

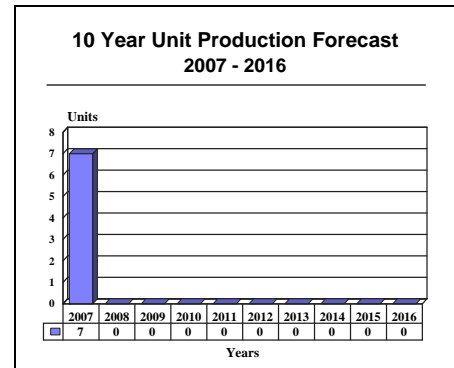
ARCHIVED REPORT

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Type 87 - Archived 9/2008

Outlook

- Low-rate serial production, exclusively for JGSDF procurement, now reportedly in final year
- No market impact, as Japanese law precludes Type 87 export sales
- No modernization or retrofit potential outside of Japan
- Production forecast reflects expected completion of 150-unit JGSDF procurement objective



Orientation

Description. A wheeled armored vehicle.

Status. Development through serial production.

Sponsors. The Japan Defense Agency, through the Japan Ground Self-Defense Force (JGSDF), sponsored the development and procurement of this vehicle.

Total Produced. Through 2006, we estimate the prime contractor produced 145 Type 87 vehicles.

On January 9, 2007, the JDA officially became the Japan Ministry of Defense.

Application. A scout/reconnaissance and patrol vehicle.

Licensees. None

Price Range. In 2007 U.S. dollars, we estimate the Type 87 carries a unit price of \$652,405.

Contractors

Prime

Komatsu Ltd	http://www.komatsu.com , 2-3-6 Akasaka, Minato-ku, Tokyo, 107-8414 Japan, Tel: + 81 3 5561 2616, Prime
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Subcontractor

Isuzu Motors Ltd	http://www.isuzu.co.jp , 6-26-1 Minami-Oi, Shinagawa-ku, Tokyo, 140-8722 Japan, Tel: + 81 3 5471 1141 (Model 10PBI Diesel Engine)
Japan Steel Works	http://www.jsw.co.jp , Hibaya Mitsui Bldg, 1-2, Yuraku-cho, 1-chome, Chiyoda-ku, Tokyo, 100-8456 Japan, Tel: + 81 3501 6136, Fax: + 81 3595 4624 (Licensed 25mm KBA Cannon)
Mitsubishi Heavy Industries Ltd	http://www.mhi.co.jp , 16-5 Konan 2-chome, Minato-ku, Tokyo, 108-8215 Japan, Tel: + 81 3 6716 3111, Fax: + 81 3 6716 5800 (Type 87 Automotive Components)

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Contractors are invited to submit updated information to Editor, International Contractors, Forecast International, 22 Commerce Road, Newtown, CT 06470, USA; rich.pettibone@forecast1.com

Technical Data

Crew. Five: commander, gunner, driver, assistant driver/radio operator, and observer.

Armor. Aluminum armor, providing all-around protection against 7.62mm armor piercing projectiles.

Configuration. 6x6

Dimensions. The following data reflect the production standard Type 87 vehicle.

	<u>SI Units</u>	<u>U.S. Units</u>
Length	5.99 meters	19.65 feet
Width	2.48 meters	8.14 feet
Height	2.81 meters	9.21 feet
Combat weight	14 tonnes	15.43 tons
Fuel capacity	410 liters	109.04 gallons

Performance. The speed and range data reflect use on a paved road.

	<u>SI Units</u>	<u>U.S. Units</u>
Maximum speed	100 kilometers per hour	62.50 miles per hour
Maximum range	500 kilometers	310.50 statute miles
Step	60 centimeters	1.97 feet
Trench	1.50 meters	4.92 feet
Slope	35%	35%
Gradient	60%	60%
Fording	95 centimeters	3.11 feet

Engine. Isuzu Model 10PBI liquid-cooled, 10-cylinder diesel engine. This powerplant generates 229.77 kilowatts (308 hp), with a power-to-weight ratio of 16.41 kilowatts per tonne (19.96 hp/ton). Details regarding the electrical system are not available.

vehicle features hydraulic power steering and radial 14.00x20 run-flat tires.

Armament

Main Armament. Örlikon-Contraves 25mm KBA cannon, mounted in a two-man, power-operated turret. Japan Steel Works produces the ordnance under license.

Secondary Armament. One coaxially mounted 7.62x51mm NATO (.308 Winchester) Type 74 machine gun. Three electrically operated smoke grenade launchers mount on each side of the turret.

Gearbox. An unspecified manually operated gearbox, with one reverse and six forward gear ratios.

Suspension and Running Gear. Independently sprung suspension system, with a coil spring and hydro-pneumatic shock damper at each wheel station. The

Program Review

Background. In the early 1970s, the Japan Ground Self-Defense Force (JGSDF) began to examine replacing the Type 73 and SU 60 armored personnel carriers employed as reconnaissance and patrol vehicles with a dedicated reconnaissance vehicle design.

