[TST1301 = TST1K + 121 / TST1N + 111]
    1105 --> 1106[TST1371 = TST1351 / D121 * TST1K + 121 * TST1K + 111]
    1106 --> 1107[TST1301 = TST1351 * D121 * D121 * TST1301 / D131 * D131 * TST1301]
    1107 --> 1108[TST1301 = TST1301 * CC1111 * CC050131]
    1108 --> 1109[TST1ND1 = TST1301 * TND131 + CC010131]
    1109 --> 1110[TST1411 = TST1301]
    1110 --> 1111{THG131}
    1111 --> 1112{1 = 1}
    1112 --> 1113[TST1411 = TST1401 * COTE4 * TST1301 - CC0131 / TST1421]
    1113 --> 1114[TST1431 = TST1401 - TST1411 * TND1 - CC0131 / CC050131]
    1114 --> 1115[TCS1K = 1451 * TCS1K + 1471 * TCS1371 * CC11K + 1021]
    1115 --> 1116[TCS1K = 1571 * TCS1K + 1501 * TCS1K + 1471 * TST1301 * TST1371 * TST1301]
    1116 --> 1117{BEGIN DO LOOP 100 N = 1, 10}
    1117 --> 1118{N = ND111 - N}
    1118 --> 1119[TST1251 = CC11K + 11 - CC11K]
    1119 --> 1120[TST1301 = TST1K + 121 / TST1N + 111]
    1120 --> 1121[TST1371 = TST1351 / D121 * TST1K + 121 * TST1K + 111]
    1121 --> 1122[TST1301 = TST1351 * D121 * D121 * TST1301 / D131 * D131 * TST1301]
    1122 --> 1123[TST1301 = TST1301 * CC1111 * CC050131]
    1123 --> 1124[TST1ND1 = TST1301 * TND131 + CC010131]
    1124 --> 1125[TST1411 = TST1301]
    1125 --> 1126{THG131}
    1126 --> 1127{1 = 1}
    1127 --> 1128[TST1411 = TST1401 * COTE4 * TST1301 - CC0131 / TST1421]
    1128 --> 1129[TST1431 = TST1401 - TST1411 * TND1 - CC0131 / CC050131]
    1129 --> 1130[TCS1K = 1451 * TCS1K + 1471 * TCS1371 * CC11K + 1021]
    1130 --> 1131[TCS1K = 1571 * TCS1K + 1501 * TCS1K + 1471 * TST1301 * TST1371 * TST1301]
    1131 --> 1132{BEGIN DO LOOP 
```

The image contains four flowcharts, each representing a different section of a program for printing a box plot. The flowcharts are organized into four vertical columns.

- Column 1 (Leftmost):** Starts with a decision diamond (178) labeled "END OF DO LOOP?". If "YES", it proceeds to a connector (46, 35). If "NO", it goes to a decision diamond (182) labeled "ND(2) - N". If "YES", it proceeds to a connector (1-70). If "NO", it goes to a connector (1720). This section includes a loop for calculating TNG values (TNG(17) = TNG(27) - TNG(1) * 2011 / DLTBX) and another loop for processing data (TNG(27) = TNG(27) * TNG(30) / DLTBX). It also includes a loop for calculating TNG values (TNG(1) = 3501, TST(1) = 11) and a loop for calculating TNG values (TNG(1) = 85, TCS(1) = 146, TCS(1) = 147).
- Column 2:** Starts with a decision diamond (180) labeled "END OF DO LOOP?". If "YES", it proceeds to a connector (46, 33). If "NO", it goes to a connector (1720). This section includes a loop for calculating TNG values (TNG(1) = 1201, TCS(1) = 146) and a loop for calculating TNG values (TNG(1) = 85, TNG(1) = 1201, TNG(1) = 233, TNG(1) = 162, TNG(1) = 190, TNG(1) = 27). It also includes a loop for calculating TNG values (TNG(1) = 106, TNG(1) = 139, TNG(1) = 244, TNG(1) = 174, TNG(1) = 210, TNG(1) = 301) and a loop for calculating TNG values (TNG(1) = 117, TNG(1) = 150, TNG(1) = 259, TNG(1) = 186, TNG(1) = 222, TNG(1) = 491).
- Column 3:** Starts with a decision diamond (181) labeled "END OF DO LOOP?". If "YES", it proceeds to a connector (47, 29). If "NO", it goes to a connector (1720). This section includes a loop for calculating TNG values (TNG(1) = 1201, TNG(1) = 233, TNG(1) = 162, TNG(1) = 190, TNG(1) = 27) and a loop for calculating TNG values (TNG(1) = 106, TNG(1) = 139, TNG(1) = 244, TNG(1) = 174, TNG(1) = 210, TNG(1) = 301) and a loop for calculating TNG values (TNG(1) = 117, TNG(1) = 150, TNG(1) = 259, TNG(1) = 186, TNG(1) = 222, TNG(1) = 491).
- Column 4 (Rightmost):** Starts with a decision diamond (180) labeled "END OF DO LOOP?". If "YES", it proceeds to a connector (47, 31). If "NO", it goes to a connector (1720). This section includes a loop for calculating TNG values (TNG(1) = 1201, TNG(1) = 233, TNG(1) = 162, TNG(1) = 190, TNG(1) = 27) and a loop for calculating TNG values (TNG(1) = 106, TNG(1) = 139, TNG(1) = 244, TNG(1) = 174, TNG(1) = 210, TNG(1) = 301) and a loop for calculating TNG values (TNG(1) = 117, TNG(1) = 150, TNG(1) = 259, TNG(1) = 186, TNG(1) = 222, TNG(1) = 491).

CHART TITLE - NON PROCEDURAL STATEMENTS

```

COMMON T
COMMON /IPRINT/ IP(80)
DIMENSION T(1620),D(2060),CD(2060),ND(100),DC(100),
TG(300),TNG(400),CC(1300),TCS(250),CFL(1150),CFLP(1150),
TST(50),TGR(100),TI(24),YC(150),TAND(8),CCLO(8),SIND(6),COS(6),
BFL(14),TGA(135),TBD(11),DINT(112),TWMT(250),DKDIN(15),
DTBZ(22),
CCCL(1150),
CLOT(150),
CCF(200)
EQUIVALENCE (D(1),T(2061)),(CD(1),T(4121)),(ND(1),T(6121)),
(DC(1),D(1401)),(TG(1),T(1001)),(TNG(1),T(1301)),(TST(1),T(1701)),
(YC(1),T(201)),(TI(1),T(41)),(CC(1),CD(1051)),(TCS(1),CD(1401)),
(CFL(1),CD(1951)),(CFLP(1),CD(1101)),(TOR(1),T(1751)),
(TAND(1),T(1221)),(CCLO(1),T(131)),(SIND(1),T(1401)),(COS(1),D(1101)),
(COS(1),T(1401)),(COTEA,T(1521)),(B02,T(121)),(TWMT(1),CD(511)),
(B102,T(151)),(TGA(1),T(1051)),(MSTW,D(1371)),(DINT(1),D(1143)),
(CFL(1),D(2061)),(TBD(1),TG(1271)),
(INCAB,ND(601)),(INPAC,ND(851)),(DGMD,D(1051)),(DKDMD,D(1441)),
(I,ND(261)),(M,ND(271)),(L,ND(281)),(J,ND(291)),(K,ND(301)),(N,ND(311))
EQUIVALENCE (TANG,T(921)),(DIND,D(271)),(DKDIN(1),D(1970)),
(DTBZ(1),D(1121)),(DTBZ1,D(1120)),
(BLFLD,D(1701)),
(CCL(1),CD(1901)),
(CLTBX,T(1001)),
(CLOT(1),T(501)),
(CCF(1),CD(1051)),
(CCL5,T(1931))

9513 FORMAT(1H,50X,50H** CLOT2 (CALLED FROM FDIS - LOOP 112) - IP(15)
** )

9500 FORMAT (4H) **FDIS SUBR. CCI ARRAY DATA FOR FUEL CELL 11,
3H***,50X,10H** FDIS - IP(17) **/END CCI )

9502 FORMAT (1H 14,5E10 0)

9504 FORMAT (8H TCS )

9505 FORMAT (8H TST )

9506 FORMAT (8H TWMT)

9503 FORMAT(1H,50X,50H** CLOT2 (CALLED FROM FDIS - LOOP 151) - IP(15)
** )

9510 FORMAT (8H) **FDIS SUBR. BOX AND STRUCT DATA--CCI,TCS,TST APPA
YS***,31X,10H** FDIS - IP(17) ** SHD CCI )

1000 FORMAT (4H) **FDIS SUBR. TNG AND TWMT ARRAY DATA**NSK,
10H** FDIS - IP(17) **/END TNG )

1170 FORMAT (8H) CASE(14,12X,30H**WING FUEL DISTRIBUTION SUPPLY***,
31X,10H** FDIS - IP(18) **//
70H CELL YIB(8P) YOB(8P) YIB(15) YOB(15)
YCG(8P) XCG(15) YCG(15))

1000 FORMAT (4H) **FUEL HEIGHTS--LB/SIDE**//50H CE
LL TOTAL CAPACITY FUEL/SYS RND(FL) RECD(FL)

1000 FORMAT (1H 3X,11,1X,7F10.2)

1000 FORMAT (1H 3X,11,1X,2F10.1,F0.1,F11.4,F0.1)

1010 FORMAT(4H) **FUEL CELL DISTRIBUTIONS**//50H *
PANEL HEIGHTS--LB/SIDE* **FUEL CELL STATION AND H
EIGHT/INCH DATA**//50H
CELL
L 1. CELL 2. //100H CELL
1 CELL 2 SECT YIB(1) X(15) Y(15) LB/IN SECT YIB(1)
X(15) Y(15) LB/IN 1

1002 FORMAT (8H TOTAL,F0.1,F0.1,4X,12,F0.2,F10.2,F0.2,F0.3,4X,12,F0.2,F
10.2,F0.2,F0.3)

1003 FORMAT (1H 13,F10.1,F0.1,4X,12,F0.2,F10.2,F0.2,F0.3,4X,12,F0.2,F10
.2,F0.2,F0.3)

1004 FORMAT (7H) **TOTAL FUEL PLUS FU
EL SYSTEM 1-6 LOADS**//50H **TOTAL*
**FUEL CELL 1* **FUEL CELL 2* //100H S

```

05/10/74

AUTOFLW CHART SET - SHEEP WIND AND EMPENNAGE MODULE - PAGE 90

CHART TITLE - NON-PROCEDURAL STATEMENTS

```
TA  SHEAR  B..MEM  T. MEM  SHEAR  B. MEM  T. M
CH  SHEAR  B. MEM  T. MEM)
105  FORMAT (1H 13,F11.1,F12.1,F11.1,3X,F9.1,F11.1,F10.1,3X,F9.1,F11.1,
      F10.1)
```

08/10/74

AUTOFLOW CHART SET - SHEEP MING AND EMPENNAGE MODULE - PAGE 51

CHART TITLE - INTRODUCTORY COMMENTS

****SUBROUTINE TBM1****

FUEL/TORQUE-BOX WEIGHT INTEGRATION

CHART TITLE - SUBROUTINE TBM11

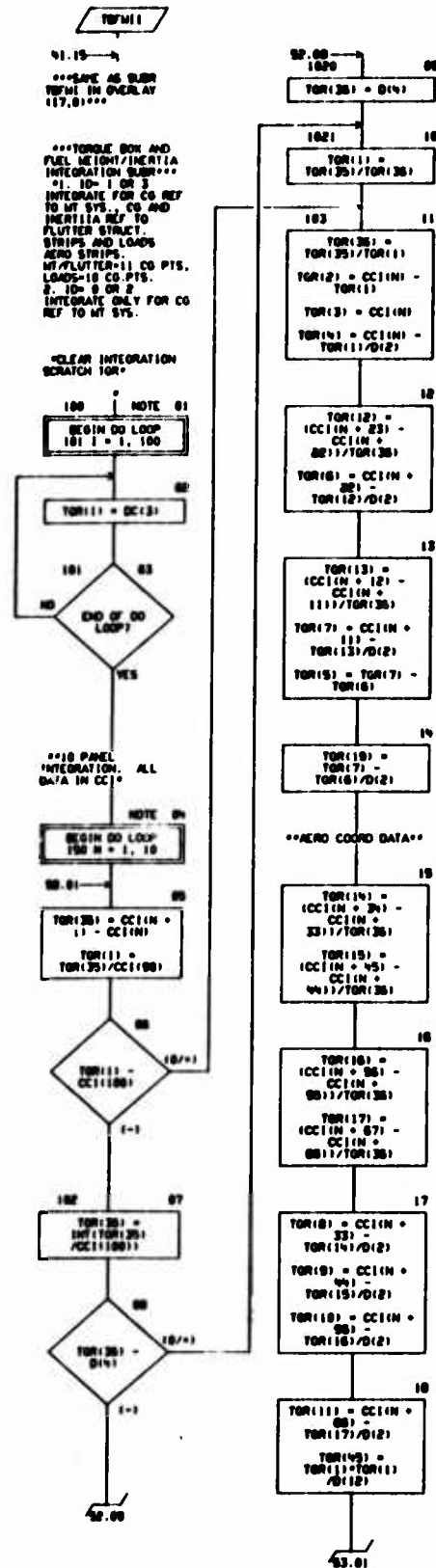
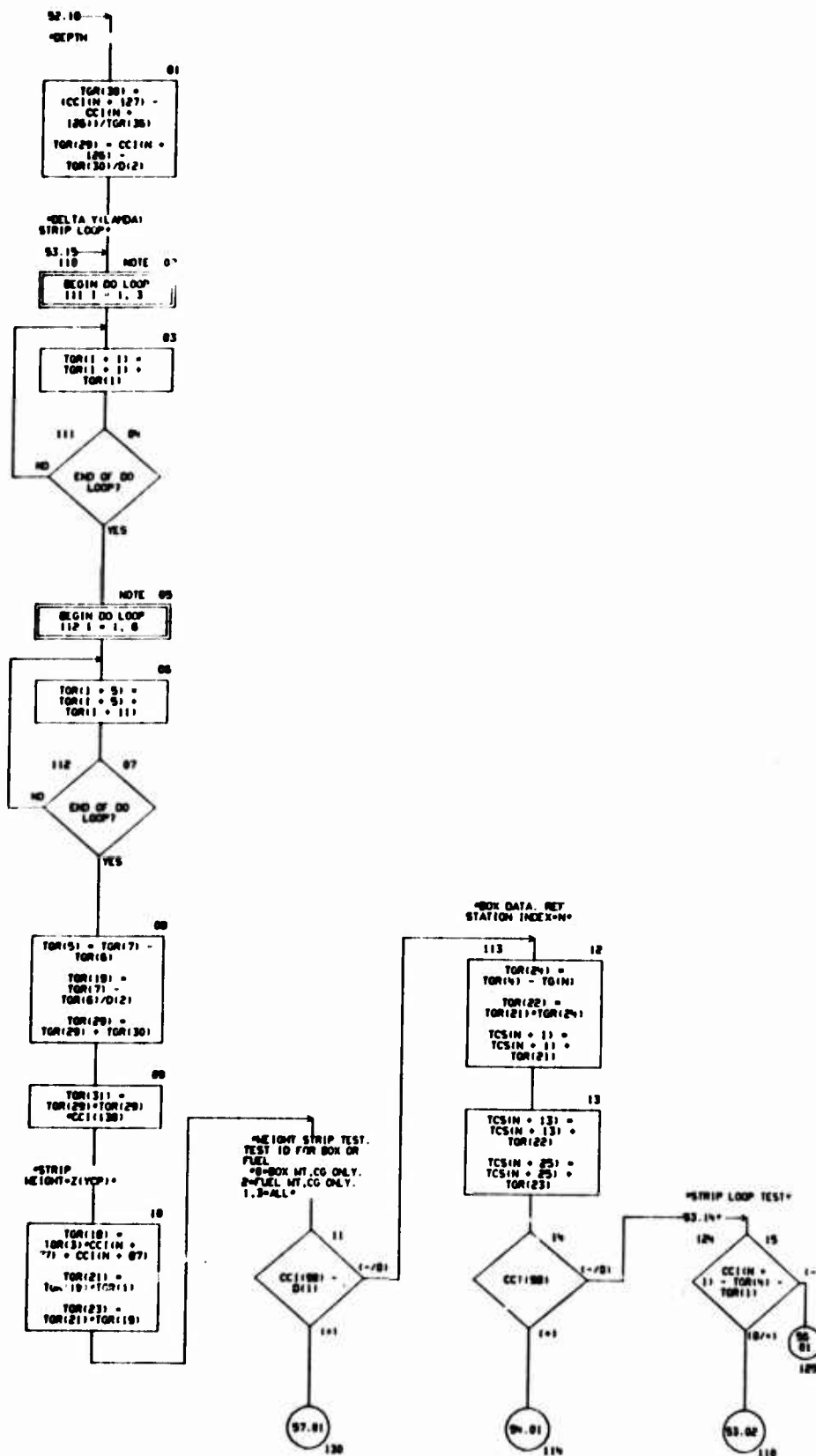


CHART TITLE - SUBROUTINE TORWII



```

graph TD
    Start([START]) --> 01[01]
    01 --> 02{02}
    02 --> 03[03]
    03 --> 04[04]
    04 --> 05{05}
    05 --> 06[06]
    06 --> 07[07]
    07 --> 08{08}
    08 --> 09[09]
    09 --> 10{10}
    10 --> 11[11]
    11 --> 12[12]
    12 --> 13{13}
    13 --> 14[14]
    14 --> 15[15]
    15 --> 16{16}
    16 --> 17[17]
    17 --> 18{18}
    18 --> 19[19]
    19 --> 20{20}
    20 --> 21[21]
    21 --> 22{22}
    22 --> 23[23]
    23 --> 24{24}
    24 --> 25[25]
    25 --> 26{26}
    26 --> 27[27]
    27 --> 28{28}
    28 --> 29[29]
    29 --> 30{30}
    30 --> 31[31]
    31 --> 32{32}
    32 --> 33[33]
    33 --> 34{34}
    34 --> 35[35]
    35 --> 36{36}
    36 --> 37[37]
    37 --> 38{38}
    38 --> 39[39]
    39 --> 40{40}
    40 --> 41[41]
    41 --> 42{42}
    42 --> 43[43]
    43 --> 44{44}
    44 --> 45[45]
    45 --> 46{46}
    46 --> 47[47]
    47 --> 48{48}
    48 --> 49[49]
    49 --> 50{50}
    50 --> 51[51]
    51 --> 52{52}
    52 --> 53[53]
    53 --> 54{54}
    54 --> 55[55]
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CHART TITLE - SUBROUTINE T07M1

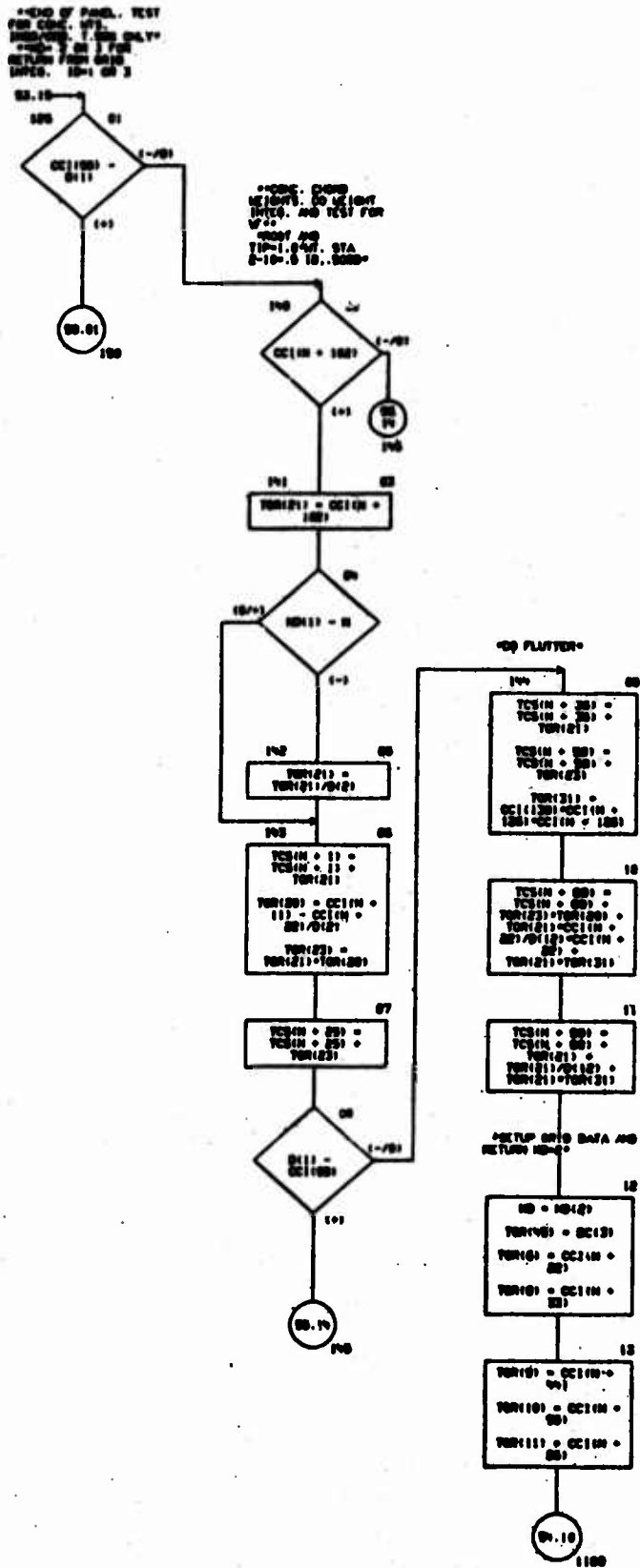
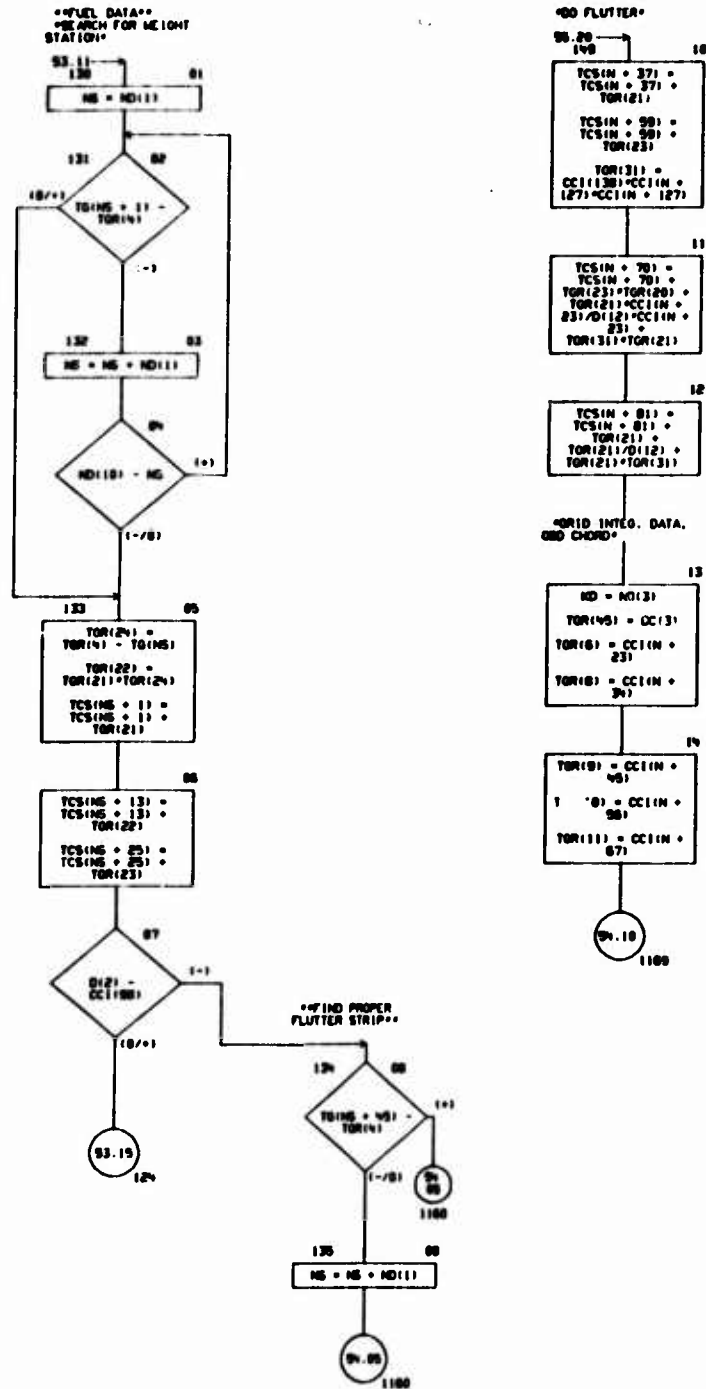


CHART TITLE - SUBROUTINE TORW11



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CHART TITLE - SUBROUTINE TBMH11

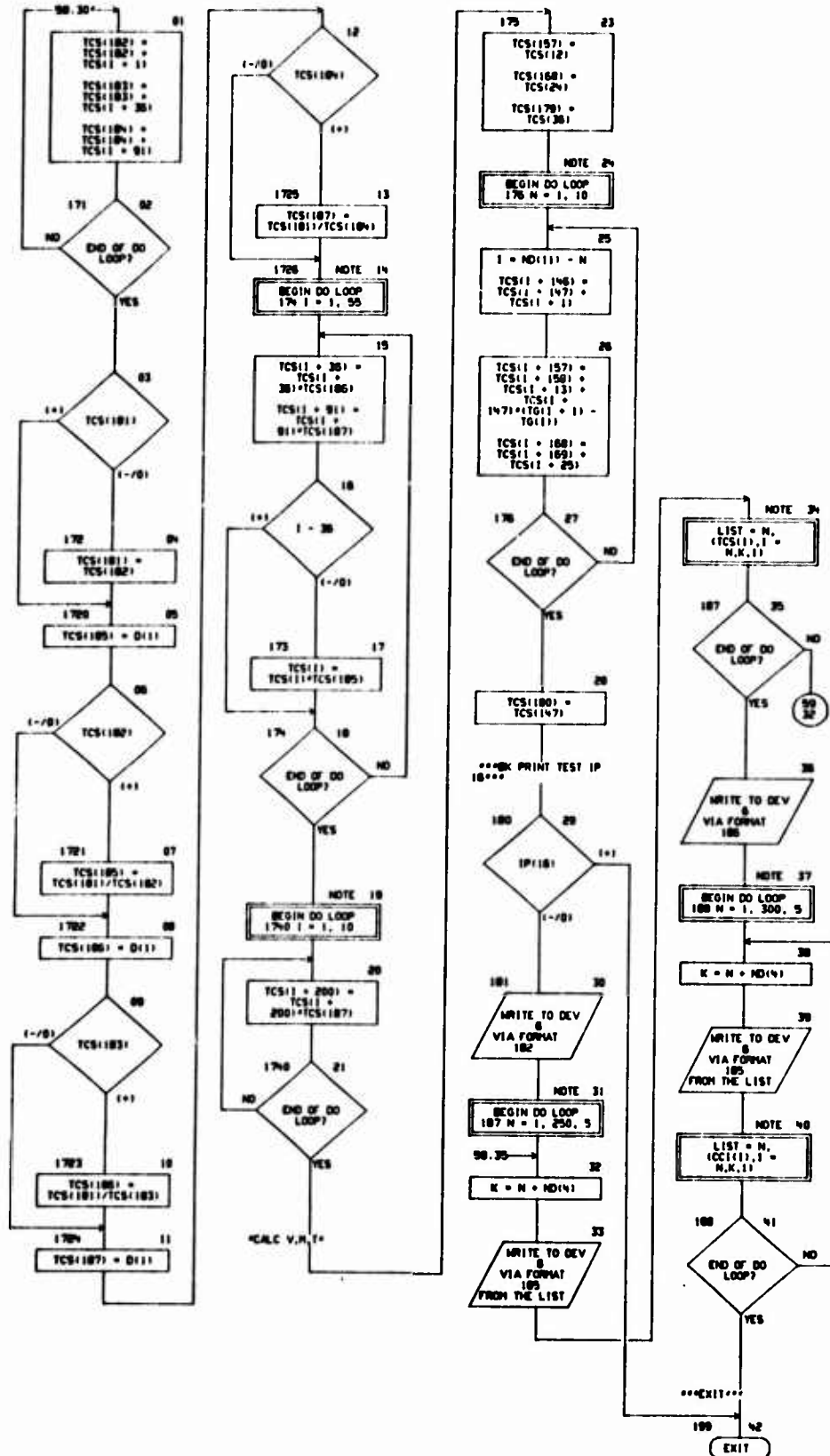


CHART TITLE - NON-PROCEDURAL STATEMENTS

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COMMON T
COMMON /IPRINT/ IP(80)
DIMENSION T(6220),D(2080),CD(2000),ND(100),DC(100),
TG(300),THG(400),YC(160),YT(24),TST(50),TGR(100),
CC(1300),TCS(250),TGA(135),
SIND(6),COS(6)
EQUIVALENCE (D(1),T(2081)),(CD(1),T(4121)),(ND(1),T(6121)),
(DC(1),D(1401)),(TG(1),T(1001)),(THG(1),T(1301)),(TST(1),T(1701)),
(TGR(1),T(1751)),(YC(1),T(351)),(YT(1),T(411)),(TGA(1),T(1051)),
(CC(1),CD(1051)),(TCS(1),CD(1401)),
(SIND(1),T(140)),(COS(1),T(146)),
(IJ,ND(26)),(IK,ND(27)),(IL,ND(28)),(IM,ND(29)),(IN,ND(30)),
(INA,ND(31)),(ND,ND(32))
102 FORMAT (7H1 ***TBFW1) SUBR. FUEL/BOX STRUCT. INTEGRATION DATA A
-TCS AND CC1 ARRAYS***,12X,21H** TBFW11 - IP(16) **/END TCS )
105 FORMAT (1H 1N,5E10.0)
106 FORMAT (8H0 CC1 )

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08/10/74

AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 61

CHART TITLE - INTRODUCTORY COMMENTS

.....

*****SUBROUTINE C102*****

PLATFORM CHORD EVALUATION

.....

CHART TITLE - SUBROUTINE CT02

CT02

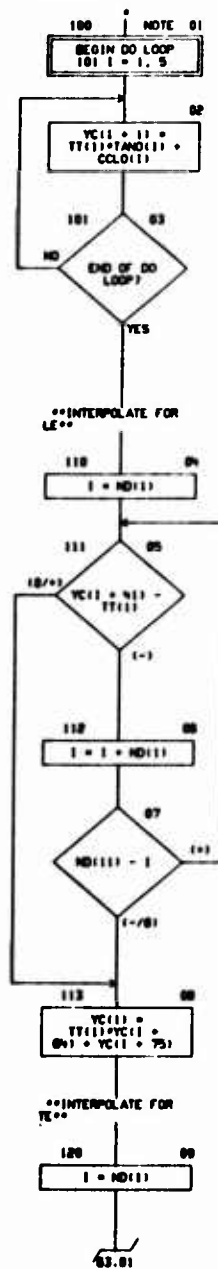
00.17- H

*****SAFE AS SUBR
CT01 IN OVERLAY
(17,0)*****

*****WING LE/TE
INTERPOLATION
SIMILAR TO

*****INTERPOLATE FOR
*****CHORD AND T/C
*****GIVEN*****
*****INTERPOLATE FOR
*****STRUCTURAL CHORD DATA
*****X(A) GIVEN*****

Y(1)=Y(11).
X(1)=X(12)
*****CALC AERO DATA AT
Y(1)*****



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graph TD
    subgraph Loop1 [Span 1 Processing]
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        285 -- 83 --> 286[286]
        286 --> 287{287}
        287 -- 84 --> 288[288]
        288 --> 289{289}
        289 -- 85 --> 290[290]
        290 --> 291{291}
        291 -- 86 --> 292[292]
        292 --> 293{293}
        293 -- 87 --> 294[294]
        294 --> 295{295}
        295 -- 88 --> 296[296]
        296 --> 297{297}
        297 -- 89 --> 298[298]
        298 --> 299{299}
        299 -- 90 --> 300[300]
        300 --> 301{301}
        301 -- 91 --> 302[302]
        302 --> 303{303}
        303 -- 92 --> 304[304]
        304 --> 305{305}
        305 -- 93 --> 306[306]
        306 --> 307{307}
        307 -- 94 --> 308[308]
        308 --> 309{309}
        309 -- 95 --> 310[310]
        310 --> 311{311}
        311 -- 96 --> 312[312]
        312 --> 313{313}
        3
```


CHART TITLE - SUBROUTINE CT012

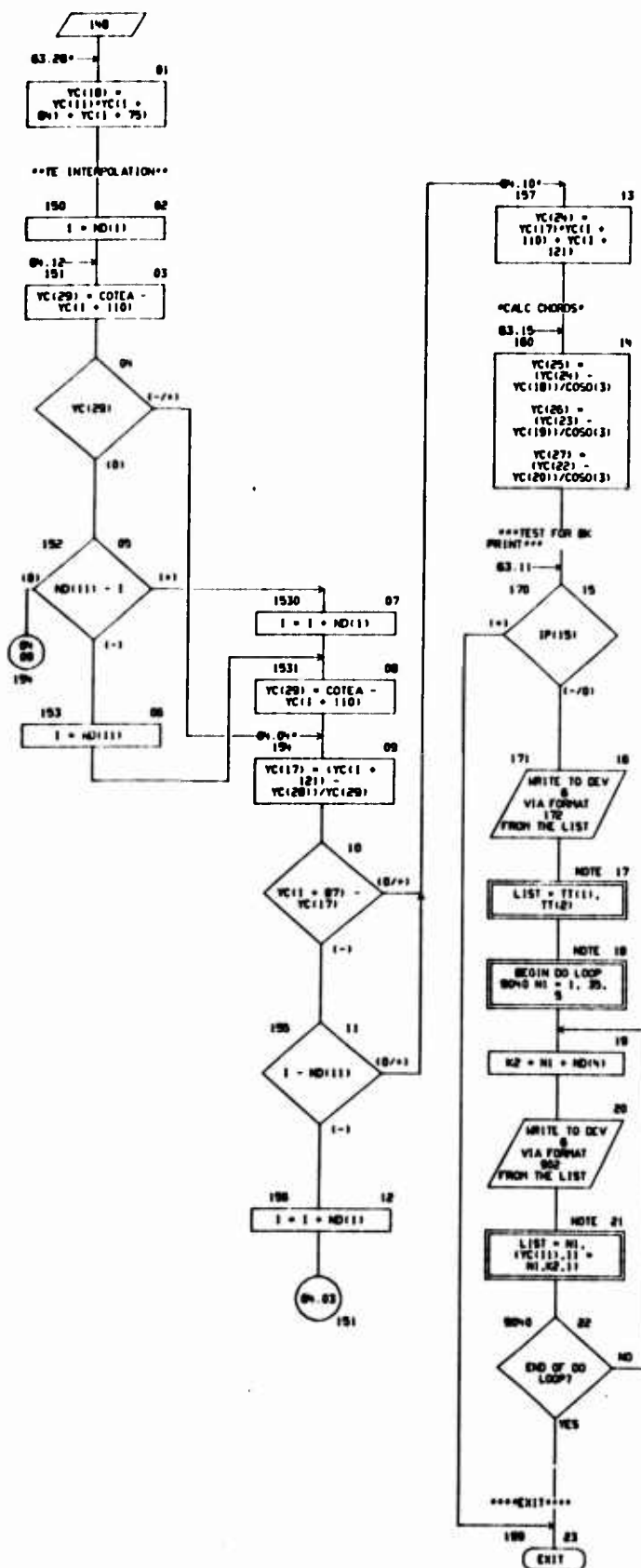


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T
COMMON /IPRINT/ IP(80)
DIMENSION T(6220),D(2060),CD(2000),ND(100),DC(100),
VC(150),TT(24),VTC(60),
TAND(8),CCLO(8),SIND(8),COSO(8)
EQUIVALENCE (D(1),T(2061)),(CD(1),T(4121)),(ND(1),T(8121)),
(VC(1),T(2011)),(TT(1),T(4111)),(DC(1),D(1401)),(VTC(1),T(3511)),
(TAND(1),T(1221)),(CCLO(1),T(1311)),(SIND(1),T(1401)),
(COSO(1),T(1461)),
(COTE4,T(1521))
172 FORMAT(1H0,20X,7HT(1) =,F0.3,5X,7HT(2) =,F0.3/6H VC )
802 FORMAT (1H 14,5C10.0)

```

06/10/74

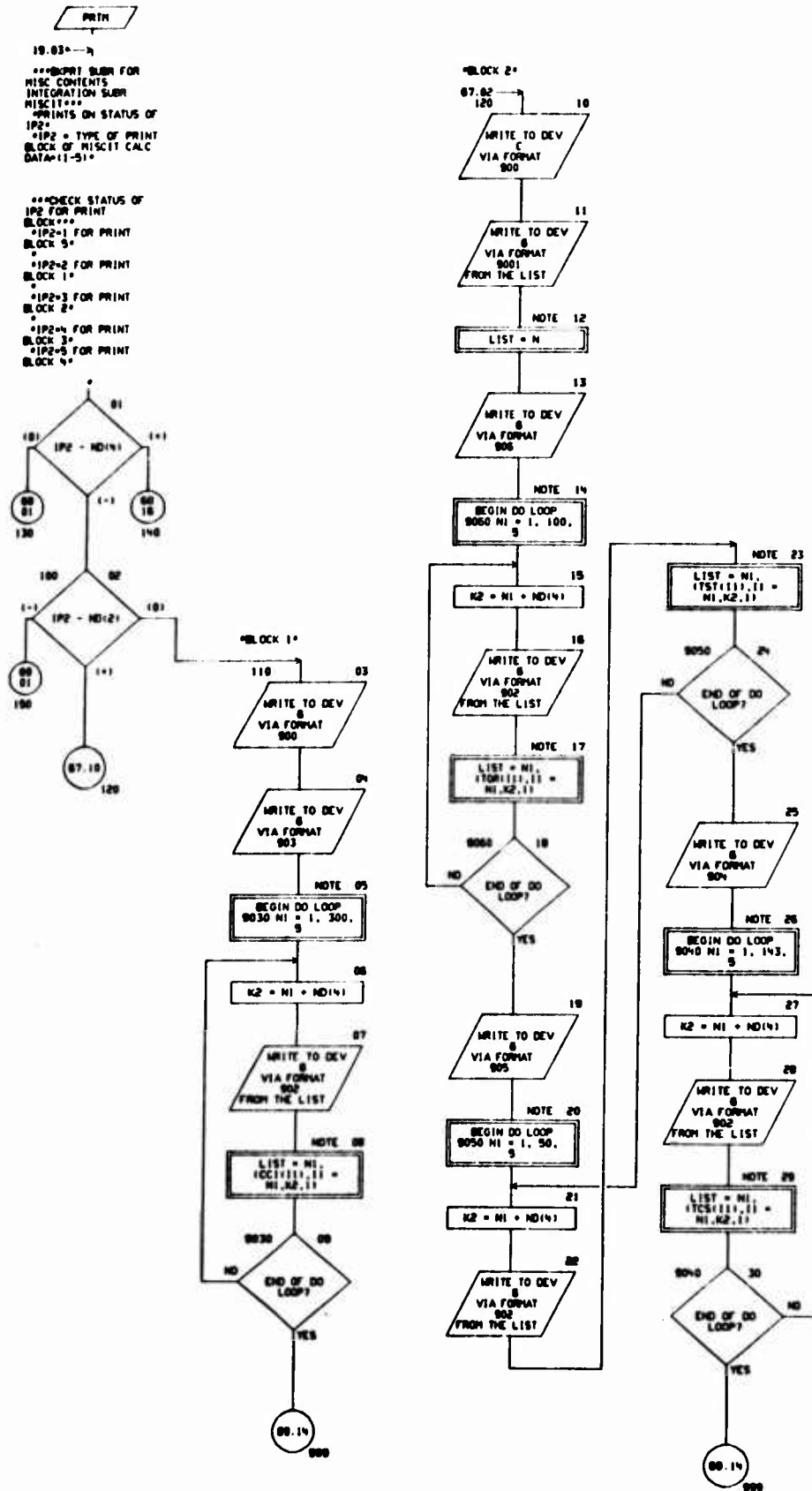
AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 06

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE PRIM*****

DESIGN DATA PRINT - MISC CONTENT MASS DATA

CHART TITLE - SUBROUTINE PRTH



```

graph TD
    01[01] --> 02[/WRITE TO DEV  
8  
VIA FORMAT  
800/]
    02 --> 03[03  
WRITE TO DEV  
8  
VIA FORMAT  
800  
FROM THE LIST]
    03 --> 04[04  
NOTE 03  
LIST = N, L]
    04 --> 05[/WRITE TO DEV  
8  
VIA FORMAT  
800/]
    05 --> 06[06  
NOTE 05  
BEGIN DO LOOP  
8051 N1 = 1, 50,  
5]
    06 --> 07[07  
N2 = N1 + ND(4)]
    07 --> 08[/WRITE TO DEV  
8  
VIA FORMAT  
802  
FROM THE LIST/]
    08 --> 09[09  
NOTE 08  
LIST = N1,  
1751111,11 =  
N1,N2,11]
    09 --> 10{10  
END OF DO  
LOOP?}
    10 -- NO --> 06
    10 -- YES --> 11[/WRITE TO DEV  
8  
VIA FORMAT  
804/]
    11 --> 12[12  
NOTE 11  
BEGIN DO LOOP  
8041 N1 = 1, 195,  
5]
    12 --> 13[13  
N2 = N1 + ND(4)]
    13 --> 14[/WRITE TO DEV  
8  
VIA FORMAT  
802  
FROM THE LIST/]
    14 --> 15[15  
NOTE 14  
LIST = N1,  
1751111,11 =  
N1,N2,11]
    15 --> 16{16  
END OF DO  
LOOP?}
    16 -- NO --> 12
    16 -- YES --> 17((17  
END))

```

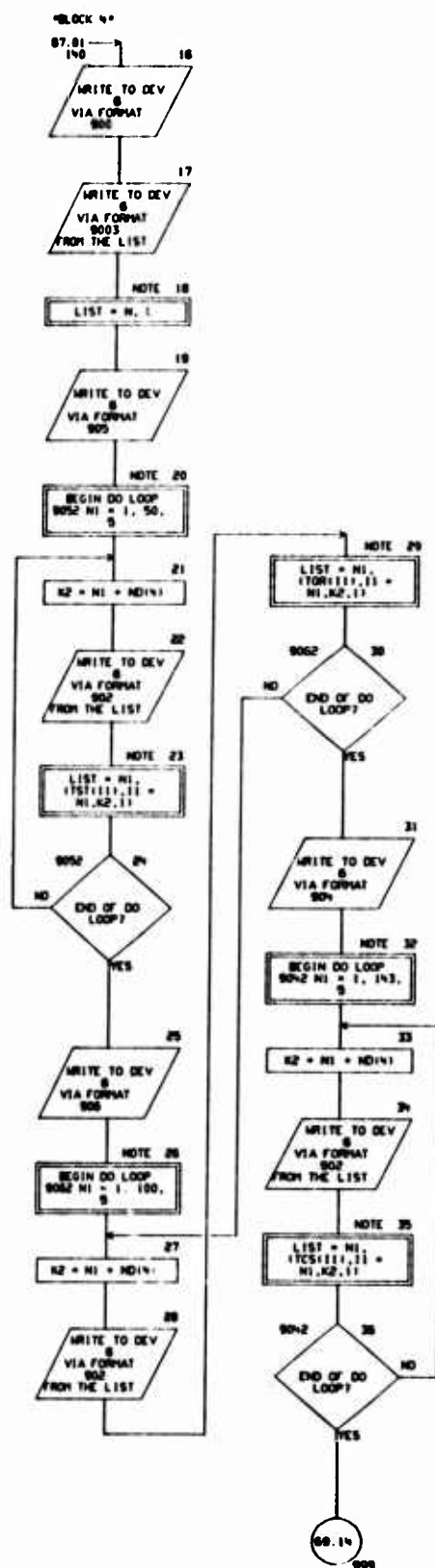


CHART TITLE - SUBROUTINE PRTH

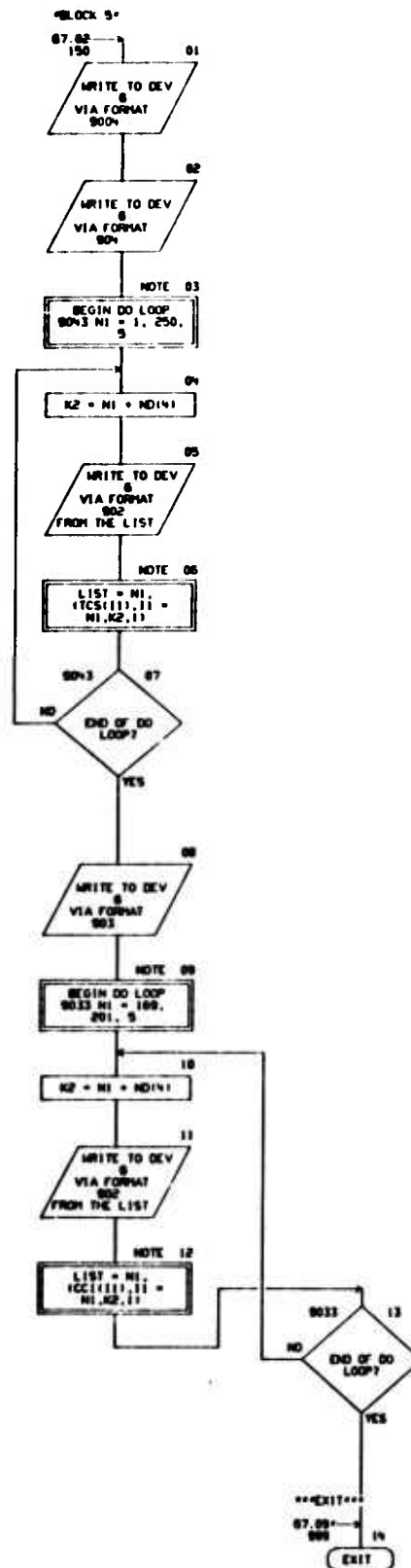


CHART TITLE - NON PROCEDURAL STATEMENTS

```

COMMON T
DIMENSION T(6220),D(2060),CD(2000),ND(100),CC(100),
TCS(250),CC(1300),
TST(50),TGR(100)
EQUIVALENCE (D(1),T(2061)),(CD(1),T(4121)),(ND(1),T(6121)),
(CD(1),D(1401)),(TCS(1),CD(1401)),(CC(1),CD(1651)),
(TST(1),T(1701)),(TGR(1),T(1751)),
(IP2,ND(131)),
(IN,ND(271)),(L,ND(281))
900  FORMAT (69H)  ***PRTH SUBR -- DATA=CCI ARRAY.  CALC DATA=TCS, TST,
      TGR ARRAYS***,22X,19H** PRTH - (P(13) **
902  FORMAT (1H 14,5E10 8)
903  FORMAT (6H0 CCI )
904  FORMAT (6H0 TCS )
905  FORMAT (6H0 TST )
906  FORMAT (6H0 TGR )
9001  FORMAT (46H0  *UNIF. DIST. MTS. TGR,TST,TCS(1-143). STA13)
9002  FORMAT (46H0  *CONC. PT. ITEMS. TST AND TCS(1-143). STA13,6H  IT
      EN12)
9003  FORMAT (46H0  *DIST. LINE ITEMS. TST,TGR,TCS(1-143). STA13,6H
      LINE12)
9004  FORMAT (68H)  ***PRTH SUBR--FINAL OUTPUT DATA ARRAYS--TCS AND CC
      I(100-201)***,23X,19H** PRTH - (P(14) **)

```

OVERLAY (16,0)

DESIGN DATA FOR TORQUE-BOX ANALYSIS

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PROGRAM TABLE OF CONTENTS AND REFERENCES,
AND TABLE OF DIAGNOSTICS

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FORTRAN MODULE NING AND EMPENNAGE MODULE -

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - PROCEDURES

(000021)	2.04	10	(000019)	2.03	(000019)	2.03
(000029)	2.08	20	(000027)	2.07	(000027)	2.07

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE MODATA

(000041)	5.01	MODATA	(000021)	2.04-X		
(000087)	5.02	100				
(000098)	5.03		(000089)	5.04		
(000089)	5.04	101				
(000091)	5.06		(000092)	5.07		
(000092)	5.07	102				
(000096)	5.09		(000101)	5.11		
(000101)	5.11	103				
(000106)	5.13		(000112)	5.18		
(000108)	5.15	1030				
(000110)	5.16	1031	(000107)	5.14		
(000111)	5.17	1032				
(000112)	5.18	1033	(000107)	5.14	(000109)	5.15
(000120)	5.22		(000122)	5.23	(000110)	5.16
(000122)	5.23	104				
(000126)	5.25		(000128)	5.26		
(000128)	5.26	105				
(000132)	5.28		(000134)	5.29		
(000134)	5.29	106				
(000138)	5.31		(000139)	5.32		
(000139)	5.32	1060				
(000144)	5.34		(000165)	6.08		
(000165)	6.08	107				
(000169)	6.10		(000175)	6.12		
(000175)	6.12	108				
(000181)	6.15	1080				
(000185)	6.16	1081	(000180)	6.14		
(000186)	6.17		(000191)	6.20		
(000190)	6.19	1082				
(000191)	6.20	1083	(000189)	6.18		
(000195)	6.22		(000197)	6.23		
(000197)	6.23	1084				
(000201)	6.25		(000202)	6.26		
(000202)	6.26	109				
(000207)	6.28		(000208)	6.29		
(000208)	6.29	1090				
(000212)	6.31		(000218)	6.33		
(000218)	6.33	110				
(000222)	6.35		(000223)	6.36		
(000223)	6.36	111				
(000228)	6.37	200				
(000238)	7.04		(000240)	7.05		
(000240)	7.05	201				
(000253)	7.09	260				
(000254)	7.10	261				
(000261)	7.12		(000263)	7.15		
(000263)	7.15	265				
(000267)	7.18		(000268)	7.21		
(000269)	7.21	266				
(000273)	7.22	299	(000253)	7.09		

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE MTLCH

(000284)	10.01	MTLCH	(000228)	8.37-X				
(000306)	10.01	100						
(000311)	10.02	112	(000389)	11.10				
(000313)	10.04	113						
(000314)	10.05	114	(000312)	10.03				
(000322)	10.08	118						
(000324)	10.10	119	(000321)	10.07				
(000327)	10.12	120	(000313)	10.04	(000323)	10.09		
(000332)	10.14	129						
(000335)	10.15	130						
(000338)	10.16	131	(000335)	10.15				
(000339)	10.17		(000340)	10.18				
(000340)	10.18	132						
(000344)	10.20	139						
(000352)	10.22	199	(000343)	10.19	(000345)	10.21	(000369)	11.07
(000348)	11.01	140	(000335)	10.15			(000385)	11.17
(000349)	11.02		(000350)	11.03				
(000350)	11.03	141						
(000359)	11.06	191						
(000369)	11.07	192	(000358)	11.05				
(000370)	11.08	193						
(000371)	11.09		(000374)	11.12				
(000373)	11.11	1930						
(000374)	11.12	194	(000372)	11.10				
(000379)	11.14	195						
(000381)	11.16	196						
(000385)	11.17	197	(000378)	11.13	(000380)	11.15		
(000386)	11.18	198						

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE MTLFW

(000403)	14.01	MTLFW	(000332)	10.14-X				
(000419)	14.01	100						
(000420)	14.02		(000421)	14.03				
(000421)	14.03	101						
(000429)	14.06	103	(000426)	14.05				
(000462)	14.07	117	(000429)	14.06	(000435)	15.04	(000438)	15.07
			(000446)	15.17	(000441)	15.12	(000444)	15.15
(000466)	14.10	118	(000429)	14.06	(000432)	15.01	(000434)	15.03
			(000450)	15.11	(000443)	15.14	(000446)	15.17
(000468)	14.12		(000470)	14.13				
(000470)	14.13	119						
(000432)	15.01	104	(000426)	14.05				
(000433)	15.02	105						
(000435)	15.04	106						
(000436)	15.05	107						
(000438)	15.07	108						
(000439)	15.08	109						
(000449)	15.10	114	(000432)	15.01				
(000441)	15.12	110						
(000442)	15.13	111						
(000444)	15.15	112						
(000445)	15.16	113						
(000474)	15.18	120	(000434)	15.03	(000437)	15.06	(000440)	15.09
(000475)	15.19		(000478)	15.20	(000443)	15.14	(000446)	15.17
(000478)	15.20	121						
(000482)	15.23		(000483)	15.24				
(000483)	15.24	122						
(000486)	15.25	130	(000471)	14.13				
(000488)	15.28	131						
(000489)	15.30	132	(000487)	15.28				
(000501)	15.32	133						
(000502)	15.33	134	(000500)	15.31				
(000504)	15.35	135						
(000507)	15.36	136	(000503)	15.34				
(000512)	15.37	140						

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(000514)	15.29		(000515)	16.01
(000519)	16.01	141		
(000517)	16.02	142	(000561)	16.23
(000527)	16.04	143		
(000528)	16.05		(000551)	16.16
(000532)	16.06	144		
(000536)	16.07	145		
(000540)	16.10		(000543)	16.12
(000543)	16.12	146		
(000546)	16.13	147		
(000547)	16.14	148		
(000548)	16.15	149	(000546)	16.13
(000551)	16.16	150	(000547)	16.14
(000554)	16.18	153	(000554)	16.17
(000570)	16.19	199		
(000555)	16.20	151		
(000559)	16.22		(000560)	16.23
(000560)	16.23	152		

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE MTLPM

(000581)	19.01	MTLPM	(000544)	16.20-X	(000559)	11.06-X
(000599)	19.02	101				
(000608)	19.04	104	(000588)	19.01		
(000610)	19.06	105	(000600)	19.03		
(000613)	19.08	107				
(000629)	19.12	120				
(000630)	19.13	121				
(000637)	19.19	130				
(000638)	19.20	131				
(000643)	19.22	199	(000636)	19.18	(000637)	19.19

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE ALOAD

(000731)	22.04	202				
(000734)	22.06		(000737)	22.07		
(000737)	22.07	2020				
(000654)	22.08	ALOAD	(000231)	7.01-X		
(000697)	22.09		(000698)	22.10		
(000688)	22.10	250				
(000720)	22.11	200				
(000721)	22.12	201				
(000776)	22.14	100	(000720)	22.11		
(000780)	22.15		(000787)	22.17		
(000787)	22.17	101				
(000790)	22.18	102	(000777)	23.14		
(000797)	22.20	110	(000794)	22.18		
(000739)	23.01	203	(000730)	22.03		
(000742)	23.03		(000745)	23.04		
(000745)	23.04	2030				
(000747)	23.05	204	(000730)	22.03	(000738)	22.07
(000748)	23.06		(000773)	23.13		
(000773)	23.13	205				
(000804)	23.15	111	(000787)	22.20		
(000805)	23.16	112				
(000807)	23.18		(000813)	23.20		
(000813)	23.20	113				
(000816)	23.21	114	(000794)	22.18	(000804)	23.15
(000819)	23.22	1140	(000816)	23.21		
(000823)	24.01	1141	(000816)	23.21		
(000831)	24.04	120	(000787)	22.20		
(000843)	24.07	121	(000848)	24.08		
(000851)	24.09	122	(000848)	24.08		

