

Materials contained in attachment 2

Test data tracking form

~~Test engineer's notes~~

~~Test sequence~~

Time-history data plots for:

Force check 0, 1, 2, 3, 4

Force check 0, 1, 2, 3, 4 (cross plot)

Condition B1.39.0928.007 (time-history and cross plots)

Conditions B1.39.0928.007.1-007.4 (time-history and cross plots)

# 737 FLIGHT CONTROL DATA TRACKING FORM

(WRITE IN BLACK INK OR PHOTOCOPY BEFORE TRANSMITTING)

PRIORITY:

SPS 20

WINDS

GW/CGI

PARAM. SET # 1

PLOT FORMAT #

FLI TEST STAFF

D. Maged

MANEUVER CODE

TEST DATE 2/26/96

TEST NO. 001-05

DESCRIPTION 737 Rudder System Ground Test

PLOT/AIRPLANE Above 1 PG 3 of 9

AIRPORT/RUNWAY N/A

F C STAFF Ben Smith

PHONE 294-7923

IRG TIME

END

ALT

REMARKS

DATA REQUEST

EKS

DATE

STAT. SOURCE

CONDITION

NUMBER

SEQUENCE

START

END

MC

DTVN. B656

FORCE CHECK 0

81.39.0928.007

FORCE CHECK 1

81.39.0928.007.1

FORCE CHECK 2

81.39.0928.007.2

FORCE CHECK 3

81.39.0928.007.3

FORCE CHECK 4

81.39.0928.007.4

16:46:20

16:47:20

16:48:15

16:44:50

16:44:05

16:44:30

16:43:20

16:41:20

16:41:45

16:39:05

16:40:15

16:37:15

16:34:05

16:35:25

16:32:15

16:32:45

FILE RECEIVED

FAST

ADDOKEY

TINKER/FILTER

DATABASE

PACK

C427.9042

# FLIGHT TEST DATA SHEET

IMPORTANT: DO NOT USE BLUE INK AS IT WILL NOT REPRODUCE FROM THE ORIGINAL

|          |               |        |       |       |       |       |     |     |       |
|----------|---------------|--------|-------|-------|-------|-------|-----|-----|-------|
|          |               |        |       |       |       |       |     |     |       |
|          |               |        |       |       |       |       |     |     |       |
|          |               |        |       |       |       |       |     |     |       |
|          |               |        |       |       |       |       |     |     |       |
| 16:12:XX | TAPES         | ON     |       |       |       |       |     |     |       |
| 16:24:18 | HYD           | SYS 1  | ON    |       |       |       |     |     |       |
| 16:24:29 | HYD           | SYS 2  | ON    |       |       |       |     |     |       |
|          |               |        |       |       |       |       |     |     |       |
| 16:25:52 | N/W           | PIN IN |       |       |       |       |     |     |       |
| 16:26:XX | RESISTANCE IN | RUDDER | PEDAL | GOING | RIGHT | -     | 0   | AIR | SPEED |
|          |               |        |       |       |       |       |     |     |       |
| 16:28:XX | HYD           | OFF    |       |       |       |       |     |     |       |
|          |               |        |       |       |       |       |     |     |       |
| 16:31:48 | HYD           | SYS 1  | ON    |       |       |       |     |     |       |
| 16:31:58 | HYD           | SYS 2  | ON    |       |       |       |     |     |       |
|          |               |        |       |       |       |       |     |     |       |
| 16:32:30 | FORCE CHECK   | MOVING | 20°   | RT    | RUD   | 55.2  | Lbs |     |       |
| 16:32:52 | "             | "      | "     | "     | 55.2  | Lbs   |     |     |       |
|          | .007%         |        |       |       |       |       |     |     |       |
| 16:34:20 | START         | SWEEP  |       |       |       |       |     |     |       |
|          |               |        |       |       |       |       |     |     |       |
| 16:35:14 | END           | SWEEP  |       |       |       |       |     |     |       |
|          |               |        |       |       |       |       |     |     |       |
| 16:36:05 |               |        |       |       | 75/   | KNOTS |     |     |       |
| 16:36:11 | FORCE CHECK 2 | 20°    | RT    | RUD   |       |       |     |     |       |
| 16:37:00 | "             | 20°    | RT    | RUD   | 67.8  | Lbs   |     |     |       |
|          |               |        |       |       |       |       |     |     |       |
|          | .007.1        |        |       |       |       |       |     |     |       |
| 16:39:15 | START         | SWEEPS |       |       |       |       |     |     |       |
|          |               |        |       |       |       |       |     |     |       |
| 16:40:05 | END           | SWEEPS |       |       |       |       |     |     |       |
|          |               |        |       |       |       |       |     |     |       |
| 16:41:09 |               |        |       |       | 100   | KTS   |     |     |       |
|          |               |        |       |       |       |       |     |     |       |
| 16:41:32 | FORCE CHECK 2 | 20°    | RT    | RUD   | 67.8  | Lbs   |     |     |       |
|          | .007.2        |        |       |       |       |       |     |     |       |
| 16:42:30 | START         | SWEEP  |       |       |       |       |     |     |       |
|          |               |        |       |       |       |       |     |     |       |
| 16:43:10 | END           | SWEEP  |       |       |       |       |     |     |       |
|          |               |        |       |       |       |       |     |     |       |
|          |               |        |       |       |       |       |     |     |       |
| 16:43:44 |               |        |       |       | 125   | KTS   |     |     |       |
|          |               |        |       |       |       |       |     |     |       |
|          |               |        |       |       |       |       |     |     |       |

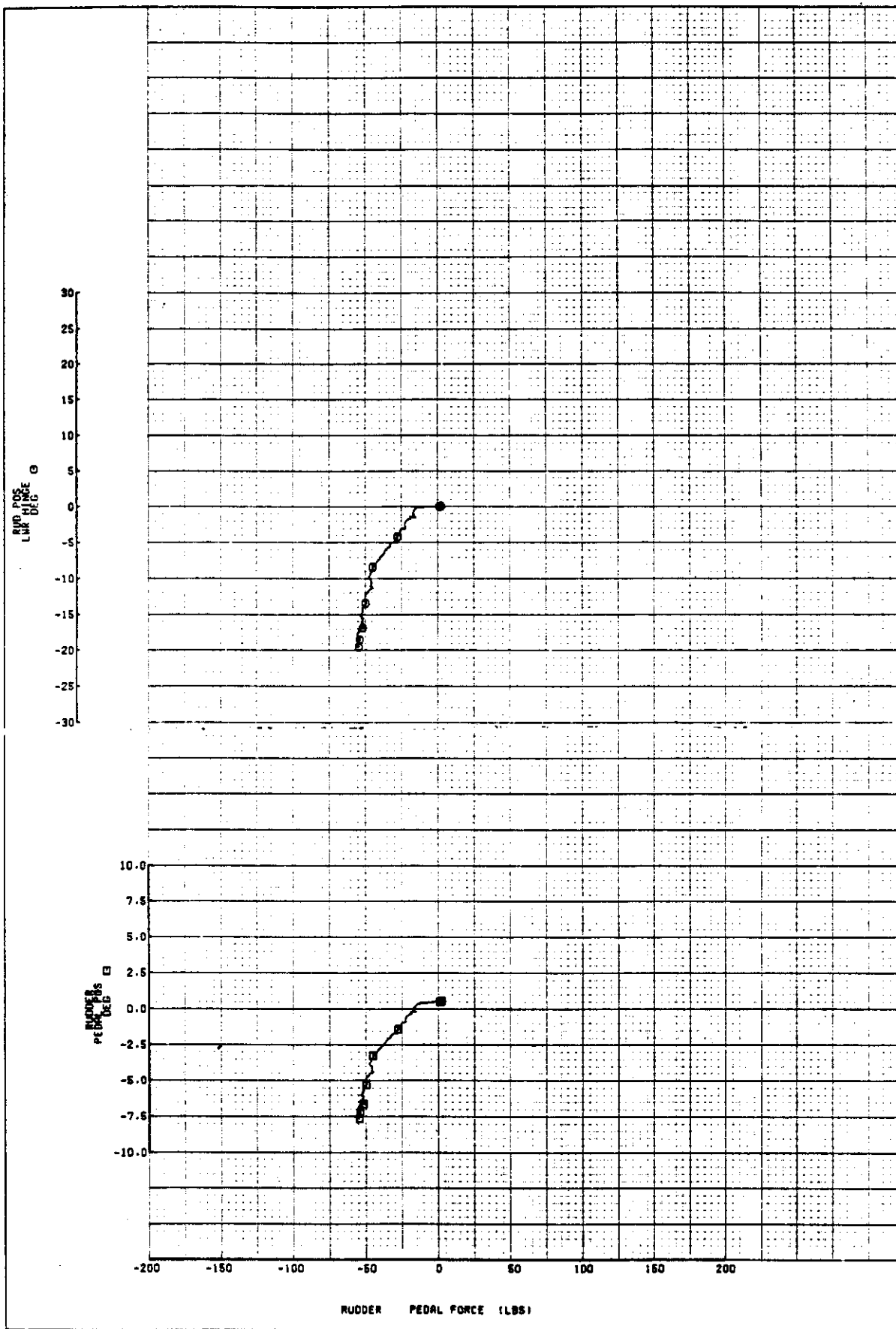
|                               |                           |                      |
|-------------------------------|---------------------------|----------------------|
| SHEET 1 OF 1                  | TITLE 737-200 Rudder Feel | MODEL 737-200        |
| RECORDER D. Nagel / T. Albert | System Ground Test        | AIRPLANE 08865129140 |
| TEST NO. 001-06               | <b>BOEING</b>             | DOC. NO.             |
| DATE 2/26/96                  |                           | PAGE 001-06-01       |

