KSC OPERATIONS
APOLLO/SATURN TEST CATALOG

1. TEST TITLE
S-IVB HYDRAULIC ACTUATOR MEASURING CALIBRATION CHECKS

2. KSC TEST NO.
V-23023-SIVB2

3. STAGE, VEHICLE OR GSE
AS-502, SIVB

4. TEST OBJECTIVES

THE FOLLOWING WILL BE OBTAINED FROM THIS TEST:

A. CALIBRATION OF S-IVB ENGINE DEFLECTION PANEL
B. CALIBRATION OF FLIGHT CONTROL RECORDERS
C. CALIBRATION CURVES FOR S-IVB TELEMETRY
D. CALIBRATION CURVES FOR I.U. TELEMETRY

5. TEST DESCRIPTION/EQUIPMENT STATUS

THE PITCH AND YAW ACTUATORS WILL BE POSITIONED AT PREDETERMINED VALUES OF ACTUATOR LENGTH BY EITHER HYDRAULIC OR MECHANICAL MEANS. ALL DATA STATIONS WILL TAKE DATA OR CALIBRATE METERS AS REQUIRED FOR EACH DIFFERENT INPUT TO ACCOMPLISH "A" THROUGH "D" OF SECTION 4 ABOVE.

A VISUAL INSPECTION OF THE ACTUATORS WILL BE MADE PRIOR TO POSITIONING THE ACTUATORS.

A. ACTUATOR HOLDING FIXTURES INSTALLED.
B. ACTUATOR MIDSTROKE LOCKS INSTALLED FOR ZERO ONLY THEN REMOVED. (SEE BACK SHEET)

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(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

6. PREPARED BY	8. NASA-KSC APPROVAL	10. APPROVAL DATE
J. K. Keller	V. a. Elentri	June 13, 1966
7. ORGANIZATION	**9. ORGANIZATION**	**11. VEHICLE EFFECTIVITY**
DOUGLAS AIRCRAFT COMPANY, INC	LVO-244 NASA-Flight Control	AS- 502

APOLLO/SATURN TEST CATALOG (Continuation Sheet)	PAGE 2 OF 2

1. TEST TITLE	2. KSC TEST NO.
S-IVB HYDRAULIC ACTUATOR MEASURING CALIBRATION CHECKS	V-23023-SIVB2
	11. VEHICLE EFFECTIVITY: AS- 502, SIVB

12. WHERE TEST PERFORMED	13. COMPUTER/ACE PROG. IDENT. (IF APPLICABLE)	14. EST. TEST TIME
VAB, HIGH BAY		1 Hour

15. TEST CONFIGURATION

16. SUPPORT REQUIREMENTS CHECKLIST *(Check appropriate boxes and add any additional)*

[X] GROUND POWER	[X] LCC MEASURING (LVO)	[ ] ETR/KSC RADAR
[ ] S-IB OR S-IC STAGE PWR	[ ] LCC MEASURING (INS)	[ ] ETR COMMAND XMITTER
[ ] S-II STAGE POWER	[X] GSE MEASURING (LVO)	[ ] LOCAL COMMAND (C.L.)
[X] S-IVB STAGE POWER	[ ] GSE MEASURING (INS)	[ ] ALDS
[X] IU POWER	[ ] LCC DATA DISPLAY	[ ] LCC TM STA. (MONITOR)
[ ] LEM POWER	[ ] CIF DATA DISPLAY	[ ] LCC TM RECORDING
[ ] SM POWER	[X] DDAS	[ ] CIF TM STA. (MONITOR)
[ ] CM POWER	[ ] DDAS TAPE RECORDING	[ ] CIF TM RECORDING
[ ] BACK-UP BATTERIES	[ ] SERVICE STRUCTURE MEAS.	[ ] CIF COMPUTER
[ ] TIMING	[X] RCA-110A COMPUTERS	[ ] CIF DATA
[ ] COUNTDOWN CLOCK	[ ] ACE	[ ] TM RECORDS
[ ] ETR SEQUENCER	[ ] L/V W-G ECS	[ ] REAL-TIME CIF COMPUT.
[ ] ETR COUNTDOWN CLOCK	[ ] CM W-G ECS	[ ] POST-TEST CIF COMPUT.
[ ] ETR S.R.O.	[ ] FACILITY ECS (GAS)	[ ] KSC TRACKING
[ ] ETR R.S.O.	[ ] H.P. GAS	[ ] RFI MONITORING
[ ] ETR PAD SAFETY	[ ] CCF	[ ] RF READOUTS (ETR)
[ ] KSC PAD SAFETY	[ ] FACILITY TV (OTV)	[ ] RF READOUTS (KSC)
[ ] SECURITY POLICE	[X] FACILITY COMM. (OIS)	[ ] WEATHER FORECAST
[ ] FIRE FIGHTING	[ ] FILM CAMERAS	[ ] MCC-C
[ ] MEDICAL	[ ] SEARCH LIGHTS	[ ] MCC-H
[ ]	[ ]	[ ] FOOD SERVICE
[ ]	[ ]	[ ]
[ ]	[ ]	[ ]
[ ]	[ ]	[ ]
[ ]	[ ]	[ ]

OTHERS:

404

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

17. OTHER APPLICABLE REFERENCE DOCUMENTATION

KSC OPERATIONS
APOLLO/SATURN TEST CATALOG

1. TEST TITLE

LABORATORY VERIFICATION OF TEST EQUIPMENT

2. KSC TEST NO.

V-23024-IU 502

3. STAGE, VEHICLE OR GSE

LABORATORY

4. TEST OBJECTIVES

A. TO VERIFY THE INTEGRITY OF ALL FLIGHT CONTROL SYSTEM GSE REQUIRED FOR LABORATORY AND VEHICLE CHECKOUT.

5. TEST DESCRIPTION/EQUIPMENT STATUS

DESCRIPTION

A. TEST EQUIPMENT WILL BE VERIFIED USING GUIDELINES ESTABLISHED BY FLIGHT CONTROL PERSONNEL AND THE MANUFACTURER. THE PROCEDURE IS DETAILED IN THE FOLLOWING SUBTASKS:

PART I RATE GYRO TEST EQUIPMENT.

PART II CONTROL SIGNAL PROCESSOR TEST EQUIPMENT.

PART III CONTROL COMPUTER TEST EQUIPMENT.

PART IV VEHICLE SUPPORT EQUIPMENT.

PART V COMMERCIAL TEST EQUIPMENT.

STATUS

A. THIS TEST IS TO BE PERFORMED PRIOR TO AS-502 UNIT TESTS IN THE LABORATORY.

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(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

6. PREPARED BY	8. NASA-KSC APPROVAL	10. APPROVAL DATE
L. M. Ward	Vincent A. Elentri	June 13, 1966
7. ORGANIZATION	9. ORGANIZATION	11. VEHICLE EFFECTIVITY
IBM CORP.	LVO-244 NASA - Flight Control	AS- 502

APOLLO/SATURN TEST CATALOG (Continuation Sheet)	PAGE 2 OF 2

1. TEST TITLE	2. KSC TEST NO.
LABORATORY VERIFICATION OF TEST EQUIPMENT	V-23024-IU 502
	11. VEHICLE EFFECTIVITY: AS-502

12. WHERE TEST PERFORMED	13. COMPUTER/ACE PROG. IDENT. (IF APPLICABLE)	14. EST. TEST TIME
FLIGHT CONTROL LABORATORY	N/A	60 HR.

15. TEST CONFIGURATION

N/A

16. SUPPORT REQUIREMENTS CHECKLIST *(Check appropriate boxes and add any additional)*

☐ GROUND POWER	☐ LCC MEASURING (LVO)	☐ ETR/KSC RADAR
☐ S-IB OR S-IC STAGE PWR	☐ LCC MEASURING (INS)	☐ ETR COMMAND XMITTER
☐ S-II STAGE POWER	☐ GSE MEASURING (LVO)	☐ LOCAL COMMAND (C.L.)
☐ S-IVB STAGE POWER	☐ GSE MEASURING (INS)	☐ ALDS
☐ IU POWER	☐ LCC DATA DISPLAY	☐ LCC TM STA. (MONITOR)
☐ LEM POWER	☐ CIF DATA DISPLAY	☐ LCC TM RECORDING
☐ SM POWER	☐ DDAS	☐ CIF TM STA. (MONITOR)
☐ CM POWER	☐ DDAS TAPE RECORDING	☐ CIF TM RECORDING
☐ BACK-UP BATTERIES	☐ SERVICE STRUCTURE MEAS.	☐ CIF COMPUTER
☐ TIMING	☐ RCA-110A COMPUTERS	☐ CIF DATA
☐ COUNTDOWN CLOCK	☐ ACE	☐ TM RECORDS
☐ ETR SEQUENCER	☐ L/V W-G ECS	☐ REAL-TIME CIF COMPUT.
☐ ETR COUNTDOWN CLOCK	☐ CM W-G ECS	☐ POST-TEST CIF COMPUT.
☐ ETR S.R.O.	☐ FACILITY ECS (GAS)	☐ KSC TRACKING
☐ ETR R.S.O.	☐ H.P. GAS	☐ RFI MONITORING
☐ ETR PAD SAFETY	☐ CCF	☐ RF READOUTS (ETR)
☐ KSC PAD SAFETY	☐ FACILITY TV (OTV)	☐ RF READOUTS (KSC)
☐ SECURITY POLICE	☐ FACILITY COMM. (OIS)	☐ WEATHER FORECAST
☐ FIRE FIGHTING	☐ FILM CAMERAS	☐ MCC-C
☐ MEDICAL	☐ SEARCH LIGHTS	☐ MCC-H
☒ IU FLIGHT CONTROL	☐	☐ FOOD SERVICE
☐	☐	☐
☐	☐	☐
☐	☐	☐
☐	☐	☐

OTHERS:

U06

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

17. OTHER APPLICABLE REFERENCE DOCUMENTATION

KSC OPERATIONS
APOLLO/SATURN TEST CATALOG

1. TEST TITLE

CONTROL COMPUTER UNIT TEST

2. KSC TEST NO.

V-23025-IU 502

3. STAGE, VEHICLE OR GSE

LABORATORY

4. TEST OBJECTIVES

A. TO VERIFY THAT THE CONTROL COMPUTER MSFC P/N 50M32300, MEETS THE APPLICABLE UNIT TEST SPECIFICATIONS.

5. TEST DESCRIPTION/EQUIPMENT STATUS

DESCRIPTION

A. THE CONTROL COMPUTER WILL BE INSPECTED FOR DAMAGE.

B. THE NULLS, GAINS, POLARITIES, AND DYNAMIC RESPONSE CHARACTERISTICS WILL BE CHECKED FOR EACH COMPUTER MODE.

C. THE SERVO AND SPATIAL COMPARATORS, REDUNDANT RELAYS, AND SPATIAL AMPLIFIER CHARACTERISTICS WILL BE CHECKED.

D. THE TEMPERATURE AND PRESSURE TRANSDUCERS WILL BE CHECKED.

STATUS

A. VERIFY PROCEDURE NUMBER V-23024-IU 502, PART III HAS BEEN COMPLETED PRIOR TO PERFORMING THIS TEST.

B. THIS TEST WILL BE PERFORMED USING A FLIGHT CONTROL SYSTEMS SECTION LABORATORY TEST SET MSFC P/N 50M34095-1.

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(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

6. PREPARED BY	8. NASA-KSC APPROVAL	10. APPROVAL DATE
J. M. Ward	Vincent A. Elentri	June 13, 1966
7. ORGANIZATION	9. ORGANIZATION LVO-244	11. VEHICLE EFFECTIVITY
IBM CORP.	NASA-Flight Control	AS-502

APOLLO/SATURN TEST CATALOG (Continuation Sheet)	PAGE 2 OF 2

1. TEST TITLE	2. KSC TEST NO.
CONTROL COMPUTER UNIT TEST	V-23025-IU 502
	11. VEHICLE EFFECTIVITY
	AS- 502

12. WHERE TEST PERFORMED	13. COMPUTER/ACE PROG. IDENT. (IF APPLICABLE)	14. EST. TEST TIME
FLIGHT CONTROL LABORATORY	N/A	8.0 HRS.

15. TEST CONFIGURATION

N/A

16. SUPPORT REQUIREMENTS CHECKLIST *(Check appropriate boxes and add any additional)*

☐ GROUND POWER	☐ LCC MEASURING (LVO)	☐ ETR/KSC RADAR
☐ S-IB OR S-IC STAGE PWR	☐ LCC MEASURING (INS)	☐ ETR COMMAND XMITTER
☐ S-II STAGE POWER	☐ GSE MEASURING (LVO)	☐ LOCAL COMMAND (C.L.)
☐ S-IVB STAGE POWER	☐ GSE MEASURING (INS)	☐ ALDS
☐ IU POWER	☐ LCC DATA DISPLAY	☐ LCC TM STA. (MONITOR)
☐ LEM POWER	☐ CIF DATA DISPLAY	☐ LCC TM RECORDING
☐ SM POWER	☐ DDAS	☐ CIF TM STA. (MONITOR)
☐ CM POWER	☐ DDAS TAPE RECORDING	☐ CIF TM RECORDING
☐ BACK-UP BATTERIES	☐ SERVICE STRUCTURE MEAS.	☐ CIF COMPUTER
☐ TIMING	☐ RCA-110A COMPUTERS	☐ CIF DATA
☐ COUNTDOWN CLOCK	☐ ACE	☐ TM RECORDS
☐ ETR SEQUENCER	☐ L/V W-G ECS	☐ REAL-TIME CIF COMPUT.
☐ ETR COUNTDOWN CLOCK	☐ CM W-G ECS	☐ POST-TEST CIF COMPUT.
☐ ETR S.R.O.	☐ FACILITY ECS (GAS)	☐ KSC TRACKING
☐ ETR R.S.O.	☐ H.P. GAS	☐ RFI MONITORING
☐ ETR PAD SAFETY	☐ CCF	☐ RF READOUTS (ETR)
☐ KSC PAD SAFETY	☐ FACILITY TV (OTV)	☐ RF READOUTS (KSC)
☐ SECURITY POLICE	☐ FACILITY COMM. (OIS)	☐ WEATHER FORECAST
☐ FIRE FIGHTING	☐ FILM CAMERAS	☐ MCC-C
☐ MEDICAL	☐ SEARCH LIGHTS	☐ MCC-H
☒ IU FLIGHT CONTROL	☐	☐ FOOD SERVICE
☐	☐	☐
☐	☐	☐
☐	☐	☐
☐	☐	☐

OTHERS:

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

17. OTHER APPLICABLE REFERENCE DOCUMENTATION

KSC OPERATIONS
APOLLO/SATURN TEST CATALOG

1. TEST TITLE

CONTROL EDS RATE GYRO UNIT TEST

2. KSC TEST NO.

V-23026-IU 502

3. STAGE, VEHICLE OR GSE

LABORATORY

4. TEST OBJECTIVES

A. TO VERIFY THAT THE CONTROL EDS RATE GYROS, MSFC P/N 50M35021, MEETS THE APPLICABLE TEST SPECIFICATIONS.

5. TEST DESCRIPTION/EQUIPMENT STATUS

DESCRIPTION

A. THE CONTROL EDS RATE GYRO WILL BE INSPECTED FOR DAMAGE.

B. THE NULLS, WHEEL SPEED, AND TORQUER LINEARITY CHARACTERISTICS WILL BE CHECKED.

C. THE OUTPUT LINEARITY, CROSS-AXIS COUPLING, AND MECHANICAL LIMITS WILL BE CHECKED.

STATUS

A. VERIFY PROCEDURE NUMBER V-23024-IU 502, PART I PRIOR TO PERFORMING THIS TEST.

B. THIS TEST WILL BE PERFORMED USING A FLIGHT CONTROL SYSTEMS SECTION LABORATORY TEST SET, IBM P/N 7902980, A RATE-OF-TURN TABLE, IBM P/N 7902086, AND SWITCH ADAPTER, IBM P/N 7902990.