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(000050)	24.12	123	(000055)	24.11		
(000050)	24.14	124	(000055)	24.11		
(000059)	24.15	125				
(000071)	24.17	126				
(000075)	24.18	127	(000060)	24.14		
(000076)	24.19	128				
(000080)	25.01	129	(000060)	24.14		
(000082)	25.03	130				
(000083)	25.04	131	(000081)	25.02		
(000089)	25.07	132				
(000090)	25.08	133	(000070)	24.16	(000072)	24.17 (000080) 25.06
(000094)	25.09	140	(000075)	24.18	(000077)	24.19
(000095)	25.10	141				
(000092)	25.11	142	(000094)	25.09		
(000090)	25.13	150	(000099)	25.10		
(000016)	25.16		(000017)	25.17		
(000017)	25.17	1500				
(000010)	25.19		(000047)	26.06		
(000021)	25.21	1501				
(000023)	25.23	1502				
(000024)	25.24	1503	(000022)	25.22		
(000020)	25.26	1504				
(000029)	25.27	1505	(000027)	25.25		
(000035)	25.29	1506				
(000040)	26.01	1507	(000035)	25.28		
(000043)	26.03	1508				
(000046)	26.05	1509	(000042)	26.02		
(000047)	26.06	151	(000020)	25.20		
(000050)	26.07	1510				
(000051)	26.08		(000086)	26.16		
(000056)	26.10		(000051)	26.13		
(000050)	26.12	1511				
(000051)	26.13	1512	(000057)	26.11		
(000056)	26.16	152				
(000071)	26.17	160	(000010)	23.22	(000027)	24.03
(000073)	26.19	1600				
(000074)	26.20	1601	(000072)	26.18		
(000075)	26.21		(000078)	26.22		
(000078)	26.22	161				
(000081)	26.23	162	(000010)	23.22		
(000082)	26.24	163	(000027)	24.03		
(000084)	26.26		(000087)	26.34		
(000094)	26.32	164				
(000095)	26.33	165	(000093)	26.31		
(000097)	26.34	166				
(001000)	26.35	169	(000081)	26.23		
(001002)	27.01	170	(001000)	26.35		
(001010)	27.04	173				
(001014)	27.06	176	(001009)	27.03		
(001016)	27.08		(001017)	27.10		
(001017)	27.10	177				
(001023)	27.13		(001025)	27.16		
(001025)	27.16	180				
(001037)	27.19		(001040)	27.21		
(001040)	27.21	183				
(001043)	27.22	199	(001000)	26.35		

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE GJAL

(001094)	30.01	GJAL	(000234)	7.02-X
(001095)	30.04	1000		
(001098)	30.05	1001	(001094)	30.03
(001101)	30.06	100		
(001104)	30.08		(001105)	30.09
(001105)	30.09	101		
(001110)	30.11		(001111)	30.12
(001111)	30.12	1018		

CARD ID	PAGE/BOX	NAME	REFERENCES (SOURCE SEQUENCE NO. AND PAGE/BOX)			
(001115)	30.14	102				
(001116)	30.15	103				
(001119)	30.16	104	(001116)	30.15		
(001120)	30.17		(001123)	30.18		
(001123)	30.18	105				
(001127)	31.01	1006	(001116)	30.15		
(001129)	31.02	106				
(001129)	31.03	107				
(001135)	31.06	108				
(001136)	31.07	109	(001134)	31.05		
(001138)	31.09		(001139)	31.10		
(001139)	31.10	1090				
(001142)	31.12	110	(001114)	30.13	(001127)	31.01
(001162)	31.17	111			(001129)	31.02
(001171)	31.20	113	(001189)	31.19	(001369)	36.08
(001172)	31.21	114	(001189)	31.19	(001371)	36.09
(001173)	31.22		(001177)	31.25		
(001176)	31.24	115				
(001177)	31.25	119	(001175)	31.23		
(001179)	31.26	120				
(001181)	31.28	1200				
(001182)	31.29	1201	(001180)	31.27		
(001188)	32.01	121				
(001193)	32.02	122				
(001198)	32.04	123				
(001204)	32.06	124				
(001211)	32.08	126				
(001217)	32.11	128				
(001222)	32.12	150				
(001225)	32.14		(001226)	32.15		
(001226)	32.15	151				
(001230)	32.17	152	(001227)	32.16		
(001240)	32.18	158	(001230)	32.17		
(001233)	33.01	153	(001230)	32.17		
(001234)	33.02		(001236)	33.04		
(001235)	33.03	154				
(001236)	33.04	155	(001234)	33.02		
(001242)	33.05	160	(001227)	32.16	(001240)	32.18
(001243)	33.06	161				
(001245)	33.08	162				
(001246)	33.09	163	(001244)	33.07		
(001249)	33.10	164	(001242)	33.05		
(001250)	33.11	165				
(001252)	33.13	166				
(001253)	33.14	167	(001251)	33.12		
(001255)	33.15	170	(001249)	33.10		
(001258)	33.16	171	(001255)	33.15		
(001264)	33.18	172				
(001265)	33.19		(001270)	33.24		
(001267)	33.21	173				
(001269)	33.23	174				
(001270)	33.24	178	(001266)	33.20	(001268)	33.22
(001277)	34.01	200	(001255)	33.15		
(001286)	34.04	202				
(001287)	34.05		(001297)	34.09		
(001297)	34.09	209				
(001300)	34.10	210	(001240)	32.18	(001237)	33.04
(001302)	34.11		(001241)	35.19	(001271)	33.24
(001306)	34.13	211	(001303)	34.12		
(001308)	34.15	212				
(001312)	35.01	213	(001303)	34.12	(001309)	34.16
(001316)	35.02	214				
(001317)	35.03	218	(001307)	34.14	(001309)	34.16
(001322)	35.05	215				
(001323)	35.06	2150				
(001331)	35.09		(001333)	35.12		
(001333)	35.12	2154				
(001337)	35.15		(001339)	35.18		
(001339)	35.18	2155				
(001341)	35.19	219	(001321)	35.04	(001322)	35.05
(001346)	35.20	250				
(001352)	35.21	252	(001346)	35.20		

(001353)	35.22	253				
(001354)	35.23	254				
(001349)	35.24	251	(001346)	35.20		
(001350)	35.01	255	(001354)	35.23		
(001352)	35.03		(001353)	35.04		
(001353)	35.04	256				
(001355)	35.06		(001356)	35.07		
(001356)	35.07	257				
(001370)	35.09	258				
(001377)	35.10	260	(001352)	35.21	(001349)	35.24
(001378)	35.11		(001380)	35.12		
(001380)	35.12	261				
(001383)	35.14	263				
(001391)	35.17		(001392)	35.19		
(001392)	35.19	266				
(001395)	35.20	267	(001382)	35.13		
(001398)	35.22	268				
(001400)	35.23	269	(001397)	35.21		
(001401)	35.24		(001404)	35.27		
(001403)	35.26	270				
(001404)	35.27	271	(001402)	35.25		
(001412)	35.28	280	(001346)	35.20	(001353)	35.22
(001414)	35.30		(001416)	35.31	(001354)	35.23
(001416)	35.31	281			(001349)	35.24
(001418)	35.33	282				
(001427)	35.35		(001429)	35.39		
(001429)	35.39	285				
(001433)	35.40	299	(001114)	30.13	(001124)	30.18
					(001418)	35.32

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE GJSI

(001443)	39.01	GJSI	(001295)	34.07-X	(001316)	35.02-X
(001450)	39.01	150				
(001462)	39.03		(001485)	39.05		
(001485)	39.05	151				
(001472)	39.08		(001476)	39.10		
(001476)	39.10	152				
(001482)	39.12	153				
(001474)	39.14		(001486)	39.15		
(001486)	39.15	154				
(001497)	39.18	160				
(001500)	39.19	199				

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE GJTI

(001577)	42.01	GJTI	(001129)	31.03-X
(001578)	42.01	159		
(001586)	42.06		(001601)	42.08
(001601)	42.08	160		
(001606)	42.12	110		
(001613)	42.13	118	(001605)	42.11
(001641)	43.01	320	(001638)	43.05
(001642)	43.02	330		
(001634)	43.03	230	(001620)	43.08
(001635)	43.04	240	(001625)	43.12
(001638)	43.05	260	(001632)	43.16
(001639)	43.06	310		
(001619)	43.07	110	(001614)	42.14
(001621)	43.09	120		
(001623)	43.10	160	(001620)	43.08
(001624)	43.11		(001626)	43.13
(001626)	43.13	200		
(001627)	43.14	210	(001622)	43.09

06/10/74	TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP		
CARD ID	PAGE/BOX	NAME	REFERENCES	(SOURCE SEQUENCE NO	AND PAGE/BOX)
1001629)	43 15	220	1001625)	43 12	
1001644)	44 01	340	1001641)	43 01	1001638) 43 05
1001645)	44 02	350	1001641)	43 01	
1001647)	44 03	360	1001643)	43 02	1001640) 43 06
1001648)	44 04	370			
1001655)	44 06	400	1001614)	42 14	1001647) 44 03
1001657)	44 08	410			
1001657)	44 08		1001657)	44 09	
1001659)	44 11		1001661)	44 12	
1001661)	44 12	420			
1001666)	44 14	421			
1001686)	44 22		1001688)	44 25	
1001688)	44 25	81			
1001691)	44 26	499	1001665)	44 13	

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE CNSTC

1001709)	47 01	CNSTC	1000243)	7 06	X	
1001756)	47 01	1000				
1001760)	47 01	1001				
1001761)	47 04	1002	1001759)	47 02		
1001763)	47 06	1003				
1001763)	47 06		1001763)	47 07		
1001765)	47 09	1004				
1001765)	47 09		1001765)	47 10		
1001768)	48 01		1001769)	48 02		
1001769)	48 02	1006				
1001776)	48 05		1001780)	48 08		
1001780)	48 08	1009				
1001785)	48 11	1300				
1001787)	48 13	1301				
1001788)	48 14	1302	1001784)	48 10	1001786)	48 12
1001793)	48 18	1303				
1001794)	48 19	1304	1001792)	48 17		
1001795)	48 20	1305				
1001796)	48 21	1306				
1001798)	48 22	1307	1001795)	48 20		
1001801)	48 23	1308	1001794)	48 19	1001797)	48 21
1001803)	48 25	1309				
1001804)	48 26	1400	1001802)	48 24		
1001810)	48 29		1001811)	48 30		
1001811)	48 30	1200				
1001815)	48 32	1007	1001813)	48 31		
1001822)	49 01	1008	1001813)	48 31		
1001827)	49 03	1401				
1001829)	49 04	1009	1001820)	48 33	1001826)	49 02
1001835)	49 06	1201	1001833)	49 05		
1001836)	49 09	1202	1001836)	49 07		
1001845)	49 18	1207	1001836)	49 07		
1001849)	50 01	1208	1001833)	49 05	1001842)	49 09
1001853)	50 02	1209	1001833)	49 05	1001847)	49 18
1001858)	50 04	1010				
1001858)	50 05	1011	1001857)	50 03		
1001861)	50 07	1012				
1001862)	50 08	1013	1001860)	50 06		
1001864)	50 10	1014				
1001865)	50 11	1015	1001863)	50 09		
1001866)	50 12	1016				
1001869)	50 13	1017	1001865)	50 11		
1001870)	50 14	1018				
1001873)	50 15	1019	1001869)	50 13		
1001875)	50 17	1020				
1001877)	50 19	1021				
1001878)	50 20	1100	1001874)	50 16	1001876)	50 18
1001883)	51 01	1103				
1001885)	51 03	1104				
1001886)	51 04	1105	1001882)	50 22	1001884)	51 02

05/10/74		TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP			
CARD ID	PAGE/BOX	NAME	REFERENCES	SOURCE	SEQUENCE NO.	AND PAGE/BOX	
(001888)	51 06	1106					
(001890)	51 08	1107					
(001895)	51 09	1022	(001887)	51 05	(001889)	51 07	
(001897)	51 11	1023					
(001899)	51 13	102					
(001901)	51 14	1024	(001896)	51 10	(001898)	51 12	
(001903)	51 16	1025					
(001904)	51 17	1026	(001902)	51 15			
(001906)	51 19	1027					
(001908)	51 20	1028	(001905)	51 18			
(001909)	51 21	1029					
(001911)	51 22	1030	(001908)	51 20			
(001914)	51 23	1031	(001907)	51 19	(001908)	51 20	(001910) 51 21
(001915)	51 24	1032					
(001916)	51 25	1033	(001914)	51 23			
(001917)	51 26	1034					
(001918)	51 27	998	(001916)	51 25			
(001919)	51 28	999					
(001921)	51 29	1035	(001918)	51 27			
(001924)	51 30		(001929)	52 11			
(001926)	51 32	1036					
(001955)	52 01	1047	(001951)	52 08			
(001956)	52 02	1048	(001950)	52 07	(001953)	52 09	
(001957)	52 03	1049					
(001958)	52 04	1050					
(001940)	52 05	1211	(001933)	52 12			
(001948)	52 06	1212	(001933)	52 12	(001937)	52 13	
(001951)	52 08	1045					
(001952)	52 09	1046					
(001928)	52 10	1037	(001925)	51 31			
(001929)	52 11	1038	(001925)	51 31	(001927)	51 32	
(001935)	52 13	1210	(001933)	52 12			
(001961)	53 01	1051	(001957)	52 03			
(001965)	53 02	1052	(001956)	52 02	(001959)	52 04	
(001969)	53 04	1053					
(001971)	53 06	1054					
(001974)	53 07	1055	(001968)	53 03	(001970)	53 05	
(001975)	53 08		(001988)	53 21			
(001977)	53 10	1056					
(001978)	53 11	1057	(001976)	53 09			
(001980)	53 13	1058					
(001982)	53 15	1059					
(001983)	53 16	1060	(001979)	53 12	(001981)	53 14	
(001985)	53 18	1061					
(001987)	53 20	1062					
(001988)	53 21	1063	(001984)	53 17	(001986)	53 19	
(001992)	54 02		(002001)	54 09			
(001994)	54 04	1064					
(001996)	54 06	1065					
(001997)	54 07	1066	(001995)	54 05			
(002000)	54 08	1067	(001993)	54 03			
(002001)	54 09	1068					
(002006)	54 12	1069					
(002007)	54 13	1070	(002005)	54 11			
(002008)	54 14	1071					
(002009)	54 15	1072					
(002011)	54 16	1073	(002008)	54 14			
(002012)	54 17	1074	(002007)	54 13	(002010)	54 15	
(002014)	54 19	1075					
(002015)	54 20	1076	(002013)	54 18			
(002016)	54 21	1077					
(002017)	54 22	1078					
(002019)	55 01	1079	(002016)	54 21			
(002022)	55 02	1080	(002015)	54 20	(002018)	54 22	
(002024)	55 04	1081					
(002025)	55 05	1082	(002023)	55 03			
(002030)	55 07	1083					
(002031)	55 08	1084	(002029)	55 06			
(002032)	55 09	1085					
(002033)	55 10	1086	(002031)	55 08			
(002034)	55 11	1087					
(002036)	55 12	1088	(002033)	55 10			

CARD ID PAGE/BOX NAME REFERENCES (SOURCE SEQUENCE NO. AND PAGE/BOX)

(002037)	95.13		(002042)	95.17	
(002038)	95.14	1009			
(002039)	95.15	1000			
(002041)	95.16	1091	(002038)	95.14	
(002042)	95.17	1092	(002037)	95.13	(002040) 95.15
(002050)	95.22	1097			
(002064)	95.23	1098	(002050)	95.21	
(002066)	95.25	1109			
(002068)	95.27	1110			
(002071)	95.28	1111	(002065)	95.24	(002067) 95.26
(002073)	95.30	1112			
(002076)	95.31	1113	(002072)	95.29	
(002083)	95.33	1999			

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE ASDM

(002095)	90.01	ASDM	(000246)	7.07-X	
(002137)	90.01	107			
(002140)	90.03	100			
(002141)	90.04	109			
(002142)	90.05	110			
(002145)	90.06	111	(002139)	90.02	(002140) 90.03 (002141) 90.04
(002146)	90.07		(002194)	90.22	
(002148)	90.09	112			
(002153)	90.11	113	(002164)	90.14	
(002154)	90.12	114			
(002162)	90.13	110	(002152)	90.10	
(002164)	90.14	119	(002162)	90.13	(002183) 90.13 (002184) 90.14
(002165)	90.15	120			
(002156)	90.01	115	(002154)	90.12	
(002158)	90.03	116			
(002159)	90.04	117	(002157)	90.02	(002186) 90.16 (002189) 90.18
(002160)	90.05	121	(002186)	90.16	(002173) 90.07 (002174) 90.08 (002180) 90.12
(002171)	90.06	122	(002186)	90.16	
(002174)	90.08	123			
(002176)	90.09	124	(002174)	90.08	
(002178)	90.11	125			
(002179)	90.12	126	(002177)	90.10	(002191) 90.20 (002193) 90.21
(002183)	90.13	127	(002162)	90.13	
(002184)	90.14	128			
(002185)	90.15	129			
(002187)	90.17	130			
(002190)	90.19	131			
(002192)	90.21	132			
(002194)	90.22	139	(002148)	90.08	(002153) 90.11 (002154) 90.12 (002160) 90.04 (002169) 90.05
(002197)	90.23	140			
(002205)	90.26		(002217)	00.01	
(002217)	00.01	141			
(002225)	00.04	142			
(002231)	00.06	2000	(002224)	00.03	
(002232)	00.07	200			
(002238)	00.11		(002240)	00.13	
(002240)	00.13	202			
(002250)	00.16		(002252)	00.18	
(002252)	00.18	205			
(002261)	00.19	210	(002231)	00.06	
(002267)	00.21	198			

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE YBSET

(002278)	03.01	YBSET	(000249)	7.00-X
(002312)	03.02		(002317)	03.04
(002317)	03.04	105		

(002323)	63 06	130																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE 552(S/C1)

(002468)	70 01	552	(001777)	48 06-X	(001789)	48 15-X
(002469)	70 01	90				
(002487)	70 03	91				
(002488)	70 05	92				
(002489)	70 06	93				
(002503)	70 09	94				
(002505)	70 10	99				

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE VLOAD1

(002518)	73.01	VLOAD1	(002262)	80.20-X		
(002565)	73.02	15				
(002566)	73.03	8				
(002570)	73.04	14	(002584)	73.01		
(002574)	73.05	16	(002584)	73.01	(002565)	73.02 (002569) 73.03
(002576)	73.07	1003				
(002589)	73.11	1009	(002575)	73.06		
(002590)	73.12		(002648)	74.09		
(002601)	73.15	101	(002597)	73.14		
(002610)	73.18	102	(002597)	73.14		
(002632)	74.03	103				
(002648)	74.09	109	(002631)	74.02		
(002651)	74.11	10				
(002652)	74.12	11				
(002657)	74.13	199	(002650)	74.10	(002651)	74.11

CHART TITLE - NON-PROCEDURAL STATEMENTS

LOCATION		DIAGNOSTIC
CARD ID	PAGE/BOX	
10000171	2.02	UNRECOGNIZED SYNTAX
10000251	2.06	UNRECOGNIZED SYNTAX
10000841	5.01	UNDEFINED - 'WRITMS' EXTERNAL REFERENCE
10001161	5.19	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10001171	5.20	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003201	10.13	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10007221	22.01	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10007211	22.12	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10010901	30.01	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10015701	42.01	UNDEFINED - 'READMS' EXTERNAL REFERENCE

PROGRAM FLOW CHARTS

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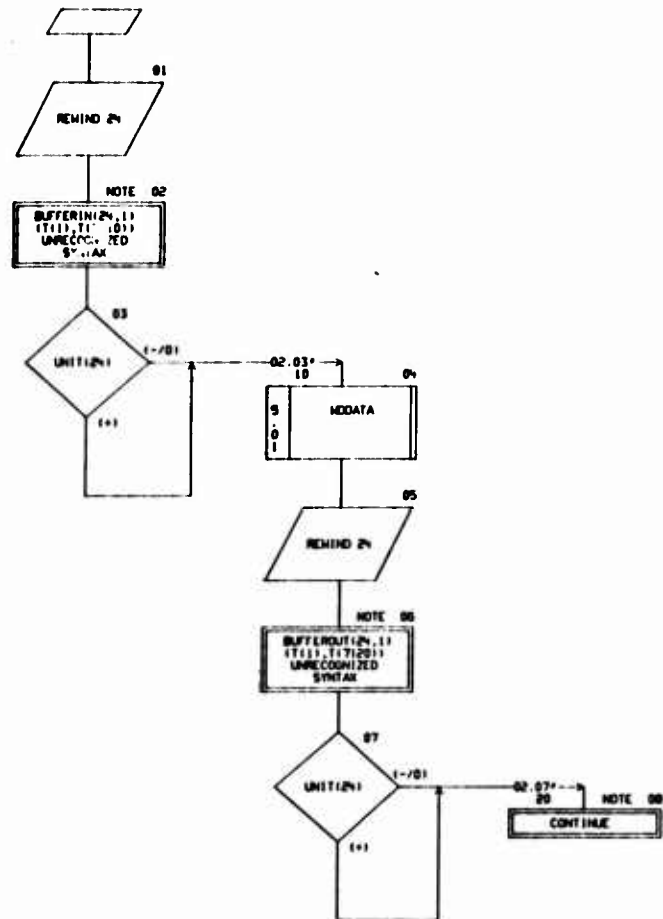
06/10/74

AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 01

CHART TITLE - INTRODUCTORY COMMENTS

```
*****  
*****PROGRAM OLAY16*****  
***PROGRAM FOR FOURTH OVERLAY OF WING/EMPENNAGE MODULE***  
DESIGN DATA FOR TORQUE-BOX ANALYSIS  
*****
```

CHART TITLE - PROCEDURES



05/10/74

AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 03

CHART TITLE - NON PROCEDURAL STATEMENTS

PROGRAM OLAY16
COMMON T(7120)
COMMON /MISC/ NMISC(100)

06/10/76

AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 04

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE MODATA*****

DESIGN DATA GENERATION CONTROL

```

graph TD
    Start([START]) --> ReadData[/READ DATA/]
    ReadData --> Init[02:04 ← 4]
    Init --> PrintTitle[***01-25-73-DESIGN  
DATA CONTROL SHEET FOR  
MING ANALYSIS***]
    PrintTitle --> SaveArray[***SAVE C10Y ARRAY  
IN RCD 190--1101 TAN  
DATA***]
    SaveArray --> Write[WRITE  
11,C10Y(1),  
150,190]
    Write --> Setup[***SETUP C10 REGION  
FOR ANALYSIS***]
    Setup --> Loop1[100 NOTE 02  
BEGIN DO LOOP  
101 I = 1, 000]
    Loop1 --> Calc1[T1 = 200 +  
DC(1)]
    Calc1 --> Dec1{101 04  
END OF DO  
LOOP?}
    Dec1 -- NO --> Loop1
    Dec1 -- YES --> Loop2[102 NOTE 05  
BEGIN DO LOOP  
102 I = 1, 300]
    Loop2 --> Calc2[T1 = 1700 +  
DC(1)]
    Calc2 --> Dec2{102 07  
END OF DO  
LOOP?}
    Dec2 -- NO --> Loop2
    Dec2 -- YES --> MoveData[***MOVE BOX GEOMETRY  
DATA***]
    MoveData --> Loop3[103 NOTE 08  
BEGIN DO LOOP  
103 I = 1, 11]
    Loop3 --> Y1[Y1(I) = TG(I)  
11]
    Y1 --> Y2[Y2(I) = TG(I) +  
22]
    Y2 --> Y3[Y3(I) = TG(I) +  
270]
    Y3 --> Y4[Y4(I) = TG(I) +  
265]
    Y4 --> End([END])
  
```

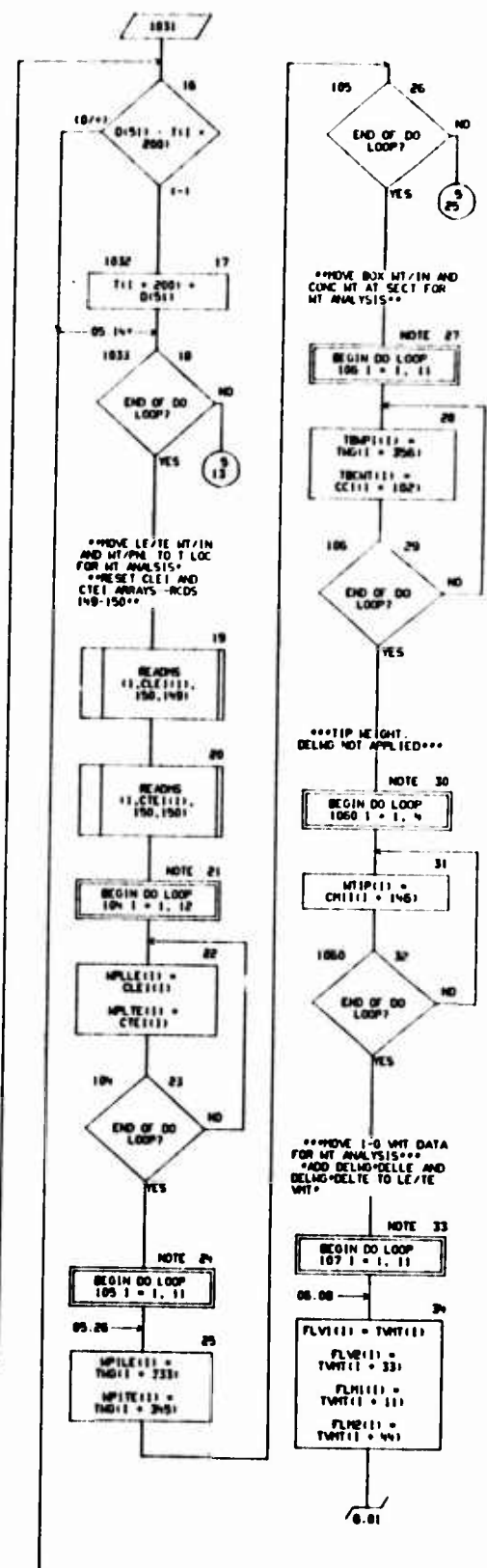


CHART TITLE - SUBROUTINE HEDATA

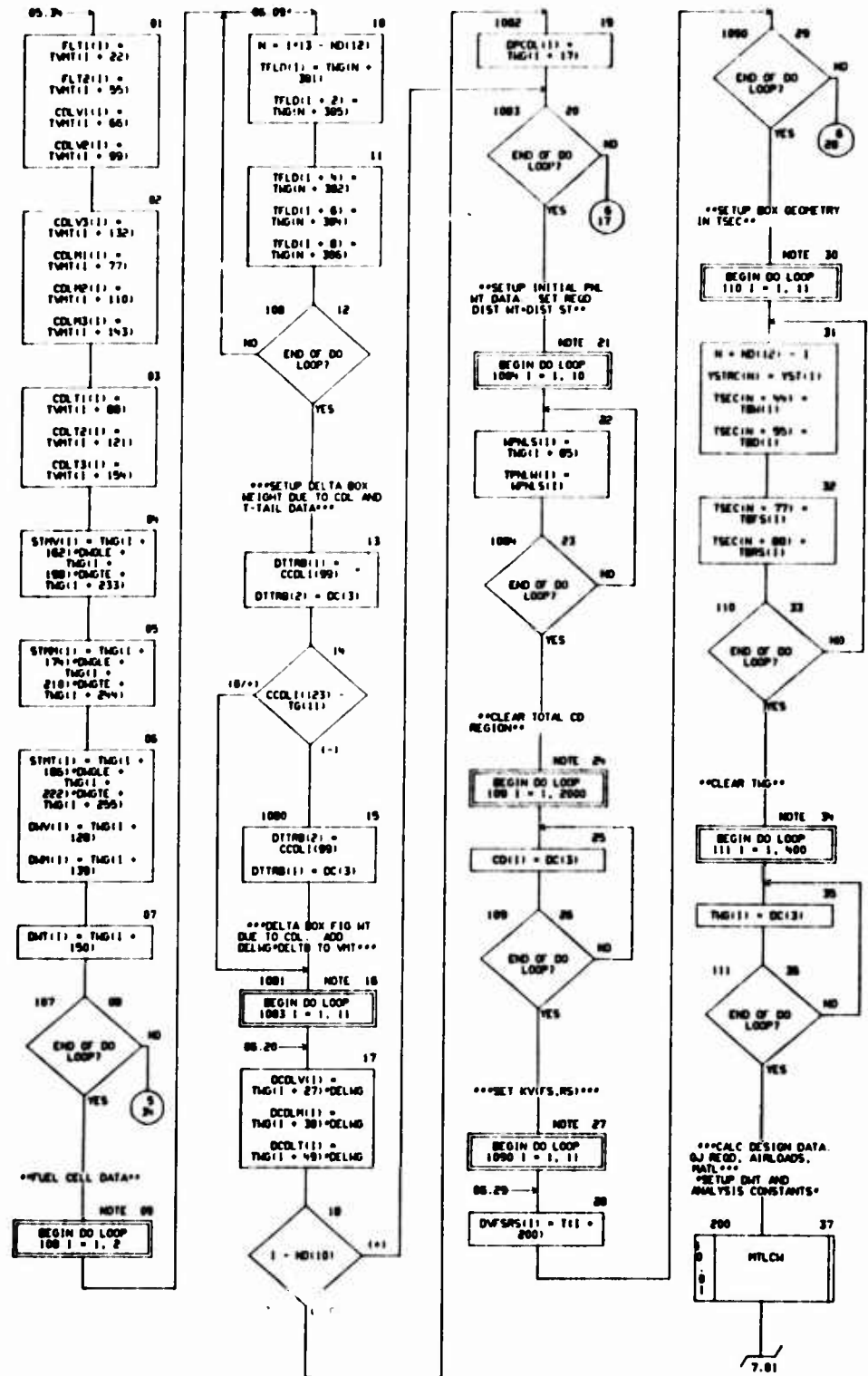


CHART TITLE - SUBROUTINE MODATA

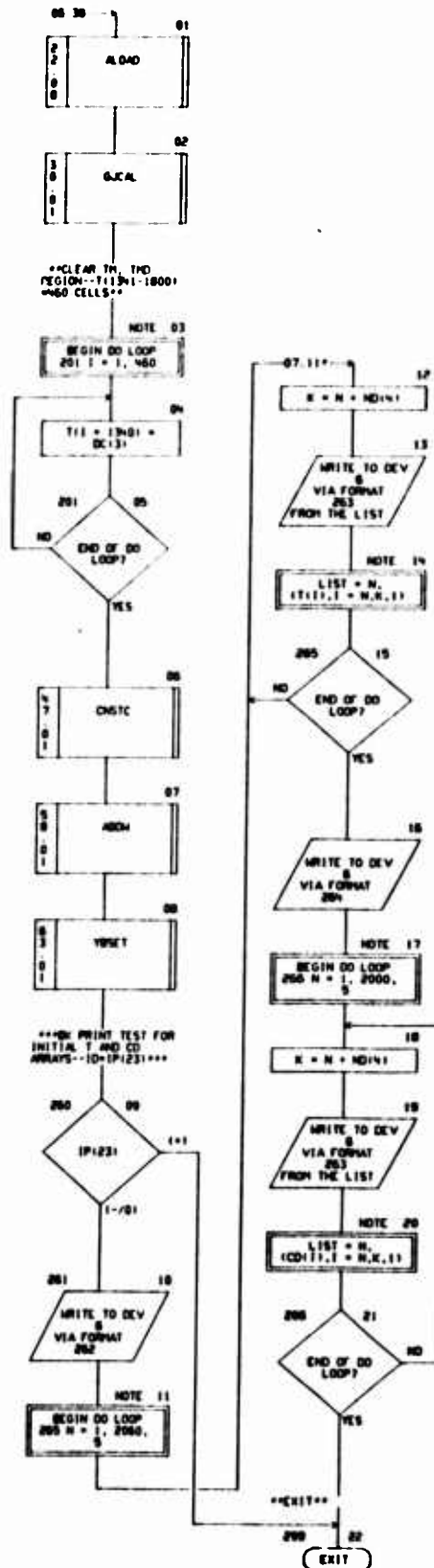


CHART TITLE - NON-PROCEDURAL STATEMENTS

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COMMON T
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DIMENSION T(16220),D(2060),CD(2000),ND(100),DC(100),
TSEC(300),TG(300),TNG(400),CLE(150),CTE(150),CC(1300),TWT(250),
YST(111),YBP(111),XBP(111),TBO(111),TBM(111),TFLD(10),CH(1150),
MPLLE(12),MPLTE(12),MPILE(11),MPITE(11),TBMPI(11),TBMCT(11),
FLV(111),FLV2(111),FLM(111),FLM2(111),FLT(111),FLT2(111),
COLV(111),COLV2(111),COLV3(111),COLM(111),COLM2(111),COLM3(111),
COLT(111),COLT2(111),COLT3(111),STMV(111),STMH(111),STHT(111),
DMV(111),DMPI(111),DMT(111),MTIP(4),DTTRB(2),MPLS(10),TPNLM(10),
DPCOL(10),DCOLV(11),DCOLM(11),DCOLT(11),CCOL(150),
YSTRC(111),TBS(111),TBR5(111),DMVSR5(111),
C10Y(150)
EQUIVALENCE (D(1),T(2061)),(CD(1),T(4121)),(ND(1),T(6121)),
(DC(1),D(1401)),(TSEC(1),CD(1501)),(TG(1),T(1001)),
(TNG(1),T(1301)),(CLE(1),CD(651)),(CTE(1),CD(801)),
(CC(1),CD(1651)),(TWT(1),CD(511)),(YSTRC(1),TSEC(1661)),
(YST(1),T(511)),(YBP(1),T(5001)),(XBP(1),T(4091)),(TBO(1),T(5301)),
(TBM(1),T(1942)),(TBS(1),T(1531)),(TBR5(1),T(1651)),
(TFLD(1),T(631)),(MPLLE(1),T(2051)),(MPLTE(1),T(2071)),
(MPILE(1),T(2631)),(MPITE(1),T(2741)),(TBMPI(1),T(7451)),
(TBMCT(1),T(7091)),(DMV(1),T(5981)),(DMPI(1),T(6091)),(DMT(1),T(6201)),
(STMV(1),T(8111)),(STMH(1),T(8221)),(STHT(1),T(8331)),
(C10Y(1),T(5011))
EQUIVALENCE (FLV(1),T(4451)),(FLV2(1),T(4701)),(FLM(1),T(4561)),
(FLM2(1),T(4081)),(FLT(1),T(4671)),(FLT2(1),T(4191)),
(COLV(1),T(3091)),(COLM(1),T(3201)),(COLT(1),T(3311)),
(COLV2(1),T(3421)),(COLM2(1),T(3531)),(COLT2(1),T(3641)),
(DTTRB(1),T(6661)),(DPCOL(1),T(2201)),
(DCOLV(1),T(2301)),(DCOLM(1),T(2411)),(DCOLT(1),T(2521)),
(CCOL(1),CD(1501)),(CH(1),CD(1251)),
(MPLS(1),T(8451)),(TPNLM(1),T(8561)),(MTIP(1),T(6411)),
(BELMD,T(1071)),(DMDL,T(1031)),(DMGTE,T(1041)),(DMVSR5(1),CD(16241)),
(COLV3(1),T(3751)),(COLM3(1),T(3861)),(COLT3(1),T(3971))
262 FORMAT (62H) ***DESIGN DATA CONTROL PROGRAM-- INITIAL T AND CD AR
RAYS***,27X,21H** MODATA - IP(23) **/64H T )
263 FORMAT (1H 14,9E10.0)
264 FORMAT (84H CD )

```

08/10/74

AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 09

CHART TITLE - INTRODUCTORY COMMENTS

****SUBROUTINE MLCW****

MATERIAL PROPERTIES EVALUATION CONTROL - METALLIC DESIGNS

NTLCM

```

**DO BOX AND PIVOT
NN=NDI25: 10 1-BOX.
2-PIVOT**
**TORQUE BOX**

```



CHART TITLE - SUBROUTINE HTLCH

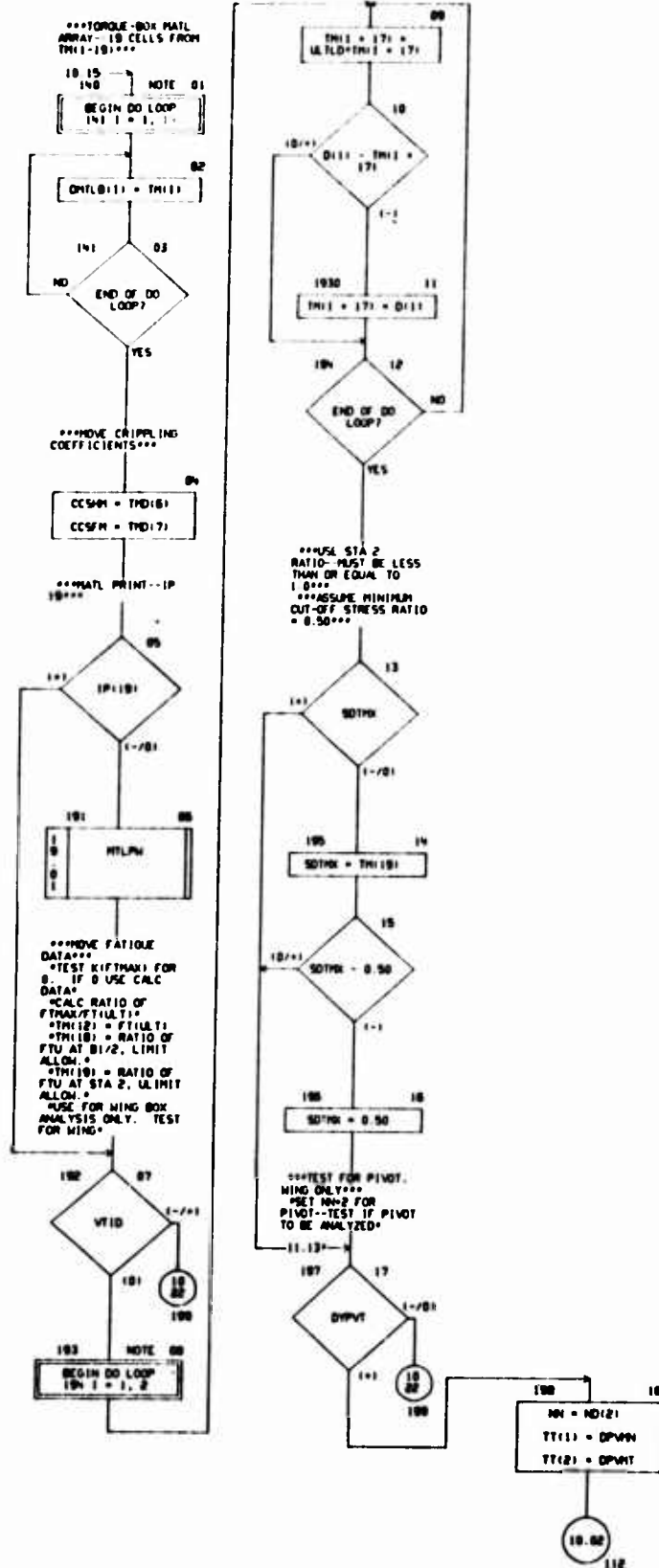


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T(6220)
COMMON /IPRINT/ IP(80)
DIMENSION D(2060),CD(2060),ND(100),DC(100),
TT(24),DHTLB(19),DHTLP(19),
THD(300),TH(180)
EQUIVALENCE (D(1),T(2061)),(CD(1),T(4121)),(ND(1),T(6121)),
(DC(1),D(1401)),(TT(1),T(1317)),
(TH(1),T(1841)),(THD(1),T(1341)),
(DPW,D(258)),(DHT,D(259)),(DPWH,D(196)),(DPWT,D(197)),
(DPYVT,D(200)),
(CCSM,T(199)),(CCSM,T(200)),
(DHTLP(1),CD(1905)),
(BDTH,D(386)),(ULTD,D(122)),
(VTID,D(209)),(DHTLB(1),T(201)),
(INM1L,ND(59)),(M1L1,ND(21)),(1,ND(31)),(NN,ND(26)),(173,ND(92))
115 FORMAT (48H ***M1L INPUT ERROR. ASSURED M1L NO. 1.*** )
116 FORMAT (22H ***TORQUE-BOX--M1L=13,6H TEMP=F7.1)
117 FORMAT (17H ***PIVOT--M1L=13,6H TEMP=F7.1)

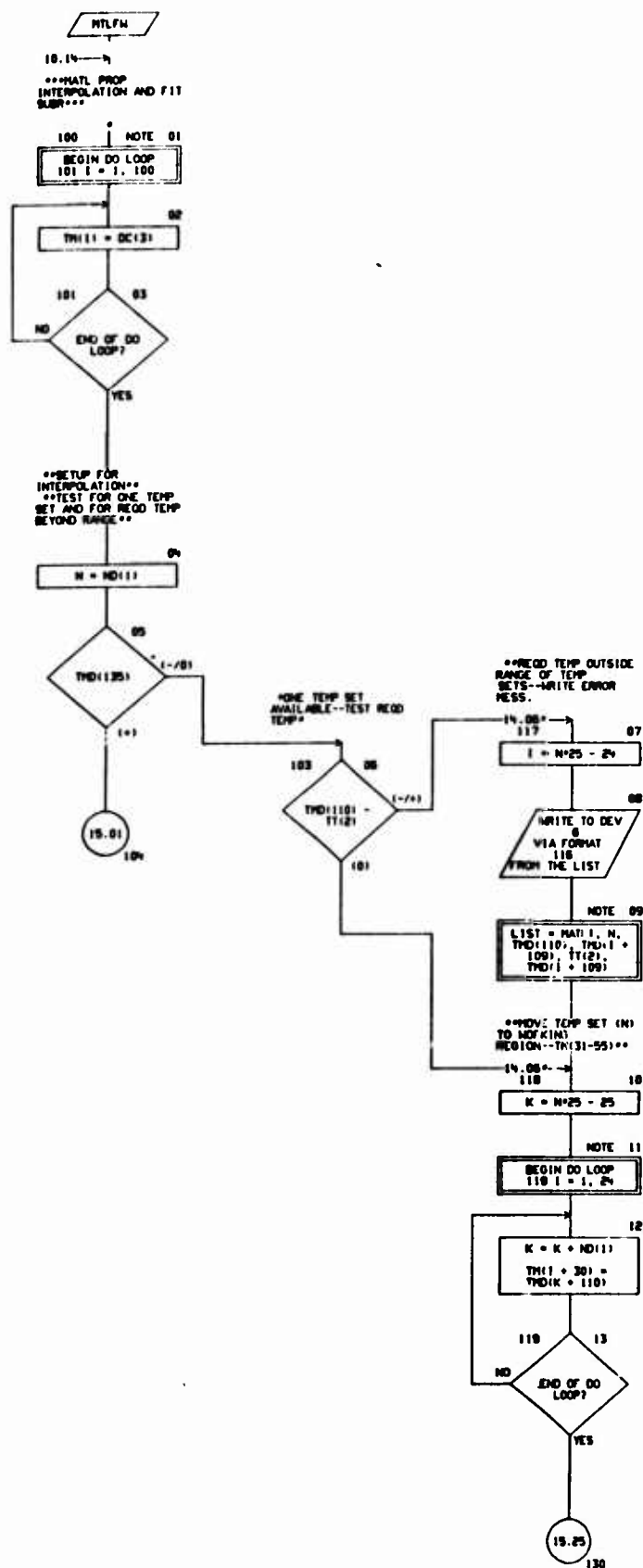
```

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE HTLFW*****

CURVE FIT FOR MATERIAL STRESS-STRAIN CURVE - METALS

CHART TITLE - SUBROUTINE MTLFW



1434

CHART TITLE - SUBROUTINE MTLFW

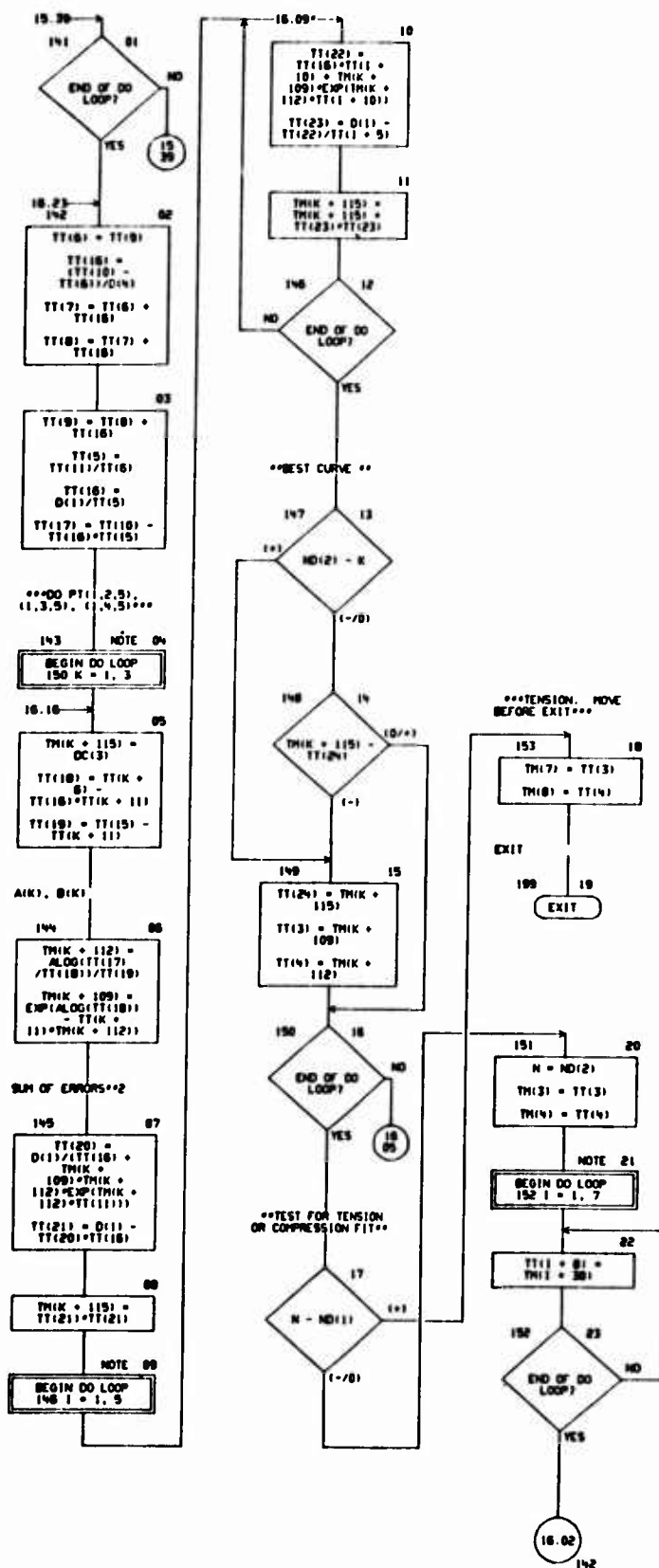


CHART TITLE - NON-PROCEDURAL STATEMENTS

```
COMMON T(2060),D(2060),CD(2000),ND(100)
DIMENSION DC(100),
THD(300),TH(160),
TT(24)
EQUIVALENCE (DC(1),D(140)),
(TMD(1),T(134)),(TM(1),T(164)),(TT(1),T(137)),
(MATL1,ND(2)),
(I,ND(3)),(N,ND(30)),(K,ND(20)),(L,ND(20))
115 FORMAT (30H- ***MATL TEMPERATURE ERROR. MATL NO.FN.1,3TH RECD TEM
P LESS THAN SET (1) TEMP OF ,F7.1,6H DEG ***,//14X,12H *RECD TEMP=
F7.1,20H DEG. ASSUMED TEMP=F7.1,6H DEG *)
116 FORMAT (30H- ***MATL TEMPERATURE ERROR. MATL NO.FN.1,50H. RECD T
EMP OUTSIDE RANGE OF TEMP SETS ON FILE***,10X,11,30H TEMP SETS ON
FILE--MIN TEMP=F7.1,16H DEG., MAX TEMP=F7.1,6H DEG. ,//14X,12H *
RECD TEMP=F7.1,20H DEG. ASSUMED TEMP=F7.1,6H DEG. *)
```

06/10/74

AUTOFLOW CHART SET - SHEEP HING AND EMPENNAGE MODULE - PAGE 10

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE HTLPH*****

MATERIAL PROPERTY DATA PRINT - METAL

CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T(2060),D(2060),CD(2000),ND(100)
DIMENSION
TH(200),
RH(16),THD(300),DC(100)
EQUIVALENCE IDC(1),D(1401),
(TMD(1),T(1341)),(TH(1),T(1641)),
(RH(1),THD(205)),
(VT(10),D(209)),
(INCAGE,ND(80)),(INPAGE,ND(85)),
(MATL1,ND(21)),(INN,ND(26)),I,ND(31))
102 FORMAT (10H) CASE 14,13X,4SH --2-TORQUE-BOX MATERIAL DATA MAT
L NO 13,4H---,16X,20H** MTLPM - (P(19) **)
103 FORMAT (10H) CASE 14,13X,3H --PIVOT MATERIAL DATA MATL NO 1
3,4H---,22X,20H** MTLPM - (P(19) **)
106 FORMAT (1H0BA10,1H BA10)
110 FORMAT(12H) TEMP =F8 2,12H DENSITY=F7.4,6H MU=F7.4,7/96H
A B E
E(RT) G(RT) I
111 FORMAT (16H) COMPRESSION 1X,2E10 0.3F14.1,7/16H TENSION 1X
,2E10 0.7F14.1)
112 FORMAT (102H) EPS(P) EPS(Y) F(P)
F(2) F(3) F(4) F(5) I
113 FORMAT (16H) COMPRESSION 1X,2F12 0.5F12.1,7/16H TENSION 1X
,2F12 0.5F12.1)
122 FORMAT (23H) FTU=F8 1,6H FSU=F8 1,7H FBU=F8 1)
132 FORMAT (39H) FTMAT(ALL01)---B1/2-F8 3,4H FTU,22H
FTMAT(ALL01)---STA 2-F8 3,4H FTU)

```

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE ALDAD*****

DESIGN AIRLOAD DATA PROCESSING

CHART TITLE - SUBROUTINE ALOAD

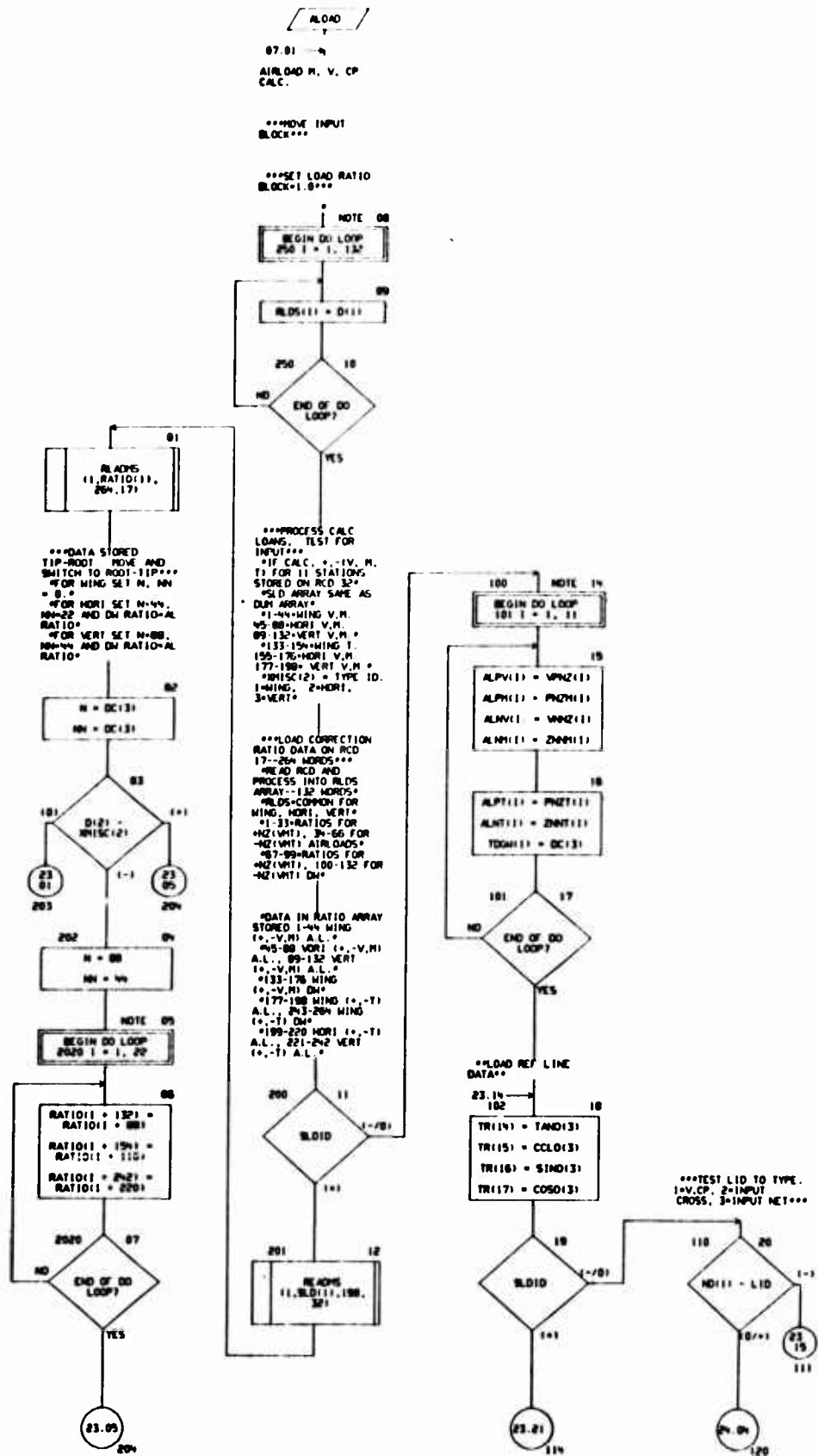
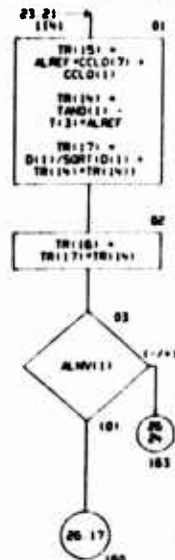
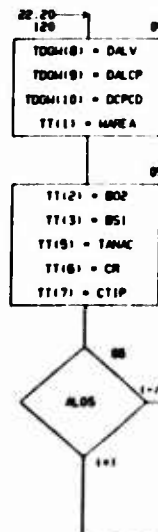


CHART TITLE - SUBROUTINE ALDAD

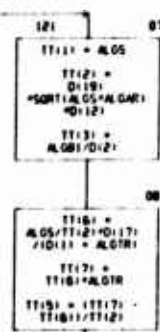
***LOAD REF INPUT
PER CENT CHORD ***
SETUP EQUATION
CONSTANTS FOR LD
ROTATION/TRANSLATION



***SHEAR CP TYPE.
CALC V.R. TEST
ALIGNMENT INPUT
V, CP***



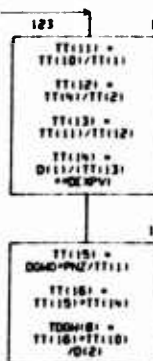
***SEPARATE HING
GEOM. FOR AIR
LOADS ***



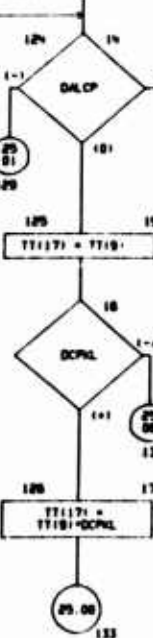
*** EXPOSED TR AND S
TEST FOR INPUT V ***



*** CALC VIEWP ***



***TEST SPANNISE
C.P.***
0=ASSUME -REF TO
B/2 ***REF TO EMP
B/2



***INPUT C.P. TEST
B.P. OR PER CENT EMP.
SPAN***

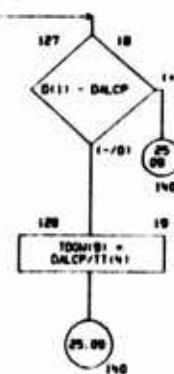
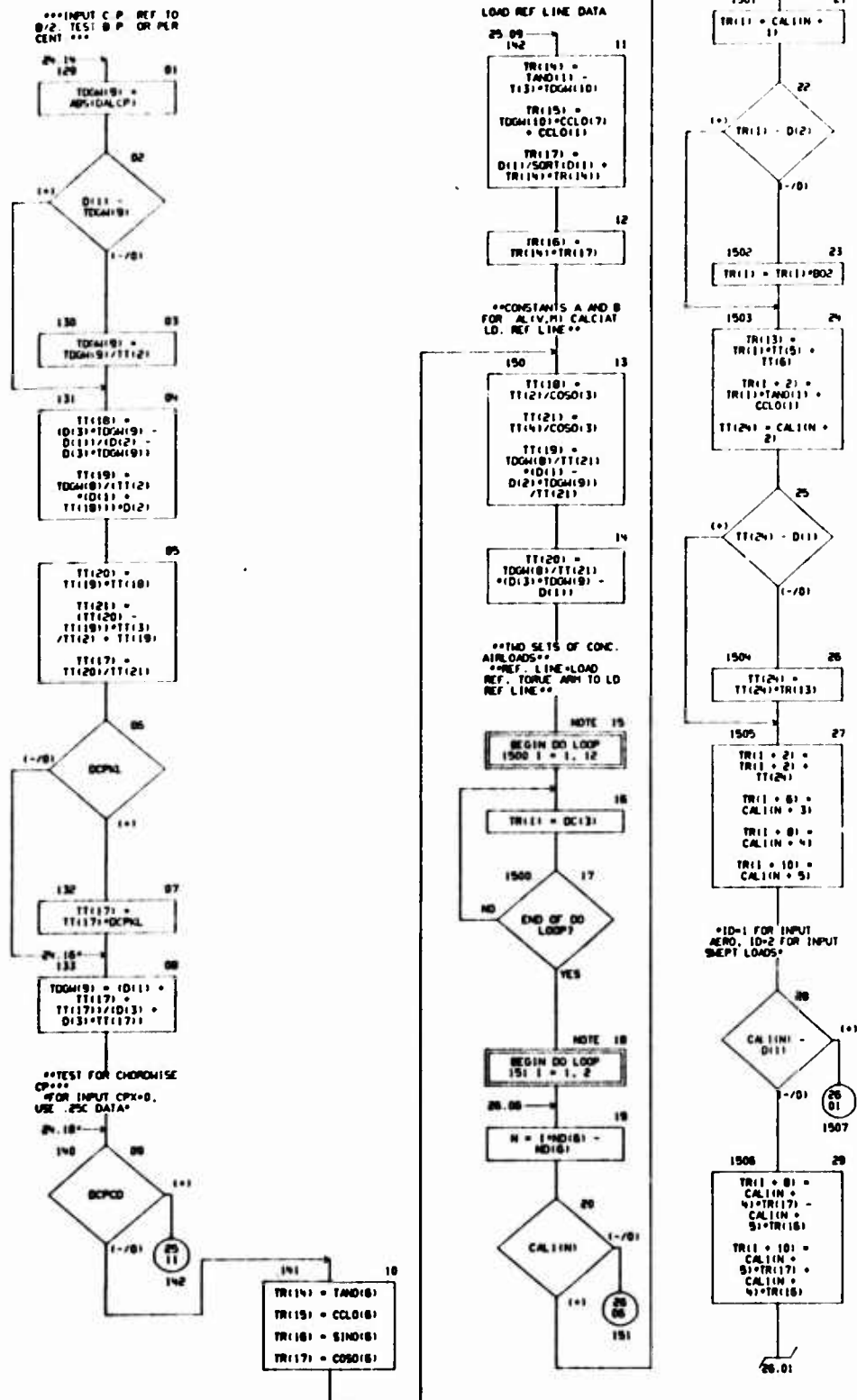


CHART TITLE - SUBROUTINE ALOAD



