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REV. "A" - 10/9/64

LAUNCH REQUIREMENTS - VEHICLE 1179/J13

Corrected Appendix I Pages 1, 2, 4 of 4.

Attached is the Launch Requirements and limitations for Vehicle 1179/J13.

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LAUNCH REQUIREMENTS - VEHICLE 1179/J13

1.0 SCOPE

1.1 General

The following requirements govern the condition under which the vehicle will be launched with the A/P Payload System. Any deviation from the prescribed limits shall be cause for hold. Any status changes must be reported to System Integration immediately after occurrence for evaluation. All discrepancies and deviations must be corrected prior to resumption of vehicle launch count-down.

2.0 PAYLOAD INTERNAL TEMPERATURE

65 ± 10° F from mating to T-4 hours.

65 ± 5° F from T-4 hours thru launch.

Temperature on Payload System shall be monitored and recorded every one-half hour from mating to launch.

3.0 PAYLOAD HUMIDITY

50% or less at all times.

4.0 L_2 PURGE

The L_2 must be connected and flowing when the system is on the launch pad. Maximum off time is one-half hour per day.

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LAUNCH REQUIREMENTS - VEHICLE 1179/J13 (Cont'd)

5.0 SRV TRANSMISSION FREQUENCY

Recovery T/M	228.2 ± 0.1 MC
Recovery Beacon	235.0 ± 0.1 MC

6.0 POWER

Power must be applied to the payload interface whenever the payload is raised or lowered.

7.0 THERMAL BLANKET

The thermal blanket must remain on the payload from mating until launch.

8.0 PRIMARY TLM READOUTS [redacted]

Payload checkout (must be verified thru vehicle TLM).

8.1 Lens Rotation, Horizon idler, and center of format Instrument No. 1 channel 09 Link I. No backup channel is available.

8.2 Lens Rotation, Horizon idler, and center of format Instrument No. 2 channel 10 Link I. No backup channel is available.

8.3 Ring A Commutator (.4 x 60) channel 11 Link and points listed below. The primary commutated points must be verified during payload confidence after mating and payload checkout task.

[redacted]

[redacted]

LAUNCH REQUIREMENTS - VEHICLE 1179/313 (Cont'd)

	VERIFICATION					
MONITOR	TELEMETRY			TELETYPE		
Function	CH-LM-1T	Volts	Tol.	CH-LM-PT	Volts	Tol.
Inst. 1 Cycle Count 1	11-1-22	.55 step	± .15	11-1-25	4.05 or greater	4.05 or greater
Inst. 1 Cycle Count 10	11-1-23	.55 step	± .15	11-1-25	"	"
Inst. 1 Cycle Count 100	11-1-24	.55 step	± .15	11-1-25	"	"
Film Footage Pot Inst. 1	11-1-25	4.05 or greater	4.05 or greater	8-2-56	"	"
Inst. 2 Cycle Count 1	11-1-27	.55 step	± .15	11-1-31	.9 or less	.9 or less
Inst. 2 Cycle Count 10	11-1-28	.55 step	± .15	11-1-31	"	"
Inst. 2 Cycle Count 100	11-1-29	.55 step	± .15	11-1-31	"	"
Orbital Function Generator	11-1-07	0.45	± 0.05	--	--	--
Calibrate Plus	11-1-30	5	--	11-1-14	5	--
Inst. 2 Film Footage Pot	11-1-31	.9 or less	.9 or less	8-2-47	.9 or less	.9 or less
Inst. 1 Door Eject	11-1-3[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Inst. 2 Door Eject	11-1-45	1.3	± .2	[illegible]	[illegible]	[illegible]
Film Door Closure	11-1-47	4.7	± .2	"	--	--
Fairing Separation	11-1-49	1.3	± .2	"	--	--
Continuity Loop SRV-1	11-1-51	5.38	± .2	"	--	--
Separation Monitor-SRV's	11-1-52	0.5	+ .1 - .1	16-1-25	0.5	+ .1 - .1
Recovery Battery SRV-1	11-1-53	0	± .2	None	--	--
Continuity Loop SRV-2	11-1-54	5.38	± .2	"	--	--
Recovery Battery SRV-2	11-1-55	0	± .2	"	--	--
Calibrate Zero	11-1-57	0	--	11-1-04	0	--
N_2 Bottle Pressure	11-1-37	3.0 or greater	± .1	13-1-11	3.0 or greater	± .1
Calibrate Zero	11-1-57	0	--	11-1-17	0	--
Sync.	11-1-58	5.5	± .2	11-1-59	5.5	± .2
Sync.	11-1-58	5.5	± .2	11-1-60	5.5	± .2

All Command Selector points as listed per launch requirements list in Appendix - I.

