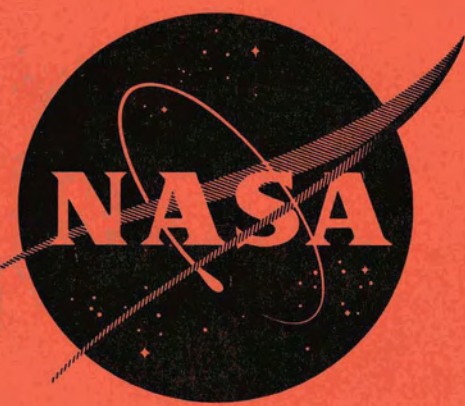


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University of Alabama in Huntsville  
saturn history  
8-27-64



# SECURITY CLASSIFICATION GUIDE

VII. 1

SATURN HISTORY DOCUMENT  
University of Alabama Research Institute  
History of Science & Technology Group  
Date: \_\_\_\_\_ Doc # \_\_\_\_\_

# SATURN LAUNCH VEHICLES

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Washington, D.C. 20546

August 27, 1964



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
WASHINGTON 25, D.C. 20546

IN REPLY REFER TO:

NASA SATURN LAUNCH VEHICLES  
SECURITY CLASSIFICATION GUIDE

FOREWORD

This security classification guide is a compilation of previous individual classification assignments. Consideration of international affairs, the use and development of advanced technological information, and requirements of flight safety have influenced these assignments. This protection is authorized by Title 18 U.S.C. 793, 794, and Executive Order 10501, "Safeguarding Official Information in the Interests of the Defense of the United States," November 5, 1953, as amended.

The security classification requirements outlined in this guide are authorized for application to all information and material concerning all Saturn Vehicles.

A handwritten signature in black ink, reading "Robert C. Seamans, Jr.", is positioned above the typed name.

Robert C. Seamans, Jr.  
Associate Administrator

August 27, 1964

SATURN HISTORY DOCUMENT  
University of Alabama Research Institute  
History of Science & Technology Group  
Date: \_\_\_\_\_ Doc # \_\_\_\_\_

SECURITY CLASSIFICATION GUIDE  
FOR  
SATURN LAUNCH VEHICLES

1. GENERAL INSTRUCTIONS:

a. Purpose of Guide:

This guide assigns security classifications to information and hardware for all SATURN vehicles. For purposes of completeness and clarity, this guide identifies the information which has been determined to be classified for all engines, stages, the instrument unit, and vehicles.

b. Engine Description:

- (1) H-1 Engine burns RP-1 and liquid oxygen and develops 188,000\* pounds of thrust.
- (2) RLIOA-3 Engine burns liquid hydrogen and oxygen and develops 15,000\* pounds of thrust.
- (3) J-2 Engine burns liquid hydrogen and oxygen and develops 200,000\* pounds of thrust.
- (4) F-1 Engine burns RP-1 and liquid oxygen and develops 1,500,000\* pounds of thrust.

c. Stage Descriptions

- (1) Stage S-I/IB: The S-I is the first stage of the SATURN I Vehicle, and is powered by eight H-I engines with a total thrust of 1,500,000\* pounds. The S-IB is a lengthened S-I stage modified to accept the S-IVB stage.
- (2) Stage S-IC: The S-IC is the first stage of SATURN V, and is powered by five F-I Engines.
- (3) Stage S-II: The S-II is the second stage of the SATURN V, and is powered by five J-2 Engines.
- (4) Stage S-IV: The S-IV is the second stage of the SATURN I, and is powered by six RLIOA-3 Engines.
- (5) Stage S-IVB: The S-IVB is the second stage of the SATURN IV, and is powered by one J-2 Engine.
- (6) S-IU (Instrument Unit): The S-IU is on all vehicles

\*Sea level

and contains instrumentation, guidance, control and tracking systems equipment, but no propulsion equipment. The S-IU is between the last powered stage and the payload.

d. Vehicle Description:

- (1) SATURN I. This vehicle consists of the S-I, the S-IV, the S-IU, and a payload.
- (2) SATURN IB. This vehicle consists of the S-IB, the S-IVB, the S-IU, and a payload.
- (3) SATURN V. This vehicle consists of the S-IC, S-II, S-IVB S-IU, and a payload.