```

graph TD
    2529["25.29  
*LAPDA STATION AT  
EA, DELTA X TO LOAD  
REF LINE*"] --> 01["01  
TR(1) = N1 = TR(1)  
TR(13) =  
TR(13) + TR(14) +  
TR(15) - TR(1) +  
21"]
    01 --> 02{"02  
TAND(3)"}
    02 --> 1508["1508  
TR(13) = TR(1) +  
21 - COTEA * TR(1)  
TR(1) = N1 =  
TR(13) +  
COLD(3) / (TAND(3) -  
COTEA / COSD(3))"]
    1508 --> 04["04  
TR(13) = (TR(1) -  
TR(13)) /  
TR(15) / (TR(14) -  
COTEA) / SIND(3)"]
    04 --> 1509["1509  
TR(1) = 101 =  
TR(1) + 101 +  
TR(1) * TR(13)"]
    1509 --> 05["05  
25.20  
151  
END OF DO LOOP?"]
    05 -- YES --> 2519["25.19"]
    05 -- NO --> 06["06  
*CALC V.R.T AT 11  
STATIONS ON LOAD REF  
LINE*"]
    06 --> 1510["1510  
NOTE 07  
BEGIN DO LOOP  
152 N = 1, 11"]
    1510 --> 08["08  
26.10  
K = ND(12) - N  
TT(22) = DC(3)  
TT(23) = DC(3)  
TT(24) = DC(3)"]
    08 --> 09["09  
NOTE 08  
BEGIN DO LOOP  
1512 I = 1, 2"]
    09 --> 10["10  
TR(13) = TR(1) +  
N1 - YSTRC(N)"]
    10 --> 11{"11  
TR(13)"}
    11 --> 1511["1511  
12  
TT(22) = TT(22) +  
TR(1) + 01  
TT(23) = TT(23) +  
TR(1) + 01  
TT(24) = TT(24) +  
TR(1) + 01  
TT(24) = TT(24) +  
TR(1) + 101"]
    1511 --> 12["12  
1512  
END OF DO LOOP?"]
    12 -- YES --> 13["13  
14  
TR(13) = TT(10) -  
YSTRC(N)  
ALPH(1) =  
TR(13) * D(3) +  
TT(20) +  
TT(21) +  
TT(22)"]
    13 -- NO --> 14["14  
15  
ALPH(1) =  
TR(13) * TR(13) +  
TT(10) * TR(13) +  
TT(20) +  
TT(23)"]
    15 --> 16["16  
152  
END OF DO LOOP?"]
    16 -- YES --> 2608["26.08"]
    16 -- NO --> 17["17  
23.22  
160  
TT(24) = ZND / PHZ"]
    17 --> 18{"18  
COSD(3)"}
    18 --> 19["19  
1000  
TT(24) = ABS(COSD(3))"]
    19 --> 20["20  
26.10  
1601  
BEGIN DO LOOP  
161 N = 1, 11"]
    20 --> 21["21  
ALPH(N) =  
TT(24) * ALPH(N)  
ALPH(N) =  
TT(24) * ALPH(N)  
ALNT(N) =  
TT(24) * ALPH(N)"]
    21 --> 22{"22  
161  
END OF DO LOOP?"}
    22 -- YES --> 2322["23.22  
23  
TAND(3) =  
TR(14)"]
    2322 --> 24["24  
24.03  
163  
TT(22) = COTEA -  
TR(14)"]
    24 --> 25["25  
NOTE 25  
BEGIN DO LOOP  
166 N = 1, 11"]
    25 --> 26["26  
26.34  
TT(23) =  
ALPH(N) * TR(17) +  
ALPH(N) * TR(16)  
ALPH(N) =  
TT(23) * COSD(3) -  
TT(24) * SIND(3)  
ALPH(N) =  
TT(24) * COSD(3) +  
TT(23) * SIND(3)"]
    26 --> 27["27  
TT(23) =  
ALPH(N) * TR(17) +  
ALNT(N) * TR(16)  
TT(24) =  
ALNT(N) * TR(17) -  
ALPH(N) * TR(16)"]
    27 --> 28["28  
TT(23) =  
ALPH(N) * TR(17) +  
ALNT(N) * TR(16)  
TT(24) =  
ALNT(N) * TR(17) -  
ALPH(N) * TR(16)"]
    28 --> 29["29  
ALPH(N) =  
TT(23) * COSD(3) -  
TT(24) * SIND(3)  
ALNT(N) =  
TT(24) * COSD(3) +  
TT(23) * SIND(3)"]
    29 --> 30["30  
TR(13) = TGIN +  
221 - TGIN +  
111 * TR(14) -  
TR(15)"]
    30 --> 31{"31  
TAND(3)"}
    31 --> 32["32  
104  
TR(13) = (TR(13) - TGIN +  
33) / (TT(22) -  
TGIN +  
111) / SIND(3)"]
    32 --> 33["33  
105  
ALPH(N) =  
ALPH(N) * TR(13)  
ALNT(N) =  
ALNT(N) * TR(13)  
ALNT(N) =  
ALNT(N) * TR(13)"]
    33 --> 34{"34  
106  
END OF DO LOOP?"}
    34 -- YES --> 2626["26.26"]
    34 -- NO --> 35["35  
**K PRINT ON IP  
26***"]
    35 --> 36{"36  
100  
IP(20)"}
    36 --> 37["37  
27.01  
170"]
    37 --> 2722["27.22"]

```


CHART TITLE - SUBROUTINE ALDAD

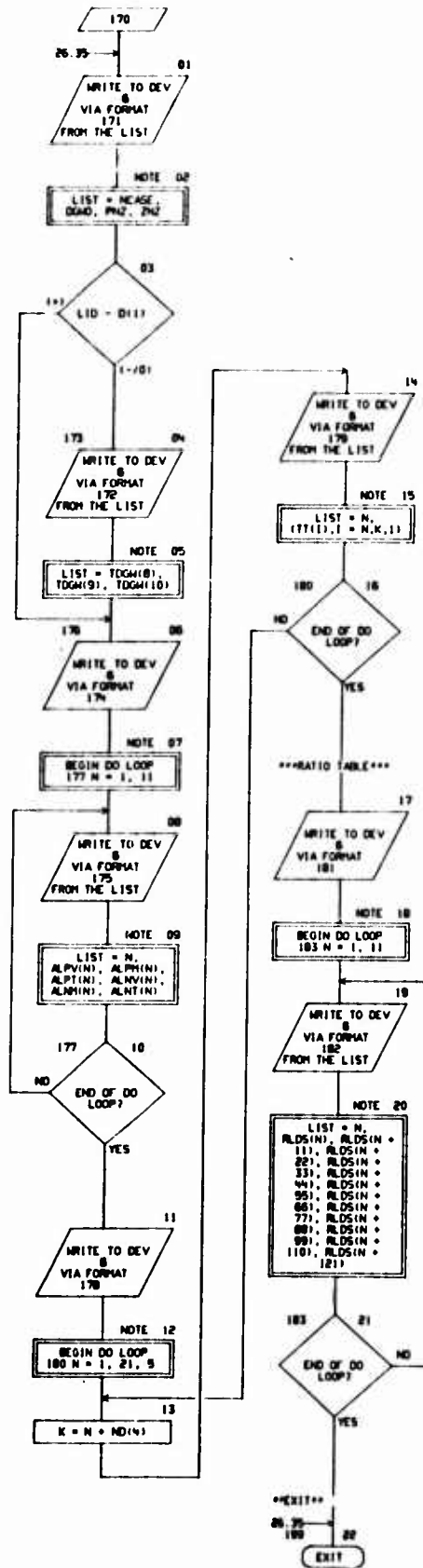


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T(2060),D(2060),CD(2000),ND(100)
COMMON /IPRINT/ IP(80)
COMMON /MISC/ XMISC(100)
DIMENSION DC(100),TSEC(300),TDGW(11),TT(24),
  PHZ(11),VPHZ(11),WPHZ(11),ZPHM(11),
  ALPV(11),ALPH(11),ALNV(11),ALNM(11),
  CAL(112), TR(17),TO(300),TAND(8),CCLO(8),SIND(6),COSO(6),
  PNZT(11),ZNNT(11),ALPT(11),ALNT(11),
  SLD(198),
  RLDS(132),RATIO(204),
  YSTRC(11),BKPR(14)
EQUIVALENCE (DC(1),D(1401)), (TSEC(1),CD(1501)), (TDGW(1),T(1430)),
  (TT(1),T(1317)), (YSTRC(1),TSEC(166)), (DGWD,D(105)),
  (PHZ,D(185)), (ZPHZ,D(186)), (DALV,D(255)), (DALCP,D(256)),
  (DCPCD,D(257)), (DCPKL,D(233)), (DEXPV,D(232)),
  (ALGS,D(235)), (ALGAR,D(236)), (ALOTR,D(237)), (ALOB1,D(238)),
  (PHZH(1),D(260)), (VPHZ(1),D(687)), (WPHZ(1),D(698)), (ZPHM(1),D(709)),
  (TAND(1),T(122)), (CCLO(1),T(131)), (SIND(1),T(140)),
  (ALPV(1),T(594)), (ALPH(1),T(565)), (ALNV(1),T(576)), (ALNM(1),T(587)),
  (BKPR(1),D(147)), (CKNOL,D(392))
EQUIVALENCE (BO2,T(112)), (BS1,T(115)), (BEP,T(96)), (CR,T(52)),
  (CTIP,T(37)), (TANAC,T(36)), (NAPEA,D(240)), (DPCEA,D(127)),
  (CAL(1),D(220)), (TR(1),T(1300)), (TO(1),T(100)),
  (PHZT(1),D(1019)), (ZNNT(1),D(1030)),
  (ALPT(1),T(877)), (ALNT(1),T(888)),
  (COSO(1),T(146)), (COTEA,T(152)), (ALREF,D(239)),
  (SLDID,D(205)), (SLD(1),CD(795)), (ACID,D(1430)),
  (RLDS(1),CD(1400)), (RATIO(1),CD(532)),
  (MPAGE,ND(85)), (MCSEC,ND(68)),
  (IN,ND(31)), (IK,ND(30)), (I,ND(29)), (LID,ND(54)), (INCASE,ND(60))
171 FORMAT(1H,5X,4HCASE,14,20X,32H--BASIC LIMIT AIRLOAD DATA--),
  24X,20H--ALOAD - IP(20) ---/1H,10X,5HDGWD=,F8.1,8H +NZ=,
  F8.3,8H -MZ=F8.3)
172 FORMAT(8H0 V=F8.1,15H LB/SIDE CP(Y)=F8.4,12H B/2 CP(X)=F8.4,
  8H C(1))
174 FORMAT(8H0 STA +V(LIM) +H(LIM) +T(LIM) -V(LIM)
  -H(LIM) -T(LIM))
175 FORMAT(1H,4X,13,F10.1,F13.1,F12.1,F11.1,F13.1,F12.1)
176 FORMAT(8H0 TT)
178 FORMAT(1H,14,9E18.8)
181 FORMAT(1H0,35X,20H--LOADS SCALING RATIOS--//21X,
  14H/AIRLOAD RATIOS,30X,17H/WEIGHT RATIOS/
  102H STA R(+V) R(+H) R(+T) R(
  -V) R(-H) R(-T) R(+V) R(+H) R(+T) R(-V) R(-H) R(
  -T))
182 FORMAT(1H,13,8F8.4,2X,8F8.4)

```

05/10/74

AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 29

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE QJCAL*****

REQD FLUTTER QJ EVALUATION AND CONTROL

CHART TITLE - SUBROUTINE GJCAL

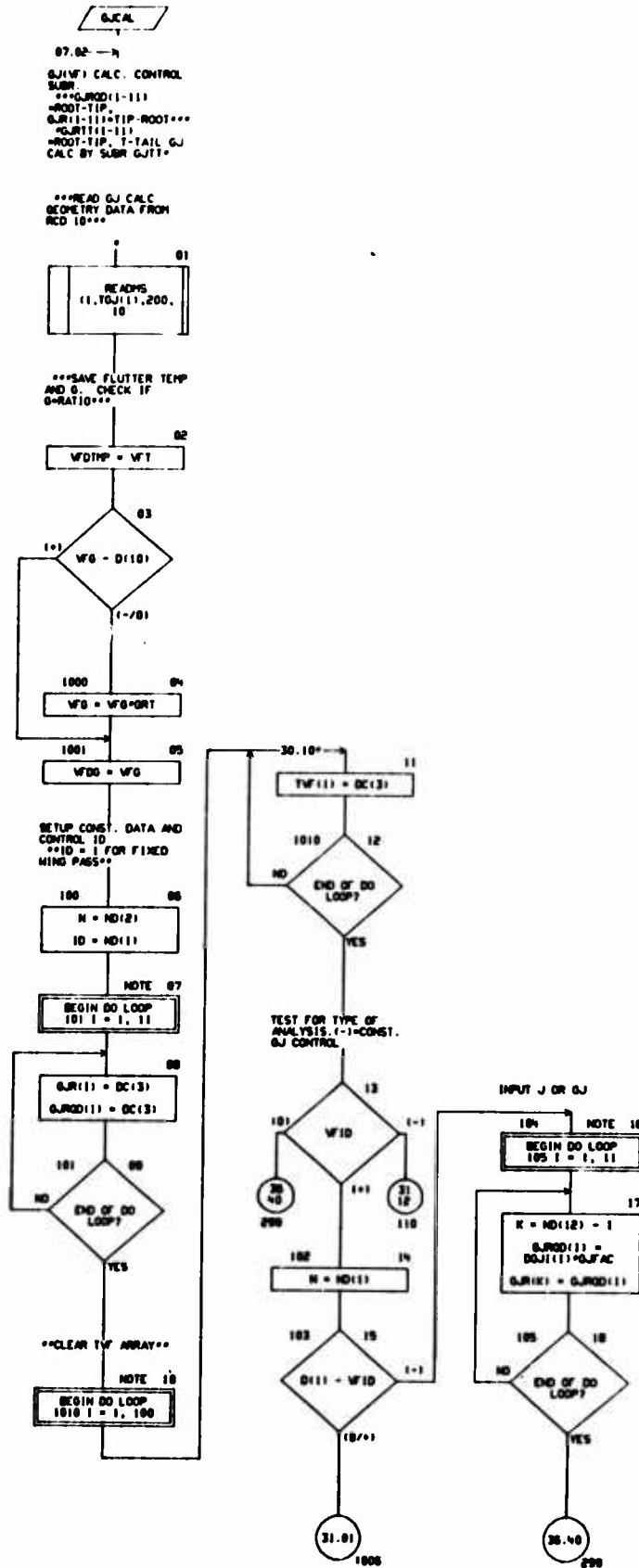
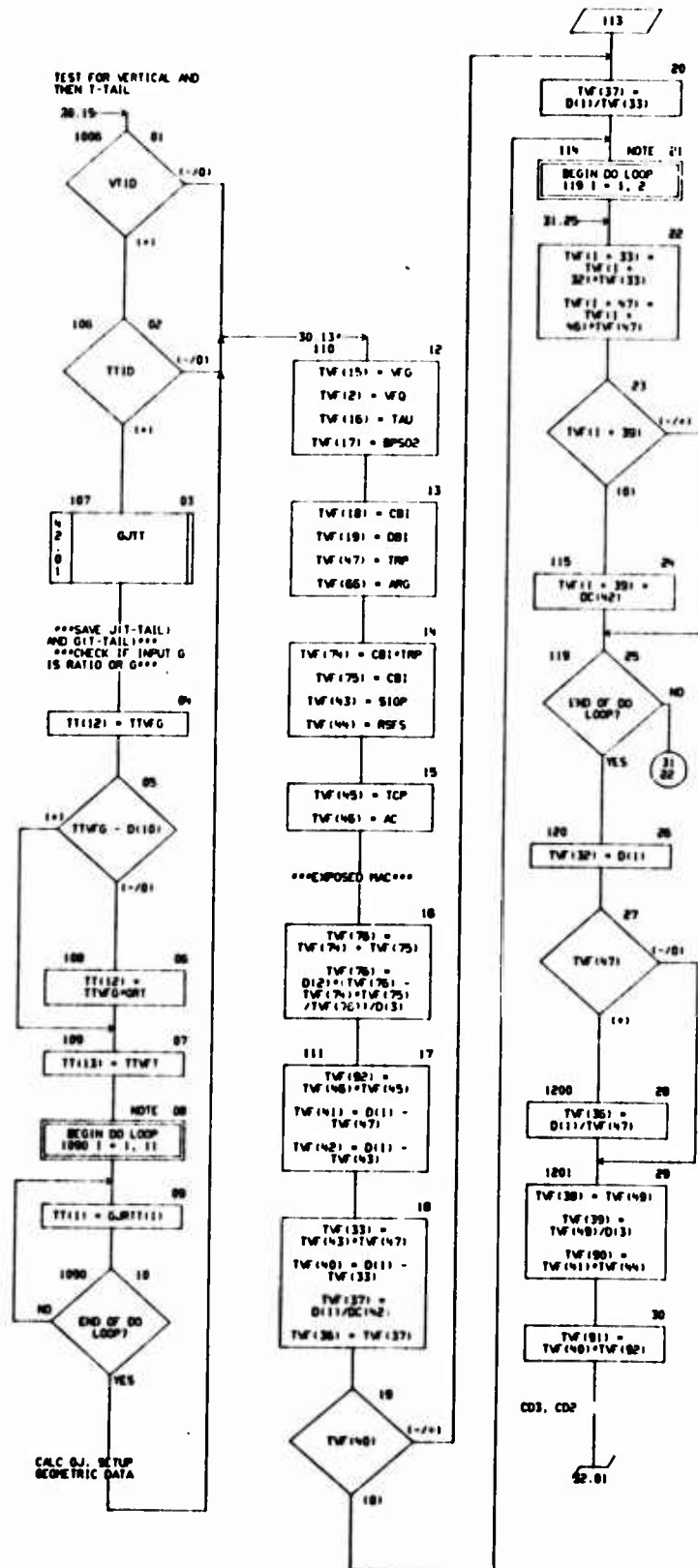


CHART TITLE - SUBROUTINE GJCL



```

31, 31      01
121
TW(00) =
D(13)+TW(47)
/TW(41)+TW(42)

TW(30) =
TW(09)+TW(08)

TW(31) =
D(13)+TW(09)+D(12)

C1, C2
122      02
TW(00) =
TW(41)+TW(40)

TW(0) =
TW(00)+TW(00)
/D(13)+TW(00)
/TW(01)

03
TW(17) =
D(11)+TW(00)

C3
123      04
TW(07) = -
ATIP/ART - ATIP

TW(05) =
ALOG(TW(33))
/TW(01)

TW(06) =
ALOG(TW(47))
/TW(00)

05
TW(0) =
TW(07)+TW
+ TW

K01, K50P
124      06
TW(4) =
TW(10)+TW(10)
/D(13)+TW(10)
/TW(41)

***SIN, COS OF (EA -
10 DEGREES)***

07
TW(04) =
COS(EA-DC(30))
+SINEA*DC(30)

TW(13) =
17*TW(04)+DC(17)
+DC(36)+TW(17)
**2

125      08
TW(03) = ANG +
DC(35)

TW(12) =
TW(12)+DC(32)
/DC(33)
*(ANG/TW(03))
**2-DC(34)

TW(06) =
0.67*AC*W*E**2-DC
(41)

09
TW(12) =
TW(12)+TW(06)

K(0)

```

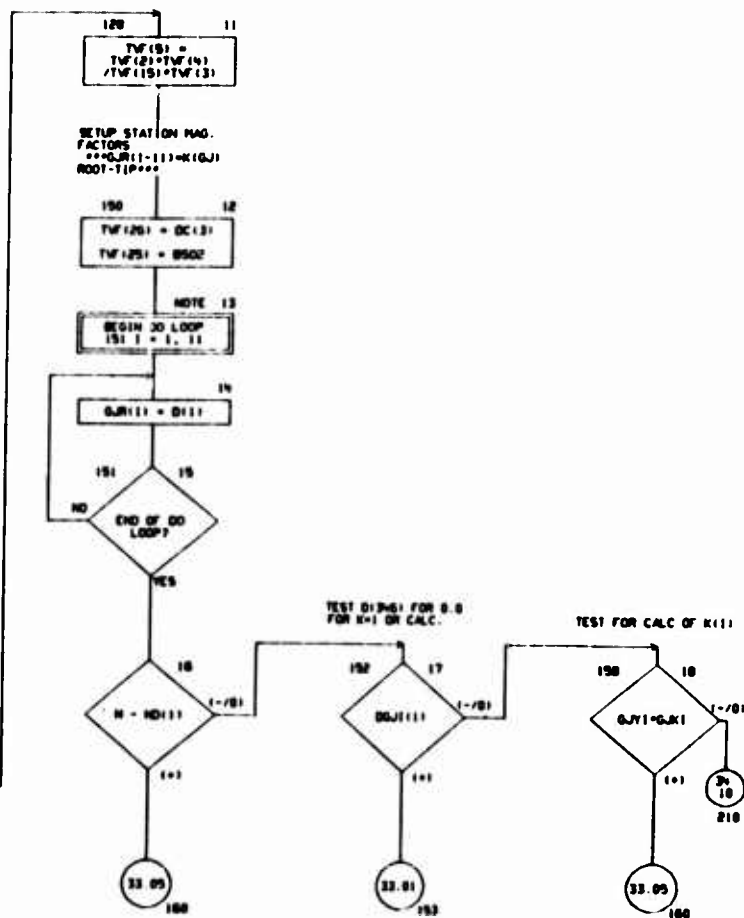


CHART TITLE - SUBROUTINE GJAL

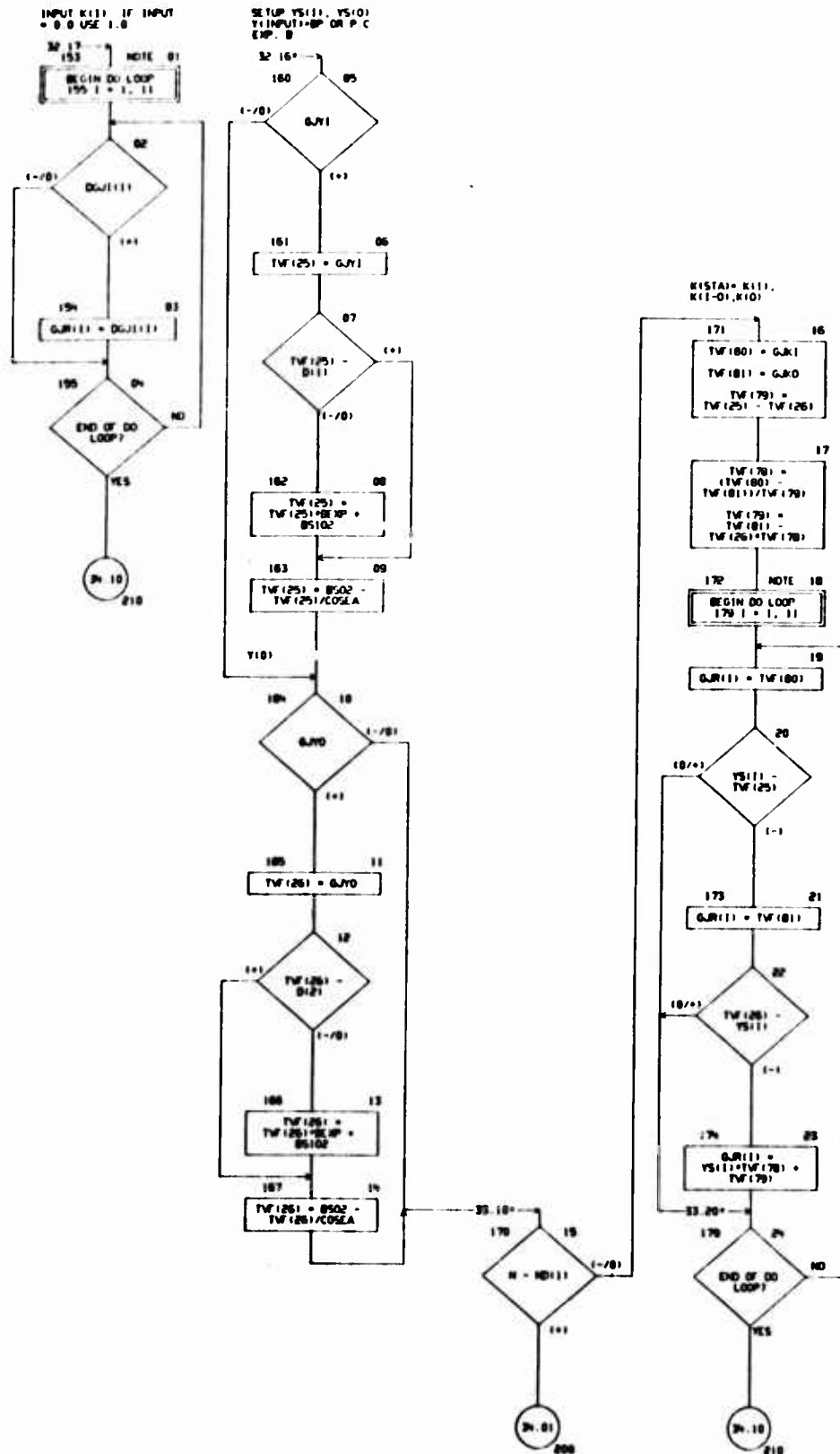
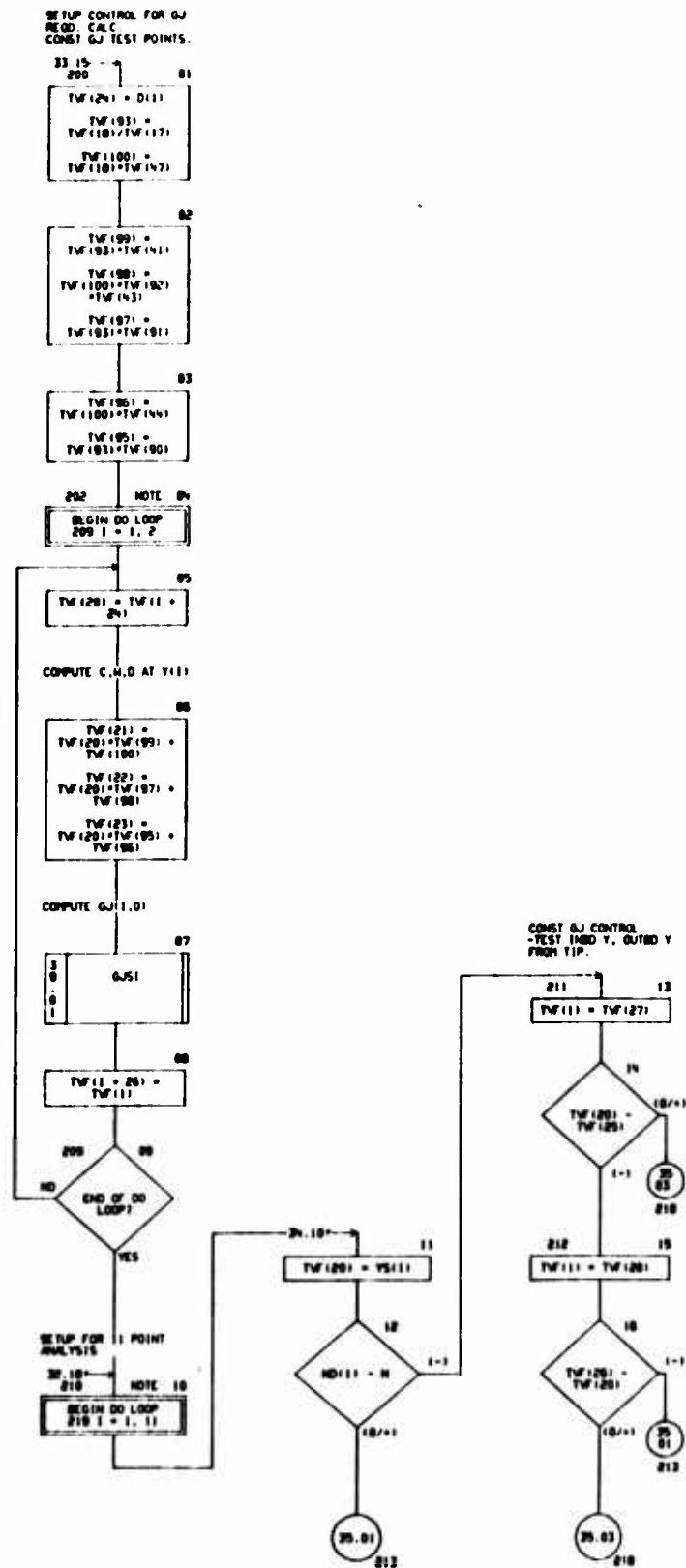


CHART TITLE - SUBROUTINE GJCA



00V-TAIL--CHECK FOR
1-TAIL00

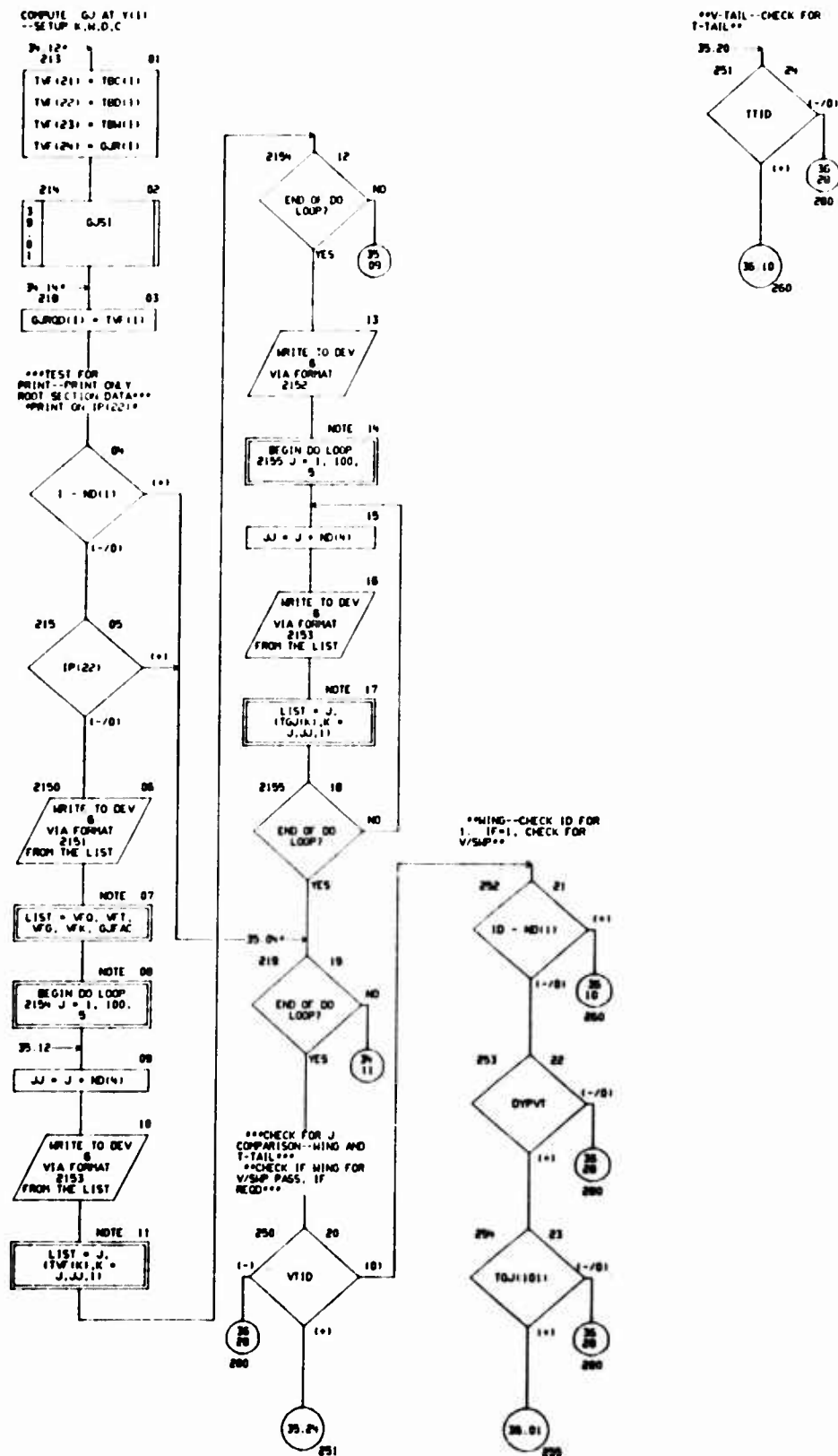


CHART TITLE - SUBROUTINE GJCAL

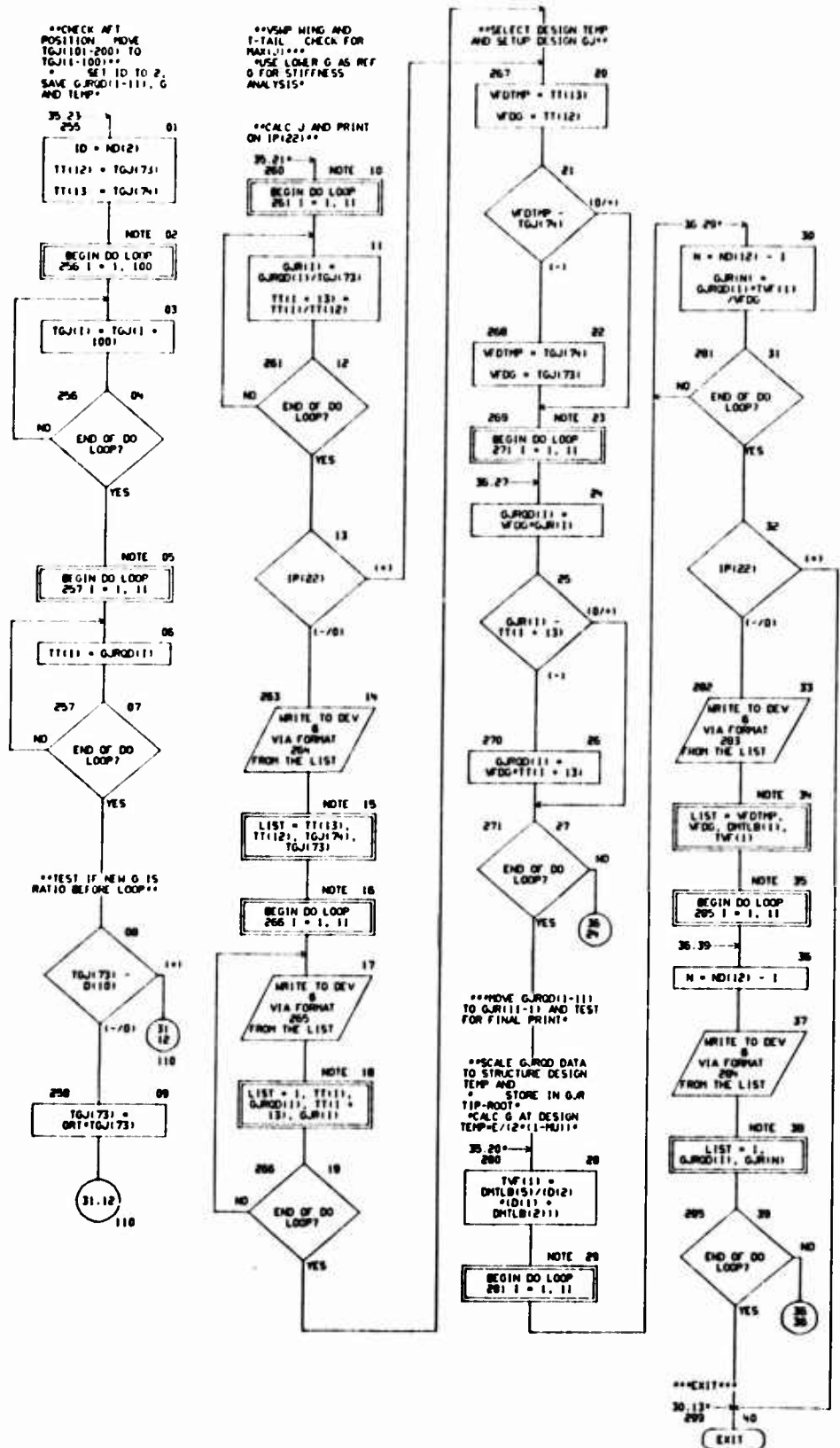


CHART TITLE - NON PROCEDURAL STATEMENTS

```

COMMON TCOM(620)
COMMON /PRINT/ IP(80)
DIMENSION T(2060), D(2060), CD(2000), ND(100), DC(100), TSEC(300),
TVF(100), TT(24), TGJ(200),
YS(11), TBH(11), TBO(11), TBC(11),
GJRQD(11), DGJ(11), GJR(11), GJRTT(11),
DHTLB(10)
EQUIVALENCE (T(1),TCOM(1)), (D(1),TCOM(2061)), (CD(1),TCOM(4121)),
, (ND(1),TCOM(6121))
EQUIVALENCE (DC(1),D(1401)), (TSEC(1),CD(1501)), (TT(1),T(1317)),
(TVF(1),T(1961)), (TGJ(1),T(1761)), (DHTLB(1),T(201)),
(GJRQD(1),T(669)), (DGJ(1),D(346)), (GJR(1),TSEC(67)),
(YS(1),TGJ(27)), (TBH(1),TGJ(38)), (TBO(1),TGJ(49)),
(TBC(1),TGJ(60)), (ARO,TGJ(2)), (BSO2,TGJ(8)), (BEXP,TGJ(9)),
(BPSO2,TGJ(10)), (BSIO2,TGJ(11)), (CB1,TGJ(12)), (DB1,TGJ(13)),
(ITRP,TGJ(14)), (TCP,TGJ(15)), (SIGP,TGJ(16)), (TAU,TGJ(17)),
(RSFS,TGJ(18)), (AC,TGJ(24)), (COSEA,TGJ(20)), (SINEA,TGJ(19)),
(ATIP,D(1318)), (ART,D(1317)), (ORT,DHTLB(15)),
(WFID,D(1251)), (VTID,D(1269)), (TTID,D(1357)), (TTVFG,D(1338))
EQUIVALENCE (WFK,TGJ(71)), (WFO,TGJ(72)), (WFG,TGJ(73)),
(WFT,TGJ(74)), (GJFAC,TGJ(75)),
(GJVI,TGJ(76)), (GJYO,TGJ(77)), (GJXI,D(1314)), (GJKO,D(1316)),
(DYPMV,D(1201)), (WFDTHP,T(196)), (WFOG,T(197)),
(TTVFT,D(1335)),
(GJRTT(1),T(668))
2151 FORMAT (34H1 ---FLUTTER ANALYSIS DATA---,50X,20H** GJCAL - IP
(22) **//10H WFO=F7.1,BH WFT=F7.1,BH WFG=F10.1,BH WFK=F7.4
,BH GJFAC=F7.4, //8H TVF)
2152 FORMAT (6H0 TGJ)
2153 FORMAT (1H 2X,13,5E10 B)
204 FORMAT (42H1 ---GJ AND J COMPARISON DATA---, //8X,BHTEMP(1)
=F7.1,12H DEG. G(1)=F10.1,4H PSI, //8X,BHTEMP(2)=F7.1,12H DEG. G(
2)=F10.1,4H PSI, //50H STA GJ(1) GJ(2) J
(1) J(2))
205 FORMAT (5X,12,2F10.1)
203 FORMAT (32H0 ---DESIGN GJ DATA---, //20H FLUTTER DES
IGN TEMP=F7.1,BH DEG. ,10H DESIGN G=F11.1,4H PSI, //20H STRUCT.
DESIGN TEMP=F7.1,BH DEG. ,10H DESIGN G=F11.1,4H PSI, //44H0
STA GJ(RECD) GJ(SCALED))
204 FORMAT (11X,12,2F10.1)

```

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AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 30

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE GJS*****

FLUTTER GJ CALCULATION AT STATION (I)

CHART TITLE - SUBROUTINE GJ51

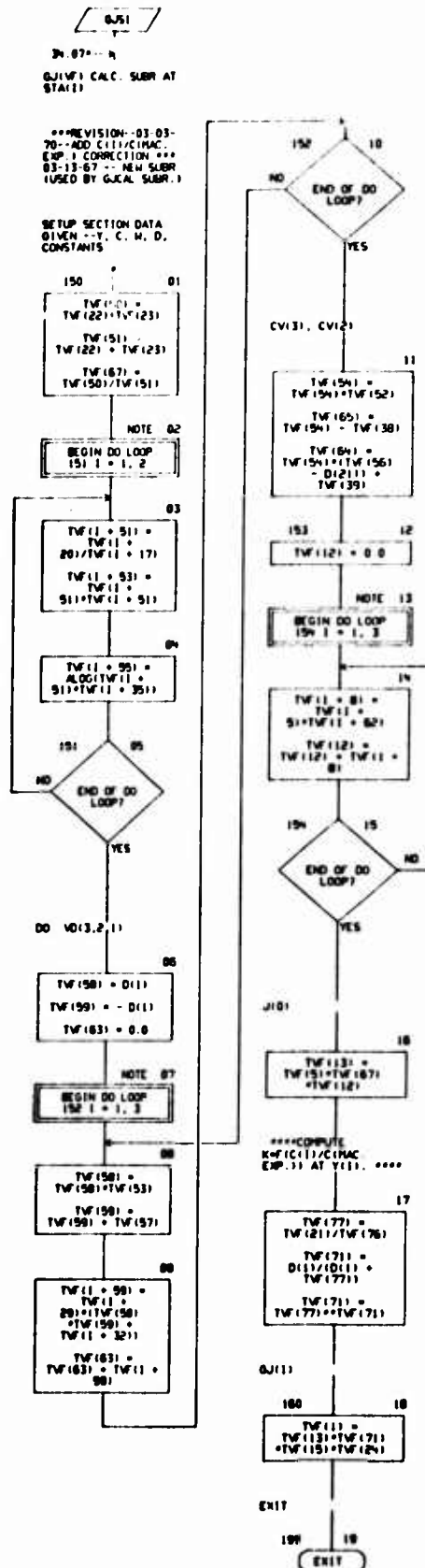


CHART TITLE - NON-PROCEDURAL STATEMENTS

COMMON T(2060),D(2060),CD(2000),ND(100)
DIMENSION TW(100)
EQUIVALENCE (TW(1),T(155))

CHART TITLE - INTRODUCTORY COMMENTS

```

SUBROUTINE GJTT
*****
      TORSIONAL STIFFNESS REQUIRED TO PREVENT FLUTTER OF T TAILS
      WRITTEN FEBRUARY 72 FROM INFORMATION DEVELOPED BY CHUCK MOODSON

      COL(GJ) = CTT*ESUBE*Q/144.0*SM**2/(CAVW)**2 * YINT/GD *
      ( ROW(DX)*COL(ISA) ) * COL(ISA)

      WHERE -
      CTT FROM GRAPH CTT VS MACH NO. FOR VARIOUS DIHEDRAL ANGLES
      IN**4/ LB. SEC.**2 - - - ORIGINAL FOR 0 AND 15 DEG.
      Q = LB/SQ.FT. SM=1.15, 0*SM**2=D(337)
      ESUBE = EFFECTIVE ECCENTRICITY OF VERTICAL TAIL
      = K / (1.+0.0/ARI)**2 * (0.4+0.7*COS(SHEEP OF EA
      - 10. DEG.)) * Q/GD

      JFAC = D(339) * TTJFC
      TO BE USED IN LIEU OF CTT IF INPUT MACH NO = 0.0
      YINT = YAW INERTIA OF HORIZONTAL TAIL ABOUT C.G. LB. IN SQ.
      GD = IN. PER SEC PER SEC = 386.0886
      CAVW = AVERAGE CHORD OF VERTICAL TAIL

      VALUES RUN FROM ROOT TO TIP WITH POINTS ON ELASTIC AXIS DIMENSIONAL.
      DX = INCREMENT OF DISTANCE ALONG ELASTIC AXIS
      TBD = TORQUE BOX DEPTH
      TBM = TORQUE BOX WIDTH
      SOA = S/A = TORQUE BOX PERIMETER OVER CROSS SEC. AREA

      ***YST(1-11) STORED ROOT/ACTUAL STRUCTURAL STATIONS***
      *ORIGIN AT C/L OF A/V*
      TBM AND TBD ARE STORED ROOT-TIP

      CALC GJTT TIP-ROOT AND STORE ROOT-TIP

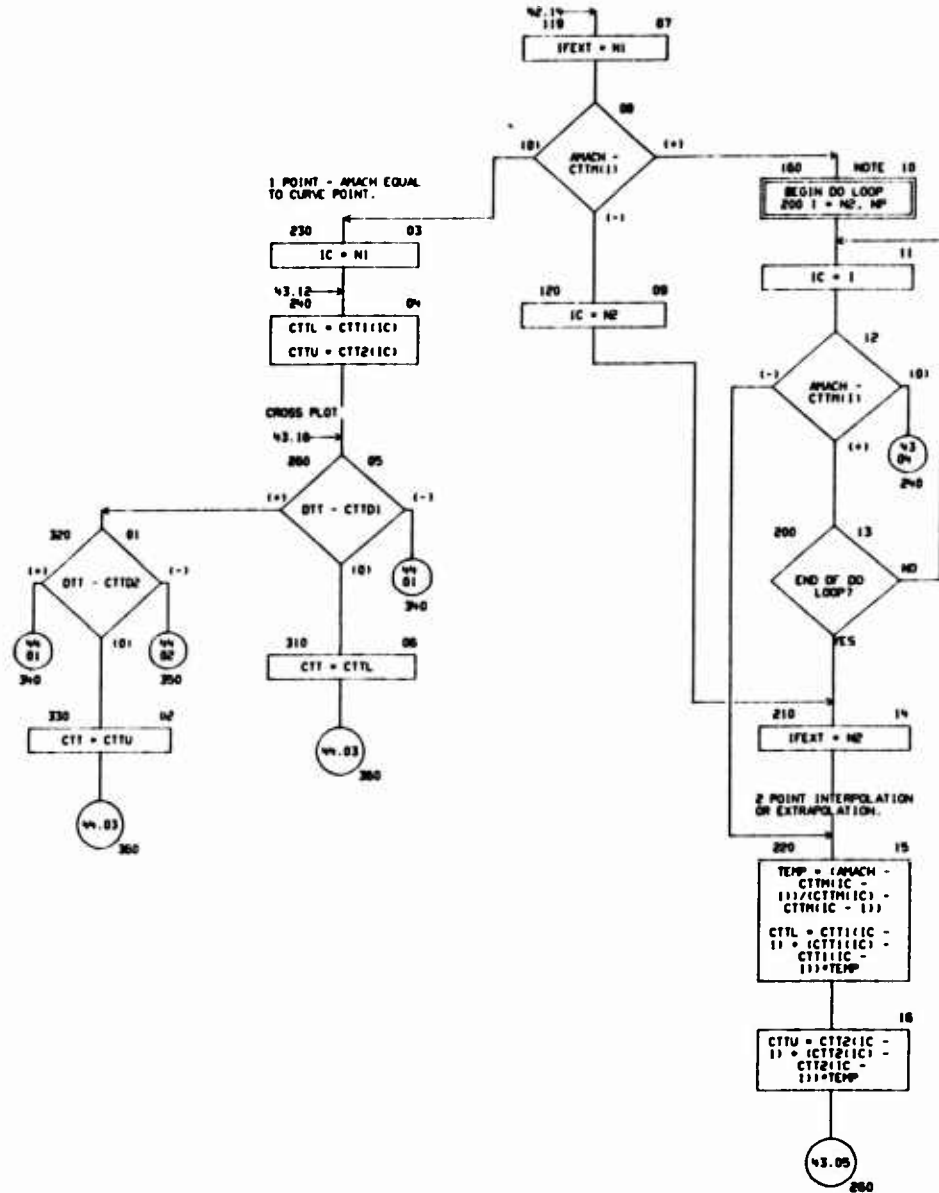
```

```

graph TD
    Start([START]) --> Read[READ T TAIL DATA FROM RCD 37]
    Read --> Box01[150 01  
READYS  
(1,0,0,1),  
(100,37)]
    Box01 --> Box02[02  
00 = 00FPS*D(12)  
ARVT = AR/D(2)  
CAVV =  
CB1*(D(11) +  
TRP)/D(2)  
NP = PC]
    Box02 --> CalcESUB[03  
CALCULATE ESUB  
TEMP =  
(C0SEA*C0S10 +  
SINEA*SIN10)  
*PI7 + PI4  
TEMP2 =  
VTK/D(11) +  
PIB/ARVT)*2  
ESUB =  
TEMP2*TEMP*PI.C]
    CalcESUB --> Setup[SET UP DELTA X AND  
S/A ARRAYS FROM YS,  
TBD AND TBM  
***S/A HAVE DEPTHS  
AND WIDTHS AT  
STAI(1,1), EXCEPT  
S/A(11)=F(111) AND  
D(111)***]
    Setup --> Box04[04  
DX(1) = B502 -  
YST(11)  
SOA(1) =  
(TBD(11) +  
TBM(11))*D(2)  
/(TBD(11)+TBM(11))  
NOTE 05  
BEGIN DO LOOP  
100 I = 2, 11]
    Box04 --> Box06[06  
J = ND(12) - 1  
DX(1) = YST(J) -  
DX(1) - YST(J)  
DAVE = (TBD(J) +  
TBM(J))/D(2)]
    Box06 --> Box07[07  
MAVE = (TBM(J) +  
TBM(J))/D(2)  
SOA(1) =  
D(2)/(DAVE +  
MAVE)/(DAVE+MAVE)]
    Box07 --> Box08{100 08  
END OF DO  
LOOP?}
    Box08 -- NO --> Box04
    Box08 -- YES --> SetupS[A]
    SetupS[***SETUP S/A VALUE  
BETWEEN ROOT TIE AND  
YST(1), IF ANY***] --> Box09[09  
TEMP2 = DC(3)  
11  
B502/C0SEA -  
YST(11)  
(0/+)  
(-)]
    Box09 --> Box12[12  
DAVE = (TBD(1) +  
DB1)/D(2)  
MAVE = (TBM(1) +  
CB1)*RSF/D(2)  
TEMP2 =  
D(2)/(DAVE +  
MAVE)/(DAVE+MAVE)]
    Box12 --> TestCTT[***TEST FOR CTT  
CALC. CALC IF INPUT  
MACH NO NOT ZERO***  
***IF MACH NO = 0.0,  
THEN CTT IS EQUAL TO  
T-TAIL J FACTOR***]
    TestCTT --> Box13[13  
CTT = D(1)]
    Box13 --> Box14{14  
MACH  
1/-01  
1=1  
1=0}
    Box14 -- 1=1 --> Box15[15  
VW  
DB  
400]
    Box14 -- 1=0 --> Box16[16  
3.07  
110]

