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PHOTOGRAPHIC INTERPRETATION REPORT

[redacted]

FROG 7, MOSCOW PARADE, 7 NOVEMBER 1965

NPIC/R-107/66
APRIL 1966

FROG 7, MOSCOW PARADE, 7 NOVEMBER 1965

A new free-flight rocket (FROG 7) on a new wheel-mounted transporter-erector-launcher (TEL) was publicly displayed for the first time in the Moscow parade of 7 November 1965 (Figures 1-3). A total of 5 rockets was observed, and there were no significant differences among them.

Unlike other members of the FROG group of rockets (FROGs 3-6), the new rocket does not appear distinctly to have 2 stages (tandem motors), and the possibility exists that this rocket has only one long motor. However, a comparison of dimensional data strongly indicates that the new rocket has in fact 2 motors in tandem, which have the same diameter and are joined by a possible explosive staging ring. The position of the possible staging device and the distances from the device to the base of the warhead and to the guidance fins are compatible with the measurements of the tandem motors of previous FROG models.

The mensural data contained in this report were obtained from photogrammetric solutions utilizing graphical techniques, metrical traps, and scale-ratio techniques. Because of the geometrical problems involved in mensural analysis of oblique ground photography, some degree of error is inherent. The reader is cautioned that while in some instances dimensions are carried to the one-hundredth part of a foot, the degree of accuracy is not that reliable. A general guide for determining the degree of confidence that can be placed in these dimensions is as follows:

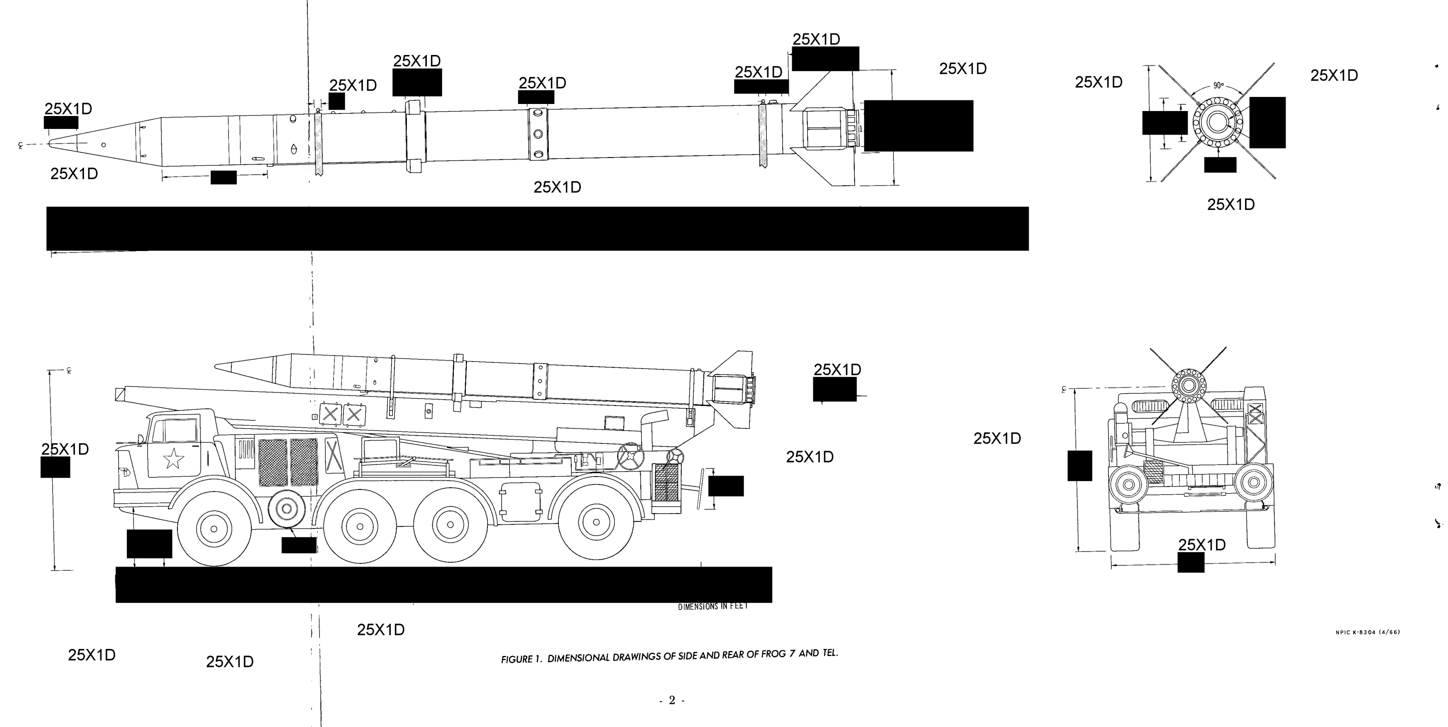
Dimensions Given	Degree of Accuracy
35 feet to 20 feet	[redacted] 25X1D
20 feet to 5 feet	
5 feet to 0 feet	

