<table>
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<th>REVISIONS</th>
<th>EFFECTIVITY</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong></td>
<td>LM-4 TNR LM-15</td>
<td>ADDED NA GND (3) PLACES. REMOVED SHLD CONNECTION AT WIRES DI163/DI166.</td>
</tr>
<tr>
<td><strong>2</strong></td>
<td>NO RQD</td>
<td>E.O. A2 ON PIN B75 PIN 14 BECOMES PIN 22. WIPE26-1 BECOMES WIPE 2-13-1; (703) BECOMES (705). ON PIN B75 PIN 5 BECOMES WIP 2-13-2; ON PIN B75 PIN 9 BECOMES WIP 2-13-3.</td>
</tr>
<tr>
<td><strong>3</strong></td>
<td></td>
<td>E.O. A3 DELETED WIRE N234 FROM PWL XI. CONNECTED PIN &quot;G&quot; OF CONN. J222 TO NA GND.</td>
</tr>
<tr>
<td><strong>4</strong></td>
<td></td>
<td>E.O. A4 DELETED MEAS. NO. GG2301T TO PSAAM AND ASSOCIATED GFE SIGNAL CONDITIONER WIRING.</td>
</tr>
<tr>
<td><strong>5</strong></td>
<td>REVISED TO LATEST Dwg STATUS. ADDED S/N.</td>
<td></td>
</tr>
<tr>
<td><strong>6</strong></td>
<td></td>
<td>CHANGED NOMENCLATURE ON WIRES N198 &amp; N197. &quot;APPARENT GIMBAL FAIL&quot; WAS &quot;GIMBAL OFF&quot;. &quot;GIMBAL OFF&quot; WAS &quot;PITCH GIMBAL OFF&quot;.</td>
</tr>
<tr>
<td><strong>7</strong></td>
<td></td>
<td>INTERNAL CIRCUITRY EXTENSIVELY REVISED &amp; REDRAWN</td>
</tr>
<tr>
<td><strong>8</strong></td>
<td></td>
<td>ADDED REF DESIGNATION 3A04 &amp; 3A05 FOR WIRING HARNESS &quot;A&quot; &amp; &quot;B&quot; RESPECTIVELY</td>
</tr>
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</table>

GRUMMAN AIRCRAFT ENGS CORP., BETHPAGE, L.I., NEW YORK

FOR CONTINUATION OF REVISIONS SEE SHEET 1.10
<table>
<thead>
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<tr>
<td>1</td>
<td>6.00</td>
<td>33G</td>
<td>D7</td>
<td>AT J706A &amp; J706B, REPOUTED WIRE N192 to J1425 &amp; J1426 PINS 1, 2, 3. RELOCATED SPLICES OF WIRES FROM J706A TO END OF SHIELDED CABLE AT J706 B.</td>
</tr>
</tbody>
</table>

**NOTED**

Sheet 1 of 17 was Sheet 1 of 16. Added sheets 1.13 & 1.14. Added Rev Letter "D" to sheets 1.10, 1.11, 1.12, 2.00, 3.00, 3.01 & 7.00 thru 9.00 for distribution & processing purposes only.

**DISPOSITION OF EXISTING PARTS**

- LM-40 E thru LM-1540
- NOT REGD

**FOR CONTINUATION OF REVISIONS SEE SHEET**
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<td>3A5</td>
<td>GC-70000-011</td>
<td>POS BAR 011</td>
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<tr>
<td>3A7</td>
<td>GC-70000-011</td>
<td>CIRCUIT BOARD 011</td>
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<tr>
<td>3A6</td>
<td>GC-70000-011</td>
<td>SIGNAL LIGHT 011</td>
<td>7</td>
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<tr>
<td>2A3</td>
<td>GC-90000-011</td>
<td>BREAKER KI-011</td>
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<td>GC-90000-011</td>
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<td>GC-70000-011</td>
<td>POS BAR 011</td>
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GRUMMAN AIRCRAFT ENG. CORP., BETHPAGE, L. I., NEW YORK

SIZE: B
CODE IDENT NO: 256512
LDW-3 70 84001

SCALE: NONE
SHEET: 1.00

NAS 9-1100
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</table>
NOTES CHECKED \ APPLY TO THIS DRAWING

1. SOLIDWIRE OF ELECTRICAL CONNECTIONS TO BE IN ACCORDANCE WITH

2. BOND PER LSP-390-001

3. WIRING INSTALLATION PER LSP-390-002

4. WIRING TO BE TWISTED IN ACCORDANCE WITH LSP-390-001, TABLE A.1.

5. QUANTITIES OF FABRICS, SPLICERS AND TERMINALS ARE NOT SPECIFIED IN THE BILL OF MATERIALS USAGE AS R001.

6. FOR SCHEMATIC WIRING DIAGRAM SEE DRAWING NO.

7. ALL WIRE TO BE STAMPED EVERY INCHES WITH WIRE NUMBER

8. WIRE BUNDLING AND ROUTING:
- Wires of the same classification may be bundled together when a classification letter is preceded by a number. Each separate classification shall be separated by a minimum of one-inch.
- Any two wires of the same classification must be separated by a minimum of one-inch. Classification A, B, C, D, E, F, G, H, I, J, and K shall be separated by a minimum of one-inch. Classifications L, M, and N, shall be separated by a minimum of four-inches from anyone of the classification groups G, H, and I.
- WIRE BUNDLES TO BE ROUTED AS SHOWN.

9. WIRE LENGTHS SHOWN ARE APPROXIMATE. EXACT LENGTHS TO BE DETERMINED ON FIRST MANUFACTURED UNIT AND ENGINEERING DEPARTMENT NOTIFIED.

10. STENCIL OR MARK CHARACTERS PER MS33558:
- High unless otherwise specified, using black lacquer per T1-25, #1755 (GUMMANN FINISH = 69). COVER WITH CLEAR FLAT LACQUER PER T1-L-09 TYPE 1 (GUMMANN FINISH = 133).

11. ENGRAVE CHARACTERS:
- High 1/32 MINIMUM DEPTH PER MS33558 (EXCEPT AS NOTED, FILL WITH BLACK LACQUER PER T1-25, #1755 (GUMMANN FINISH = 69).

12. ENGRAVE ALL INDEX DIVISIONS OUTSIDE FROM RADIUS:
- APPLY 3/16 LONG, ROTATING INWARD.

13. CENTRALIZE ALL CHARACTERS.

14. BREAK ALL SHARP EDGES

15. BEND RELIEF TO BE MINIMUM RADIUS

16. ALL BENDS RADIUS TO BE MINIMUM RADIUS

17. ENGRAVE CHARACTERS:
- APPLY (FOR POLYMER/PRIMER MIL-P-23377 OR OILS = 1002.
- APPLY LACQUER OF MIL-L-58, TYPE 1 FOR FEDERAL STANDARD = 105.