2. INTERPRETATION OF REQUIREMENTS:

This guide identifies the information pertaining to SATURN vehicles, which information has been determined to be classified. It is recognized that new developments may be made which were not foreseen when this guide was prepared. This includes the development of new materials or techniques, or the unique application of old materials or techniques. In such event, the information is to be protected as classified according to its apparent significance, and submitted promptly to the Security Classification Officer, George C. Marshall Space Flight Center, for classification determination.

Questions which arise concerning the classification of any information or items which cannot be decided by referral to the guide should be submitted to the Security Classification Officer, George C. Marshall Space Flight Center, Huntsville, Alabama.

3. AUTOMATIC DOWNGRADING & DECLASSIFICATION:

Executive Order 10501, as amended by Executive Order 10964, established an automatic downgrading and declassification system applicable to the Executive Branch of the Federal Government. For NASA employees, the associated procedures are set forth in NASA Management Instruction 24-5-1, "Automatic Time-Phased Downgrading and Declassification System"; Department of Defense personnel are referred to the tri-service implementation of DOD Instruction 5200.10, "Downgrading and Declassification of Classified Defense Information"; and contractors should see Appendix II of the "Industrial Security Manual for Safeguarding Classified Information." Pursuant to these procedures, all Saturn vehicles information media marked as "Confidential" are assigned to "Group 4." Information media marked at the "Secret" level are assigned to "Group 3." The prescribed markings for these group assignments shall be applied as specified in the cited directives.

SECURITY CLASSIFICATION ASSIGNMENTS

FOR

SATURN VEHICLES

SECTION I - STAGES AND VEHICLES

S-I/IB S-IC S-II S-IV S-IVB S-IU SAT-I SAT-IB SAT-V

1. Funding (Fiscal Information)

a. Total funds authorized	U	U	U	U	U	U	U	U	U	U
b. Total funds expended	U	U	U	U	U	U	U	U	U	U
c. Estimated total cost	U	U	U	U	U	U	U	U	U	U
d. Cost of a vehicle or components	U	U	U	U	U	U	U	U	U	U
e. Dollar value of contracts	U	U	U	U	U	U	U	U	U	U

2. Procurement

a. List of contractors and/or subcontractors	U	U	U	U	U	U	U	U	U	U
b. Contract numbers and completion dates	U	U	U	U	U	U	U	U	U	U
c. Number of components to be furnished under each contract	U	U	U	U	U	U	U	U	U	U

d. Status and progress reports, contractual documents, films, technical reports, etc., will be classified according to content as determined from this guide.

3. Production

a. Number of vehicles to be produced	U	U	U	U	U	U	U	U	U	U
b. Delivery schedule listing delivery dates	U	U	U	U	U	U	U	U	U	U
c. Delivery date of a single vehicle	U	U	U	U	U	U	U	U	U	U
d. Serial numbers of vehicles or components	U	U	U	U	U	U	U	U	U	U

S-I/IB S-IC S-II S-IV S-IVB S-IU SAT-I SAT-IB SAT-V

4. Planning

- a. Complete research and development plan including target dates
- b. Portions of research and development plans containing no technical information requiring classification according to this guide

C C C C C C C C C C U U U U U U U U U U

5. End Item

- a. Assembled end item
- b. External views not showing classified engine details
- c. External views showing classified engine details
- d. External view of S-IU

U C C C C C C C C C U U U U U U U U U U N/A C N/A N/A N/A N/A N/A N/A

6. Launchings

- a. Exact scheduled launch dates
- b. The time of day for all launchings
- c. During the period ending 18 months prior to a scheduled launch date, reference to the date by calendar year is unclassified. A more precise reference than by year is CONFIDENTIAL.
- d. During the period commencing 18 months prior to a scheduled launch date and ending 10 days prior to a scheduled launch date, reference to the date by the quarter of the year is unclassified. A more precise reference than by the quarter of a year is CONFIDENTIAL.

C C C C C C C C C C U U U U U U U U U U

e. Ten days prior to a scheduled launch date, the launch date becomes unclassified.

f. Launch results

(1) Actual flight trajectory data including real time; evaluated and refined data (trajectory, dynamic pressures, sequence, burnout times, separations, etc.). See item 37.