```


FIND CTT VALUE FROM
CURVE DATA - - -
CTTD1, CTTD2 TWO
DIPEDRAL ANGLES FOR
WHICH CURVES ARE
GIVEN



1463

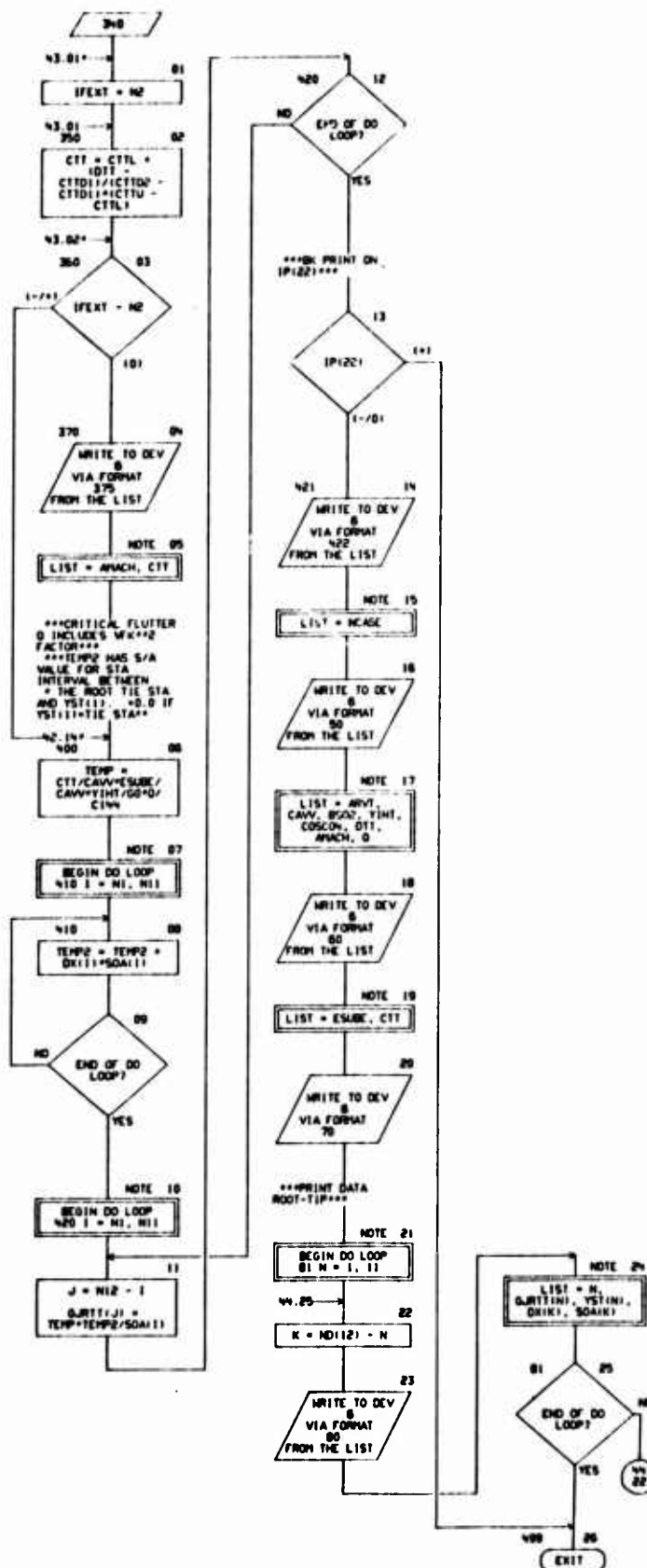


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON TCOM(6220)
COMMON /IPRINT/ IP(80)
DIMENSION T(2060), D(2060), CD(2000), ND(100), DC(100)
, TSEC(300), GJDAT(100), GJT(40), TGJ(200)
, VST(11), TBN(11), TBO(11), GJRTT(11)
, SOA(11), DX(11), CTT(20), CTT2(20), CTTM(20)
EQUIVALENCE (T(1),TCOM(1)), (D(1),TCOM(2061)), (CD(1),TCOM(4121))
, (ND(1),TCOM(6121)), (DC(1),D(1401))
, (N1,ND(1)), (N2,ND(2)), (N10,ND(10)), (N11,ND(11)), (N12,ND(12))
, (GJDAT(1),T(1661)), (GJT(1),T(1621))
, (TGJ(1),T(1761))
EQUIVALENCE (TSEC(1),CD(1501)), (GJRTT(1),T(668))
, (CTTM(1),GJDAT(21)), (CTT(1),GJDAT(41)), (CTT2(1),GJDAT(61))
, (D0,DC(33)), (PT0,DC(35)), (PT4,DC(76)), (PT7,DC(137))
, (COS10,DC(138)), (SIN10,DC(139)), (GOFPS,DC(143))
, (VTK,DC(144))
, (PC,GJDAT(18)), (CTT01,GJDAT(19)), (CTT02,GJDAT(20))
, (COSEA,TGJ(20)), (SINEA,TGJ(19))
, (SINC04,TGJ(25)), (COS04,TGJ(26))
, (AR,TGJ(21)), (BS02,TGJ(8)), (VST(1),TGJ(78)), (C144,D(17))
, (TBO(1),TGJ(49)), (TBN(1),TGJ(38))
, (CB1,TGJ(12)), (TRP,TGJ(14)), (BS102,TGJ(11))
, (DB1,TGJ(13)), (RSFS,TGJ(18))
EQUIVALENCE (AMACH,D(336)), (D,D(337)), (TW01,T(147),D(360))
, (DTT,D(310),W(44)), (TJFC,D(339))
EQUIVALENCE (G0,GJT(26)), (CAVV,GJT(27)), (ARVT,GJT(28))
, (ESUBE,GJT(29)), (TEMP,GJT(30)), (TEMP2,GJT(31))
, (DR(1),GJT(1)), (SOA(1),GJT(12)), (CTT,GJT(23)), (CTTL,GJT(24))
, (CTTU,GJT(25))
, (VT10,D(209))
, (INCASE,ND(160)), (MPAGE,ND(185))
375  FORMAT( B0H0***** EXTRAPOLATED ON T-TAIL STIFFNESS COEFF. FOR M
ACH NO., IF6.2, B0, CTT = , IE9.3 )
422  FORMAT (10H1 CASE14,17H---GJT1 SUBR---,60X,
10H** GJT1 - IP(22) **)
50  FORMAT (6X, 47-TAIL GJ0 // 6X, 4AR=, IF5.1, 6X, 4C-AV=, IF7.2,
10X, 4EA LENGTH=, IF7.2, 6X, 4YAW INERT. M-TAIL =, IE12.5 /
42X, 4COS SHEEP C/4 =, IF7.5, 4X, 4DIEDRAL OF M-TAIL =, IF6.2/
6X, 4MACH=, IF6.2, 4X, 4Q=, IF7.2 )
60  FORMAT ( 1H0, 6X, 4ESUBE =, IF9.4, 10X, 4CTT =, IE12.5 ///)
70  FORMAT (B0H 5TA,6X,2H0J,14X,2HYS,14X,2H0Y,14X,2H5/A)
80  FORMAT (1H0,6X,12,F16.1,F14.3,2X,F13.3,3X,F13.4)

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AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 46

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE CMSG*****

STRUCTURAL SYNTHESIS CONSTANTS AND DATA SETUP

CHART TITLE - SUBROUTINE CNSTC

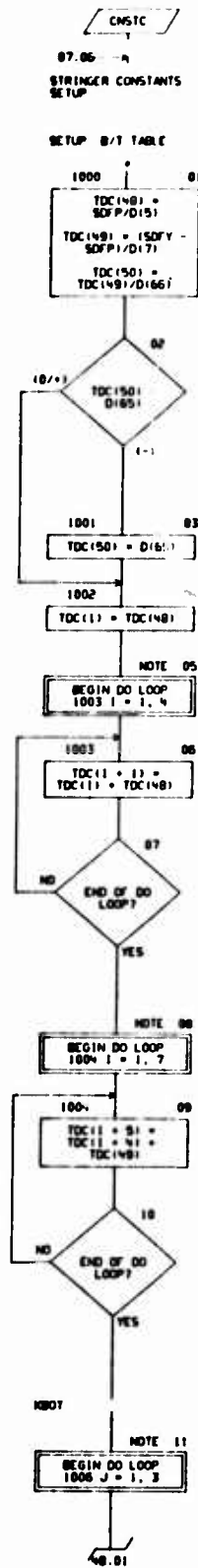


CHART TITLE - SUBROUTINE CNSTC

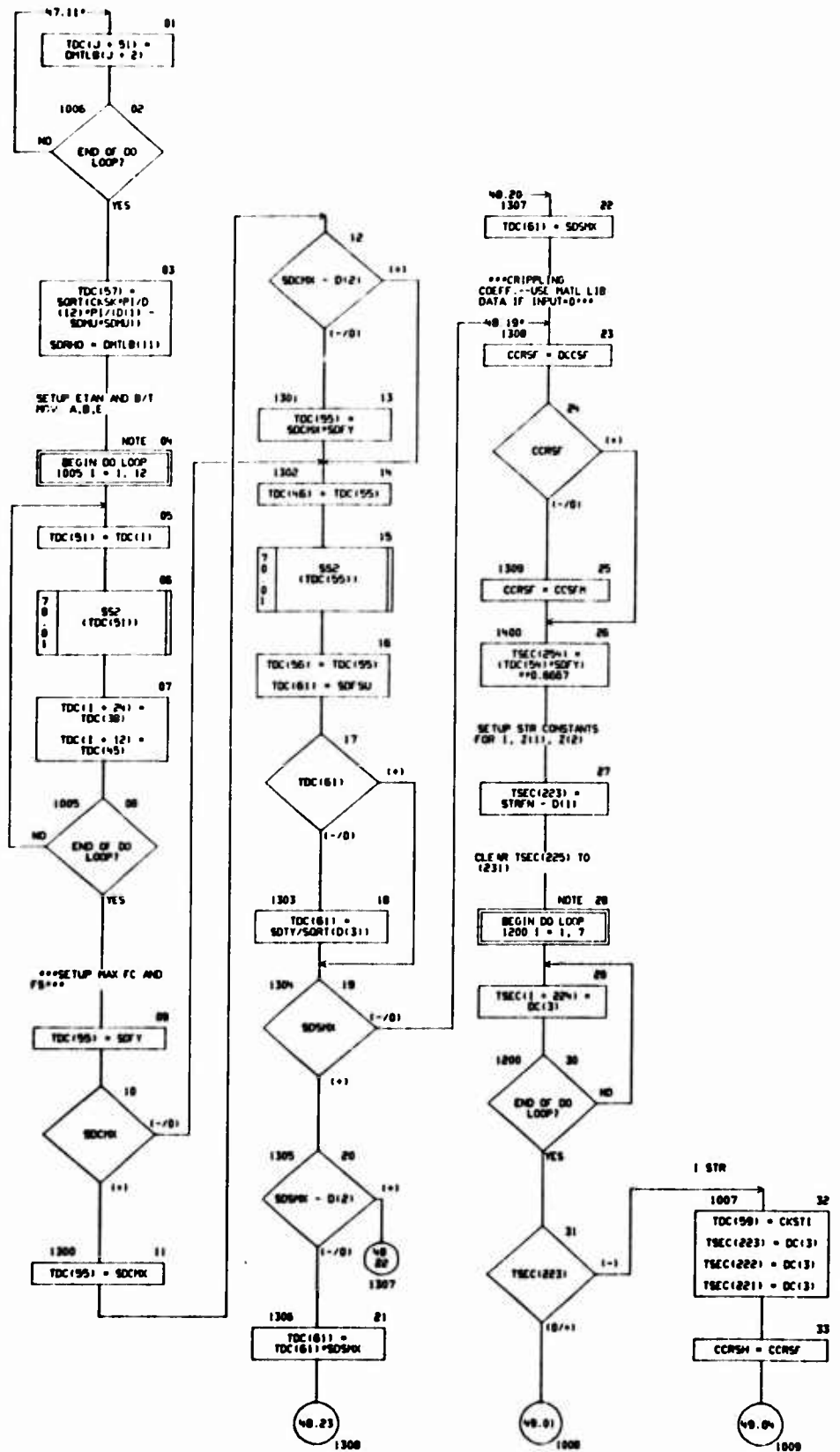


CHART TITLE - SUBROUTINE CWSYC

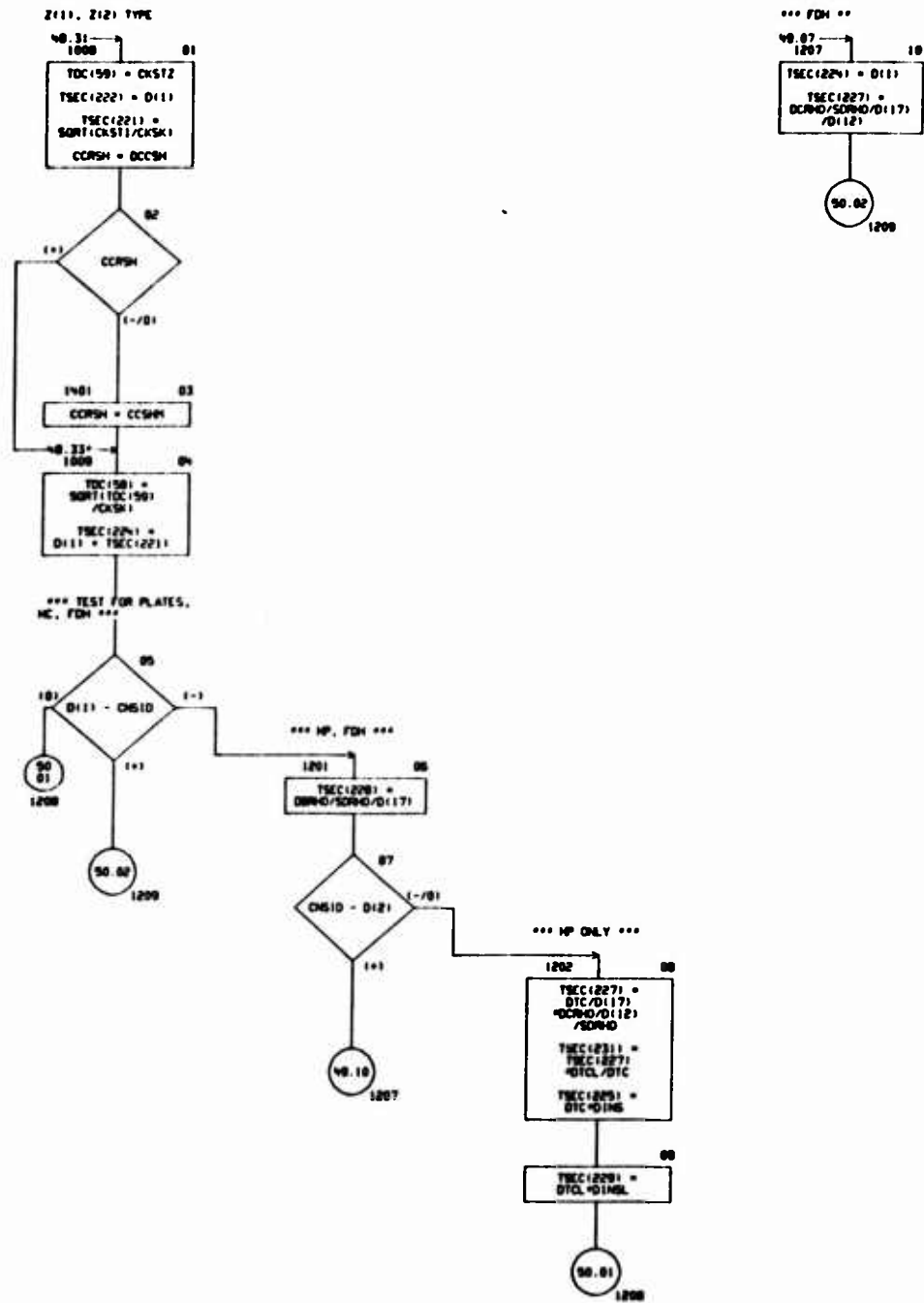
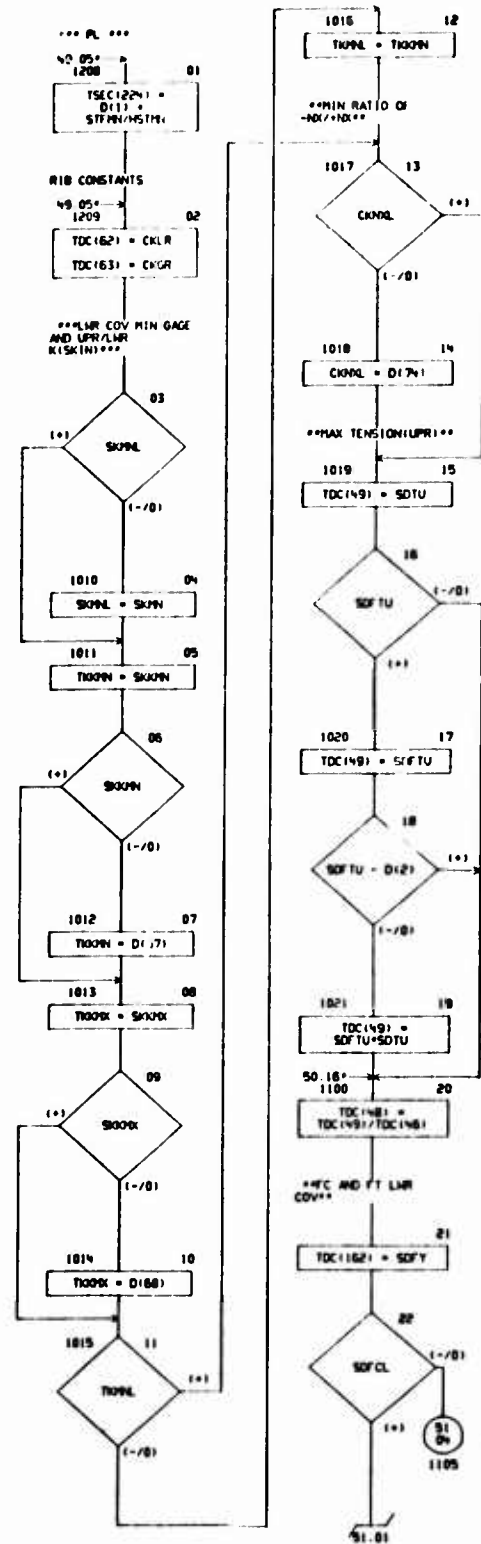


CHART TITLE - SUBROUTINE CNSTC



[illegible]

CHART TITLE - SUBROUTINE CNSTC

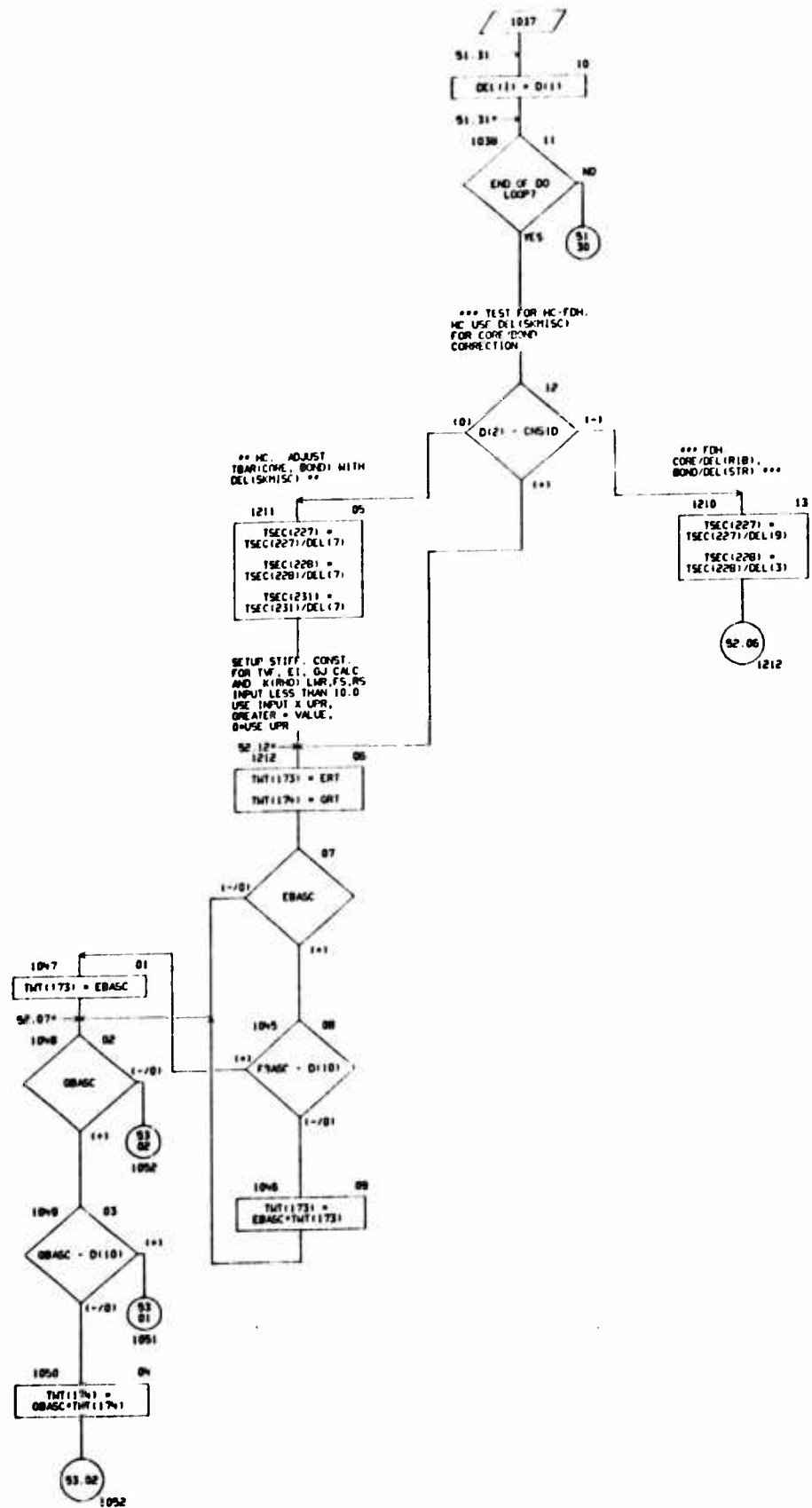


CHART TITLE - SUBROUTINE CNSTC

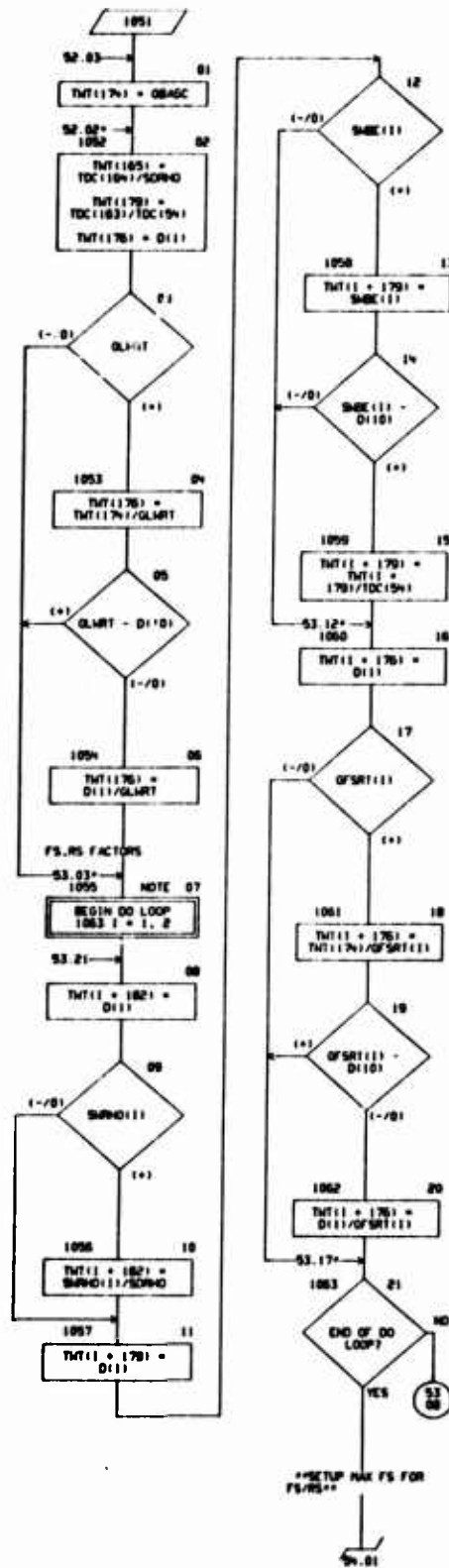


CHART TITLE - SUBROUTINE CMSTC

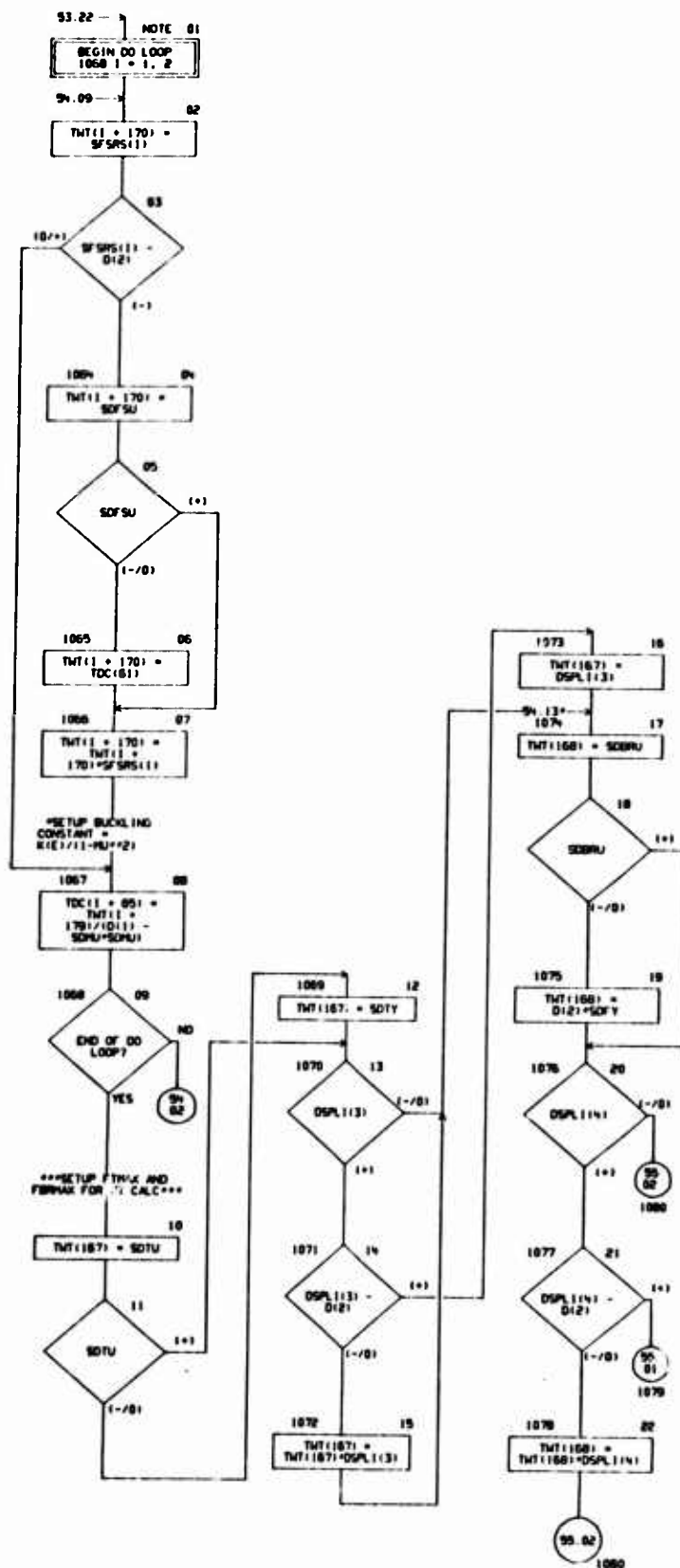


CHART TITLE - SUBROUTINE CMSTC

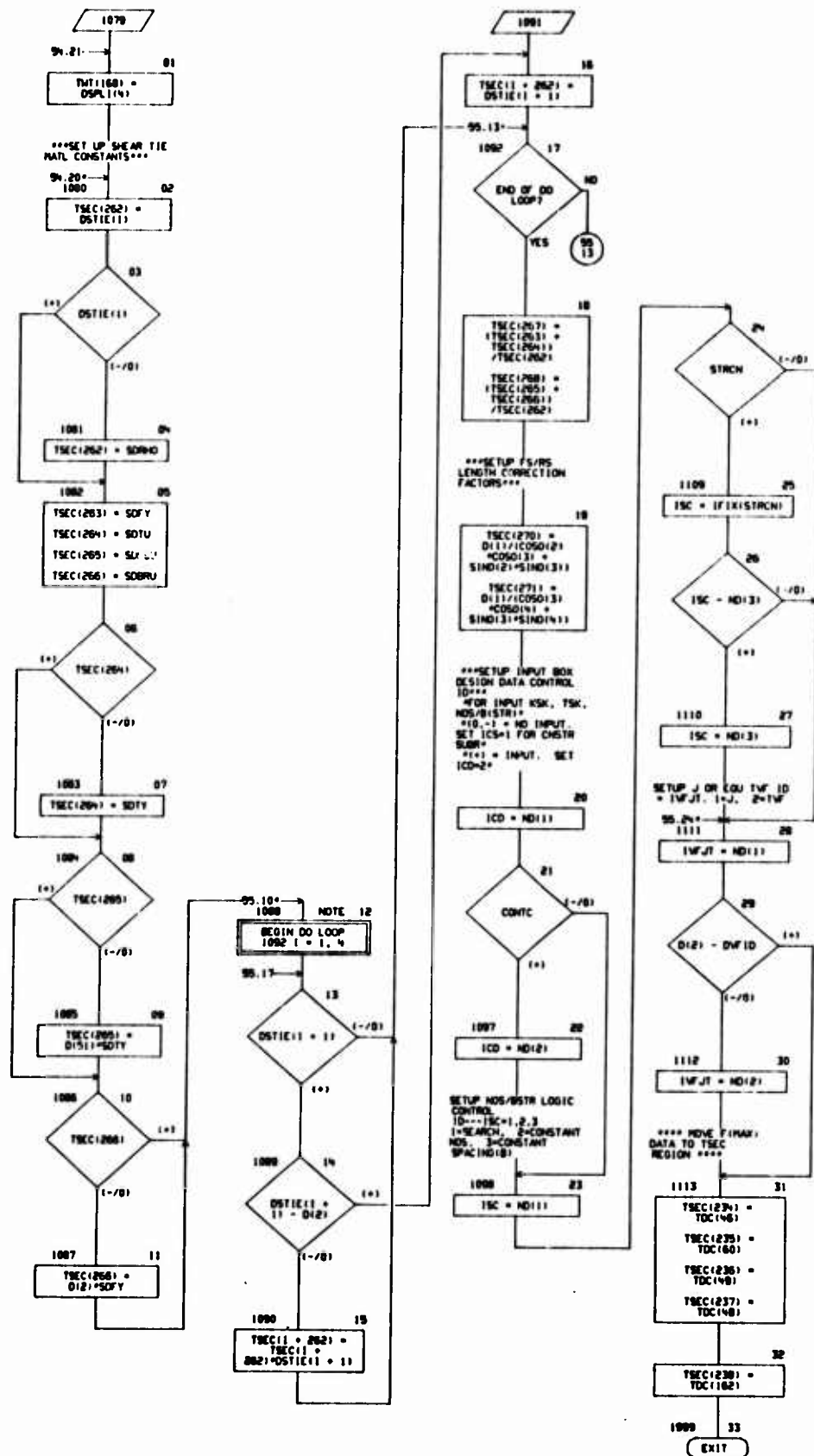


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T(2060),D(2060),CD(2000),ND(100)
DIMENSION DC(100), DMTLB(17),
TDC(200),TSC(1420),TSS(100),TMT(400),TSEC(300),
WFSAS(2),SWRND(2),SABC(2),
WFSRT(2),
DSTIE(0),OSPL(10),
COSO(0),SIND(0),
DLTB(30),DEL(30)
EQUIVALENCE (TDC(1),T(134)),(TSC(1),T(154)),(TSS(1),T(196)),
(DC(1),D(140)),(TMT(1),CD(110)),(TSEC(1),CD(150)),
(DLTB(1),D(600)),(DEL(1),TMT(25)),
(DMTLB(1),T(20)),(WFSAS(1),D(412)),(SWRND(1),D(414)),
(SABC(1),D(416)),(WFSRT(1),D(453)),
(ITOOPN,TDC(84)),(ITOOX,TDC(85)),
(IP1,D(15)),(UPNZ,D(205)),(UWAZ,D(206)),
(CCRSH,TSEC(252)),(CCRSF,TSEC(253)),
(ICD,ND(49)),(ISC,ND(22)),
(IWFJT,ND(53)),(I,ND(31)),(J,ND(30))
EQUIVALENCE (STRFN,D(361)),(CKSK,D(362)),(CKSTI,D(363)),
(CKSTZ,D(364)),(SKOON,D(365)),(SKOPK,D(366)),(CONTC,D(367)),
(DWFO,D(368)),(SKOIN,D(370)),(OTPN,D(371)),(BMIN,D(380)),
(BMAX,D(381)),(SMIN,D(382)),(TRCN,D(383)),(STFHN,D(384)),
(SOCHK,D(385)),(SOTPK,D(386)),(SOSPK,D(387)),(SOFCL,D(388)),
(ELMR,D(389)),(RNOL,D(390)),(EFLMR,D(391)),(CHOL,D(392)),
(SOPL,D(394)),(TIORN,D(395)),(SOFU,D(398)),
(CCLR,D(401)),(CKGR,D(402)),(SOBRU,DMTLB(17)),
(EBASC,D(450)),(OBASC,D(451)),
(OLMRT,D(452)),(DCCSH,D(408)),(DCCSF,D(409))
EQUIVALENCE (CHSID,D(451)),(DTC,D(462)),(DCRHO,D(463)),
(DBRHO,D(464)),(DINS,D(465)),(DTCL,D(466)),(DINSL,D(467)),
(DSTIE(1),D(52)),(OSPL(1),D(1490)),
(COSO(1),T(146)),(SIND(1),T(140)),
(CCRSH,T(199)),(CCRSF,T(200)),
(SORNO,TMT(175)),
(SORU,DMTLB(2)),(SOFPP,DMTLB(13)),
(SOFY,DMTLB(6)),(SOTY,DMTLB(10)),(SOTU,DMTLB(12)),
(IERT,DMTLB(14)),(IRT,DMTLB(15)),(SOFSU,DMTLB(16))

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AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 57

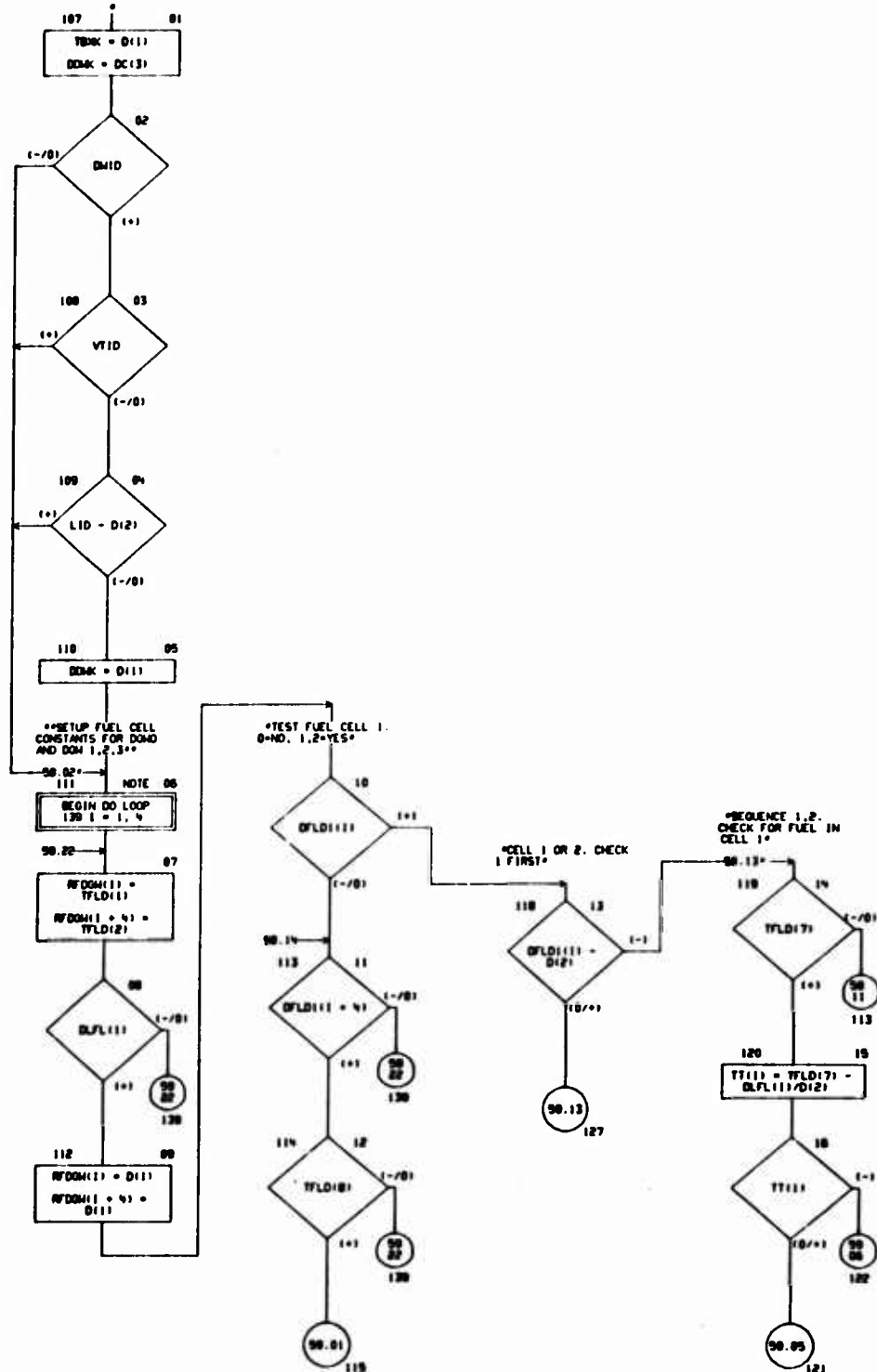
CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE ABCD*****

INITIAL STRUCTURE AND CONTENT INERTIA LOAD SETUP

ABCM

••SETUP DM FACTORS
AT DDMO••



440 CELL 1: USE CELL 2*

50 12 115 01

51 121 115 01

52 116 03

53 117 04

54 118 05

55 119 06

56 120 07

57 121 08

58 122 09

59 123 10

60 124 11

61 125 12

62 126 13

63 127 14

64 128 15

65 129 16

66 130 17

67 131 18

68 132 19

69 133 20

70 134 21

71 135 22

72 136 23

73 137 24

74 138 25

75 139 26

76 140 27

77 141 28

78 142 29

79 143 30

80 144 31

81 145 32

82 146 33

83 147 34

84 148 35

85 149 36

86 150 37

87 151 38

88 152 39

89 153 40

90 154 41

91 155 42

92 156 43

93 157 44

94 158 45

95 159 46

96 160 47

97 161 48

98 162 49

99 163 50

100 164 51

101 165 52

102 166 53

103 167 54

104 168 55

105 169 56

106 170 57

107 171 58

108 172 59

109 173 60

110 174 61

111 175 62

112 176 63

113 177 64

114 178 65

115 179 66

116 180 67

117 181 68

118 182 69

119 183 70

120 184 71

121 185 72

122 186 73

123 187 74

124 188 75

125 189 76

126 190 77

127 191 78

128 192 79

129 193 80

130 194 81

131 195 82

132 196 83

133 197 84

134 198 85

135 199 86

136 200 87

137 201 88

138 202 89

139 203 90

140 204 91

141 205 92

142 206 93

143 207 94

144 208 95

145 209 96

146 210 97

147 211 98

148 212 99

149 213 100

150 214 101

151 215 102

152 216 103

153 217 104

154 218 105

155 219 106

156 220 107

157 221 108

158 222 109

159 223 110

160 224 111

161 225 112

162 226 113

163 227 114

164 228 115

165 229 116

166 230 117

167 231 118

168 232 119

169 233 120

170 234 121

171 235 122

172 236 123

173 237 124

174 238 125

175 239 126

176 240 127

177 241 128

178 242 129

179 243 130

180 244 131

181 245 132

182 246 133

183 247 134

184 248 135

185 249 136

186 250 137

187 251 138

188 252 139

189 253 140

190 254 141

191 255 142

192 256 143

193 257 144

194 258 145

195 259 146

196 260 147

197 261 148

198 262 149

199 263 150

200 264 151

201 265 152

202 266 153

203 267 154

204 268 155

205 269 156

206 270 157

207 271 158

208 272 159

209 273 160

210 274 161

211 275 162

212 276 163

213 277 164

214 278 165

215 279 166

216 280 167

217 281 168

218 282 169

219 283 170

220 284 171

221 285 172

222 286 173

223 287 174

224 288 175

225 289 176

226 290 177

227 291 178

228 292 179

229 293 180

230 294 181

231 295 182

232 296 183

233 297 184

234 298 185

235 299 186

236 300 187

237 301 188

238 302 189

239 303 190

240 304 191

241 305 192

242 306 193

243 307 194

244 308 195

245 309 196

246 310 197

247 311 198

248 312 199

249 313 200

250 314 201

251 315 202

252 316 203

253 317 204

254 318 205

255 319 206

256 320 207

257 321 208

258 322 209

259 323 210

260 324 211

261 325 212

262 326 213

263 327 214

264 328 215

265 329 216

266 330 217

267 331 218

268 332 219

269 333 220

270 334 221

271 335 222

272 336 223

273 337 224

274 338 225

275 339 226

276 340 227

277 341 228

278 342 229

279 343 230

280 344 231

281 345 232

282 346 233

283 347 234

284 348 235

285 349 236

286 350 237

287 351 238

288 352 239

289 353 240

290 354 241

291 355 242

292 356 243

293 357 244

294 358 245

295 359 246

296 360 247

297 361 248

298 362 249

299 363 250

300 364 251

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310 374 261

311 375 262

312 376 263

313 377 264</

CHART TITLE - SUBROUTINE AB04

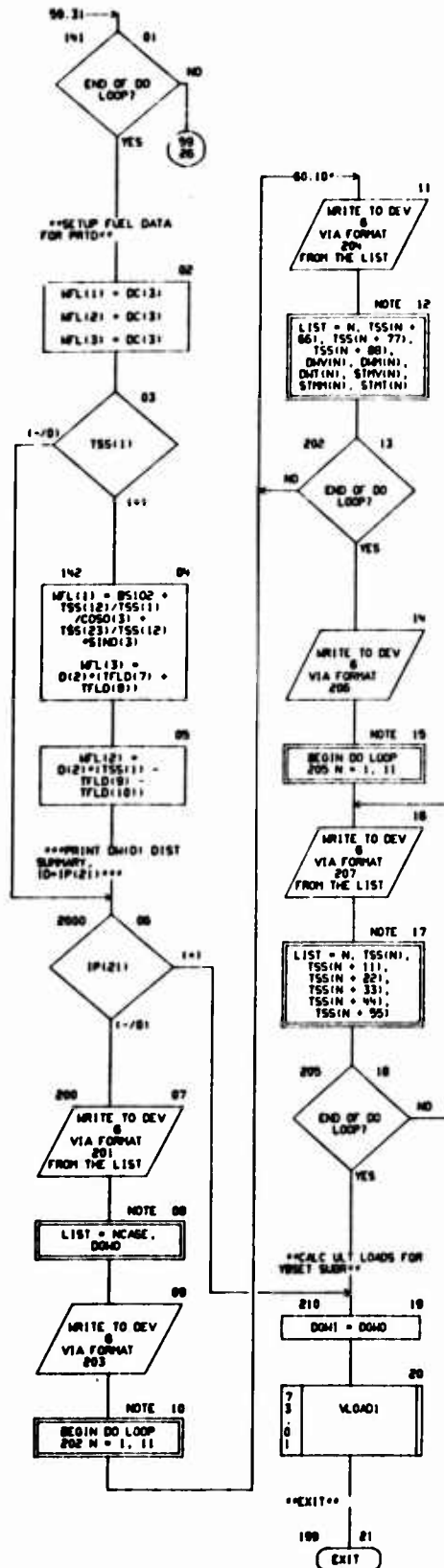


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T(6220)
COMMON /IPRINT/ IP(80)
DIMENSION D(2060),CD(2000),ND(100),DC(100),
TSEC(300),TT(24),
TDOM(16),
SDMV(11),SDMH(11),SDMT(11),STHV(11),STPH(11),STHT(11),
COLV(11),COLM(11),COLT(11),COLVE(11),COLME(11),COLT2(11),
COLVS(11),COLMS(11),COLT3(11),FLV(11),FLVE(11),FLM(11),FLME(11),
FLT(11),FLT2(11),DLFL(4),DFLD(4),DCOL(10),TFLD(10),TFDOM(8),
DMT(11),TSS(100),MFL(3),SIND(6),COSO(6),
YSTRC(11),DMV(11),DMH(11)
EQUIVALENCE (D(1),T(2081)),(D(11),T(4121)),(ND(1),T(6121)),(DC(1),
D(1401)),(TSEC(1),CD(1901)),(TT(1),T(13171)),(TDOM(1),T(4301)),
(VT(1),D(2091)),(DM(1),D(1101)),(DGMD,D(1051)),
(DCOL(1),D(1671)),(YSTRC(1),TSEC(1661)),(MFL(1),T(971)),
(BS102,T(151)),(SIND(1),T(1401)),(COSO(1),T(1461)),
(DDM1,T(221)),(DGMD,D(1051)),
(TFLD(1),T(6311)),(TFDOM(1),T(5221)),
(DMV(1),T(5001)),(DMH(1),T(6091)),
(DDM1,TDOM(21)),(DDMK,TDOM(31)),
(INCASE,ND(601)),(INPADE,ND(851)),(FLD,ND(541)),(N,ND(311)),(1,ND(301))
EQUIVALENCE (COLV(1),T(3091)),(COLM(1),T(3201)),(COLT(1),T(3311)),
(COLVE(1),T(3421)),(COLME(1),T(3531)),(COLT2(1),T(3641)),
(COLVS(1),T(3751)),(COLMS(1),T(3861)),(COLT3(1),T(3971)),
(FLV(1),T(4451)),(FLM(1),T(4561)),(FLT(1),T(4671)),
(FLVE(1),T(4781)),(FLME(1),T(4891)),(FLT2(1),T(4901)),
(SDMV(1),T(8441)),(SDMH(1),T(8551)),(SDMT(1),T(8661)),
(TBHK,TDOM(41)),(DLFL(1),D(1941)),(DFLD(1),D(1991)),(TSS(1),T(1981)),
(TBHK,TDOM(41)),(MFL1,TDOM(111)),(MFL2,TDOM(121)),(COLK1,TDOM(131)),
(COLK2,TDOM(141)),(COLK3,TDOM(151)),(DMT(1),T(6201)),
(STHV(1),T(8111)),(STPH(1),T(8221)),(STHT(1),T(8331))
201 FORMAT (10H) CASE 14,10X,94H---INITIAL DEADWEIGHT DISTRIBUTION
DATA AT DOM(10)---,13X,10H-- ABOH - IP(21) ---/5X,SHOARD=,F(9.1)
203 FORMAT (10H) *****TOTAL 1-G DEADWEIGHT***** **INITI
AL TORQUE-BOX** **LE,TE,TIP,MISC CONTENTS** //10H STA
SHEAR B. MOM. T. MOM. SHEAR B. MOM. T. MOM.
SHEAR B. MOM. T. MOM. )
204 FORMAT (14 3X,12,F10.1,F12.1,2F11.1,F12.1,2F11.1,F12.1,F11.1)
206 FORMAT (7H) **DESIGN FUEL 1-G D.MT.** **DESIGN
CONC. 1-G D.MT.** //7H STA SHEAR B. MOM. T. MOM.
SHEAR B. MOM. T. MOM. )
207 FORMAT (14 3X,12,F10.1,F12.1,2F11.1,F12.1,F11.1)