18. ELECTRIC DRAWING SYMBOLS SHOWN ON THIS DRAWING ARE IN ACCORDANCE WITH SECTION 15 OF THE MSCP DRAWING MANUAL.

19. BENT TO LSP-400-10002 FOR SYSTEM FUNCTIONAL DIAGRAM AND LSP-500-20003.

20. FOR PANEL LAYOUTS REFER TO LSP-390-002.

21. RETURN DESIGNATION: N4 PER SECTION 15.

22. ALL QUESTIONS OF TECHNICAL INTEREST REFER TO MIL-DREW-5200 B

23. MATERIALS ATTACHED TO ASSEMBLIES ARE PART OF MANUFACTURING,

24. THE DRAWING IS SUBJECT TO LSP-530-001
- LSP-530-001: 7/2/77
- LSP-530-002: 7/2/77
- LSP-530-003: 7/2/77
- LSP-530-004: 7/2/77
- LSP-530-005: 7/2/77

25. WIRE BUNDLES TO BE ROUTED IN CONSOLE AS SHOWN.

26. ENGRAVE CHARACTERS:
- APPLY (FOR POLYMER/PRIMER MIL-P-23377 OR OILS = 1002.
- APPLY LACQUER OF MIL-L-58, TYPE 1 FOR FEDERAL STANDARD = 105.

27. DEPARTMENT NUMBER:
- LSP-530-001
- 7/2/77

28. SCALE NONE

29. CODE KENT IS:
- B 26512
- LDW-370-54-001

30. GUMMANN AIRCRAFT ENGRG CORP., BETHPAGE, L.I., NEW YORK

31. APPLIES TO THIS DRAWING

32. SCALE NONE

33. SHEET 3/30

34. NAS 9-1100
1. Soldering of electrical connections to be in accordance with LSP-390-001.

2. Wiring installation per LSP-390-002.

3. All wires to be hot stamped every inches with wire number.

4. Wire Bundling and Routing:

   a. Wires of the same classification may be routed together when a classification letter is preceded by a number. Each subclassification shall be separated by a minimum of one inch.

   b. Minimum of one-inch separation required between classification groups A, B, C, D, & E.

   c. Minimum of one-inch separation required between classification groups F, G, & H.

   d. Wires bundles to be routed in console as shown.

5. Wire lengths shown are approximate. Exact lengths to be determined on first manufactured unit and engineering department notified.

6. Engrave Characters ( ) high unless otherwise specified, using black lacquer per TT-1-595, #1775 (Grumman Finish #69). Cover with clear flat lacquer per TT-L-58, #005 (Grumman Finish #3133). Engrave all index divisions apart 3/16 long, rotating outward from radius. Centralize all characters. Break all sharp edges. Bend relief to be minimum radius.

7. Finish:

   a. Apply epoxy polyamide primer MIL-P-23377 or MIL-P-24018.

   b. Apply costs of MIL-L-20278 for Federal standard #935.

8. Return designation: N4 = structure GRD.

9. Numbers assigned to MIT assemblies are mit drawing numbers.

10. This DWG conforms to the following ICD’S:

    a. L15 300-10002 7/30/65
    b. L15 500-10002 7/30/65
    c. L15 370-10003 REV A
    d. L15 370-10004 REV B
    e. L15 370-10005 REV A
    f. L15 370-10007 7/30/65
    g. L15 390-10001 REV A 7/30/65
    h. L15 390-10002 7/30/65

SOLDERING OF ELECTRICAL CONNECTIONS TO BE IN ACCORDANCE WITH BOND PER LSP-390-001.
RING INSTALLATION PER LSP-390-002.
WIRKS ARE TO BE TWISTED IN ACCORDANCE WITH LSP-530-001, TABLE II.
QUANTITIES OF END CAPS, SPLICES AND TERMINALS ARE NOT SPECIFIED THE BULK OF MATERIALS. USAGE: AS REQ'D.
FOR SCHEMATIC WIRING DIAGRAM SEE DRAWING NO.
ALL WIRES BE HOT STAMPED EVERY INCHES WITH WIRE NUMBER.
WIRE BUNDLING AND ROUTING:
WIRKS OF THE SAME CLASSIFICATION MAY BE BUNDLED TOGETHER WHEN A CLASSIFICATION LETTER IS PRECEEDED RY A NUMBER. SUCH SUBCLASSIFICATION SHALL BE SEPARATED BY A MINIMUM ONE-INCH.
(AEXAMPLE: 1D%, 2D SEPARATED ONE-INCH MINIMUM.)
A MINIMUM OF ONE-INCH SEPARATION REQUIRED BETWEEN CLASSIFICATION GROUPS A, B, C, O, & E.
A MINIMUM OF ONE-INCH SEPARATION REQUIRED BETWEEN CLASSIFICATION GROUPS F, G, & H.
WIRE BUNDLES TO BE ROUTED IN CONSOLE SHOWN.
A. WIRE LENGTHS SHOWN ARE APPROXIMATE, EXACT LENGTHS TO BE DETERMINED ON FIRST MANUFACTURED LOT AND ENGINEERING DEPARTMENT NOTIFIED.
B. STENCIL OR MARK CHARACTERS PER MS33558, HIGH UNLESS OTHERWISE SPECIFIED, USING BLACK LACQUER PKR TT-L-595, +1775 (GRUMMAN FINISH = 69). COVER WITH CLEAR FLAT LACQUER PER TT-L-58 TYPE (GRUMMAN FINISH = 133). ENGRAVE CHARACTERS (.005 MINIMUM DEPTH PER MS33558 (EXCEPT AS NOTED), FILL WITH BLACK LACQUER PER TT-L-595, +1775 (GRUMMAN FINISH = 94).
C. ENGRAVE ALL INDEX DIVISIONS APART 3/16 LONG, OUTWARD FROM CENTRALIZE ALL CHARACTERS.
D. BREAK ALL SHARP EDGES.
E. BEND RELIEF TO BE MINIMUM RADII.
F. FINISH:
- EPOXY POLYAMIDE PRIMER MIL-P-23377 OR GMS. +1012.
- APPLY COATS OF MIL-L-18245 COLOR +595 PER FEDERAL STANDARD +595.
H. SCALE NONE.
25. "HIGH'SIDE OF SIGNAL REFERS TO POSITIVE GOING PULSES.

26. DELETED

27. DEUTSCH PART NUMBERS:
   30J2 = 340-18-85S
   30P2 = 346-18-85P

28. UNLESS OTHERWISE SPECIFIED ALL ABBREVIATIONS ARE PER MIL-STD-12.

   AOT - ALIGNMENT OPTICAL TELESCOPE
   CEA - SIGNAL CONDITIONING ASSY
   CDU - COUPLING DATA UNIT
   IMU - INERTIAL MEASURING UNIT
   PTA - PULSE TORQUE ASSEMBLY
   SCA - SIGNAL CONDITIONING ASSY
   MIG - MIDDLE GIMBAL ANGLE
   AGI - INNER GIMBAL ANGLE
   OOG - OUTER GIMBAL ANGLE
   TM - TELEMETRY
   DGC - DISPLAY AND CONTROLS
   PCM - PULSE CODE MODULATION
   TLA - LAUNCH UMBILICAL TOWER
   SLA - SPACECRAFT-LM ADAPTER
   PGNS - PRIMARY GUIDANCE AND NAVIGATION SYSTEM

GRUMMAN AIRCRAFT ENG. CORP., BETHPAGE, L.I., NEW YORK

SIZE CODE SHEET NO.
B 26512 LDW370-54001 D

NAS 9-1100

SUPERSEDES LDW370-54001 REV B, 3-13-67
26. CUT

LUT  LAUNCH UMBILICAL TRUNK
SLA  SPACECRAFT-LM ADAPTER
PGAS  PRIMARY GUIDANCE AND NAVIGATION SYSTEM
DSKY  DISPLAY KEYBOARD
CUTO  CUT KNOB
TRANSL  TRANSLATION COMMAND
SCH  SIGNAL WAVEFORM SPLITTER
ESIVE  AUXILIARY
CAL  CALIBRATION
FW  FIELD VOLTAGE WAVEFORM
TORQ  TORQUE
DAC  DIGITAL TO ANALOG CONVERTER
JP  JOINT PERCENT
PTC  PORTABLE TEMPERATURE CONTROLLER
GASTA  GROUND ANGLE SEQUENCING TRANSFER AMPLIFIER

29. TO DETERMINE COMPLETE GROUPING OF PARTIAL WIRE GROUPS SHOWN BY OPEN-ENDEL SYMBOl (△), COLLECT ALL PARTIAL GROUPS IDENTIFIED BY THE SAME TRIANGLE OR BALLOON NUMBER ON THIS OR THE REFERENCED LEVEL 3 SCHEMATIC.