# FLIGHT TEST DATA SHEET

IMPORTANT DO NOT USE BLUE INK AS IT WILL NOT REPRODUCE FROM THE ORIGINAL

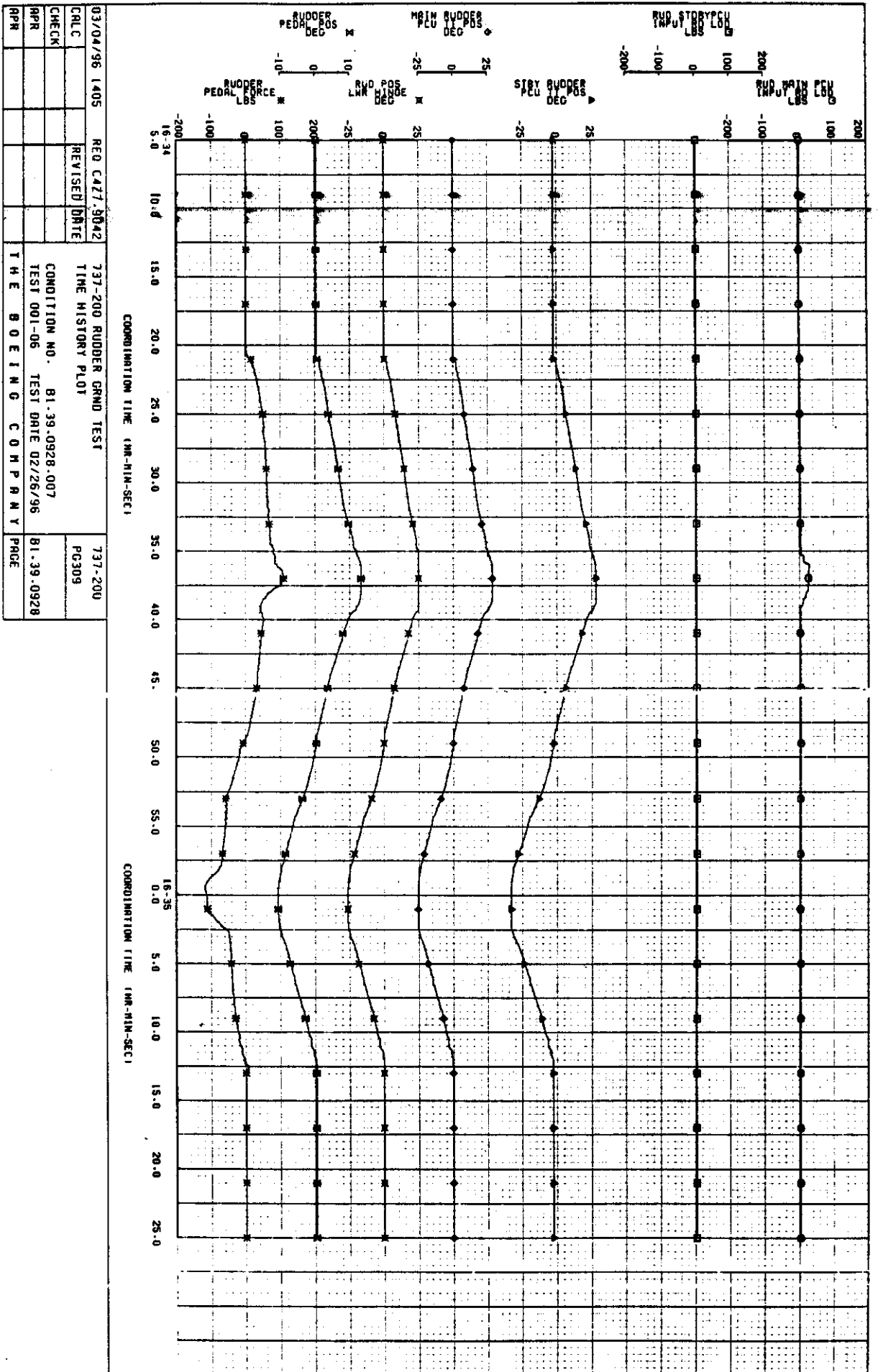
|        |               |       |        |      |     |
|--------|---------------|-------|--------|------|-----|
| 164418 | FORCE CHECK 3 | 200   | RT RUD | 69.7 | Lbs |
| 164500 | START         | SWEET |        |      |     |
| 164540 | END           | SWEET |        |      |     |
| 164604 |               | 150   | KNOTS  |      |     |
| 164635 | FORCE CHECK 4 | 200   | RT RUD | 81.7 | Lbs |
| 164730 | START         | SWEET |        |      |     |
| 164800 | END           | SWEET |        |      |     |
| 165000 | TAPE          | OFF   |        |      |     |

|                      |        |                      |
|----------------------|--------|----------------------|
| SHEET 2 OF 2         | TITLE  | MODEL 737-200        |
| RECORDER T. ALBERT S |        | AIRPLANE 16-807      |
| TEST NO. 001-06      |        | DOC. 108-38554 160 P |
| DATE 2/26/76         | BOEING | PAGE 001-06-C2       |



|               |               |                                |            |
|---------------|---------------|--------------------------------|------------|
| 03/04/96 1405 | REQ C427.9042 | 737-200 RUDDER ORND TEST       | 737-200    |
| CALC          | REVISED DATE  | CROSS PLOT                     | P0309      |
| CHECK         |               | CONDITION NO. FORCE CHECK 0    |            |
| APR           |               | TEST 001-06 TEST DATE 02/26/96 | 81-39-0928 |
| APR           |               | THE BOEING COMPANY             | PAGE       |

FORMAT 2  
737-200, P0309, RUDDER FEEL SYSTEM CHECK



FORMAT 1  
 737-200, PC309, RUDDER FEEL SYSTEM CHECK

RUDDER PEDAL FORCE (LBS)

RUDDER PEDAL FORCE (LBS)

10.0  
7.5  
5.0  
2.5  
0.0  
-2.5  
-5.0  
-7.5  
-10.0

-200 -150 -100 -50 0 50 100 150 200

RUDDER PEDAL FORCE (LBS)

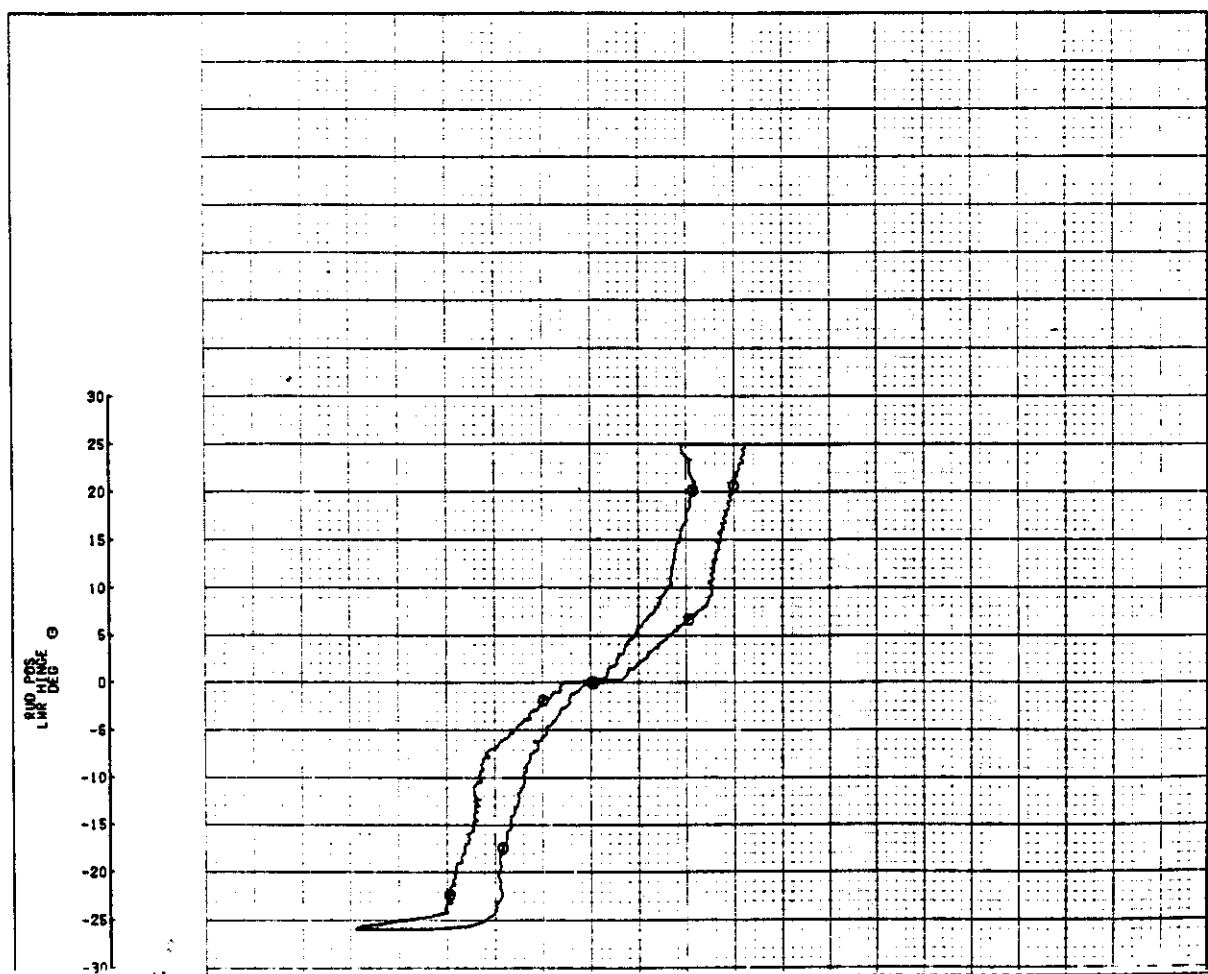
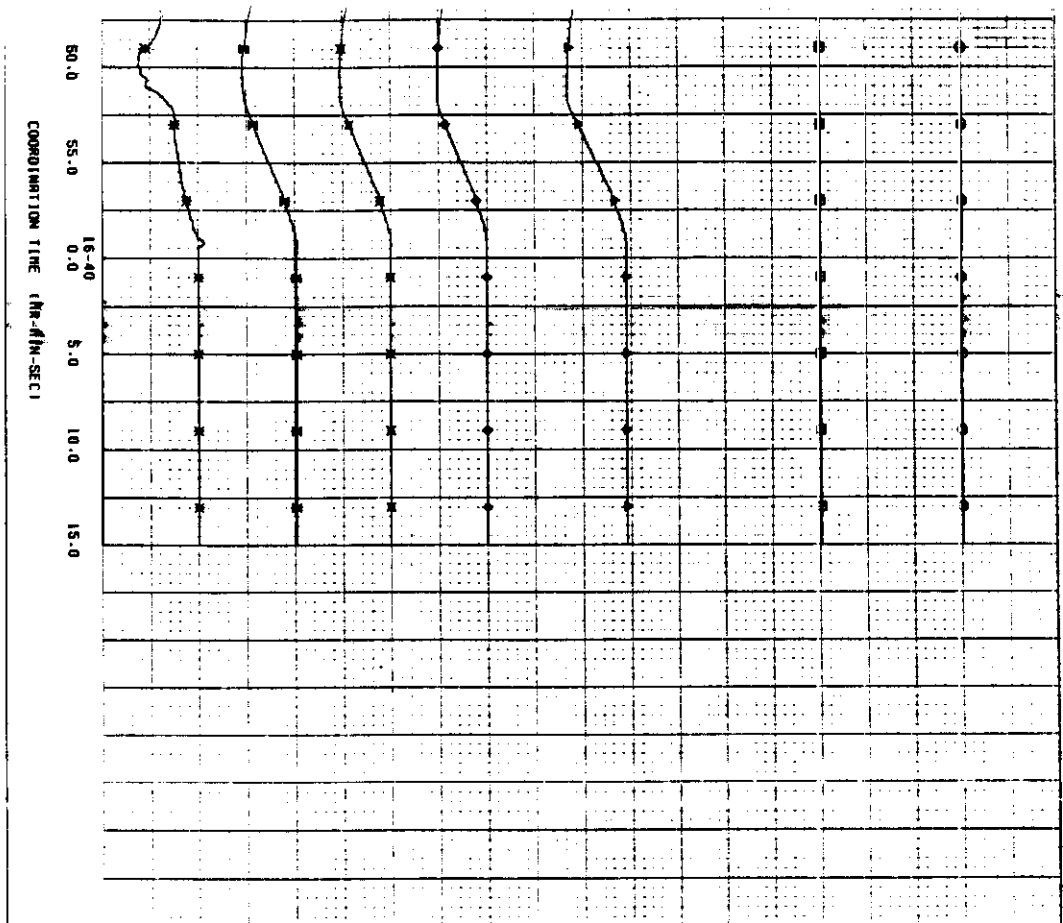
|               |               |                                |            |
|---------------|---------------|--------------------------------|------------|
| 03/04/96 1405 | REQ C427.9042 | 737-200 RUDDER GRND TEST       | 737-200    |
| CALC          | REVISED DATE  | CROSS PLOT                     | P0309      |
| CHECK         |               | CONDITION NO. 81-39-0928-007   |            |
| APR           |               | TEST 001-06 TEST DATE 02/26/96 | 81-39-0928 |
| APR           |               | THE BOEING COMPANY             | PAGE       |

