


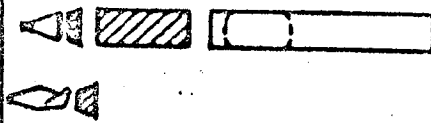


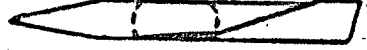
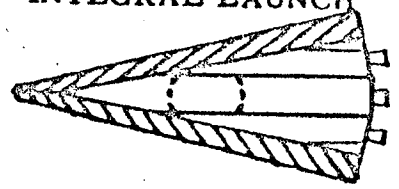


~~D SECRET~~ SPECIAL HANDLING
POTENTIAL VEHICLE SYSTEM CONCEPTS

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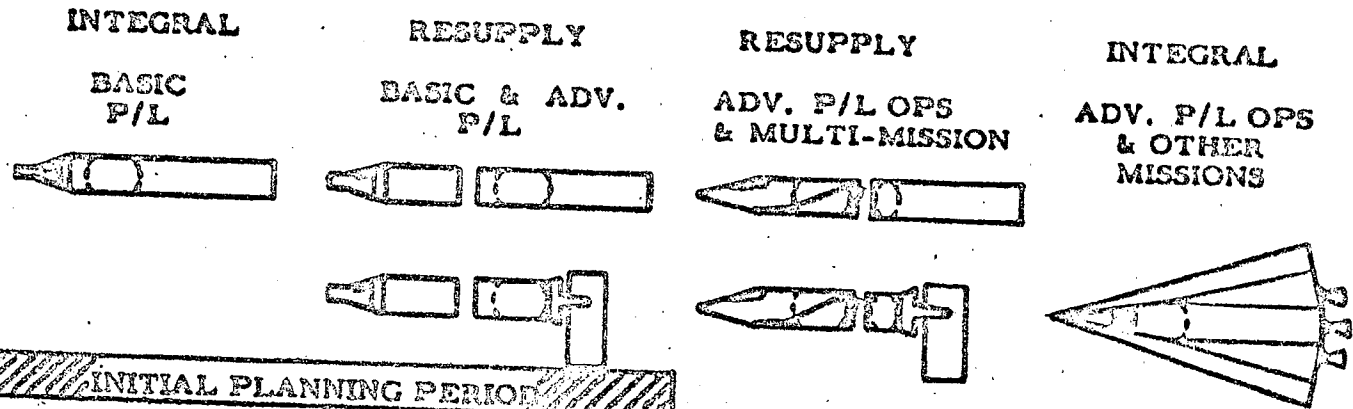
3.6

<p>I</p> <p>INTEGRAL LAUNCH</p>  <p>Dispose all Segments each Mission.</p>	<p>II</p> <p>INTEGRAL LAUNCH</p>  <p>Retrieve/Reuse R. E. V. each Mission - Dispose all other Segments.</p>	<p>III</p> <p>RENDEZVOUS/RESUPPLY</p>  <p>Dispose R. E. V. + Supply Module (RRV) each Resupply Mission - Revisit/Reuse Orbiting Vehicle for ~ 1 year cycle.</p>	<p>IV</p> <p>RENDEZVOUS/RESUPPLY</p>  <p>Dispose Supply Module each Resupply Mission - Retrieve/Reuse R. E. V. - Revisit/Reuse Orbiting Vehicle for ~ 1 year cycle.</p>
<p>V</p> <p>RENDEZVOUS/RESUPPLY</p>  <p>Retrieve/Reuse R. E. V. + Supply Module (RRV) each Resupply Mission - Revisit/Reuse Orbiting Vehicle for ~ 1 year cycle.</p>	<p>VI</p> <p>RENDEZVOUS/RESUPPLY</p>  <p>Retrieve/Reuse Integrated R. E. V. + Supply Module + Lab - Revisit/Reuse Mission Module Lab ~ 1 year cycle</p>	<p>VII</p> <p>INTEGRAL LAUNCH</p>  <p>Retrieve/Reuse fully Integrated R. E. V. + Lab + Supply Module + Mission Module. Dispose conventional booster only.</p>	<p>VIII</p> <p>INTEGRAL LAUNCH</p>  <p>Retrieve/Reuse fully Integrated R. E. V. + Lab + Supply Module + Mission Module + Propulsion Sys. Dispose propellant tanks and pressurization system only.</p>