30. THIS DRAWING TO BE REDRAWN TO LEVEL 2 FORMAT.
28. PVR - PRECISION VOLTAGE REFERENCE
   TORQ - TORQUE
   DAC - DIGITAL TO ANALOG CONVERTER
   IP - ONE PER-CENT
   PTC - PORTABLE TEMPERATURE CONTROLLER
   GASTA - GIMBAL ANGLE SEQUENCING
   TRANSFORMATION ASSEMBLY

29. TO DETERMINE COMPLETE GROUPING OF
    PARTIAL WIRE GROUPS SHOWN BY
    OPEN-ENDED SYMBOL (——), COLLECT
    ALL PARTIAL GROUPS IDENTIFIED BY THE
    SAME TRIANGLE OR BALLOON NUMBER
    ON THIS OR THE REFERENCED LEVEL 3
    SCHEMATIC.

30. DELETED

31. THIS DRAWING AND APPLICABLE EO'S
    INCLUDE MEASUREMENTS LISTED IN
    LED 360-7 AND SUBSEQUENT APPLICABLE
    PROJECT-APPROVED MCR'S.

32. SWITCH #155 IN THE UP POSITION TIES THE
    RATE OF DESCENT SIGNAL (PG3-PIN 1) TO
    COMMON 2/3 K ISOLATION (PG3-PIN 1) AND
    THE RESULTING COMMAND IS FOR A DECREASE
    IN RATE OF DESCENT. ANALOGOUSLY, SWITCH
    #155 IN THE DOWN POSITION TIES RATE OF
    DESCENT SIGNAL (PG3-PIN 1) TO THE COMMON
    2/3 K ISOLATION TO COMMAND AN INCREASE
    IN THE RATE OF DESCENT.
28. (cont.)

PVR - PRECISION VOLTAGE REFERENCE
TORQ - TORQUE
DAC - DIGITAL TO ANALOG CONVERTER
IP - ONE PER-CENT
PTC - PORTABLE TEMPERATURE CONTROLLER
GASTA - GIMBAL ANGLE SEQUENCING
TRANSFORMATION ASSEMBLY

29. TO DETERMINE COMPLETE GROUPING OF
PARTIAL WIRE GROUPS SHOWN BY
OPEN-ENDED SYMBOL ( —)}, COLLECT
ALL PARTIAL GROUPS IDENTIFIED BY THE
SAME TRIANGLE OR BALLOON NUMBER ON
THIS OR THE REFERENCED LEVEL 3
SCHEMATIC.

30. DELETED

31. THIS DRAWING AND APPLICABLE EO'S
INCLUDE MEASUREMENTS LISTED IN
LED 360-7 AND SUBSEQUENT APPLICABLE
PROJECT-APPROVED MCR'S.

32. SWITCH #155 IN THE UP POSITION TIES THE
RATE OF DESCENT (4) SIGNAL (P59-PIN P) TO
COMMON 7/8 K ISOLATION (P59-PIN 2). THE
RESULTING COMMAND IS FOR A DECREASE
IN RATE OF DESCENT. ANLOGOUSLY, SWITCH
#153 IN THE DOWN POSITION TIES RATE OF
DESCENT (-) SIGNAL (P59-PIN 2) TO THE COMMON
9/13 K ISOLATION TO COMMAND AN INCREASE
IN THE RATE OF DESCENT.

33. THE FOLLOWING REF DWG NOS. APPLY TO NOTED VEHICLE
EFFECTIVITY.

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34. (a) RELAYS ARE SHOWN IN THE UNENERGIZED OR
OFF POSITION.
(b) SIGNAL DESCRIPTIONS:

\[
\begin{align*}
\text{V/28 VDC IMU STANDBY PSAAM POWER HIGH} \\
\text{V/-2 V CURRENT LOW} \\
\text{V} \text{ ATTENUATOR CIRCUIT OUTPUT} \\
\text{V/-2 CU COMMON} \\
\text{5/0 VDC IMU} \\
\end{align*}
\]

(c) CIRCUIT DESCRIPTION:

CIRCUIT A - AC AMPLIFIER
CIRCUIT B - GLITCH DETECTOR

GRUMMAN AIRCRAFT ENGRG CORP., BETHPAGE, L. I., NEW YORK

SUPERSEDES LDW370-54001 REV B 8-7-67
ON SH 600 ZONE 30C ADD N4 GND SYMBOL TO SHLD OF WIRES N696/N697 AS FOLLOWS:

ON SH 1100 ZONE 99A #975 ADD N4 GND SYMBOL TO SHLD OF WIRES D1804/D1857/D1858 (2 PLACES)
ON SH 1100 ZONES 100A#100B
REMOVE SHLD CONNECTION BETWEEN WIRES D1163/D1166 (4 PLACES) AS FOLLOWS:

PLS AFFECTED: NONE
CABLES: N4, N696, N697

ADDED N4 GND (3 PLACES) AT WIRES D1804/D1857/D1858
REMOVED SHLD CONNECTION AT WIRES D1163/D1166

LEVEL 3 CHG 755 CHANGE ORDER
FOR E-GSR INFO ONLY

CORRECTIONS FOR EMI (LR-51)

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<th>Device</th>
<th>Category</th>
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<td>OUT</td>
<td>LM-504</td>
<td>IN</td>
<td>LM-504</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test</td>
<td>IN</td>
<td>LM-504</td>
<td>OUT</td>
<td>LM-504</td>
<td></td>
</tr>
</tbody>
</table>

LEVEL 3 SCHEMATIC - PRIMARY GUIDANCE NAVIGATION & CONTROL DRAWING

REVISED W/ DATE

ISSUED BY: A. T. ARROYO X-6420 SECTION: LIVE WIRE GROUP: 542 P: 35

GRUMMAN AIRCRAFT ENGINEERING CORP.
CODE IDENT NO. 26512
ENGINEERING ORDER

REV 10.7.4
CAM 10.7.4

NAS 9-1100
DELETE THIS INFORMATION

ADD THIS INFORMATION

CABLES AFFECTED: LNW 9411 9001

PANELS AFFECTED: TDE 79 909 C

Dwg AFFECTED: V 19

LEVEL 3 DHD CHANGE ORDER
FOR ENRIG INFO ONLY

Issued by: H. NIEDDALSIR / L. LONDE

01 NAS 9-1100
ON SH 6.00 ZONE 41A
REMOVE N234 WIRE FROM PNL XI § 970.
ADD N4 GND TO WIRE FROM PIN G OF J222.

LEVEL 3 Dwg CHANGE ORDER
FOR ENG INFO ONLY

ISSUED BY: AT ARROYO X-6420
GROUP EPS-LIVewire GROUP no. 350 PL 25
To make Level 3 compatible with GFE hardware (LC 624).