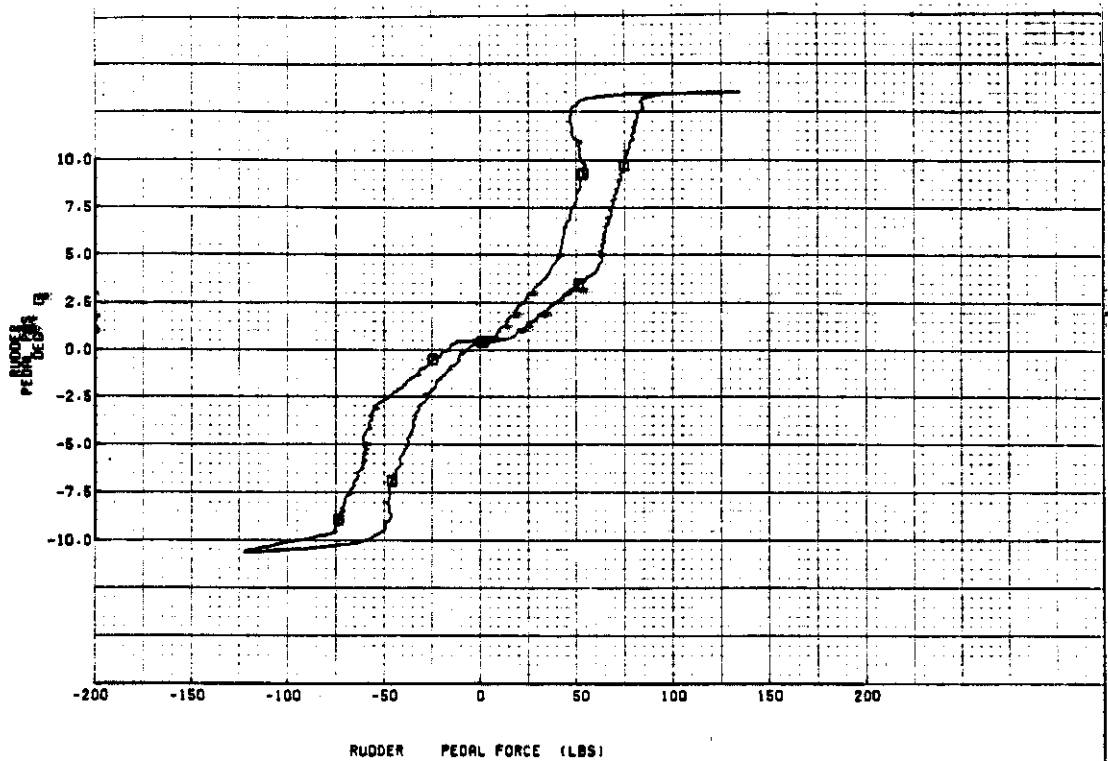
FORMAT 2  
737-200. P0309. RUDDER FEEL SYSTEM CHECK





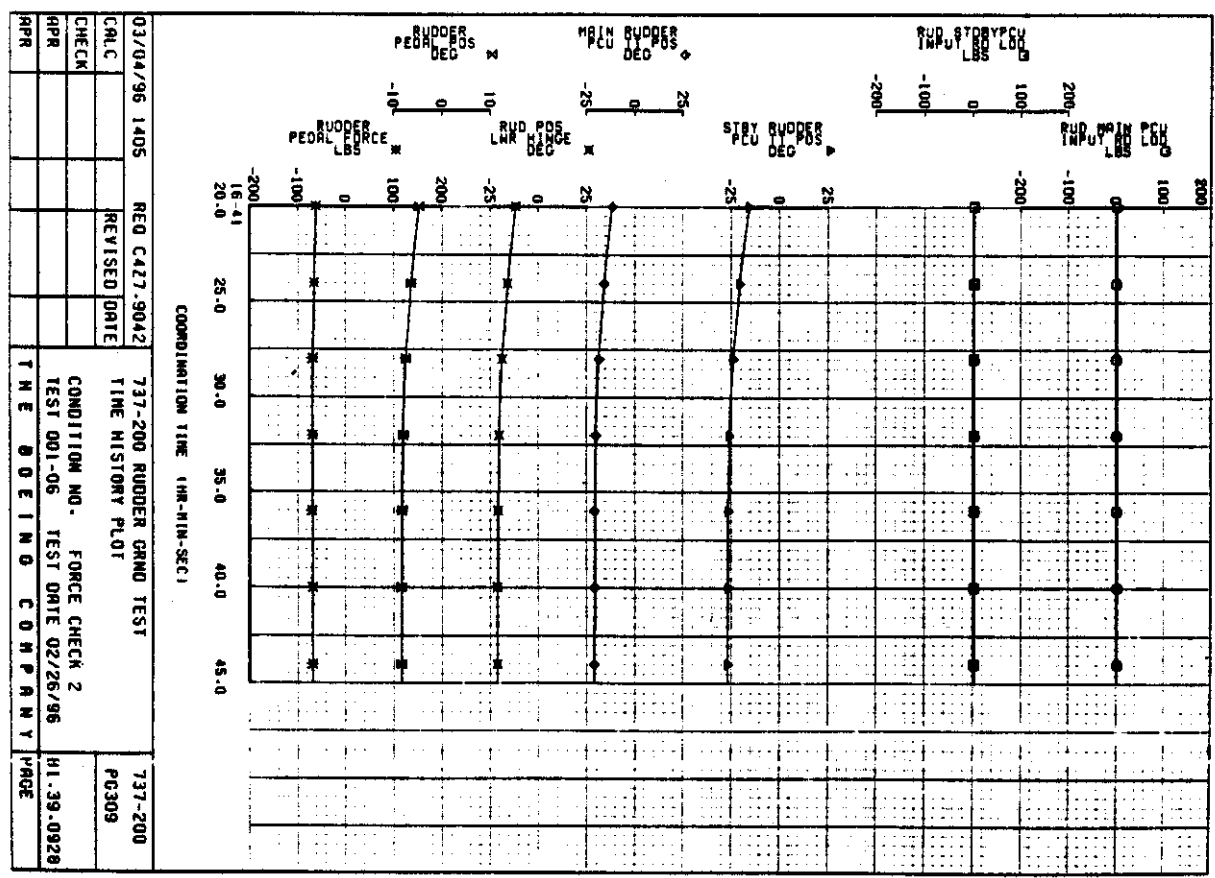






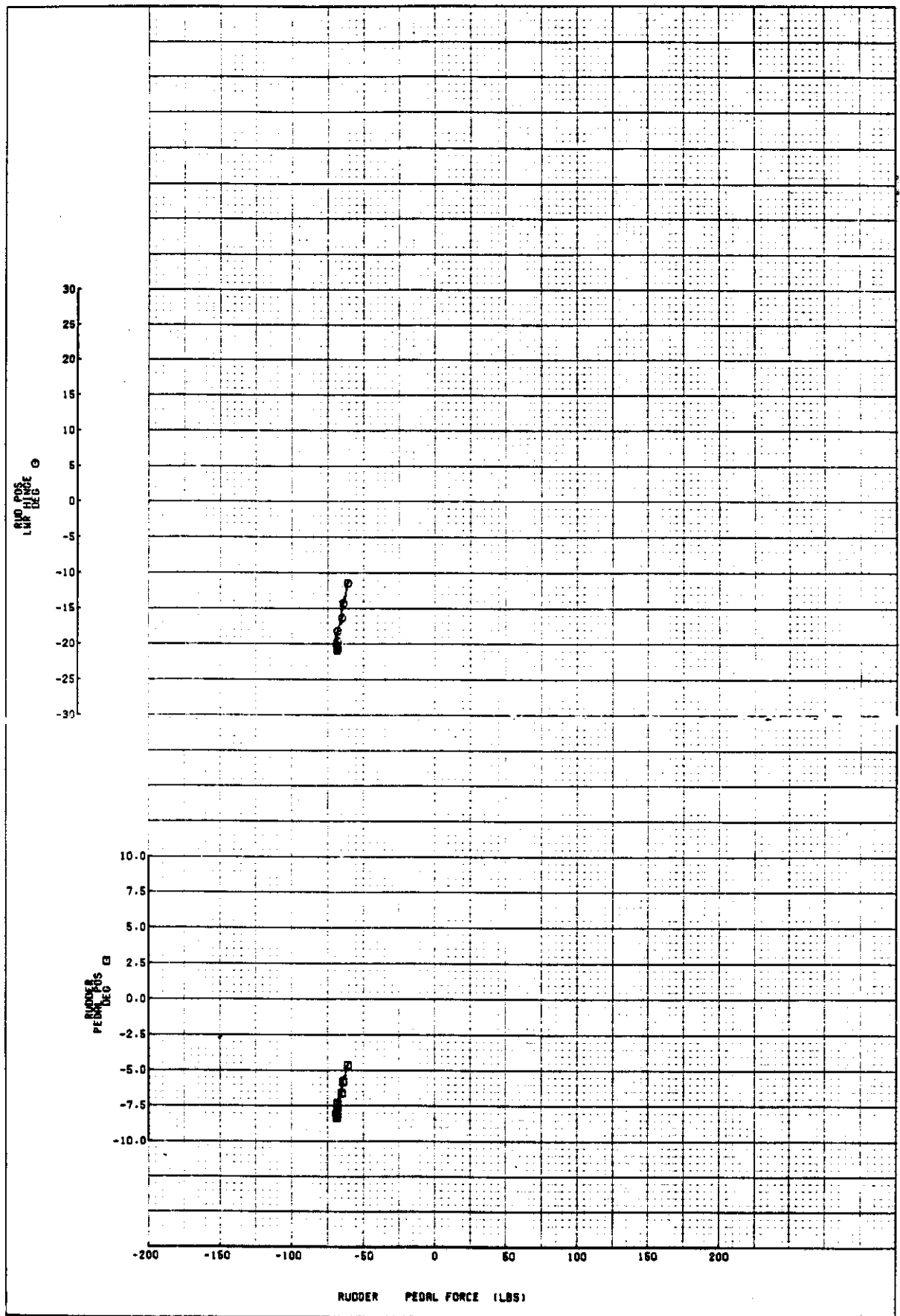
|               |  |               |         |                          |                                |         |            |
|---------------|--|---------------|---------|--------------------------|--------------------------------|---------|------------|
| 03/04/96 1405 |  | REQ C427.9042 |         | 737-200 RUDDER GRND TEST |                                | 737-200 |            |
| CALC          |  |               | REVISED | DATE                     | CROSS PLOT                     |         | P0309      |
| CHECK         |  |               |         |                          | CONDITION NO. B1.39.0928.007.1 |         | B1.39.0928 |
| APR           |  |               |         |                          | TEST 001-06 TEST DATE 02/26/96 |         |            |
| APR           |  |               |         |                          | THE BOEING COMPANY             |         | PAGE       |