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05/18/74

AUTOFLOW CHART SET - SHEEP HING AND EMPENNAGE MODULE - PAGE 82

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE VDSCT*****

EFFECTIVE BOX DEPTH INITIALIZATION

CHART TITLE - SUBROUTINE YBSET

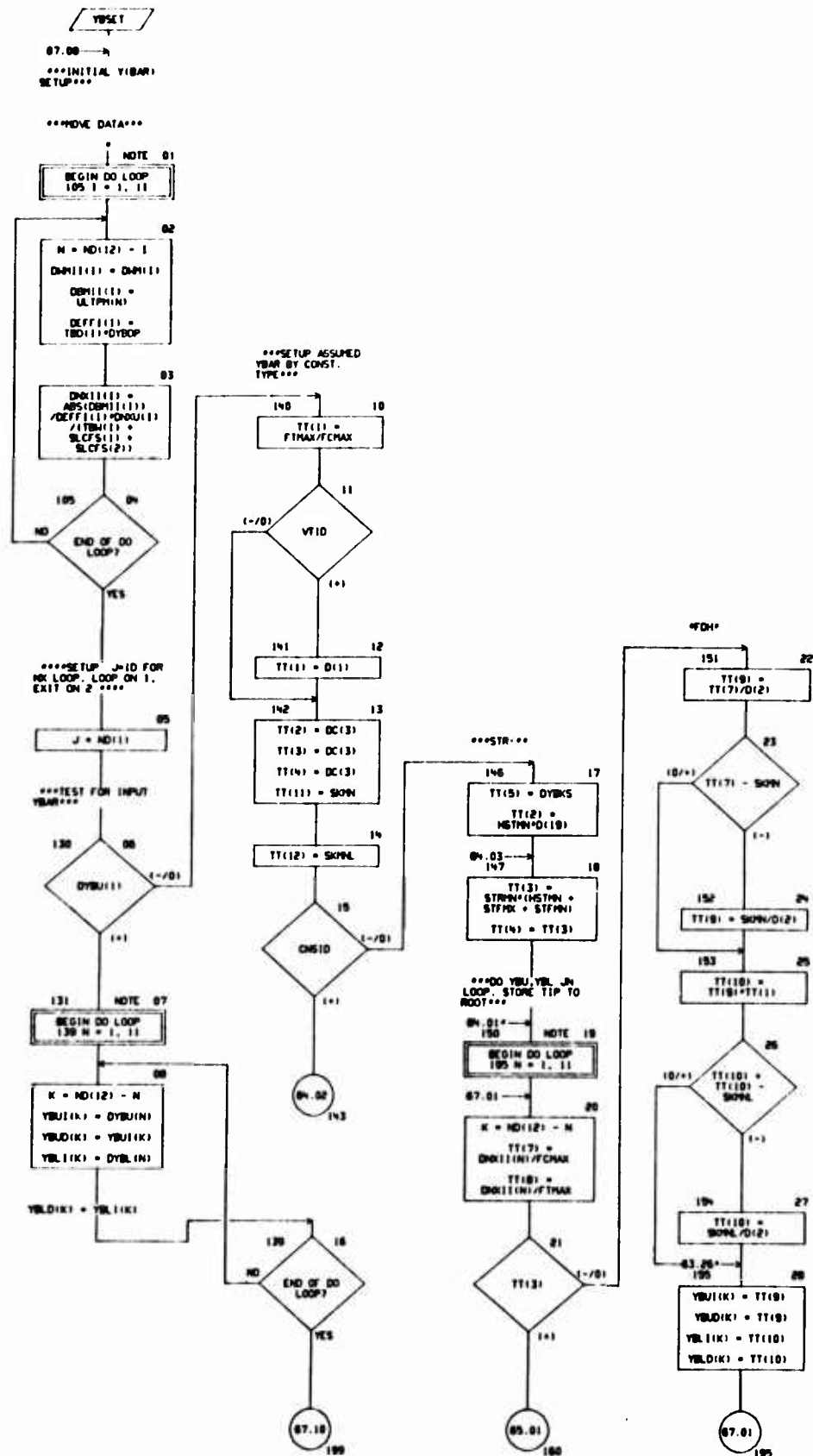


CHART TITLE - SUBROUTINE YBSET

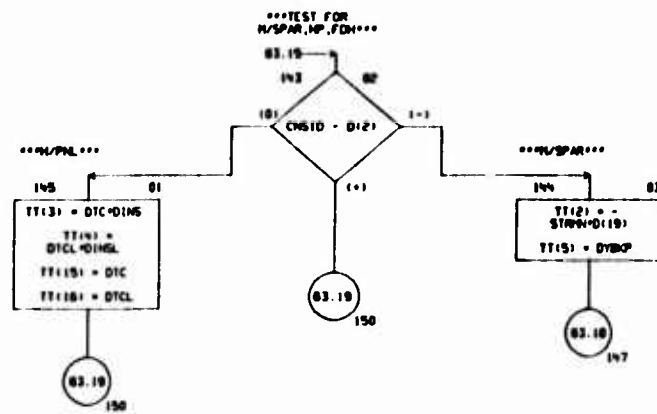


CHART TITLE - SUBROUTINE YDSET

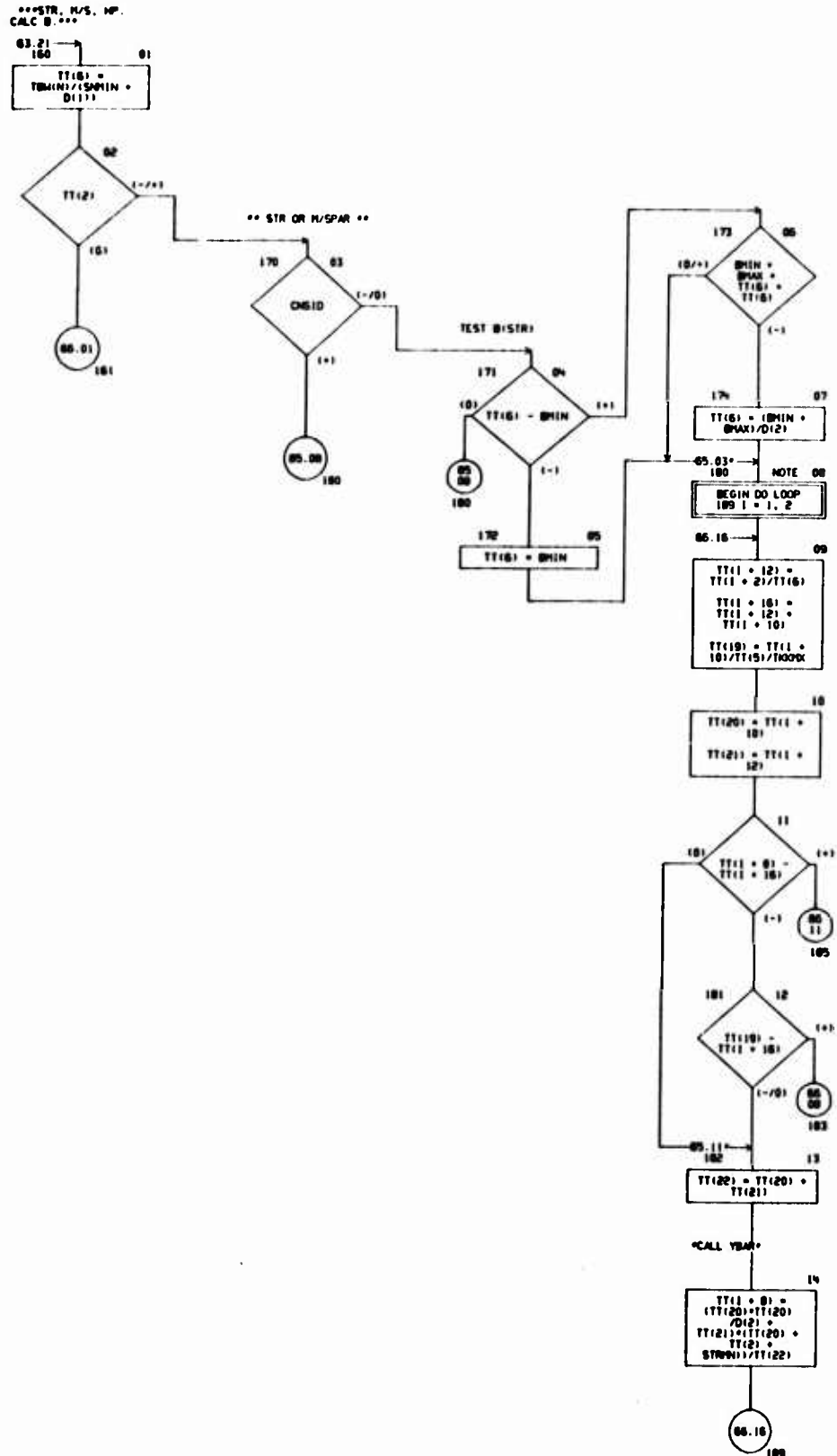


CHART TITLE - SUBROUTINE YBSET

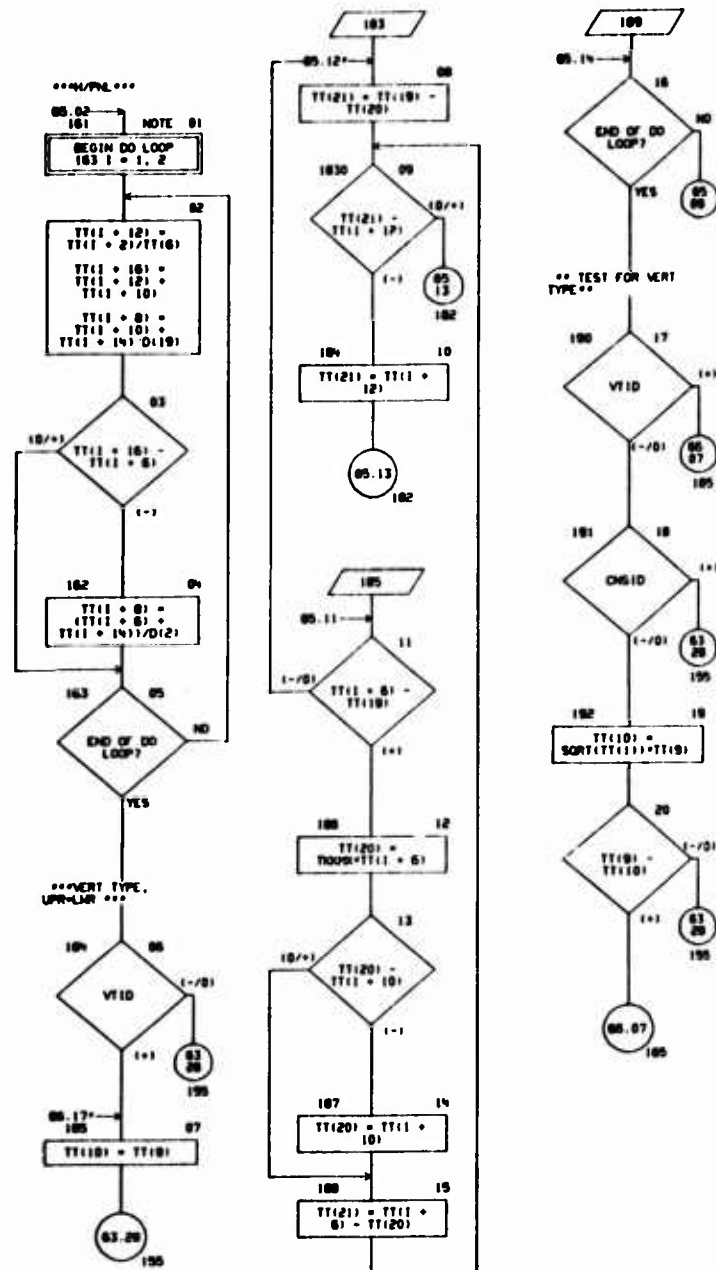


CHART TITLE - SUBROUTINE YDSET

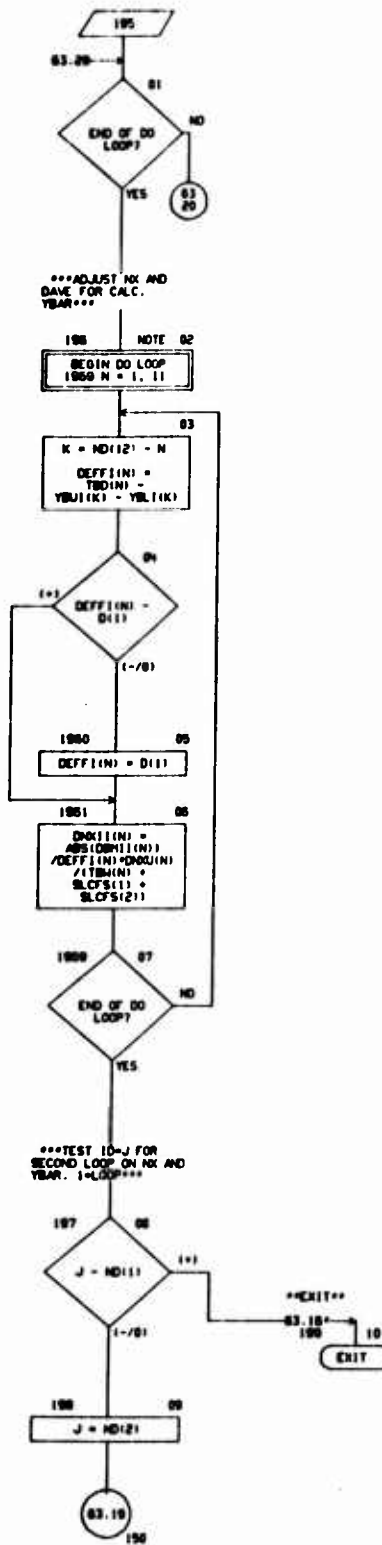


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T(6220)
DIMENSION D(2060),CD(2000),ND(100),
DC(100),TSEC(300),TT(24),
DYBU(11),DYBL(11),
TDC(200),TBM(11),TBD(11),DNV(11),DMP(11),ULTPM(11),
DMH(1111),DBH(1111),DNK(1111),DEFF(111),
SLCTS(5),DNOU(11),
YBU(111),YBL(111),YBUD(11),YBLD(11)
EQUIVALENCE (D(1),T(2061)),(CD(1),T(4121)),(ND(1),T(6121)),
(DC(1),D(1401)),(TSEC(1),CD(1501)),(TT(1),T(1317)),
(NSHM,D(377)),(DYBU(1),D(997)),(DYBL(1),D(1041)),
(TDC(1),T(1341)),(TBM(1),T(942)),(TBD(1),T(530)),
(DNV(1),T(500)),(DMH(1),T(609)),(ULTPM(1),TSEC(1)),
(DNOU(1),D(931)),
(YBUD(1),T(679)),(YBLD(1),T(690)),
(YBU(1),TSEC(133)),(YBL(1),TSEC(180))
EQUIVALENCE (NSID,D(481)),(SKOH,D(370)),(STPM,D(371)),
(STPM,D(379)),(SNMIN,D(382)),(STPM,D(394)),(SKOAL,D(394)),
(OTC,D(462)),(OTCL,D(466)),(DINS,D(4C5)),(DINSL,D(467)),
(FCHAX,TDC(461)),(FTMAX,TDC(60)),(TKKOK,TDC(65)),(VTID,D(269)),
(DYBKS,D(115)),(DYBKP,D(116)),(DMH(111),T(701)),
(DNK(111),T(723)),(DBH(111),T(712)),(DEFF(1),T(800)),
(BMIN,D(380)),(BMAX,D(381)),(DYBOP,D(117)),(SLCTS(1),D(1470)),
(IN,ND(30)),(K,ND(29)),(I,ND(28)),(J,ND(27))

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06/10/74

AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 89

CHART TITLE - INTRODUCTORY COMMENTS

****SUBROUTINE 952****

STRESS-STRAIN CURVE EVALUATION AT GIVEN STRESS (FC)

CHART TITLE - SUBROUTINE SS2(SFC)

SS2

48.06 →

STRESS-STRAIN EVAL.
SUBR

REVISION -- 01-10-66
-- NEW FORMAT

STRAIN AND REDUCED
MODULUS FOR GIVEN FC

00 01
SFC = SFC1

02
SC1 =
EXP(SD(2)*SFC)

03
SC2 = D(1)/SD(3)

COMPUTE STRAIN, ET.
ES

04
SA(1) = SFC*SC2 +
SD(1)*SC1
SA(3) = SFC/SA(1)

05
SA(2) =
D(1)/SC2 +
SD(1)*SD(2)*SC1
SC1 = SA(2)/SA(3)

ENBK AND KDOT

06
SA(8) =
SA(3)*(D(1) +
D(2)*SORT(D(3) +
D(4)*SC1))
SA(9) =
SD(8)*SORT(SA(8)
/SFC)

ENL1 AND ENL2

07
SA(4) =
SORT(SA(2)*SD(3))
SA(5) = SA(3)

END1 AND END2

08
SA(6) = SA(2)

09
SA(7) =
SA(3)*(D(4) +
D(6)*SC1)

10
EXIT

CHART TITLE - NON-PROCEDURAL STATEMENTS

COMMON T(2060),D(2060),CD(2000),ND(100)

DIMENSION

TDC(200),TSC(1420),TSS(100),

SA(14),SD(7)

EQUIVALENCE (TDC(1),T(1341)),(TSC(1),T(1341)),(TSS(1),T(1361)),

(SA(1),T(1377)),(SD(1),T(1392)),(SC,T(1391)),(SC2,T(1322)),

(SC1,T(1321))

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE VLOAD*****

NET ULTIMATE DESIGN LOADS EVALUATION

[illegible]

CHART TITLE - SUBROUTINE WLOAD1

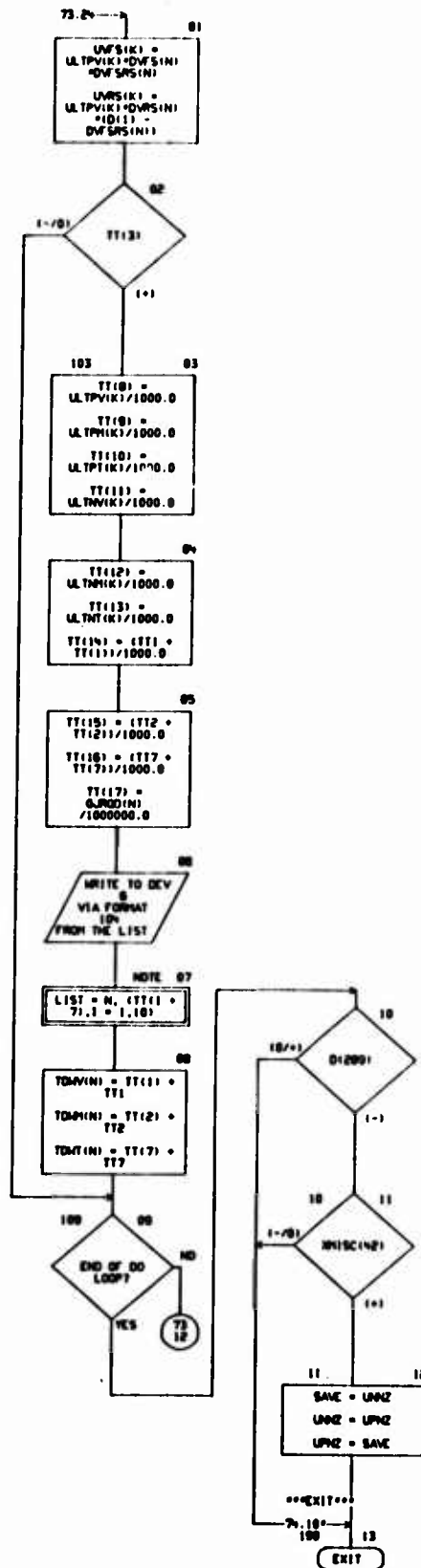


CHART TITLE - NON-PROCEDURAL STATEMENTS

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COMMON T(2060),D(2557),CD(2000),ND(100)
COMMON /PRINT/ IP(80)
COMMON /MISC/ NMISC(100)
DIMENSION DC(100),T(124),TSEC(300),
ALPV(11),ALPH(11),ALPT(11),ALNV(11),ALNM(11),ALNT(11),
TDGH(16),ULTPT(11),ULTNT(11),
DMV(11),DMH(11),DMT(11),SDMV(11),SDMH(11),SDMT(11),
UVFS(11),UVMS(11),DVFS(11),DVMS(11),
TDMV(11),TDMH(11),TDMT(11),
GJROD(11),DVFSRS(11),
RLDS(132),
ULTPV(11),ULTPH(11),ULTNV(11),ULTNH(11)
EQUIVALENCE (DC(1),D(1401)),(UPN2,D(205)),(UNN2,D(206)),
(ULTF,D(122)),(T(1),T(1317)),(TSEC(1),CD(1501)),
(ALPV(1),T(1594)),(ALPH(1),T(1565)),(ALPT(1),T(1877)),(ALNV(1),T(1576)),
(ALNM(1),T(1587)),(ALNT(1),T(1888)),(TDGH(1),T(1430)),
(DMV(1),T(1598)),(DMH(1),T(1609)),(DMT(1),T(1620)),
(ULTPH(1),TSEC(1)),(ULTPV(1),TSEC(12)),(ULTNV(1),TSEC(111)),(ULTNH(1),
TSEC(122)),(GJROD(1),T(1868)),(DMV(1),T(122)),
(DDMR,TDGH(2)),(DDMK,TDGH(3)),(TBRK,TDGH(4)),
(INCASE,ND(160)),(NDOW,ND(156)),(TGM,ND(161)),(IOP),ND(182)),
(INPAGE,ND(185)),(ILID,ND(194)),(IN,ND(130)),(IK,ND(131))
EQUIVALENCE (UVFS(1),TSEC(23)),(UVMS(1),TSEC(134)),
(ULTPT(1),TSEC(144)),(ULTNT(1),TSEC(155)),
(SDMV(1),T(1844)),(SDMH(1),T(1855)),(SDMT(1),T(1866)),
(RLDS(1),CD(1400)),
(TDMV(1),CD(1868)),(TDMH(1),CD(1879)),(TDMT(1),CD(1890)),
(DVFSRS(1),CD(1824)),(DVFS(1),D(1842)),(DVMS(1),D(1853))
DIMENSION STMV(11),STMH(11),STMT(11)
EQUIVALENCE (STMV(1),T(1811)),(STMH(1),T(1822)),(STMT(1),T(1833))
1004 FORMAT (10H) CASE(4,10X,4BH--DESIGN LOADS/1000 AND REQ GJ/I
,800,000---,17X,21H** VLOAD= (PI24) **/180,15X,8H 10M,11,
7H NDDM=11,7H IOP=11,8H DGM,FB,1)
1005 FORMAT (10BH0 STA +V(ULT) +H(ULT) +T(ULT) -V(ULT) -H(UL
T) -T(ULT) NM(10) NM(10) TM(10) GJ/REQ)
104 FORMAT (1H 3X,12,F10.3,F11.2,F10.2,F9.3,F10.2,F10.2,F9.3,F10.2,F10
.2,F12.3)

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OVERLAY (17, 0)

DATA GENERATION AND OUTPUT DATA PROCESSING

PROGRAM TABLE OF CONTENTS AND REFERENCES,
AND TABLE OF DIAGNOSTICS

Preceding page blank

FORTRAN MODULE WING AND EMPENNAGE MODULE -

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - PROCEDURES

(000021)	2.04	10	(000019)	2.03	(000019)	2.03
(000020)	2.08	20	(000027)	2.07	(000027)	2.07

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE MODATA

(000041)	5.01	MODATA	(000021)	2.04-X
(000085)	5.01	100		
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(000091)	5.05		(000092)	5.06
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(000096)	5.09		(000097)	5.10
(000097)	5.10	1003		
(000112)	5.12	101		
(000114)	5.14		(000115)	5.15
(000115)	5.15	1010		
(000117)	5.17		(000118)	5.18
(000119)	5.18	1011		
(000120)	5.20		(000129)	5.27
(000129)	5.27	102		
(000132)	5.29		(000133)	5.30
(000133)	5.30	1020		
(000136)	5.32		(000137)	5.33
(000137)	5.33	1021		
(000141)	5.35		(000142)	5.35
(000142)	5.35	1022		
(000145)	5.38		(000146)	5.39
(000146)	5.39	1023		
(000150)	5.41		(000151)	5.42
(000151)	5.42	1024		
(000155)	5.44		(000156)	6.01
(000156)	6.01	1025		
(000160)	6.03		(000163)	6.04
(000163)	6.04	1026		
(000166)	6.06	110	(000309)	6.13
(000167)	6.07	111	(000307)	6.14
(000172)	6.10		(000173)	6.11
(000173)	6.11	112		
(000174)	6.14		(000178)	6.15
(000179)	6.15	1120		
(000183)	6.17		(000184)	6.18
(000184)	6.18	113		
(000188)	6.23		(000202)	6.26
(000202)	6.26	114		
(000209)	6.29	115		
(000212)	6.30	117	(000200)	6.20
(000224)	6.36		(000226)	6.38
(000228)	6.38	118		
(000236)	7.01	1180		
(000239)	7.02	1181	(000235)	6.40
(000239)	7.03	1182		
(000245)	7.04	1183	(000238)	7.02
(000268)	7.11		(000281)	7.19
(000268)	7.13	119		
(000272)	7.14	120	(000267)	7.12
(000275)	7.15	121	(000267)	7.12
(000276)	7.16	122		
(000277)	7.17	123	(000269)	7.13
(000281)	7.19	124	(000272)	7.14
(000288)	7.21	1240	(000276)	7.16
			(000275)	7.15

06/10/74	TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP	
CARD 10	PAGE/BOX	NAME	REFERENCES	(SOURCE SEQUENCE NO. AND PAGE/BOX)
(000294)	0.02		(000298)	0.05
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(000305)	0.12	125	(000106)	0.08
(000308)	0.13	127	(000305)	0.12
(000308)	0.14	126		
(000312)	0.15	128	(000305)	0.12
(000316)	0.17		(000317)	0.18
(000317)	0.18	1280		
(000324)	0.21		(000325)	0.22
(000325)	0.22	1281		
(000332)	0.26		(000333)	0.27
(000333)	0.27	1282		
(000345)	0.34	130		
(000359)	0.01	201		
(000370)	0.10		(000373)	0.11
(000373)	0.11	202		
(000376)	0.13		(000378)	0.14
(000378)	0.14	2020		
(000384)	0.16	203		
(000407)	0.18		(000408)	0.21
(000409)	0.21	205		
(000413)	0.24		(000415)	0.27
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(000419)	0.30		(000421)	0.33
(000421)	0.33	2051		
(000425)	0.36		(000427)	0.39
(000427)	0.39	2052		
(000431)	0.42		(000433)	10.01
(000433)	10.01	2053		
(000437)	10.04		(000438)	10.07
(000438)	10.07	2054		
(000443)	10.10		(000445)	10.13
(000445)	10.13	2055		
(000448)	10.16		(000451)	10.19
(000451)	10.18	2056		
(000455)	10.20	250	(000483)	0.15
(000456)	10.21		(000457)	10.22
(000457)	10.22	251		
(000461)	10.24		(000463)	11.25
(000464)	10.41	252		
(000501)	11.02	253	(000483)	10.40
(000502)	11.03	254		
(000508)	11.07	255	(000501)	11.02
(000510)	11.08	256		
(000517)	11.12	257	(000508)	11.07
(000518)	11.13	258		
(000525)	11.17	259	(000517)	11.12
(000543)	11.25	260		
(000547)	11.27	261		
(000548)	11.28	262	(000546)	11.26
(000560)	11.29	263		
(000562)	11.30	264	(000548)	11.28
(000563)	11.31	265		
(000566)	11.32	266	(000562)	11.30
(000566)	11.33	267		
(000568)	11.34	268	(000565)	11.32
(000580)	11.35		(000588)	12.12
(000588)	12.12	269		
(000602)	12.17	270	(000600)	12.16
(000608)	12.20		(000612)	12.21
(000612)	12.21	271		
(000616)	12.22	272	(000600)	12.16
(000617)	12.23	273		
(000620)	12.25	0000		
(000620)	12.25		(000620)	12.26
(000625)	12.28	274	(000600)	12.16
(000626)	12.29	275	(000613)	12.21
(000650)	13.06	280	(000616)	12.22
(000684)	13.08		(000686)	13.11
(000686)	13.11	283		

06/10/74	TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP		PAGE 3
CARD ID	PAGE/BOX	NAME	REFERENCES	SOURCE SEQUENCE NO. AND PAGE/BOX	
(000673)	13.12	210	(000625)	12.28	(000657) 13.05
(000674)	13.13		(000675)	13.14	
(000675)	13.14	2100			
(000676)	13.15	209	(000677)	13.15	
(000680)	13.17	211			
(000685)	13.18	220			
(000686)	13.19	221	(000679)	13.16	
(000690)	13.20	259	(000677)	13.15	(000685) 13.18

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE PRIO

(000701)	17.01	PRIO	(000745)	8.34-X	
(000743)	17.01	400			
(000744)	17.02		(000745)	17.03	
(000745)	17.03	401			
(000749)	17.05		(000820)	18.03	
(000750)	17.06	402			
(000787)	17.15	403			
(000816)	18.01	404			
(000817)	18.02	405	(000815)	17.24	
(000820)	18.03	409	(000749)	17.05	
(000823)	18.05		(000824)	18.06	
(000824)	18.06	407			
(000826)	18.08		(000832)	18.10	
(000832)	18.10	408			
(000841)	18.12	410			
(000850)	18.15	4107			
(000852)	18.16	4108	(000849)	18.14	
(000853)	18.17	4109	(000851)	18.15	
(000855)	18.18	411	(000849)	18.14	
(000856)	18.19	4110	(000854)	18.17	
(000857)	18.20	4111			
(000859)	19.01	4112	(000856)	18.19	
(000860)	19.02	4113	(000858)	18.20	
(000863)	19.04	412			
(000872)	19.05	420			
(000873)	19.07	422			
(000884)	19.09	424			
(000885)	19.10	426			
(000902)	19.14	428	(000899)	19.13	
(000912)	20.01	4285	(000899)	19.13	
(000922)	20.03	429	(000899)	19.13	
(000934)	20.07		(000938)	20.10	
(000935)	20.08	4290			
(000937)	20.09	4291	(000934)	20.07	
(000938)	20.10	4292	(000936)	20.08	
(000948)	20.12	430	(000909)	19.15	(000919) 20.02
(000948)	20.13	4300	(000948)	20.12	
(000951)	20.14	4302			
(000957)	20.16	440			
(000950)	20.17	442			
(000967)	20.19	450	(000946)	20.12	
(000968)	20.20	451			
(000972)	20.21	455			
(000981)	20.24	457	(000987)	20.18	
(000992)	20.26	460			
(000995)	21.01	461	(000992)	20.26	
(000998)	21.02		(000998)	21.03	
(000998)	21.03	4610			
(001002)	21.05		(001003)	21.06	
(001003)	21.06	462			
(001005)	21.07	463			
(001006)	21.08		(001106)	22.15	
(001007)	21.09	464			
(001013)	21.10	465			
(001024)	21.13	466			
(001030)	21.14	467			

06/10/74	TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEET				PAGE 4
CARD ID	PAGE/BOX	NAME	REFERENCES (SOURCE SEQUENCE NO) AND PAGE/BOX				
(001036)	21.15	468	(001103)	22.14			
(001042)	21.16	469	(001103)	22.14			
(001043)	21.17	470					
(001049)	22.01	471	(001103)	22.14			
(001054)	22.02	472	(001033)	21.14	(001039)	21.15	(001046) 21.17
(001075)	22.07	473	(001072)	22.06			
(001081)	22.08	476					
(001096)	22.12	474	(001072)	22.06			
(001102)	22.13	475	(001093)	22.11			
(001106)	22.15	479	(001006)	21.08	(001042)	21.16	(001103) 22.14
(001109)	22.16	480					
(001110)	22.17		(001117)	23.01			
(001117)	23.01	481					
(001120)	23.02	482					
(001121)	23.03		(001122)	23.04			
(001122)	23.04	483					
(001125)	23.05	490					
(001129)	23.07	4901					
(001132)	23.08	492	(001222)	24.10			
(001138)	23.09	4921					
(001147)	23.11	4923					
(001166)	23.15	493					
(001167)	23.16	4930					
(001176)	23.20	4933	(001173)	23.19			
(001182)	24.01	4934	(001173)	23.19			
(001186)	24.03	4937	(001173)	23.19			
(001192)	24.05	494	(001166)	23.15	(001177)	23.21	(001183) 24.02
(001193)	24.06		(001194)	24.07			
(001194)	24.07	4940					
(001197)	24.08	4941	(001193)	24.06			
(001203)	24.09	4943					
(001210)	24.11	4945	(001195)	24.07			
(001213)	24.12	491	(001210)	24.11			
(001214)	24.13	4910					
(001220)	24.17		(001221)	24.10			
(001221)	24.18	4912					
(001226)	25.01	499	(000932)	20.26	(001210)	24.11	(001213) 24.12
(001227)	25.02	500					
(001251)	25.11	506					
(001255)	25.13	599	(001226)	25.01	(001250)	25.10	

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE TBFWI

(001265)	29.01	TBFWI	(000212)	6.30-X			
(001292)	29.01	100					
(001293)	29.02		(001294)	29.03			
(001294)	29.03	101					
(001298)	29.05		(001513)	35.01			
(001301)	29.07	102					
(001303)	29.09	1020					
(001304)	29.10	1021	(001302)	29.08			
(001305)	29.11	103	(001300)	29.06			
(001332)	30.02	110	(001420)	30.15			
(001333)	30.03		(001334)	30.04			
(001334)	30.04	111					
(001336)	30.06		(001337)	30.07			
(001337)	30.07	112					
(001353)	30.12	113	(001350)	30.11			
(001420)	30.15	124	(001358)	30.14	(001425)	32.13	(001446) 34.07
(001361)	31.01	114	(001358)	30.14			
(001363)	31.03	115					
(001364)	31.04	116	(001362)	31.02			
(001366)	31.05	1160	(001449)	34.08	(001451)	34.09	
(001380)	31.10	1169	(001481)	33.13	(001510)	34.14	
(001382)	31.12	117					
(001384)	31.14	1170					
(001385)	31.15	1171	(001383)	31.13			

06/10/74	TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP			
CARD ID	PAGE/BOX	NAME	REFERENCES (SOURCE SEQUENCE NO. AND PAGE/BOX)			
(001306)	31.16	110	(001301)	31.11		
(001401)	32.01	119	(001422)	32.12		
(001406)	32.03	120	(001408)	32.05		
(001407)	32.04	121				
(001409)	32.06	122	(001406)	32.03		
(001425)	32.13	123	(001422)	32.12		
(001404)	32.14	145	(001425)	32.13	(001455)	33.02
(001405)	32.15	146			(001463)	33.08
(001407)	32.17	147				
(001408)	32.18	148	(001406)	32.16		
(001432)	33.01	125	(001428)	30.15		
(001455)	33.02	140	(001432)	33.01		
(001456)	33.03	141				
(001458)	33.05	142				
(001459)	33.06	143	(001457)	33.04		
(001466)	33.09	144	(001463)	33.08		
(001437)	34.01	130	(001350)	30.11		
(001438)	34.02	131	(001440)	34.04		
(001439)	34.03	132				
(001441)	34.05	133	(001438)	34.02		
(001449)	34.08	134	(001446)	34.07		
(001450)	34.09	135				
(001495)	34.10	149	(001492)	32.20		
(001513)	35.01	150	(001425)	32.13	(001404)	32.14
(001518)	35.03	151			(001492)	32.20
(001519)	35.04				(001432)	33.08
(001520)	35.05	152	(001559)	35.29		
(001521)	35.06	153	(001523)	35.08		
(001522)	35.07	154				
(001524)	35.09	155	(001521)	35.06		
(001527)	35.11	156				
(001530)	35.12	157	(001527)	35.11		
(001532)	35.14	158				
(001533)	35.15	159				
(001534)	35.16	160	(001531)	35.13	(001532)	35.14
(001545)	35.21	161	(001547)	35.23		
(001546)	35.22	162				
(001548)	35.24	163	(001545)	35.21		
(001559)	35.29	164	(001519)	35.04	(001527)	35.11
(001564)	35.30	170	(001517)	35.02		
(001565)	35.01		(001568)	36.02		
(001568)	35.02	171				
(001570)	35.04	172				
(001571)	35.05	1720	(001569)	36.03		
(001573)	35.07	1721				
(001574)	35.08	1722	(001572)	36.06		
(001576)	35.10	1723				
(001577)	35.11	1724	(001575)	36.09		
(001579)	35.13	1725				
(001581)	35.14	1726	(001578)	36.12		
(001582)	35.15		(001586)	36.18		
(001585)	35.17	173				
(001586)	35.18	174	(001584)	36.16		
(001588)	35.20		(001589)	36.21		
(001589)	35.21	1740				
(001592)	35.23	175				
(001597)	35.25		(001601)	36.27		
(001601)	35.27	176				
(001607)	35.29	180				
(001608)	35.30	181				
(001610)	35.32		(001620)	36.35		
(001620)	35.35	187				
(001624)	35.38		(001626)	36.41		
(001628)	35.41	188				
(001630)	35.42	189	(001607)	36.29		

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE WFLDD

(001641)	39.01	WFOO	(000680)	13.17-X	
(001677)	39.01	150			
(001687)	39.09	1501			
(001705)	39.11	1542	(001696)	39.08	
(001706)	39.12		(001710)	39.18	
(001708)	39.16	1543			
(001710)	39.18	155	(001708)	39.15	
(001716)	39.23	156			
(001719)	39.25	120	(001715)	39.22	
(001720)	39.26		(001723)	39.27	
(001723)	39.27	121			
(001737)	39.32	1210			
(001739)	39.34	1211			
(001740)	39.35	1212	(001736)	39.31	(001738) 39.33
(001741)	39.36	1213			
(001743)	39.38	1214			
(001746)	39.39	1219	(001740)	39.35	(001742) 39.37
(001748)	39.41		(001759)	40.05	
(001753)	40.01	5501			
(001754)	40.02	5502			
(001756)	40.03	5505	(001752)	39.43	(001753) 40.01
(001759)	40.05	122			
(001764)	40.08	123			
(001765)	40.09	124	(001763)	40.07	
(001781)	40.17		(001789)	40.25	
(001782)	40.18	1240			
(001783)	40.19	1241			
(001785)	40.21	1242			
(001787)	40.23	1243			
(001788)	40.24	1244	(001782)	40.18	(001784) 40.20 (001786) 40.22
(001789)	40.25	1249	(001781)	40.17	
(001796)	40.27		(001810)	41.02	
(001809)	40.33	125			
(001817)	41.01	126	(001808)	40.32	
(001818)	41.02	127	(001814)	40.34	
(001827)	41.03	100			
(001835)	41.09	1010			
(001844)	41.11	1052	(001834)	41.08	
(001847)	41.15	1053			
(001850)	41.17	1054	(001846)	41.14	
(001851)	41.18		(001855)	41.24	
(001854)	41.22	1055			
(001855)	41.24	106	(001853)	41.21	
(001860)	41.29	1060			
(001863)	41.31	1061	(001859)	41.28	
(001864)	41.32		(001868)	41.38	
(001867)	41.36	1062			
(001868)	41.38	107	(001866)	41.35	
(001874)	41.43	108			
(001878)	41.45	499	(001873)	41.42	

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE WFOO

(001890)	44.01	WFOO	(000686)	13.18-X	
(001929)	44.02	170			
(001931)	44.04		(001935)	44.06	
(001935)	44.06	171			
(001942)	44.09		(001943)	44.10	
(001943)	44.10	172			
(001946)	44.11	178	(001928)	44.01	
(001947)	44.12		(001948)	44.13	
(001948)	44.13	179			
(001951)	44.14	180			
(001958)	44.17		(001967)	44.26	
(001960)	44.19	181			
(001961)	44.20	182			
(001963)	44.22	183			

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CARD ID	PAGE/BOX	NAME	REFERENCES (SOURCE SEQUENCE NO. AND PAGE/BOX)						
(001905)	44.24	184							
(001906)	44.25	185	(001900)	44.19	(001902)	44.21	(001904)	44.23	
(001907)	44.26	186	(001909)	44.18					
(001908)	44.28		(002027)	45.17					
(001909)	44.30		(001905)	44.31					
(001910)	44.31	187							
(001911)	44.32	188							
(001912)	44.33	1880							
(001913)	44.34	189							
(001914)	44.35	190							
(001916)	45.01	191	(001913)	44.34					
(001918)	45.03	192	(001915)	44.35					
(002003)	45.06		(002004)	45.07					
(002004)	45.07	193							
(002027)	45.17	194	(001911)	44.32	(001912)	44.33	(001913)	44.34	
(002039)	45.20		(002041)	45.21				(001917)	
(002041)	45.21	201						45.02	
(002043)	45.23		(002044)	45.24					
(002044)	45.24	202							
(002048)	45.26		(002050)	45.27					
(002050)	45.27	203							
(002051)	45.28	204							
(002057)	46.02	205							
(002058)	46.03	206	(002056)	46.01					
(002059)	46.04	207							
(002062)	46.05	208	(002058)	46.03					
(002066)	46.07		(002070)	46.09					
(002070)	46.09	2010							
(002084)	46.13	209	(002081)	46.12					
(002090)	46.14	2090	(002081)	46.12					
(002095)	46.15	210	(002087)	46.13					
(002100)	46.17	211							
(002103)	46.18	212	(002099)	46.16					
(002106)	46.20	2120							
(002108)	46.22	2121							
(002109)	47.01	2122	(002107)	46.21					
(002110)	47.02	2123							
(002113)	47.03	2124	(002105)	46.19	(002109)	47.01			
(002119)	47.06	2125							
(002131)	47.12	2126	(002118)	47.05					
(002134)	47.14		(002264)	49.25					
(002143)	47.16	213							
(002144)	47.17	214							
(002149)	47.19		(002150)	48.01					
(002150)	48.01	2140							
(002181)	48.11	215	(002192)	48.18					
(002185)	48.13	2150							
(002186)	48.14	2151	(002184)	48.12					
(002187)	48.15	2152	(002189)	48.16	(002229)	49.07	(002230)	49.08	
(002189)	48.16	2153	(002186)	48.14					
(002190)	48.17	216							
(002191)	48.18	2160							
(002193)	48.19	217	(002189)	48.16	(002190)	48.17			
(002211)	48.26	2170							
(002225)	49.04	2171	(002210)	48.25					
(002226)	49.05	218							
(002227)	49.06	219							
(002230)	49.08	220							
(002231)	49.09	221	(002225)	49.04	(002226)	49.05			
(002243)	49.14	5002							
(002245)	49.15	5005	(002242)	49.13					
(002252)	49.18		(002254)	49.20					
(002254)	49.20	222							
(002259)	49.23		(002261)	49.24					
(002261)	49.24	223							
(002264)	49.25	224	(002142)	47.15	(002143)	47.16	(002188)	48.15	
(002268)	49.27		(002293)	50.03					
(002285)	49.33	225							
(002288)	50.01	226	(002284)	49.32					
(002292)	50.02	227	(002287)	49.33					
(002293)	50.03	228							
(002305)	50.04	229							

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CARD ID	PAGE/BOX	NAME	REFERENCES (SOURCE SEQUENCE NO. AND PAGE/BOX)					
1002331	50 10	230						
1002333	50 12		1002475	52 14				
1002338	50 13	231	1002333	50 12				
1002339	50 14	2310						
1002340	50 15	232						
1002341	50 16	2320						
1002346	50 17	233	1002340	50 15	1002341	50 16		
1002349	50 19		1002351	50 20				
1002351	50 20	234						
1002356	50 23		1002358	50 24				
1002358	50 24	235						
1002383	51 04	240	1002333	50 12	1002338	50 13	1002339	50 14
1002384	51 05	241					1002341	50 16
1002385	51 06	2410						
1002386	51 07	242						
1002387	51 08	2420						
1002388	51 09	243	1002386	51 07				
1002391	51 11		1002393	51 12				
1002393	51 12	244						
1002398	51 15		1002400	51 16				
1002400	51 16	245						
1002423	51 22	250	1002383	51 04	1002384	51 05	1002385	51 06
1002424	51 23	2500					1002387	51 08
1002436	51 27	2501						
1002438	52 01	2502	1002435	51 26				
1002441	52 02	2503	1002437	51 27				
1002444	52 06	2511						
1002455	52 07	2512						
1002458	52 08	2515	1002453	52 05	1002454	52 06		
1002467	52 12	251						
1002475	52 14	252	1002423	51 22	1002466	52 11		
1002480	52 16	2530						
1002485	52 18		1002487	52 21				
1002487	52 21	2540						
1002494	52 24		1002496	52 27				
1002496	52 27	2530						
1002503	52 28	2532	1002479	52 15				
1002520	52 33	260						
1002524	52 34	499						

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE TPINT(Y1,X1,Y0)

1002534	55 01	TPINT	1001768	40 10-X	1001770	40 12-X	1002200	40 21-X	1002205	40 23-X	1002214	40 27-X
			1002219	49 02-X								
1002552	55 01	100										
1002553	55 02		1002555	55 03								
1002555	55 03	101										
1002582	55 13	110	1002587	55 12								
1002595	55 14	111	1002592	55 13								
1002596	55 15	112	1002618	57 02								
1002597	55 16	113	1002595	55 14	1002619	57 03	1002620	57 04				
1002601	56 01	114	1002592	55 13	1002617	57 01	1002618	57 02	1002623	57 05		
1002602	56 02	115										
1002629	56 03	120	1002582	55 12	1002595	55 15	1002598	55 16	1002601	56 01	1002603	56 02
			1002607	56 06	1002609	56 07	1002620	57 04	1002625	57 07		
1002633	56 04	129										
1002606	56 05	116	1002592	55 13								
1002607	56 06	117	1002623	57 05								
1002608	56 07	118	1002606	56 05	1002624	57 06	1002625	57 07				
1002617	57 01	120	1002582	55 12								
1002618	57 02	121										
1002619	57 03	122										
1002620	57 04	123										
1002623	57 05	124	1002617	57 01								
1002624	57 06	125										
1002625	57 07	126										

CHART TITLE - NON-PROCEDURAL STATEMENTS

CARD ID PAGE/BOX NAME

REFERENCES (SOURCE SOURCE NO. AND PAGE/BOX)

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE CTOT

(002643)	00.01	CTOT	(001756)	40.03-X	(002745)	49.15-X	(002758)	52.00-X
(002667)	00.01	100						
(002668)	00.02		(002669)	00.03				
(002669)	00.03	101						
(002672)	00.04	110						
(002673)	00.05	111	(002675)	00.07				
(002674)	00.06	112						
(002676)	00.08	113	(002673)	00.05				
(002678)	01.01	120						
(002680)	01.02	121	(002682)	01.04				
(002681)	01.03	122						
(002683)	01.05	123	(002680)	01.02				
(002685)	01.06	130						
(002681)	01.07	131						
(002692)	01.08	132	(002694)	01.10				
(002693)	01.09	133						
(002695)	01.11	134	(002692)	01.08				
(002699)	01.12	136						
(002700)	01.13	137						
(002701)	01.14	138						
(002702)	01.15		(002704)	01.16				
(002704)	01.16	139						
(002707)	01.17	140	(002700)	01.13				
(002709)	01.19		(002712)	01.20				
(002712)	01.20	141						
(002716)	01.22	142	(002727)	01.31				
(002718)	01.24	143						
(002719)	01.25	144						
(002721)	01.26	1440	(002718)	01.24				
(002722)	01.27	1441	(002720)	01.25				
(002723)	01.28	145	(002717)	01.23	(002718)	01.24		
(002725)	01.30	146						
(002726)	01.31	147						
(002728)	02.01	148	(002724)	01.29	(002725)	01.30		
(002731)	02.02	150						
(002732)	02.03	151	(002743)	02.12				
(002734)	02.05	152						
(002735)	02.06	153						
(002737)	02.07	1530	(002734)	02.05				
(002738)	02.08	1531	(002736)	02.06				
(002739)	02.09	154	(002733)	02.04	(002734)	02.05		
(002741)	02.11	155						
(002742)	02.12	156						
(002744)	02.13	157	(002740)	02.10	(002741)	02.11		
(002747)	02.14	160	(002705)	01.16				
(002753)	02.15	170	(002689)	01.12				
(002754)	02.16	171						
(002763)	02.19		(002765)	02.22				
(002765)	02.22	9040						
(002768)	02.23	199	(002753)	02.15				

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE PINTO

(002779)	05.01	PINTO	(002520)	52.33-X
(002806)	05.01	200		
(002809)	05.07	2121		
(002807)	05.09	2122	(002803)	05.06
(002801)	05.13	2123		
(002804)	05.15	2124	(002800)	05.12
(002806)	05.19	2125		
(002873)	05.21	2126	(002807)	05.10
(002876)	05.23	220		

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CARD ID	PAIR NO.	NAME	REFERENCES	SOURCE	SEQUENCE NO.	AND PAIR NO.
(002877)	85 24	2200				
(002878)	85 25	221	(002875)	85 22	(002876)	85 23
(002879)	85 26	222				
(002880)	85 27	2220				
(002881)	85 28	223	(002878)	85 25	(002879)	85 26
(002882)	85 29		(002888)	85 35		
(002887)	85 33	2230				
(002888)	85 35	224	(002886)	85 32		
(002893)	86 02	225				
(002894)	86 03	2250				
(002898)	86 07	2251				
(002899)	86 09	2252	(002897)	86 06		
(002902)	86 13	2253				
(002905)	86 15	226	(002921)	86 01	(002933)	86 02 (002901) 86 12
(002906)	86 16	227				
(002907)	86 17	2270				
(002911)	86 21	2271				
(002912)	86 23	2272	(002910)	86 20		
(002915)	86 27	2273				
(002919)	86 29	228	(002905)	86 15	(002906)	86 16 (002914) 86 26
(002922)	86 31		(002928)	86 37		
(002927)	86 35	2280				
(002928)	86 37	229	(002926)	86 34		
(002934)	86 40		(002933)	87 05		
(002937)	86 42		(002939)	86 43		
(002939)	86 43	230				
(002942)	87 01	2300				
(002943)	87 05	231	(002941)	87 02		
(002948)	87 08		(002954)	87 14		
(002953)	87 12	2311				
(002954)	87 14	231	(002952)	87 11		
(002960)	87 15	232				

CHART TITLE - NON PROCEDURAL STATEMENTS

LOCATION		DIAGNOSTIC
CARD ID	PAGE/BOX	
10000171	2 02	UNRECOGNIZED SYNTAX
10000251	2 06	UNRECOGNIZED SYNTAX
10001121	9 12	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10001201	9 19	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10001211	9 20	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10001221	9 22	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10001231	9 23	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10001241	9 24	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10001601	0 08	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003121	0 15	UNDEFINED - 'WRITMS' EXTERNAL REFERENCE
10003221	0 19	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003261	0 23	UNDEFINED - 'WRITMS' EXTERNAL REFERENCE
10003371	0 29	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003381	0 29	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003391	0 30	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003401	0 31	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003411	0 32	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003421	0 33	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003591	9 01	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003601	9 02	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003611	9 03	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003621	9 04	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003631	9 05	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003641	9 06	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003651	9 07	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003661	9 08	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10006171	12 23	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10006221	12 27	UNDEFINED - 'WRITMS' EXTERNAL REFERENCE
10010771	39 01	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10010291	44 02	UNDEFINED - 'READMS' EXTERNAL REFERENCE

PROGRAM FLOW CHARTS

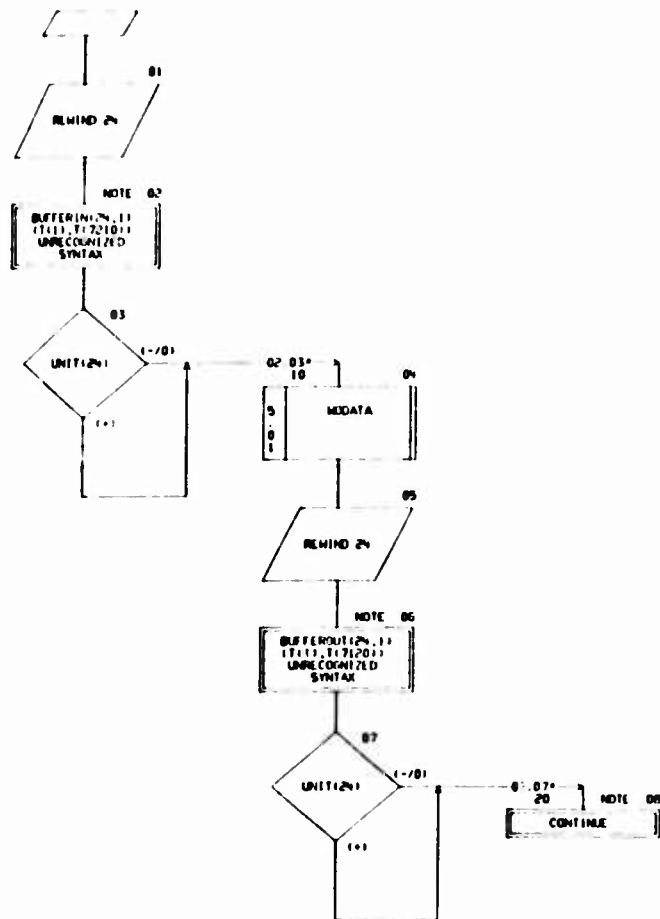
CHART TITLE - INTRODUCTORY COMMENTS

*****PROGRAM CLAY17*****

PROGRAM FOR SEVENTH OVERLAY OF WING/EMPENNAGE MODULE

DATA GENERATION AND OUTPUT DATA PROCESSING

CHART TITLE - PROCEDURES



06/10/76

AUTOFLOW CHART SET - SHEEP - WING AND EMPENNAGE MODULE - PAGE 03

CHART TITLE - NON PROCEDURAL STATEMENTS

PROGRAM OLAY17

COMMON T171201

COMMON /MISC/ IMISC11001

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE MESSAGES*****

MODULE OUTPUT DATA CONTROL - FINAL RESULTS

CHART TITLE - SUBROUTINE MODATA

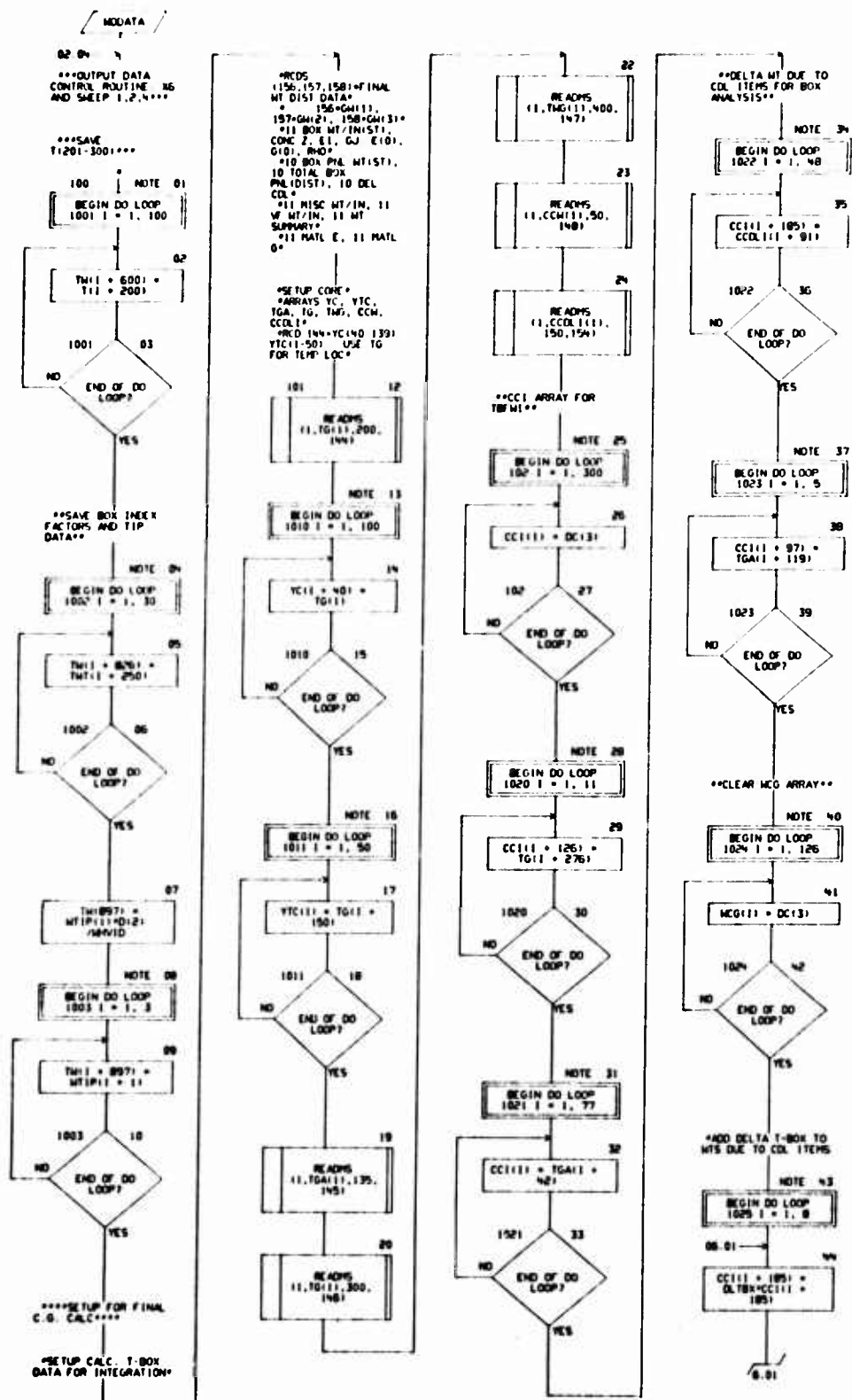


CHART TITLE - SUBROUTINE MODATA

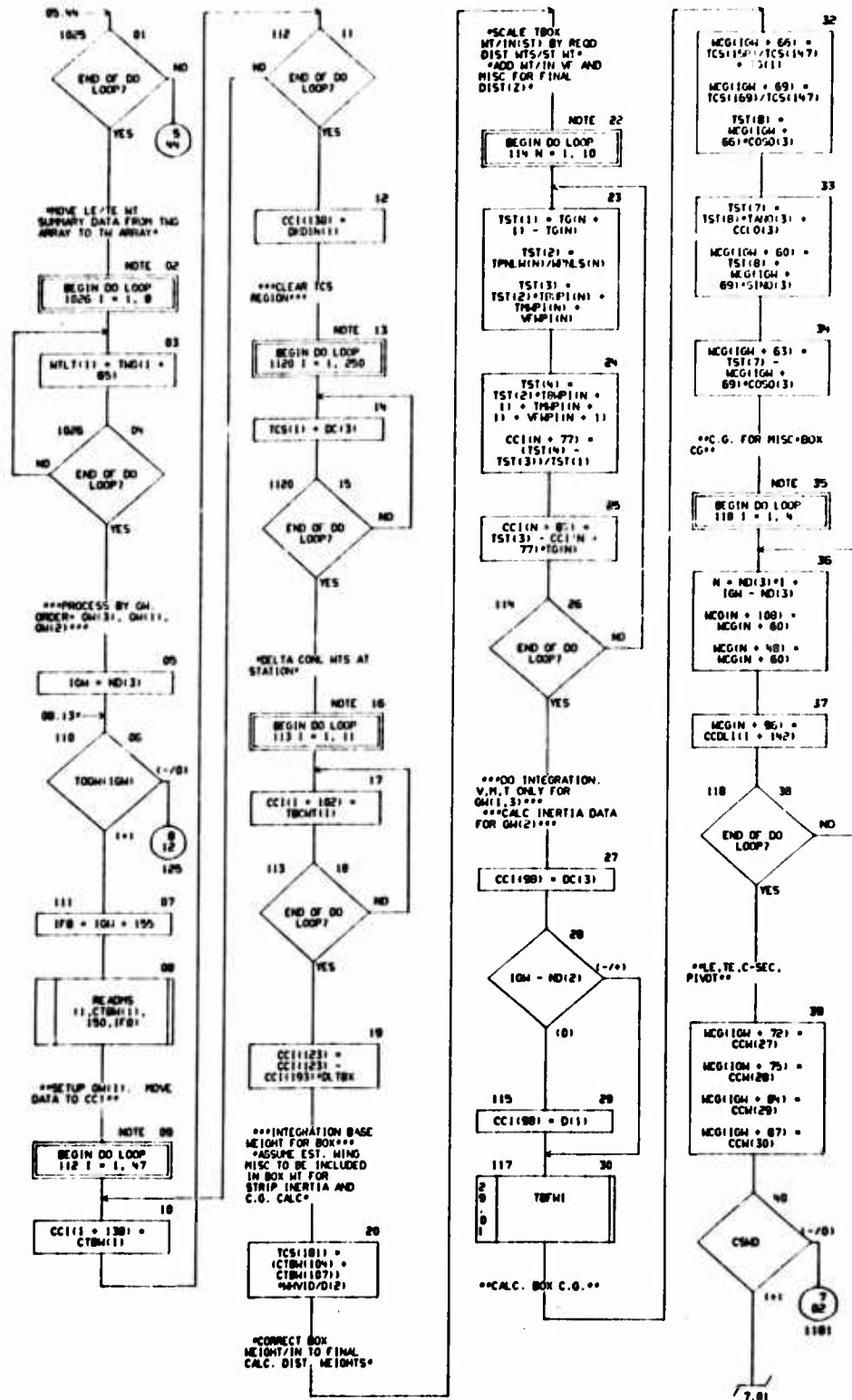


CHART TITLE - SUBROUTINE WDATA

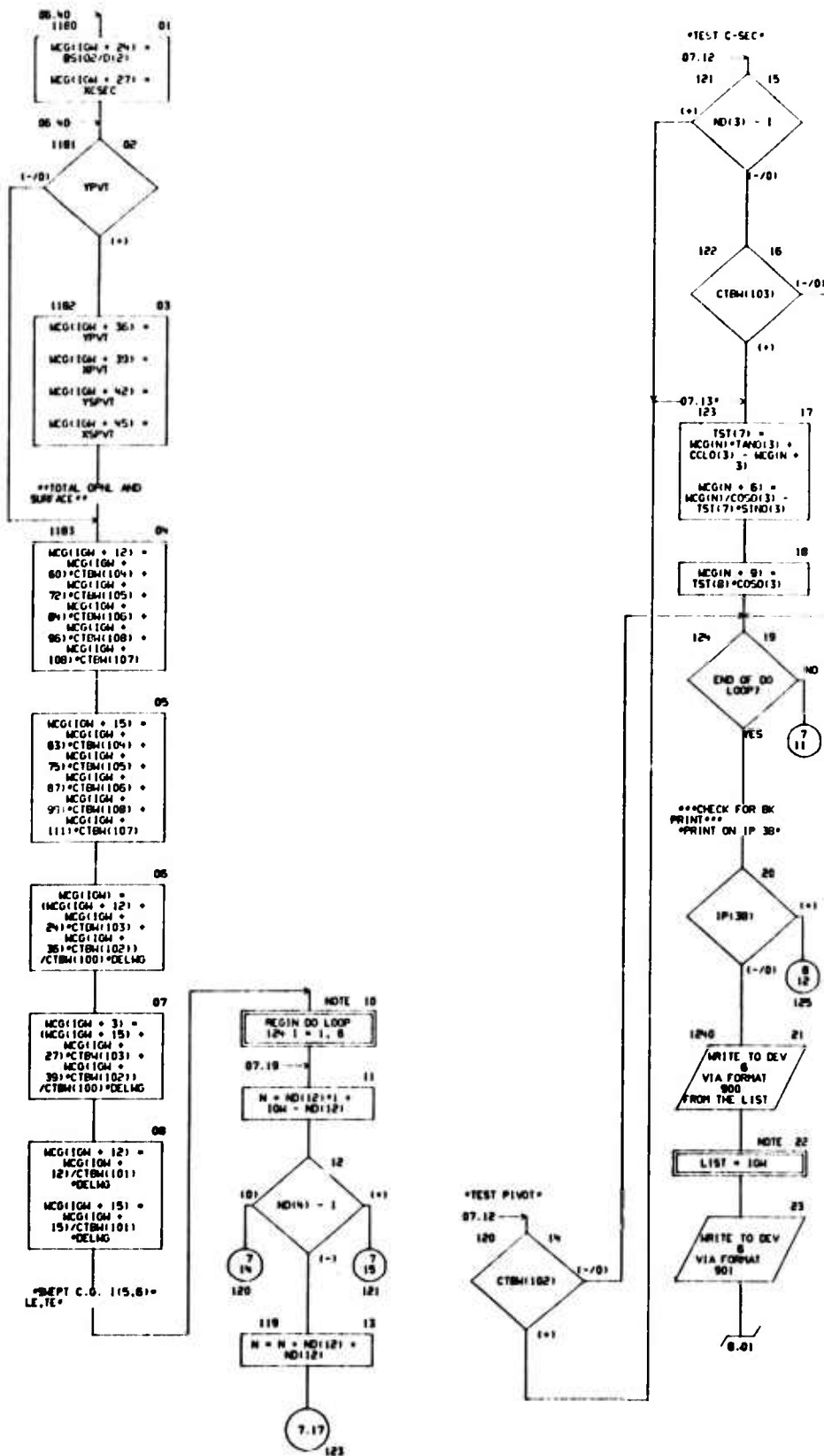


CHART TITLE - SUBROUTINE NODATA

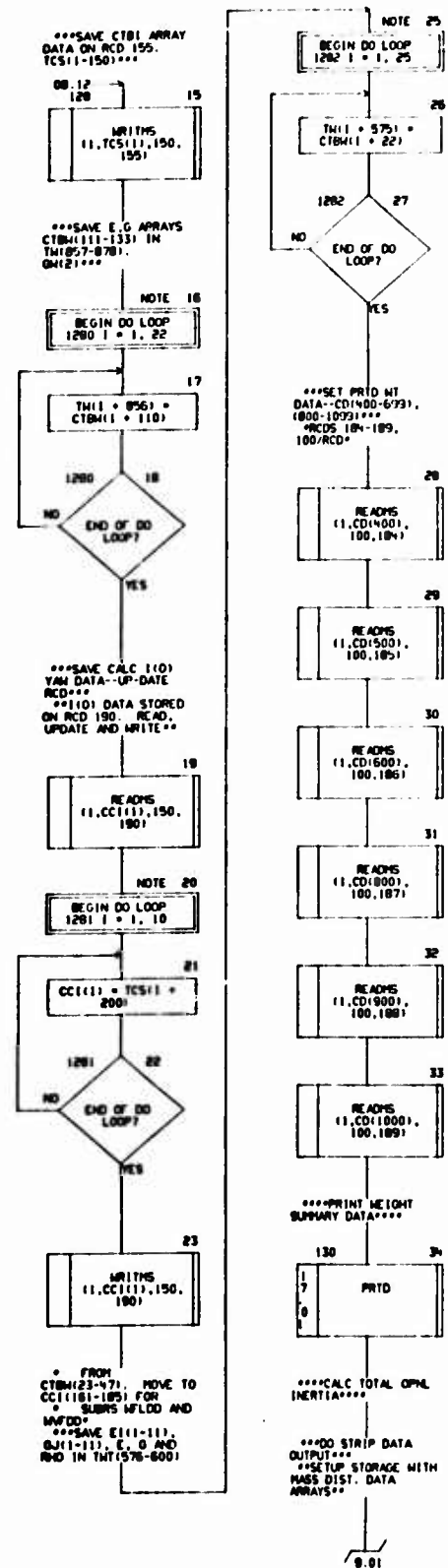
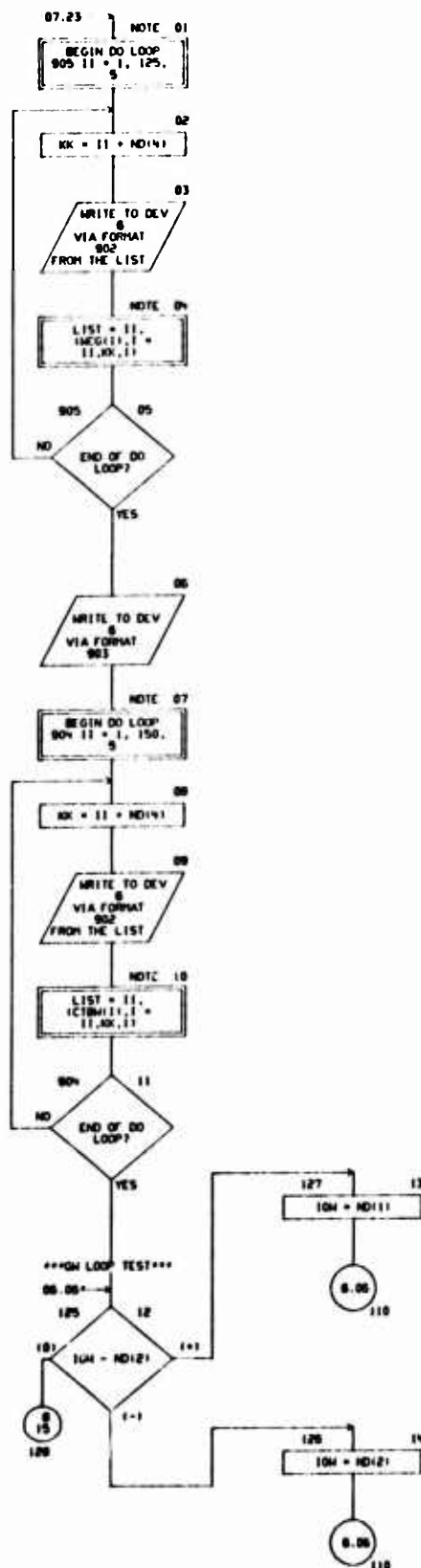