DELETE MEAS. No. G2301 to B23AM and associated GFE signal conditioner wiring effective as of 1/27/71.

Level 3 schematic, Primary Guidance, Navigation & Control Subsystem.

Issued by R. Kerr 47517 Section GN & C Group No. 270 PL 65.
ON 66 ZONE 4116 ALL ZONE 26 GAGE WIRES TO 22 GAGE

AS PER THE FOLLOWING EXAMPLE:

H/73-226(E) WAS H/73-226(E)

LEVEL 3 OWI CHANGE ORDER
FOR EORR-LFO ONLY

<table>
<thead>
<tr>
<th>ITEM</th>
<th>SPEC</th>
<th>NOT</th>
<th>O</th>
<th>REASON FOR EO</th>
</tr>
</thead>
<tbody>
<tr>
<td>LM</td>
<td>2261</td>
<td>100</td>
<td>G</td>
<td>TSM OF 6/6/66</td>
</tr>
<tr>
<td>LM</td>
<td>2262</td>
<td>100</td>
<td>G</td>
<td>XBB</td>
</tr>
<tr>
<td>LM</td>
<td>2263</td>
<td>100</td>
<td>G</td>
<td>CAR</td>
</tr>
</tbody>
</table>

Issued by: R. Shirley  Section: LTC  Group No.: 262
GRUMMAN AIRCRAFT ENGINEERING CORP.

ENGINEERING ORDER

Sheet 3.00 Zone 27B: Remove Circuit Breaker Rating '3A' from Breaker Number 402141.

Sheet 4.00 Zone 41A: Place XX 405 "Ref LDW270-59-010" "Beta Circuit Breaker" "Cn 4-08-12".

Sheet 4.00 Zone 41C: Change XX as shown below:

---

Level 3 Dwg Change Order: For engine into only

---

Detail Copy No. | Detail Copy No. | Dwg Copy No. | Dwg Copy No. | LAU 399-833 | LAU 399-833
---|---|---|---|---|---

---

Issued by: D. Karr

Section: General

Group No. 370: P-35

NAS 9-1100
**SHEET ZONE**

<table>
<thead>
<tr>
<th>JOB</th>
<th>DESCRIPTION OF EO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1100</td>
<td>101A ON 4038, PIN 72 CHANGED TO 22</td>
</tr>
<tr>
<td>1100</td>
<td>99A ON 4025, JS7 CHANGED TO JS04</td>
</tr>
<tr>
<td>1100</td>
<td>99A DW6, 8ME LDW 200-54000 CHANGED TO LDW 200-54003, ALL WIRED DW6, K1</td>
</tr>
<tr>
<td>1100</td>
<td>97A CONDUCTOR 18F CHANGED TO 18F9</td>
</tr>
<tr>
<td>1100</td>
<td>96A LDW 300-54000 SH 4.00 WAS LDW 340-54000 SH 7.0</td>
</tr>
<tr>
<td>1100</td>
<td>96B LDW 500-54000 SH 11.00 WAS SH 6.00</td>
</tr>
</tbody>
</table>

CABLES AFFECTED: NONE

PANELS AFFECTED: NONE

---

**NOTED**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION OF EO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00</td>
<td>LM-4(34)</td>
</tr>
<tr>
<td>1.00</td>
<td>LM-5(85)</td>
</tr>
</tbody>
</table>

**ISSUED BY:** K. CHEVEND

**SECTION:** LTC

**GROUP NO.:** 267 P. 35

**DRAWING NO.:** LDW370-54001

**REFERENCE:** NAS 9-1100
GRUMMAN AIRCRAFT ENGINEERING CORP.

ENGINEERING ORDER EMF-2

ON SHEET 8.00 Zone 36C IN REFERENCE TO WORKS Nos. 44, 45, 46, 47, 48:

Pins 7, 8 (was) Pin 71
(410) was (RT)
- q = "48"
- r = "73"
- s = "71"
- J = "47"
- I0 = "46"

ON SHEET 6.00 Zone 33C ADD TWISTED, SHLD SYMBOL WITH AN MW GROUND TO WIRE AT 198 X 1199 AT J174 AS SHOWN BELOW:

CABLES AFFECTED: NONE as 34-93

PANELS AFFECTED: NONE as 34-93

LEVEL 3 DIAG CHG ORDER FOR ENGR W/O ONLY

ISSUED BY R. KEESE X7557

SECTION GND C GROUP 370 M 35

NAS 9-1100
ON SHEET 5.00 ZONE 14A MAKE CHANGE AS SHOWN BELOW!

LEVEL 3 DNS CHANGE ORDER
FOR ENGRS INFO ONLY

ISBN 370-S4.001

J1800 AND J1800 WERE J23 AND P23 RESPECTIVELY

J. THOMAS

NAS 9-1100
## Engineering Order

**GRUMMAN AIRCRAFT ENGINEERING CORP.**

**Code Ident No. 26512**

**Engineer Order**

**ENG 32.1 REV 3-65**

**LDW 370-5**

**LBDW 390-5300**

**ON SHEET 2.00 (DC 155)**

**Part Number** LSC 350-81-05612 WAS LSC 370-81-05611

---

### Level 3 Change Order

**For Engineering Use Only**

**PART NUMBER** LSC 350-81-05612

**NAVIGATION & CONTROLS SUBSYSTEM**

**To Make Drawing Agree With**

** dirs: HTHW**

**LSC 350-81-05612**

**NOTED**

**Issued By** R. Kile

**DATE** 2-26-67

---

**NAS 9-1100**

**01**
GRUMMAN AIRCRAFT ENGINEERING CORP.
CODE IDENT NO. 26512

ENGINEERING ORDER

SHEET 6.00 ZONE 325

GRUMMAN AIRCRAFT ENGINEERING CORP.
CODE IDENT NO. 26512

ENGINEERING ORDER

SHEET 6.00 ZONE 325

LEVEL 3 DUGG CHANGE ORDER
FOR ENGINEERING DEPARTMENT ONLY (E)

CABLES AFFECTED: LDW370-54408 C.

DESCRIPTION OF LO

ADDED WIRE FROM PIN "R" OF J706A TO SHLD GND .

ADDED WIRE FROM PIN "R" OF J706A TO SHLD GND .

LEVEL 3 DRAWING

REMARKS:

ISSUED BY: JOSEPH THOMAS 4/4/72

SECTION G H C

GROUP NO. 372 H S

NAS 9-1100
LEVEL 3 DWG CHANGE ORDER
FOR ENGINEERING ONLY

CHANGED REFERENCE DWG NO. FROM P22A TO P22

TO MAKE DWG AGREE WITH VEHICLE

LEVEL 3 DWG CHANGE ORDER
FOR ENGINEERING ONLY

GRUMMAN AIRCRAFT ENGINEERING CORP.
CODE IDENT NO. 3612

ENGINEERING ORDER

<table>
<thead>
<tr>
<th>NO.</th>
<th>DWG</th>
<th>REV</th>
<th>TITLE</th>
<th>EFF</th>
<th>QA</th>
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<tbody>
<tr>
<td>370</td>
<td>370-61001</td>
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<td>GUIDANCE NAVIGATION &amp; CONTROL SYSTEM</td>
<td>2.00</td>
<td>44C</td>
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<tr>
<td>370</td>
<td>370-62001</td>
<td>0</td>
<td>GUIDANCE NAVIGATION &amp; CONTROL SYSTEM</td>
<td>2.00</td>
<td>44C</td>
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<tr>
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<td>GUIDANCE NAVIGATION &amp; CONTROL SYSTEM</td>
<td>2.00</td>
<td>44C</td>
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<tr>
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<td>370-64001</td>
<td>0</td>
<td>GUIDANCE NAVIGATION &amp; CONTROL SYSTEM</td>
<td>2.00</td>
<td>44C</td>
</tr>
</tbody>
</table>

ISSUED BY  J. E. Thomas  X/1625
SECTION  G & C  GROUP NO. 320  PAGE 1
Switch #18S in the up position ties the rate of descent (th) signal to common panels.