~~D SECRET~~ SPECIAL HANDLING

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FOLLOW-ON SYSTEMS PERSPECTIVE



INITIAL PLANNING PERIOD

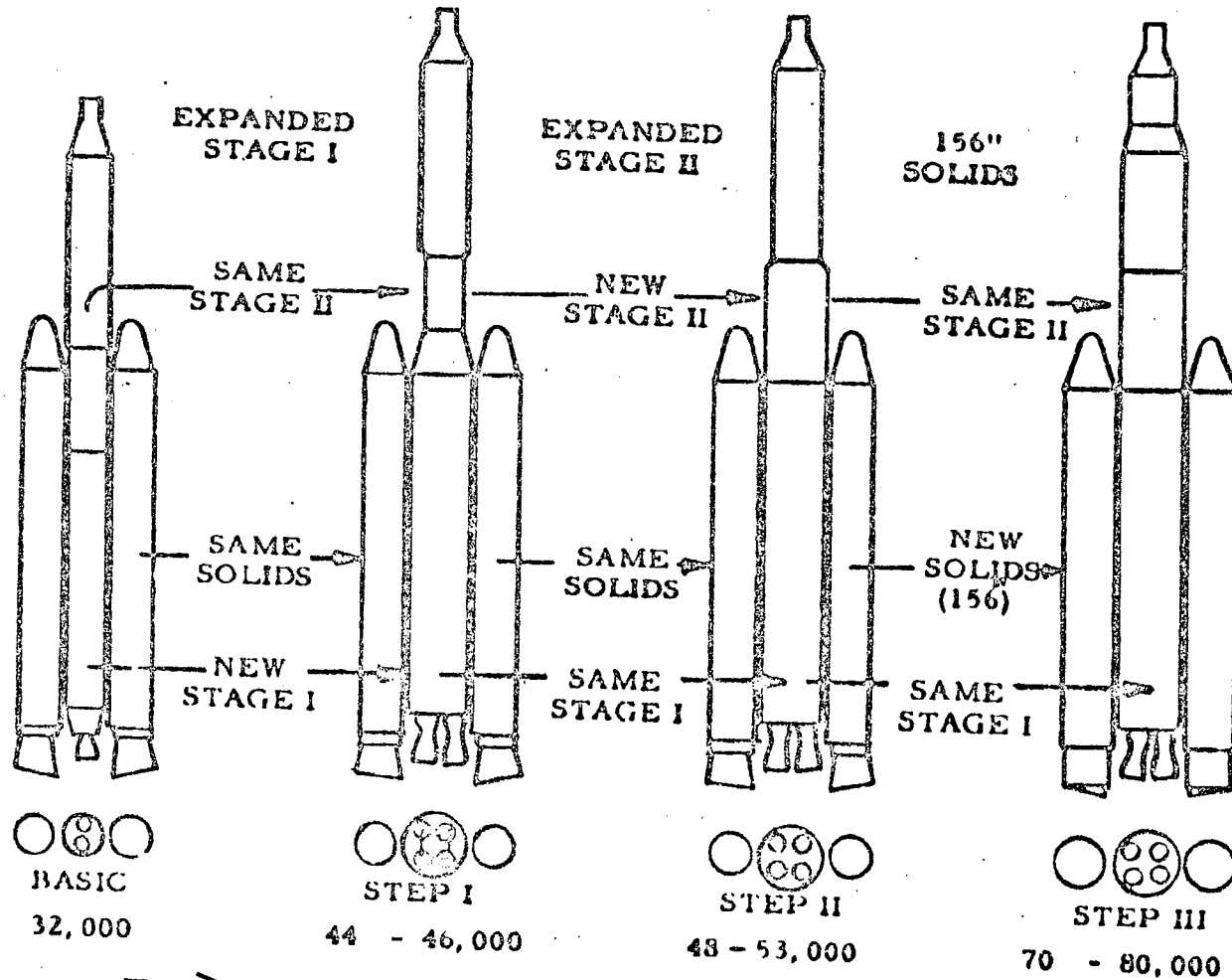
SYSTEM AVAILABILITY	1970	1973 - 1975	1978	POST 1980
R. E. V. TYPE	GEMINI B	GEMINI B	LIFTING BODY (MED L/D)	LIFTING BODY (HI L/D)
LAUNCH VEH.	T III M	T III M	LDC 1 & 2	STRAP-ON TANK-AGE
LAUNCH WEIGHT	31.0 K (i = 90°)	30.0 K (i = 96.4°)	47.0 K (i = 96.4°)	~ 70.0 K
P/L TYPE	BASELINE 4"	BASIC (4") & ADV (2")	ADV (2") & MULT.	ADV (2") & OTHER
MISSION DURATION	30 DAYS	CONT. OPS - 1 YR.	CONT. OPS - 1 YR.	60 + DAYS
DEV. 'MT STATUS		60 D. RESUPPLY (BASIC)	50 D. RESUPPLY	
R. E. VEHICLE	PHASE II	PHASE II	TECHNOLOGY STUDIES	PROPOSED BY INDUSTRY
LAB. MOD.	"	"	COMPONENTS IN Q II	
MISS. MOD.	"	"	PRELIMINARY STUDIES	
LAUNCH VEHICLE	"	"	PRELIMINARY STUDIES	
DEV'MT CYCLE	5 YR	3 YR (BASIC)	7 YR	10-12 YRS
△ NRC - (ROM)	0	275 M\$	1,200 M\$	2,000 M\$