CHART TITLE - SUBROUTINE WDATA

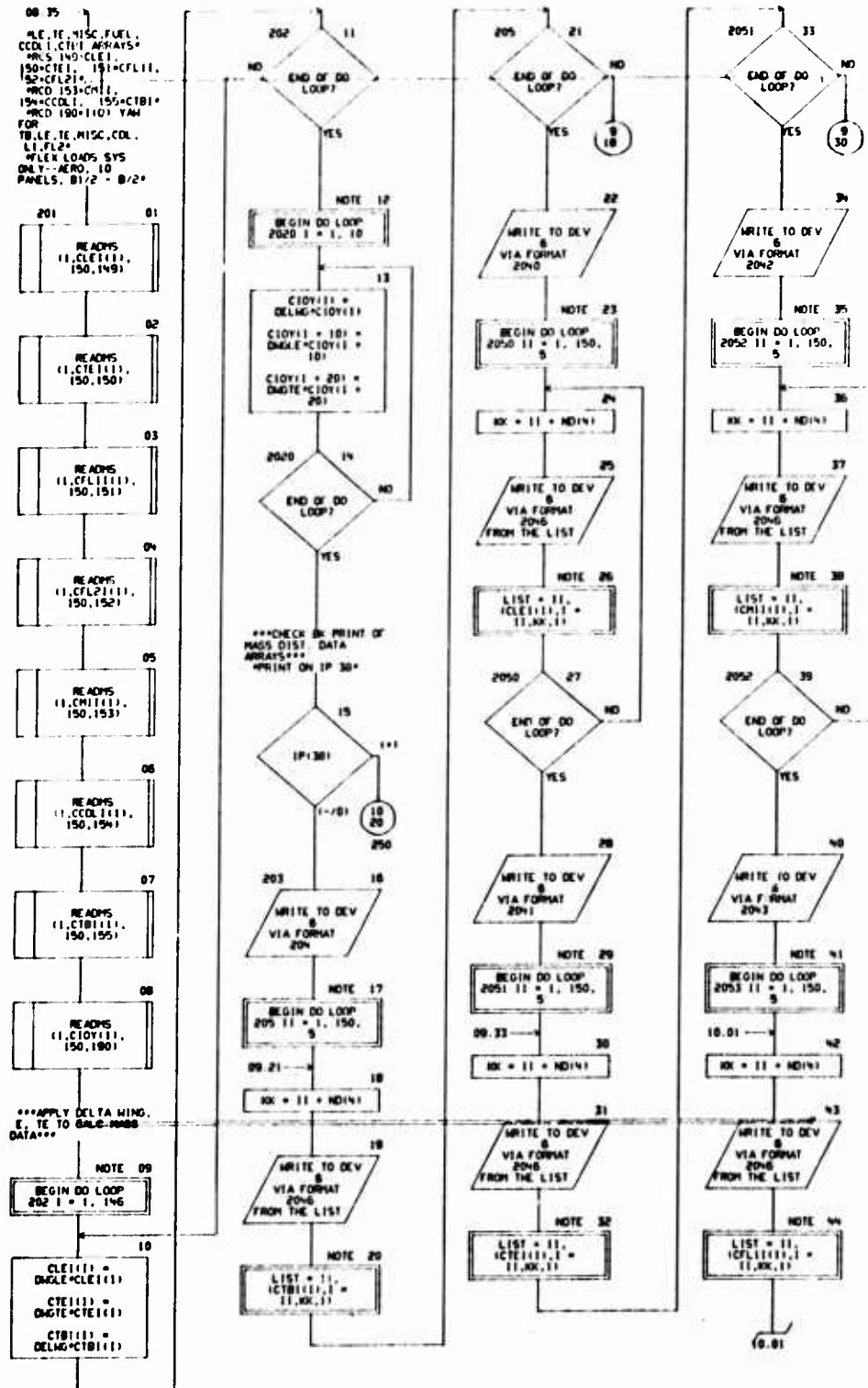


CHART TITLE - SUBROUTINE WDATA

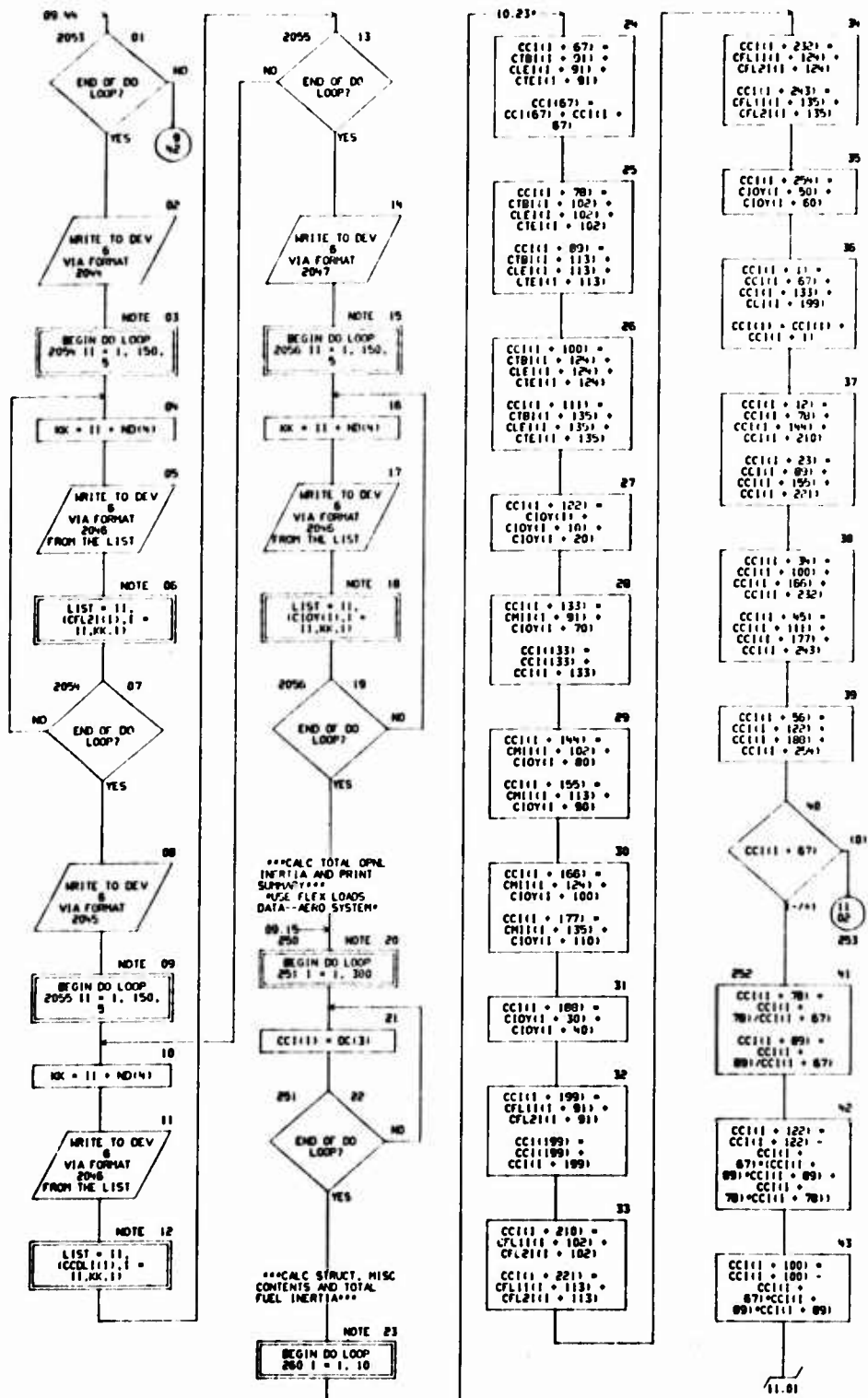


CHART TITLE - SUBROUTINE MODATA



NAME _____ SUBJECT _____ NUMBER _____

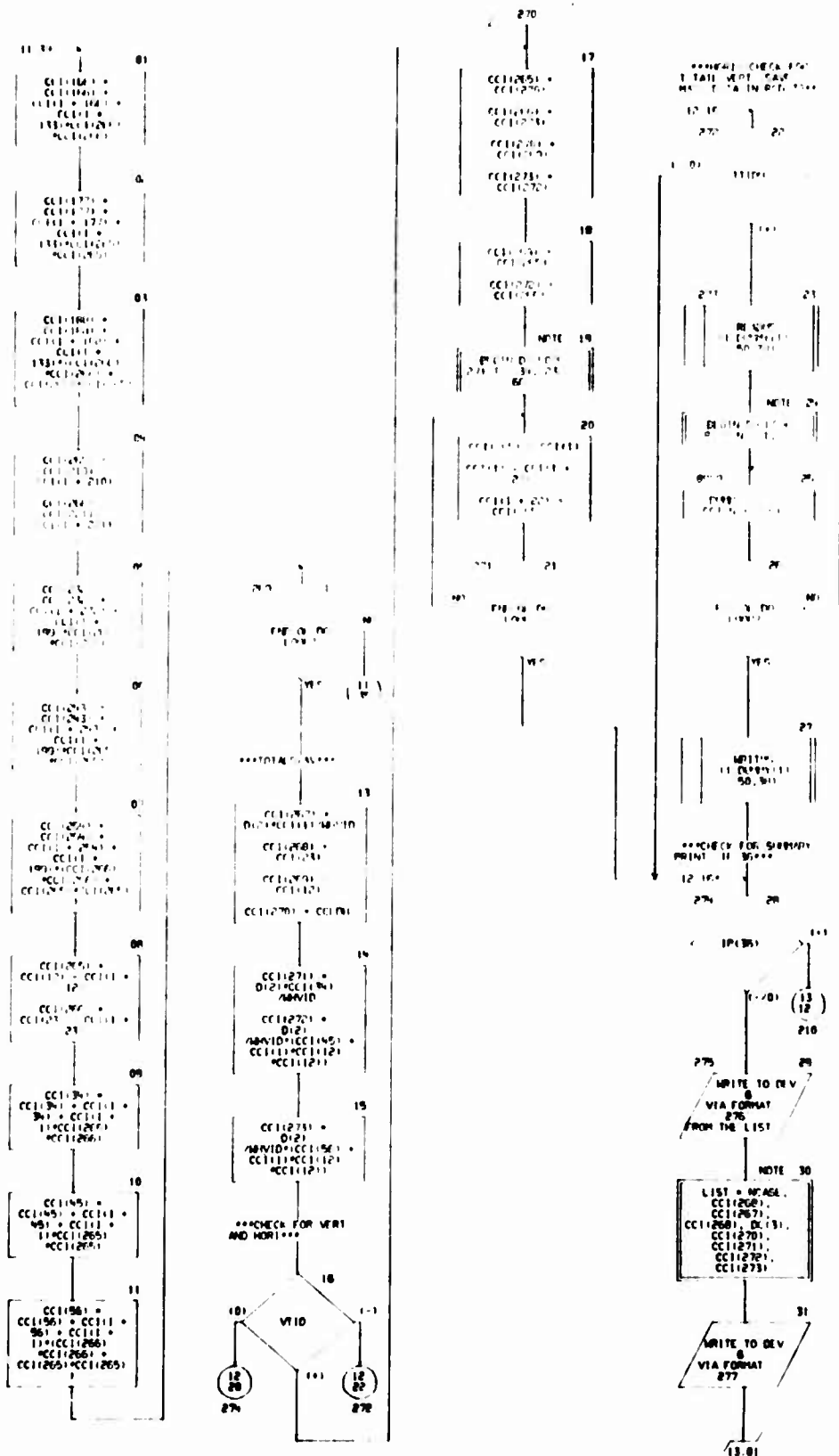


CHART TITLE - SUBROUTINE MODATA

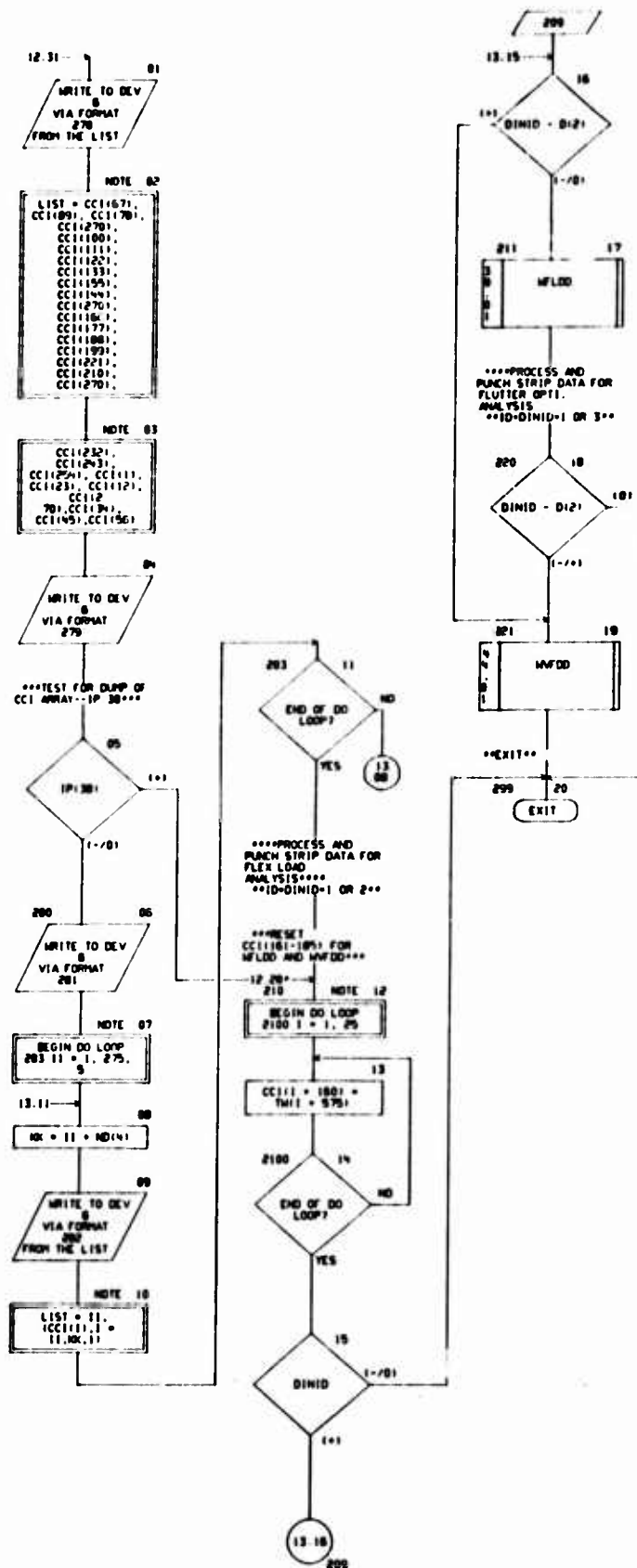


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T
COMMON /IPRINT/ IP(80)
DIMENSION T(1720),D(2060),CD(2000),ND(100),DC(100),TW(900),
YC(150),YTC(80),TG(300),TNG(400),TGA(135),CC(1300),TCS(250),
CCW(50),CLE(1150),CTE(1150),CFL(1150),CFL2(1150),CML(1150),
CCOL(1150),TST(50),TGR(100),CTB(1150),CTBM(150),TMT(400),
TAND(9),CCLO(9),SIND(6),COS(6),
MCO(126),TOGM(3),MTIP(4),DND(115),
TBM(111),TBM(111),WMP(111),
MPML(10),TPML(10),TBM(111),
MTLT(8),CLOY(150),
T(24),TS(520)
DIMENSION DUMP(50)
EQUIVALENCE (D(1),T(2061)),(CD(1),T(121)),(ND(1),T(612)),
(DC(1),D(1401)),(TT(1),T(111)),(YC(1),T(201)),(YTC(1),T(351)),
(TW(1),T(1621)),(TMT(1),CD(1101)),(CTBM(1),CD(351)),
(TG(1),T(1001)),(TNG(1),T(1301)),(TGA(1),T(1051)),
(TST(1),T(1701)),(TGR(1),T(1751)),(CTB(1),CD(351)),
(CLE(1),CD(651)),(CTE(1),CD(801)),(CFL(1),CD(951)),
(CFL2(1),CD(1101)),(CML(1),CD(1251)),(CCOL(1),CD(1501)),
(CCC(1),CD(1651)),(TCS(1),CD(1401)),(CCW(1),CD(1)),
(DND(1),D(271)),(DND(1),D(1970)),
(TGM(1),ND(61)),(TFB(1),ND(971)),(TND(1),ND(1931)),
(INPAC(1),ND(851)),(INPAC(1),ND(1601))
EQUIVALENCE (TAND(1),T(1271)),(CCLO(1),T(1311)),(SIND(1),T(1401)),
(COS(1),T(1461)),(BS(1),T(151)),(MVID(1),T(1571)),(TOGM(1),D(801)),
(DELD(1),T(1071)),(DELD(1),T(1101)),(DELD(1),T(1931)),(DELD(1),T(1941)),
(VPVT(1),T(391)),(VPVT(1),T(401)),(VPVT(1),T(111)),(VPVT(1),T(151)),
(INSEC(1),T(1621)),(INSEC(1),D(4001)),
(MTIP(1),T(641)),(TS(1),T(111)),
(TBM(1),CTBM(1)),(TBM(1),CTBM(701)),(WMP(1),CTBM(891)),
(MPML(1),CTBM(101)),(TPML(1),CTBM(1501)),(TBM(1),CTBM(121)),
(CLOY(1),CD(1401)),(CCLO(1),T(1311)),(VTD(1),D(2091)),(TTT(1),D(2041)),
(MCO(1),TMT(701)),(MTLT(1),TMT(8791))
900 FORMAT (47H) ***MODATA SUBR MEG AND CTBM ARRAYS***
    42X,21H** MODATA - (P130) **/1240 10M,121
901 FORMAT (6H0 MEG)
902 FORMAT (1H 14,5E10.0)
903 FORMAT (6H0 CTBM)
204 FORMAT (70H)
    ---TORQUE-BOX HEIGHT DISTRIBUTION SUMMARY-
    <CTB1 ARRAY-->,19X,21H** MODATA - (P130) **/640 CTB1
2040 FORMAT (72H)
    ---LEADING EDGE HEIGHT DISTRIBUTION SUMMAR
    Y--CLE1 ARRAY-->,17X,21H** MODATA - (P130) **/640 CLE1
2041 FORMAT (74H)
    ---TRAILING EDGE HEIGHT DISTRIBUTION SUMMA
    RY--CTE1 ARRAY-->,19X,21H** MODATA - (P130) **/640 CTE1
2042 FORMAT (88H)
    ---MISC. STRUCTURE AND CONTENTS HEIGHT DIS
    TRIBUTION SUMMARY--CH11 ARRAY-->,1X,21H** MODATA - (P130) **/
    640 CH11
2043 FORMAT (72H)
    ---FUEL CELL 1 HEIGHT DISTRIBUTION SUMMARY
    --CFL1 ARRAY-->,17X,21H** MODATA - (P130) **/640 CFL11
2044 FORMAT (72H)
    ---FUEL CELL 2 HEIGHT DISTRIBUTION SUMMARY
    --CFL2 ARRAY-->,17X,21H** MODATA - (P130) **/640 CFL21
2045 FORMAT (84H)
    ---EXTERNAL CONC. MAGS HEIGHT DISTRIBUTION
    SUMMARY--CCLD1 ARRAY-->,9X,21H** MODATA - (P130) **/640 CCLD1
2046 FORMAT (1H 14,5E10.0)
2047 FORMAT (1H1,68X,21H** MODATA - (P130) **/
    100H
    ---1101YAW DATA FOR TB,LE,TE,MISC,COL,FL1
    ,FL2,(FLEX LOADS, AERO SYSTEM)--CLOY ARRAY-->,70H CLOY
276 FORMAT (1H1,5X,4H0CASE,14,142.31H**SURFACE INERTIA SUMMARY-->,
    10X,21H** MODATA - (P136) **/112.63H**TOTAL EXPOSED PANEL INERTI
    A ABOUT SURFACE CENTER-LINE AT F.S.,FB,2,2H**/7X,54LB/AV,4X,
    7HUS/STA,4X,7H0/PLANE,3X,7H4/PLANE,2X,17H1/PITCH1LB-IN**2),2X,
    10H1/ROLL1LB-IN**2),2X,15H1/YAW1LB-IN**2)/

```

CHART TITLE - NON PROCEDURAL STATEMENTS

```

277      2X,F10.1,2F11.2,F10.2,3E10.0)
      FORMAT(1H0/125,51H**PANEL INERTIA ABOUT EXPOSED PANEL CG---PER SID
      E---//3X,WHITEM,5X,7H0/SIDE,4X,7H05/STA,4X,7H0/PLANE,3X,
      7H0/PLANE,2X,17H1/PITCHILB-IN**2),2X,18H1/ROLLILB-IN**2),2X,
      19H1/YAWILB-IN**2) )
278      FORMAT (5H STRUCT*,F10.1,2F11.2,F10.2,E17.0,2E10.0,/5H MISC** ,F
      10.1,2F11.2,F10.2,E17.0,2E10.0,/5H FUEL ,F10.1,2F11.2,F10.2,E17
      .0,2E10.0,/5H TOTAL ,F10.1,2F11.2,F10.2,E17.0,2E10.0)
279      FORMAT (42H0 NOTE---DOES NOT INCLUDE C-SEC OR PIVOT../50H
      **TIP PANEL MASS DATA INCLUDED WITH MISC CONTENTS.)
281      FORMAT (10H) ---PANEL INERTIA SUMMARY. FLEX LOADS (AERO
      ) SYSTEM-CC: ARRAY ** .11X,21H** MODATA - (P130) **/50H CC: )
282      FORMAT (1H 14,5E10.0)

```

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE PRID*****

CALCULATED HEIGHT SUMMARY PRINT

CHART TITLE - SUBROUTINE PRTO

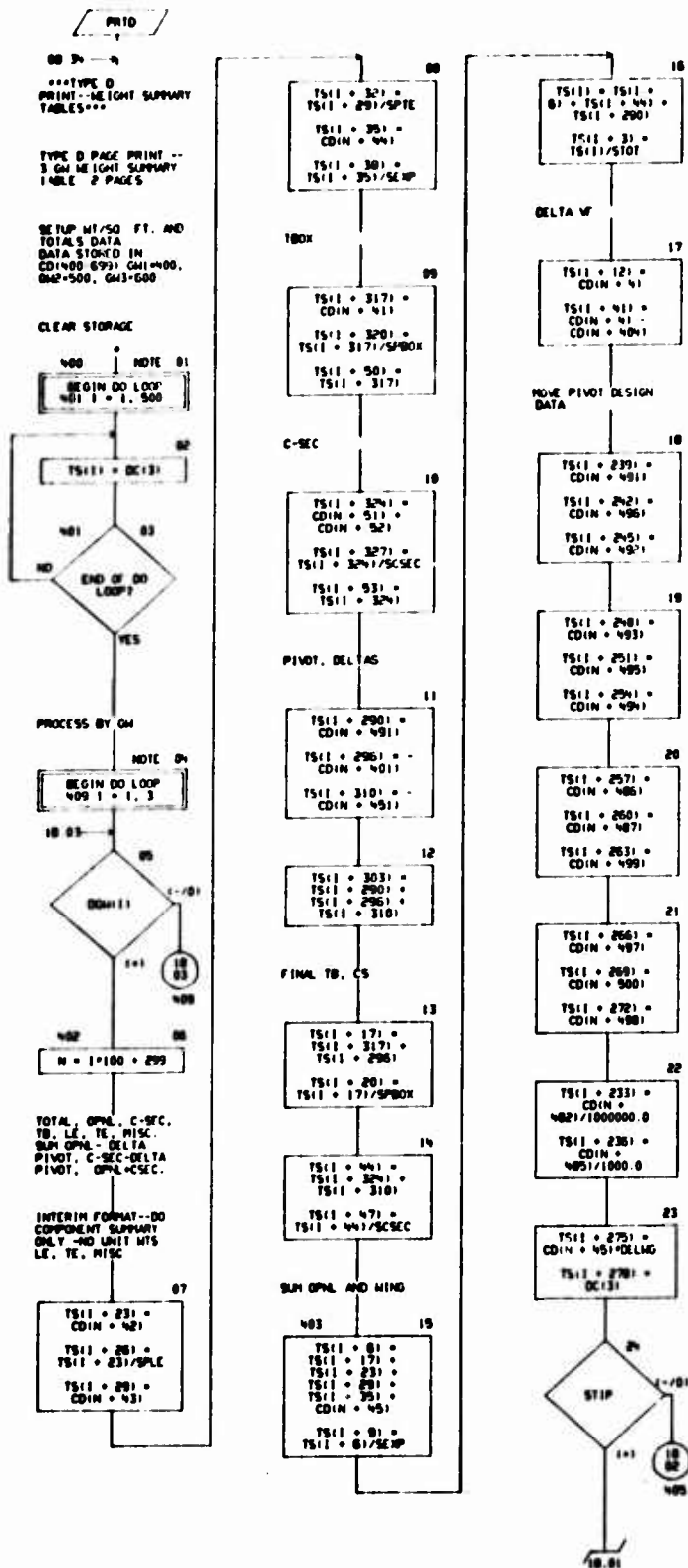


CHART TITLE - SUBROUTINE PH10

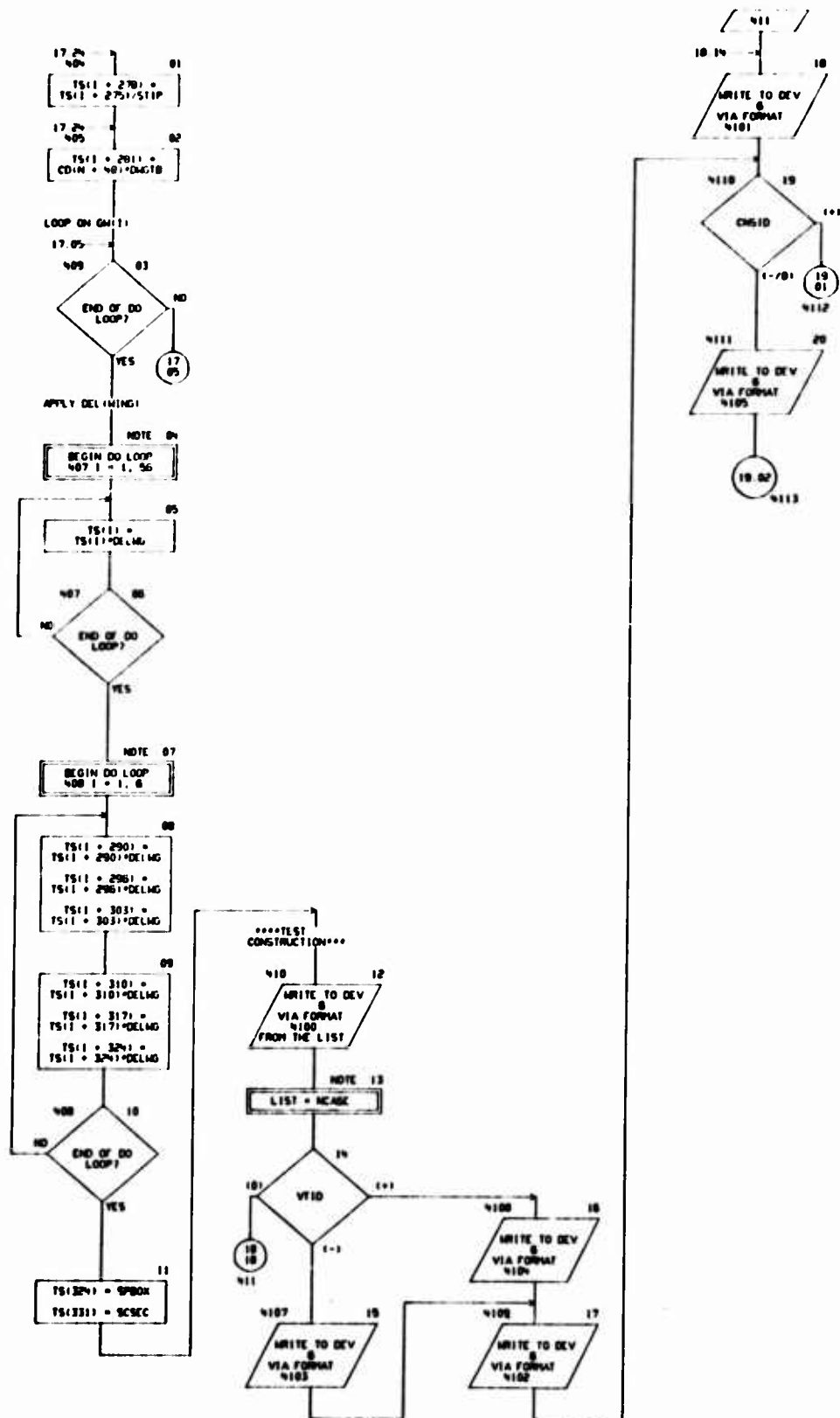
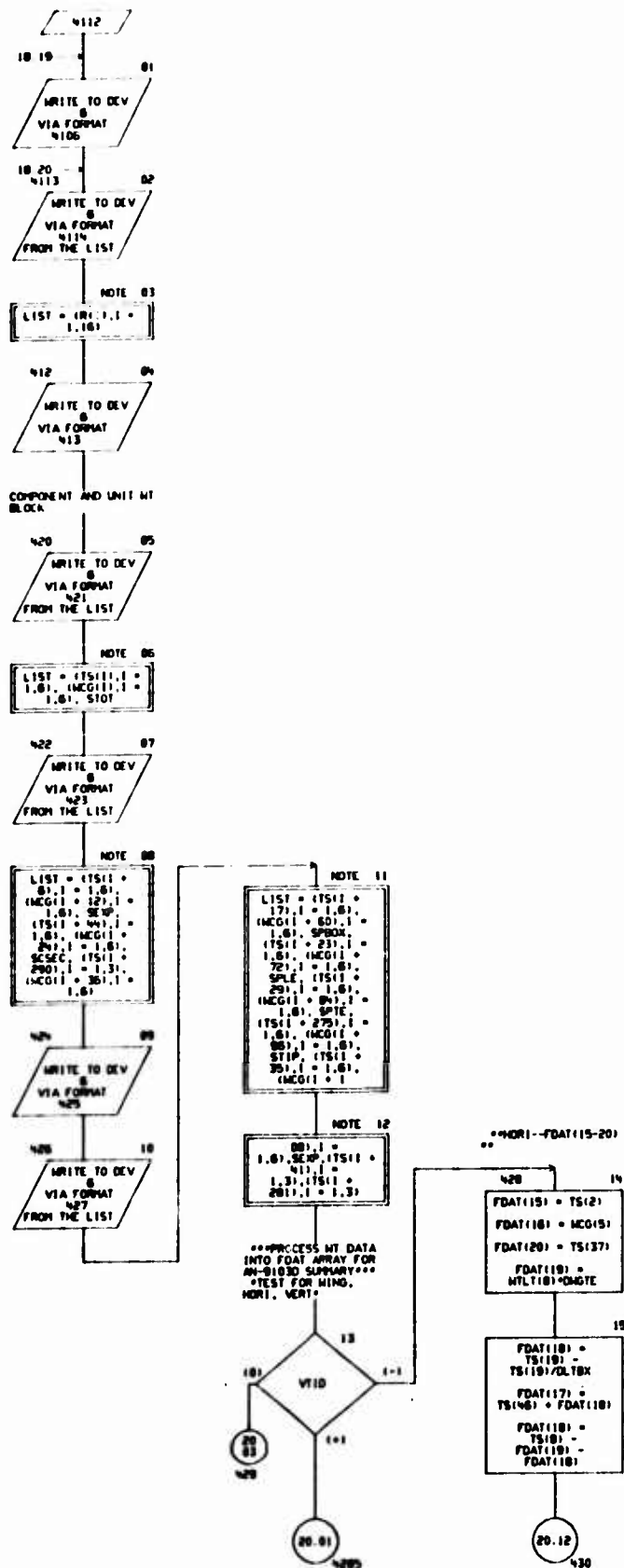


CHART TITLE - SUBROUTINE PRID



••VERT--FOAT(23-20)
••

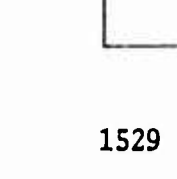


CHART TITLE - SUBROUTINE PRIO

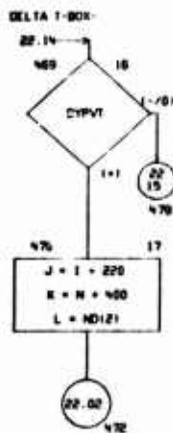
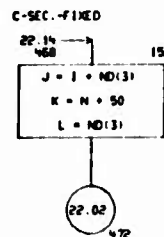
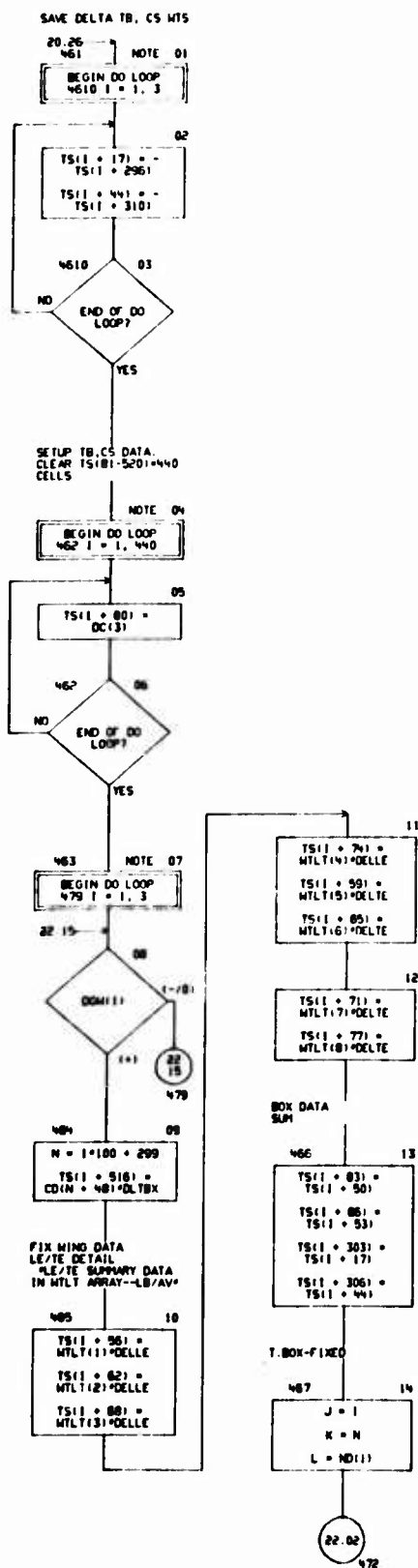


CHART TITLE - SUBROUTINE PRIO

DELTA C-SEC-

22.14
471 01
J = 1 + 223
K = N + 450
L = ND(1)

DO MOVE L = FIX TB, 2
DELTA TB, 3 C-S, 4
DELTA C-S

21.14
472 02

TSIJ = 1.11 +
CDIK = 81
TSIJ = 1101 +
CDIK = 101
TSIJ = 1191 +
CDIK = 111
TSIJ = 1371 +
CDIK = 121

03

TSIJ = 1461 +
CDIK = 131
TSIJ = 1551 +
CDIK = 141

I RIB, FS, RS, ATT

04

TSIJ = 1731 +
CDIK = 51
TSIJ = 2001 +
CDIK = 61
TSIJ = 2091 +
CDIK = 151
TSIJ = 2181 +
CDIK = 161

05

TSIJ = 2271 +
CDIK = 71
TSIJ = 2361 +
CDIK = 171
TSIJ = 2451 +
CDIK = 181
TSIJ = 2541 +
CDIK = 81

TEST FOR FX, DEL, OP
OR C-S

06

L = ND(2)

1-781

22.12
473

O-PNL

473 07

TSIJ = 911 +
CDIK = 21
TSIJ = 1281 +
CDIK = 31
TSIJ = 1821 +
CDIK = 301
TSIJ = 1911 +
CDIK = 311

DELTA W DETAIL

476 08

TSIJ = 2691 +
CDIK = 191
TSIJ = 2781 +
CDIK = 201
TSIJ = 2871 +
CDIK = 211
TSIJ = 2721 +
CDIK = 221

09

TSIJ = 2811 +
CDIK = 231
TSIJ = 2901 +
CDIK = 241
TSIJ = 2601 +
CDIK = 251
TSIJ = 2701 +
CDIK = 261

10

TSIJ = 2631 +
CDIK = 2721
TSIJ = 2721 +
CDIK = 2811
TSIJ = 2901 +
CDIK = 251
TSIJ = 2751 +
CDIK = 261

11

TSIJ = 2841 +
CDIK = 271
TSIJ = 2931 +
CDIK = 281
CDIK = 291

C-SEC

22.06
474 12

TSIJ = 921 +
CDIK = 31
TSIJ = 1281 +
CDIK = 41
TSIJ = 1911 +
CDIK = 191
TSIJ = 1821 +
CDIK = 131

EXIT ON L - SUM RIDS

475 13

TSIJ = 1641 +
TSIJ = 1731 +
TSIJ = 1821 +
TSIJ = 1911

14

COMPUTED GO TO
FOR L
468 21.15
471 22.01
469 21.16
479 22.15

IF OUTSIDE THE RANGE

ON LOOP

21.08
479 15

END OF DO
LOOP?

NO

21.08

SUM FX(OPNL) * CSI, DELTA
PIVOT

480 NOTE 16

BEGIN DO LOOP
481 1 = 1, 20

23.01
17

J = 1 + ND(1)

TSIJ = 721 +
TSIJ = 751 +
TSIJ = 781

TSIJ = 731 +
TSIJ = 761 +
TSIJ = 791

18

TSIJ = 741 +
TSIJ = 771 +
TSIJ = 801

TSIJ = 2921 +
TSIJ = 2951 +
TSIJ = 2981

19

TSIJ = 2931 +
TSIJ = 2961 +
TSIJ = 2991

TSIJ = 2941 +
TSIJ = 2971 +
TSIJ = 3001

23.01

CHART TITLE - SUBROUTINE PRIO

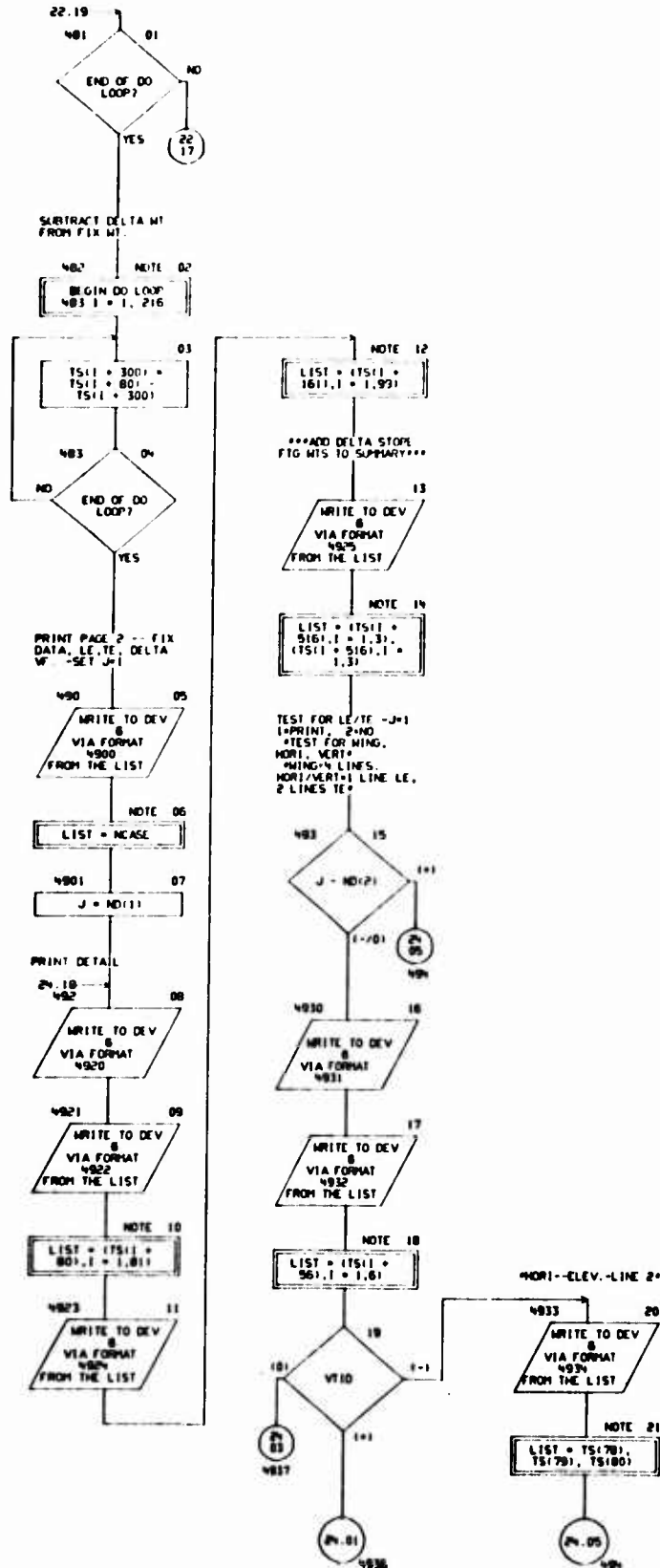


CHART TITLE - SUBROUTINE PRID

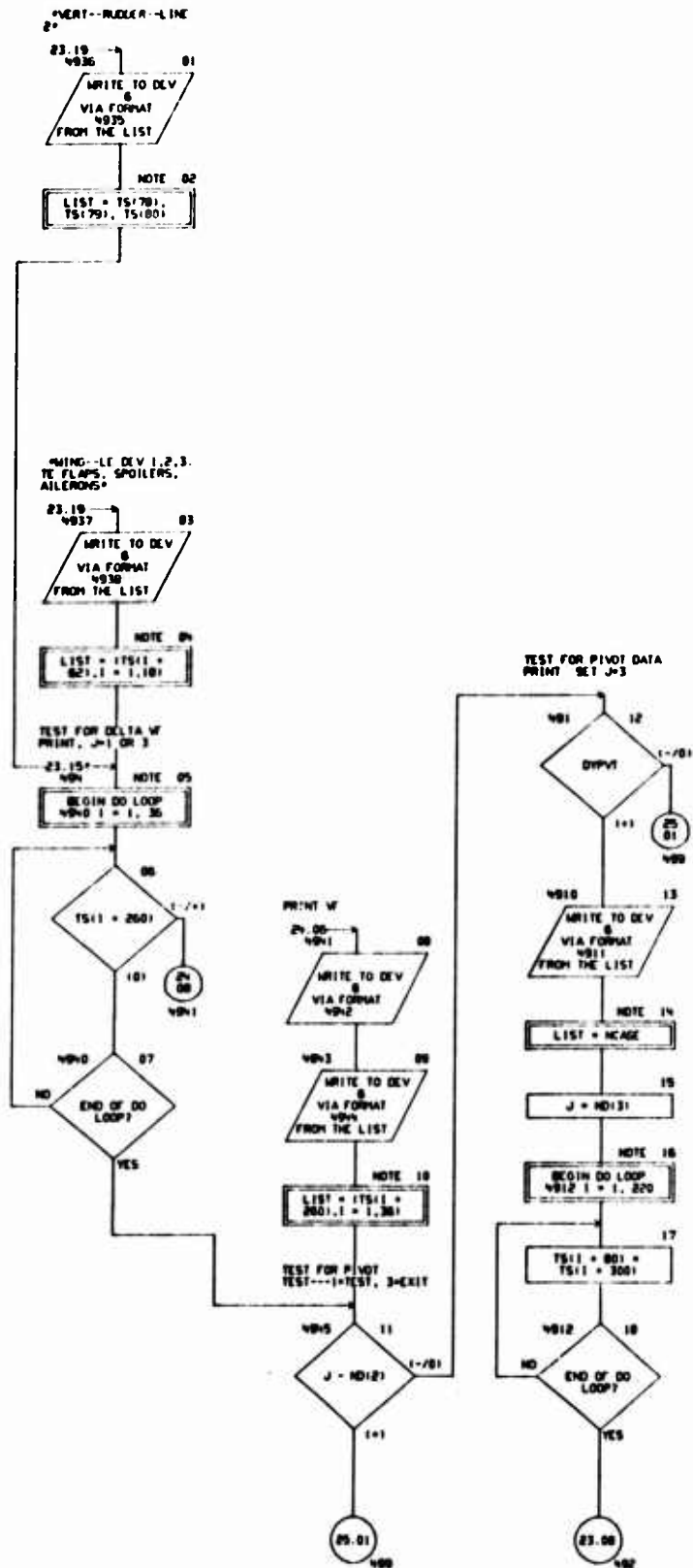


CHART TITLE - SUBROUTINE PRIO

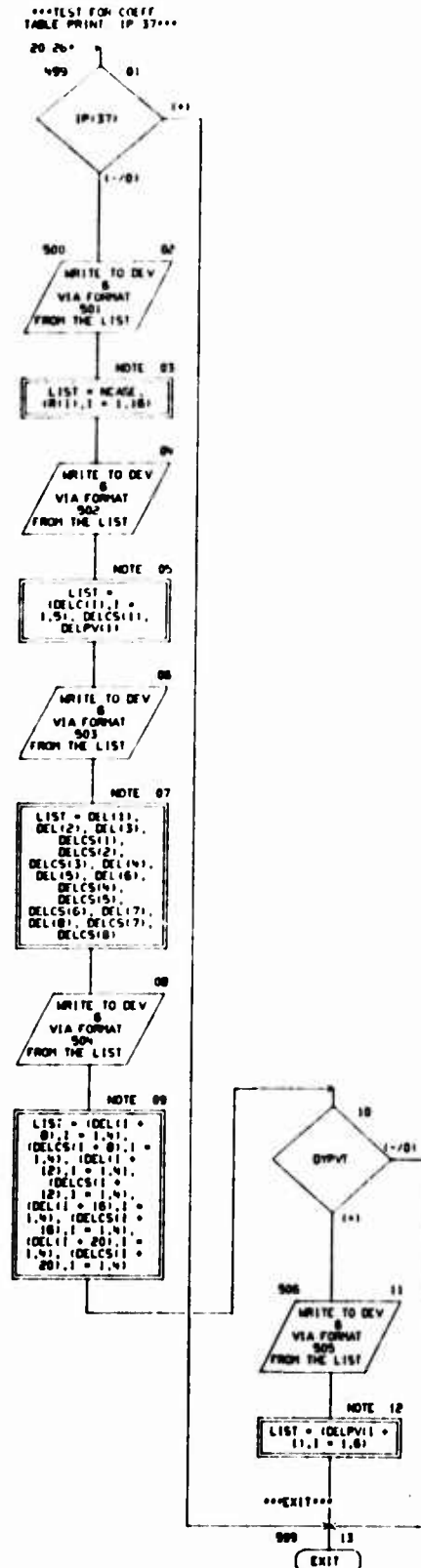


CHART TITLE - NON-PROFESSIONAL STATEMENTS