Dedicated Reconnaissance Design

The program received initial development funding in 1973; the 1974 defense budget authorized the construction of four prototypes (two 4x4 and two 6x6

vehicles). Following competitive evaluations, the development team settled on the 6x6 configuration. In 1978, two definitive reconnaissance and patrol vehicle prototypes rolled out; the effort cost an estimated JPY342 million.

Following additional evaluations and minor modifications, the JGSDF type-classified the vehicle as the Type 87 in 1987. The JDA awarded Komatsu the initial

Type 87

production contract in 1988; the Type 87 entered serial production in 1989.

Description. In the all-welded aluminum alloy hull, the driver sits at the right front; the radio operator/assistant driver sits to the left front. The driver's station features a single-piece hatch cover and three fixed day periscopes; the center periscope is interchangeable with a night vision device. The crew station for the radio operator/assistant driver features a single-piece hatch cover and a single periscope.

The fighting compartment with a two-man power-operated turret occupies the center of the vehicle. The gunner sits to the left of the main armament; the commander sits to the right. The gunner's station features a hatch cover, a day/night sight, and a single periscope. The commander's station features a hatch cover, a roof-mounted sight, and six periscopes.

...Plus a Rear Observer

The engine of the Type 87 is in the rear of the vehicle, with an aisle for the observer to the left. The observer's

station features a rearward-facing periscope. Each side of the vehicle has an observation block. A door on the left side of the vehicle provides primary access/egress; the door features a vision block and an observation flap.

The Type 87 is not amphibious. The vehicle does not feature a nuclear, biological, and chemical (NBC) protective suite.

Significant News

Japan: No Plans to Amend Arms Export Policy – Japan does not plan to lift its ban on arms exports. Yasuhisa Shiozaki, a top government spokesman, said the government does not plan to review its arms export ban. This comment came just days after Japanese Defense Minister Fumio Kyuma said it was time to rethink the controls and allow Japan to develop weapons with the United States.

Since 1976, Japan has effectively banned all arms exports. The ban was loosened in 2004 to allow Japan to cooperate with the United States on missile defense technology. (Reuters, 5/07)

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Funding

The Japan Ministry of Defense (formerly known as the Japan Defense Agency, JDA), through the Japan Ground Self-Defense Force (JGSDF), funds the development and JGSDF procurement of the Type 87.

Timetable

<u>Month</u>	<u>Year</u>	<u>Major Development</u>
Early	1973	Concept definition begins
Mid	1974	Initial funding for 4x4 and 6x6 evaluation vehicles
	1975-1977	Evaluations of first vehicles
Late	1978	JDA awards contract for definitive prototypes
	1978	Fabrication of first two prototypes
	1987	Type classification as Type 87
	1988	JDA awards production contract
	2007	Low-rate serial production continues for JGSDF procurement; production run will conclude sometime in 2007

Type 87

MonthYearMajor Development

Worldwide Distribution/Inventories

Export Potential. None. The Japanese Constitution precludes the export of military hardware.

Countries. Japan (145).

Forecast Rationale

The Type 87 scout/reconnaissance vehicle is now in its final year of low-rate serial production, exclusively for the Japan Ground Self-Defense Force (JGSDF). As is common to Japanese armored vehicle programs, the Type 87 production line is reportedly proceeding at the inefficient rate of less than one vehicle per month toward the JGSDF procurement objective of 150 vehicles.

Spared the Budget Ax

The Japan Ministry of Defense (formerly known as the Japan Defense Agency) and its contractors maintain strict security concerning domestic military programs. While such an environment limits our ability to evaluate the Type 87 program, information continues to trickle out. Although the JGSDF is facing significant budget reductions, available evidence suggests these cuts may not lead to a truncated Type 87 program. In terms of

JGSDF appropriations, the final seven vehicles are in production already.

Blessing in Disguise?

As Japan's constitution precludes the export of Japanese military hardware, the Type 87 has no direct impact on the international light-wheeled vehicles market. However, given the extremely high-end unit price of this vehicle (a chronic symptom of the Japanese defense industry), this vehicle would be unable to compete in a glutted international market anyway.

End of the Run?

Our 10-year production outlook reflects the completion of Type 87 production for JGSDF procurement. Unless the JGSDF places a follow-on order, we forecast that the Type 87 production run will end sometime this year.

Ten-Year Outlook

ESTIMATED CALENDAR YEAR PRODUCTION

Vehicle	(Engine)	High Confidence Level				Good Confidence Level			Speculative			Total 07-16	
		thru 06	07	08	09	10	11	12	13	14	15		16
KOMATSU INDUSTRIES													
TYPE 87	10PBI	145	7	0	0	0	0	0	0	0	0	0	7
Total Production		145	7	0	0	0	0	0	0	0	0	0	7



JGSD Type 87 Scout/Reconnaissance Vehicle

Source: Japan Ministry of Defense