Switch #* in the down position ties the rate of descent (-) signal to the common.

Cables affected: none.

Volume 2, issue 24.

Note: For engine includes only.
ON SH 6.00 ZONES 32C & 33C CHANGE ROUTING OF WIRE N192 AT CONNECTORS J706A & J706B AS FOLLOWS:

- ADD N192-26(E) TO CES LDW300-54003
- ADD N192-26(E) TO CES LDW300-54003
- ADD N192-26(E) TO CES LDW300-54003
- ADD N192-26(E) TO CES LDW300-54003

CABLES AFFECTED:
- LDW375-54001
- LDW375-54002
- LDW375-54003

LEVEL 3 DWG CHANGE ORDER FOR ENGAG INFO ONLY

ISSUED BY: A.T. ARROYO X-1457
SECTION: LTC
GROUP NO: 542 PL: 5
ON SHEET 5.00 CHG WIRES TO SWITCH 351 AS FOLLOWS:

J219
61 > N170-22 (E) 79
62 > N171-22 (E)

WAS J262, PINS A, B

PINS AFB
CABLES AFFECTED 110039054408 SWLOW 350- DODD LEVEL 3 DWG CHG ORDER

TO PROVIDE ISOLATION OF EACH REROUTED WIRES TO SWITCH 351

LEVEL 3 CWS CHANGE ORDER
FOR EXCING INFO ONLY

LM
LM-45-50
THRU
LM-45-50

ISSUED BY: A. R. ARROYO X 1657 SECTION LTC GROUP NO. 542 R. 5

GRUMMAN AIRCRAFT ENGINEERING CORP.
CODE IDENT NO. 26512
ENGINEERING ORDER

NAS 9-1100
GRUMMAN AIRCRAFT ENGINEERING CORP.

CONCERN NO. P-9-5

REASON FOR EO
CREW SAFETY REDUNDANCY
DESCRIPTION (CONC 3742 PINS STHRU 6)
ADDED "CSIA" TO WIRES N/S STHRU W, N206 THRU N208, N320 THRU N335.
ADDED "CSIA" TO WIRES IN N201, N204, N205.

ADDED "CSIA" TO WIRES N206 THRU N208, N320 THRU N335.
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ADDED "CSIA" TO WIRES IN N201, N204, N205.

ADDED "CSIA" TO WIRES N206 THRU N208, N320 THRU N335.
ADDED "CSIA" TO WIRES IN N201, N204, N205.
ON SH 6.00 ZONE 3BC ADD P/N 181880 CONN. AS SHOWN BELOW:

- **J220**
- **J218**
- **P018**
- **J747**

**CABLES AFFECTED:** LOW 370-5401 UN LOW 370-5401 FOR ENGR INFO ONLY

**CREW SAFETY REDUNDANCY STUDY**

<table>
<thead>
<tr>
<th>MODE</th>
<th>EFFICIENCY</th>
<th>IDENTIFICATION</th>
<th>LISTED ENCLOSURE SIZE</th>
<th>AT LAST ENCLOSURE SIZE</th>
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<tr>
<td>LM-4</td>
<td>LM-4 (34)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>LM-1</td>
<td>LM-1 (45)</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

**PANELS AFFECTED:** NONE

**LEVEL 3 CBIG CHANGE ORDER**

**ISSUED BY:** A.T. ARROYO (X/657)  SECTION: LTC  GROUP NO. S17  N. 5
AT SH 4.00 ZONE 2C
CHANGE CONN & PINS AS FOLLOWS:

PI84B J184 (PI84A) WAS?

<table>
<thead>
<tr>
<th>CABLE AFFECTED: LDW370-54017 W15664(166)</th>
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</thead>
<tbody>
<tr>
<td>N15G-26(W) GG2122V</td>
<td>J78</td>
<td>15G</td>
<td>35</td>
</tr>
<tr>
<td>N15T-26(W) GG2122V</td>
<td>J97</td>
<td>15T</td>
<td>36</td>
</tr>
<tr>
<td>N15B-26(W) GG2123V</td>
<td>J80</td>
<td>15B</td>
<td>37</td>
</tr>
<tr>
<td>N15N-26(W) GG2123V</td>
<td>J81</td>
<td>15N</td>
<td>38</td>
</tr>
<tr>
<td>N160-26(W) GG2152V</td>
<td>J83</td>
<td>160</td>
<td>61</td>
</tr>
<tr>
<td>N161-26(W) GG2152V</td>
<td>J84</td>
<td>161</td>
<td>60</td>
</tr>
<tr>
<td>N162-26(W) GG2153V</td>
<td>J85</td>
<td>162</td>
<td>59</td>
</tr>
<tr>
<td>N163-26(W) GG2153V</td>
<td>J61</td>
<td>163</td>
<td>58</td>
</tr>
<tr>
<td>N164-26(W) GG2182V</td>
<td>J60</td>
<td>164</td>
<td>82</td>
</tr>
<tr>
<td>N165-26(W) GG2182V</td>
<td>J37</td>
<td>165</td>
<td>83</td>
</tr>
<tr>
<td>N166-26(W) GG2183V</td>
<td>J58</td>
<td>166</td>
<td>84</td>
</tr>
<tr>
<td>N167-26(W) GG2183V</td>
<td>J59</td>
<td>167</td>
<td>85</td>
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</table>

ISSUED BY A.T. ARROYO X-1657 SECTION LTC GROUP NO. 542 P.5
This is a revision to EO-D2

LEVEL 3 Dwg Change Order
FOR ENGINES 4B/4D ONLY

Cables Affected: LDW 300-54003 SN 4.00 (Draw by FDV 90)
PNLS: None

CABLES AFFECTED; LDW 300-54000 SN 41 (Draw by FDV 90)
PNLS: None

To Prove Isolation of Each Thea Ref ODE 20J
LM SHOPPING LIST REVIEW ITEMS 215
Rep EO GZ
Distributed Wires N192 To J1425 4.110, PWS 4.63 To Improve Routing of Wires
J706A To End of Shielded Cable E105

APPROVED BY

LM Draw

GROUP NO. 542

LEVEL 3 SCHEMATIC PRIMARY GUIDANCE NAVIGATION & CONTROL SUBSYSTEM
LDW 300-54000 D7

Issued by A. T. Arroyo X-1687 SECTION 1TC
LEVEL 3 DWG CHANGE ORDER
FOR ENGRS INFO ONLY

PANEL II

CARLINES AFFECTED: (See Diagram)

PANEL AFFECTED: (See Diagram)

CABLES AFFECTED: (See Diagram)

PRIORITY: 3

SCHEMATIC LEVEL: 3

MILITARY: YES

SUBSYSTEM: YES

FIRE: YES

ISSUED BY: N.B. NIEUELSKI (X1627)
SECTION: LTC/INSTR
GROUP NO.: 267

01

NAS 9-1100
GRUMMAN AIRCRAFT ENGINEERING CORP.