~~D SECRET~~ SPECIAL HANDLING

~~D~~ SECRET SPECIAL HANDLING POSSIBLE MOL LAUNCH VEHICLE EVOLUTION

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T-III
MOL



P/L (80°80/130)

~~D~~ SECRET SPECIAL HANDLING

~~D SECRET SPECIAL HANDLING~~

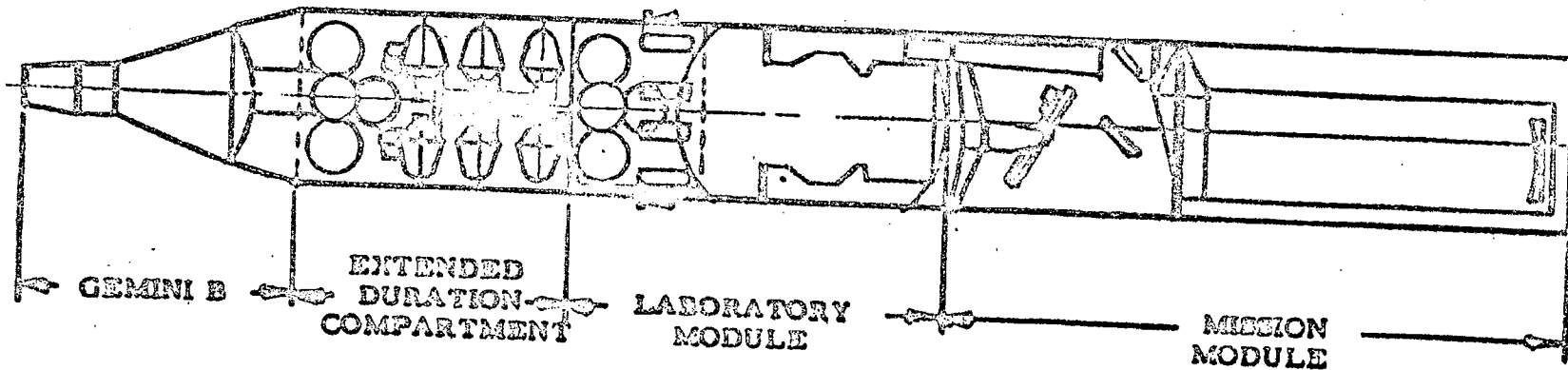
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EXTENDED DURATION INTEGRAL LAUNCH

ORBITING VEHICLE

(50 DAY MISSION DURATION)