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(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

6. PREPARED BY	8. NASA-KSC APPROVAL	10. APPROVAL DATE
J. M. Ward	Vincent A. Elentri	June 13, 1966
7. ORGANIZATION	9. ORGANIZATION	11. VEHICLE EFFECTIVITY
IBM CORP.	LVO-244 NASA-Flight Control	AS-502

KSC FORM 23-191A (9/66)

APOLLO/SATURN TEST CATALOG (Continuation Sheet)	PAGE 2 OF 2

1. TEST TITLE	2. KSC TEST NO.
CONTROL EDS RATE GYRO UNIT TEST	V-23026-IU 502
	11. VEHICLE EFFECTIVITY: AS-502

12. WHERE TEST PERFORMED	13. COMPUTER/ACE PROG. IDENT. (IF APPLICABLE)	14. EST. TEST TIME
FLIGHT CONTROL LABORATORY	N/A	10.0 HRS.

15. TEST CONFIGURATION

N/A

16. SUPPORT REQUIREMENTS CHECKLIST *(Check appropriate boxes and add any additional)*

☐ GROUND POWER	☐ LCC MEASURING (LVO)	☐ ETR/KSC RADAR
☐ S-IB OR S-IC STAGE PWR	☐ LCC MEASURING (INS)	☐ ETR COMMAND XMITTER
☐ S-II STAGE POWER	☐ GSE MEASURING (LVO)	☐ LOCAL COMMAND (C.L.)
☐ S-IVB STAGE POWER	☐ GSE MEASURING (INS)	☐ ALDS
☐ IU POWER	☐ LCC DATA DISPLAY	☐ LCC TM STA. (MONITOR)
☐ LEM POWER	☐ CIF DATA DISPLAY	☐ LCC TM RECORDING
☐ SM POWER	☐ DDAS	☐ CIF TM STA. (MONITOR)
☐ CM POWER	☐ DDAS TAPE RECORDING	☐ CIF TM RECORDING
☐ BACK-UP BATTERIES	☐ SERVICE STRUCTURE MEAS.	☐ CIF COMPUTER
☐ TIMING	☐ RCA-110A COMPUTERS	☐ CIF DATA
☐ COUNTDOWN CLOCK	☐ ACE	☐ TM RECORDS
☐ ETR SEQUENCER	☐ L/V W-G EGS	☐ REAL-TIME CIF COMPUT.
☐ ETR COUNTDOWN CLOCK	☐ CM W-G ECS	☐ POST-TEST CIF COMPUT.
☐ ETR S.R.O.	☐ FACILITY ECS (GAS)	☐ KSC TRACKING
☐ ETR R.S.O.	☐ H.P. GAS	☐ RFI MONITORING
☐ ETR PAD SAFETY	☐ CCF	☐ RF READOUTS (ETR)
☐ KSC PAD SAFETY	☐ FACILITY TV (OTV)	☐ RF READOUTS (KSC)
☐ SECURITY POLICE	☐ FACILITY COMM. (OIS)	☐ WEATHER FORECAST
☐ FIRE FIGHTING	☐ FILM CAMERAS	☐ MCC-C
☐ MEDICAL	☐ SEARCH LIGHTS	☐ MCC-H
☒ IU FLIGHT CONTROL	☐	☐ FOOD SERVICE
☐	☐	☐
☐	☐	☐
☐	☐	☐
☐	☐	☐

OTHERS:

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(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

17. OTHER APPLICABLE REFERENCE DOCUMENTATION

KSC OPERATIONS
APOLLO/SATURN TEST CATALOG

1. TEST TITLE

CONTROL SIGNAL PROCESSOR UNIT TEST

2. KSC TEST NO.

V-23027-IU 502

3. STAGE, VEHICLE OR GSE

LABORATORY

4. TEST OBJECTIVES

A. TO VERIFY THAT THE CONTROL SIGNAL PROCESSOR, MSFC P/N 50M35500, MEETS THE APPLICABLE UNIT TEST SPECIFICATIONS.

5. TEST DESCRIPTION/EQUIPMENT STATUS

DESCRIPTION

A. THE CONTROL SIGNAL PROCESSOR WILL BE INSPECTED FOR DAMAGE.

B. THE NULLS, INVERTER OUTPUTS, AND SIGNAL OUTPUT POLARITIES AND GAINS WILL BE CHECKED.

C. THE COMPARATOR, RATE SWITCH, AND UP-TO-SPEED CHARACTERISTICS WILL BE CHECKED.

STATUS

A. VERIFY PROCEDURE NUMBER V-23024-IU 502, PART II HAS BEEN COMPLETED PRIOR TO PERFORMING THIS TEST.

B. THIS TEST WILL BE ACCOMPLISHED USING FLIGHT CONTROL SYSTEMS SECTION LABORATORY TEST SET, MSFC P/N 50M35688.

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

6. PREPARED BY	8. NASA-KSC APPROVAL	10. APPROVAL DATE
J. M. Ward	Vincent A. Ellentri	June 13, 1968
7. ORGANIZATION	9. ORGANIZATION	11. VEHICLE EFFECTIVITY
IBM CORP.	LVO-244 NASA-Flight Control	AS-502

KSC FORM 23-191 A (2/68)

APOLLO/SATURN TEST CATALOG (Continuation Sheet)	PAGE 2 OF 2

1. TEST TITLE	2. KSC TEST NO.
CONTROL SIGNAL PROCESSOR UNIT TEST	V-23027-IU 502
	11. VEHICLE EFFECTIVITY AS- 502

12. WHERE TEST PERFORMED	13. COMPUTER/ACE PROG. IDENT. (IF APPLICABLE)	14. EST. TEST TIME
FLIGHT CONTROL LABORATORY	N/A	8 HRS.

15. TEST CONFIGURATION

N/A

16. SUPPORT REQUIREMENTS CHECKLIST *(Check appropriate boxes and add any additional)*

☐ GROUND POWER	☐ LCC MEASURING (LVO)	☐ ETR/KSC RADAR
☐ S-IB OR S-IC STAGE PWR	☐ LCC MEASURING (INS)	☐ ETR COMMAND XMITTER
☐ S-II STAGE POWER	☐ GSE MEASURING (LVO)	☐ LOCAL COMMAND (C.L.)
☐ S-IVB STAGE POWER	☐ GSE MEASURING (INS)	☐ ALDS
☐ IU POWER	☐ LCC DATA DISPLAY	☐ LCC TM STA. (MONITOR)
☐ LEM POWER	☐ CIF DATA DISPLAY	☐ LCC TM RECORDING
☐ SM POWER	☐ DDAS	☐ CIF TM STA. (MONITOR)
☐ CM POWER	☐ DDAS TAPE RECORDING	☐ CIF TM RECORDING
☐ BACK-UP BATTERIES	☐ SERVICE STRUCTURE MEAS.	☐ CIF COMPUTER
☐ TIMING	☐ RCA-110A COMPUTERS	☐ CIF DATA
☐ COUNTDOWN CLOCK	☐ ACE	☐ TM RECORDS
☐ ETR SEQUENCER	☐ L/V W-G ECS	☐ REAL-TIME CIF COMPUT.
☐ ETR COUNTDOWN CLOCK	☐ CM W-G ECS	☐ POST-TEST CIF COMPUT.
☐ ETR S.R.O.	☐ FACILITY ECS (GAS)	☐ KSC TRACKING
☐ ETR R.S.O.	☐ H.P. GAS	☐ RFI MONITORING
☐ ETR PAD SAFETY	☐ CCF	☐ RF READOUTS (ETR)
☐ KSC PAD SAFETY	☐ FACILITY TV (OTV)	☐ RF READOUTS (KSC)
☐ SECURITY POLICE	☐ FACILITY COMM. (OIS)	☐ WEATHER FORECAST
☐ FIRE FIGHTING	☐ FILM CAMERAS	☐ MCC-C
☐ MEDICAL	☐ SEARCH LIGHTS	☐ MCC-H
☒ IU FLIGHT CONTROL	☐	☐ FOOD SERVICE
☐	☐	☐
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☐	☐	☐
☐	☐	☐

OTHERS:

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

17. OTHER APPLICABLE REFERENCE DOCUMENTATION

KSC OPERATIONS
APOLLO/SATURN TEST CATALOG

1. TEST TITLE

INTEGRATED PROCESSOR/EDS RATE GYRO TEST

2. KSC TEST NO.

V-23028-IU 502

3. STAGE, VEHICLE OR GSE

LABORATORY

4. TEST OBJECTIVES

A. TO VERIFY THAT CONTROL SIGNAL PROCESSOR AND CONTROL EDS RATE GYROS FUNCTION PROPERLY AS A COMBINED UNIT.

5. TEST DESCRIPTION/EQUIPMENT STATUS

DESCRIPTION

A. THIS TEST WILL VERIFY:

1. INPUT VOLTAGE AND FREQUENCY FROM THE CONTROL SIGNAL PROCESSOR TO THE EDS/CONTROL RATE GYRO.

2. THE OUTPUTS OF THE 28 VDC AND 60 VDC REGULATORS WITHIN THE CONTROL SIGNAL PROCESSOR.

3. THE WHEEL SPEEDS OF ALL NINE GYROS.

4. INTEGRATED CONTROL AND TM OUTPUT POLARITY AND LINEARITY.

5. INTEGRATED TORQUING POLARITY AND LINEARITY.

6. INTEGRATED COMPARATOR AND RATE SWITCH OPERATIONS.

STATUS

A. VERIFY PROCEDURE NUMBERS V-23024-IU 502, PART II, V-23026-IU 502, AND V-23027-IU 502 HAVE BEEN COMPLETED PRIOR TO PERFORMING THIS TEST.

(119)

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

6. PREPARED BY	8. NASA-KSC APPROVAL	10. APPROVAL DATE
J. M. Ward	Vincent A. Elentri	June 13, 1966
7. ORGANIZATION	9. ORGANIZATION	11. VEHICLE EFFECTIVITY
IBM CORP.	LVO-244 NASA-Flight Control	AS-502

KSC FORM 23-191A (9/66)

APOLLO/SATURN TEST CATALOG (Continuation Sheet)	PAGE 2 OF 2
1. TEST TITLE INTEGRATED PROCESSOR/EDS RATE GYRO TEST	2. KSC TEST NO. V-23028-IU 502 11. VEHICLE EFFECTIVITY AS- 502

12. WHERE TEST PERFORMED	13. COMPUTER/ACE PROG. IDENT. (IF APPLICABLE)	14. EST. TEST TIME
FLIGHT CONTROL LABORATORY	N/A	8 HRS.

15. TEST CONFIGURATION

N/A

16. SUPPORT REQUIREMENTS CHECKLIST *(Check appropriate boxes and add any additional)*

☐ GROUND POWER	☐ LCC MEASURING (LVO)	☐ ETR/KSC RADAR
☐ S-IB OR S-IC STAGE PWR	☐ LCC MEASURING (INS)	☐ ETR COMMAND XMITTER
☐ S-II STAGE POWER	☐ GSE MEASURING (LVO)	☐ LOCAL COMMAND (C.L.)
☐ S-IVB STAGE POWER	☐ GSE MEASURING (INS)	☐ ALDS
☐ IU POWER	☐ LCC DATA DISPLAY	☐ LCC TM STA. (MONITOR)
☐ LEM POWER	☐ CIF DATA DISPLAY	☐ LCC TM RECORDING
☐ SM POWER	☐ DDAS	☐ CIF TM STA. (MONITOR)
☐ CM POWER	☐ DDAS TAPE RECORDING	☐ CIF TM RECORDING
☐ BACK-UP BATTERIES	☐ SERVICE STRUCTURE MEAS.	☐ CIF COMPUTER
☐ TIMING	☐ RCA-110A COMPUTERS	☐ CIF DATA
☐ COUNTDOWN CLOCK	☐ ACE	☐ TM RECORDS
☐ ETR SEQUENCER	☐ L/V W-G ECS	☐ REAL-TIME CIF COMPUT.
☐ ETR COUNTDOWN CLOCK	☐ CM W-G ECS	☐ POST-TEST CIF COMPUT.
☐ ETR S.R.O.	☐ FACILITY ECS (GAS)	☐ KSC TRACKING
☐ ETR R.S.O.	☐ H.P. GAS	☐ RFI MONITORING
☐ ETR PAD SAFETY	☐ CCF	☐ RF READOUTS (ETR)
☐ KSC PAD SAFETY	☐ FACILITY TV (OTV)	☐ RF READOUTS (KSC)
☐ SECURITY POLICE	☐ FACILITY COMM. (OIS)	☐ WEATHER FORECAST
☐ FIRE FIGHTING	☐ FILM CAMERAS	☐ MCC-C
☐ MEDICAL	☐ SEARCH LIGHTS	☐ MCC-H
☒ IU FLIGHT CONTROL	☐	☐ FOOD SERVICE
☐	☐	☐
☐	☐	☐
☐	☐	☐
☐	☐	☐

OTHERS:

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

17. OTHER APPLICABLE REFERENCE DOCUMENTATION

KSC OPERATIONS **APOLLO/SATURN TEST CATALOG**	PAGE 1 OF 2
1. TEST TITLE CONTROL COMPUTER SUBSYSTEM TEST	2. KSC TEST NO. V-23029-IU 502 3. STAGE, VEHICLE OR GSE IU

4. TEST OBJECTIVES

A. TO DETAIL THE STEPS NECESSARY TO PERFORM UNIT INSTALLATION OF THE FLIGHT CONTROL COMPUTER, MSFC P/N 50M32300, IN THE IU AND VERIFY FUNCTIONAL OPERATION.