(2) Comparisons between actual and planned stage and vehicle performance

- (a) General information from which planned performance cannot be determined
- (b) Specific information from which planned performance can be determined

(3) Malfunctions

- (a) General statements concerning hardware malfunctions and causes thereof
- (b) Specific information pertaining to malfunctions and causes thereof

g. General information concerning launch results

U	U	U	U	U	U	U	U	U	U
C	C	C	C	C	C	C	C	C	C
U	U	U	U	U	U	U	U	U	U
C	C	C	C	C	C	C	C	C	C
U	U	U	U	U	U	U	U	U	U

S-I/IB S-IC S-II S-IV S-IVB S-IU SAT-I SAT-IB SAT-V

SECTION II - GUIDANCE, CONTROL, INSTRUMENTATION, COMMUNICATIONS, AND TRACKING SYSTEMS

	S-I/IB	S-IC	S-II	S-IV	S-IVB	S-IU	SAT-I	SAT-IB	SAT-V
7. <u>Guidance and Control Systems</u>									
a. Complete technical description of theory and operation	N/A	N/A	N/A	N/A	N/A	C	C	C	C
b. Error and analysis reflecting accuracy	N/A	N/A	N/A	N/A	N/A	C	C	C	C
c. Test results of the Guidance and Control System	N/A	N/A	N/A	N/A	N/A	C	C	C	C
d. Weight, external dimensions, and power consumption	U	U	U	U	U	U	U	U	U
e. Stabilized platform	N/A	N/A	N/A	N/A	N/A	C	C	C	C
8. <u>Instrumentation Systems</u>									
a. Measuring systems	U	U	U	U	U	U	U	U	U
b. Telemetry equipment	U	U	U	U	U	U	U	U	U
9. <u>Tracking Systems</u>									
a. Radar beacons	U	U	U	U	U	U	U	U	U
b. UDOP transponder	U	U	U	U	U	U	U	N/A	N/A
c. AZUSA	U	U	U	U	U	U	U	U	U
d. Radar altimeter	U	U	U	U	U	U	U	U	U
10. <u>All Operating Frequencies</u>	U	U	U	U	U	U	U	U	U
11. <u>Digital Guidance Computer - Under development and not yet determined</u>									



	S-I/IB	S-IC	S-II	S-IV	S-IVB	S-IU	SAT-I	SAT-IB	SAT-V
12. <u>Command Destruct System</u>									
a. Complete technical description of the philosophies, operational theory, and logic of the secure command system	N/A	N/A	N/A	N/A	N/A	*	C	S	S
b. Coder and decoder specifications									
(1) Electrical	N/A	N/A	N/A	N/A	N/A	*	U	U	U
(2) Mechanical	N/A	N/A	N/A	N/A	N/A	*	U	U	U
(3) Security	N/A	N/A	N/A	N/A	N/A	*	C	S	S
(4) Environmental									
(a) Planned mission acceleration	N/A	N/A	N/A	N/A	N/A	*	C	C	C
(b) Acceleration limits of equipment	N/A	N/A	N/A	N/A	N/A	*	U	U	U
(c) All other environmental factors	N/A	N/A	N/A	N/A	N/A	*	U	U	U
c. Coder and decoder circuitry, logic, and theory	N/A	N/A	N/A	N/A	N/A	*	U	U	U
d. Security parameters	N/A	N/A	N/A	N/A	N/A	*	C	S	S
e. Destruct code	N/A	N/A	N/A	N/A	N/A	*	U	S	S
f. Code plugs									
(1) Without code setting	N/A	N/A	N/A	N/A	N/A	*	N/A	U	U
(2) Test plugs	N/A	N/A	N/A	N/A	N/A	*	N/A	U	U
(3) Flight plugs	N/A	N/A	N/A	N/A	N/A	*	N/A	S	S

\*Takes classification of vehicle upon which S-IU is being used.