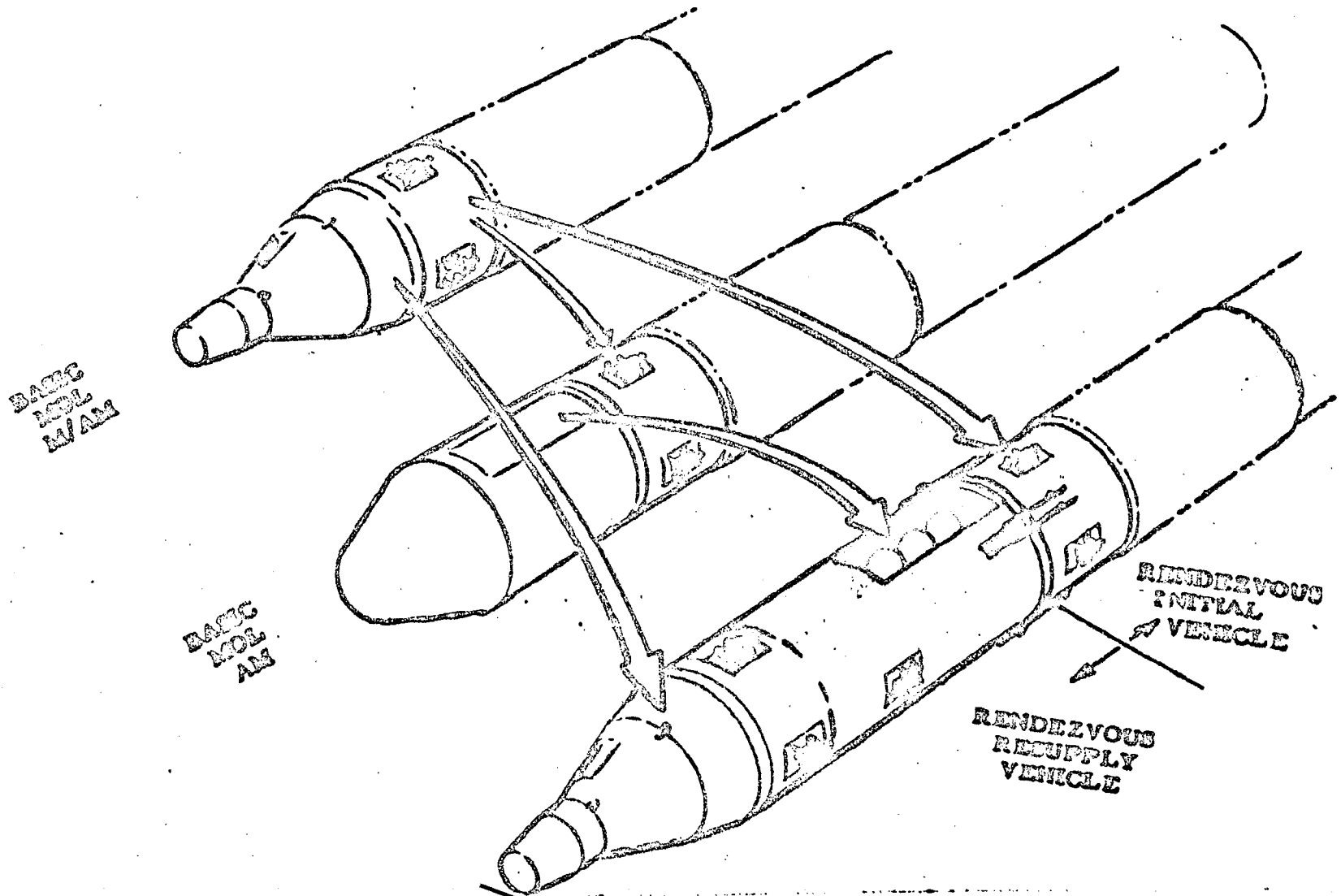
(LDC 1 BOOSTER)