B. TO VERIFY CALIBRATION OF VEHICLE MEASURMENTS ORIGINATING IN THE CONTROL COMPUTER.

5. TEST DESCRIPTION/EQUIPMENT STATUS

DESCRIPTION

A. VISUAL INSPECTION AND POWER VERIFICATION ARE PERFORMED IN CONJUNCTION WITH INSTALLATION OF THE CONTROL COMPUTER.

B. THE CONTROL COMPUTER IS FUNCTIONALLY TESTED AND SUBSTITUTE RAMPS ARE VERIFIED.

C. CONTROL COMPUTER MEASURING CALIBRATION IS PERFORMED.

STATUS

A. LCC FLIGHT CONTROL PANEL METER AND RECORDER CALIBRATION WILL BE VERIFIED DURING THIS TEST.

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

6. PREPARED BY	8. NASA-KSC APPROVAL	10. APPROVAL DATE
J. M. Ward	Vincent A. Elentri	June 13, 1966
7. ORGANIZATION IBM CORP.	9. ORGANIZATION LVO-244 NASA-Flight Control	11. VEHICLE EFFECTIVITY AS-502

KSC FORM 23-191A (2/66)

APOLLO/SATURN TEST CATALOG (Continuation Sheet)	PAGE 2 OF 2

1. TEST TITLE	2. KSC TEST NO.
CONTROL COMPUTER SUBSYSTEM TEST	V-23029-IU 502
	11. VEHICLE EFFECTIVITY: AS- 502

12. WHERE TEST PERFORMED	13. COMPUTER/ACE PROG. IDENT. (IF APPLICABLE)	14. EST. TEST TIME
VAB	N/A	8.0 HR

15. TEST CONFIGURATION

CONTROL COMPUTER INSTALLED IN IU, COOLANT LINE CHECKED

16. SUPPORT REQUIREMENTS CHECKLIST *(Check appropriate boxes and add any additional)*

[X] GROUND POWER	[X] LCC MEASURING (LVO)	[ ] ETR/KSC RADAR
[ ] S-IB OR S-IC STAGE PWR	[ ] LCC MEASURING (INS)	[ ] ETR COMMAND XMITTER
[ ] S-II STAGE POWER	[ ] GSE MEASURING (LVO)	[ ] LOCAL COMMAND (C.L.)
[ ] S-IVB STAGE POWER	[ ] GSE MEASURING (INS)	[ ] ALDS
[X] IU POWER	[ ] LCC DATA DISPLAY	[ ] LCC TM STA. (MONITOR)
[ ] LEM POWER	[ ] CIF DATA DISPLAY	[ ] LCC TM RECORDING
[ ] SM POWER	[X] DDAS	[ ] CIF TM STA. (MONITOR)
[ ] CM POWER	[ ] DDAS TAPE RECORDING	[ ] CIF TM RECORDING
[ ] BACK-UP BATTERIES	[ ] SERVICE STRUCTURE MEAS.	[ ] CIF COMPUTER
[ ] TIMING	[X] RCA-110A COMPUTERS	[ ] CIF DATA
[ ] COUNTDOWN CLOCK	[ ] ACE	[ ] TM RECORDS
[ ] ETR SEQUENCER	[ ] L/V W-G ECS	[ ] REAL-TIME CIF COMPUT.
[ ] ETR COUNTDOWN CLOCK	[ ] CM W-G ECS	[ ] POST-TEST CIF COMPUT.
[ ] ETR S.R.O.	[ ] FACILITY ECS (GAS)	[ ] KSC TRACKING
[ ] ETR R.S.O.	[ ] H.P. GAS	[ ] RFI MONITORING
[ ] ETR PAD SAFETY	[ ] CCF	[ ] RF READOUTS (ETR)
[ ] KSC PAD SAFETY	[ ] FACILITY TV (OTV)	[ ] RF READOUTS (KSC)
[ ] SECURITY POLICE	[X] FACILITY COMM. (OIS)	[ ] WEATHER FORECAST
[ ] FIRE FIGHTING	[ ] FILM CAMERAS	[ ] MCC-C
[ ] MEDICAL	[ ] SEARCH LIGHTS	[ ] MCC-H
[X] IU MECHANICAL	[ ]	[ ] FOOD SERVICE
[X] IU ELECTRICAL	[ ]	[ ]
[X] IU FLIGHT CONTROL	[ ]	[ ]
[ ]	[ ]	[ ]
[ ]	[ ]	[ ]

OTHERS:

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

17. OTHER APPLICABLE REFERENCE DOCUMENTATION

KSC OPERATIONS
APOLLO/SATURN TEST CATALOG

1. TEST TITLE

CONTROL EDS RATE GYRO AND CONTROL SIGNAL PROCESSOR SUBSYSTEM TEST

2. KSC TEST NO.

V-23030-IU 502

3. STAGE, VEHICLE OR GSE

IU

4. TEST OBJECTIVES

A. TO DETAIL THE STEPS NECESSARY TO PERFORM UNIT INSTALLATION OF THE EDS/CONTROL RATE GYRO, MSFC P/N 50M35021, AND CONTROL SIGNAL PROCESSOR, MSFC P/N 50M35500, IN THE IU AND EVALUATE IN ACCORDANCE WITH THE APPLICABLE SPECIFICATIONS.

B. TO VERIFY CALIBRATION OF VEHICLE MEASUREMENTS ORIGINATING IN THE CONTROL SIGNAL PROCESSOR.

5. TEST DESCRIPTION/EQUIPMENT STATUS

DESCRIPTION

A. VISUAL INSPECTION AND POWER VERIFICATION ARE PERFORMED IN CONJUNCTION WITH INSTALLATION OF THE UNITS.

B. A FUNCTIONAL VERIFICATION OF EACH UNIT IS PERFORMED. SIGNAL POLARITY, COMPARATOR, AND RATE SWITCH OPERATIONS ARE EVALUATED USING THE ML ESE RAMP GENERATORS.

C. CONTROL SIGNAL PROCESSOR MEASURING CALIBRATION IS PERFORMED.

STATUS

A. LCC FLIGHT CONTROL PANEL METER AND RECORDER CALIBRATION WILL BE VERIFIED DURING THIS TEST.

B. THIS PROCEDURE WILL BE COORDINATED WITH THE NETWORKS GROUP TO VERIFY THAT THE EDS BUS IS DE-ENERGIZED.

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

6. PREPARED BY	8. NASA-KSC APPROVAL	10. APPROVAL DATE
J. M. Ward	Vincent A. Ellentri	June 13, 1966
7. ORGANIZATION	9. ORGANIZATION	11. VEHICLE EFFECTIVITY
IBM CORP.	LVO-244 NASA - Flight Control	AS- 502

APOLLO/SATURN TEST CATALOG (Continuation Sheet)	PAGE 2 OF 2

1. TEST TITLE	8. KSC TEST NO.
CONTROL EDS RATE GYRO AND CONTROL SIGNAL PROCESSOR SUBSYSTEM TEST	V-23030-IU 502
	11. VEHICLE EFFECTIVITY
	AS- 502

12. WHERE TEST PERFORMED	13. COMPUTER/ACE PROG. IDENT. (IF APPLICABLE)	14. EST. TEST TIME
VAB	N/A	10 HRS

15. TEST CONFIGURATION

IU IS ERECTED

16. SUPPORT REQUIREMENTS CHECKLIST *(Check appropriate boxes and add any additional)*

[X] GROUND POWER	[X] LCC MEASURING (LVO)	[ ] ETR/KSC RADAR
[ ] S-IB OR S-IC STAGE PWR	[ ] LCC MEASURING (INS)	[ ] ETR COMMAND XMITTER
[ ] S-II STAGE POWER	[ ] GSE MEASURING (LVO)	[ ] LOCAL COMMAND (C.L.)
[ ] S-IVB STAGE POWER	[ ] GSE MEASURING (INS)	[ ] ALDS
[X] IU POWER	[ ] LCC DATA DISPLAY	[ ] LCC TM STA. (MONITOR)
[ ] LEM POWER	[ ] CIF DATA DISPLAY	[ ] LCC TM RECORDING
[ ] SM POWER	[X] DDAS	[ ] CIF TM STA. (MONITOR)
[ ] CM POWER	[ ] DDAS TAPE RECORDING	[ ] CIF TM RECORDING
[ ] BACK-UP BATTERIES	[ ] SERVICE STRUCTURE MEAS.	[ ] CIF COMPUTER
[ ] TIMING	[X] RCA-110A COMPUTERS	[ ] CIF DATA
[ ] COUNTDOWN CLOCK	[ ] ACE	[ ] TM RECORDS
[ ] ETR SEQUENCER	[ ] L/V W-G ECS	[ ] REAL-TIME CIF COMPUT.
[ ] ETR COUNTDOWN CLOCK	[ ] CM W-G ECS	[ ] POST-TEST CIF COMPUT.
[ ] ETR S.R.O.	[ ] FACILITY ECS (GAS)	[ ] KSC TRACKING
[ ] ETR R.S.O.	[ ] H.P. GAS	[ ] RFI MONITORING
[ ] ETR PAD SAFETY	[ ] CCF	[ ] RF READOUTS (ETR)
[ ] KSC PAD SAFETY	[ ] FACILITY TV (OTV)	[ ] RF READOUTS (KSC)
[ ] SECURITY POLICE	[X] FACILITY COMM. (OIS)	[ ] WEATHER FORECAST
[ ] FIRE FIGHTING	[ ] FILM CAMERAS	[ ] MCC-C
[ ] MEDICAL	[ ] SEARCH LIGHTS	[ ] MCC-H
[X] IU MECHANICAL	[ ]	[ ] FOOD SERVICE
[X] IU ELECTRICAL	[ ]	[ ]
[X] IU FLIGHT CONTROL	[ ]	[ ]
[ ]	[ ]	[ ]
[ ]	[ ]	[ ]

OTHERS:

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

17. OTHER APPLICABLE REFERENCE DOCUMENTATION

KSC OPERATIONS **APOLLO/SATURN TEST CATALOG**	PAGE 1 OF 2
1. TEST TITLE CONTROL COMPUTER NULL TEST	2. KSC TEST NO. V-23031-IU 502 3. STAGE, VEHICLE OR GSE IU

4. TEST OBJECTIVES

A. TO EVALUATE THE FLIGHT CONTROL COMPUTER, MSFC P/N 50M32300, SERVO AND SPATIAL AMPLIFIER OUTPUT NULLS WITH NO SENSOR INPUTS.

5. TEST DESCRIPTION/EQUIPMENT STATUS

DESCRIPTION

A. THE SERVO AMPLIFIER NULLS WILL BE EVALUATED WITH THE CONTROL COMPUTER IN THE S-IC BURN MODE.

B. THE SPATIAL AMPLIFIER NULLS WILL BE EVALUATED WITH THE CONTROL COMPUTER IN THE S-IVB COAST MODE.

C. DATA WILL BE RECORDED FROM MEASUREMENTS TAKEN IN THE IU.

STATUS

A. THIS TEST REQUIRES S-IC ACTUATORS TO BE ELECTRICALLY CONNECTED.

B. THIS TEST REQUIRES THE CONTROL RELAY PACKAGES TO BE ELECTRICALLY CONNECTED.

4.1

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

6. PREPARED BY	8. NASA-KSC APPROVAL	10. APPROVAL DATE
J. M. Ward	Vincent A. Elentri	June 13, 1966
7. ORGANIZATION IBM CORP.	9. ORGANIZATION LVO-244 NASA-Flight Control	11. VEHICLE EFFECTIVITY AS-502

APOLLO/SATURN TEST CATALOG (Continuation Sheet)	PAGE 2 OF 2

1. TEST TITLE	2. KSC TEST NO.
CONTROL COMPUTER NULL TEST	V-23031-IU 502
	11. VEHICLE EFFECTIVITY: AS-502

12. WHERE TEST PERFORMED	13. COMPUTER/ACE PROG. IDENT. (IF APPLICABLE)	14. EST. TEST TIME
VAB/PAD 39A	NOT ESTABLISHED	1 HR.

15. TEST CONFIGURATION: IU ELECTRICALLY MATED TO THE S-IC AND S-IVB STAGE, CONTROL COMPUTER IN NORMAL OPERATING CONDITION.

16. SUPPORT REQUIREMENTS CHECKLIST *(Check appropriate boxes and add any additional)*

[X] GROUND POWER	[X] LCC MEASURING (LVO)	[ ] ETR/KSC RADAR
[ ] S-IB OR S-IC STAGE PWR	[ ] LCC MEASURING (INS)	[ ] ETR COMMAND XMITTER
[ ] S-II STAGE POWER	[ ] GSE MEASURING (LVO)	[ ] LOCAL COMMAND (C.L.)
[ ] S-IVB STAGE POWER	[ ] GSE MEASURING (INS)	[ ] ALDS
[X] IU POWER	[ ] LCC DATA DISPLAY	[ ] LCC TM STA. (MONITOR)
[ ] LEM POWER	[ ] CIF DATA DISPLAY	[ ] LCC TM RECORDING
[ ] SM POWER	[X] DDAS	[ ] CIF TM STA. (MONITOR)
[ ] CM POWER	[ ] DDAS TAPE RECORDING	[ ] CIF TM RECORDING
[ ] BACK-UP BATTERIES	[ ] SERVICE STRUCTURE MEAS.	[ ] CIF COMPUTER
[ ] TIMING	[X] RCA-110A COMPUTERS	[ ] CIF DATA
[ ] COUNTDOWN CLOCK	[ ] ACE	[ ] TM RECORDS
[ ] ETR SEQUENCER	[ ] L/V W-G ECS	[ ] REAL-TIME CIF COMPUT.
[ ] ETR COUNTDOWN CLOCK	[ ] CM W-G ECS	[ ] POST-TEST CIF COMPUT.
[ ] ETR S.R.O.	[ ] FACILITY ECS (GAS)	[ ] KSC TRACKING
[ ] ETR R.S.O.	[ ] H.P. GAS	[ ] RFI MONITORING
[ ] ETR PAD SAFETY	[ ] CCF	[ ] RF READOUTS (ETR)
[ ] KSC PAD SAFETY	[ ] FACILITY TV (OTV)	[ ] RF READOUTS (KSC)
[ ] SECURITY POLICE	[X] FACILITY COMM. (OIS)	[ ] WEATHER FORECAST
[ ] FIRE FIGHTING	[ ] FILM CAMERAS	[ ] MCC-C
[ ] MEDICAL	[ ] SEARCH LIGHTS	[ ] MCC-H
[X] S-IC FLIGHT CONTROL	[ ]	[ ] FOOD SERVICE
[X] IU FLIGHT CONTROL	[ ]	[ ]
[ ]	[ ]	[ ]
[ ]	[ ]	[ ]
[ ]	[ ]	[ ]

OTHERS:

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

17. OTHER APPLICABLE REFERENCE DOCUMENTATION

KSC OPERATIONS
APOLLO/SATURN TEST CATALOG

1. TEST TITLE

CONTROL COMPUTER REDUNDANCY TEST

2. KSC TEST NO.

V-23032-IU 502

3. STAGE, VEHICLE OR GSE

IU

4. TEST OBJECTIVES

A. TO DETAIL THE STEPS NECESSARY WHICH WILL EXERCISE ALL POSSIBLE COMBINATIONS OF THE INPUT SIGNAL REDUNDANT RELAY CONTACTS IN THE FLIGHT CONTROL COMPUTER, MSFC P/N 50M32300.

5. TEST DESCRIPTION/EQUIPMENT STATUS

DESCRIPTION

A. THIS PROCEDURE WILL CONTROL THE RELAY REDUNDANCY MATRIX IN THE CONTROL COMPUTER.

B. THE LVDC AND THE CONTROL EDS RATE GYRO WILL FURNISH ATTITUDE ERROR AND ATTITUDE RATE SIGNALS TO THE CONTROL COMPUTER. THE SERVO AND SPATIAL AMPLIFIER OUTPUTS PROVIDE VERIFICATION OF REDUNDANT RELAY COMBINATIONS.