	S-I/IB	S-IC	S-II	S-IV	S-IVB	S-IU	SAT-I	SAT-IB	SAT-V
<b>g. Coder</b>									
(1) Without code plug	N/A	N/A	N/A	N/A	N/A	*	N/A	U	U
(2) With test code plug	N/A	N/A	N/A	N/A	N/A	*	N/A	U	U
(3) With flight code plug	N/A	N/A	N/A	N/A	N/A	*	N/A	S	S
<b>h. Decoder (Flight and Monitor)</b>									
(1) Without code plug	N/A	N/A	N/A	N/A	N/A	*	N/A	U	U
(2) With test code plug	N/A	N/A	N/A	N/A	N/A	*	N/A	U	U
(3) With flight code plug	N/A	N/A	N/A	N/A	N/A	*	N/A	S	S
<b>i. Command receiver</b>									
(1) Flight	N/A	N/A	N/A	N/A	N/A	U	U	U	U
(2) Monitor	N/A	N/A	N/A	N/A	N/A	U	U	U	U
<b>j. Frequencies</b>									
(1) Radio frequency	N/A	N/A	N/A	N/A	N/A	U	U	U	U
(2) Tone frequencies	N/A	N/A	N/A	N/A	N/A	U	U	U	U
<b>k. Countermeasures</b>									
(1) Susceptibility to countermeasures	N/A	N/A	N/A	N/A	N/A	*	U	S	S
(2) Defense against countermeasures	N/A	N/A	N/A	N/A	N/A	*	U	S	S
l. Test and checkout procedure	N/A	N/A	N/A	N/A	N/A	U	U	U	U

\*Takes classification of vehicle upon which S-IU is being used.



	S-I/IB	S-IC	S-II	S-IV	S-IVB	S-IU	SAT-I	SAT-IB	SAT-V
(d) General fabrication techniques	U	U	U	U	U	N/A	N/A	N/A	N/A
(e) Detailed fabrication techniques	U	C	C	U	C	N/A	N/A	N/A	N/A
(4) Propellant valves									
(a) Thrust chamber									
1. Fuel	U	U	C	U	C	N/A	N/A	N/A	N/A
2. IOX	U	U	C	U	C	N/A	N/A	N/A	N/A
(b) Gas generator* *Gas generator ball valve - U	U	U*	C	N/A	C	N/A	N/A	N/A	N/A
(5) Gas generator									
(a) Gas generator assembly design	U	U	C	N/A	C	N/A	N/A	N/A	N/A
(b) Combustion chamber design	U	U	C	N/A	C	N/A	N/A	N/A	N/A
(c) Injector	U	C	C	N/A	C	N/A	N/A	N/A	N/A
(d) Other individual components	U	U	U	N/A	U	N/A	N/A	N/A	N/A
14. <u>Formula or Material</u>									
a. Common usage of common materials	U	U	U	U	U	N/A	N/A	N/A	N/A
b. Unusual or exotic materials with usage shown	C	C	C	C	C	N/A	N/A	N/A	N/A
c. Unusual or exotic materials with usage not shown	U	U	U	U	U	N/A	N/A	N/A	N/A
15. <u>Ignition System</u>									
a. Engine start sequence	U	C	C	U	C	N/A	U	C	C

	S-I/IB	S-IC	S-II	S-IV	S-IVB	S-IU	SAT-I	SAT-IB	SAT-V
16. <u>Propellant</u>									
a. Type	U	U	U	U	U	N/A	N/A	N/A	N/A
b. Nominal consumption rates	U	U	U	U	U	N/A	N/A	N/A	N/A
c. Specific consumption rates	U	C	C	U	C	N/A	N/A	N/A	N/A
17. Reliability - Reliability is defined as the demonstrated ability of an item to meet its performance parameters and is expressed as a percentage of successful performances over attempted performances.									
a. Reliability goals	U	U	U	U	U	N/A	U	U	U
b. Demonstrated reliability of flight critical components	U	C	C	C	C	N/A	C	C	C
c. Demonstrated reliability of flight non-critical components	U	U	U	U	U	N/A	U	U	U
18. <u>Thrust</u>									
a. Class	U	U	U	U	U	N/A	N/A	N/A	N/A
b. Specific from engine tests	U	U	U	U	U	N/A	N/A	N/A	N/A
c. Specific impulse from test results	U	C	C	U	C	N/A	N/A	N/A	N/A
19. <u>Problem Areas and Redesign Required</u>	C	C	C	C	C	N/A	N/A	N/A	N/A
20. <u>Hardware Components</u>									
a. Turbopump	U	C	C	U	C	N/A	N/A	N/A	N/A
b. Injector	U	C	C	U	C	N/A	N/A	N/A	N/A