```

COMMON T(2000),D(2000),CD(2000),ND(100),TW(900)
COMMON /IPRINT/ IP(100)
COMMON /MISC/ NMISC(100)
COMMON /FDAT/ FUAT(100)
DIMENSION DC(100),TS(50),R(10),
  TOGH(4),DGH(3),MTL(3),
  MEG(26),MTL(8),
  CCH(50),
  DELC(5),DELC(30),DELC(30),DELPV(7)
EQUIVALENCE (DC(1),D(100)),(TS(1),TW(1)),(MEG(1),TW(70)),
  (R(1),NMISC(95)),(DGH(8),T(192)),
  (CCH(10),D(100)),
  (VT(10),D(200)),(MTL(1),T(97)),(TOGH(1),D(80)),(DGH(1),D(100)),
  (OPH(2),T(110)),(DGH(2),T(19)),(DPH(2),T(20)),(DGH(2),T(21)),
  (DELMG,T(107)),(MTL(1),TW(87)),(DELE,T(109)),(DELE,T(190)),
  (STOT,T(11)),(SEXP,T(2)),(SPBOX,T(24)),(SCS(1),T(95)),
  (SPLE,T(25)),(SPTE,T(26)),(STIP,T(17)),(DIPVT,D(200)),
  (I,ND(27)),(J,ND(28)),(K,ND(29)),(L,ND(30)),(N,ND(31)),
  (INCASE,ND(60)), (MATE,ND(21))
EQUIVALENCE (DELC(1),T(107)),(DELC(1),TW(87)),(DELC(1),D(100)),
  (CCH(1),CD(1)),
  (DLTBX,T(100)),(DMGLE,T(193)),(DMGLE,T(194)),
  (DELPV(1),D(530))
4100 FORMAT (10H CASE 14,25X,15HHEIGHT SUMMARY,50X,10H** PRID ** )
4101 FORMAT (10H,T(10),10H ***TOTAL WING)
4102 FORMAT (10H,T(14),10H ***TOTAL,T(30),WHTAIL)
4103 FORMAT (10H,T(25),WHTOR)
4104 FORMAT (10H,T(25),WHTVR)
4105 FORMAT (10H,T(25),30HSTIFFENED SAIL/MTL-RIB ***)
4106 FORMAT (10H,T(25),22HPLATE/MTL-SPAR ***)
4114 FORMAT (10H BA10,10H BA10)
413 FORMAT (10H,37X,32H ****TOTAL HEIGHT SUMMARY****/10H,10X,10H*E
  10H*--LB/AV*,5X,20HUNIT HEIGHT--LB/S*,5X,10H*G--BP*,11X,10H*
  C.G.--FS*,7X,6H*AREA*/100H GM(1) GM(2) GM(3) G
  M(1) GM(2) GM(3) GM(1) GM(2) GM(3) GM(1) GM(2) GM(3) SF/
  AV)
421 FORMAT (12H ***TOTAL***,F8.1,2X,F6.2,1X,F7.1,1X,F7.1,F8.1)
423 FORMAT (12H *O PHL*,F8.1,2X,F6.2,1X,F7.1,1X,F7.1,F8.1,F8.1,12H
  *C-SEC*,F8.1,2X,F6.2,1X,F7.1,1X,F7.1,F8.1,12H *PIVOT*,
  F8.1,2X,F7.1,1X,F7.1)
425 FORMAT (10H,T(0),30H** OUTER PANEL COMPONENTS ** )
427 FORMAT (12H /1-BOX/ F8.1,2X,F6.2,1X,F7.1,1X,F7.1,F8.1,12H
  /L.E. / F8.1,2X,F6.2,1X,F7.1,1X,F7.1,F8.1,12H /T.E. / 3
  F8.1,2X,F6.2,1X,F7.1,1X,F7.1,F8.1,12H /1P / F8.1,2X,F6.
  2,1X,F7.1,1X,F7.1,F8.1,12H /MISC / F8.1,2X,F6.2,1X,F7.1,1
  X,F7.1,F8.1,12H /AV.F. / F8.1,12H /WTO / F8.1)
4301 FORMAT (30H0 ***PIVOT SUMMARY*** )
4303 FORMAT (12H DEL-PVT F8.1,12H DEL-BOX F8.1,12H DEL-CS
  F8.1)
441 FORMAT (10H0 ***NOMINAL WING BOX SUMMARY*** )
443 FORMAT (12H *1-BOX* F8.1,2X,F6.2,4X,F8.1,12H *C-SEC* F8.
  1,2X,F6.2,4X,F8.1,12H **V.F.* F8.1)
452 FORMAT (31H0 ***DESIGN DATA*** )
456 FORMAT (10H PIVOT/MISC F11.1,5X,F11.1,10H MTL(1)/MT(10
  0)F11.1,5X,F11.1,10H ND(10)/ND(10)F11.1,5X,F11.1,10H
  PI(10)/PI(10) F11.3,5X,F11.3,10H Y-BP/M-ST(10)F11.3,5X,F1
  1.3,10H Y-BP/M-ST(10)F11.3,5X,F11.3,10H MOM(10)/FBR(10)
  F11.3,5X,F11.3)
458 FORMAT (10H TOGH(1)+F8.1,0H TOGH(2)+F8.1,0H TOGH(3)+F8.1,0H +NZ=
  F8.3,0H +NZG=F8.3,10H FLITOT+F8.1,10H MTL ND=13/10H DGH(1)+F
  8.1,10H DGH(2)+F8.1,0H DGH(3)+F8.1,0H -NZ=F8.3,0H -NZG=F8.3,10H
  FLIDES+F8.1,0H YCP+F7.1)
4800 FORMAT (10H CASE 14,10X,43H ***NOMINAL TORQUE-BOX DETAIL ME10

```

CHART TITLE - NON-PROCEDURAL STATEMENTS

```

NTS-***,15X,15H** PRIO - (P137) ***
4920 FORMAT (1H 2X,22H **TOTAL SURFACE** ,10X,20H **OUTER PANEL**
- ,7X,22H **CENTER-SECTION** ,/1H 22X,8HGM1) GM12) GM
3) GM1) GM2) GM3) GM1) GM2) GM3)
4922 FORMAT (10H **TORQUE-BOX** ,F10.1,3X,F9.1,2X,F9.1,10H **UP
PER COVER** ,F10.1,3X,F9.1,2X,F9.1,10H **SKINS** ,F10
1,3X,F9.1,2X,F9.1,10H **STRG** ,F10.1,3X,F9.1,2X,F9.
1,10H **MISC. SK** ,F10.1,3X,F9.1,2X,F9.1,10H **LOWER CO
VER** ,F10.1,3X,F9.1,2X,F9.1,10H **SKINS** ,F10.1,3X,F
9.1,2X,F9.1,10H **STRG** ,F10.1,3X,F9.1,2X,F9.1,10H
**MISC. SK** ,F10.1,3X,F9.1,2X,F9.1)
4924 FORMAT (10H **RIBS** ,F10.1,3X,F9.1,2X,F9.1,10H **
INTERM** ,F10.1,3X,F9.1,2X,F9.1,10H **BULKHEADS** ,F10.1
,3X,F9.1,2X,F9.1,10H **RT/C-L** ,F10.1,3X,F9.1,2X,F9.1
,10H **FRONT SPAR** ,F10.1,3X,F9.1,2X,F9.1,10H **CAPS
** ,F10.1,3X,F9.1,2X,F9.1,10H **MED** ,F10.1,3X,F
9.1,2X,F9.1,10H **REAR SPAR** ,F10.1,3X,F9.1,2X,F9.1,10H
**CAPS** ,F10.1,3X,F9.1,2X,F9.1,10H **MED** ,
F10.1,3X,F9.1,2X,F9.1,10H **MISC. ATT.** ,F10.1,3X,F9.1,2X
,F9.1)
4925 FORMAT (10H **STORE FTG.** ,F10.1,3X,F9.1)
4931 FORMAT (10H40H
***LEADING EDGE***
***TRAILING EDGE*** )
4932 FORMAT (10H **FIXED STR** ,F10.1,20X,12H**FIXED STR** ,F9.1)
4934 FORMAT (1H 67X,12H**ELEVATORS** ,F9.1)
4935 FORMAT (1H 67X,12H**RUDDERS** ,F9.1)
4938 FORMAT (10H **DEV. NO. 1** ,F10.1,20X,12H**E FLAPS** ,F9.1,6X
,12H**DEV. NO. 2** ,F10.1,20X,12H**SPOILERS** ,F9.1,6X,12H**DEV. NO.
3** ,F10.1,20X,12H**AILERONS** ,F9.1)
4942 FORMAT (10H
***FLUTTER STIFF
MESS SUMMARY--OUTER-PANEL**-/10H
UP
PER COVER
LOWER COVER
RIBS, SPARS
, ATT. )
4944 FORMAT (10H COV-U /-L-/1.R.,F10.1,3X,F9.1,2X,F9.1,10H SK-U
-/L-/R.S.,F10.1,3X,F9.1,2X,F9.1,10H STR-U/-L-/R.S.,F10.1
,3X,F9.1,2X,F9.1,10H M.SK.-U/-L-/M.A.,F10.1,3X,F9.1,2X,F9.1
)
4911 FORMAT (10H1 CASE14,F10,9H ***DETAIL HEIGHTS--WING BOX LESS
PIVOT STRUCT.-----,15X,15H** PRIO - (P137) ***
501 FORMAT (10H CASE14,10X,20H****,EFFICIENT SUMMARY****,
35X,15H** PRIO - (P137) ****/1H ,8A10/1H ,8A10/1
502 FORMAT (10H 1000,F10.4)
503 FORMAT (10H 2010,F10.4,10X,10H 3010,F10.4,10H 2020,F1
0.4,10X,10H 3020,F10.4,10H 2030,F10.4,20X,10H 3030,
F10.4)
504 FORMAT (10H 2110,F10.4,10H 3110,F10.4,10H 2210,F10.4,
10H 3210,F10.4,10H 2310,F10.4,10H 3310,F10.4,10H
2410,F10.4,10H 3410,F10.4)
505 FORMAT (10H 4010,F10.4,10H 4020,F10.4,10H 4030,F10.4)

```

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE TBM*****

FUEL/TORQUE BOX WEIGHT INTEGRATION

CHART TITLE - SUBROUTINE TBFMI

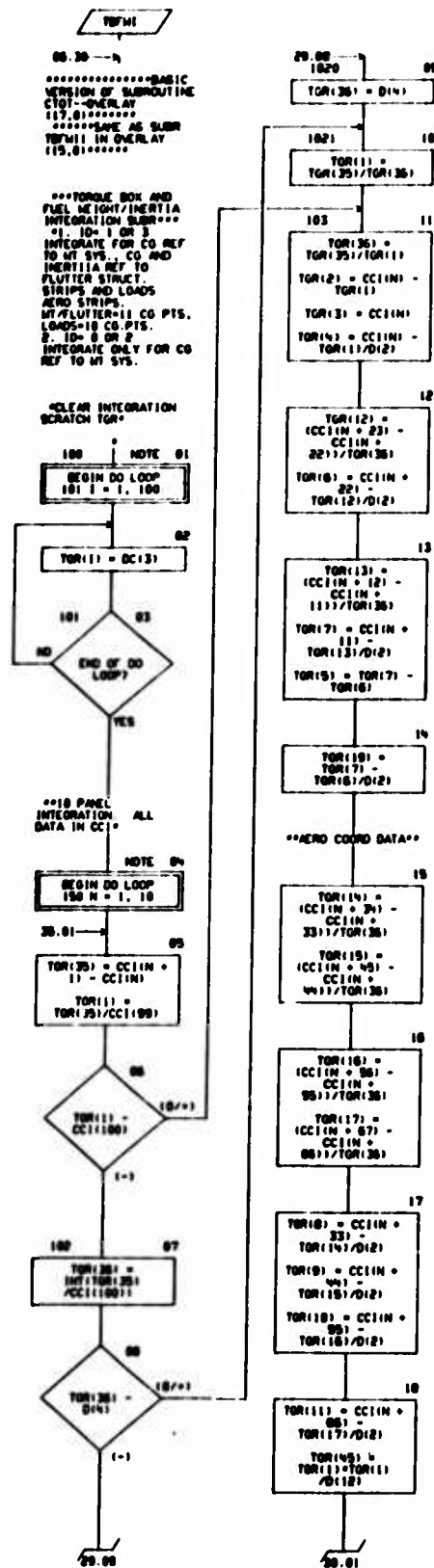
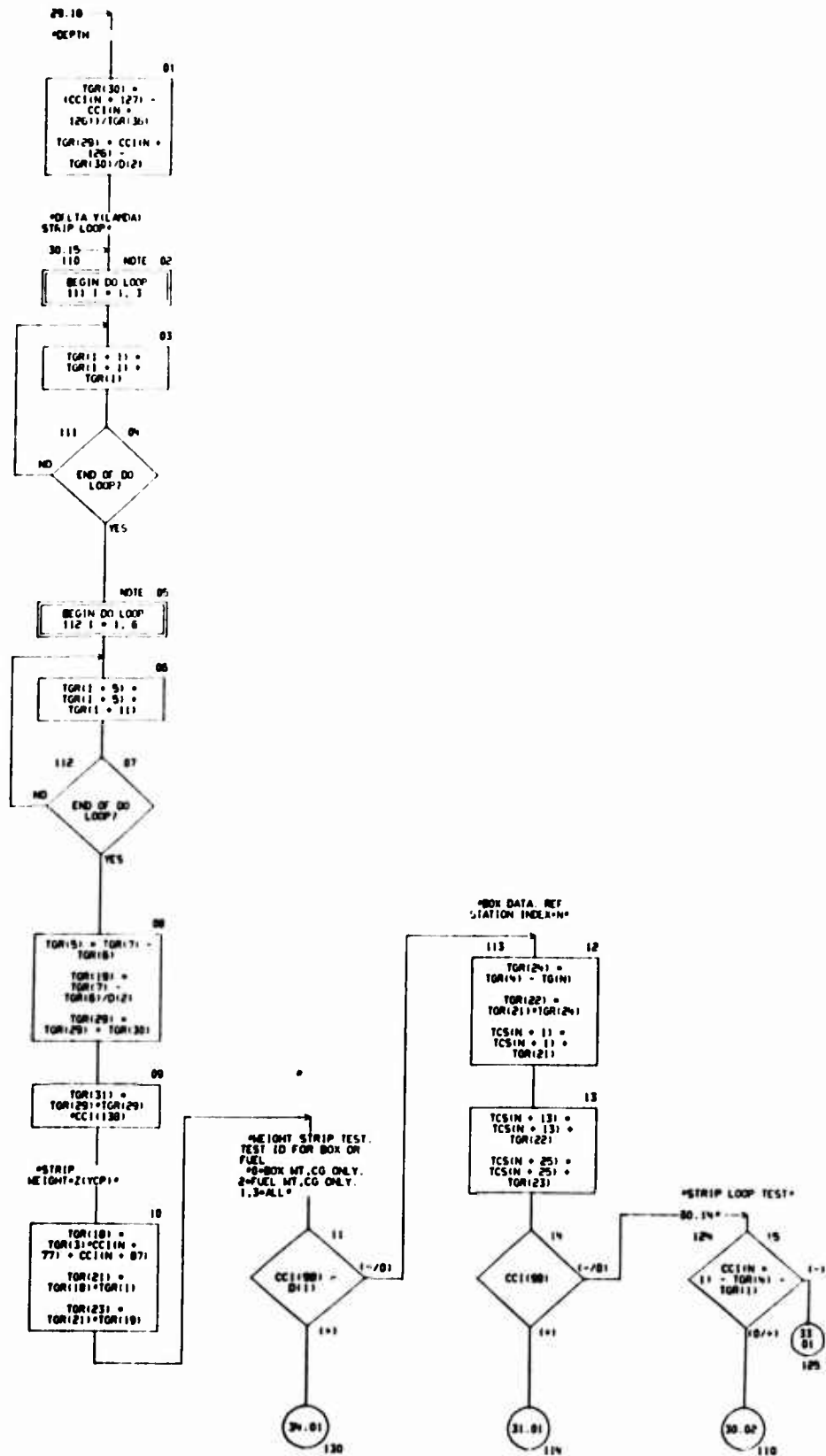


CHART TITLE - SUBROUTINE TORMI



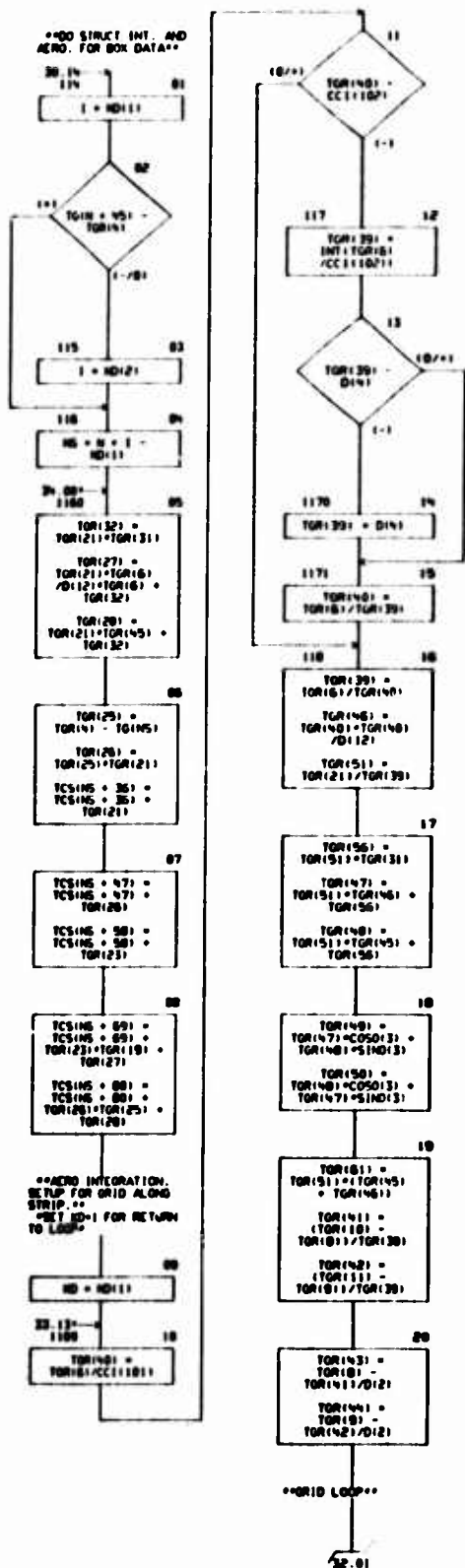


CHART TITLE - SUBROUTINE TGRW1

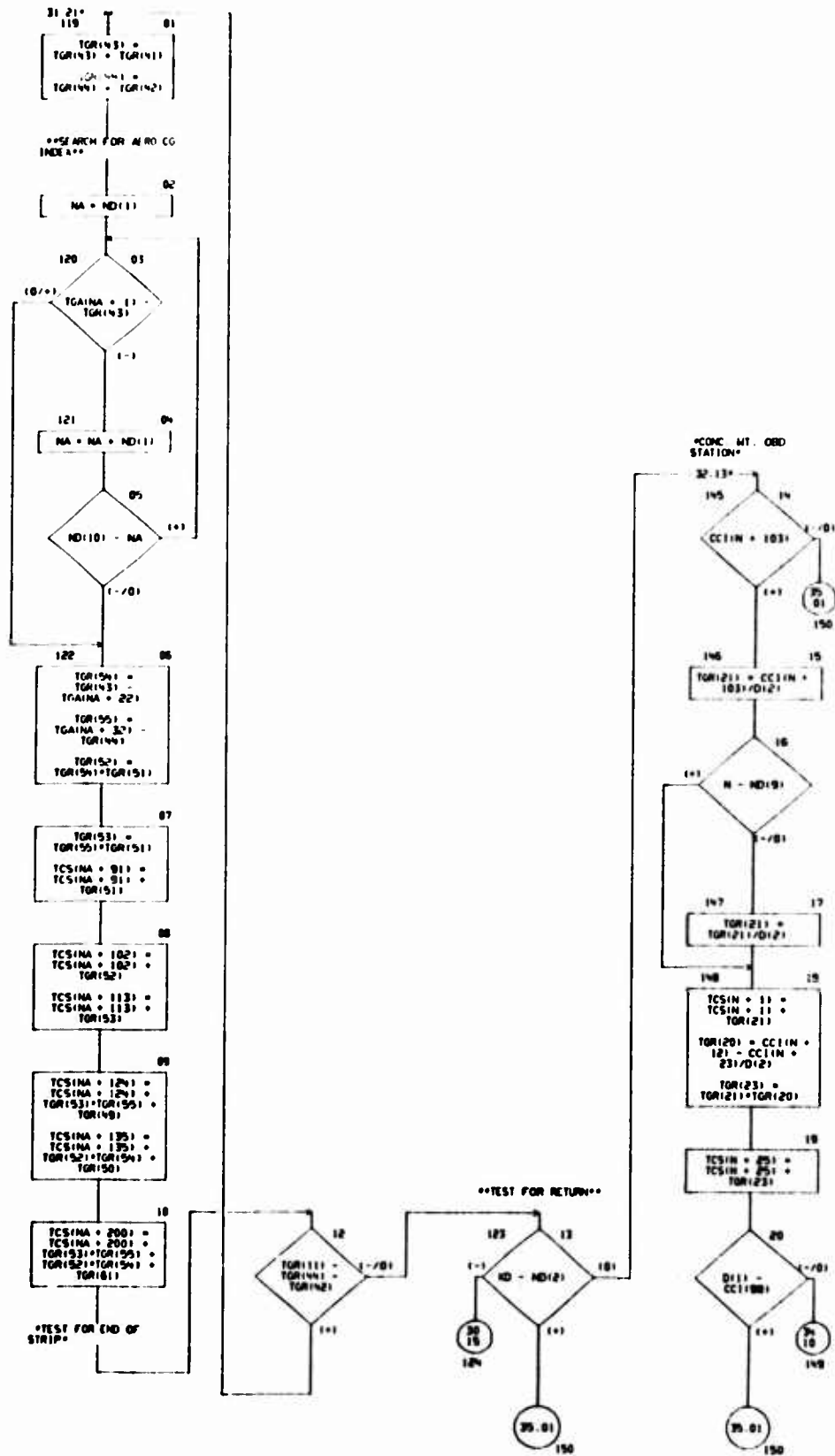


CHART TITLE - SUBROUTINE TORMI

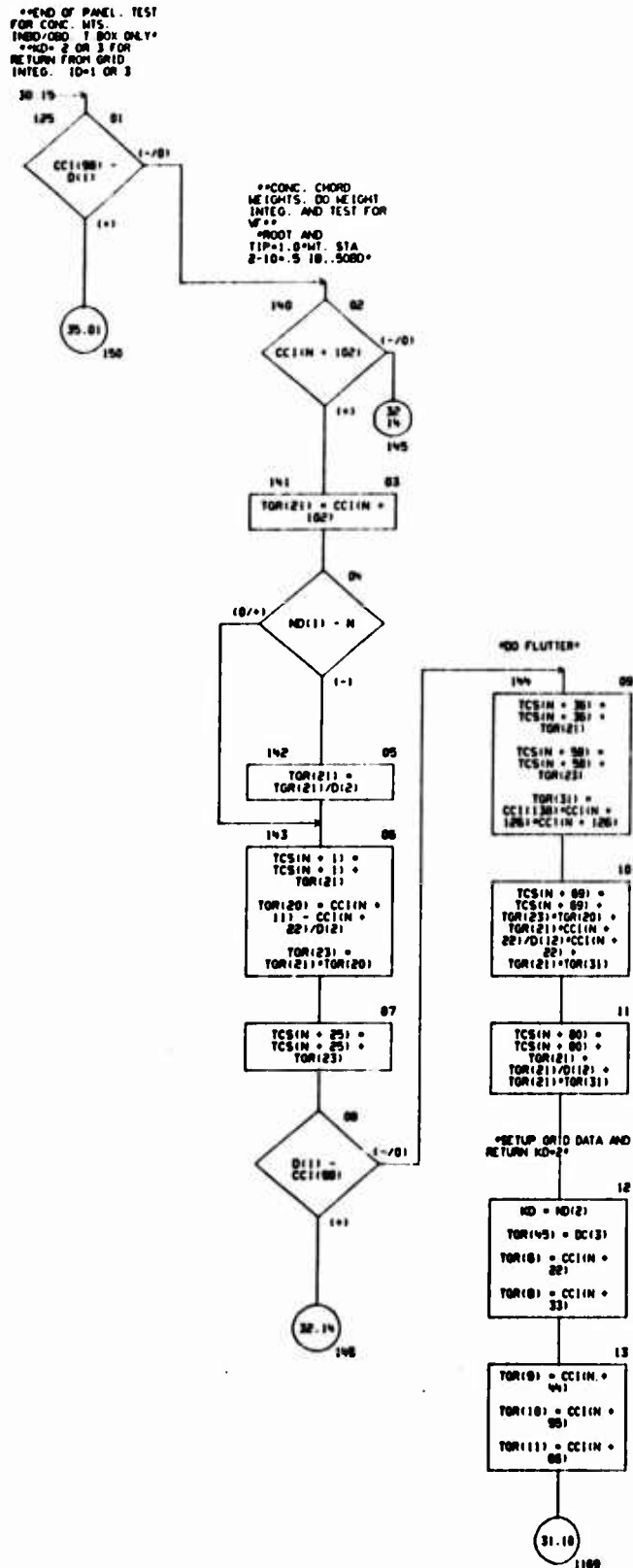
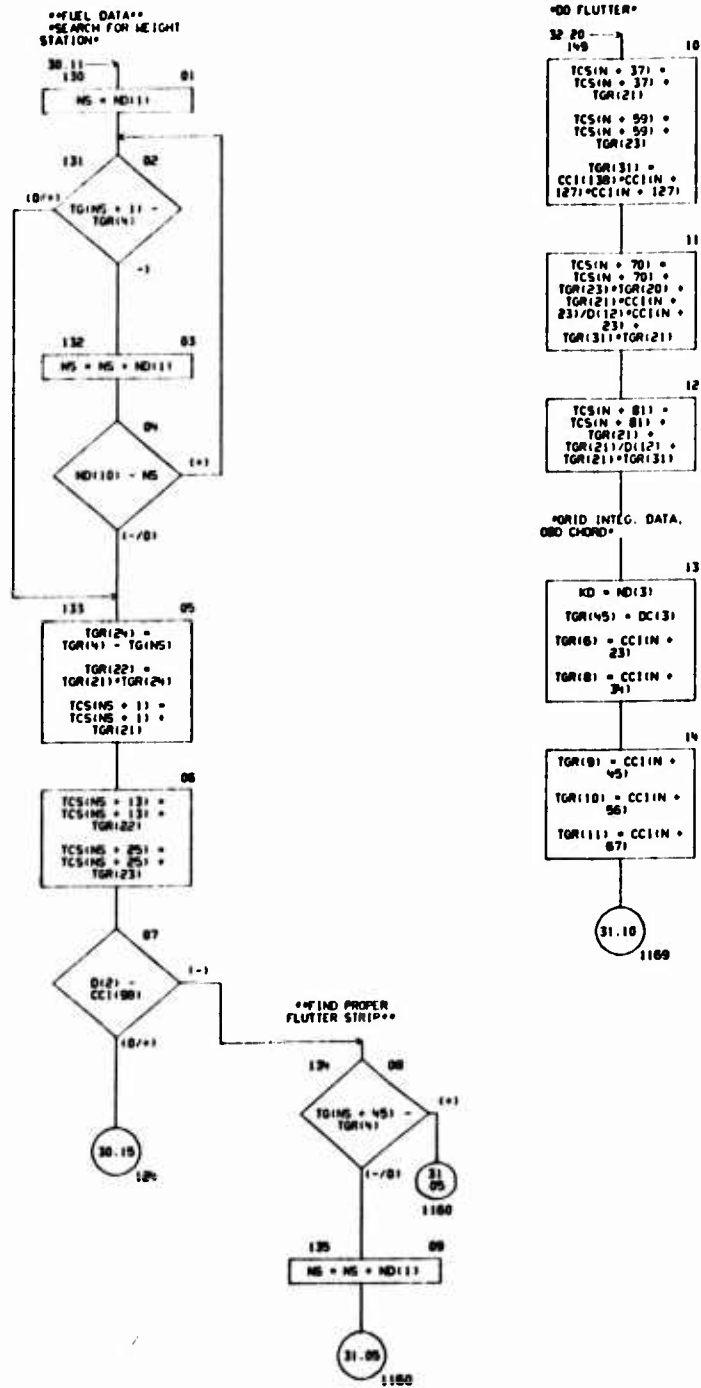


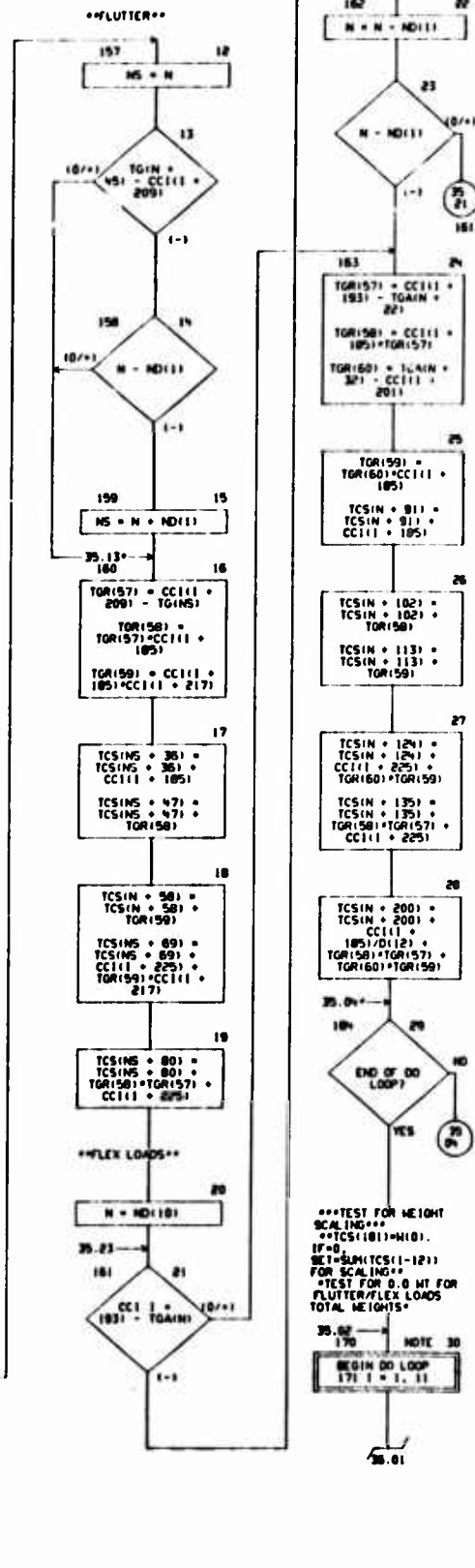
CHART TITLE - SUBROUTINE TORMI



```

graph TD
    Start([START]) --> 32
    32 --> 150{END OF DO LOOP?}
    150 -- YES --> 151[END OF DO LOOP]
    150 -- NO --> 29_25((29 25))
    151 --> 152[DELTA MT DUE TO COL **]
    152 --> 153{CC(100) - D(1)}
    153 -- (-/0) --> 29_30((29 30))
    153 --> 154[NOTE 03]
    154 --> 155[BEGIN DO LOOP]
    155 --> 35_29((35 29))
    35_29 --> 156{CC(1) + 100}
    156 -- (-/0) --> 29_29((29 29))
    156 --> 157[N = ND(1)]
    157 --> 158{CC(1) + 200 - TG(N)}
    158 -- (-/0) --> 159[N = N - ND(1)]
    158 --> 160{N - ND(1)}
    160 -- (-/0) --> 161[N = N - ND(1)]
    160 --> 162{N - ND(1)}
    162 --> 163[TC(SIN(1)) = TC(SIN(1))  
CC(1) = 100  
TC(SIN(1)) = TC(SIN(1))  
CC(1) = 100  
100 * CC(1) = 200 - TG(N)]
    163 --> 164[END OF DO LOOP]
    164 --> 165[END OF DO LOOP]

```



```

graph TD
    Start([START]) --> 171{171}
    171 -- NO --> 172{172}
    171 -- YES --> 173{173}
    172 --> 174[174]
    174 --> 175{175}
    175 -- NO --> 176{176}
    175 -- YES --> 177[177]
    176 --> 178{178}
    178 -- NO --> 179{179}
    178 -- YES --> 180[180]
    179 --> 181{181}
    181 -- NO --> 182{182}
    181 -- YES --> 183[183]
    182 --> 184{184}
    184 -- NO --> 185{185}
    184 -- YES --> 186[186]
    185 --> 187{187}
    187 -- NO --> 188{188}
    187 -- YES --> 189[189]
    188 --> 190{190}
    190 -- NO --> 191{191}
    190 -- YES --> 192[192]
    191 --> 193{193}
    193 -- NO --> 194{194}
    193 -- YES --> 195[195]
    194 --> 196{196}
    196 -- NO --> 197{197}
    196 -- YES --> 198[198]
    197 --> 199{199}
    199 -- NO --> 200{200}
    199 -- YES --> 201[201]
    200 --> 202{202}
    202 -- NO --> 203{203}
    202 -- YES --> 204[204]
    203 --> 205{205}
    205 -- NO --> 206{206}
    205 -- YES --> 207[207]
    206 --> 208{208}
    208 -- NO --> 209{209}
    208 -- YES --> 210[210]
    209 --> 211{211}
    211 -- NO --> 212{212}
    211 -- YES --> 213[213]
    212 --> 214{214}
    214 -- NO --> 215{215}
    214 -- YES --> 216[216]
    215 --> 217{217}
    217 -- NO --> 218{218}
    217 -- YES --> 219[219]
    218 --> 220{220}
    220 -- NO --> 221{221}
    220 -- YES --> 222[222]
    221 --> 223{223}
    223 -- NO --> 224{224}
    223 -- YES --> 225[225]
    224 --> 226{226}
    226 -- NO --> 227{227}
    226 -- YES --> 228[228]
    227 --> 229{229}
    229 -- NO --> 230{230}
    229 -- YES --> 231[231]
    230 --> 232{232}
    232 -- NO --> 233{233}
    232 -- YES --> 234[234]
    233 --> 235{235}
    235 -- NO --> 236{236}
    235 -- YES --> 237[237]
    236 --> 238{238}
    238 -- NO --> 239{239}
    238 -- YES --> 240[240]
    239 --> 241{241}
    241 -- NO --> 242{242}
    241 -- YES --> 243[243]
    242 --> 244{244}
    244 -- NO --> 245{245}
    244 -- YES --> 246[246]
    245 --> 247{247}
    247 -- NO --> 248{248}
    247 -- YES --> 249[249]
    248 --> 250{250}
    250 -- NO --> 251{251}
    250 -- YES --> 252[252]
    251 --> 253{253}
    253 -- NO --> 254{254}
    253 -- YES --> 255[255]
    254 --> 256{256}
    256 -- NO --> 257{257}
    256 -- YES --> 258[258]
    257 --> 259{259}
    259 -- NO --> 260{260}
    259 -- YES --> 261[261]
    260 --> 262{262}
    262 -- NO --> 263{263}
    262 -- YES --> 264[264]
    263 --> 265{265}
    265 -- NO --> 266{266}
    265 -- YES --> 267[267]
    266 --> 268{268}
    268 -- NO --> 269{269}
    268 -- YES --> 270[270]
    269 --> 271{271}
    271 -- NO --> 272{272}
    271 -- YES --> 273[273]
    272 --> 274{274}
    274 -- NO --> 275{275}
    274 -- YES --> 276[276]
    275 --> 277{277}
    277 -- NO --> 278{278}
    277 -- YES --> 279[279]
    278 --> 280{280}
    280 -- NO --> 281{281}
    280 -- YES --> 282[282]
    281 --> 283{283}
    283 -- NO --> 284{284}
    283 -- YES --> 285[285]
    284 --> 286{286}
    286 -- NO --> 287{287}
    286 -- YES --> 288[288]
    287 --> 289{289}
    289 -- NO --> 290{290}
    289 -- YES --> 291[291]
    290 --> 292{292}
    292 -- NO --> 293{293}
    292 -- YES --> 294[294]
    293 --> 295{295}
    295 -- NO --> 296{296}
    295 -- YES --> 297[297]
    296 --> 298{298}
    298 -- NO --> 299{299}
    298 -- YES --> 300[300]
    299 --> 301{301}
    301 -- NO --> 302{302}
    301 -- YES --> 303[303]
    302 --> 304{304}
    304 -- NO --> 305{305}
    304 -- YES --> 306[306]
    305 --> 307{307}
    307 -- NO --> 308{308}
    307 -- YES --> 309[309]
    308 --> 310{310}
    310 -- NO --> 311{311}
    310 -- YES --> 312[312]
    311 --> 313{313}
    313 -- NO --> 314{314}
    313 -- YES --> 315[315]
    314 --> 316{316}
    316 -- NO --> 317{317}
    316 -- YES --> 318[318]
    317 --> 319{319}
    319 -- NO --> 320{320}
    319 -- YES --> 321[321]
    320 --> 322{322}
    322 -- NO --> 323{323}
    322 -- YES --> 324[324]
    323 --> 325{325}
    325 -- NO --> 326{326}
    325 -- YES --> 327[327]
    326 --> 328{328}
    328 -- NO --> 329{329}
    328 -- YES --> 330[330]
    329 --> 331{331}
    331 -- NO --> 332{332}
    331 -- YES --> 333[333]
    332 --> 334{334}
    334 -- NO --> 335{335}
    334 -- YES --> 336[336]
    335 --> 337{337}
    337 -- NO --> 338{338}
    337 -- YES --> 339[339]
    338 --> 340{340}
    340 -- NO --> 341{341}
    340 -- YES --> 342[342]
    341 --> 343{343}
    343 -- NO --> 344{344}
    343 -- YES --> 345[345]
    344 --> 346{346}
    346 -- NO --> 347{347}
    346 -- YES --> 348[348]
    347 --> 349{349}
    349 -- NO --> 350{350}
    349 -- YES --> 351[351]
    350 --> 352{352}
    352 -- NO --> 353{353}
    352 -- YES --> 354[354]
    353 --> 355{355}
    355 -- NO --> 356{356}
    355 -- YES --> 357[357]
    356 --> 358{358}
    358 -- NO --> 359{359}
    358 -- YES --> 360[360]
    359 --> 361{361}
    361 -- NO --> 362{362}
    361 -- YES --> 363[363]
    362 --> 364{364}
    364 -- NO --> 365{365}
    364 -- YES --> 366[366]
    365 -->
```

CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T
COMMON /IPRINT/ IP(80)
DIMENSION T(6220),D(2060),CD(2000),ND(100),DC(100),
TG(300),TWG(400),YC(160),TF(24),TST(50),TGR(100),
CC(300),TCS(250),TGA(135),
SIND(6),COS(6)
EQUIVALENCE (D(1),T(2061)),(CD(1),T(4121)),(ND(1),T(6121)),
(DC(1),D(1401)),(TG(1),T(1001)),(TWG(1),T(1301)),(TST(1),T(1701)),
(TGR(1),T(1751)),(YC(1),T(351)),(TF(1),T(4111)),(TGA(1),T(1851)),
(CD(11),CD(1851)),(TCS(1),CD(1401)),
(SIND(1),T(1401)),(COS(1),T(1461)),
(I,ND(26)),(N,ND(27)),(L,ND(28)),(K,ND(29)),(NS,ND(30)),
(MA,ND(31)),(KD,ND(32))
182  FORMAT (77H)  ***TBFH SUBR: FUEL/BOX STRUCT. INTEGRATION DATA A
      -TCS AND CC1 ARRAYS***,13X,20H** TBFH - (P(34) **/640 TCS )
185  FORMAT (1H 14,5E18 8)
186  FORMAT (640 CC1 )

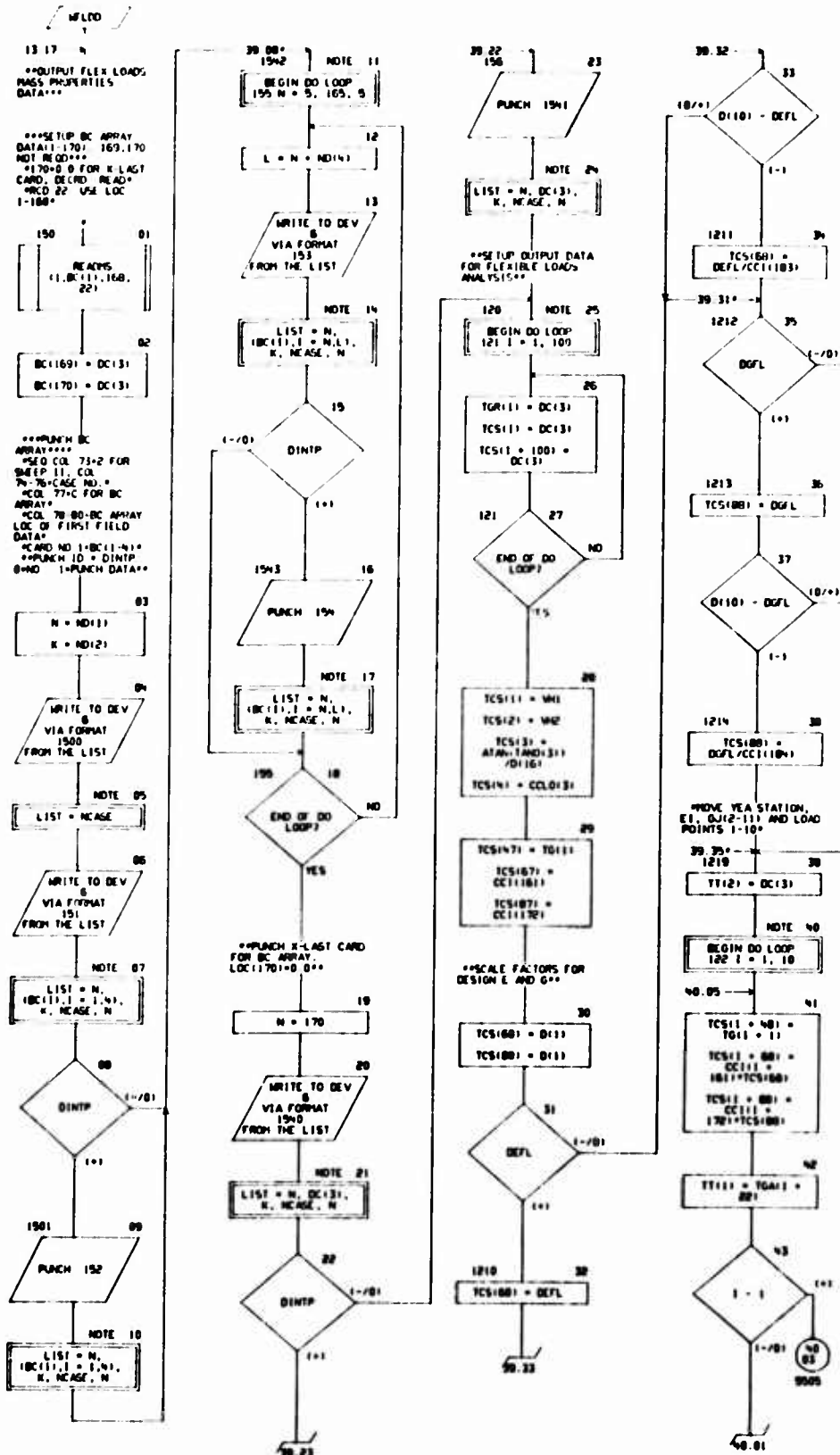
```

CHART TITLE INTERVIEW COMMENTS

*****SUBROUTINE WLD*****

*****PASS/EN SIGN DATA CALC OUTPUT FOR FILE LOGIC ED *****

CHART TITLE - SUBROUTINE WFLDO



1549

CHART TITLE - SUBROUTINE MFLSD

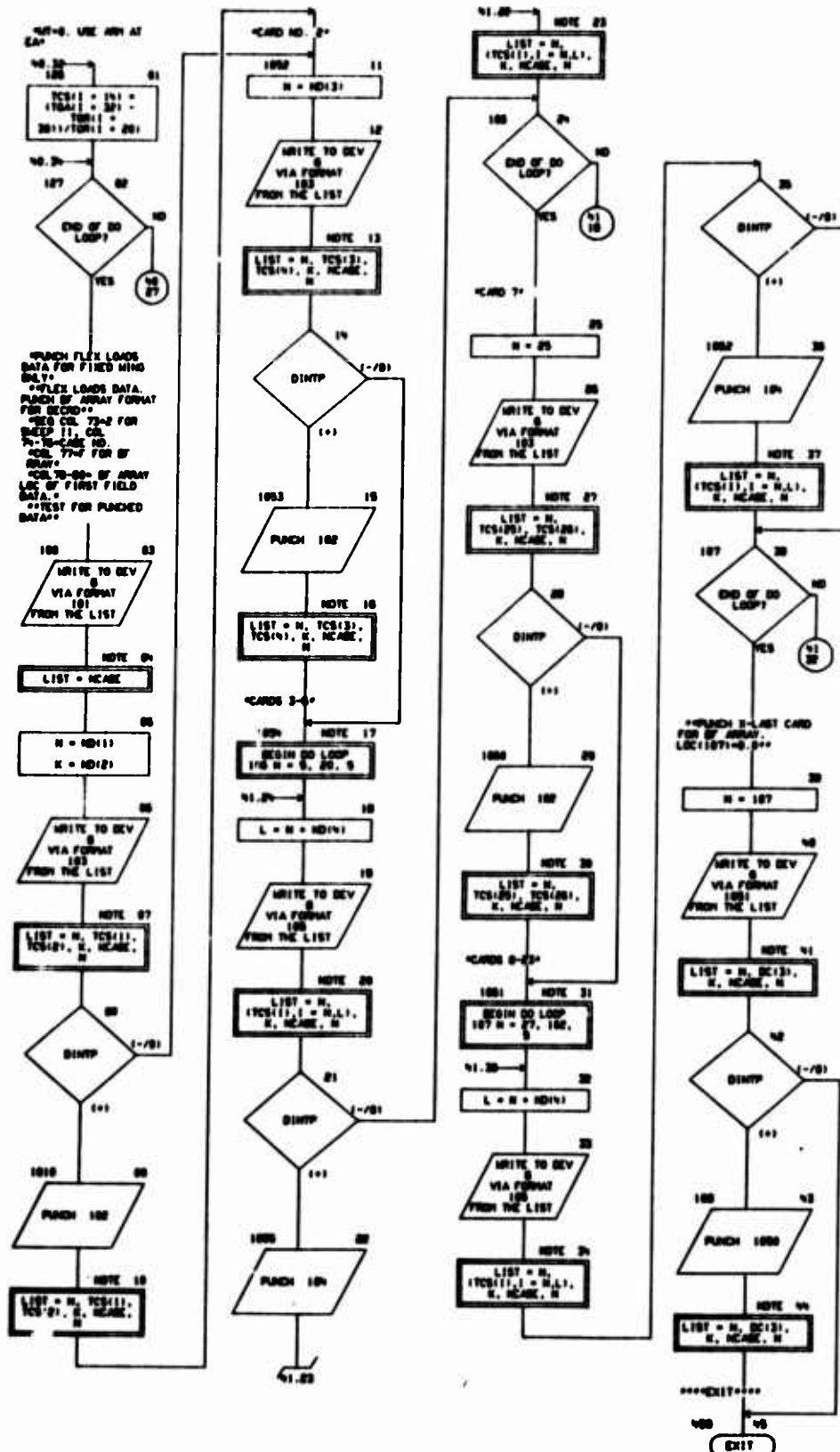


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON /PRINT/IP(80)
COMMON T
DIMENSION T(16220),D(2060),CD(2000),ND(100),DC(100),
VC(150),VTC(80),TG(300),TMG(400),TGA(135),CC(1300),TCS(250),
CLE(1150),CTE(1150),CFL2(1150),CFL1(1150),CHI(1150),
CCDL(1150),TST(50),TGR(100),CTB(150),
TAND(8),CCLO(8),SIND(8),COSO(6),
DFXF(2),DFXC(2),
BC(170),
TT(24)
EQUIVALENCE (D(1),T(2061)),(CD(1),T(4121)),(ND(1),T(6121)),
(DC(1),D(1401)),(TT(1),T(4111)),(VC(1),T(201)),(VTC(1),T(351)),
(B1502,T(161)),
(TG(1),T(1001)),(TMG(1),T(1301)),(TGA(1),T(1051)),
(TST(1),T(1701)),(TGR(1),T(1751)),(CTB(1),CD(351)),
(CLE(1),CD(651)),(CTE(1),CD(801)),(CFL1(1),CD(951)),
(CFL2(1),CD(1101)),(CHI(1),CD(1251)),(CCDL(1),CD(1501)),
(CCC(1),CD(1651)),(TCS(1),CD(1401)),(BC(1),CD(1401)),
(IN,ND(130)),(I,ND(28)),(IK,ND(31)),(IL,ND(28)),(INEASE,ND(60))
EQUIVALENCE (TAND(1),T(122)),(CCLO(1),T(131)),(SIND(1),T(1401)),
(COSO(1),T(146)),
(VM1,D(290)),(VM2,D(291)),
(DEF1,D(1292)),(DOFL,D(1293)),
(DINTP,D(1290)),
(DFXF(1),D(1271)),(DFXC(1),D(1274))
1500 FORMAT (12H) CASE NO.13,95H ***FLEXIBLE LOADS GENERAL DATA
      BC ARRAY DATA***,29X,11H** MFLD0 **/
151  FORMAT (3X,13,4E16 0,10X,11,13,1HC,13)
152  FORMAT (9X,13,4E12 5,12X,11,13,1HC,13)
153  FORMAT (3X,13,5E16 0,2X,11,13,1HC,13)
154  FORMAT (9X,13,5E12 5,11,13,1HC,13)
1540 FORMAT (2H -,1X,13,E16 0,66X,11,13,1HC,13)
1541 FORMAT (1H ,8X,13,E12 5,40X,11,13,1HC,13)
9503 FORMAT(1H1,70X,39H** CTOT (CALLED FROM MFLD0) - (P135) **)
101  FORMAT (12H) CASE NO.13,95H ***FLEXIBLE LOADS INERTIA DATA
      IF ARRAY DATA***,29X,11H** MFLD0 **/
102  FORMAT (9X,13,2F12 5,36X,11,13,1HF,13)
103  FORMAT (3X,13,2F16 5,50X,11,13,1HF,13)
104  FORMAT (9X,13,5E12 5,11,13,1HF,13)
105  FORMAT (3X,13,5E16 0,2X,11,13,1HF,13)
1050 FORMAT (1H-,8X,13,E12 5,40X,11,13,1HF,13)
1051 FORMAT (2H -,1X,13,E16 0,66X,11,13,1HF,13)

```

CHART TITLE - INTRODUCTORY COMMENTS