C. THE VEHICLE DDAS DATA IS COMPARED TO A PREDEFINED TABLE OF CONTROL COMPUTER CONDITIONS FOR THE APPLICABLE RELAY MATRIX CODE.

STATUS

A. STAGE HYDRAULICS MUST BE OFF FOR THIS TEST.

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

6. PREPARED BY	8. NASA-KSC APPROVAL	10. APPROVAL DATE
J. M. Ward	Vincent A. Elentri	June 13, 1966
7. ORGANIZATION	9. ORGANIZATION	11. VEHICLE EFFECTIVITY
IBM CORP.	LVO-244 NASA-Flight Control	AS-502

APOLLO/SATURN TEST CATALOG (Continuation Sheet)	PAGE 2 OF 2

1. TEST TITLE	2. KSC TEST NO.
CONTROL COMPUTER REDUNDANCY TEST	V-23032-IU 502
	11. VEHICLE EFFECTIVITY: AS- 502

12. WHERE TEST PERFORMED	13. COMPUTER/ACE PROG. IDENT. (IF APPLICABLE)	14. EST. TEST TIME
VAB/PAD 39A	NOT ESTABLISHED	2 HRS.

15. TEST CONFIGURATION: IU ELECTRICALLY MATED TO S-IC, S-II, AND S-IVB. CONTROL COMPUTER IN NORMAL OPERATING CONDITION.

16. SUPPORT REQUIREMENTS CHECKLIST *(Check appropriate boxes and add any additional)*

[X] GROUND POWER	[X] LCC MEASURING (LVO)	[ ] ETR/KSC RADAR
[ ] S-IB OR S-IC STAGE PWR	[ ] LCC MEASURING (INS)	[ ] ETR COMMAND XMITTER
[ ] S-II STAGE POWER	[ ] GSE MEASURING (LVO)	[ ] LOCAL COMMAND (C.L.)
[ ] S-IVB STAGE POWER	[ ] GSE MEASURING (INS)	[ ] ALDS
[X] IU POWER	[ ] LCC DATA DISPLAY	[ ] LCC TM STA. (MONITOR)
[ ] LEM POWER	[ ] CIF DATA DISPLAY	[ ] LCC TM RECORDING
[ ] SM POWER	[X] DDAS	[ ] CIF TM STA. (MONITOR)
[ ] CM POWER	[ ] DDAS TAPE RECORDING	[ ] CIF TM RECORDING
[ ] BACK-UP BATTERIES	[ ] SERVICE STRUCTURE MEAS.	[ ] CIF COMPUTER
[ ] TIMING	[X] RCA-110A COMPUTERS	[ ] CIF DATA
[ ] COUNTDOWN CLOCK	[ ] ACE	[ ] TM RECORDS
[ ] ETR SEQUENCER	[ ] L/V W-G ECS	[ ] REAL-TIME CIF COMPUT.
[ ] ETR COUNTDOWN CLOCK	[ ] CM W-G ECS	[ ] POST-TEST CIF COMPUT.
[ ] ETR S.R.O.	[ ] FACILITY ECS (GAS)	[ ] KSC TRACKING
[ ] ETR R.S.O.	[ ] H.P. GAS	[ ] RFI MONITORING
[ ] ETR PAD SAFETY	[ ] CCF	[ ] RF READOUTS (ETR)
[ ] KSC PAD SAFETY	[ ] FACILITY TV (OTV)	[ ] RF READOUTS (KSC)
[ ] SECURITY POLICE	[X] FACILITY COMM. (OIS)	[ ] WEATHER FORECAST
[ ] FIRE FIGHTING	[ ] FILM CAMERAS	[ ] MCC-C
[ ] MEDICAL	[ ] SEARCH LIGHTS	[ ] MCC-H
[X] S-IC FLIGHT CONTROL	[ ]	[ ] FOOD SERVICE
[X] S-II FLIGHT CONTROL	[ ]	[ ]
[X] S-IVB FLIGHT CONTROL	[ ]	[ ]
[X] IU FLIGHT CONTROL	[ ]	[ ]
[ ]	[ ]	[ ]

OTHERS:

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

17. OTHER APPLICABLE REFERENCE DOCUMENTATION

KSC OPERATIONS
APOLLO/SATURN TEST CATALOG

1. TEST TITLE

CONTROL COMPUTER COMPARATOR TEST

2. KSC TEST NO.

V-23033-IU 502

3. STAGE, VEHICLE OR GSE

IU

4. TEST OBJECTIVES

A. TO DETAIL THE STEPS NECESSARY TO EVALUATE THE SWITCHING CHARACTERISTICS OF THE SERVO AND SPATIAL AMPLIFIER COMPARATORS IN THE FLIGHT CONTROL COMPUTER, MSFC P/N 50M32300.

5. TEST DESCRIPTION/EQUIPMENT STATUS

DESCRIPTION

A. THIS PROCEDURE WILL CONTROL ML ESE RAMP GENERATORS PROVIDING HARDLINE ERROR INPUTS TO THE CONTROL COMPUTER.

B. ERROR INPUT SIGNAL LEVELS ARE ADJUSTED THROUGH ALL COMBINATIONS TO DETERMINE COMPARATOR CIRCUITRY CHARACTERISTICS.

STATUS

A. S-IVB STAGE HYDRAULICS MUST BE OFF FOR THIS TEST.

B. APS BUS MUST REMAIN OFF DURING THIS TEST IF SYSTEM IS FUELED.

403

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

6. PREPARED BY	8. NASA-KSC APPROVAL	10. APPROVAL DATE
J. M. Ward	Vincent A. Elentri	June 13, 1966
7. ORGANIZATION	9. ORGANIZATION LVO-244	14. VEHICLE EFFECTIVITY
IBM CORP.	NASA-Flight Control	AS-502

APOLLO/SATURN TEST CATALOG (Continuation Sheet)	PAGE 2 OF 2

1. TEST TITLE	2. KSC TEST NO.
CONTROL COMPUTER COMPARATOR TEST	V-23033-IU 502
	11. VEHICLE EFFECTIVITY: AS-502

12. WHERE TEST PERFORMED	13. COMPUTER/ACE PROG. IDENT. (IF APPLICABLE)	14. EST. TEST TIME
VAB/PAD 39A	NOT ESTABLISHED	2 HRS.

15. TEST CONFIGURATION: IU ELECTRICALLY MATED TO S-IVB, CONTROL COMPUTER IN NORMAL OPERATING CONDITION.

16. SUPPORT REQUIREMENTS CHECKLIST *(Check appropriate boxes and add any additional)*

[X] GROUND POWER	[ ] LCC MEASURING (LVO)	[ ] ETR/KSC RADAR
[ ] S-IB OR S-IC STAGE PWR	[ ] LCC MEASURING (INS)	[ ] ETR COMMAND XMITTER
[ ] S-II STAGE POWER	[ ] GSE MEASURING (LVO)	[ ] LOCAL COMMAND (C.L.)
[ ] S-IVB STAGE POWER	[ ] GSE MEASURING (INS)	[ ] ALDS
[X] IU POWER	[ ] LCC DATA DISPLAY	[ ] LCC TM STA. (MONITOR)
[ ] LEM POWER	[ ] CIF DATA DISPLAY	[ ] LCC TM RECORDING
[ ] SM POWER	[X] DDAS	[ ] CIF TM STA. (MONITOR)
[ ] CM POWER	[ ] DDAS TAPE RECORDING	[ ] CIF TM RECORDING
[ ] BACK-UP BATTERIES	[ ] SERVICE STRUCTURE MEAS.	[ ] CIF COMPUTER
[ ] TIMING	[X] RCA-110A COMPUTERS	[ ] CIF DATA
[ ] COUNTDOWN CLOCK	[ ] ACE	[ ] TM RECORDS
[ ] ETR SEQUENCER	[ ] L/V W-G EGS	[ ] REAL-TIME CIF COMPUT.
[ ] ETR COUNTDOWN CLOCK	[ ] CM W-G ECS	[ ] POST-TEST CIF COMPUT.
[ ] ETR S.R.O.	[ ] FACILITY ECS (GAS)	[ ] KSC TRACKING
[ ] ETR R.S.O.	[ ] H.P. GAS	[ ] RFI MONITORING
[ ] ETR PAD SAFETY	[ ] CCF	[ ] RF READOUTS (ETR)
[ ] KSC PAD SAFETY	[ ] FACILITY TV (OTV)	[ ] RF READOUTS (KSC)
[ ] SECURITY POLICE	[X] FACILITY COMM. (OIS)	[ ] WEATHER FORECAST
[ ] FIRE FIGHTING	[ ] FILM CAMERAS	[ ] MCC-C
[ ] MEDICAL	[ ] SEARCH LIGHTS	[ ] MCC-H
[X] S-IVB FLIGHT CONTROL	[ ]	[ ] FOOD SERVICE
[X] IU FLIGHT CONTROL	[ ]	[ ]
[ ]	[ ]	[ ]
[ ]	[ ]	[ ]
[ ]	[ ]	[ ]

OTHERS:

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

17. OTHER APPLICABLE REFERENCE DOCUMENTATION

KSC OPERATIONS
APOLLO/SATURN TEST CATALOG

1. TEST TITLE

CONTROL EDS RATE GYRO COMPARATOR TEST

2. KSC TEST NO.
V-23034-IU 502

3. STAGE, VEHICLE OR GSE
IU

4. TEST OBJECTIVES

A. TO DETAIL THE STEPS NECESSARY TO EVALUATE THE PARAMETERS OF THE THREE CONTROL EDS RATE GYRO COMPARATORS WITHIN THE CONTROL SIGNAL PROCESSOR.

B. TO VERIFY SPARE GYRO SIGNALS ARE SELECTED WHEN THE COMPARATOR IS SET.

5. TEST DESCRIPTION/EQUIPMENT STATUS

DESCRIPTION

A. THIS PROCEDURE WILL CONTROL ML ESE RAMP GENERATORS TO PROVIDE TORQUER COMMAND TO THE CONTROL EDS RATE GYROS.

B. REFERENCE AND ACTIVE GYRO TORQUER SIGNAL LEVELS ARE ADJUSTED THROUGH ALL COMBINATIONS TO DETERMINE COMPARATOR CIRCUITRY CHARACTERISTICS.

C. SPARE GYROS WILL BE TORQUED DURING COMPARATOR SET CONDITIONS TO VERIFY CONNECTION TO THE CONTROL COMPUTER.

STATUS

A. EDS AND APS BUS MUST REMAIN OFF DURING THIS TEST.

B. STAGE HYDRAULICS WILL BE OFF FOR THIS TEST

4/-1

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

6. PREPARED BY	8. NASA-KSC APPROVAL	10. APPROVAL DATE
J. M. Ward	Vincent A. Elentri	June 13, 1966
7. ORGANIZATION	9. ORGANIZATION	11. VEHICLE EFFECTIVITY
IBM CORP.	LVO-244 NASA - Flight Control	AS- 502

APOLLO/SATURN TEST CATALOG (Continuation Sheet)	PAGE 2 OF 2
1. TEST TITLE CONTROL EDS RATE GYRO COMPARATOR TEST	2. KSC TEST NO. V-23034-IU 502 11. VEHICLE EFFECTIVITY AS- 502

12. WHERE TEST PERFORMED	13. COMPUTER/ACE PROG. IDENT. (IF APPLICABLE)	14. EST. TEST TIME
VAB/PAD 39A	NOT ESTABLISHED	2 HRS.

15. TEST CONFIGURATION CONTROL EDS RATE GYRO/CONTROL SIGNAL PROCESSOR IN NORMAL OPERATING CONDITION.

16. SUPPORT REQUIREMENTS CHECKLIST *(Check appropriate boxes and add any additional)*

[X] GROUND POWER	[X] LCC MEASURING (LVO)	[ ] ETR/KSC RADAR
[ ] S-IB OR S-IC STAGE PWR	[ ] LCC MEASURING (INS)	[ ] ETR COMMAND XMITTER
[ ] S-II STAGE POWER	[ ] GSE MEASURING (LVO)	[ ] LOCAL COMMAND (C.L.)
[ ] S-IVB STAGE POWER	[ ] GSE MEASURING (INS)	[ ] ALDS
[X] IU POWER	[ ] LCC DATA DISPLAY	[ ] LCC TM STA. (MONITOR)
[ ] LEM POWER	[ ] CIF DATA DISPLAY	[ ] LCC TM RECORDING
[ ] SM POWER	[X] DDAS	[ ] CIF TM STA. (MONITOR)
[ ] CM POWER	[ ] DDAS TAPE RECORDING	[ ] CIF TM RECORDING
[ ] BACK-UP BATTERIES	[ ] SERVICE STRUCTURE MEAS.	[ ] CIF COMPUTER
[ ] TIMING	[X] RCA-110A COMPUTERS	[ ] CIF DATA
[ ] COUNTDOWN CLOCK	[ ] ACE	[ ] TM RECORDS
[ ] ETR SEQUENCER	[ ] L/V W-G ECS	[ ] REAL-TIME CIF COMPUT.
[ ] ETR COUNTDOWN CLOCK	[ ] CM W-G ECS	[ ] POST-TEST CIF COMPUT.
[ ] ETR S.R.O.	[ ] FACILITY ECS (GAS)	[ ] KSC TRACKING
[ ] ETR R.S.O.	[ ] H.P. GAS	[ ] RFI MONITORING
[ ] ETR PAD SAFETY	[ ] CCF	[ ] RF READOUT (ETR)
[ ] KSC PAD SAFETY	[ ] FACILITY TV (OTV)	[ ] RF READOUTS (KSC)
[ ] SECURITY POLICE	[X] FACILITY COMM. (OIS)	[ ] WEATHER FORECAST
[ ] FIRE FIGHTING	[ ] FILM CAMERAS	[ ] MCC-C
[ ] MEDICAL	[ ] SEARCH LIGHTS	[ ] MCC-H
[X] IU ELECTRICAL EDS GROUP	[ ]	[ ] FOOD SERVICE
[ ]	[ ]	[ ]
[X] IU FLIGHT CONTROL	[ ]	[ ]
[ ]	[ ]	[ ]
[ ]	[ ]	[ ]

OTHERS:

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

17. OTHER APPLICABLE REFERENCE DOCUMENTATION

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KSC OPERATIONS
APOLLO/SATURN TEST CATALOG

1. TEST TITLE

CONTROL EDS RATE GYRO EXCESSIVE RATE TEST

2. KSC TEST NO.

V-23035-IU 502

3. STAGE, VEHICLE OR GSE

IU

4. TEST OBJECTIVES

A. TO VERIFY THE SWITCHING CHARACTERISTICS OF THE RATE SWITCHES WITHIN THE CONTROL SIGNAL PROCESSOR/CONTROL EDS RATE GYRO SYSTEM, MSFC P/N 50M35500 AND 50M35021.