	S-I/IB	S-IC	S-II	S-IV	S-IVB	S-IU	SAT-I	SAT-IB	SAT-V
c. Thrust chamber	U	U	C	U	C	N/A	N/A	N/A	N/A
d. Thrust chamber nozzle extension	N/A	U	N/A	N/A	N/A	N/A	N/A	N/A	N/A
e. Gas generator*	U	C*	C	N/A	C	N/A	N/A	N/A	N/A

21. Models and Mockups

- a. Models and mockups containing classified hardware or revealing classified information
- b. Models and mockups not containing classified hardware nor revealing classified information

N/A	C	C	C	C	C	N/A	C	C	C
U	U	U	U	U	U	N/A	U	U	U

22. Drawings, Cutaways, or Exploded Views

See Item 28

23. Test Data

- a. Raw, unidentified, uninterpreted, and unevaluated test data
- b. Test results from single engine tests from which engine reliability, reliability of flight critical components, specific impulse or other classified information can be determined

U	U	U	U	U	U	N/A	N/A	N/A	N/A
U	C	C	U	C	C	N/A	N/A	N/A	N/A

\*without injector - U

	S-I/IB	S-IC	S-II	S-IV	S-IVB	S-IU	SAT-I	SAT-IB	SAT-V
c. Test results from clustered engine tests from which engine reliability of flight critical components, specific impulse, or other classified information can be determined	U	C	C	U	C	N/A	N/A	N/A	N/A
d. Propellant consumption rates per engine from single engine tests	U	C	C	U	C	N/A	N/A	N/A	N/A
e. Propellant consumption rates per engine from clustered engine tests	U	C	C	U	C	N/A	N/A	N/A	N/A
f. Analysis of engine operating conditions showing significant or unexpected results	C	C	C	C	C	N/A	N/A	N/A	N/A
<u>24. Incident and Malfunction Reports</u>									
a. Incident notification	U	U	U	U	U	N/A	N/A	N/A	N/A
b. Detailed reports pertaining to classified items	N/A	C	C	N/A	C	N/A	N/A	N/A	N/A
c. Detailed reports on normally or abnormally operating unclassified items	U	U	U	U	U	N/A	N/A	N/A	N/A
d. Information concerning major malfunctions ascribed to engine design	C	C	C	C	C	N/A	N/A	N/A	N/A
e. Information concerning minor or trivial malfunctions ascribed to engine design	U	U	U	U	U	N/A	N/A	N/A	N/A

	S-I/IB	S-IC	S-II	S-IV	S-IVB	S-IU	SAT-I	SAT-IB	SAT-V
25. Status Reports - An accumulation of comprehensive reports (such as an assessment meeting, program review, monthly, quarterly, or final)	C	C	C	C	C	N/A	N/A	N/A	N/A
26. <u>Retrockets</u>									
a. Propellant composition	C	U	U	U	U	N/A	N/A	N/A	N/A
b. Average velocity and range with associated times	S	U	U	U	U	N/A	N/A	N/A	N/A
c. Burning time	C	U	U	U	U	N/A	N/A	N/A	N/A
d. Thrust class	C	U	U	U	U	N/A	N/A	N/A	N/A
e. Specific thrust and specific impulse	C	U	U	U	U	N/A	N/A	N/A	N/A
f. Internal design information	C	U	U	U	U	N/A	N/A	N/A	N/A
g. Detailed information concerning manufacturing techniques of propellant, liner and/or igniter	C	U	U	U	U	N/A	N/A	N/A	N/A
h. Overall external dimensions	U	U	U	U	U	N/A	N/A	N/A	N/A
27. <u>End Item</u>									
a. Assembled	U	C	C	C	C	C	C	C	C
b. External views (visual sight or pictures) not showing engine injectors	U	U	U	U	U	N/A	U	U	U

SECTION IV - STAGES AND VEHICLE



S-I/IB S-IC S-II S-IV S-IVB S-IU SAT-I SAT-IB SAT-V

- c. External views (visual sight or pictures) showing engine injectors  
U C C U U C N/A U U C
- d. External views of S-IU  
N/A N/A N/A N/A U N/A N/A N/A N/A
- e. External dimensions  
U U U U U U U U U

