

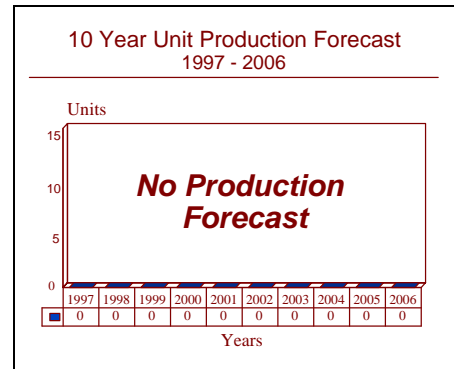
ARCHIVED REPORT

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SO.203 (2S7) Pion 203 mm Self-Propelled Gun - Archived 4/98

Outlook

- The serial production of the SO.203 (2S7) is complete
- A total of 1,039 SO.203 (2S7) systems was manufactured
- Some additional modernization and retrofit potential exists for the remaining systems



Orientation

Description. A tracked 203 millimeter self-propelled artillery system

Sponsor. The development and initial procurement of this artillery system was sponsored by the Ministry of Defense of the former Soviet Union through the Russian Army. Continued support of the system is sponsored by the Ministry of Defense of the Russian Federation.

Contractors. The SO.203 (2S7) Pion was developed and manufactured by the Russian State Arsenals at the Kirov Plant in Saint Petersburg (formerly Leningrad). This facility is now known as Spetmash JSC.

Licensees. None

Status. The serial production of the SO.203 (2S7) was terminated in 1993. The system is in service in the Russian Federation and several other nations.

Total Produced. A total of 1,039 SO.203 (2S7) artillery systems was manufactured.

Application. Mobile fire support for the field army at the front level.

Price Range. In equivalent 1992 United States dollars, the unit price of the SO.203 (2S7) was \$1.219 million.

Technical Data

Crew. Seven: commander, driver plus five crewmen plus seven additional men in the ammunition supply truck.

Muzzle Brake. None

Recoil System. Hydropneumatic

Breech Mechanism. Interrupted screw stepped thread

Ammunition. The Pion uses separate loading ammunition in High Explosive Fragmentation, High Explosive (Rocket Assisted Projectile) Chemical, Nuclear, High Explosive/concrete piercing types.

Dimensions. The following dimensional data are for the 2S7M, called the Malka, the latest production model of the system. While the dimensions are the same as the original 2S7, this version can carry eight projectiles and charges as opposed to four in the original SO.203 (2S7) Pion version. The maximum firing rate has been increased from 1.5 rounds per minute to 2.5 rounds per minute. The 2S7M has a new radio and firing data can be relayed directly to the gun as opposed as being through an intermediate relay in the original system.

	<u>SI units</u>	<u>US units</u>
Length overall	13.12 m	43.04 ft
Width	3.38 meters	11.08 feet
Height	3.06 meters	10.03 feet
Combat weight	46.08 tonnes	50.79 tons
Fuel capacity	850 liters	226.06 gallons
Ordnance caliber	203 millimeters	8.0 inches

Performance. The following automotive performance data is on a metalled road. The maximum range figure for the 2A44 cannon is with non-assisted ammunition.

Maximum speed	50 kilometers per hour	31.05 miles per hour
Maximum range	675 kilometers	419.2 statute miles
Step	70 centimeters	2.3 feet
Trench	2.46 meters	8.07 feet
Slope	22%	22%
Gradient	41%	41%
Fording	1.2 meters	3.94 feet
Elevation	+60°	+60°
Depression	0°	0°
Traverse (total)	30°	30°
Maximum ordnance range	37.5 kilometers	41,010 yards
Maximum rate of fire	2.5 rounds per minute	2.5 rounds per minute
Sustained rate of fire	1 round in two minutes	1 round in two minutes

The barrel life of the 56.2 caliber 2A44 cannon is 450 rounds.

Engine. The SO.203 (2S7) uses an unidentified diesel engine rated at 555.0 kilowatts (744 horsepower). This liquid cooled V-12 engine is provided by the Russian State Factories. The power-to-weight ratio is 11.94 kilowatts per tonne (15.52 horsepower per ton).

Gearbox. The SO.203 (2S7) uses an unidentified manually operated gearbox provided by the Russian State Factories.

Suspension and Running Gear. The SO.203 (2S7) uses a torsion bar type suspension with seven dual-tired road

wheels on each side; the rear road wheel acts as the idler. There are six track return rollers mounted on each side supporting the inside of the track.

Fire Control. The gunner is provided with a PG-1M panoramic periscope and K-1 collimator; target data is normally transmitted to the self-propelled gun from other sources. For direct fire engagements, an OP4M-87 telescope is used.

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