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~~D SECRET~~ SPECIAL HANDLING
RESUPPLY SYSTEM CONCEPT

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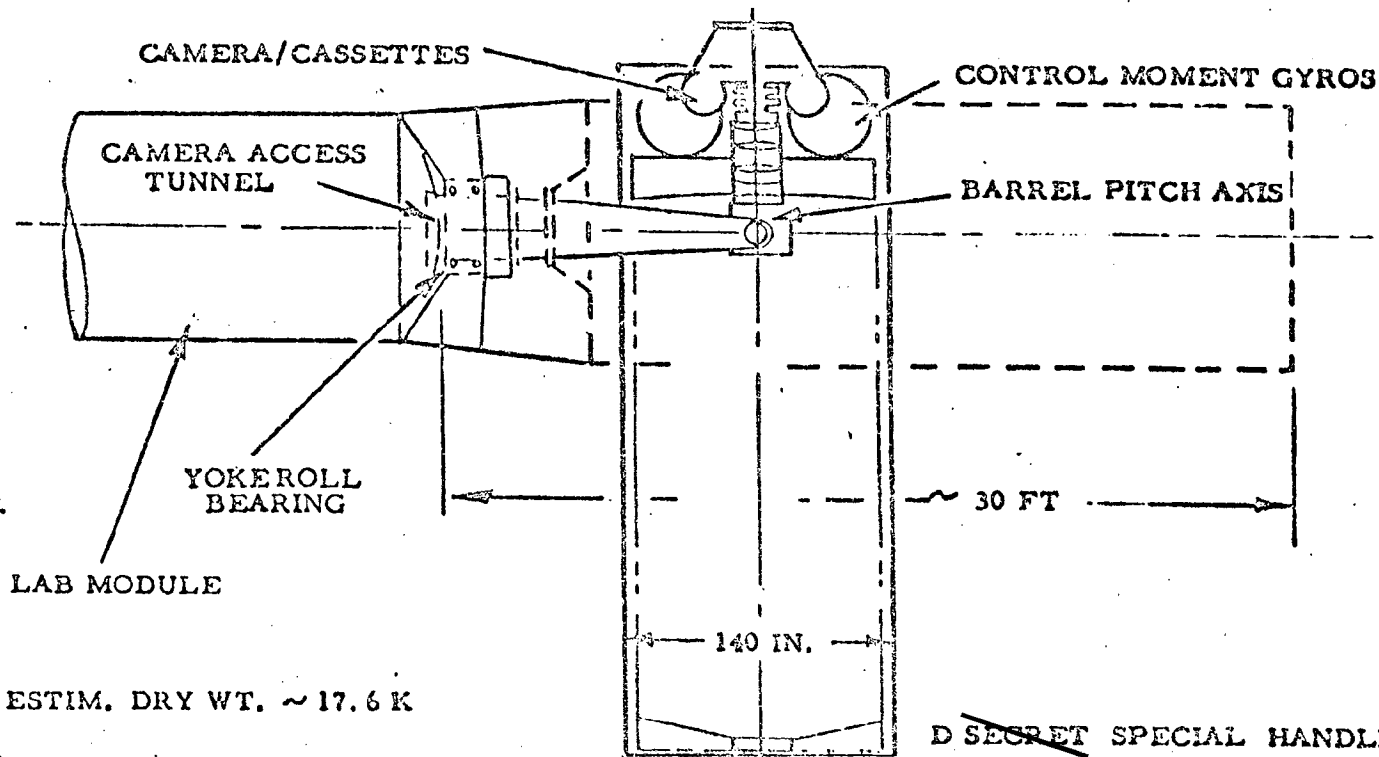
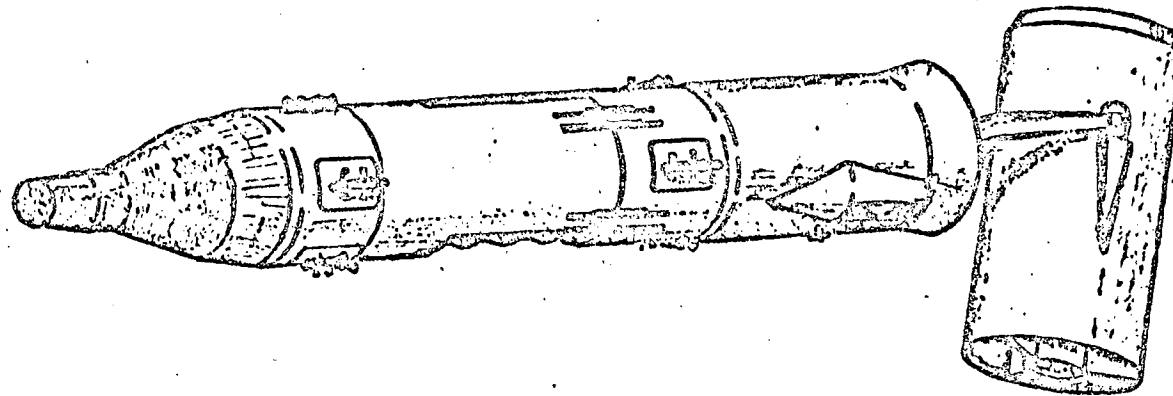