B. TO VERIFY THE EDS INTERFACE.

5. TEST DESCRIPTION/EQUIPMENT STATUS

DESCRIPTION

A. THIS PROCEDURE WILL CONTROL ML ESE RAMP GENERATORS TO PROVIDE TORQUER COMMANDS TO THE CONTROL EDS RATE GYROS.

B. REFERENCE, ACTIVE AND SPARE GYRO TORQUER SIGNAL LEVELS ARE ADJUSTED TO DETERMINE RATE SWITCH CIRCUITRY CHARACTERISTICS.

C. THE EXCESSIVE RATE INDICATIONS ARE VERIFIED ON THE EDS PREPARATIONS AND CONTROL EDS RATE GYRO PANELS.

STATUS

A. THIS TEST IS PERFORMED IN SUPPORT OF OVERALL TESTS.

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(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

6. PREPARED BY	8. NASA-KSC APPROVAL	10. APPROVAL DATE
L. M. Ward	Vincent A. Elentz	June 13, 1966
7. ORGANIZATION	9. ORGANIZATION	11. VEHICLE EFFECTIVITY
IBM CORP.	LVO-244 NASA-Flight Control	AS-502

APOLLO/SATURN TEST CATALOG (Continuation Sheet)	PAGE 2 OF 2

1. TEST TITLE	2. KSC TEST NO.
CONTROL EDS RATE GYRO EXCESSIVE RATE TEST	V-23035-IU 502
	11. VEHICLE EFFECTIVITY AS-502

12. WHERE TEST PERFORMED	13. COMPUTER/ACE PROG. IDENT. (IF APPLICABLE)	14. EST. TEST TIME
VAB/PAD 39A	NOT ESTABLISHED	0.1 HR.

15. TEST CONFIGURATION CONTROL EDS RATE GYRO/CONTROL SIGNAL PROCESSOR IN NORMAL OPERATING CONDITION.

16. SUPPORT REQUIREMENTS CHECKLIST *(Check appropriate boxes and add any additional)*

[X] GROUND POWER	[X] LCC MEASURING (LVO)	[ ] ETR/KSC RADAR
[ ] S-IB OR S-IC STAGE PWR	[ ] LCC MEASURING (INS)	[ ] ETR COMMAND XMITTER
[ ] S-II STAGE POWER	[ ] GSE MEASURING (LVO)	[ ] LOCAL COMMAND (C.L.)
[ ] S-IVB STAGE POWER	[ ] GSE MEASURING (INS)	[ ] ALDS
[X] IU POWER	[ ] LCC DATA DISPLAY	[ ] LCC TM STA. (MONITOR)
[ ] LEM POWER	[ ] CIF DATA DISPLAY	[ ] LCC TM RECORDING
[ ] SM POWER	[X] DDAS	[ ] CIF TM STA. (MONITOR)
[ ] CM POWER	[ ] DDAS TAPE RECORDING	[ ] CIF TM RECORDING
[ ] BACK-UP BATTERIES	[ ] SERVICE STRUCTURE MEAS.	[ ] CIF COMPUTER
[ ] TIMING	[X] RCA-110A COMPUTERS	[ ] CIF DATA
[ ] COUNTDOWN CLOCK	[ ] ACE	[ ] TM RECORDS
[ ] ETR SEQUENCER	[ ] L/V W-G ECS	[ ] REAL-TIME CIF COMPUT.
[ ] ETR COUNTDOWN CLOCK	[ ] CM W-G ECS	[ ] POST-TEST CIF COMPUT.
[ ] ETR S.R.O.	[ ] FACILITY ECS (GAS)	[ ] KSC TRACKING
[ ] ETR R.S.O.	[ ] H.P. GAS	[ ] RFI MONITORING
[ ] ETR PAD SAFETY	[ ] CCF	[ ] RF READOUTS (ETR)
[ ] KSC PAD SAFETY	[ ] FACILITY TV (OTV)	[ ] RF READOUTS (KSC)
[ ] SECURITY POLICE	[X] FACILITY COMM. (OIS)	[ ] WEATHER FORECAST
[ ] FIRE FIGHTING	[ ] FILM CAMERAS	[ ] MCC-C
[ ] MEDICAL	[ ] SEARCH LIGHTS	[ ] MCC-H
[X] IU EDS GROUP	[ ]	[ ] FOOD SERVICE
[X] IU FLIGHT CONTROL	[ ]	[ ]
[ ]	[ ]	[ ]
[ ]	[ ]	[ ]
[ ]	[ ]	[ ]

OTHERS:

428

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

17. OTHER APPLICABLE REFERENCE DOCUMENTATION

KSC OPERATIONS
APOLLO/SATURN TEST CATALOG

1. TEST TITLE
LABORATORY PNEUMATIC TESTS OF THE ST-124M STABILIZED PLATFORM SYSTEM

2. KSC TEST NO.
V-23038-IU-502

3. STAGE, VEHICLE OR GSE
Saturn V

4. TEST OBJECTIVES

A. TO VERIFY THAT THE STABILIZED PLATFORM PNEUMATIC PERFORMANCE IS WITHIN SPECIFIED FLOW AND PRESSURE TOLERANCES DURING SIMULATED FLIGHT CONDITIONS.

B. TO VERIFY THE CALIBRATION OF THE INTERNAL AMBIENT PRESSURE TRANSDUCER.

C. TO VERIFY THAT PLATFORM, PEA, ASC, AND AC POWER SUPPLY DO NOT LEAK EXCESSIVELY.

D. TO VERIFY THAT THE PLATFORM PURGE SYSTEM PERFORMANCE IS WITHIN SPECIFIED FLOW AND PRESSURE TOLERANCES.

5. TEST DESCRIPTION/EQUIPMENT STATUS

A. ENERGIZE ELECTRICAL, PNEUMATIC, AND COOLING GSE, AND ALLOW PLATFORM TO REACH OPERATING TEMPERATURE. REGULATE INLET GAS SUPPLY PRESSURE THROUGHOUT TEST TO MAINTAIN A PRESCRIBED DIFFERENTIAL PRESSURE WITH REFERENCE TO INTERNAL AMBIENT PRESSURE. APPLY A VACUUM AT THE ORIFICE TO SIMULATE EXTERNAL AMBIENT PRESSURE CONDITIONS AFTER LIFTOFF. RECORD INLET, INTERNAL AMBIENT, DIFFERENTIAL, AND EXTERNAL AMBIENT PRESSURE VALUES, AND GAS CONSUMPTION IN SCFM.

B. ADJUST THE INTERNAL AMBINET PRESSURE AND CHECK THE INTERNAL AMBIENT PRESSURE TRANSDUCER THROUGHOUT ITS OPERATING RANGE.

C. PRESSURIZE PLATFORM AND ASSOCIATED EQUIPMENT AND CHECK LEAK RATE.

D. ADJUST THE PURGE ORIFICE INLET PRESSURE WITHIN A SPECIFIED RANGE, UNTIL THE INTERNAL AMBIENT PRESSURE AND PURGE ORIFICE FLOW RATE FALL WITHIN PRESCRIBED LIMITS. RECORD VALUES.

ELECTRICAL, PNEUMATIC, AND COOLING GSE CONNECTED.

4 29

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

6. PREPARED BY	8. NASA-KSC APPROVAL	10. APPROVAL DATE
C. L. Cascio	C M LeFort	6/22/66
7. ORGANIZATION	9. ORGANIZATION	11. VEHICLE EFFECTIVITY
IBM		AS- 502

KSC FORM 23-191A (2/66)

APOLLO/SATURN TEST CATALOG (Continuation Sheet)	PAGE 2 OF
1. TEST TITLE LABORATORY PNEUMATIC TESTS OF THE ST-124M STABILIZED PLATFORM SYSTEM	2. KSC TEST NO. V-23038-IU-502 11. VEHICLE EFFECTIVITY AS- 502

12. WHERE TEST PERFORMED	13. COMPUTER/ACE PROG. IDENT. (IF APPLICABLE)	14. EST. TEST TIME
LAB		8 HRS

15. TEST CONFIGURATION

16. SUPPORT REQUIREMENTS CHECKLIST *(Check appropriate boxes and add any additional)*

☐ GROUND POWER	☐ LCC MEASURING (LVO)	☐ ETR/KSC RADAR
☐ S-IB OR S-IC STAGE PWR	☐ LCC MEASURING (INS)	☐ ETR COMMAND XMITTER
☐ S-II STAGE POWER	☐ GSE MEASURING (LVO)	☐ LOCAL COMMAND (C.L.)
☐ S-IVB STAGE POWER	☐ GSE MEASURING (INS)	☐ ALDS
☐ IU POWER	☐ LCC DATA DISPLAY	☐ LCC TM STA. (MONITOR)
☐ LEM POWER	☐ CIF DATA DISPLAY	☐ LCC TM RECORDING
☐ SM POWER	☐ DDAS	☐ CIF TM STA. (MONITOR)
☐ CM POWER	☐ DDAS TAPE RECORDING	☐ CIF TM RECORDING
☐ BACK-UP BATTERIES	☐ SERVICE STRUCTURE MEAS.	☐ CIF COMPUTER
☐ TIMING	☐ RCA-110A COMPUTERS	☐ CIF DATA
☐ COUNTDOWN CLOCK	☐ ACE	☐ TM RECORDS
☐ ETR SEQUENCER	☐ L/V W-G ECS	☐ REAL-TIME CIF COMPUT.
☐ ETR COUNTDOWN CLOCK	☐ CM W-G ECS	☐ POST-TEST CIF COMPUT.
☐ ETR S.R.O.	☐ FACILITY ECS (GAS)	☐ KSC TRACKING
☐ ETR R.S.O.	☐ H.P. GAS	☐ RFI MONITORING
☐ ETR PAD SAFETY	☐ CCF	☐ RF READOUTS (ETR)
☐ KSC PAD SAFETY	☐ FACILITY TV (OTV)	☐ RF READOUTS (KSC)
☐ SECURITY POLICE	☐ FACILITY COMM. (OIS)	☐ WEATHER FORECAST
☐ FIRE FIGHTING	☐ FILM CAMERAS	☐ MCC-C
☐ MEDICAL	☐ SEARCH LIGHTS	☐ MCC-H
☐	☐	☐ FOOD SERVICE
☐	☐	☐
☐	☐	☐
☐	☐	☐
☐	☐	☐

OTHERS:

150

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

17. OTHER APPLICABLE REFERENCE DOCUMENTATION

KSC OPERATIONS
APOLLO/SATURN TEST CATALOG

1. TEST TITLE

ST-124M AUTOMATIC NULL CHECK PROGRAM

2. KSC TEST NO.

V-23039-IU-502

3. STAGE, VEHICLE OR GSE

Saturn V

4. TEST OBJECTIVES

TO INITIATE A PROGRAM HAVING THE CAPABILITY OF MONITORING THE OUTPUT OF THE GYROS AND ACCELEROMETERS AND CAUSING A RAPID STABILIZED PLATFORM SYSTEM SHUTDOWN IN THE EVENT OF ABNORMAL OUTPUTS.

5. TEST DESCRIPTION/EQUIPMENT STATUS

THE PROGRAM IS AUTOMATICALLY CALLED IN BY THE SLCC UPON COMPLETION OF THE ST-124M TURN ON PROGRAM AND REMAINS IN EXECUTION UNTIL THE PLATFORM IS DEACTIVATED OR A SPECIFIC INHIBIT CONDITION IS GENERATED FROM A DISCRETE INPUT. THE GYRO TURN ON DISCRETE IS REMOVED BY THE PROGRAM WHENEVER A GYRO OR ACCELEROMETER OUTPUT VOLTAGE EXCEEDS A PRE-SET TOLERANCE. ONCE THE GYROS ON DISCRETE HAS BEEN REMOVED, THE PROGRAM WILL CALL THE ST-124M TURN OFF PROGRAM AND DISPLAY THE OUT OF TOLERANCE CONDITION.

C/91

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

6. PREPARED BY	8. NASA-KSC APPROVAL	10. APPROVAL DATE
[illegible]	C M LaPorta	6/21/66
7. ORGANIZATION	**9. ORGANIZATION**	**11. VEHICLE EFFECTIVITY**
IBM	LVO-23	AS- 502

APOLLO/SATURN TEST CATALOG (Continuation Sheet)	PAGE 2 OF
1. TEST TITLE ST-124M AUTOMATIC NULL CHECK PROGRAM	2. KSC TEST NO. V-23039-IU-502 11. VEHICLE EFFECTIVITY AS - 502

12. WHERE TEST PERFORMED	13. COMPUTER/ACE PROG. IDENT. (IF APPLICABLE)	14. EST. TEST TIME
VAB, PAD		1 HR.

15. TEST CONFIGURATION

16. SUPPORT REQUIREMENTS CHECKLIST *(Check appropriate boxes and add any additional)*

☐ GROUND POWER	☐ LCC MEASURING (LVO)	☐ ETR/KSC RADAR
☐ S-IB OR S-IC STAGE PWR	☒ LCC MEASURING (INS)	☐ ETR COMMAND XMITTER
☐ S-II STAGE POWER	☐ GSE MEASURING (LVO)	☐ LOCAL COMMAND (C.L.)
☐ S-IVB STAGE POWER	☐ GSE MEASURING (INS)	☐ ALDS
☒ IU POWER	☐ LCC DATA DISPLAY	☐ LCC TM STA. (MONITOR)
☐ LEM POWER	☐ CIF DATA DISPLAY	☐ LCC TM RECORDING
☐ SM POWER	☒ DDAS	☐ CIF TM STA. (MONITOR)
☐ CM POWER	☐ DDAS TAPE RECORDING	☐ CIF TM RECORDING
☐ BACK-UP BATTERIES	☐ SERVICE STRUCTURE MEAS.	☐ CIF COMPUTER
☐ TIMING	☒ RCA-110A COMPUTERS	☐ CIF DATA
☐ COUNTDOWN CLOCK	☐ ACE	☐ TM RECORDS
☐ ETR SEQUENCER	☐ L/V W-G ECS	☐ REAL-TIME CIF COMPUT.
☐ ETR COUNTDOWN CLOCK	☐ CM W-G ECS	☐ POST-TEST CIF COMPUT.
☐ ETR S.R.O.	☐ FACILITY ECS (GAS)	☐ KSC TRACKING
☐ ETR R.S.O.	☒ H.P. GAS	☐ RFI MONITORING
☐ ETR PAD SAFETY	☐ CCF	☐ RF READOUTS (ETR)
☐ KSC PAD SAFETY	☐ FACILITY TV (OTV)	☐ RF READOUTS (KSC)
☐ SECURITY POLICE	☒ FACILITY COMM. (OIS)	☐ WEATHER FORECAST
☐ FIRE FIGHTING	☐ FILM CAMERAS	☐ MCC-C
☐ MEDICAL	☐ SEARCH LIGHTS	☐ MCC-H
☐	☐	☐ FOOD SERVICE
☐	☐	☐
☐	☐	☐
☐	☐	☐
☐	☐	☐

OTHERS:

4/5C

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

17. OTHER APPLICABLE REFERENCE DOCUMENTATION

KSC OPERATIONS
APOLLO/SATURN TEST CATALOG

1. TEST TITLE
ST-124M PLATFORM STATUS

2. KSC TEST NO.
V-23040-IU-502

3. STAGE, VEHICLE OR GSE
Saturn V

4. TEST OBJECTIVES

DETERMINES THE OPERATIONAL STATUS OF THE STABILIZER SYSTEM.