28. Drawings, Photographs, or Sketches:

- a. A compilation of unclassified drawings containing sufficient information for the manufacture of a classified item  
C C C C C C C C C
- b. External configurations and nominal dimensions  
U U U U U U U U U
- c. Electrical wiring details  
U U U U U U U U U
- d. Structural details of the stages, except insulation information  
U U U U U U N/A N/A
- e. Individual detail drawings not showing insulation details  
U U U U U N/A U U U

29. Design Information

- a. Complete detailed internal arrangement of components  
U C C C C U U C C
- b. Complete installation details of tanks, piping, engines  
U C C C C N/A C C C
- c. General arrangement of components  
U U U U U U U U U

	S-I/IB	S-IC	S-II	S-IV	S-IVB	S-IU	SAT-I	SAT-IB	SAT-V
30. <u>Insulation Scheme</u>									
a. Location and type of material used	N/A	N/A	U	U	U	N/A	N/A	N/A	N/A
b. Fabricated insulation	N/A	N/A	U	C	C	N/A	N/A	N/A	N/A
c. Specific manufacturing or application techniques	N/A	N/A	U	C	C	N/A	N/A	N/A	N/A
d. Drawings and data which reveal techniques of manufacture or installation	N/A	N/A	U	C	C	N/A	N/A	N/A	N/A
e. Views of inside of tank after insulation installed	N/A	N/A	N/A	C	C	N/A	N/A	N/A	N/A
31. <u>Maneuverability</u>									
a. Specific guidance and control capabilities	C	C	C	C	C	C	C	C	C
b. General guidance and control capabilities	U	U	U	U	U	U	U	U	U
32. <u>Propellants</u>									
a. Propellant tank capacities	U	U	U	U	U	U	U	U	U
b. Propellant loadings for specific missions	C	C	C	C	C	N/A	C	C	C
33. <u>Mass Characteristics</u>									
a. Calculated weights of the stages or components	U	U	U	U	U	U	U	U	U

	S-I/IB	S-IC	S-II	S-IV	S-IVB	S-IU	SAT-I	SAT-IB	SAT-V
c. External views (visual sight or pictures) showing engine injectors	U	C	C	U	C	N/A	U	U	C
d. External views of S-IU	N/A	N/A	N/A	N/A	N/A	U	N/A	N/A	N/A
e. External dimensions	U	U	U	U	U	U	U	U	U

28. Drawings, Photographs, or Sketches:

- a. A compilation of unclassified drawings containing sufficient information for the manufacture of a classified item
- b. External configurations and nominal dimensions
- c. Electrical wiring details
- d. Structural details of the stages, except insulation information
- e. Individual detail drawings not showing insulation details

29. Design Information

- a. Complete detailed internal arrangement of components
- b. Complete installation details of tanks, piping, engines
- c. General arrangement of components

	S-I/IB	S-IC	S-II	S-IV	S-IVB	S-IU	SAT-I	SAT-IB	SAT-V
<u>30. Insulation Scheme</u>									
a. Location and type of material used	N/A	N/A	U	U	U	N/A	N/A	N/A	N/A
b. Fabricated insulation	N/A	N/A	U	C	C	N/A	N/A	N/A	N/A
c. Specific manufacturing or application techniques	N/A	N/A	U	C	C	N/A	N/A	N/A	N/A
d. Drawings and data which reveal techniques of manufacture or installation	N/A	N/A	U	C	C	N/A	N/A	N/A	N/A
e. Views of inside of tank after insulation installed	N/A	N/A	N/A	C	C	N/A	N/A	N/A	N/A
<u>31. Maneuverability</u>									
a. Specific guidance and control capabilities	C	C	C	C	C	C	C	C	C
b. General guidance and control capabilities	U	U	U	U	U	U	U	U	U
<u>32. Propellants</u>									
a. Propellant tank capacities	U	U	U	U	U	U	U	U	U
b. Propellant loadings for specific missions	C	C	C	C	C	N/A	C	C	C
<u>33. Mass Characteristics</u>									
a. Calculated weights of the stages or components	U	U	U	U	U	U	U	U	U

S-I/IB S-IC S-II S-IV S-IVB S-IU SAT-I SAT-IB SAT-V

b. Measured weights of individual components	U	U	U	U	U	U	U	U	U
c. A compilation of the measured weights of all components	C	C	C	C	C	U	C	C	C
d. Measured weights of the stages and vehicle	C	C	C	C	C	U	C	C	C
e. Center of gravity	U	U	U	U	U	U	U	U	U
f. Moments of inertia	U	U	U	U	U	U	U	U	U

