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LAUNCH REQUIREMENTS-VEHICLE 1605

Attached is the Launch Requirements and limitations for Vehicle J-12/1605.



Chief System Engineer
Program

cc:



Declassified and Released by the N R C

In Accordance with E. O. 12958

on NOV 26 1997

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LAUNCH REQUIREMENTS - VEHICLE J-12/1605

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

$65 \pm 10^{\circ}$ F from mating to T-4 hours.

$65 \pm 5^{\circ}$ 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 RELATIVE HUMIDITY

50% or less at all times.

4.0 N₂ PRESSURE

The N₂ must be connected and flowing when the system is on the launch pad. Maximum off time is one-half hour per day.

LAUNCH REQUIREMENTS - VEHICLE J-12/1605 (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

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 task and task 16.

LAUNCH REQUIREMENTS - VEHICLE J-12/1605 (Cont'd)

MONITOR	VERIFICATION						
	Function	PRIMARY			ALTERNATE		
		CH-LK-PT	Volts	Tol.	CH-LK-PT	Volts	Tol.
Inst. 1 Cycle Count 1	11-1-22	.55 step	± .15	11-1-25	.9 or less	.9 or less	
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	.9 or less	.9 or less	8-2-56	"	"	
Inst. 2 Cycle Count 1	11-1-27	.55 step	± .15	11-1-31	"	"	
Inst. 2 Cycle Count 10	11-1-23	.55 step	± .15	11-1-31	"	"	
Inst. 2 Cycle Count 100	11-1-29	.55 step	± .15	11-1-31	"	"	
Calibrate Plus	11-1-30	5	--	11-1-07	5	--	
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	11-1-35	1.3	± .2	None	--	--	
Inst. 2 Door Eject	11-1-45	1.3	± .2	"	--	--	
Film Door Closure	11-1-47	4.7	± .2	"	--	--	
Fairing Separation	11-1-49	1.3	± .2	"	--	--	
Continuity Loom 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	--	
Calibrate Zero	11-1-57	0	--	11-1-11	0	--	
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.

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LAUNCH REQUIREMENTS - VEHICLE J-12/1605 (Cont'd)

9.0 HOMING OF CAMERA STOVES

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

10.0 LAUNCH REQUIREMENTS COMMAND SETTINGS

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 a loaded 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.

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LAUNCH REQUIREMENTS - VEHICLE J-12/1605 (Continued)

12.1.1 Final System Weight, in lbs. _____

12.1.2 Cycle counter and film footage pct readings for both instruments, at the final splice in units and % of total capacity.

Cycle Count Film Footage Pct

a. Master _____

b. Slave _____

12.1.3 Cycle counter and film footage pct readings for both instruments, at launch, in units.

Cycle Count Film Footage Pct

a. Master _____

b. Slave _____

12.1.4 Clock error, static run, in microseconds: _____

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

a. Master _____

b. Slave _____

12.1.6 Length of leader on take-up units

a. Master _____

b. Slave _____

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

a. S/I A Stellar _____

Index _____

b. S/I B Stellar _____

Index _____

LAUNCH REQUIREMENTS: The following Command Settings are specified for the
 1605/J-12 payload. Date of issue (R-20) 7/20/64 (R-7)

COMMAND SELECTOR			VERIFICATION					
			PRIMARY			SECONDARY		
NO.	FUNCTION	POSITION	CH-LK-Pt	Volts	Tol ±	CH-LK-Pt	Volts	Tol ±
6	V/H Ramp Level	10	11-1-02	4.0	0.20	8-2-24	4.0	0.20
			11-1-03	2.0	0.10	8-2-26	2.0	0.10
8	V/H Ramp Amplitude	3	11-1-05	1.0	0.05	8-2-28	1.0	0.05
			11-1-06	3.0	0.15	8-2-30	3.0	0.15
9	Program	1/2	11-1-08	1.0	0.05	8-2-32	1.0	0.05
			11-1-09	1.0	0.05	8-2-34	1.0	0.05
10	V/H Ramp Delay	6	11-1-12	2.0	0.10	8-2-44	2.0	0.10
			11-1-13	2.0	0.10	8-2-45	2.0	0.10
11	Instrument Mode	1	11-1-15	1.0	0.05	8-2-48	1.0	0.05
			11-1-16	1.0	0.05	8-2-50	1.0	0.05
12	Intermix Position	11	11-1-18	4.0	0.20	8-2-52	4.0	0.20
			11-1-19	4.0	0.20	8-2-53	4.0	0.20
15	Intermix Mode	4 CLM	11-1-20	4.0	0.20	8-2-55	4.0	0.20
			-	-	-	-	-	-
14	Orbital Function Generator	1	11-1-7	0.45	0.05	-	-	-
			11-1-11	1.0	0.05	-	-	-

NOTE: Command settings subject to change at any time prior to flight.
 Personnel concerned should verify final settings on day of flight.

LAUNCH REQUIREMENTS: The following settings/requirements are specified for the
1605/J-12 payload. Date of issue (R-20) 7/20/64 (R-1).