5. TEST DESCRIPTION/EQUIPMENT STATUS

THE PROGRAM READS AND DISPLAYS DISCRETES AND DDAS VALUES OF:

A. SENSOR OUTPUTS.
B. TEMPERATURES AND PRESSURES.
C. SUPPLY VOLTAGES.
D. COMPONENT ON/OFF CONDITIONS.

ANY IMPROPER STATUS IS DISPLAYED AND THE PROGRAM TERMINATED.

4/53

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

6. PREPARED BY	8. NASA-KSC APPROVAL	10. APPROVAL DATE
D R Ellis	C M La Porta	6/21/66
7. ORGANIZATION	9. ORGANIZATION	11. VEHICLE EFFECTIVITY
IBM	LVO-23	AS-502

KSC FORM 23-191A (2/66)

APOLLO/SATURN TEST CATALOG (Continuation Sheet)	PAGE 2 OF
1. TEST TITLE ST-124M PLATFORM STATUS	2. KSC TEST NO. V-23040-IU-502 11. VEHICLE EFFECTIVITY AS - 502

12. WHERE TEST PERFORMED	13. COMPUTER/ACE PROG. IDENT. (IF APPLICABLE)	14. EST. TEST TIME
VAB & PAD	GT 17	1 HR.

15. TEST CONFIGURATION

16. SUPPORT REQUIREMENTS CHECKLIST *(Check appropriate boxes and add any additional)*

☑ GROUND POWER	☐ LCC MEASURING (LVO)	☐ ETR/KSC RADAR
☐ S-IB OR S-IC STAGE PWR	☐ LCC MEASURING (INS)	☐ ETR COMMAND XMITTER
☐ S-II STAGE POWER	☐ GSE MEASURING (LVO)	☐ LOCAL COMMAND (C.L.)
☐ S-IVB STAGE POWER	☐ GSE MEASURING (INS)	☐ ALDS
☑ IU POWER	☐ LCC DATA DISPLAY	☐ LCC TM STA. (MONITOR)
☐ LEM POWER	☐ CIF DATA DISPLAY	☐ LCC TM RECORDING
☐ SM POWER	☑ DDAS	☐ CIF TM STA. (MONITOR)
☐ CM POWER	☐ DDAS TAPE RECORDING	☐ CIF TM RECORDING
☐ BACK-UP BATTERIES	☐ SERVICE STRUCTURE MEAS.	☐ CIF COMPUTER
☐ TIMING	☑ RCA-110A COMPUTERS	☐ CIF DATA
☐ COUNTDOWN CLOCK	☐ ACE	☐ TM RECORDS
☐ ETR SEQUENCER	☐ L/V W-G ECS	☐ REAL-TIME CIF COMPUT.
☐ ETR COUNTDOWN CLOCK	☐ CM W-G ECS	☐ POST-TEST CIF COMPUT.
☐ ETR S.R.O.	☐ FACILITY ECS (GAS)	☐ KSC TRACKING
☐ ETR R.S.O.	☑ H.P. GAS	☐ RFI MONITORING
☐ ETR PAD SAFETY	☐ CCF	☐ RF READOUTS (ETR)
☐ KSC PAD SAFETY	☐ FACILITY TV (OTV)	☐ RF READOUTS (KSC)
☐ SECURITY POLICE	☑ FACILITY COMM. (OIS)	☐ WEATHER FORECAST
☐ FIRE FIGHTING	☐ FILM CAMERAS	☐ MCC-C
☐ MEDICAL	☐ SEARCH LIGHTS	☐ MCC-H
☐	☐	☐ FOOD SERVICE
☐	☐	☐
☐	☐	☐
☐	☐	☐
☐	☐	☐

OTHERS:

454

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

17. OTHER APPLICABLE REFERENCE DOCUMENTATION

KSC OPERATIONS
APOLLO/SATURN TEST CATALOG

1. TEST TITLE

ST-124M PLATFORM POSITIONING

2. KSC TEST NO.

V-23041-IU-502

3. STAGE, VEHICLE OR GSE

Saturn V

4. TEST OBJECTIVES

POSITIONS AND MAINTAINS THE PLATFORM AT A DESIRED ATTITUDE.

5. TEST DESCRIPTION/EQUIPMENT STATUS

THE OPERATOR INSERTS DATA CODE WORDS PROVIDING AXIS, DIRECTION AND MAGNITUDE INFORMATION, THE PROGRAM ADDS THIS VALUE TO THE CURRENT POSITION.

435

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

6. PREPARED BY	8. NASA-KSC APPROVAL	10. APPROVAL DATE
D R Ellis	C M LePorte	6/21/66
7. ORGANIZATION	9. ORGANIZATION	11. VEHICLE EFFECTIVITY
IBM	LVO-23	AS-502

APOLLO/SATURN TEST CATALOG (Continuation Sheet)	PAGE 2 OF

1. TEST TITLE	2. KSC TEST NO.
ST-124M PLATFORM POSITIONING	V-23041-IU-502
	11. VEHICLE EFFECTIVITY
	AS - 502

12. WHERE TEST PERFORMED	13. COMPUTER/ACE PROG. IDENT. (IF APPLICABLE)	14. EST. TEST TIME

15. TEST CONFIGURATION

16. SUPPORT REQUIREMENTS CHECKLIST *(Check appropriate boxes and add any additional)*

[X] GROUND POWER	[ ] LCC MEASURING (LVO)	[ ] ETR/KSC RADAR
[ ] S-IB OR S-IC STAGE PWR	[ ] LCC MEASURING (INS)	[ ] ETR COMMAND XMITTER
[ ] S-II STAGE POWER	[ ] GSE MEASURING (LVO)	[ ] LOCAL COMMAND (C.L.)
[ ] S-IVB STAGE POWER	[ ] GSE MEASURING (INS)	[ ] ALDS
[X] IU POWER	[ ] LCC DATA DISPLAY	[ ] LCC TM STA. (MONITOR)
[ ] LEM POWER	[ ] CIF DATA DISPLAY	[ ] LCC TM RECORDING
[ ] SM POWER	[X] DDAS	[ ] CIF TM STA. (MONITOR)
[ ] CM POWER	[ ] DDAS TAPE RECORDING	[ ] CIF TM RECORDING
[ ] BACK-UP BATTERIES	[ ] SERVICE STRUCTURE MEAS.	[ ] CIF COMPUTER
[X] TIMING	[X] RCA-110A COMPUTERS	[ ] CIF DATA
[ ] COUNTDOWN CLOCK	[ ] ACE	[ ] TM RECORDS
[ ] ETR SEQUENCER	[ ] L/V W-G ECS	[ ] REAL-TIME CIF COMPUT.
[ ] ETR COUNTDOWN CLOCK	[ ] CM W-G ECS	[ ] POST-TEST CIF COMPUT.
[ ] ETR S.R.O.	[ ] FACILITY ECS (GAS)	[ ] KSC TRACKING
[ ] ETR R.S.O.	[X] H.P. GAS	[ ] RFI MONITORING
[ ] ETR PAD SAFETY	[ ] CCF	[ ] RF READOUTS (ETR)
[ ] KSC PAD SAFETY	[ ] FACILITY TV (OTV)	[ ] RF READOUTS (KSC)
[ ] SECURITY POLICE	[X] FACILITY COMM. (OIS)	[ ] WEATHER FORECAST
[ ] FIRE FIGHTING	[ ] FILM CAMERAS	[ ] MCC-C
[ ] MEDICAL	[ ] SEARCH LIGHTS	[ ] MCC-H
[ ]	[ ]	[ ] FOOD SERVICE
[ ]	[ ]	[ ]
[ ]	[ ]	[ ]
[ ]	[ ]	[ ]
[ ]	[ ]	[ ]

OTHERS:

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

17. OTHER APPLICABLE REFERENCE DOCUMENTATION

KSC OPERATIONS
APOLLO/SATURN TEST CATALOG

1. TEST TITLE
ST-124M PLATFORM TORQUING

2. KSC TEST NO.
V-23042-IU-502

3. STAGE, VEHICLE OR GSE
Saturn V

4. TEST OBJECTIVES
DETERMINES AND DISPLAYS THE TORQUING AND ERECTION RATES OF THE PLATFORM ABOUT THE PITCH ROLL AND YAW AXES IN POSITIVE AND NEGATIVE DIRECTIONS.

5. TEST DESCRIPTION/EQUIPMENT STATUS

ALL THREE AXIS ARE TORQUED SIMULTANEOULY FOR 25 SECONDS TIME (APPROXIMATELY 2 DEGREES) AND MONITORED DURING RETURN TO NULL.

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(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

6. PREPARED BY	8. NASA-KSC APPROVAL	10. APPROVAL DATE
[illegible]	C M LaPorta	6/21/66
7. ORGANIZATION	9. ORGANIZATION	11. VEHICLE EFFECTIVITY
IBM	LVO-23	AS-502

KSC FORM 23-191A (2/66)

APOLLO/SATURN TEST CATALOG (Continuation Sheet)	PAGE 2 OF

1. TEST TITLE	2. KSC TEST NO.
ST-124M PLATFORM TORQUING	V-23042-IU-502
	11. VEHICLE EFFECTIVITY AS- 502

12. WHERE TEST PERFORMED	13. COMPUTER/ACE PROG. IDENT. (IF APPLICABLE)	14. EST. TEST TIME
VAB & PAD		1 HR.

15. TEST CONFIGURATION

16. SUPPORT REQUIREMENTS CHECKLIST *(Check appropriate boxes and add any additional)*

☐ GROUND POWER	☐ LCC MEASURING (LVO)	☐ ETR/KSC RADAR
☐ S-IB OR S-IC STAGE PWR	☒ LCC MEASURING (INS)	☐ ETR COMMAND XMITTER
☐ S-II STAGE POWER	☐ GSE MEASURING (LVO)	☐ LOCAL COMMAND (C.L.)
☐ S-IVB STAGE POWER	☐ GSE MEASURING (INS)	☐ ALDS
☒ IU POWER	☐ LCC DATA DISPLAY	☐ LCC TM STA. (MONITOR)
☐ LEM POWER	☐ CIF DATA DISPLAY	☐ LCC TM RECORDING
☐ SM POWER	☒ DDAS	☐ CIF TM STA. (MONITOR)
☐ CM POWER	☐ DDAS TAPE RECORDING	☐ CIF TM RECORDING
☐ BACK-UP BATTERIES	☐ SERVICE STRUCTURE MEAS.	☐ CIF COMPUTER
☐ TIMING	☒ RCA-110A COMPUTERS	☐ CIF DATA
☐ COUNTDOWN CLOCK	☐ ACE	☐ TM RECORDS
☐ ETR SEQUENCER	☐ L/V W-G ECS	☐ REAL-TIME CIF COMPUT.
☐ ETR COUNTDOWN CLOCK	☐ CM W-G ECS	☐ POST-TEST CIF COMPUT.
☐ ETR S.R.O.	☐ FACILITY ECS (GAS)	☐ KSC TRACKING
☐ ETR R.S.O.	☒ H.P. GAS	☐ RFI MONITORING
☐ ETR PAD SAFETY	☐ CCF	☐ RF READOUTS (ETR)
☐ KSC PAD SAFETY	☐ FACILITY TV (OTV)	☐ RF READOUTS (KSC)
☐ SECURITY POLICE	☒ FACILITY COMM. (OIS)	☐ WEATHER FORECAST
☐ FIRE FIGHTING	☐ FILM CAMERAS	☐ MCC-C
☐ MEDICAL	☐ SEARCH LIGHTS	☐ MCC-H
☐	☐	☐ FOOD SERVICE
☐	☐	☐
☐	☐	☐
☐	☐	☐
☐	☐	☐

OTHERS:

4/58

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

17. OTHER APPLICABLE REFERENCE DOCUMENTATION

KSC OPERATIONS
APOLLO/SATURN TEST CATALOG

1. TEST TITLE
ST-124M PLATFORM STABILITY

2. KSC TEST NO.
V-23043-IU-502

3. STAGE, VEHICLE OR GSE
Saturn V

4. TEST OBJECTIVES
EVALUATES THE DYNAMIC RESPONSE OF THE GYRO AND ACCELEROMETER SERVO LOOPS.

5. TEST DESCRIPTION/EQUIPMENT STATUS
A POSITIVE AND A NEGATIVE TEST PULSE IS INSERTED INTO EACH SERVO LOOP AMPLIFIER, THE RESPONSE IS MONITORED AND DISPLAYED AS FOLLOWS:

A. MAXIMUM VOLTAGE.
B. RECOVERY TIME (INTERNAL FIRST AND SECOND CROSSOVER).
C. NUMBER OF OSCILLATIONS.
D. TIME TO NULL (WITHIN 500MV).

499

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

6. PREPARED BY	8. NASA-KSC APPROVAL	10. APPROVAL DATE
[illegible]	C M L. Potts	6/21/66
7. ORGANIZATION	9. ORGANIZATION	11. VEHICLE EFFECTIVITY
IBM	LVO-23	AS- 502

APOLLO/SATURN TEST CATALOG (Continuation Sheet)	PAGE 2 OF

1. TEST TITLE	2. KSC TEST NO.
ST-124M PLATFORM STABILITY	V-23043-IU-502
	11. VEHICLE EFFECTIVITY
	AS- 502

12. WHERE TEST PERFORMED	13. COMPUTER/ACE PROG. IDENT. (IF APPLICABLE)	14. EST. TEST TIME
VAB & PAD		1 HR.

15. TEST CONFIGURATION

16. SUPPORT REQUIREMENTS CHECKLIST *(Check appropriate boxes and add any additional)*

☐ GROUND POWER	☐ LCC MEASURING (LVO)	☐ ETR/KSC RADAR
☐ S-IB OR S-IC STAGE PWR	☐ LCC MEASURING (INS)	☐ ETR COMMAND XMITTER
☐ S-II STAGE POWER	☐ GSE MEASURING (LVO)	☐ LOCAL COMMAND (C.L.)
☐ S-IVB STAGE POWER	☐ GSE MEASURING (INS)	☐ ALDS
☑ IU POWER	☐ LCC DATA DISPLAY	☐ LCC TM STA. (MONITOR)
☐ LEM POWER	☐ CIF DATA DISPLAY	☐ LCC TM RECORDING
☐ SM POWER	☑ DDAS	☐ CIF TM STA. (MONITOR)
☐ CM POWER	☐ DDAS TAPE RECORDING	☐ CIF TM RECORDING
☐ BACK-UP BATTERIES	☐ SERVICE STRUCTURE MEAS.	☐ CIF COMPUTER
☐ TIMING	☑ RCA-110A COMPUTERS	☐ CIF DATA
☐ COUNTDOWN CLOCK	☐ ACE	☐ TM RECORDS
☐ ETR SEQUENCER	☐ L/V W-G ECS	☐ REAL-TIME CIF COMPUT.
☐ ETR COUNTDOWN CLOCK	☐ CM W-G ECS	☐ POST-TEST CIF COMPUT.
☐ ETR S.R.O.	☐ FACILITY ECS (GAS)	☐ KSC TRACKING
☐ ETR R.S.O.	☑ H.P. GAS	☐ RFI MONITORING
☐ ETR PAD SAFETY	☐ CCF	☐ RF READOUTS (ETR)
☐ KSC PAD SAFETY	☐ FACILITY TV (OTV)	☐ RF READOUTS (KSC)
☐ SECURITY POLICE	☑ FACILITY COMM. (OIS)	☐ WEATHER FORECAST
☐ FIRE FIGHTING	☐ FILM CAMERAS	☐ MCC-C
☐ MEDICAL	☐ SEARCH LIGHTS	☐ MCC-H
☐	☐	☐ FOOD SERVICE
☐	☐	☐
☐	☐	☐
☐	☐	☐
☐	☐	☐

OTHERS:

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

17. OTHER APPLICABLE REFERENCE DOCUMENTATION

KSC OPERATIONS
APOLLO/SATURN TEST CATALOG

1. TEST TITLE

ST-124M TURN OFF PROGRAM

2. KSC TEST NO.

V-23044-IU-502

3. STAGE, VEHICLE OR GSE

Saturn V

4. TEST OBJECTIVES

TO PROVIDE CAPABILITY TO AUTOMATICALLY SEQUENCE THE PLATFORM POWER OFF.