9.0 HOMING OF CAMERA STOVES

9.1 Both camera stoves must be properly homed prior to terminal count.

10.0 LAUNCH REQUIREMENTS COMMAND SYSTEM

10.1 All stepping switches must be positioned in accordance with the Command Settings List prior to terminal count. (See Appendix - I)

11.0 FILM CONSUMPTION PRIOR TO LAUNCH

11.1 Minimum film consumption prior to launch shall be 100 cycles on both Instruments.

11.2 Should the Payload System stay in armed condition for an extended period, the System shall be operated 10 cycles per applicable procedure every other day.

12.0 RESPONSIBILITY

12.1 It shall be the responsibility of the senior A/P Payload Engineer to ensure the implementation of the restrictions and requirements listed herein. In addition, he is charged with the responsibility of supplying the following System information immediately prior to launch to Flight Operations and Computer Services by telephone.

12.1.1 Final System Weight, in Lbs._____

12.1.2 Cycle counter film footage pot and leader length readings for both instruments, in accordance with J1210 Para. 18, Item 5.4.1.

	MASTER	SLAVE
a. Cycle Counter	_____	_____
b. Film Footage Pot in Volts	_____	_____
c. Leader Lengths in Feet	_____	_____

12.1.3 Cycle counter, film footage pot and leader length readings for both instruments, in accordance with J1210, Para. 18, Item 5.4.10.

	MASTER	SLAVE
a. Total length of leader from "A" bucket hub to flight payload splice.	_____Ft.	_____Ft.
b. Cycle Counter Readings	_____Cts.	_____Cts.
c. Take-up Pot Voltage	_____	_____

12.1.4 Cycle counter and film footage pot readings for both instruments, at launch, in units.

	Cycle Counter	Film Footage Pot
a. Master	_____	_____
b. Slave	_____	_____

12.1.5 Clock error, static run, in microseconds:_____

12.1.6 Length of off-spool of both instruments, including control strips, in feet:

a. Master _____Ft.
b. Slave _____Ft.

12.1.7 Length of off-spool of both S/I Instruments, in feet:

a. S/I A Stellar _____Ft.
Index _____Ft.
b. S/I B Stellar _____Ft.
Index _____Ft.

12.1.8 DOOR MONITOR CALIBRATIONS:

CONDITION	T/M VOLTAGE INST. NO. 1	T/M VOLTAGE INST. NO. 2	FILM DOOR
DOOR ON (CLOSED)	_____	_____	_____
DOOR OFF (OPEN)	_____	_____	_____

12.1.9 SEPARATION MONITOR CALIBRATIONS:

CONDITION	SRV-A*	SRV A (ONLY)	T/M VOLTAGE SRV [illegible]	FAIRING
MATED	_____	_____	_____	_____
SEPARATED	_____	_____	_____	_____

* = AFTER FIRST RECOVERY

[redacted]:

CONDITION			T/M VOLTAGE		
CONTINUITY LOOP	S/I SEAL	MAIN STAGE [redacted]			
CLOSED	OPEN	OPEN	1.84 ± 5%	_____	_____
CLOSED	OPEN	CLOSED	4.30 ± 5%	_____	_____
CLOSED	CLOSED	CLOSED	5.38 ± 5%	_____	_____
OPEN	CLOSED	CLOSED	4.57 ± 5%	_____	_____
OPEN	CLOSED	OPEN	2.16 ± 5%	_____	_____
OPEN	OPEN	OPEN	.75 ± 5%	_____	_____
OPEN	OPEN	CLOSED	3.42 ± 5%	_____	_____
CLOSED	CLOSED	OPEN	3.12 ± 5%	_____	_____

[redacted]

LAUNCH REQUIREMENTS: The following Command Settings are specified for the 1179/J-13 payload. Date of issue 10/7/64 (R-20) _____ (R-7)

COMMAND SELECTOR			VERIFICATION					
			PRIMARY			SECONDARY		
SEC.	FUNCTION	POSITION	CH-LK-Pt	Volts	Tol ±	CH-LK-Pt	Volts	Tol ±
6	V/H Ramp Level	6	11-1-2	2.0	.10	8-2-24	2.0	.10
			11-1-3	2.0	.10	8-2-26	2.0	.10
8	V/H Ramp Amplitude	5	11-1-5	2.0	.10	8-2-28	2.0	.10
			11-1-6	1.0	.05	8-2-30	1.0	.05
9	Program	4	11-1-8	1.0	.10	8-2-32	1.0	.10
			11-1-9	4.0	.20	8-2-34	4.0	.20
10	V/H Ramp Delay	6	11-1-12	2.0	.10	8-2-44	2.0	.10
			11-1-13	2.0	.10	8-2-45	2.0	.10
11	Instrument Mode	1	11-1-15	1.0	.05	8-2-48	1.0	.05
			11-1-16	2.0	.05	8-2-50	2.0	.05
12	Intermix Position	11	11-1-18	1.0	.20	8-2-52	1.0	.20
			11-1-19	4.0	.20	8-2-53	4.0	.20
13	Intermix Mode	4	11-1-20	4.0	.20	8-2-55	4.0	.20
			-	-	-	-	-	-
14	Orbital Function Generator	1	11-1-11	1.0	.05	None		
			-	-	-	-	-	-

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LAUNCH REQUIREMENTS: The following settings/requirements are specified for the 1179/J-13 payload. Date of issue 10/7/64 (R-20) _____ (R-7).