The reader is further cautioned that the line drawing on which the mensural data appear is not intended to be used for detailed engineering analysis. 25X1D

The new FROG has a diameter of [redacted] feet as compared with the [redacted] of previous models (FROGs 3-6). Also, the 4 tail fins are considerably larger. The rocket is [redacted] long. The nosecone is conical and [redacted] long. Its base diameter is the same as the diameter of the rocket body. The warhead is [redacted] long and [redacted] in diameter. Immediately aft of the warhead section are 4 nozzle-like apertures that may serve to stabilize the rocket in flight. Approximately [redacted] aft of the forward tip of the rocket are 4 small fin-like appendages that possibly also serve to stabilize the rocket in flight or provide rigid guides on the monorail of the TEL during the launch. The rocket is secured to the monorail launcher by 2 metal straps that have turnbuckle devices.

25X1D 25X1D 25X1D 25X1D 25X1D

The equipment on the TEL includes a crane loader mechanism that eliminates the need for a separate crane vehicle. The launcher is elevated and oriented by an electrohydraulic system, the orientation being determined with the aid of a panoramic telescope. In the elevated position the rail is supported by an A-frame. Two jack pads on the rear of the TEL and one on each side of the motor compartment level and stabilize the TEL for firing. The FROG is fired electrically from off-carriage. The firing cables and equipment boxes are mounted on the chassis beneath the launcher rail. It has been reported 1/ that the aft wheels of the TEL are steerable.