```
*****  
*****SUBROUTINE MWTD*****  
**PASS/DESIGN DATA EVALUATION FOR FLUTTER OPT. PROGRAM**  
*****
```

CHART TITLE - SUBROUTINE MWDO

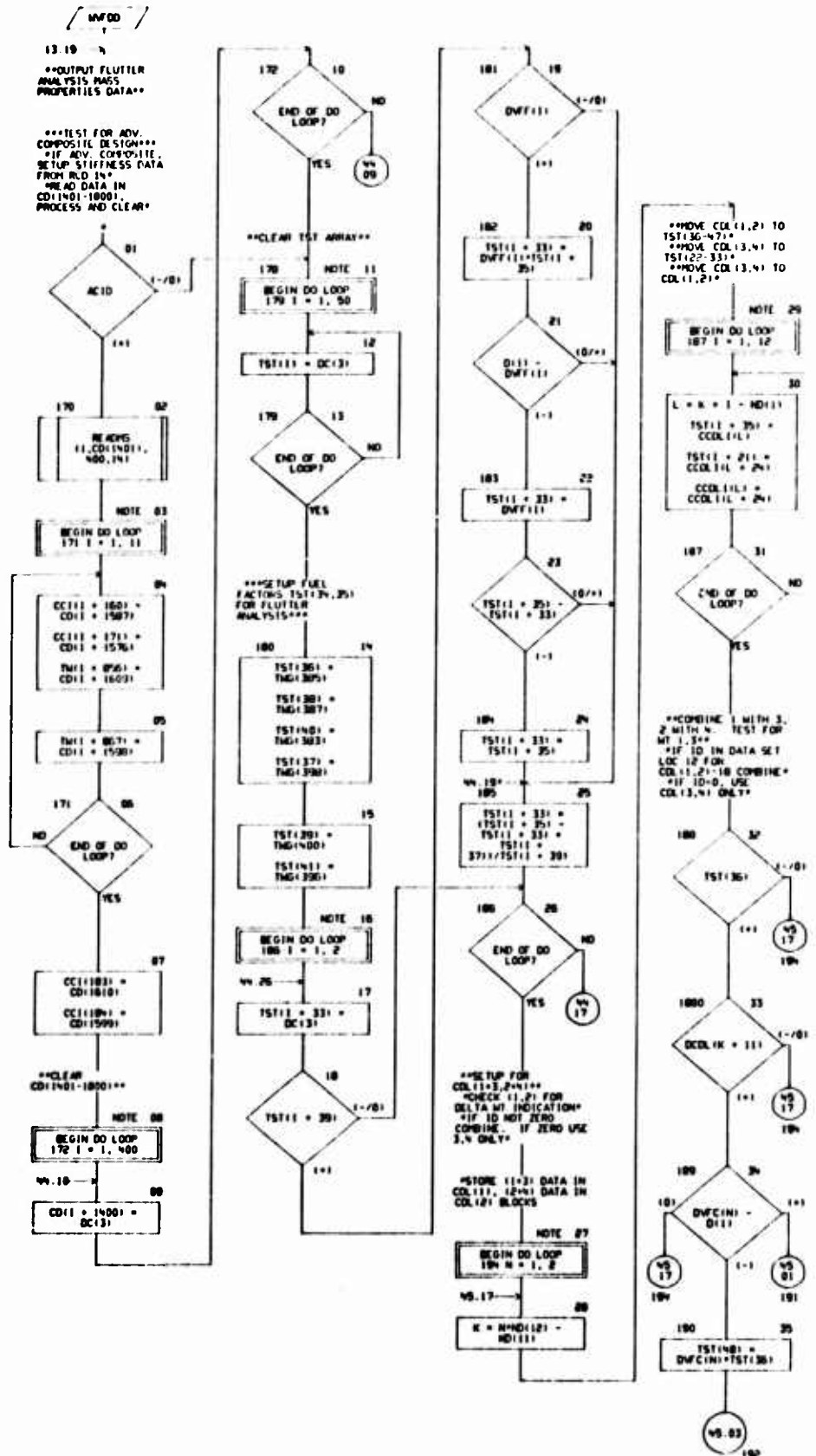


CHART TITLE - SUBROUTINE MWDO

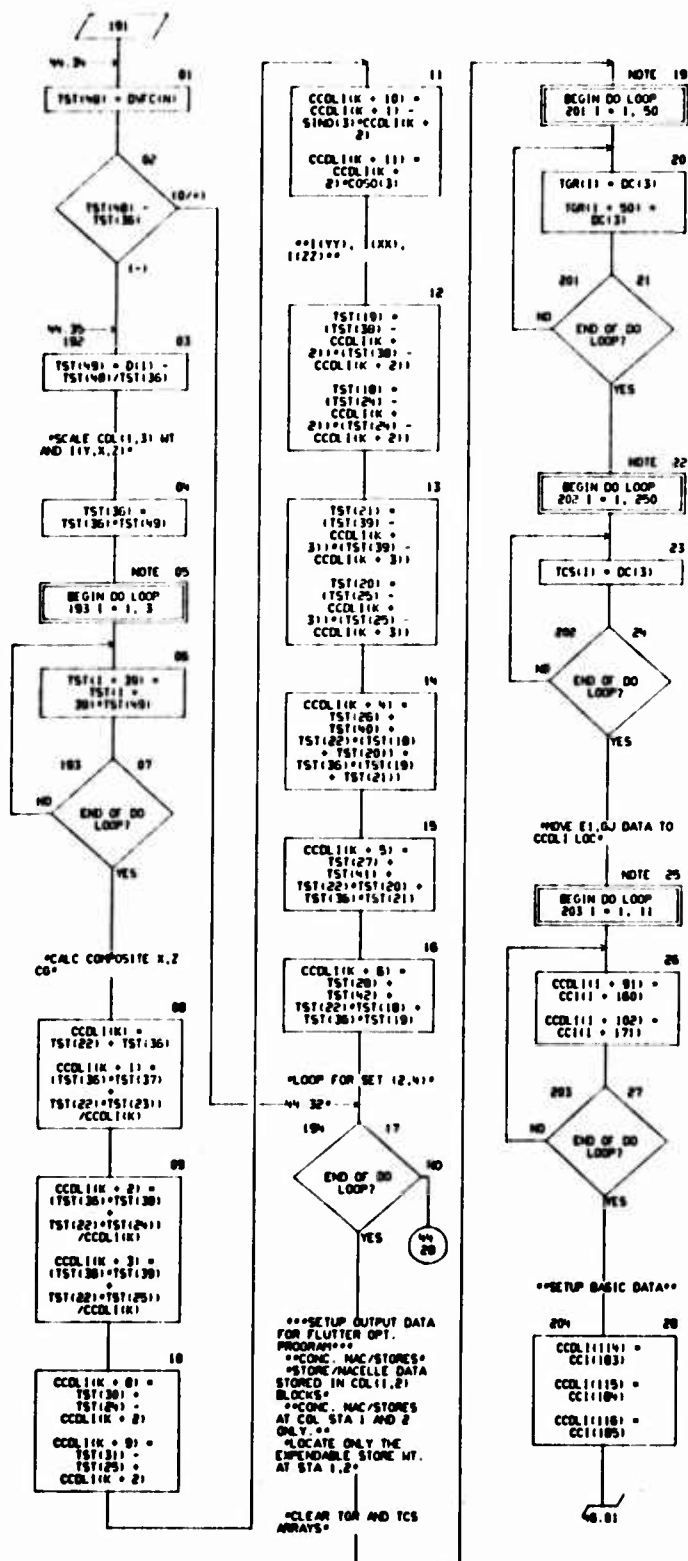


CHART TITLE - SUBROUTINE WYDO

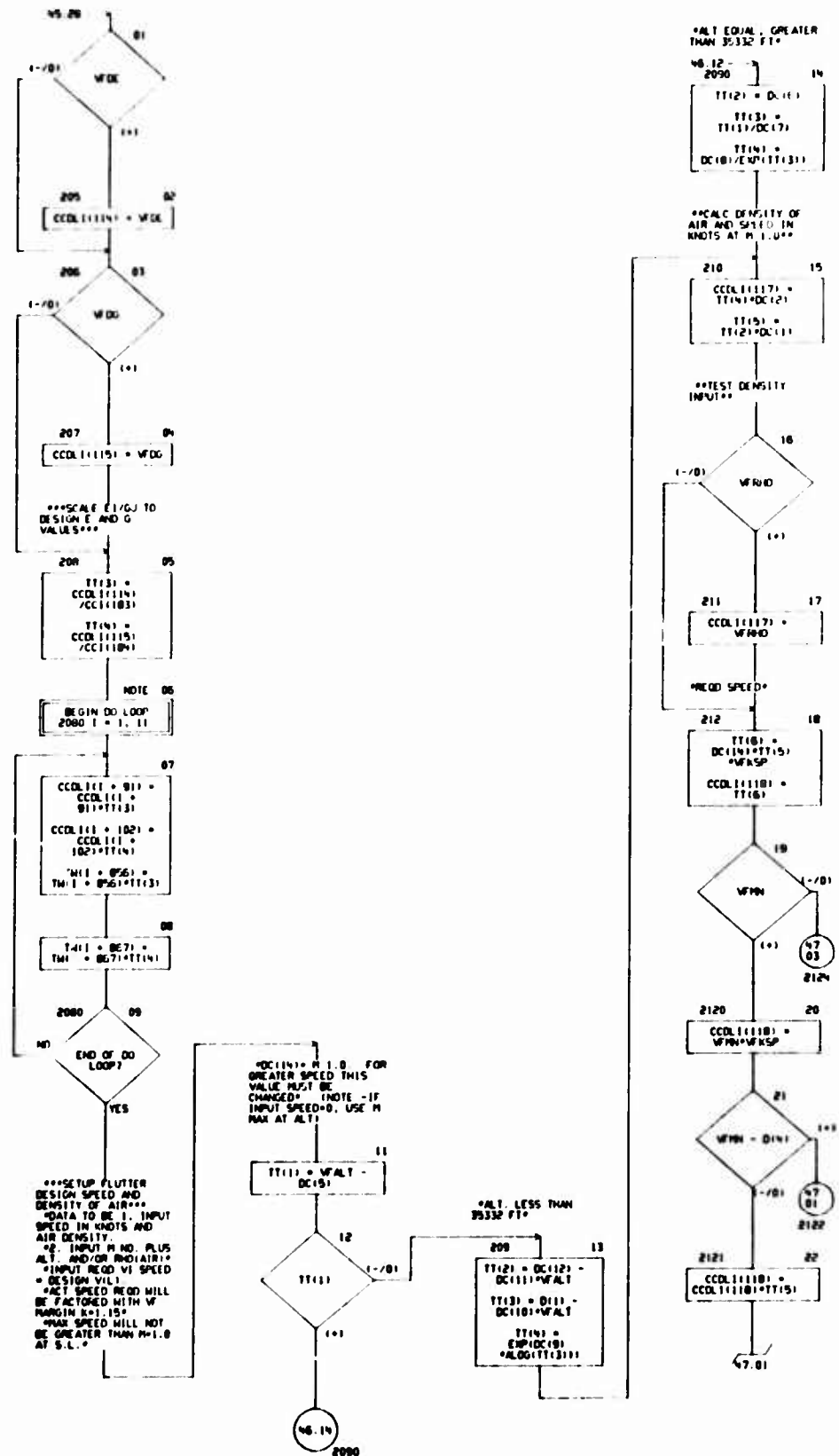
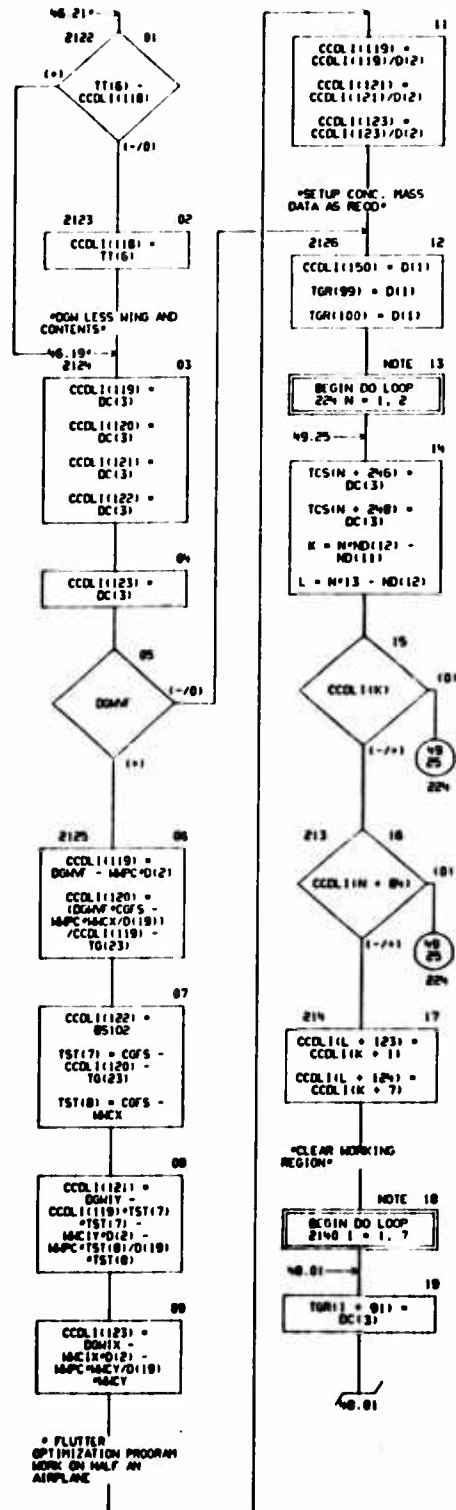


CHART TITLE - SUBROUTINE WFFDO



```

graph TD
    4718((4718)) --> 2140{2140}
    2140 -- NO --> 4719((4719))
    2140 -- YES --> 4718
    style 2140 fill:#fff,stroke:#000,stroke-width:1px
    style 4718 fill:#fff,stroke:#000,stroke-width:1px
    style 4719 fill:#fff,stroke:#000,stroke-width:1px
  
```

TST(28) =
CCOL1(K)
*CCOL1(K) * 2)

TST(29) =
CCOL1(K) *
2)*SIND(3)

```

TST(29) =
CCOL1K1
*CCOL1K1 *
3)*CCOL1K1 * 3) *
TST(29) * TST(29))

TST(30) =
CCOL1K1
2)*COSO13)

```

$TS1(30) =$
 $CCDL1(K)$
 $+ (CCDL1(K) +$
 $1) * CCDL1(K) + 31) *$
 $ST(30) * TS1(30))$
 $CCDL1(L) = 1271 +$
 $CCDL1(K)$

```
CCDL1(L * 128) *  
TST(28) = SIN(0.3)  
CCDL1(L * 129) *  
TST(28) = COS(0.3)  
CCDL1(L * 130) *  
CCDL1(L * 128)
```

```
CCDL1(L * 131) =  
CCDL1(L * 129)  
CCDL1(L * 131) =  
TST(29) *  
CCDL1(K *  
9)*COSO(1)  
*COSO(1)  
CCDL1(K *  
9)*SINO(1)  
*SINO(1)
```

```
CCCL11L = 132) =
  1TST(20)
  *CCCL11K = 21 -
  CCCL11K = 51 =
    CCCL11K =
    41)*SIND(3)
    *COS(13)

CCCL11L = 134) =
  CCCL11L = 132)
```

```
CCDL1(L * 135) *  
TST(30) *  
CCDL1(K *  
9)*SINO(3)  
*SINO(3) *  
CCDL1(K *  
4)*COSO(3)  
*COSO(3)
```

```

**CHECK FOR RELATIVE
LOC OF CDL(1) TO
CONTROL STATIONS**
*IF ABS(1) WITHIN
1.0 INCH-DC(16)- OR
.01*(Y(1)-Y(1-1))
*SET CDL AT THAT
STATION. NO ADD-MASS
STATION REQ.*
*SET STATION NO TO
(1-1) FOR CARD TYPE
(6,0,11,12) SKIP*

```

1 - NO121

```

TGR(15) = TG(1) -
CCOL(16) + 11
TST(7) = TG(1) -
TG(1) - 11
TST(8) =
DC(15)*TST(7)

```

2150 13
TST(0) = DC(10)

```

graph TD
    Start([START]) --> ReadT[READ T]
    ReadT --> ReadB[READ B]
    ReadB --> Decision{ABS(TOR(B)-TST(B)) < 1}
    Decision -- NO --> ReadT
    Decision -- YES --> PrintB[PRINT B]
    PrintB --> End([END])
  
```

48.15° 2152 15
TORIN = 981 = -
D11 - CCOL11501

49.25

Figure 1 shows a control system diagram. A reference input of 217 is fed into a summing junction. The output of the summing junction is the error signal e , which is also labeled as -48.16° . This error signal is fed into a block labeled $1/s$. The output of this block is $TST(1) = TG(1) - 11$, which is then fed into a block labeled $1/s$. The output of this second block is $TST(2) = TG(1)$, which is fed into a block labeled $1/s$. The output of this third block is $TST(3) = TG(1) + 11$, which is fed into a block labeled $1/s$. The output of this fourth block is $TST(4) = CGCL(1) = 90^\circ$.

20

TST(5) =
CCDL(1) = 91)

TST(6) =
CCDL(1) = 92)

TST(31) =
CCDL(1K) = 1)

9	TPINT	21
0	(TST(1),TST(4)	
1	,TST(3))	

CCOL1(L, 125) =
TT(2)
TST(4) =
CCOL1(I, 101)
TST(5) =
CCOL1(I, 102)
TST(6) =
CCOL1(I, 103)

23

TPINT
(TST(1),TST(4)
,TST(31))

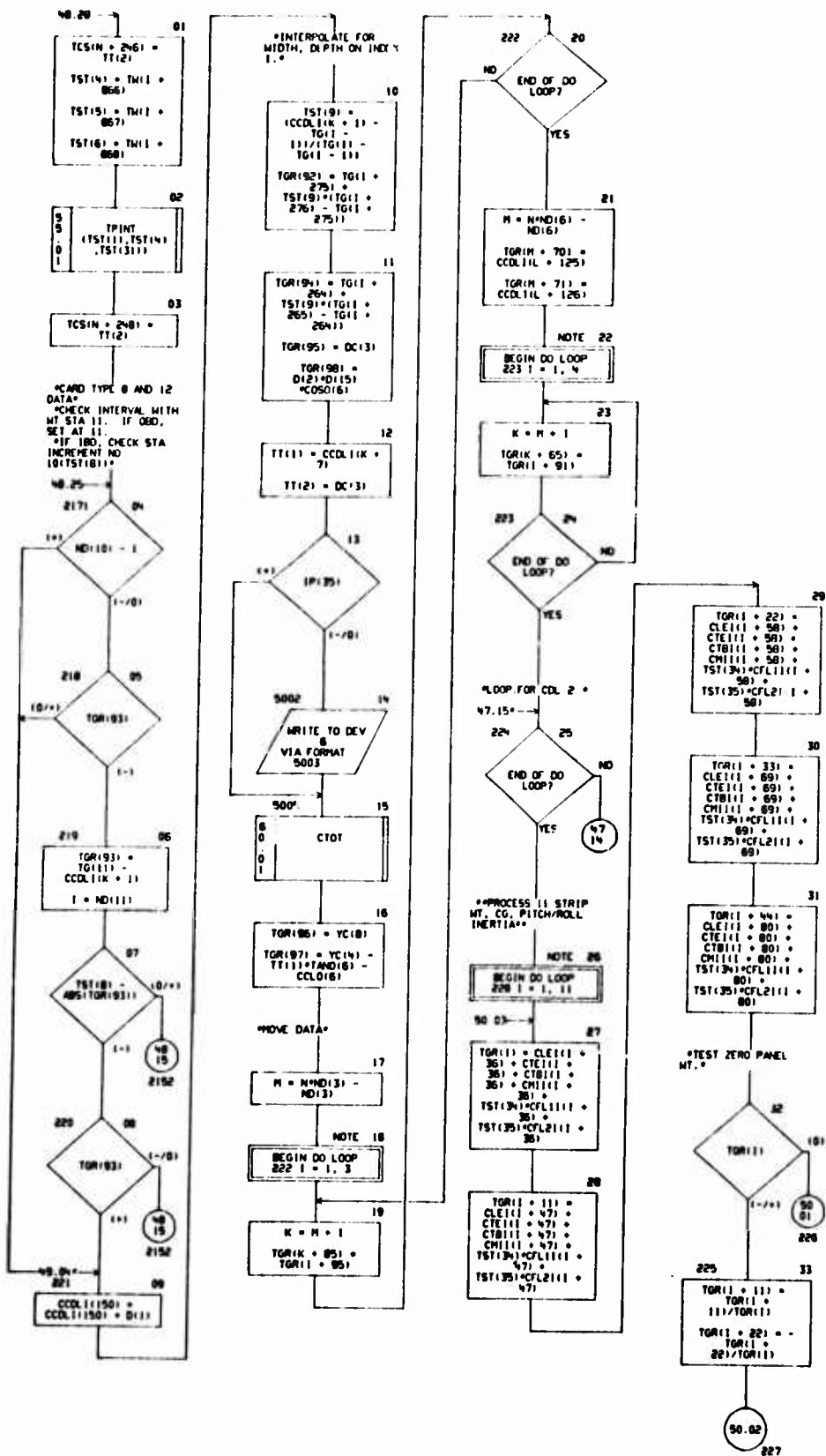
CCDL1(L * 126) *
TT(2)
TGRIN * 99) *
D(1) * CCDDL(150)

	2171
2170	26
TST(4) = TW(1) + 055)	
TST(5) = TW(1) + 056)	
TST(6) = TW(1) + 057)	

	27
TPINT (TST(1),TST(4) ,TST(3))	

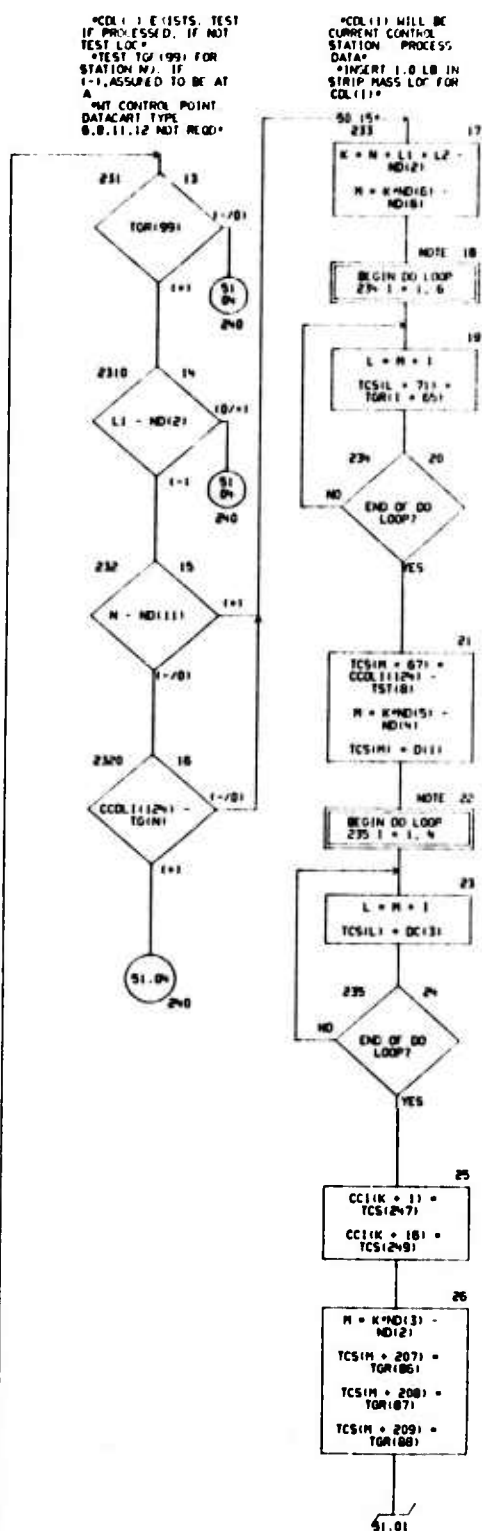
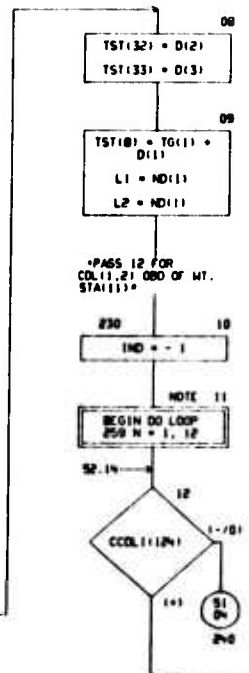
90.01

CHART TITLE - SUBROUTINE INFO




```

      01
      TGR11 = 111 *
      DC131
      TGR11 = 221 *
      DC131
      **ITYPE1 PITCH ABOUT
      CO**
      02
      TGR11 = 331 *
      TGR11 = 331 *
      TGR111TGR11 =
      221TGR11 = 221
      03
      END OF DO
      LOOP?
      YES
      47
      NO
      **PROCESS STRIP AND
      CONC. MASS DATA FOR
      OUTPUT**
      **ADJUST CONTROL
      STATIONS AS REQ'D FOR
      CONC. MASS**
      *M = MT ANALYSIS
      *L = CONTROL STATION
      INDEX. K1 MAX1 = 11 +
      2 = 13
      *L1 = CONC. MASS (11)
      10 1-TEST,
      2-PROCESS DO
      *L2 = CONC. MASS (21)
      10 1-TEST,
      2-PROCESS DO
      *CONTROL STATION (0)
      CARD TYPE 0 ONE**
      **CC111-301 = E.G
      DATA FOR CARD TYPE
      0**
      04
      TCS(66) = TG(277)
      TCS(67) = D(11)
      TCS(68) = TG(266)
      TCS(69) = DC131
      05
      TCS(70) =
      CCCL(192)
      TCS(71) =
      CCCL(1103)
      06
      CC(11) = TH(857)
      CC(116) = TH(868)
      *CONTROL STATION = MT
      STATION
      *CONTROL STATION = MT
      STATION + 1.0 INCH*
      *INITIALIZE BOUNDARY
      ID AT STATION 1. CARD
      TYPE 11 DATA*
      07
      TCS(156) = D(11)
      TCS(157) = D(11)
      TCS(158) = D(21)
      TCS(159) = D(13)
  
```



```

graph TD
    26((90.26)) --> 81[01  
M = K*ND(1) - ND(3)  
TCSIM = 1551 = TST(32)  
TCSIM = 1561 = TST(33)  
TCSIM = 1571 = TST(33)]
    81 --> 82[02  
TCSIM = 1501 = TST(33) + D(1)  
TST(32) = TST(33)  
TST(33) = TST(33) + D(1)]
    82 --> 83[03  
SET L1 = 2. CALC DELTA Y FOR CONTROL STA N-1  
L1 = ND(2)  
TST(81) = CCOL(1124)]
    83 --> 84[04  
**TEST COLD(12)**  
**CHECK TGR(100) FOR VALID CONTROL STA NO DATA RECORD FOR *CARD TYPES 6,8,11,12**  
90.12*  
240{04  
CCOL(1137) (-/0)  
(+) 51 22 250  
(-) 241{05  
TGR(100) (-/0)  
(+) 51 22 250  
(-) 2410{06  
L2 = ND(2)  
(+) 51 22 250  
(-) 242{07  
N = ND(11)  
(+) 51 22 250  
(-) 2420{08  
2420{08  
CCOL(1137) - TGR(1)  
(+/0)  
(+) 51 22 250  
(-) 243{09  
K = N + L1 + L2 - ND(2)  
M = K*ND(6) - ND(6)  
NOTE 10  
BEGIN DO LOOP  
244 I = 1, 6  
51.12{11  
L = M + 1  
TCSIL = 711 = TGR(1) + 711  
244{12  
END OF DO LOOP?  
YES 51 11 11  
NO 245{13  
TCSIM = 671 = CCOL(1137) - TST(81)  
M = K*ND(5) - ND(4)  
TCSIM = D(1)  
NOTE 14  
BEGIN DO LOOP  
245 I = 1, 4  
15{15  
L = M + 1  
TCSIL(1) = DC(3)  
245{16  
END OF DO LOOP?  
YES 17{17  
CCILK(1) = TCS(248)  
CCILK(16) = TCS(250)  
2450{18  
M = K*ND(3) - ND(2)  
TCSIM = 2071 = TGR(89)  
TCSIM = 2081 = TGR(90)  
TCSIM = 2091 = TGR(91)  
19{19  
M = K*ND(4) - ND(3)  
TCSIM = 1551 = TST(32)  
TCSIM = 1561 = TST(33)  
TCSIM = 1571 = TST(33)  
20{20  
TCSIM = 1581 = TST(33) + D(1)  
TST(32) = TST(33)  
TST(33) = TST(33) + D(1)  
21{21  
SET L2 = 2. CALC DELTA Y FOR CONTROL STA N-1  
L2 = ND(2)  
TST(81) = CCOL(1137)  
22{22  
PROCESS BASIC STRIP DATA  
51.04*  
250{22  
N = ND(11)  
(+/0) 52 14 250  
(-) 2500{23  
K = N + L1 + L2 - ND(2)  
M = K*ND(5) - ND(4)  
TCSIM = TGR(N)  
TCSIM = 11 = TGR(N + 44)  
24{24  
TCSIM = 21 = TGR(N + 33)  
TCSIM = 31 = TGR(N + 22)  
TCSIM = 41 = DC(3)  
25{25  
CARD TYPE 8 DATA. 8/CARD. SECOND FIELD=N-1 DATA  
25{25  
M = K*ND(6) - ND(5)  
TCSIM = 711 = TGR(N + 276)  
26{26  
N = ND(11)  
(+/0) 52 01 2502  
(-) 2501{27  
TCSIM = 741 = ATAN(TAN(31) / D(16))  
52.02 2503

```

CHART TITLE - SUBROUTINE WFOO

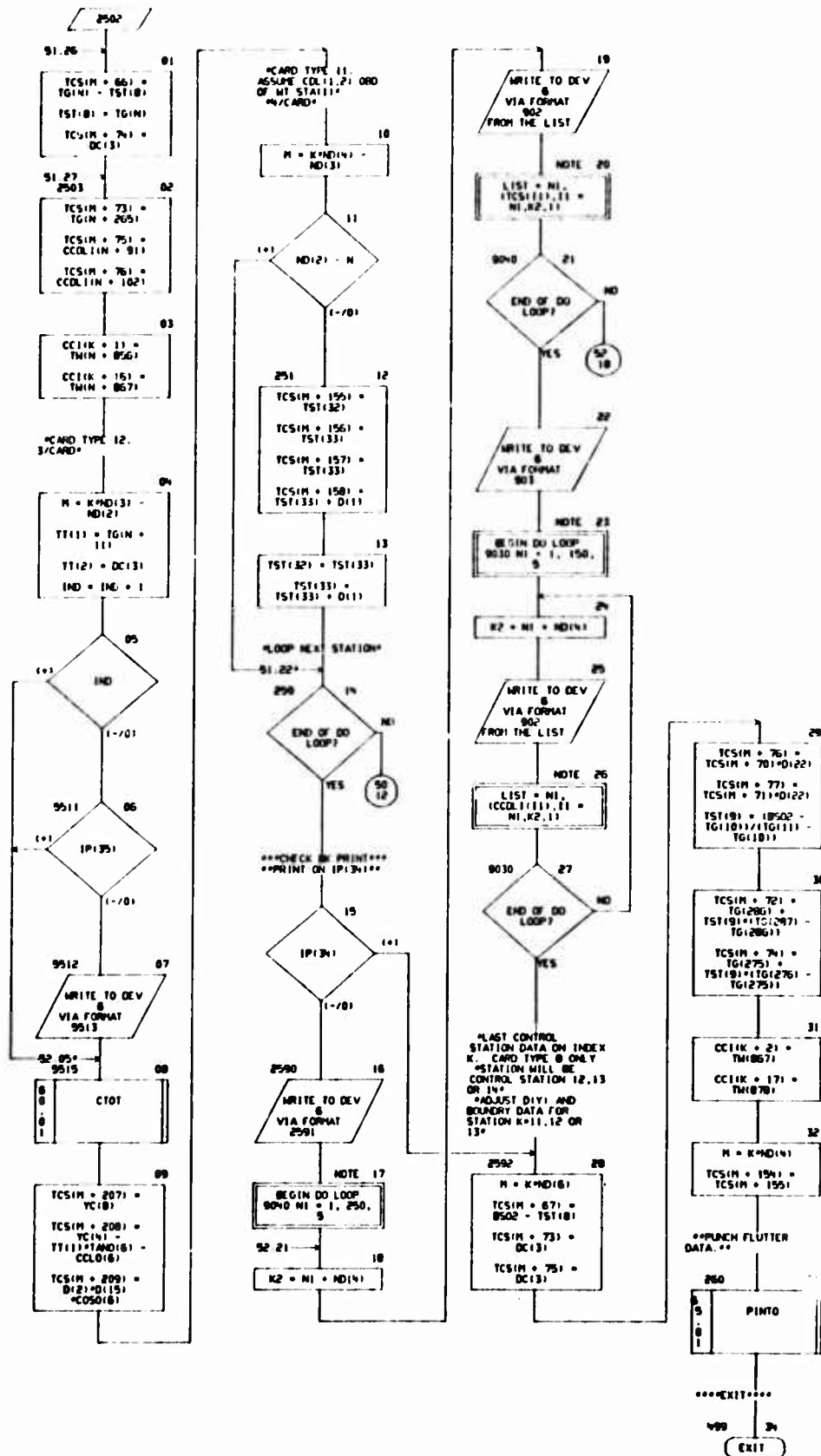


CHART TITLE - MAIN PROCEDURAL STATEMENTS

```

COMMON T
COMMON /IPRINT/ IP(80)
DIMENSION T(1201,D(2060),CD(2000),ND(100),DC(100),TW(900),
VC(150),VTC(60),TG(300),TWG(400),CC(1300),TCS(250),
CLE(1150),CTE(1150),CFL(11150),CFL2(1150),CMT(1150),
CCCL(1150),TST(50),TGR(100),CTB(1150),
TAND(9),CCLO(9),SINO(6),COSO(6),
DWF(2),DWC(2),
DCDL(100),
TT(24)
EQUIVALENCE (D(1),T(2061)),(CD(1),T(4121)),(ND(1),T(6121)),
(DC(1),D(1401)),(TT(1),T(4111)),(VC(1),T(2011)),(VTC(1),T(3511)),
(TG(1),T(1001)),(TW(1),T(6211)),(TST(1),T(1511)),
(TGR(1),T(1001)),(TWG(1),T(13011)),
(TST(1),T(17011)),(TGR(1),T(17511)),(CTB(1),CD(3511)),
(CLE(1),CD(6511)),(CTE(1),CD(8011)),(CFL(1),CD(9511)),
(CFL2(1),CD(11011)),(CMT(1),CD(12511)),(CCCL(1),CD(15011)),
(CCC(1),CD(16511)),(TCS(1),CD(14011)),
(IAC(1),D(14301)),
(IN,ND(301),I,ND(291),K,ND(311),L,ND(281),M,ND(271))
EQUIVALENCE (TAND(1),T(1221)),(CCLO(1),T(1311)),(SINO(1),T(1401)),
(COSO(1),T(1461)),(VFKSP,D(3091)),
(DGMF,D(2951)),(CCFS,D(2961)),(DGMF,D(2971)),(DGMF,D(2981)),
(IMPC,D(2991)),(IMCY,D(3001)),(IMCX,D(3011)),
(IMCY,D(3021)),(IMCX,D(3031)),(WFMN,D(3041)),
(WFAL,D(3051)),(WFRH,D(3061)),(WFDC,D(3071)),(WFDG,D(3081)),
(DWFF(1),D(2761)),(DWC(1),D(2781)),(DCDL(1),D(18551))
9003 FORMAT(1H,70X,39H** CTOT (CALLED FROM MWDO) - (P135) **)
9513 FORMAT(1H,59X,50H** CTOT (CALLED FROM MWDO - LOOP 299) - (P135)
**)
2991 FORMAT(1H,5X,78H**DATA GENERATION SUBR FOR FLUTTER OPTIMIZATION
PROGRAM--FINAL DATA ARRAYS***,6X,20H** MWDO - (P134) **/END TCS )
902 FORMAT (1H,14,5L18.0)
903 FORMAT (8H0CCDL)

```

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE TPINT*****

PARABOLIC CURVE FIT AND EVALUATION

TPINT

*YI=ABSCISSAS,
XI=ORDINATES.
YO=EVALUATION PT.
*NO LOCATED IN
T1:21*

```

**MOVE DATA**
**NORMALIZE R(1)00

```

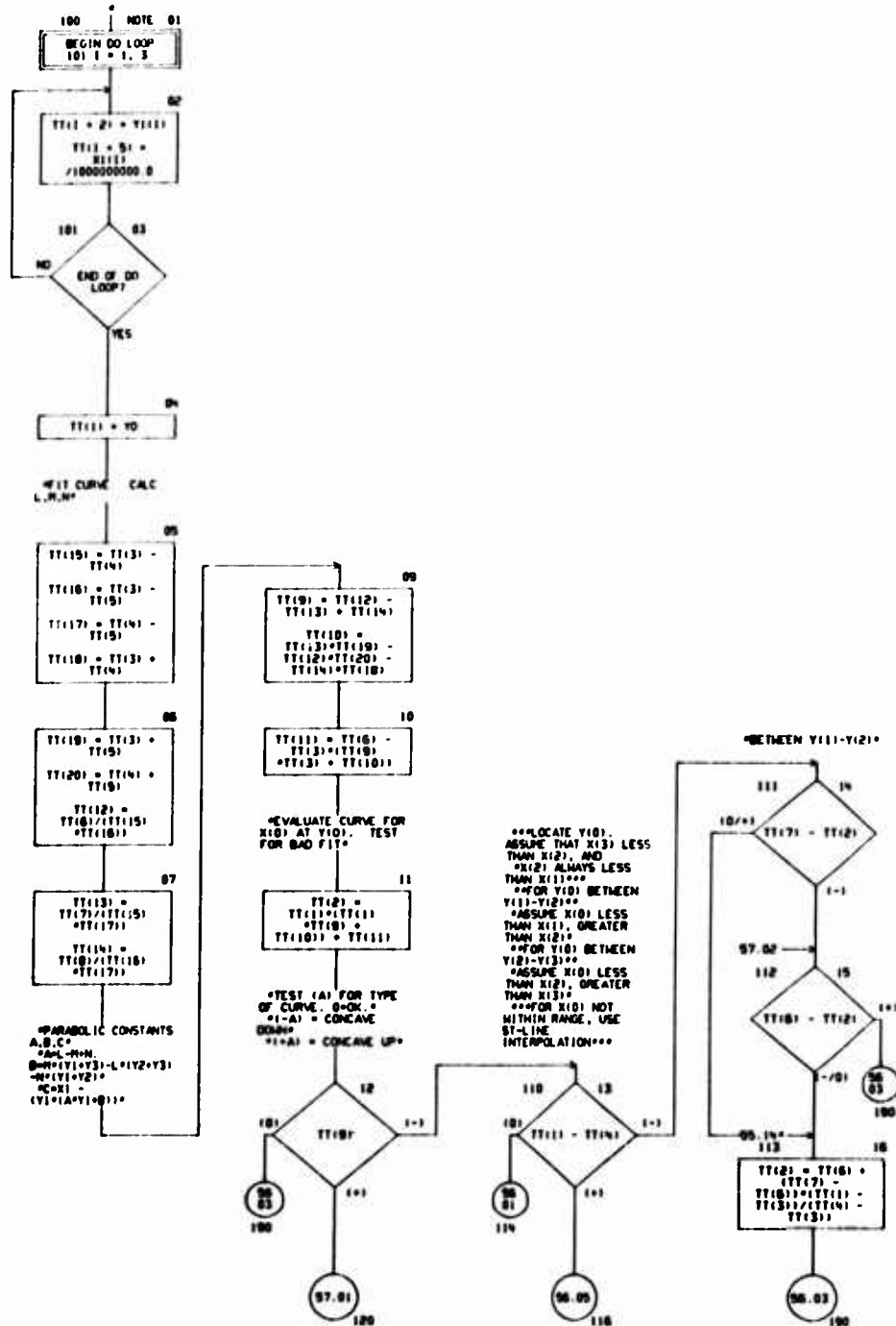


CHART TITLE - SUBROUTINE TPINT(Y1,X1,Y0)

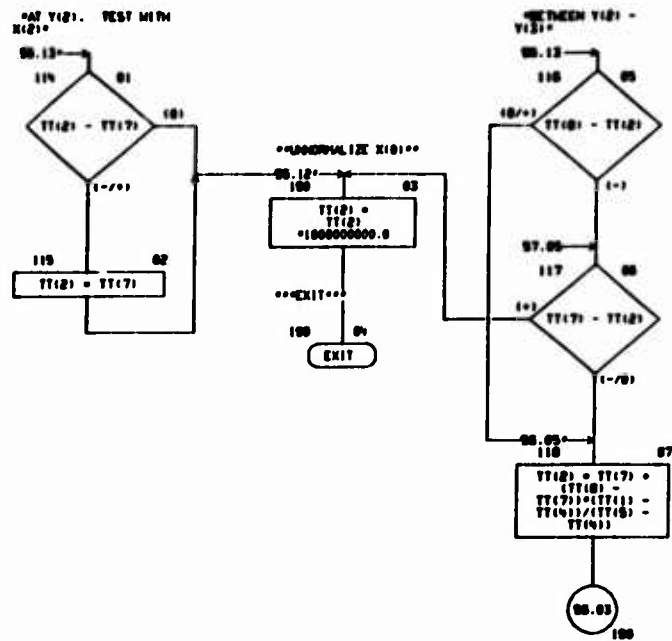


CHART TITLE - SUBROUTINE TPINT(Y1,X1,Y0)

***CONCAVE DOWN.
 X(2) MAY BE LESS OR
 GREATER THAN X(1)***
 ***IF GREATER, X(3)
 MAY BE LESS OR
 GREATER THAN X(2)***
 **TEST FOR RELATIVE
 VALUE OF X(2), X(3)
 AND LOCATE Y(0)**
 **FOR Y(0) BETWEEN
 Y(1)-Y(2)**
 **ASSUME VALUE OF
 X(0) BETWEEN
 X(1)-X(2)**
 **SAVE FOR Y(0)
 BETWEEN Y(2) AND
 Y(3)**

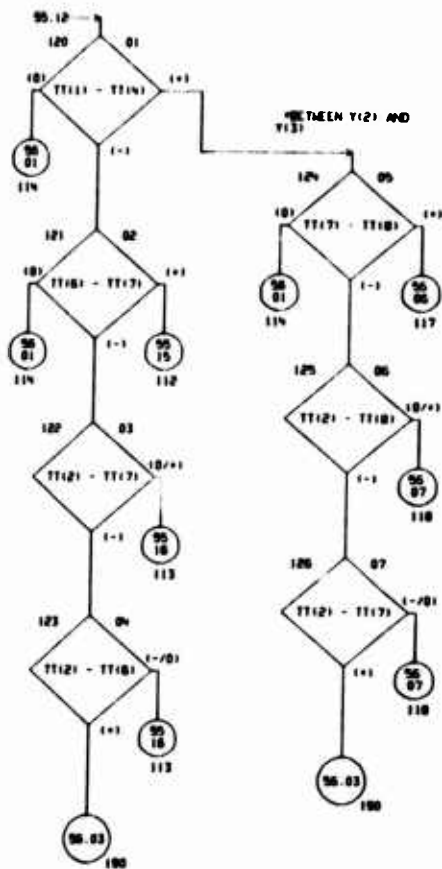


CHART TITLE - NON-PROCEDURAL STATEMENTS

COMMON 7

DIMENSION T(16220),D(2060),CD(2000),ND(100),DC(100),
TT(20),

V(13),X(13)

EQUIVALENCE (D(1),T(2061)),(CD(1),T(4121)),(ND(1),T(6121)),

(DC(1),D(1401)),(TT(1),T(4111)),

(1,ND(321))

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AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 50

CHART TITLE - INTRODUCTORY COMMENTS

.....

*****SUBROUTINE CTOT*****

PLATFORM CHORD EVALUATION

.....

CHART TITLE - SUBROUTINE CTOT

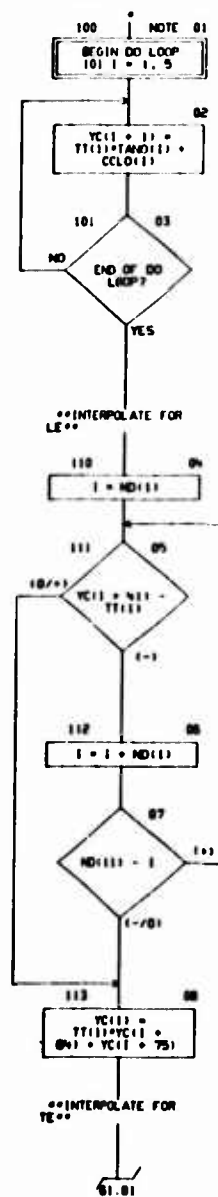
CTOT

40.034--3

*****BASIC
VERSION OF SUBROUTINE
CTOT--OVERLAY
(17,0)*****
***SAME AS SUBR
CTOT1 IN OVERLAY
(14,0)***
***SAME AS SUBR
CTOT2 IN OVERLAY
(15,0)***

**BLENDED WING LE/TE
INTERPOLATION
SUBROUTINE TO
CAERO**
*INTERPOLATE FOR
AERO CHORD AND 1/C
FOR GIVEN Y(A)*
*INTERPOLATE FOR
STRUCTURAL CHORD DATA
IF X(A) GIVEN*

Y(1)=TT(1),
X(1)=TT(2)
***CALC AERO DATA AT
Y(1)***



:1570

1571

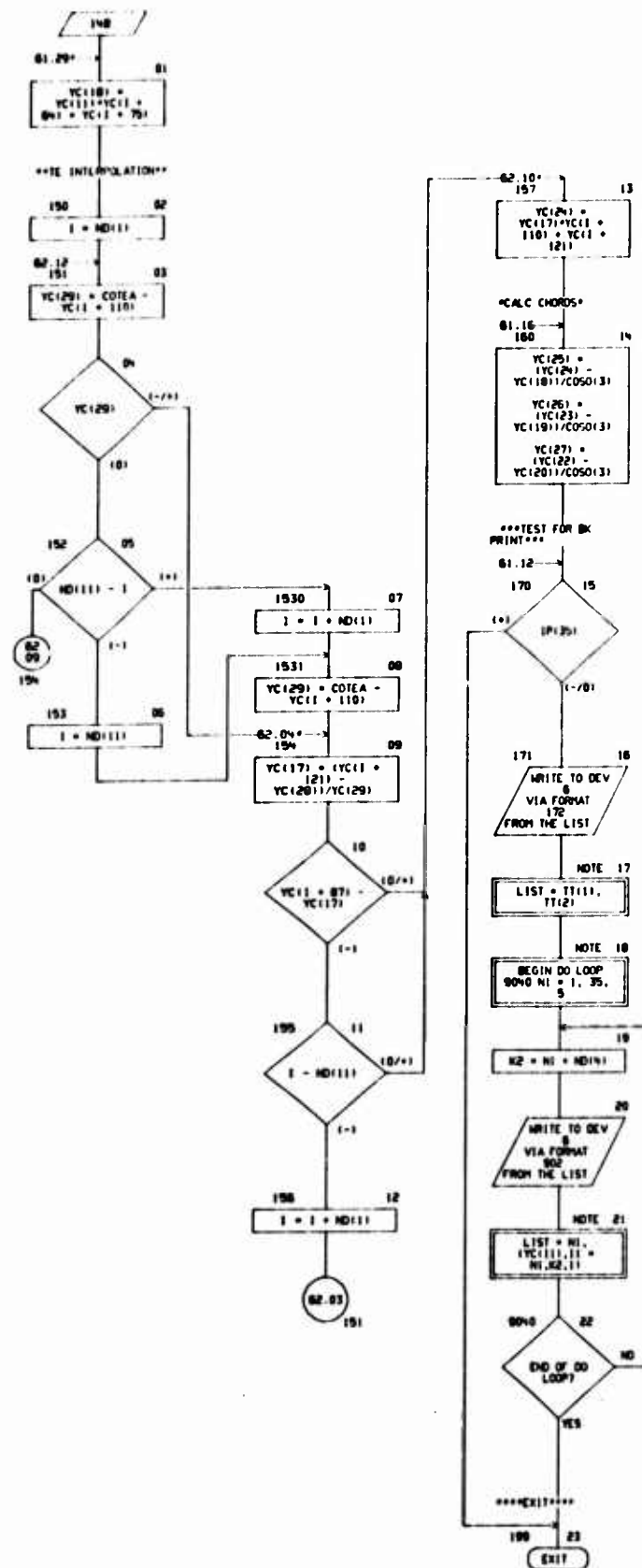


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T
COMMON /IPRINT/ (P180)
DIMENSION T(6220),D(2060),CD(2000),ND(100),DC(100),
YC(150),TT(124),YTC(60),
TAND(9),CCLO(9),SIND(6),COSO(6)
EQUIVALENCE (D(1),T(2061)),(CD(1),T(4121)),(ND(1),T(6121)),
(YC(1),T(201)),(TT(1),T(411)),(DC(1),D(1401)),(YTC(1),T(351)),
(TAND(1),T(122)),(CCLO(1),T(131)),(SIND(1),T(140)),
(COSO(1),T(146)),
(COTE, T(152))
172  FORMAT(1H,20X,7HT(1) =,FB,3.5X,7HT(2) =,FB,3/6H YC)
172  FORMAT(20H0 ***C101 SUEP--(P=33*** ,//3X,2F12.3,/6H0 YC)
902  FORMAT(1H 14,5E10.8)

```

06/10/74

AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 64

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE PINTO*****

PASS/DESIGN DATA PUNCH/PRINT FOR FLUT. OPT. PROGRAM

CHART TITLE - SUBROUTINE PINTO

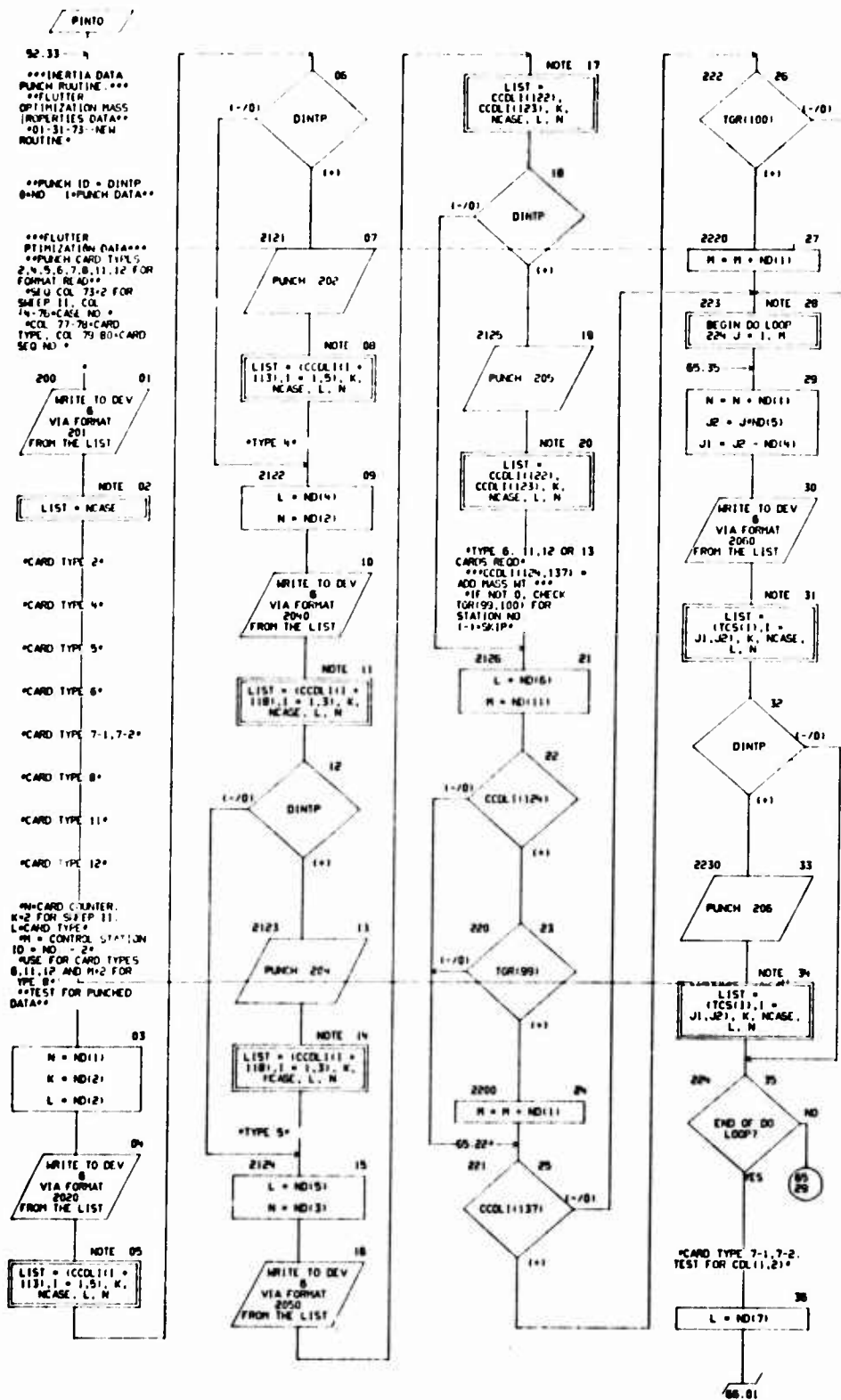


CHART TITLE - SUBROUTINE PINTO

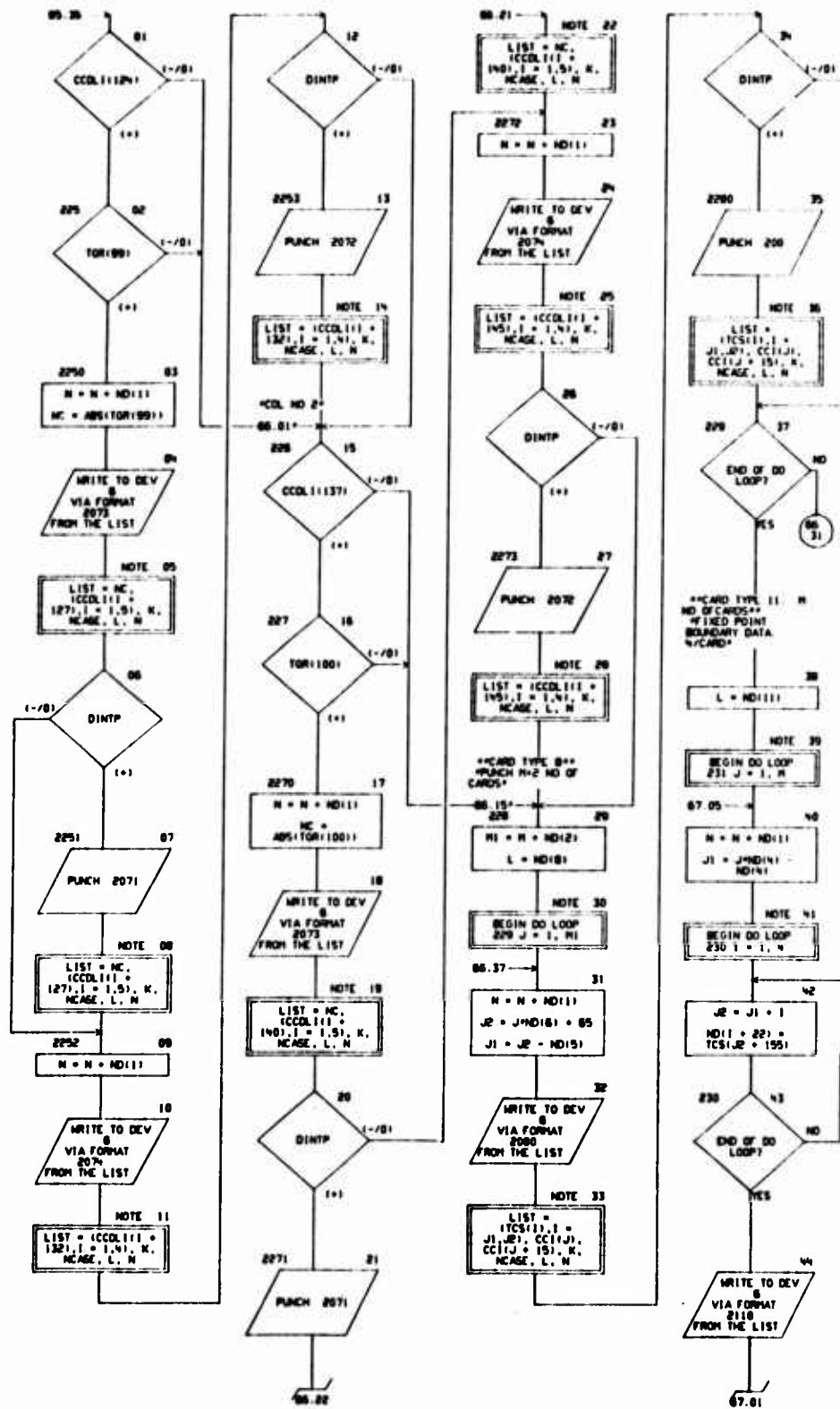


CHART TITLE: SUBROUTINE PINTO

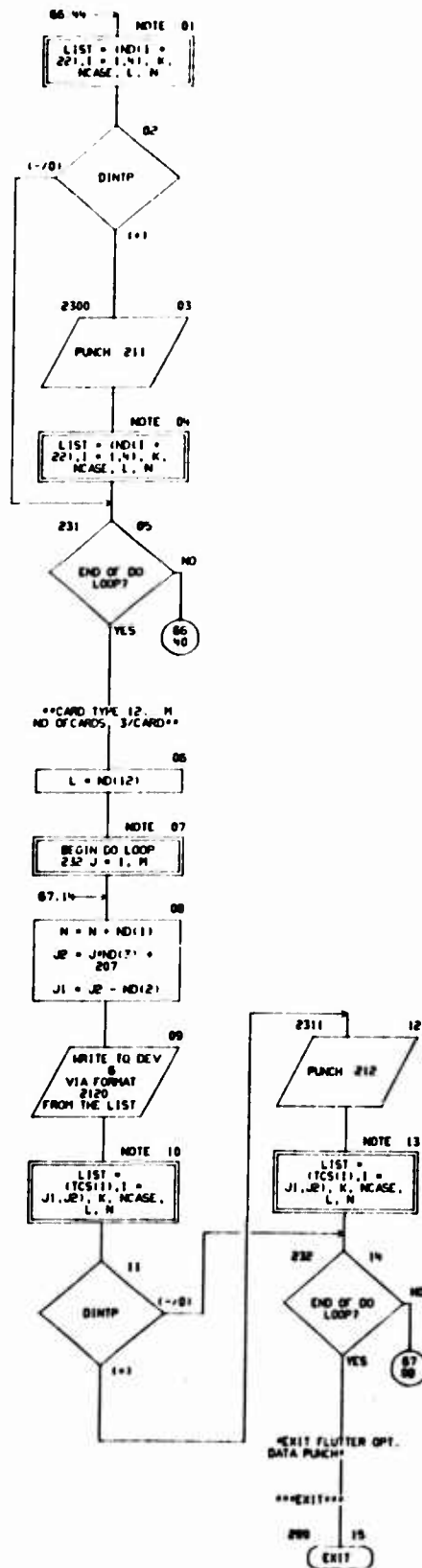


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T
DIMENSION T(16320),D(2060),CD(2000),ND(100),DC(100),
CCDL(150),TGR(100),
CC(1300),
TCS(250)
EQUIVALENCE (D(1),T(2061)),(CD(1),T(4121)),(ND(1),T(6121)),
(CD(1),D(1401)),(TCS(1),CD(1401)),
(CCDL(1),CD(1501)),(TGR(1),T(1751)),
(CC(1),CD(1651)),
(IDINTP,D(2001)),
(N,ND(301),11,ND(291),1K,ND(311),1MCASE,ND(601))
201  FORMAT (12H) CASE NO 13,62H ***FLUTTER OPTIMIZATION DATA.
      (MOD, CARD IMAGE DATA)***,22X,11H** PINTO **//)
202  FORMAT (5E12.5,12X,11,13,12,12)
2020  FORMAT (3X,5E16.0,16X,11,13,12,12)
204  FORMAT (12X,3E12.5,24X,11,13,12,12)
2040  FORMAT (19X,3E16.0,32X,11,13,12,12)
205  FORMAT (2E12.5,48X,11,13,12,12)
2050  FORMAT (3X,2E16.0,64X,11,13,12,12)
206  FORMAT (5E12.5,12X,11,13,12,12)
2060  FORMAT (3X,5E16.0,16X,11,13,12,12)
2071  FORMAT (112,5E12.5,11,13,12,12)
2072  FORMAT (4E12.5,24X,11,13,12,12)
2073  FORMAT (3X,116,5E16.0,11,13,12,12)
2074  FORMAT (3X,16X,4E16.0,16X,11,13,12,12)
208  FORMAT (4F6.2,4E12.5,11,13,12,12)
2080  FORMAT (3X,4F8.2,4E16.0,11,13,12,12)
211  FORMAT (4112,24X,11,13,12,12)
2110  FORMAT (3X,4116,32X,11,13,12,12)
212  FORMAT (3E12.5,36X,11,13,12,12)
2120  FORMAT (3X,3E16.0,48X,11,13,12,12)

```