PANORAMIC LENS SETTINGS:

	Instrument No. 1 (Master)	Instrument No. 2 (Slave)
Slit Dimensions	0.200 x 2.278	0.200 x 2.278
Filter Type	Wratten 21	Wratten 21

NOTE: SLIT LENGTH AND WIDTH MUST BE MEASURED AT TIME OF INSTALLATION

Measured by _____

Verified by _____

HORIZON OPTICS SETTINGS:

	Instrument No. 1 (Master)	Instrument No. 2 (Slave)
Supply Horizons:		
Aperture	F 6.8	F 8.0
Speed	1/100 Sec.	1/100 Sec.
Filter	Wratten 25	Wratten 25
Take-up Horizons:		
Aperture	F 8.0	F 6.8
Speed	1/100 Sec.	1/100 Sec.
Filter	Wratten 25	Wratten 25

STELLAR INDEX OPTICS SETTINGS:

	Stellar Index A	Stellar Index B
Stellar Lens:		
Aperture	F 1.8	F 1.8
Speed	2.0 Sec.	2.0 Sec.
Filter	None	None

[redacted]

[redacted]

[redacted]

TRACKING REQUIREMENTS: CONTINUED Date of Issue 10/7/64 (R-20) _____ (R-7)

STELLAR INDEX OPTICS SETTINGS:

	Stellar Index A	Stellar Index B
Index Lens:		
Aperture	F 4.5	F 4.5
Speed	1/500 Sec.	1/500 Sec.
Filter	Wratten 21	Wratten 21

[redacted]

Photographic Instruments:

	Instrument No. 1 (Master)	Instrument No. 2 (Slave)
Primary:		
Type	7J - 40 - 16000	7J - 40 - 16000
Emul. Date	68 - 7 - 7 - 4	68 - 6 - 7 - 4
Wt. & Spool No.	89.0 - 79.7 - 48 - 97B	89.1 - 79.7 - 58 - 31
Box No.	6	6
Secondary:		
Type	7J - 40 - 16000	7J - 40 - 16000
Emul. Date	68 - 6 - 7 - 4	68 - 6 - 7 - 4
Wt. & Spool No.	88.3 - 78.9 - 48 - 43	88.2 - 79.0-48 - 96
Box No.	8	8

[redacted] SPOOLING REQUIREMENTS:

	Master		Slave	
Original Length - Ft.	16000		16000	
Length to Offspool - Ft.	0	± 10	0	± 10
Length to Load - Ft.	16000		16000	

[redacted]

[redacted]

-GEMINI SYSTEM-

[redacted]

APPENDIX - I
PAYLOAD LAUNCH
REQUIREMENTS ENTRY
SHEET 4 OF 4

LAUNCH REQUIREMENTS: CONTINUED Date of Issue 10/7/64 (R-20) _____ (R-7)

ITEM NOMENCLATURE: CONTINUED

Stellar Index:

	Stellar Index A		Stellar Index B	
	Stellar Index		Stellar Index	
Primary:				
Type	3J-34-75	7J-33-135	3J-34-75	7J-33-135
Recd. Date	44-30-7-4	31-4-7-4	44-30-7-4	31-4-7-4
Secondary:				
Type	3J-34-75	7J-33-135	3J-34-75	7J-33-135
Recd. Date	44-30-7-4	31-4-7-4	44-30-7-4	31-4-7-4

STELLAR INDEX FILM OFFSPOOLING REQUIREMENTS

	Stellar Index A		Stellar Index B	
	Stellar Index		Stellar Index	
Original Length - Ft.	75	135	75	135
Length to Offspool - Ft.	30 +0	45 +0	30 +0	45 +0
Length to Load - Ft.	45	90	45	90

PANORAMIC STELLAR INDEX TO PANORAMIC 1 to 7

FILM MAGAZINE TYPE:

Stellar A	Stellar B
[illegible]	[illegible]

LAUNCH WINDOW: 2200 Z - 2300 Z

[redacted]

Flight Operations [redacted] Date 10-7-64

CSE - System Integration [redacted] Date 10-7-64

System Engineering [redacted] Date 10-7

Special Staff [redacted] Date 10-7

Resident Office [redacted] Date 10-7-1964

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