ENGINEERING ORDER

ON SHEET 11.00 ZONES 10GA & 10TA REVISE WIRING AS SHOWN:

(REF) P878

J878

DELETE

(REF) D555

D555

DELETE

ON SHEET 11.00 ZONE 10TA REVISE WIRING AS SHOWN BELOW:

P878

B3

B4

ON SH 11.00 ZONE 10TA REVISE WIRING AS SHOWN BELOW:

P878

B3

B4

DELETE

PANELS AFF: NONE

CABLES AFF: LOW90-54417 ON LOW90-5792

LEVEL 3 FWS CHANGE ORDER
FOR ENGRG INFO ONLY

DATA TRANSITION PROBLEM: WIRING CHANGES TO ACHIEVE PROGRAMMED DATA BIT TRANSITIONS

LM 4 (5)

LM 15 (45)

THRU

E Schematic level B PRIMARY GUIDANCE NAVIGATION CONTROL SUB SB LOW90-54001 E1

ISSUED BY N.B. NIEDBALSKI (PG) (NG57) SECTION LTC/INSTR GROUP NO. R-L
ON SH 5.00 ZONE 13B REVISE AS FOLLOWS:

ADD

(LMK-#-S) -> (LMG THRU 15)

P1800

J1800

ADD

J35

27 > N813-22(E) -> Z

Make same change on SH 10.00 ZONE 76C FOR PINS 3, 11, 9 & 10 ON WIRES D1170, D1172, D1174 & D1173 RESP.

ZONE 77B FOR WIRES D1408/TAD163 PINS 8, 7, 8, 19, 6, 7, 20, 37, 35, 36

CABLES AFFECTED: LDW370-5400 KN 6005

 LEVEL 3 OWS CHANGE ORDER FOR ENG INFO ONLY

TO FACILITATE HARNES INSTALLATION & MAINTAINABILITY

AT J3/J1800 REVERSED "J x F" FOR LM-6 THRU 15

LEVEL 3 SCHEMATIC NAVIGATION & CONTROL SUBSYSTEM

Issued by A.T. ARROYO X-1657
ON SH 6.00 ZONE 27A (AT J221 PIN 28) CHANGE C/O ON WIRE N241 AS FOLLOWS:

WAS

STANDBY

NOW

STANDBY

WIRE N241-26(E) STANDBY/PROCEED

WIRE N241-26(E) STANDBY

CABLES AFFECTED: NONE

LEVEL 3 Dwg CHANGE ORDER

FOR ENG INFO ONLY

INTEGRATION OF AUTO-PROCEED FUNCTION INTO PINS AS PER L/M ENG CHANGE ORDER 6-16

ON WIRE N241-26(E), "STANDBY/PROCEED" WAS "STANDBY"

LEVEL 3 ESSENTIAL PRIMARY GUIDANCE, NAVIGATION & CONTROL
GRUMMANN AIRCRAFT ENGINEERING CORP.
GRU CODE IDENT NO. 26512
No.LDW370-5400
RWALA

ENGINEERING ORDER

(ON SH 6.00 ZONE 24B)

P229

DELETE

(ON SH 10.00 ZONE 75)

P217B (REP)

ON SH 10.00 AT ZONE 75 AT 9/0 OF 6DS25 (PHL II)
DELETE "GL4045".

PNLS AFFECTED: NONE

LEVEL 3 DIVS CHANGE ORDER
FOR ENGDS REFO-ONLY

DELETION OF PNLS CAUTION
FROM INTERFACE PER CCA 762
DELETED WIRE DI17 FROM P229 PIN 31 TO P970

Issued by: A. T. Arroyo X-1657
Section: LTC
Group No.: 542

NAS 9-1100
LEVEL 3 OWS CHANGE ORDER
FOR ENGRG WFO ONLY

ON SHEET 2.00 CHANGE PART NUMBERS AS FOLLOWS:

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>DESCRIPTION OF EO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3A1</td>
<td>GO10868 WAS GO10660</td>
</tr>
<tr>
<td>3A10</td>
<td>6010617 HT 6010669</td>
</tr>
<tr>
<td>3A9</td>
<td>GO14512-061 HT GO14512-011</td>
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<tr>
<td>3A8</td>
<td>GO07900-041 HT GO07900-001</td>
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<td>3A7</td>
<td>GO07712-011 HT GO07712-061</td>
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<tr>
<td>3A6</td>
<td>GO07015-011 HT GO07013-011</td>
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<td>3A5</td>
<td>GO07914-021 HT GO07950-011</td>
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<tr>
<td>3A4</td>
<td>GO09993-001 HT GO09993-001</td>
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<tr>
<td>3A3</td>
<td>GO10000-071 HT GO10000-021</td>
</tr>
<tr>
<td>3A2</td>
<td>GO10050-011 HT GO10000-021</td>
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<tr>
<td>3A1</td>
<td>GO18600-051 HT GO18600-051</td>
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</table>

PANELS AFFECTED: NONE
CABLES AFFECTED: NONE

UPDATE OF PART NUMBERS
FOR PANS GFE (LN-737-658)

<table>
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<tr>
<th>PART NO.</th>
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<tbody>
<tr>
<td>LM-4 (L4)</td>
<td>DAILY</td>
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</table>

ISSUED BY AT-1100 (X1657) SECTION L TC GROUP NO. 542 PL 5

GRUMMAN AIRCRAFT ENGINEERING CORP.
CODE IDENT NO. 26512
ENGINEERING ORDER

ON SHEET 2.00 ADD "FOR LM-4 ONLY" FOR 3A1 THRU 3A11.
ON SHEET 8.00: CORRECT ZONE CALLOUTS INSIDE 3 A7 (ECU)

ZONE 51 WAS 58
ZONE 52 WAS 59
ZONE 53 WAS 60
ZONE 54 WAS 61
ZONE 55 WAS 62
ZONE 56 WAS 63
ZONE 57 WAS 64
ZONE 58 WAS 65

AT 3 A7 ZONES 546-556 ADD REF (ZONE 51A) TO 54-52.

AT ZONES 51C, 57C-58C ADD C0N. C/O 40-53 & 56-53.

ON SHEET 5.00 IN ZONE 13 C AT JP/23B PINS E & I:
"TO PTA (SH 9.00) & IMU (SH 4.00)" WAS "TO IMU (SH 4.00)"

ON SHEET 6.00 ZONE 26 A REVISE AS SHOWN:

ON SH 3.02 CORRECT NOTE 32 AS FOLLOWS:

P69-PINS I, K CHANGE TO P59-PINS P, E, C, RESP

DESCRIPTION OF EO (Cont): AT JP/23B PINS E & I "TO PTA (SH 9.00) IMU (SH 4.00)" WAS "TO IMU (SH 4.00)".

J 1425 WAS J 62; 16 WAS J & 17 WAS H ON SH 6.00.

AT NOTE #32: P59-PINS P, E & WAS P69-PINS I, K.