FORMAT 2  
737-200, PG309, RUDDER FEEL SYSTEM CHECK



|                                |            |
|--------------------------------|------------|
| 737-200 RUDDER GRND TEST       | 737-200    |
| TIME HISTORY PLOT              | PG309      |
| CONDITION NO. FORCE CHECK 2    |            |
| TEST 001-06 TEST DATE 02/26/96 | HL 39.0926 |
| THE BOEING COMPANY             | PAGE       |

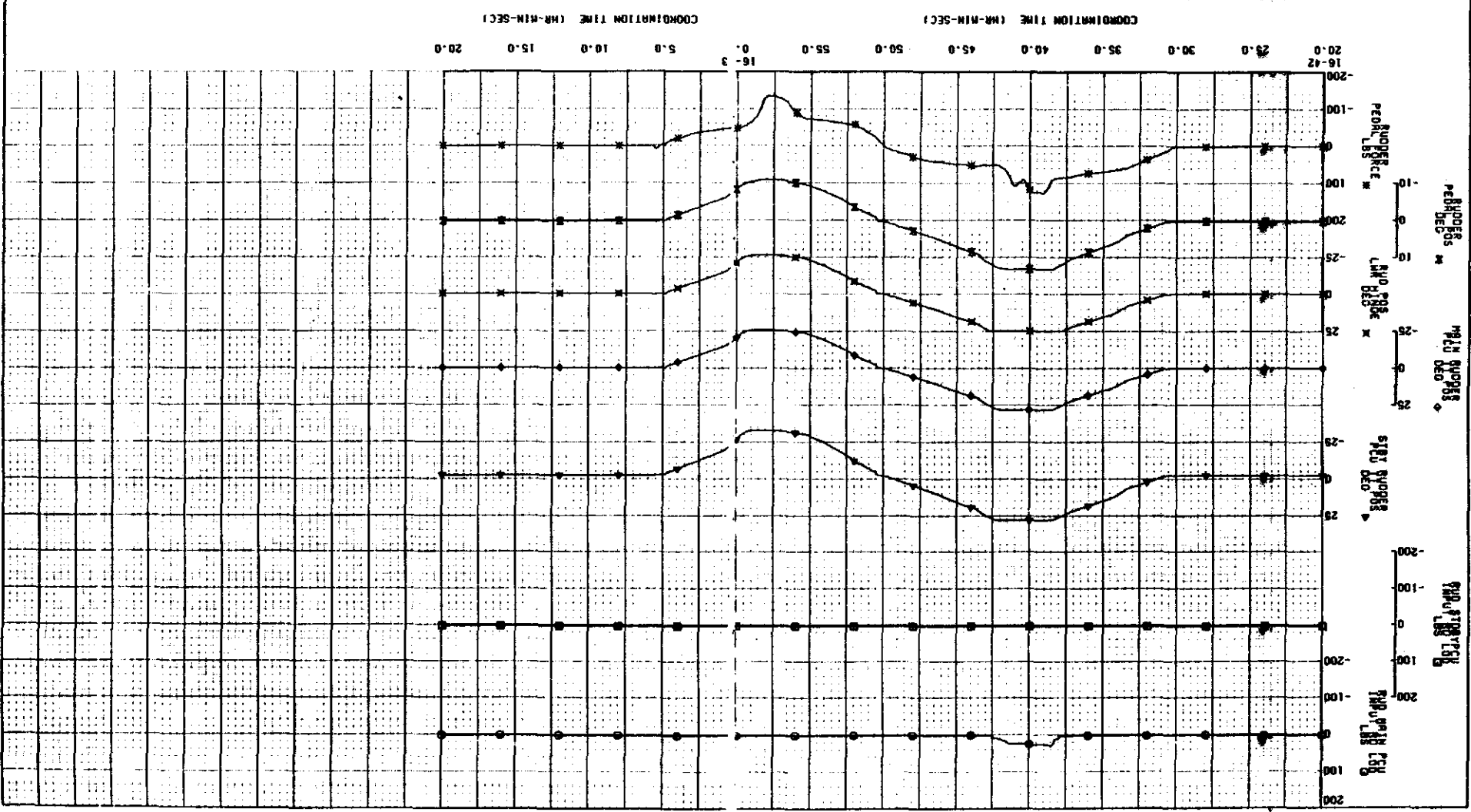
FORMAT 1  
737-200, PG309, RUDDER FEEL SYSTEM CHECK

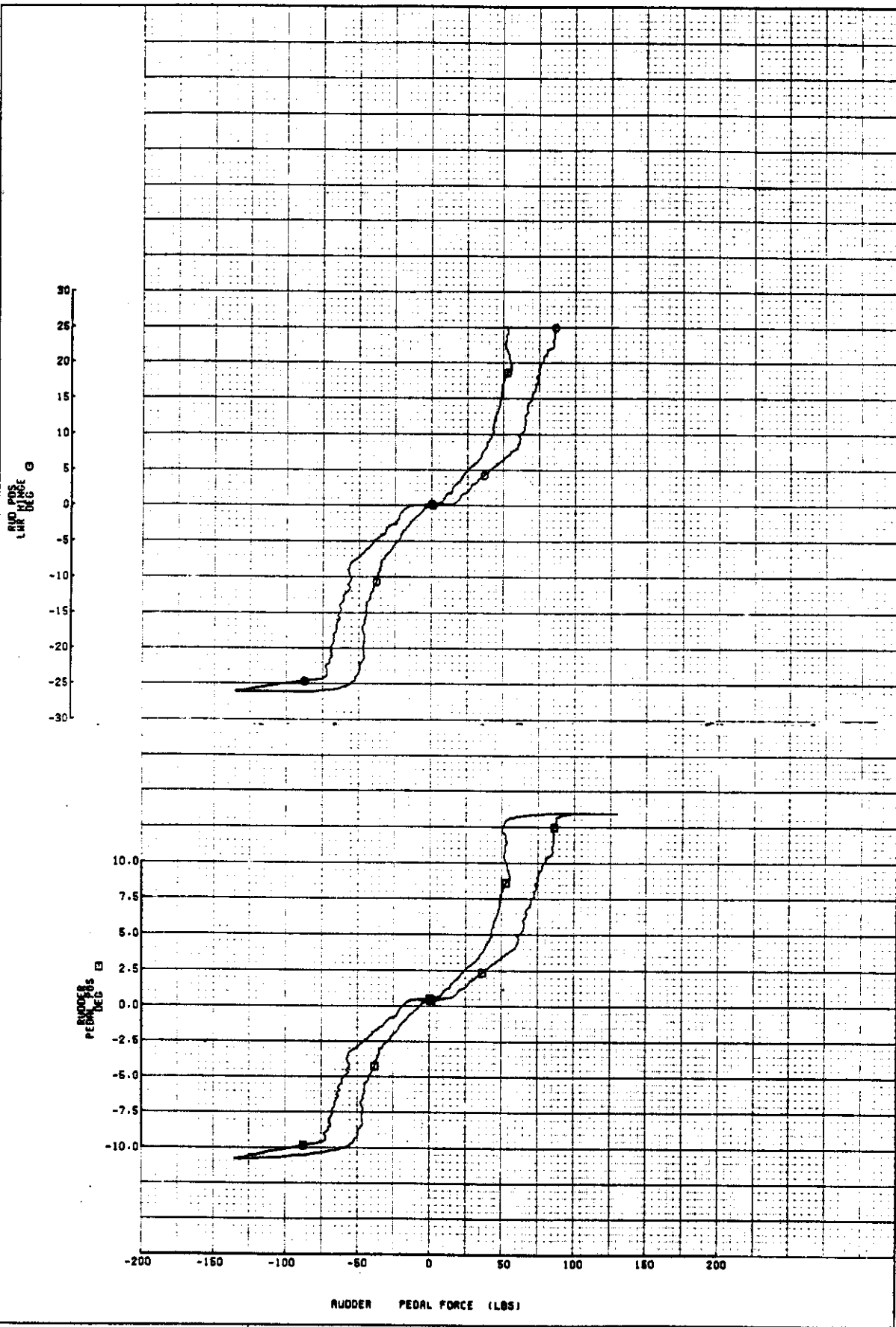


|               |               |                                |            |
|---------------|---------------|--------------------------------|------------|
| 03/04/96 1405 | REQ C427.9042 | 737-200 RUDDER GRND TEST       | 737-200    |
| CALC          | REVISED DATE  | CROSS PLOT                     | P0309      |
| CHECK         |               | CONDITION NO. FORCE CHECK 2    |            |
| APR           |               | TEST 001-08 TEST DATE 02/28/96 | B1.39.0928 |
| APR           |               | THE BOEING COMPANY             | PAGE       |

