

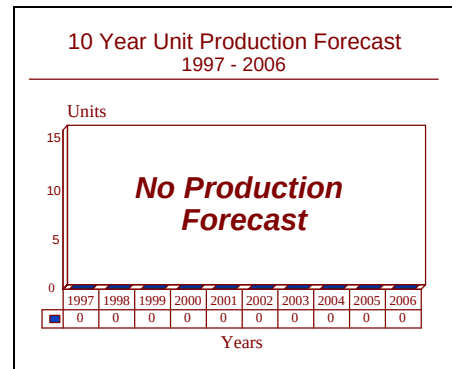
ARCHIVED REPORT

For data and forecasts on current programs please visit
www.forecastinternational.com or call +1 203.426.0800

Type 74 - Archived 4/97

Outlook

- Serial production of the Type 74 for Japan is complete
- Total of 873 Type 74 tanks was manufactured
- Type 74 has not and will not be exported
- At present, there are no significant modernization or retrofit programs for this tank



Orientation

Description. A tank.

Sponsor. The development and procurement of the Type 74 has been sponsored by the Japanese Defense Agency, Japanese Defense Agency Bureau of Equipment, Japanese Ground Self-Defense Force through the Technical Research and Development Institute, Setagaya-ku, Tokyo, Japan.

Contractors. This tank was developed and manufactured by Mitsubishi Heavy Industries Limited, Special Vehicle Division, Chiyoda-Ku, Tokyo, Japan. The major subcontractors include Japan Electric Works, Mitsubishi Electric Company, Nippon Kogaku, Japan Steel Works.

Licensees. None

Status. The Type 74 is in service with the Japanese Ground Self-Defense Force; production of this tank was completed in 1991. The Type 74 is being complimented and will eventually be superseded by the new Type 90 tank (see separate report).

Total Produced. A total of 873 Type 74 tanks was manufactured.

Application. A tank for the projection of power as well as defensive operations. The Type 74 is the primary offensive weapon for Japanese ground defense forces.

Price Range. Due to the advanced suspension system and ridiculously low production rate, in its class and its time frame, the Type 74 was the most expensive tank in the world. The unit price in equivalent 1991 United States dollars was \$4.821 million.

Technical Data

Crew. Four: commander, gunner, loader, driver

Armor. The Type 74 is fabricated from conventional steel alloy armor with a level of protection similar to

the original M60. In the late eighties, additional appliqué armor was fitted to the top and forward portions of the turret.

Dimensions. This data is pertinent to the Type 74 tank in its last production configuration.

Length	<u>SI units</u> 9.42 meters
Width	3.18 meters

<u>US units</u> 30.91 feet
10.43 feet

Height	2.48 meters	8.14 feet
Combat weight	38.00 tonnes	41.88 tons
Fuel capacity	950 liters	252.66 gallons

Performance. The maximum speed and range figures are for a metalled road. Some sources state that the top speed of this tank is slightly over 60 kilometers per hour (37.3 miles per hour).

Maximum speed	53 kilometers per hour	32.91 miles per hour
Maximum range	340 kilometers	211.14 statute miles
Step	100 centimeters	3.28 feet
Trench	2.7 meters	8.85 feet
Slope	40%	40%
Gradient	60%	60%
Fording	1.07 meters	3.51 feet

Engine. This tank uses the Mitsubishi 10ZF Type 22WT, two-cycle, air-cooled, ten cylinder, 90°V supercharged diesel engine with fuel injection. The maximum power output is 536.9 kilowatts (720 horsepower) at 36.67 revolutions per second (2,200 revolutions per minute). The compression ratio is 18.7:1 and the swept volume is 21.5 liters. The power-to-weight ratio with this engine is 14.13 kilowatts per tonne (17.19 horsepower per ton). A 24 volt electrical system is used.

Gearbox. The Type 74 uses a Mitsubishi MT75A planetary-gearred powershift with a wet multi-plate clutch with six forward and one reverse gear ratios. Double differential-type steering is used.

Suspension and Running Gear. The Type 74 uses a unique adjustable cross linked hydro-pneumatic suspension system that can be adjusted to the type of terrain the vehicle is operating in. This technology allows for the tank to raise or lower itself, tilt to the forward or to the rear or to tilt to either side. Five dual tired road wheels are fitted to each side of the tank; there are no return rollers.

