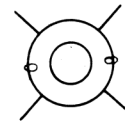
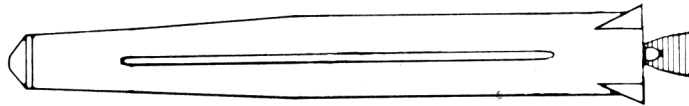


C6
 Thor/char

Characteristics Summary

STRATEGIC MISSILE..... XSM-75



"THOR"

DOUGLAS

Length 64.8 ft Diameter 8.0 ft

STATUS

1. First Flight Test with Programmed Autopilot to Full Range Jan 57
2. First Flight Test with All-Inertial Guidance Dec 57
3. First Flight Test with Instrumented Nose Cone Apr 58
4. Provide First Operational Prototype Missile Jun 59
5. The following are projected estimates of warhead weight vs. yield based on a nose cone plus warhead weight of 3500 pounds:

| Warhead Wt (lb) | Yield (Megatons) | Date Available |
|-----------------|------------------|----------------|
| 1600 | 1.75 to 2 | 1959 |
| 2200 | 4 to 5 | 1963* |
| 1600 | 3 | |
| 2200 | 8 | 1965 |

*The 2200 lb warhead is associated with the new, lighter nose cone expected in this time period.

Navy Equivalent: None

Mfr's Model: ---

RESTRICTED DATA
ATOMIC ENERGY ACT 1954

POWER PLANT

(1) MB-1*
 North American

ENGINE RATINGS

| S.L.S. | LB | SEC |
|--------|---------|-----|
| | Main | |
| Max: | 150,000 | 157 |
| | Vernier | |
| Max: | 1000 | 9** |

*MB-1 is a complete propulsion system comprised of one XLR79-NA-5 main engine and two vernier thrust chambers

**After main engine burn-out

FEATURES

Intermediate range, single-stage, surface-to-surface, ballistic missile
 Operable in severe weather and environment
 Fins installed for aerodynamic stability
 Both main engine and vernier verniers are gimballed for pitch, yaw, and roll control

Max Fuel Cap . . . 4438 gal
 Max Oxd. Cap . . . 7028 gal

GUIDANCE

Guidance and control are performed during powered flight by a self-contained, pre-set programmer and all-inertial guidance system in conjunction with hydraulically powered control systems.

CONTROL

The autopilot controls flow to hydraulic actuators. These actuators position the appropriate rocket engines to eliminate deviations from the flight path.

18 APR 58

S E C R E T

XSM-75

Review basis
 To prove characteristics
 performance
 8 July 58

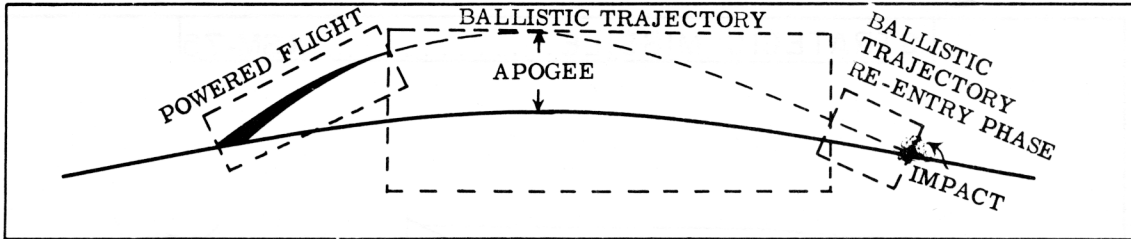
Confidential
 Unclassified
 DOWNGRADED AT 3 YEAR INTERVALS
 DECLASSIFIED AFTER 12 YEARS
 DOD DIR 5200.10
 G. R. Jannetown
 31 July 70

Black Book
 5th ed
 Addendum

401

5740c-4983

Characteristics Summary Basic Mission XSM-75



| P E R F O R M A N C E | | | | | | | | | | | |
|--|---|---|-----|----------|-------|-------|-------|--------|---------|---------|---|
| F L I G H T T I M E | R A N G E | V E L O C I T Y | | | | | | | | | |
| 17.0 minutes (total) | 1500 nautical miles (maximum) | Burnout - 14,600 ft/sec Re-entry - 14,800 ft/sec | | | | | | | | | |
| L A U N C H I N G | A C C E L E R A T I O N | A L T I T U D E | | | | | | | | | |
| Transporter-erector is used to position missile on launcher. Missile is secured in launch position. Propellant is pumped into tanks, cradle is lowered final guidance and control checks completed. The engines are then started and missile is launched | NOT AVAILABLE | Apogee 350 n. mi. Re-entry 25 n. mi. | | | | | | | | | |
| L O A D | W E I G H T S | T A R G E T A C C U R A C Y | | | | | | | | | |
| Propellant 96,640 lb Nose Cone 3500 lb | <table style="margin-left: auto; margin-right: auto;"> <tr> <td></td> <td style="text-align: center;">R&D</td> <td style="text-align: center;">Tactical</td> </tr> <tr> <td style="text-align: center;">Empty</td> <td style="text-align: center;">7916*</td> <td style="text-align: center;">6444*</td> </tr> <tr> <td style="text-align: center;">Launch</td> <td style="text-align: center;">110,299</td> <td style="text-align: center;">109,769</td> </tr> </table> <p style="text-align: center; font-size: x-small;">*Less nose cone</p> | | R&D | Tactical | Empty | 7916* | 6444* | Launch | 110,299 | 109,769 | <p>*CEP = 1.1 nautical miles</p> <p>Overall CEP, including errors and uncertainties in re-entry, vernier shut-off, geophysical data and guidance.</p> |
| | R&D | Tactical | | | | | | | | | |
| Empty | 7916* | 6444* | | | | | | | | | |
| Launch | 110,299 | 109,769 | | | | | | | | | |

RESTRICTED DATA
ATOMIC ENERGY ACT 1954

| N O T E S |
|--|
| <p>1. Performance Basis:</p> <ul style="list-style-type: none"> (a) Contractor's estimated data (b) Performance is based on a non-rotating earth. (c) Typical re-entry trajectories involve peak decelerations of 20 to 50 G's. depending on range. <p>2. Revision Basis</p> <ul style="list-style-type: none"> (a) To revise load block |