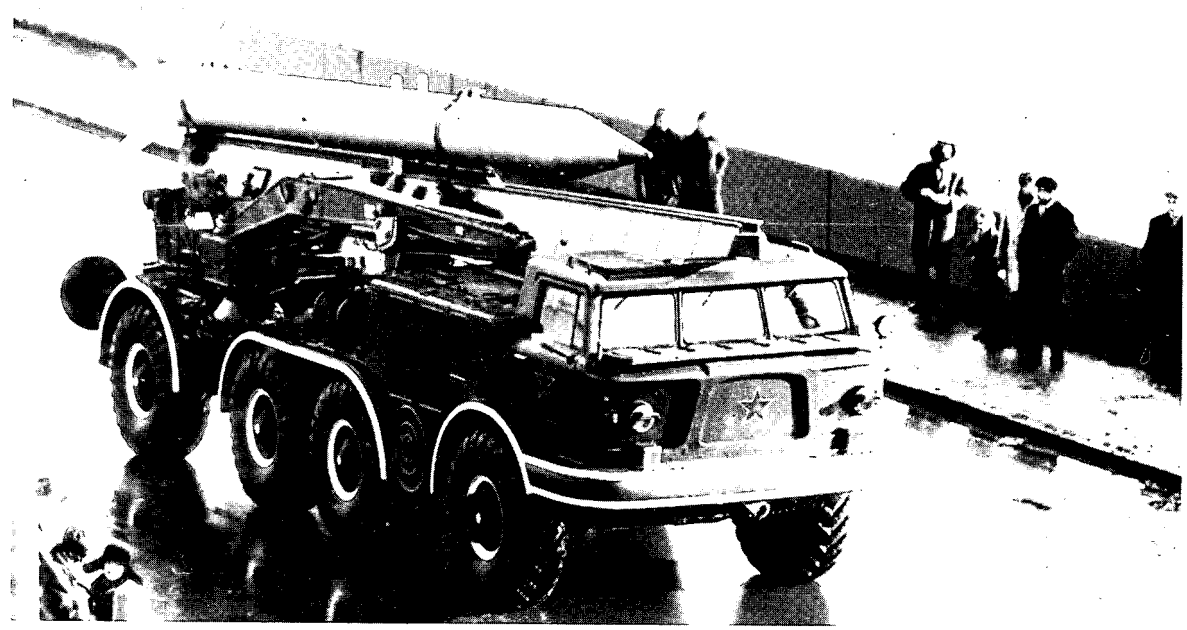


[redacted]

25X1D

NPIC K-8304 (4/66)

FIGURE 1. DIMENSIONAL DRAWINGS OF SIDE AND REAR OF FROG 7 AND TEL.