34. Static Tests

a. Dates and places of static tests	U	U	U	U	U	N/A	N/A	N/A	N/A
b. Propellant loadings for static tests	U	U	U	U	U	N/A	N/A	N/A	N/A
c. General information concerning the results of static tests	U	U	U	U	U	N/A	N/A	N/A	N/A
d. Detailed and specific information concerning the results of stage static tests	C	C	C	C	C	N/A	N/A	N/A	N/A

35. Payload Weight

a. Capability expressed in general terms	U	U	U	U	U	N/A	U	U	U
b. Capability expressed as an exact value	C	C	C	C	C	N/A	C	C	C
c. Specific payload for a specific mission	C	C	C	C	C	N/A	C	C	C

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36. Reliability - Reliability is defined as the demonstrated ability of an item to meet its performance parameters expressed as a percentage of successful performances over attempted performances.

- a. Specification reliability U U U U U U U U U U
- b. Theoretical and calculated reliability U U U U U U U U U U
- c. Criticality ratings and rankings and reliability predictions U U U U U U U U U U
- d. Reliability assessment data based on demonstrated reliability of flight critical components C C C C C C C C C C
- e. Demonstrated reliability of flight critical components C C C C C C C C C C
- f. Demonstrated reliability of flight non-critical components U U U U U U U U U U

37. Trajectories and Orbits See 6 f. (1) and 6 f. (2).

- a. Exact planned flight trajectory data for specific missions or payloads C C C C C C C C C C
- b. Planned flight trajectory data expressed in general terms U U U U U U U U U U

S-I/IB S-IC S-II S-IV S-IVB S-IU SAT-I SAT-IB SAT-V

- c. Theoretical and hypothetical calculated trajectories
- d. Orbital trajectory data
- e. Comparisons of achieved and planned trajectories from which planned trajectories can be determined

38. Count Down Sequence

SECTION V - FLIGHT REPORTS

39. General trajectory information

40. Specific trajectory information

- a. Powered flight trajectory
- b. Re-entry trajectory
- c. Orbital trajectory

41. General vehicle performance information

42. Specific vehicle performance information

- a. Guidance system
- b. Control system

U	U	U	U	U	U	U	U	U	U	U	U	U	U
U	U	U	U	U	U	U	U	U	U	U	U	U	U
C	C	C	C	C	C	C	C	C	C	C	C	C	C
U	U	U	U	U	U	U	U	U	U	U	U	U	U
U	U	U	U	U	U	U	U	U	U	U	U	U	U
U	U	U	U	U	U	U	U	U	U	U	U	U	U
U	U	U	U	U	U	U	U	U	U	U	U	U	U
U	U	U	U	U	U	U	U	U	U	U	U	U	U
U	U	U	U	U	U	U	U	U	U	U	U	U	U
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
U	U	U	U	U	U	U	U	U	U	U	U	U	U

	S-I/IB	S-IC	S-II	S-IV	S-IVB	S-IU	SAT-I	SAT-IB	SAT-V
c. Propulsion systems	C	C	C	C	C	N/A	N/A	N/A	N/A
d. Electrical networks	U	U	U	U	U	U	U	U	U
e. Instrumentation	U	U	U	U	U	U	U	U	U
f. Vehicle structure	U	U	U	U	U	U	U	U	U
43. <u>Photographs, both moving and still of a vehicle during launch</u>	U	U	U	U	U	U	U	U	U
44. <u>Raw, uninterpreted and unevaluated telemetry records</u>	U	U	U	U	U	U	U	U	U
45. <u>Reduced, interpreted and evaluated telemetry records containing classified vehicle performance information</u>	C	C	C	C	C	C	C	C	C
46. <u>Reduced, interpreted and evaluated telemetry records containing unclassified vehicle performance information</u>	U	U	U	U	U	U	U	U	U
<u>SECTION VI - Ground Support Equipment</u>									
47. <u>Launch towers and associated mechanical equipment</u>	U	U	U	U	U	U	U	U	U
48. <u>Fueling equipment</u>	U	U	U	U	U	N/A	U	U	U
49. <u>Electronic testing equipment</u>	U	U	U	U	U	U	U	U	U