FORMAT 2  
737-200, P0309, RUDDER FEEL SYSTEM CHECK

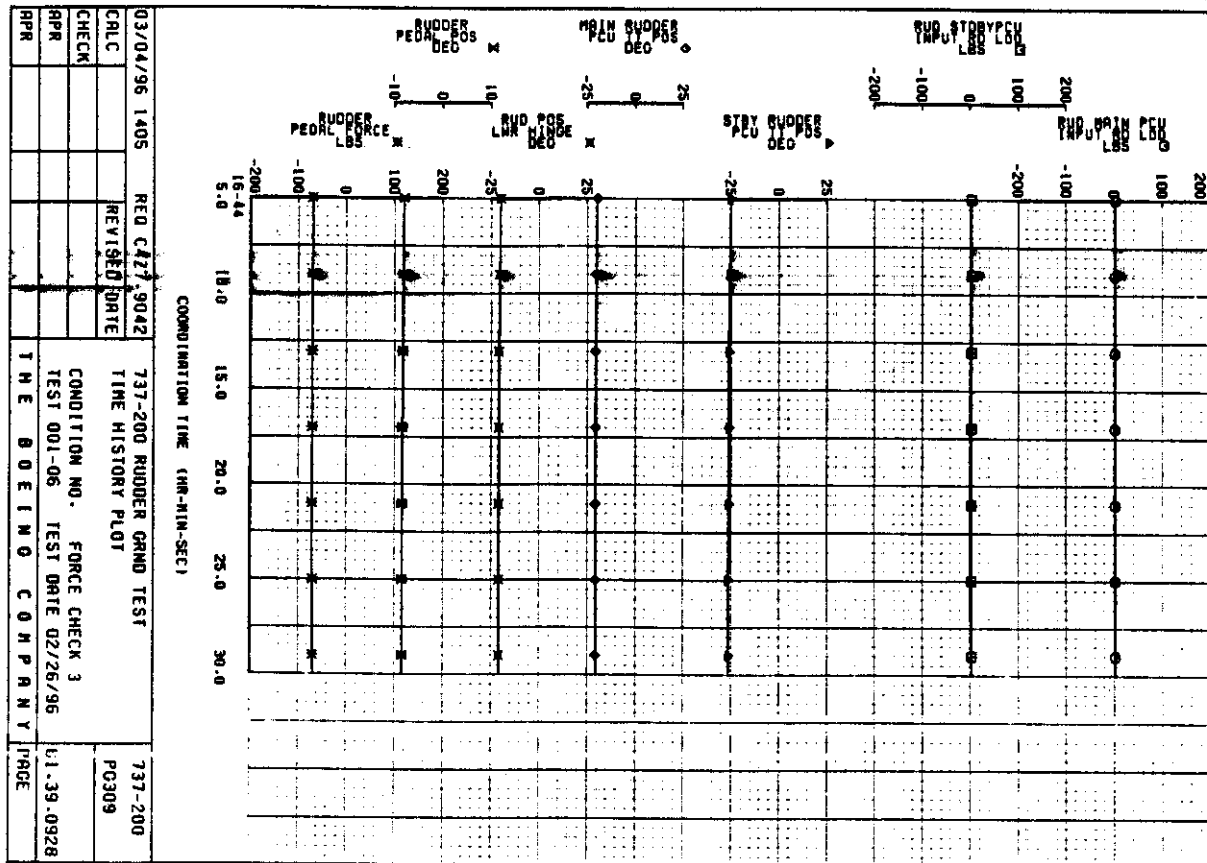
|               |              |                                |            |
|---------------|--------------|--------------------------------|------------|
| 03/04/96 1405 | REG 147.9042 | 737-200 RUDDER GRND TEST       | 737-200    |
| CALC          | REVISED DATE | TIME HISTORY PLOT              | PG309      |
| CHECK         |              | CONDITION NO. 81.39.0928.007.2 |            |
| APR           |              | TEST 001-06 TEST DATE 02/26/96 | 81.39.0928 |
| APR           |              | THE BOEING COMPANY             | PAGE       |



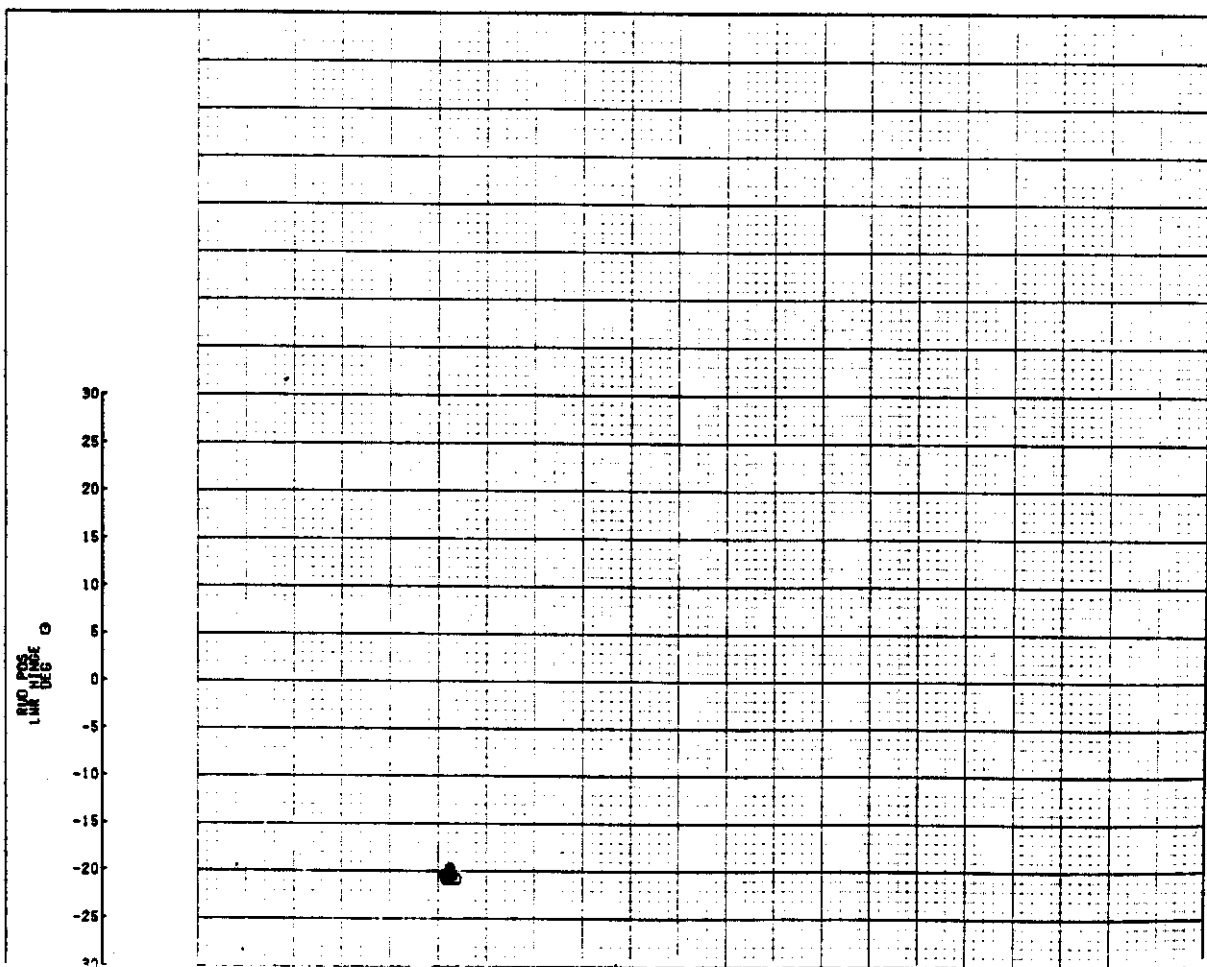


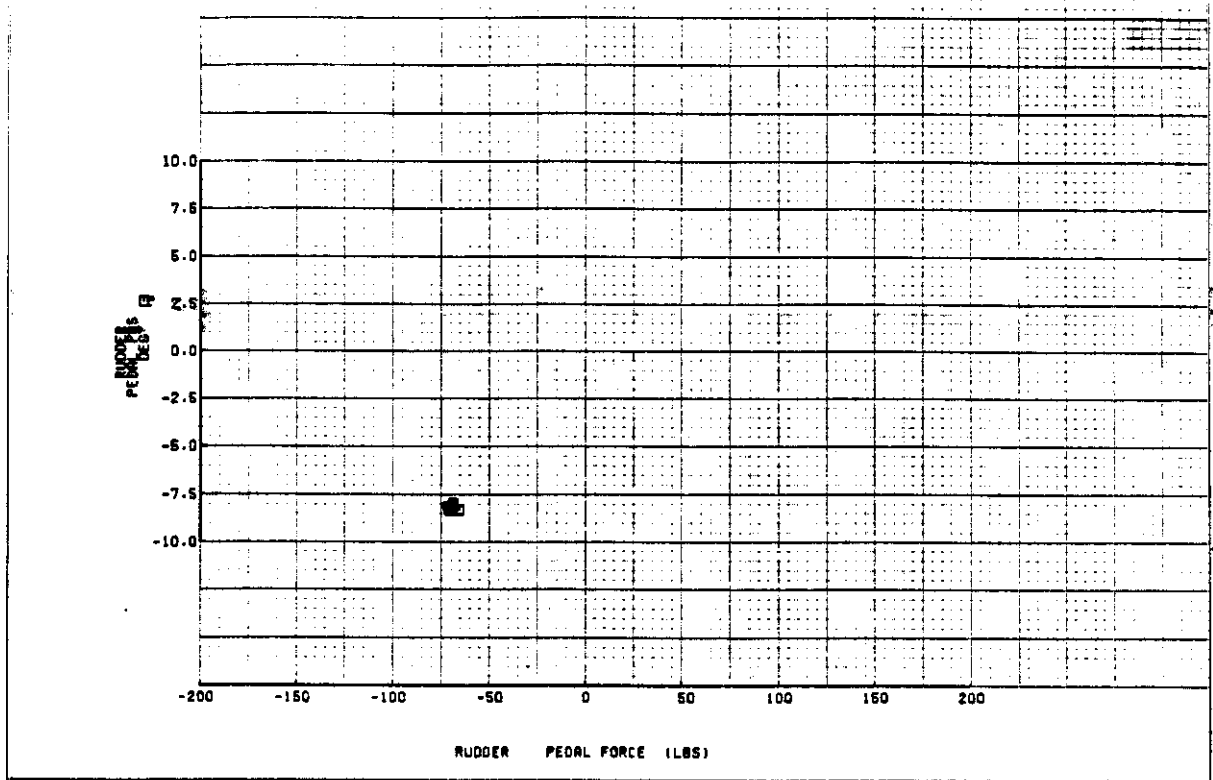
|               |               |                                |            |
|---------------|---------------|--------------------------------|------------|
| 03/04/96 1405 | REQ C427.9042 | 737-200 RUDDER GRND TEST       | 737-200    |
| CALC          | REVISED DATE  | CROSS PLOT                     | P0309      |
| CHECK         |               | CONDITION NO. 81.39-0928.007.2 |            |
| APR           |               | TEST 001-06 TEST DATE 02/26/96 | 81.39-0928 |
| APR           |               | THE BOEING COMPANY             | PROE       |