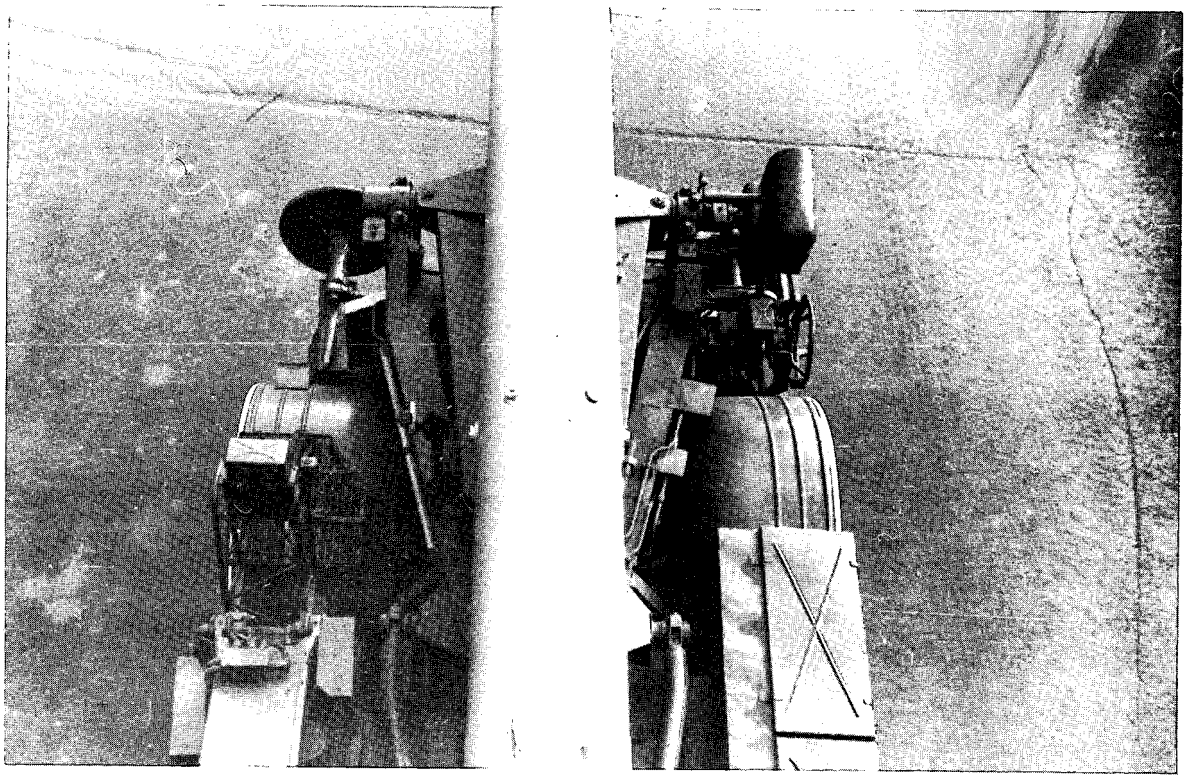


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FIGURE 2. FRONT AND PARTIAL TOP VIEWS OF FROG 7 ON TEL.

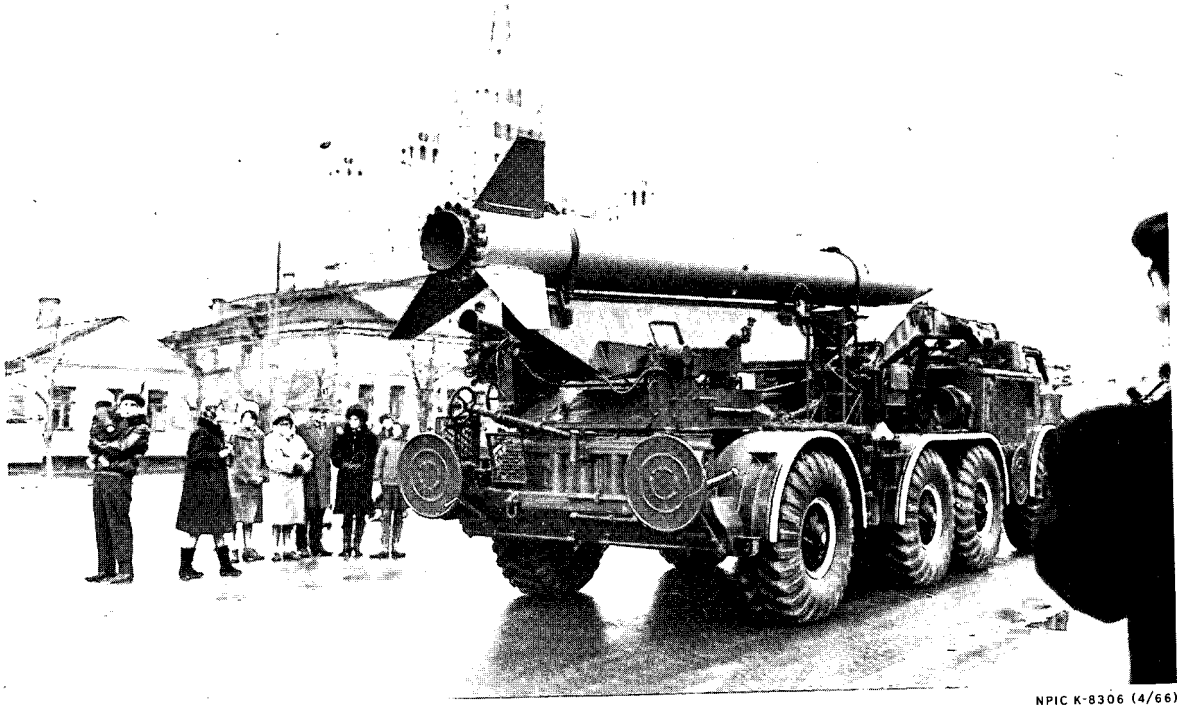

FIGURE 3. SIDE AND REAR VIEWS OF FROG 7 ON TEL.

REFERENCES

PHOTOGRAPHY

25X1D AFSC. [redacted] 7 Nov 65, selected photos (CONFIDENTIAL)

DOCUMENT

25X1D 1. DOD. [redacted] *Moscow Parade of 7 Nov 65* (U), Nov 65 (SECRET)

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