PANELS AFFECTED: NONE
CABLES AFFECTED: NONE

LEVEL 3 DINS CHANGE ORDER FOR ENGINE INFO ONLY
### REVISE SW 2.00 AS FOLLOWS:

<table>
<thead>
<tr>
<th>SW</th>
<th>Change Description</th>
<th>LM</th>
<th>LM 4 Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>155</td>
<td>LSC350-81-086/2-1 Toggel SW Rate of Descent</td>
<td>36B</td>
<td>LM 4 Only</td>
</tr>
<tr>
<td>155</td>
<td>LSC350-81-056/2-1 Toggel SW Rate of Descent</td>
<td>36B</td>
<td>LM 4 Only</td>
</tr>
<tr>
<td>155</td>
<td>LSC350-81-056/2-1 Toggel SW Rate of Descent</td>
<td>36B</td>
<td>LM 4 Only</td>
</tr>
<tr>
<td>351</td>
<td>LSC250-81-041/1 Toggel SW Rate of Descent</td>
<td>24C</td>
<td>LM 4 Only</td>
</tr>
<tr>
<td>351</td>
<td>LSC250-81-041/1 Toggel SW Rate of Descent</td>
<td>24C</td>
<td>LM 4 Only</td>
</tr>
<tr>
<td>351</td>
<td>LSC250-81-041/1 Toggel SW Rate of Descent</td>
<td>24C</td>
<td>LM 4 Only</td>
</tr>
</tbody>
</table>

- ADD W/ASSO INFO

---

### PANELS AFF: None

### CABLES AFF: None

---

### LEVEL 3 DRAW CHANGE ORDER

FOR ENGNS INFO ONLY

- LM 2249 CCA 726
  - PIN CHANGE DUE TO REVISED TESTING
  - IN BLM ADDED 155 & 351 W/ASSOC INFO
  - FOR LM-6 & SUB

### LEVEL 3 SCHMATIC PG & EC

- LM 570-54001

---

**Issued by:** A.T. Aernst & I. Schiffer (V/C)

**Section:** ENG

**Group No.:** 287

---

**NAS 9-1100**
ON SHEETS 6.00 x 10.00 (BONES 31D, 32D, 33D, 74D, 74C, 75A, 76A)

IN F/D; CHANGE REF DWG NO. CALLOUT FOR PROP, CES & COMM AS PER FOLLOWING EXAMPLES:

(1) CES (ATCA) SEE NOTE 33

(2) CES (DECA) SEE NOTE 33

(3) PROP SEE NOTE 33

(4) COMM (DUA) SEE NOTE 33

NOTE 33: THE FOLLOWING REF DWG NO'S. APPLY TO NOTED VEHICLE EFFECTIVITY:

<table>
<thead>
<tr>
<th>SUBSYSTEM</th>
<th>LM-4</th>
<th>LM-5</th>
<th>LM-C 2 SUB</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROP</td>
<td>LDW270-54000</td>
<td>LDW270-52000</td>
<td>LDW270-52000</td>
</tr>
<tr>
<td>CES</td>
<td>LDW300-54003</td>
<td>LDW300-52003</td>
<td>LDW300-52003</td>
</tr>
<tr>
<td>COMM</td>
<td>LDW380-54000</td>
<td>LDW380-55000</td>
<td>LDW380-55000</td>
</tr>
</tbody>
</table>

LEVEL 3 DWG CHANGE ORDER
FOR ENGRS INFO ONLY

CORRECT REF DWG CALLOUTS
- WIRE, REDUCT TO
- REDUCE WEIGHT

LM  
LM-4 (X4)  
LM-15 (X6)

NOTE 33 EXAMPLES:
- PRIMARY
- SUBSYSTEM
- GUIDANCE, MAINTENANCE

ISSUED BY: A.T. ARROYO  X-1657  SECTION: LTC  GROUP NO. 267 n. 5

01

NAS 9-1100
ON SH 6.00 ZONE 26A CHANGE AS SHOWN:

- P229 (REF)
  - 40 0-75V 400 Hz LOW B
  - 38 0-75V 400 Hz HIGH B

- P195
  - 40 0-75V 400 Hz LOW B L43-22(B)
  - 38 0-75V 400 Hz HIGH B L46-22(B)

DELETED WIRES FROM P229 PINS 40 38 TO P195 PINS U1425 PINS 1425

CABLE REROUTING TO REDUCE WEIGHT

ISSUED BY: ARROYO X-1657  SECTION: LTC  GROUP NO. 267  R.5
ON SH 6.00 ZONE 30 D (AT WIRE N224 CONN J/P 173)
REVISE AS FOLLOWS:
ADD LM-5 G/C

N224 (REF)

13
12
15
14

(PIN 150 ON LM-5 ONLY)

RESTRICT TO LM-4 LM-6 LM-16

PNLS AFFECTED: None

LEVEL 3 DWS CHANGE ORDER
FOR ENG INFO ONLY

LEVEL 3 DRAWING CORRECTION
FOR ENG INFO ONLY

PRIORITY LEVEL 3 SHEET
OF ENG, DRAWING NO. 60016 SET 4

LM 5 (25)

N4.0

LEVEL 3 SCHEMATIC
FOR ENG INFO ONLY

E EFFECTIVITY RANGE DISPOSITION
APPROVED BY

REVIEWED BY

DATE

ISSUED BY

ENG RES. EPA

GROUP NO. 207 P. 5

NAS 9-1100

01

GRUMMAN AIRCRAFT ENGINEERING CORP.
CODE IDENT NO. 26512
ENGINEERING ORDER

GRUMMAN AIRCRAFT ENGINEERING CORP.
CODE IDENT NO. 26512
ENGINEERING ORDER

GRUMMAN AIRCRAFT ENGINEERING CORP.
CODE IDENT NO. 26512
ENGINEERING ORDER
ON SH 6.00 ZONES 25A & 34D
CHANGE C/O FROM "LDW340-54000" TO "SEE NOTE 33"
ON SH 3.0% ADD CREW PROVISIONS (INT LIT) C/O TO NOTE 33
AS FOLLOWS:
SUBSYSTEM LM-4 LM-5 LM-67
CPS (INT LITG) LDW340-54000 LDW340-55000 LDW340-55000

CABLES AFF: None
PANELS **: None

LEVEL 3 DWG CHANGE ORDER
FOR EIGE'S INFO ONLY

ISSUED BY: A.T. ARROYO X-1657
SECTION: LTC
GROUP NO. 267 P. 5

NAS 9-1100
GRUMMAN AIRCRAFT ENGINEERING CORP.

ENGINEERING ORDER

ON SH 10.00 ZONES 7407XZ AT 1475 X 1825 (3 PLACES)

REPLACE c/o "LDW330-54000" WITH "ECS SEE NOTE 33"

ON SH 3.02 ADD ECS DWG c/o AS FOLLOWS TO NOTE 33:

SUBSYSTEM
LM-4
LM-5
LM-6

ECS
LDW330-54000
LDW330-55000
LDW330-55000

LEVEL 3 DWG CHANGE ORDER
FOR ENGR INFO ONLY

ISSUED BY: A.T. ARROYO X-1357  SECTION: LTC  GROUP No. 267 p. 5

NAS 9-1100
GRUMMAN AIRCRAFT ENGINEERING CORP.