FORMAT 2  
737-200, P0309, RUDDER FEEL SYSTEM CHECK



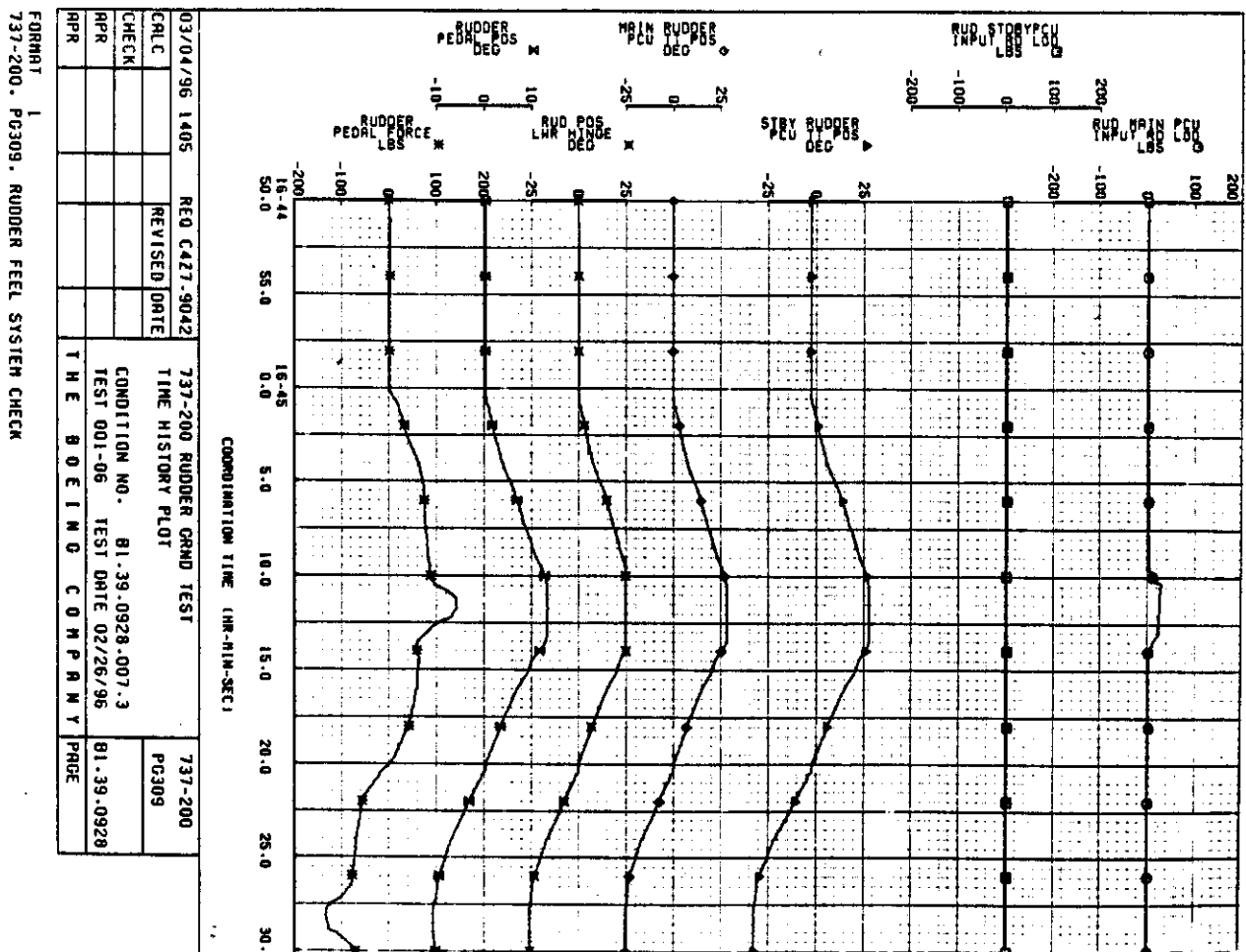
FORM 1  
737-200, PG309, RUDDER FEEL SYSTEM CHECK



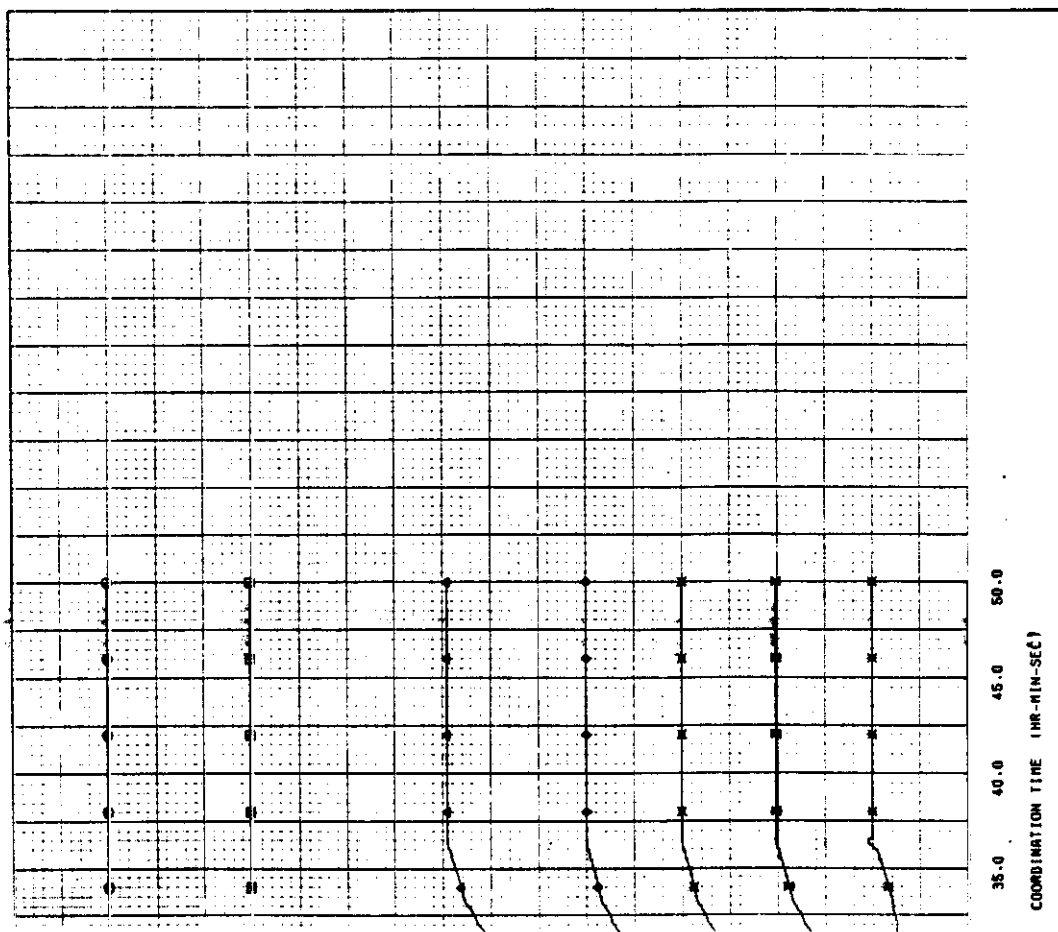
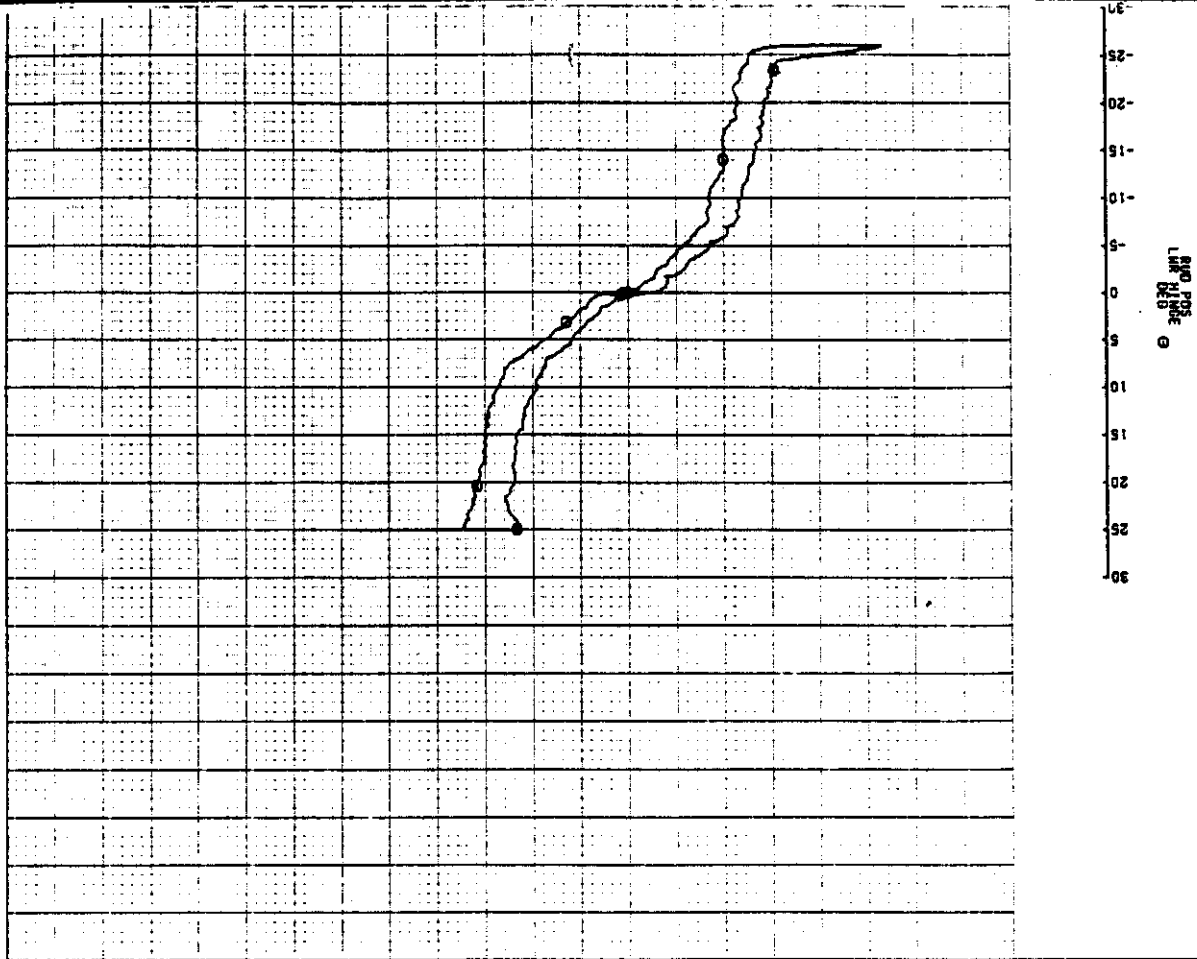


