Characteristics Summary

GUIDED AIRCRAFT ROCKET........GAR-1

"FALCON" HUGHES

Wing Area ............. Not Applicable Length .................. 77.8 in.
Span ...................... 20.0 in. Height ...................... 20.0 in.

AVAILABILITY

| Number available | PROCUREMENT
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>ACTIVE</td>
<td>RESERVE</td>
</tr>
</tbody>
</table>

STATUS

1. Project Initiated: Mar 47
2. Complete Guided Aircraft Rocket Project Initiated: Mar 48
3. First Air-to-Air Hit: Jun 52
4. First Falcon-Equipped Squadrons: Early 56

Navy Equivalent: None

Mfr's Model: D

POWER PLANT

(1) Solid Rocket Motor
T47 or T58*
Thiokol Chemical Corp.

THRUST RATINGS
S.L.S. LB - Duration (sec)
Nominal: 4600 - 1.3

* Later versions

FEATURES

Supersonic Guided Aircraft Rocket for destruction of subsonic and supersonic bombers.
Blast Type Warhead

Max Fuel Cap: ....... 31 lb

GUIDANCE

(a) INITIAL
None during boost phase

(b) MID-COURSE & TERMINAL

CONTROL
Hydraulic: Initiated by the Error Signal from Target Seeker
## Characteristics Summary Basic Mission

### Gar-1

### Performance

<table>
<thead>
<tr>
<th>ENDURANCE</th>
<th>RANGE</th>
<th>SPEED</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOT APPLICABLE</td>
<td>5000 ft to 25,000 ft</td>
<td>Launching speed of aircraft plus 2000 ft/sec</td>
</tr>
</tbody>
</table>

#### LAUNCHING

- Short Length Rail:
  - Extended from wing tip pods in F-89H and from missile bays in F-102A;
  - Approximately 20 seconds required from time target is sighted to time rocket is launched.

#### CLIMB

- NOT APPLICABLE

#### ALTITUDE

- Effective up to 60,000 ft

### Load Weights

<table>
<thead>
<tr>
<th>Warhead:</th>
<th>8 lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel: (Thiokol Base)</td>
<td>31 lb</td>
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</table>

<table>
<thead>
<tr>
<th>Burnout</th>
<th>96 lb</th>
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</thead>
<tbody>
<tr>
<td>Launch</td>
<td>127 lb</td>
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</tbody>
</table>

### Target Accuracy

- $P_k = .50$ to .95 for salvo of 8 rockets against subsonic and supersonic bombers

### Notes

1. Performance Basis:
   - Estimated data (Not substantiated by WADC)

2. Revision Basis: To reflect latest characteristics and performance data.