PANORAMIC LENS SETTINGS:

	<u>Instrument No. 1 (Master)</u>	<u>Instrument No. 2 (Slave)</u>
Slit Dimensions **	<u>_____ x 2.278</u>	<u>_____ x 2.278</u>
Filter Type	<u>Wratten 21</u>	<u>Wratten 21</u>

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

** Slit Width will be determined by
Saturday - 25 July Measured by _____
Verified by _____

HORIZON OPTICS SETTINGS:

	<u>Instrument, No. 1 (Master)</u>	<u>Instrument No. 2 (Slave)</u>
Supply Horizons:		
Aperture	<u>F 6.8</u>	<u>F 8.0</u>
Speed	<u>1/100 Sec.</u>	<u>1/100 Sec.</u>
Filter	<u>Wratten 25</u>	<u>Wratten 25</u>

Take-up Horizons:

Aperture	<u>F 8.0</u>	<u>F 6.8</u>
Speed	<u>1/100 Sec.</u>	<u>1/100 Sec.</u>
Filter	<u>Wratten 25</u>	<u>Wratten 25</u>

STELLAR INDEX OPTICS SETTINGS:

	<u>Stellar Index A</u>	<u>Stellar Index B</u>
Stellar Lens:		
Aperture	<u>F 1.8</u>	<u>F 1.8</u>
Speed	<u>2.0 Sec.</u>	<u>2.0 Sec.</u>
Filter	<u>None</u>	<u>None</u>

LAUNCH REQUIREMENTS: CONTINUED
STELLAR INDEX OPTICS SETTINGS:

Date of Issue (R-20) 7/20/64 (R-7)

	<u>Stellar Index A</u>	<u>Stellar Index</u>
Index Lens:		
Aperture	<u>F 4.5</u>	<u>F 4.5</u>
Speed	<u>1/500</u>	<u>1/500</u>
Filter	<u>Wratten 21</u>	<u>Wratten 21</u>

FILM NOMENCLATURE:

Panoramic Instruments:

Instrument No. 1 (Master) Instrument No. 2 (Slave)

Primary:

Type -	<u>7J-40-16000</u>	<u>7J-40-16000</u>
Emul. Date	<u>59-2-4-3-5-4</u>	<u>59-4-5-4</u>
Wt. & Spool No.	<u>88.7-79.2-48-75</u>	<u>88.7-79.4-48-34</u>
Fox No.	<u>49</u>	<u>49</u>

Secondary:

Type	<u>7J-40-16000</u>	<u>7J-40-16000</u>
Emul. Date	<u>62 - 8 - 6 - 4</u>	<u>62 - 8 - 6 - 4</u>
Wt. & Spool No.	<u>88.7 - 79.4 - 68 - 80T</u>	<u>89.2 - 79.9 - 58 - 67B</u>
Fox No.	<u>29</u>	<u>29</u>

PANORAMIC OFFSPOOLING REQUIREMENTS:

	<u>Master</u>	<u>Slave</u>
Original Length - Ft.	<u>16000</u>	<u>16000</u>
Length to Offspool - Ft.	<u>200</u> + 10	<u>200</u> + 10
Length to Load - Ft.	<u>15800</u>	<u>15800</u>

LAUNCH REQUIREMENTS
- CAMERA SYSTEM -

APPENDIX - I
PAYLOAD LAUNCH
REQUIREMENTS LETTER
SHEET 4 OF 4

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

FILM NOMENCLATURE: CONTINUED

Stellar Index:

	Stellar Index A		Stellar Index B	
	Stellar	Index	Stellar	Index
Primary:				
Type	<u>3I-34-75</u>	<u>7I-33-135</u>	<u>3I-34-75</u>	<u>7I-33-135</u>
Emul. Date	<u>7-3-64</u>	<u>28-1-3-4</u>	<u>7-3-64</u>	<u>28-1-3-4</u>
Secondary:				
Type	<u>35-34-75</u>	<u>7I-33-135</u>	<u>3I-34-75</u>	<u>7I-33-135</u>
Emul. Date	<u>7-3-64</u>	<u>28-4-5-4</u>	<u>7-3-64</u>	<u>28-4-5-4</u>

STELLAR INDEX FILM OFFSPOOLING REQUIREMENTS

	Stellar Index A		Stellar Index B	
	Stellar	Index	Stellar	Index
Original Length - Ft.	<u>75</u>	<u>135</u>	<u>75</u>	<u>135</u>
Length to Offspool - Ft.	<u>30.0</u> ⁺¹ ₋₀	<u>45.0</u> ⁺¹ ₋₀	<u>31.0</u> ⁺¹ ₋₀	<u>47.0</u> ⁺¹ ₋₀
Length to Load - Ft.	<u>45.0</u>	<u>90.0</u>	<u>44.0</u>	<u>88.0</u>

CYCLE RATIO STELLAR INDEX TO PANORAMIC 1 to 7

STELLAR BAFFLE TYPE:

Stellar A	Stellar B
<u>11.500</u>	<u>11.500</u>
_____	_____
_____	_____

LAUNCH WINDOW:

2300 - 2400

cc:



- Flight Operations
- System Integration
- System Engineering
- Special Staff
- Resident Officer

Date 7/21/64
 Date 7-21-64
 Date 7-21-64
 Date 7-21-64
 Date 7-21-64