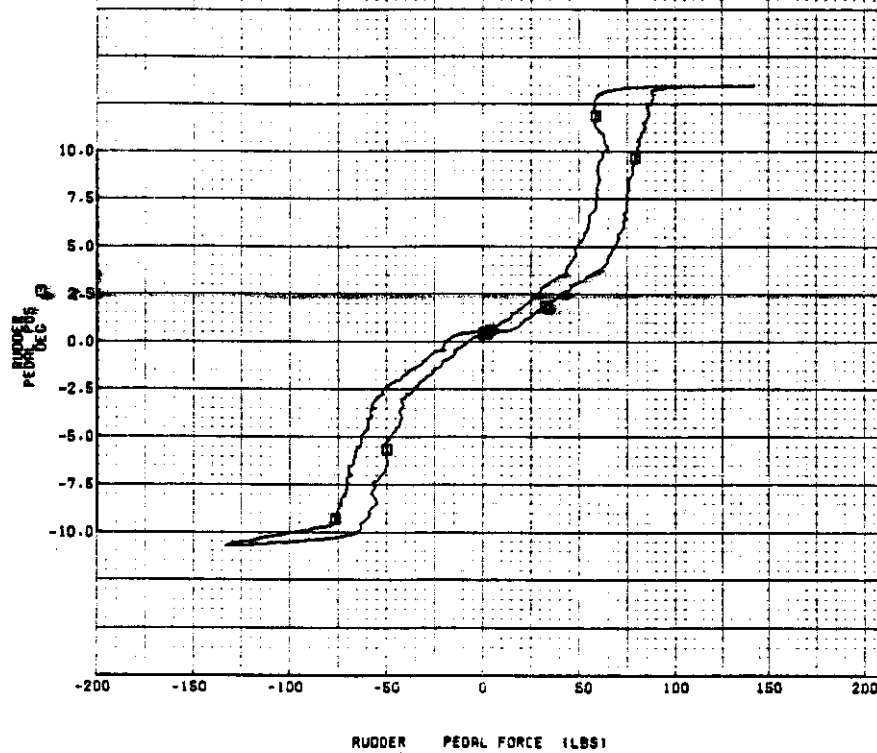
|               |               |                                |            |
|---------------|---------------|--------------------------------|------------|
| 03/04/96 1405 | REQ C427.9042 | 737-200 RUDDER GRND TEST       | 737-200    |
| CALC          | REVISED DATE  | CROSS PLOT                     | P0309      |
| CHECK         |               | CONDITION NO. FORCE CHECK 3    |            |
| APR           |               | TEST 001-06 TEST DATE 02/26/96 | 81.39.0928 |
| APR           |               | THE BOEING COMPANY             | PAGE       |

FORMAT 2  
737-200, P0309, RUDDER FEEL SYSTEM CHECK





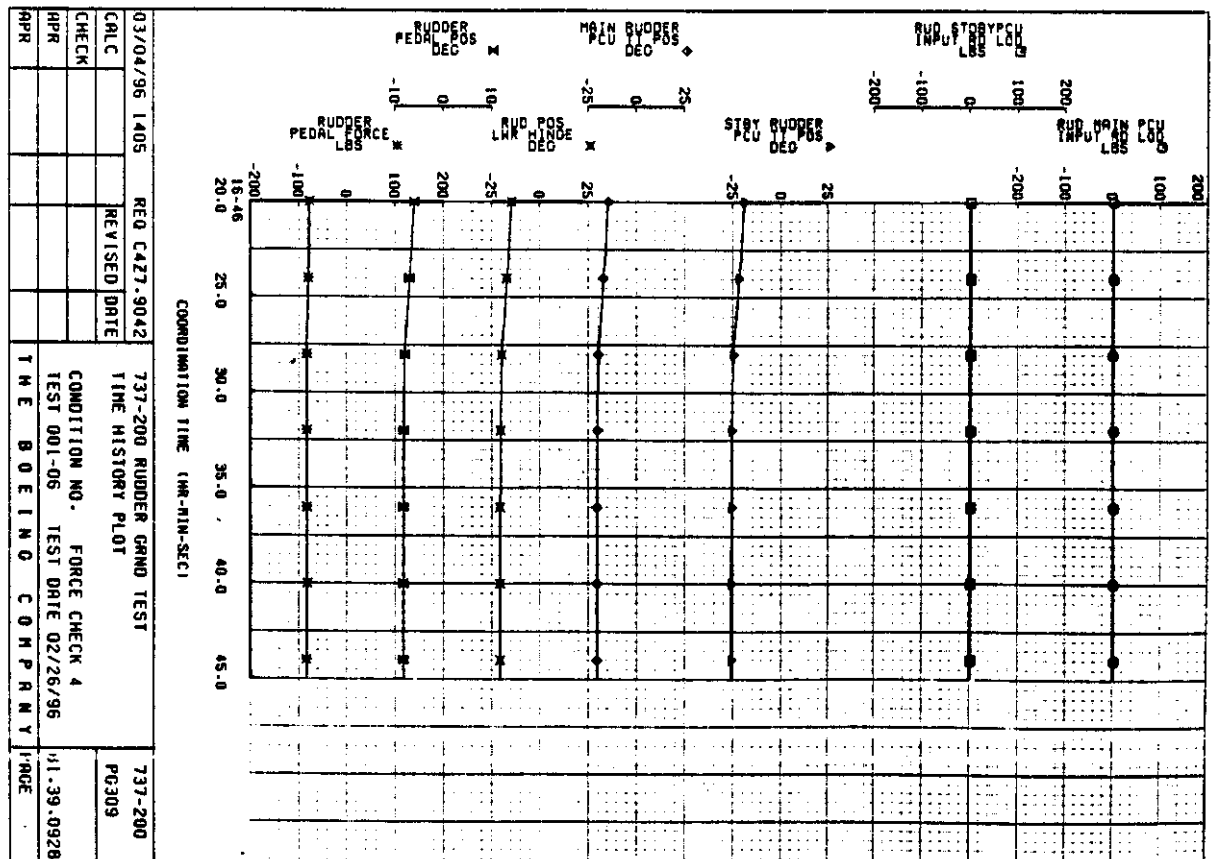


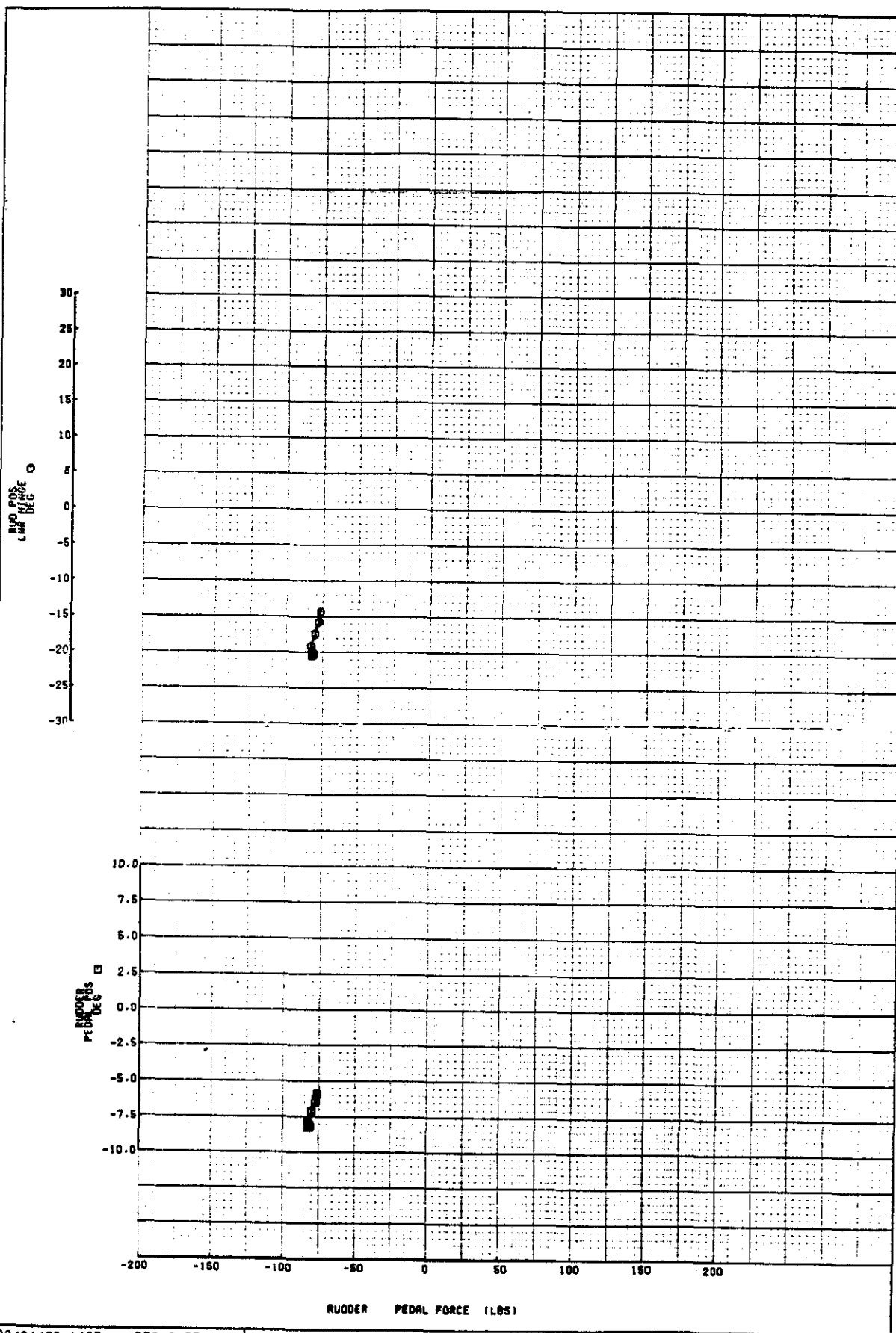


|               |               |                                |            |
|---------------|---------------|--------------------------------|------------|
| 03/04/96 1405 | REQ C477.9042 | 737-200 RUDDER GRND TEST       | 737-200    |
| CALC          | REVISED DATE  | CROSS PLOT                     | P0309      |
| CHECK         |               | CONDITION NO. B1.39.0928.007.3 |            |
| APR           |               | TEST 001-06 TEST DATE 02/26/96 | B1.39.0928 |
| APR           |               | THE BOEING COMPANY             | PAGE       |