Armament. The primary weapon is the Royal Ordnance 105 millimeter L7 tank cannon manufactured under license by Japan Steel Works. The 51 caliber cannon has a muzzle velocity of 609 meters per second (1,998 feet per second). Beginning in the late eighties, the Japanese began to retrofit a thermal sleeve to the L/7. This tank cannon is compatible with all NATO standard tank cannon ammunition of this caliber including

Armor Piercing Discarding Sabot-Tracer and High Explosive

Plastic-Tracer ammunition and, more recently, Armor Piercing Fin Stabilized Discarding Sabot-Tracer. A total of 55 rounds are carried with 14 for ready use in the turret. The commander's cupola is fitted with an M2HB 12.7 millimeter anti-aircraft machine gun with 450 ready rounds. A coaxial Type 74 7.62 millimeter machine gun was developed by Nihon Tokushya Kinoza Company Limited for the Type 74 tank and has 200 ready rounds with some 800 rounds stored. Triple 60 millimeter smoke dischargers are mounted on each side at the rear of the turret. The smoke grenades are ignited some 30 meters above ground level and form a covering cloud of 50 meters in width.

Fire Control. A Mitsubishi analog ballistic computer drives the all-electric turret/gun control system which is stabilized in the vertical and horizontal axes. A laser rangefinder provided by Japan Electric Works is accurate to ten meters (10.94 yards) at 200 meters to 2,000 meters (218.7 yards to 2,187.2 yards). The J-3 optical sight manufactured by Nippon Kogaku at the commander's position is slaved to the computer, provided by Mitsubishi Electric Company. The gunner's primary sight is a J-2 periscope; the commander has a J-3 periscope. The gunner's night sight is an infrared version of the J-2 and the commander's is an infrared version of the J-3. A white/infrared searchlight is mounted on the turret.

Beginning in the late eighties, passive thermal sights were added to the Type 74.

Variants/Upgrades

Variants. As of early 1997, several variants of the Type 74 had been developed.

The Type 78 armored recovery vehicle began development in 1974 and was type-designated in 1978. The

chassis of the Type 74 is modified with the crew compartment forward, a hydraulically operated dozer blade up front and a similarly powered crane on the right side of the hull. The crane can lift 20 tonnes (22.04

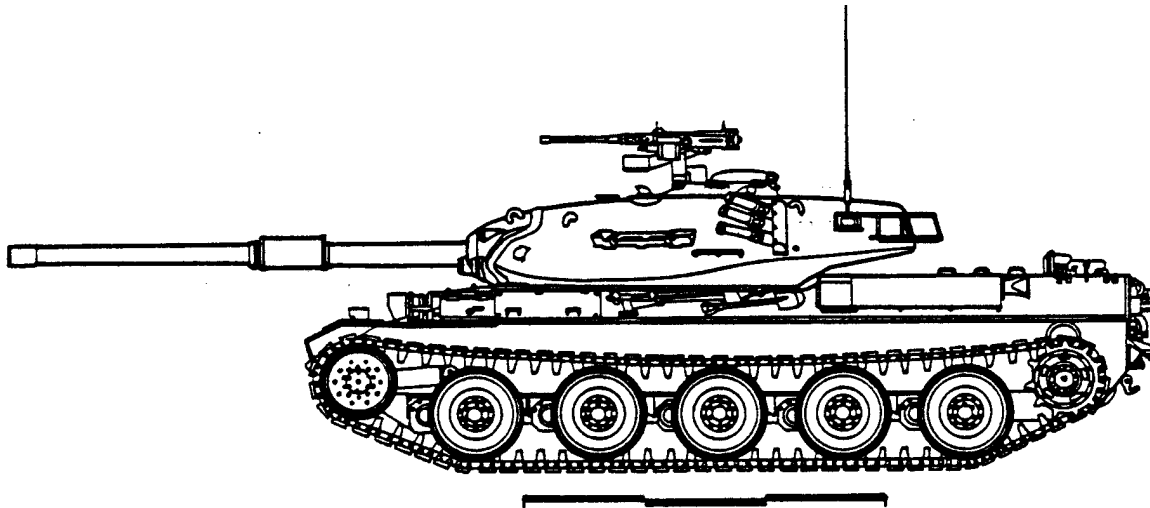
tons) while the winch has a capacity of 38 tonnes (41.89 tons). A single 12.7 millimeter M2HB machine gun is fitted. This program is described in the Engineer Vehicles section of this book.

The Type 91 armored vehicle launched bridge is based on the hull and chassis of the Type 74 tank.

In the eighties, a Type 74 chassis was test fitted with an unspecified 105 millimeter howitzer for trials of a self-propelled howitzer. This program is now dormant.

The Type 74 chassis is also the basis for the Type 87 (formerly AW-X) self-propelled anti-aircraft artillery system which is described in the Munitions and Ordnance book that is a companion volume to this.

An unknown number of Type 74 tanks have been retrofitted with a dozer blade and the associated hydraulic control equipment.



TYPE 74

Source: Forecast International

* * *