CODE IDENT NO. 26712

ENGINEERING ORDER

ON SHEET 6.00 ZONE 29D

FROM RCS THRUSTERS SHUTDOWN SIG. RELAY SEE NOTE 34

CHANGE

TO RCS THRUSTERS SHUTDOWN SIG. RELAY SEE NOTE 34

ON SHEET 3.02
ADD TO NOTE 33:

ECS
LM-4
LOD310-54000

LM-5
LOD310-57000

LM-6
LOD310-57000

LM-7 4 SUB

Panels Affected: None

Cables Affected: None

Issued By: V. Rossetti X 1441

Section: CSS Group No. 267 P/25

RCS THRUSTER SHUTDOWN SIG. RELAY

1. ISSUED 11-26-75

2. ISSUE SHEET NO. 3.02

3. ADD TO NOTE 33

4. SHEET NO. 3.02

5. PANELS AND CABLES

6. CHECK OFF No. 267

7. SHEET NO. 6.00 ZONE 29D

8. SHEET NO. 267B/69

9. PRIORITY LEVEL 3

10. DRAWING NO.

11. ENGINEERING ORDER

12. GRUMMAN AIRCRAFT ENGINEERING CORP.

13. CODE IDENT NO. 26712

14. ENGINEERING ORDER

15. ON SHEET 6.00 ZONE 29D

16. FROM RCS THRUSTERS SHUTDOWN SIG. RELAY SEE NOTE 34

17. CHANGE

18. TO RCS THRUSTERS SHUTDOWN SIG. RELAY SEE NOTE 34

19. ON SHEET 3.02
ADD TO NOTE 33:

20. ECS
LM-4
LOD310-54000

21. LM-5
LOD310-57000

22. LM-6
LOD310-57000

23. LM-7 SUB

24. Panels Affected: None

25. Cables Affected: None

26. Issued By: V. Rossetti X 1441

27. Section: CSS Group No. 267 P/25

28. RCS THRUSTER SHUTDOWN SIG. RELAY

29. 1. ISSUED 11-26-75

30. 2. ISSUE SHEET NO. 3.02

31. 3. ADD TO NOTE 33

32. 4. SHEET NO. 3.02

33. 5. PANELS AND CABLES

34. 6. CHECK OFF No. 267

35. 7. SHEET NO. 6.00 ZONE 29D

36. 8. SHEET NO. 267B/69

37. 9. PRIORITY LEVEL 3

38. 10. DRAWING NO.
ZONE 10B
CALLOUT WAS:
FROM GSE / PIC
(ADJUSTABLE TEMPERATURE CONTROLLER)
CALLOUT SHALL BE:
FROM GSE / PIC
(ADJUSTABLE TEMPERATURE CONTROLLER)
SEE NOTE *

ZONE 11B
CALLOUT WAS:
TO GSE
CALLOUT SHALL BE:
TO GSE
SEE NOTE *
GRUMMAN AIRCRAFT ENGINEERING CORP.
CODE IDENT NO. 26512

ENGINEERING ORDER

ON SHEET 3.02

LM-6 & SUB
LM-6 & SUB

LMW 380-55000
LMW 380-56000

FROM

CHANGE

TO

CABLES AFF: NONE
PANELS AFF: NONE

ISSUED BY: V. Filceman
X 1441
SECTION: GSS
GROUP NO. 261, P. 25

TOTAL 844

CHANGE TO DRAWING NO. 26512-33000

LEVEL 3 DRAWING NO. 26512-33000

DESCRIPTION OF CHANGE

INTERFACE CORRECTLY WITH NEW COMMUNICATIONS LEVEL 2 DRAWING

RESIDUALS OF EXISTING MIGRATED INTERFACE CORRECTLY WITH NEW COMMUNICATIONS LEVEL 2 DRAWING

Issued by V. Filceman
GRUMMAN AIRCRAFT ENGINEERING CORP.
CODE IDENT NO. 26512
ENGINEERING ORDER
ON SHEET 2.00
ON ITEMS 3A2, 3A4, 3A5, 3A6, 3A8, 3A10, 3A11L, 3A12
DELETE LM-4 "ONLY EFFECTIVITY AND ADD LM-4 "THRU LM-15"

ADD THE FOLLOWING:

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>DESCRIPTION</th>
<th>REASON FOR EO</th>
</tr>
</thead>
</table>
| 3A1      | 2018-04-19/1 | EFFECTIVITY 3A2, 3A4, 3A5, 3A6, 3A8, 3A10, 3A11L, 3A12 LM-4 "THRU LM-15"
| 3A3      | 2018-06-01   | ONLY EFFECTIVITY AND ADD LM-4 "THRU LM-15"
| 3A7      | 2018-02-24   | ONLY EFFECTIVITY AND ADD LM-4 "THRU LM-15"
| 3A9      | 2018-09-08   | ONLY EFFECTIVITY AND ADD LM-4 "THRU LM-15"
| 3A1      | 2018-05-22/1 | ONLY EFFECTIVITY AND ADD LM-4 "THRU LM-15"
| 3A8      | 2018-07-02   | ONLY EFFECTIVITY AND ADD LM-4 "THRU LM-15"

PANELS AFFECTED: NONE

CABLES AFFECTED: NONE

LEVEL 3 DWS CHANGE ORDER
FOR EMBRS INFO Q-1

UPDATE OF PART NUMBERS

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>DESCRIPTION</th>
<th>EFFECTIVITY</th>
</tr>
</thead>
</table>
| LM-5     | ONLY EFFECTIVITY 3A2, 3A4, 3A5, 3A6, 3A8, 3A10, 3A11L, 3A12 LM-4 "THRU LM-15"
| LM-6     | ONLY EFFECTIVITY 3A2, 3A4, 3A5, 3A6, 3A8, 3A10, 3A11L, 3A12 LM-4 "THRU LM-15"

ISSUED BY: F. B. Z. Z. 06/03
SECTION: CGS
GROUP NO. 2.07
P. 25
### Engineering Order

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Sheet</th>
<th>Used By</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018601-191</td>
<td>IMU 4</td>
<td>3A</td>
<td>LM-5</td>
</tr>
<tr>
<td>2018601-221</td>
<td>IMU 4</td>
<td>3A</td>
<td>LM-5 &amp; LM-6</td>
</tr>
</tbody>
</table>

**Remarks:**
- **Reason for Change:** Due to excessive wear, the LMU1 was replaced with a LM-5.
- **Part Number of 3A:** Was 2018601-191 for LM-5.

**Issued by:**
- **Date:** 21-48
- **Section:** CSS
- **Group:** 267

**Code:** NAS 9-1100
<table>
<thead>
<tr>
<th>REO DESIGNATION</th>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
<th>SHEET ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>6011000-081</td>
<td>ACT</td>
<td></td>
<td>LM-5 &amp; LM-6</td>
</tr>
<tr>
<td>6011000-071</td>
<td>ACT</td>
<td></td>
<td>LM-4</td>
</tr>
</tbody>
</table>

**Reason for Change:**

Weve redesigned to part number of BAB was modified for LM-4 and 6011000-081 for LM-5 & LM-6.

**Parts Affected:**

None

**Carinos Affected:**

None

**Effective Date:**

01/01/2023

**Issued by:**

V. Joseph

**Section:**

CSS

**Group No.:**

267

**Control No.:**

2030 - 3201

**Project:**

CSS

**Contract No.:**

900-1100
**MAN AIRCRAFT ENGINEERING CORP.**

**ENGINEERING ORDER COMPO'DW267B3581 SHEET 2.00**

**PART NUMBER OF 3AS**

- **FROM 2003994-02Z TO 2003994-05Z**

**EFFECTIVENESS**

**DESCRIPTION OF EO**

- **3AS PART NUMBER L03794-057**

**DRAWING DISPOSITION**

- **APPROVE**

**CHANGE REQD PARTS**

- **REVISE**

**PRIORITY**

- **LEVEL 3 SCHEMATIC**

**DRAWING NO.**

**CABLES AFFECTED:** NONE

**AFFECTED:** MORE

**LEVEL 3 SCHEMATIC**

**FOR CHANGE ONLY**

**ON SHEET 2.00 IN EN CHANGE PART NUMBER OF 3AS FROM 2003994-02Z TO 2003994-05Z**