FORMAT 2  
737-200, P0309, RUDDER FEEL SYSTEM CHECK

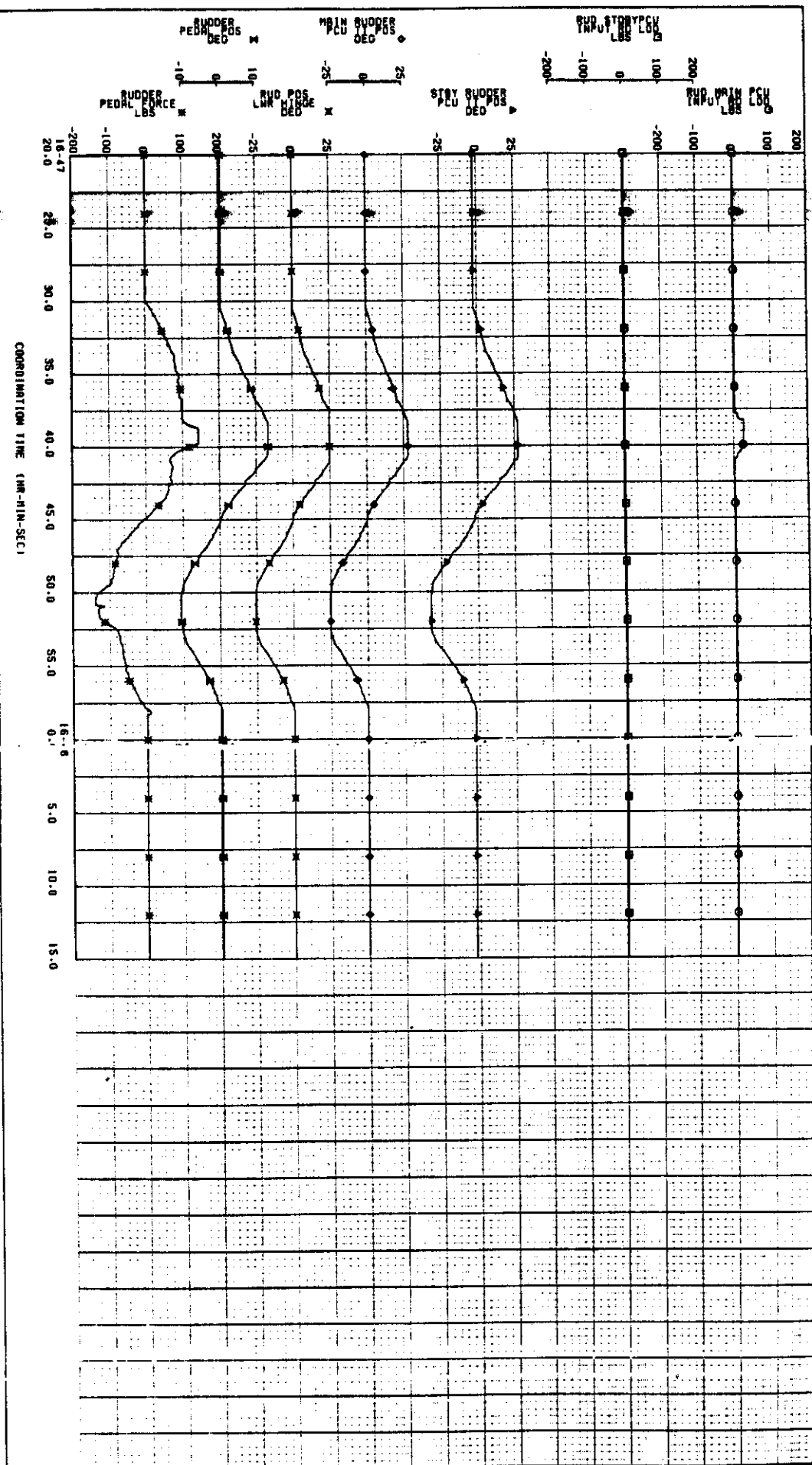
FORMAT 1  
737-200, P0309, RUDDER FEEL SYSTEM CHECK





|               |               |                                |            |
|---------------|---------------|--------------------------------|------------|
| 03/04/96 1405 | REQ C477.9042 | 737-200 RUDDER OPND TEST       | 737-200    |
| CALC          | REVISED DATE  | CROSS PLOT                     | P0309      |
| CHECK         |               | CONDITION NO. FORCE CHECK 4    |            |
| APR           |               | TEST 001-06 TEST DATE 02/26/96 | B1.39.0928 |
| APR           |               | THE BOEING COMPANY             | PAGE       |

FORMAT 2  
737-200. P0309. RUDDER FEEL SYSTEM CHECK

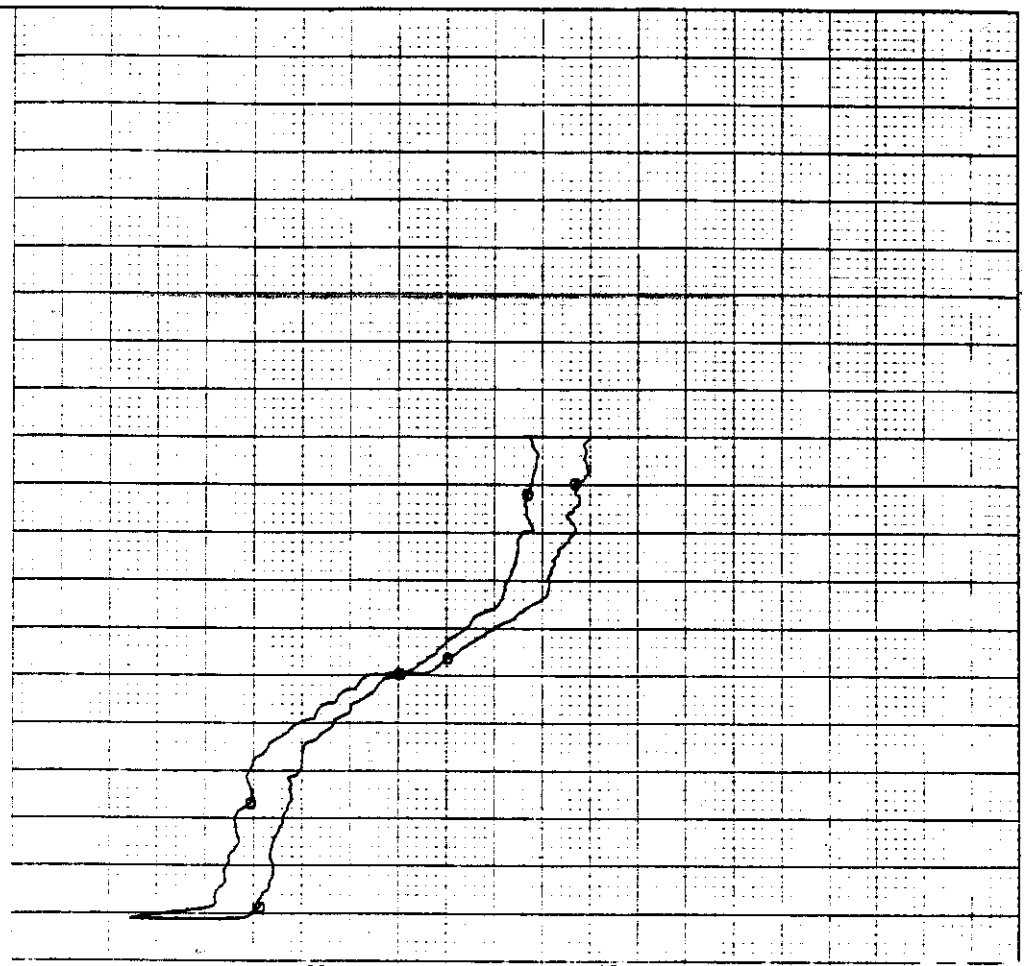


|               |  |                    |  |                                |  |
|---------------|--|--------------------|--|--------------------------------|--|
| 03/04/96 1405 |  | REQ 0477.9042      |  | 737-200                        |  |
| C/LC          |  | REVISED DATE       |  | TIME HISTORY PLOT              |  |
| CHECK         |  |                    |  | CONDITION NO. 81.39.0928.007.4 |  |
| RPR           |  |                    |  | TEST 001-06 TEST DATE 02/26/96 |  |
| RPR           |  |                    |  | 81.39.0928                     |  |
|               |  | THE BOEING COMPANY |  | PAGE                           |  |

FORMAT 1  
737-200, RUDDER FEEL SYSTEM CHECK

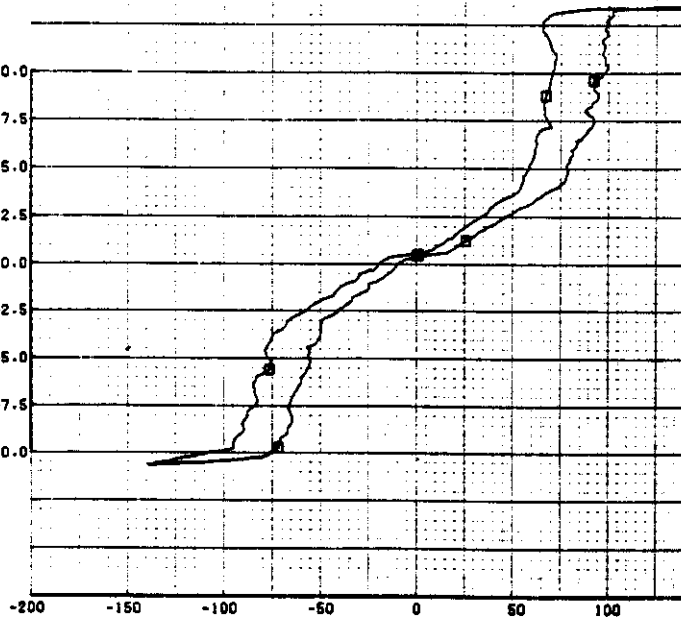
RPD POS  
 LMR HINGE  
 DEG

30  
 25  
 20  
 15  
 10  
 5  
 0  
 -5  
 -10  
 -15  
 -20  
 -25  
 -30



RUDDER  
 PEDAL POS  
 DEG

10.0  
 7.5  
 5.0  
 2.5  
 0.0  
 -2.5  
 -5.0  
 -7.5  
 -10.0



-200 -150 -100 -50 0 50 100 150 200

RUDDER PEDAL FORCE (LBS)

|               |               |                                |            |
|---------------|---------------|--------------------------------|------------|
| Q3/D4/96 1405 | REQ C427.9042 | 737-200 RUDDER GRND TEST       | 737-200    |
| CALC          | REVISED DATE  | CROSS PLOT                     | P0309      |
| CHECK         |               | CONDITION NO. B1-39.0928.007.4 |            |
| APR           |               | TEST 001-06 TEST DATE 02/28/96 | B1-39.0928 |
| APR           |               | THE BOEING COMPANY             | PAGE       |

FORMAT 2  
 737-200, P0309, RUDDER FEEL SYSTEM CHECK

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