5. TEST DESCRIPTION/EQUIPMENT STATUS

THE PROGRAM IS ENABLED BY THE ST-124M TURN ON PROGRAM AND INITIATED FROM THE DISPLAY CONSOLE KEYBOARD, OR BY THOSE TESTS MONITORING CRITICAL STABILIZER PLATFORM SYSTEM FUNCTIONS WHERE AN OUT OF TOLERANCE FUNCTION REQUIRES THE PLATFORM SYSTEM TO BE SHUTDOWN.

STABILIZED PLATFORM SYSTEM OPERATING IN THE AUTOMATIC TURN ON MODE.

4111

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

6. PREPARED BY	8. NASA-KSC APPROVAL	10. APPROVAL DATE
[illegible]	C M LaPata	6/21/66
7. ORGANIZATION	9. ORGANIZATION	11. VEHICLE EFFECTIVITY
IBM	LVO-23	AS-502

APOLLO/SATURN TEST CATALOG (Continuation Sheet)	PAGE 2 OF
1. TEST TITLE ST-124M TURN OFF PROGRAM	2. KSC TEST NO. V-23044-IU-502 11. VEHICLE EFFECTIVITY AS- 502

12. WHERE TEST PERFORMED	13. COMPUTER/ACE PROG. IDENT. (IF APPLICABLE)	14. EST. TEST TIME
VAB, PAD	GT 12	15 MIN

15. TEST CONFIGURATION

16. SUPPORT REQUIREMENTS CHECKLIST *(Check appropriate boxes and add any additional)*

☐ GROUND POWER	☐ LCC MEASURING (LVO)	☐ ETR/KSC RADAR
☐ S-IB OR S-IC STAGE PWR	☒ LCC MEASURING (INS)	☐ ETR COMMAND XMITTER
☐ S-II STAGE POWER	☐ GSE MEASURING (LVO)	☐ LOCAL COMMAND (C.L.)
☐ S-IVB STAGE POWER	☐ GSE MEASURING (INS)	☐ ALDS
☒ IU POWER	☐ LCC DATA DISPLAY	☐ LCC TM STA. (MONITOR)
☐ LEM POWER	☐ CIF DATA DISPLAY	☐ LCC TM RECORDING
☐ SM POWER	☒ DDAS	☐ CIF TM STA. (MONITOR)
☐ CM POWER	☐ DDAS TAPE RECORDING	☐ CIF TM RECORDING
☐ BACK-UP BATTERIES	☐ SERVICE STRUCTURE MEAS.	☐ CIF COMPUTER
☐ TIMING	☒ RCA-110A COMPUTERS	☐ CIF DATA
☐ COUNTDOWN CLOCK	☐ ACE	☐ TM RECORDS
☐ ETR SEQUENCER	☐ L/V W-G ECS	☐ REAL-TIME CIF COMPUT.
☐ ETR COUNTDOWN CLOCK	☐ CM W-G ECS	☐ POST-TEST CIF COMPUT.
☐ ETR S.R.O.	☐ FACILITY ECS (GAS)	☐ KSC TRACKING
☐ ETR R.S.O.	☒ H.P. GAS	☐ RFI MONITORING
☐ ETR PAD SAFETY	☐ CCF	☐ RF READOUTS (ETR)
☐ KSC PAD SAFETY	☐ FACILITY TV (OTV)	☐ RF READOUTS (KSC)
☐ SECURITY POLICE	☒ FACILITY COMM. (OIS)	☐ WEATHER FORECAST
☐ FIRE FIGHTING	☐ FILM CAMERAS	☐ MCC-C
☐ MEDICAL	☐ SEARCH LIGHTS	☐ MCC-H
☐	☐	☐ FOOD SERVICE
☐	☐	☐
☐	☐	☐
☐	☐	☐
☐	☐	☐

OTHERS:

4/1/6

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

17. OTHER APPLICABLE REFERENCE DOCUMENTATION

KSC OPERATIONS
APOLLO/SATURN TEST CATALOG

1. TEST TITLE
ST-124M TURN ON PROGRAM

2. KSC TEST NO.
V-23045-IU-502

3. STAGE, VEHICLE OR GSE
Saturn V

4. TEST OBJECTIVES

TO SEQUENTIALLY SUPPLY POWER TO THE STABILIZED PLATFORM SYSTEM, CHECKING FOR PROPER RESPONSE AS EACH CONTROL DISCRETE IS ISSUED, AND IN THE EVENT OF IMPROPER RESPONSE TO CAUSE INITIATION OF A SHUTDOWN SEQUENCE WITHIN THE PROGRAM. UPON COMPLETION OF THE POWER TURN ON PORTION OF THE PROGRAM, THE AUTOMATIC NULL CHECK MONITOR PROGRAM IS CALLED.

5. TEST DESCRIPTION/EQUIPMENT STATUS

THE PROGRAM IS INITIATED FROM THE DISPLAY CONSOLE KEYBOARD AFTER PLACING ALL APPLICABLE SWITCHES IN THE AUTO POSITION ON THE ST-124M CONTROL PANEL. THE PROGRAM WILL MONITOR THE OPERATIONAL STATUS OF THE GN2 SUPPLY AS WELL AS PLATFORM TEMPERATURE AND INVERTER STATUS.

SATISFACTORY SYSTEM OPERATION IN THE MANUAL MODE OF CONTROL

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

6. PREPARED BY	8. NASA-KSC APPROVAL	10. APPROVAL DATE
[illegible]	C M L. Potts	6/21/66
7. ORGANIZATION	9. ORGANIZATION	11. VEHICLE EFFECTIVITY
IBM	LVO-23	AS-502

APOLLO/SATURN TEST CATALOG (Continuation Sheet)	PAGE 2 OF
1. TEST TITLE ST-124M TURN ON PROGRAM	2. KSC TEST NO. V-23045-IU-502 11. VEHICLE EFFECTIVITY AS-502

12. WHERE TEST PERFORMED	13. COMPUTER/ACE PROG. IDENT. (IF APPLICABLE)	14. EST. TEST TIME
VAB & PAD	GT 11	15 MIN

15. TEST CONFIGURATION

16. SUPPORT REQUIREMENTS CHECKLIST *(Check appropriate boxes and add any additional)*

☐ GROUND POWER	☐ LCC MEASURING (LVO)	☐ ETR/KSC RADAR
☐ S-IB OR S-IC STAGE PWR	☒ LCC MEASURING (INS)	☐ ETR COMMAND XMITTER
☐ S-II STAGE POWER	☐ GSE MEASURING (LVO)	☐ LOCAL COMMAND (C.L.)
☐ S-IVB STAGE POWER	☐ GSE MEASURING (INS)	☐ ALDS
☒ IU POWER	☐ LCC DATA DISPLAY	☐ LCC TM STA. (MONITOR)
☐ LEM POWER	☐ CIF DATA DISPLAY	☐ LCC TM RECORDING
☐ SM POWER	☒ DDAS	☐ CIF TM STA. (MONITOR)
☐ CM POWER	☐ DDAS TAPE RECORDING	☐ CIF TM RECORDING
☐ BACK-UP BATTERIES	☐ SERVICE STRUCTURE MEAS.	☐ CIF COMPUTER
☐ TIMING	☒ RCA-110A COMPUTERS	☐ CIF DATA
☐ COUNTDOWN CLOCK	☐ ACE	☐ TM RECORDS
☐ ETR SEQUENCER	☐ L/V W-G ECS	☐ REAL-TIME CIF COMPUT.
☐ ETR COUNTDOWN CLOCK	☐ CM W-G ECS	☐ POST-TEST CIF COMPUT.
☐ ETR S.R.O.	☐ FACILITY ECS (GAS)	☐ KSC TRACKING
☐ ETR R.S.O.	☒ H.P. GAS	☐ RFI MONITORING
☐ ETR PAD SAFETY	☐ CCF	☐ RF READOUTS (ETR)
☐ KSC PAD SAFETY	☐ FACILITY TV (OTV)	☐ RF READOUTS (KSC)
☐ SECURITY POLICE	☒ FACILITY COMM. (OIS)	☐ WEATHER FORECAST
☐ FIRE FIGHTING	☐ FILM CAMERAS	☐ MCC-C
☐ MEDICAL	☐ SEARCH LIGHTS	☐ MCC-H
☐	☐	☐ FOOD SERVICE
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☐	☐	☐
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☐	☐	☐

OTHERS:

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

17. OTHER APPLICABLE REFERENCE DOCUMENTATION

KSC OPERATIONS
APOLLO/SATURN TEST CATALOG

1. TEST TITLE

ST-124M ACCELEROMETER MONITOR PROGRAM

2. KSC TEST NO.

V-23046-IU-502

3. STAGE, VEHICLE OR GSE

Saturn V

4. TEST OBJECTIVES

TO INITIATE A PROGRAM FOR CONTINUOUSLY DISPLAYING ACCELEROMETER OUTPUTS.

5. TEST DESCRIPTION/EQUIPMENT STATUS

THE PROGRAM IS INITIATED FROM THE DISPLAY CONSOLE KEYBOARD. ACCELEROMETER PULSE DETECTION, ACCUMULATION, AND ASSOCIATED CALCULATIONS ARE PERFORMED BY THE LVDC AND RESULTS OF THESE CALCULATIONS ARE TRANSMITTED TO THE SLCC FOR DISPLAY.

445

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

6. PREPARED BY	8. NASA-KSC APPROVAL	10. APPROVAL DATE
[illegible]	C M LaPorte	6/21/66
7. ORGANIZATION	9. ORGANIZATION	11. VEHICLE EFFECTIVITY
IBM	LVO-23	AS- 502

APOLLO/SATURN TEST CATALOG (Continuation Sheet)	PAGE 2 OF
1. TEST TITLE ST-124M ACCELEROMETER MONITOR PROGRAM	2. KSC TEST NO. V-23046-IU-502 11. VEHICLE EFFECTIVITY AS - 502

12. WHERE TEST PERFORMED	13. COMPUTER/ACE PROG. IDENT. (IF APPLICABLE)	14. EST. TEST TIME
VAB, PAD	GE02	

15. TEST CONFIGURATION

16. SUPPORT REQUIREMENTS CHECKLIST *(Check appropriate boxes and add any additional)*

☐ GROUND POWER	☐ LCC MEASURING (LVO)	☐ ETR/KSC RADAR
☐ S-IB OR S-IC STAGE PWR	☐ LCC MEASURING (INS)	☐ ETR COMMAND XMITTER
☐ S-II STAGE POWER	☐ GSE MEASURING (LVO)	☐ LOCAL COMMAND (C.L.)
☐ S-IVB STAGE POWER	☐ GSE MEASURING (INS)	☐ ALDS
☒ IU POWER	☐ LCC DATA DISPLAY	☐ LCC TM STA. (MONITOR)
☐ LEM POWER	☐ CIF DATA DISPLAY	☐ LCC TM RECORDING
☐ SM POWER	☒ DDAS	☐ CIF TM STA. (MONITOR)
☐ CM POWER	☐ DDAS TAPE RECORDING	☐ CIF TM RECORDING
☐ BACK-UP BATTERIES	☐ SERVICE STRUCTURE MEAS.	☐ CIF COMPUTER
☐ TIMING	☒ RCA-110A COMPUTERS	☐ CIF DATA
☐ COUNTDOWN CLOCK	☐ ACE	☐ TM RECORDS
☐ ETR SEQUENCER	☐ L/V W-G ECS	☐ REAL-TIME CIF COMPUT.
☐ ETR COUNTDOWN CLOCK	☐ CM W-G ECS	☐ POST-TEST CIF COMPUT.
☐ ETR S.R.O.	☐ FACILITY ECS (GAS)	☐ KSC TRACKING
☐ ETR R.S.O.	☒ H.P. GAS	☐ RFI MONITORING
☐ ETR PAD SAFETY	☐ CCF	☐ RF READOUTS (ETR)
☐ KSC PAD SAFETY	☐ FACILITY TV (OTV)	☐ RF READOUTS (KSC)
☐ SECURITY POLICE	☒ FACILITY COMM. (OIS)	☐ WEATHER FORECAST
☐ FIRE FIGHTING	☐ FILM CAMERAS	☐ MCC-C
☐ MEDICAL	☐ SEARCH LIGHTS	☐ MCC-H
☐	☒ NAVIGATION	☐ FOOD SERVICE
☐	☐	☐
☐	☐	☐
☐	☐	☐
☐	☐	☐

OTHERS:

446

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

17. OTHER APPLICABLE REFERENCE DOCUMENTATION

KSC OPERATIONS
APOLLO/SATURN TEST CATALOG

1. TEST TITLE
ST-124M STABILIZED PLATFORM SYSTEM MEASURING TEST

2. KSC TEST NO.
V-23047-IU-502

3. STAGE, VEHICLE OR GSE
Saturn V

4. TEST OBJECTIVES
TO FUNCTIONALLY CHECK SYSTEM MEASUREMENTS.

5. TEST DESCRIPTION/EQUIPMENT STATUS
POWER UP THE SYSTEM AND PROVIDE INPUTS FOR MEASURING TO FUNCTIONALLY CHECK THE STABILIZED PLATFORM SYSTEM'S MEASURING PROGRAM.

FUNCTIONAL TEST COMPLETED.