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10

~~D SECRET~~ SPECIAL HANDLING
POSSIBLE ADVANCED PAYLOAD CONFIGURATION

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ESTIM. DRY WT. ~ 17.6 K

~~D SECRET~~ SPECIAL HANDLING

~~D SECRET~~ SPECIAL HANDLING

SELECTED EARLY FOLLOW-ON ALTERNATIVES

BASIC
MOL
PROGRAM

○ INTEGRAL LAUNCH OPERATIONS

M/AM

EDAM

- THM M
- 4" RES. P/L
- 30 DAY

- THM M
- 4" RES. P/L
- 45 DAY

(BASELINE SYSTEMS)

(EXTENDED DURATION SYSTEMS)

M/AM AM

M/AM

M/AM

- THM LDC 1
- 4" RES. P/L
- 50 DAY

- THM LDC 1 & 2
- 2" RES. ADV. P/L
- 60 DAY

- THM M
- 4" RES. P/L
- 30 DAY

○ RENDEZVOUS/RESUPPLY OPERATIONS

RIV

RRV

RIV

RRV

- THM M
- 4" RES. P/L
- CONT. OPS
- 60 DAY RESUPPLY

- THM M
- 2" RES. ADV. P/L
- CONT. OPS.
- 50 DAY RESUPPLY

~~D SECRET~~ SPECIAL HANDLING

STP

2364

13

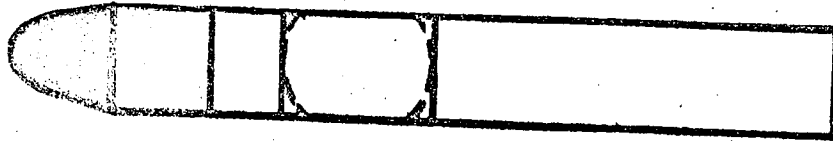
D

~~SECRET SPECIAL HANDLING~~

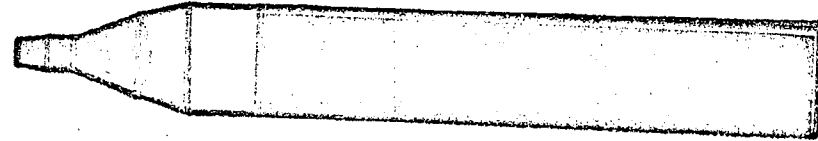
RESUPPLY SYSTEM DERIVATION FROM MOL HARDWARE

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BASELINE AM VEHICLE

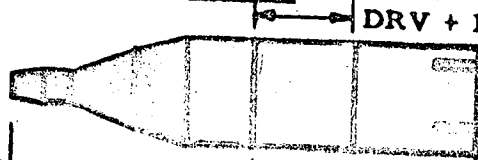


BASELINE M/AM VEHICLE



RENDEZVOUS RESUPPLY VEHICLE

(RRV)



DRV + FILM HANDLING SYSTEM

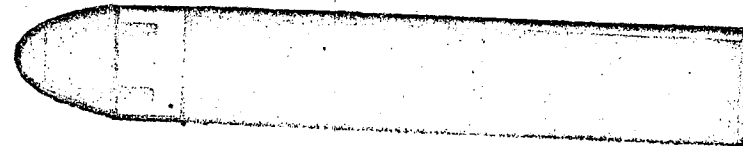
GEMINI B LABORATORY UNPRESSURIZED COMPARTMENT

EXTENDED DURATION MODULE

- ADD BASELINE SUBSYSTEM COMPONENTS
- ADD DOCKING SYSTEM AND INTERFACE

RENDEZVOUS INITIAL VEHICLE

(RIV)



- DELETE GEMINI B
- ADD EXTENDED DURATION PROVISIONS
- ADD DOCKING SYSTEM AND INTERFACE
- ADD ASCENT FAIRING

D

~~SECRET SPECIAL HANDLING~~