447

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

6. PREPARED BY	8. NASA-KSC APPROVAL	10. APPROVAL DATE
D L Elliott	C M LaPorta	6/21/66
7. ORGANIZATION	9. ORGANIZATION	11. VEHICLE EFFECTIVITY
IBM	LVO-23	AS-502

KSC FORM 23-191A (2/66)

APOLLO/SATURN TEST CATALOG (Continuation Sheet)	PAGE 2 OF

1. TEST TITLE	2. KSC TEST NO.
ST-124M STABILIZED PLATFORM SYSTEM MEASURING TEST	V-23047-IU-502
	11. VEHICLE EFFECTIVITY AS - 502

12. WHERE TEST PERFORMED	13. COMPUTER/ACE PROG. IDENT. (IF APPLICABLE)	14. EST. TEST TIME
VAB		4HRS

15. TEST CONFIGURATION

16. SUPPORT REQUIREMENTS CHECKLIST *(Check appropriate boxes and add any additional)*

☐ GROUND POWER	☐ LCC MEASURING (LVO)	☐ ETR/KSC RADAR
☐ S-IB OR S-IC STAGE PWR	☒ LCC MEASURING (INS)	☐ ETR COMMAND XMITTER
☐ S-II STAGE POWER	☐ GSE MEASURING (LVO)	☐ LOCAL COMMAND (C.L.)
☐ S-IVB STAGE POWER	☐ GSE MEASURING (INS)	☐ ALDS
☒ IU POWER	☐ LCC DATA DISPLAY	☐ LCC TM STA. (MONITOR)
☐ LEM POWER	☐ CIF DATA DISPLAY	☐ LCC TM RECORDING
☐ SM POWER	☐ DDAS	☐ CIF TM STA. (MONITOR)
☐ CM POWER	☐ DDAS TAPE RECORDING	☐ CIF TM RECORDING
☐ BACK-UP BATTERIES	☐ SERVICE STRUCTURE MEAS.	☐ CIF COMPUTER
☒ TIMING	☐ RCA-110A COMPUTERS	☐ CIF DATA
☐ COUNTDOWN CLOCK	☐ ACE	☐ TM RECORDS
☐ ETR SEQUENCER	☐ L/V W-G ECS	☐ REAL-TIME CIF COMPUT.
☐ ETR COUNTDOWN CLOCK	☐ CM W-G ECS	☐ POST-TEST CIF COMPUT.
☐ ETR S.R.O.	☐ FACILITY ECS (GAS)	☐ KSC TRACKING
☐ ETR R.S.O.	☒ H.P. GAS	☐ RFI MONITORING
☐ ETR PAD SAFETY	☐ CCF	☐ RF READOUTS (ETR)
☐ KSC PAD SAFETY	☐ FACILITY TV (OTV)	☐ RF READOUTS (KSC)
☐ SECURITY POLICE	☒ FACILITY COMM. (OIS)	☐ WEATHER FORECAST
☐ FIRE FIGHTING	☐ FILM CAMERAS	☐ MCC-C
☐ MEDICAL	☐ SEARCH LIGHTS	☐ MCC-H
☐	☐ IU. ELEC.	☐ FOOD SERVICE
☐	☐ I.U. MECH	☐
☐	☐	☐
☐	☐	☐
☐	☐	☐

OTHERS:

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

17. OTHER APPLICABLE REFERENCE DOCUMENTATION

KSC OPERATIONS
APOLLO/SATURN TEST CATALOG

1. TEST TITLE

FUNCTIONAL TEST OF THE ST-124M STABILIZED PLATFORM SYSTEM IN THE VEHICLE

2. KSC TEST NO.

V-23048-IU-502

3. STAGE, VEHICLE OR GSE

Saturn V

4. TEST OBJECTIVES

TO VERIFY SATISFACTORY FUNCTIONAL PERFORMANCE IN VEHICLE OF STABILIZED PLATFORM AND ASSOCIATED ESE.

5. TEST DESCRIPTION/EQUIPMENT STATUS

POWER UP THE SYSTEM AND OBSERVE THE INDICATORS ON ALL MONITORING DEVICES FOR NORMAL INDICATION. PERFORM ALL SWITCH FUNCTIONS AND VERIFY PROPER REACTION.

CABLE CHECK COMPLETED.

449

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

6. PREPARED BY	8. NASA-KSC APPROVAL	10. APPROVAL DATE
[illegible]	CM LePorto	6/21/66
7. ORGANIZATION	9. ORGANIZATION	11. VEHICLE EFFECTIVITY
IBM	LVO-23	AS- 502

APOLLO/SATURN TEST CATALOG (Continuation Sheet)	PAGE 2 OF

1. TEST TITLE	2. KSC TEST NO.
FUNCTIONAL TEST OF THE ST-124M STABILIZED PLATFORM SYSTEM IN THE VEHICLE	IU-23048-IU-502
	11. VEHICLE EFFECTIVITY AS- 502

12. WHERE TEST PERFORMED	13. COMPUTER/ACE PROG. IDENT. (IF APPLICABLE)	14. EST. TEST TIME
V4B		4 HRS

15. TEST CONFIGURATION

16. SUPPORT REQUIREMENTS CHECKLIST *(Check appropriate boxes and add any additional)*

☐ GROUND POWER	☐ LCC MEASURING (LVO)	☐ ETR/KSC RADAR
☐ S-IB OR S-IC STAGE PWR	☐ LCC MEASURING (INS)	☐ ETR COMMAND XMITTER
☐ S-II STAGE POWER	☐ GSE MEASURING (LVO)	☐ LOCAL COMMAND (C.L.)
☐ S-IVB STAGE POWER	☐ GSE MEASURING (INS)	☐ ALDS
☒ IU POWER	☐ LCC DATA DISPLAY	☐ LCC TM STA. (MONITOR)
☐ LEM POWER	☐ CIF DATA DISPLAY	☐ LCC TM RECORDING
☐ SM POWER	☒ DDAS	☐ CIF TM STA. (MONITOR)
☐ CM POWER	☐ DDAS TAPE RECORDING	☐ CIF TM RECORDING
☐ BACK-UP BATTERIES	☐ SERVICE STRUCTURE MEAS.	☐ CIF COMPUTER
☒ TIMING	☒ RCA-110A COMPUTERS	☐ CIF DATA
☐ COUNTDOWN CLOCK	☐ ACE	☐ TM RECORDS
☐ ETR SEQUENCER	☐ L/V W-G ECS	☐ REAL-TIME CIF COMPUT.
☐ ETR COUNTDOWN CLOCK	☐ CM W-G ECS	☐ POST-TEST CIF COMPUT.
☐ ETR S.R.O.	☐ FACILITY ECS (GAS)	☐ KSC TRACKING
☐ ETR R.S.O.	☒ H.P. GAS	☐ RFI MONITORING
☐ ETR PAD SAFETY	☐ CCF	☐ RF READOUTS (ETR)
☐ KSC PAD SAFETY	☐ FACILITY TV (OTV)	☐ RF READOUTS (KSC)
☐ SECURITY POLICE	☒ FACILITY COMM. (OIS)	☐ WEATHER FORECAST
☐ FIRE FIGHTING	☐ FILM CAMERAS	☐ MCC-C
☐ MEDICAL	☐ SEARCH LIGHTS	☐ MCC-H
☐	☐ I.U. ELEC.	☐ FOOD SERVICE
☐	☐ I.U. MECH.	☐
☐	☐	☐
☐	☐	☐
☐	☐	☐

OTHERS:

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

17. OTHER APPLICABLE REFERENCE DOCUMENTATION

KSC OPERATIONS
APOLLO/SATURN TEST CATALOG

1. TEST TITLE

ST-124M STABILIZED PLATFORM SYSTEM COMPLEX CABLE CHECKOUT

2. KSC TEST NO.

V-23049-IU-502

3. STAGE, VEHICLE OR GSE

Saturn V

4. TEST OBJECTIVES

TO VERIFY WITH NON-FLIGHT ITEMS, CORRECT POWER AND CONTROL CIRCUITRY.

5. TEST DESCRIPTION/EQUIPMENT STATUS

OPERATE SWITCHES ON THE SYSTEM CONTROL PANELS AND NOTE CORRESPONDING LIGHT REACTIONS ON TEST BOXES CONNECTED INTO THE SYSTEM POWER AND CONTROL CABLES.

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

6. PREPARED BY	8. NASA-KSC APPROVAL	10. APPROVAL DATE
[illegible]	C M LePorte	6/21/66
7. ORGANIZATION	9. ORGANIZATION	11. VEHICLE EFFECTIVITY
IBM	LVO-23	AS- 502

APOLLO/SATURN TEST CATALOG (Continuation Sheet)	PAGE 2 OF

1. TEST TITLE	2. KSC TEST NO.
ST-124M STABILIZED PLATFORM SYSTEM COMPLEX CABLE CHECKOUT	V-23049-IU-502
	11. VEHICLE EFFECTIVITY AS- 502

12. WHERE TEST PERFORMED	13. COMPUTER/ACE PROG. IDENT. (IF APPLICABLE)	14. EST. TEST TIME
VAB		4HRS

15. TEST CONFIGURATION

16. SUPPORT REQUIREMENTS CHECKLIST *(Check appropriate boxes and add any additional)*

☐ GROUND POWER	☐ LCC MEASURING (LVO)	☐ ETR/KSC RADAR
☐ S-IB OR S-IC STAGE PWR	☐ LCC MEASURING (INS)	☐ ETR COMMAND XMITTER
☐ S-II STAGE POWER	☐ GSE MEASURING (LVO)	☐ LOCAL COMMAND (C.L.)
☐ S-IVB STAGE POWER	☐ GSE MEASURING (INS)	☐ ALDS
☒ IU POWER	☐ LCC DATA DISPLAY	☐ LCC TM STA. (MONITOR)
☐ LEM POWER	☐ CIF DATA DISPLAY	☐ LCC TM RECORDING
☐ SM POWER	☒ DDAS	☐ CIF TM STA. (MONITOR)
☐ CM POWER	☐ DDAS TAPE RECORDING	☐ CIF TM RECORDING
☐ BACK-UP BATTERIES	☐ SERVICE STRUCTURE MEAS.	☐ CIF COMPUTER
☐ TIMING	☒ RCA-110A COMPUTERS	☐ CIF DATA
☐ COUNTDOWN CLOCK	☐ ACE	☐ TM RECORDS
☐ ETR SEQUENCER	☐ L/V W-G ECS	☐ REAL-TIME CIF COMPUT.
☐ ETR COUNTDOWN CLOCK	☐ CM W-G ECS	☐ POST-TEST CIF COMPUT.
☐ ETR S.R.O.	☐ FACILITY ECS (GAS)	☐ KSC TRACKING
☐ ETR R.S.O.	☐ H.P. GAS	☐ RFI MONITORING
☐ ETR PAD SAFETY	☐ CCF	☐ RF READOUTS (ETR)
☐ KSC PAD SAFETY	☐ FACILITY TV (OTV)	☐ RF READOUTS (KSC)
☐ SECURITY POLICE	☐ FACILITY COMM. (OIS)	☐ WEATHER FORECAST
☐ FIRE FIGHTING	☐ FILM CAMERAS	☐ MCC-C
☐ MEDICAL	☐ SEARCH LIGHTS	☐ MCC-H
☐	☒ J.U. ELEC	☐ FOOD SERVICE
☐	☒ INTERGRATIONS	☐
☐	☐	☐
☐	☐	☐
☐	☐	☐

OTHERS:

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

17. OTHER APPLICABLE REFERENCE DOCUMENTATION

KSC OPERATIONS
APOLLO/SATURN TEST CATALOG

1. TEST TITLE

ST-124M STABILIZED PLATFORM SYSTEM EQUIPMENT INSTALLATION IN THE VEHICLE

2. KSC TEST NO.

V-23050-IU-502

3. STAGE, VEHICLE OR GSE

Saturn V

4. TEST OBJECTIVES

TO PREPARE THE SYSTEM FOR OPERATION IN THE VEHICLE.

5. TEST DESCRIPTION/EQUIPMENT STATUS

INSTALL FLIGHT COMPONENTS IN THE IU AND CONNECT PNEUMATIC LINES, COOLING LINES, AND ALL CABLES.

ALL LABORATORY TEST PROCEDURES COMPLETED.

(193)

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

6. PREPARED BY	8. NASA-KSC APPROVAL	10. APPROVAL DATE
[illegible]	C M LaPorte	6/21/66
7. ORGANIZATION	9. ORGANIZATION	11. VEHICLE EFFECTIVITY
IBM	LVO-23	AS- 502

KSC FORM 23-191A (2/66)

APOLLO/SATURN TEST CATALOG (Continuation Sheet)	PAGE 2 OF

1. TEST TITLE	2. KSC TEST NO.
ST-124M STABILIZED PLATFORM SYSTEM EQUIPMENT INSTALLATION IN THE VEHICLE	V-23050-IU-502
	11. VEHICLE EFFECTIVITY AS 502

12. WHERE TEST PERFORMED	13. COMPUTER/ACE PROG. IDENT. (IF APPLICABLE)	14. EST. TEST TIME
VAB		4HRS

15. TEST CONFIGURATION

16. SUPPORT REQUIREMENTS CHECKLIST *(Check appropriate boxes and add any additional)*

☐ GROUND POWER	☐ LCC MEASURING (LVO)	☐ ETR/KSC RADAR
☐ S-IB OR S-IC STAGE PWR	☐ LCC MEASURING (INS)	☐ ETR COMMAND XMITTER
☐ S-II STAGE POWER	☐ GSE MEASURING (LVO)	☐ LOCAL COMMAND (C.L.)
☐ S-IVB STAGE POWER	☐ GSE MEASURING (INS)	☐ ALDS
☐ IU POWER	☐ LCC DATA DISPLAY	☐ LCC TM STA. (MONITOR)
☐ LEM POWER	☐ CIF DATA DISPLAY	☐ LCC TM RECORDING
☐ SM POWER	☐ DDAS	☐ CIF TM STA. (MONITOR)
☐ CM POWER	☐ DDAS TAPE RECORDING	☐ CIF TM RECORDING
☐ BACK-UP BATTERIES	☐ SERVICE STRUCTURE MEAS.	☐ CIF COMPUTER
☐ TIMING	☐ RCA-110A COMPUTERS	☐ CIF DATA
☐ COUNTDOWN CLOCK	☐ ACE	☐ TM RECORDS
☐ ETR SEQUENCER	☐ L/V W-G ECS	☐ REAL-TIME CIF COMPUT.
☐ ETR COUNTDOWN CLOCK	☐ CM W-G ECS	☐ POST-TEST CIF COMPUT.
☐ ETR S.R.O.	☐ FACILITY ECS (GAS)	☐ KSC TRACKING
☐ ETR R.S.O.	☐ H.P. GAS	☐ RFI MONITORING
☐ ETR PAD SAFETY	☐ CCF	☐ RF READOUTS (ETR)
☐ KSC PAD SAFETY	☐ FACILITY TV (OTV)	☐ RF READOUTS (KSC)
☐ SECURITY POLICE	☐ FACILITY COMM. (OIS)	☐ WEATHER FORECAST
☐ FIRE FIGHTING	☐ FILM CAMERAS	☐ MCC-C
☐ MEDICAL	☐ SEARCH LIGHTS	☐ MCC-H
☐	☒ I.U. ELEC.	☐ FOOD SERVICE
☐	☒ I.U. MECH	☐
☐	☐	☐
☐	☐	☐
☐	☐	☐

OTHERS:

(CONTINUE ON KSC FORM 23-192 IF REQUIRED)

17. OTHER APPLICABLE REFERENCE DOCUMENTATION