

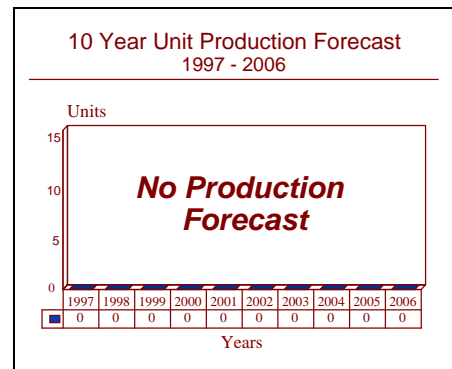
ARCHIVED REPORT

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Type 85 122 mm Self-Propelled Howitzer - Archived 4/97

Outlook

- The serial production of the Type 85 is dormant and not forecast to be resumed
- A total of 754 Type 85 systems has been manufactured
- Some modernization and retrofit potential will exist for this system



Orientation

Description. A tracked 122 millimeter self-propelled artillery system

Sponsor. This development and procurement of this self-propelled artillery system is sponsored by the Ministry of National Defense through the People's Liberation Army.

Contractors. The Type 85 was developed and is manufactured by the Ministry of Ordnance Industry of the People's Republic of China at the Chinese State Arsenals at undetermined locations.

Licensees. None

Status. The serial production of the Type 85 went dormant in 1993 in the People's Republic of China; the system remains in service.

Total Produced. As of January 1, 1997, a total of 754 Type 85 self-propelled artillery systems had been manufactured.

Application. Fire support for the field army at the battalion and division levels.

Price Range. In equivalent 1993 United States dollars, the unit price of the Type 85 was \$894,020.

Technical Data

Crew. Six: commander, gunner, three loaders and driver.

Muzzle Brake. Multibaffle

Recoil System. Hydropneumatic

Breech Mechanism. Semi-automatic vertical sliding wedge

Ammunition. This artillery system fires the following 122 millimeter separate pattern ammunition types that are interchangeable with the D.30 122 millimeter howitzer, which the Chinese also manufacture. The types are High Explosive, High Explosive Incendiary, High Explosive Rocket Assisted Projectile, High Explosive Anti-Tank, High Explosive Fragmentation, Chemical (two types), Illumination, Cargo and Smoke. It is also able to fire Chinese-developed versions of the

late Doctor G.V. Bull's Extended Range Full Bore ammunition in several types.

Armor. Conventional steel alloy affording protection from 7.62 millimeter projectiles and ballistic fragments.

Dimensions. The following dimensions are for the last production standard.

	<u>SI units</u>	<u>US units</u>
Length overall	6.66 meters	21.85 feet
Width	3.07 meters	10.07 feet
Height	2.85 meters	9.35 feet
Combat weight	16.5 tonnes	18.19 tons
Fuel capacity	450 liters	119.68 gallons
Ordnance caliber	122 millimeters	4.80 inches

Performance. The maximum range figure for the Chinese D.30 ordnance is for when it is used in the gun mode and is with the High Explosive Extended Range Full Bore projectile. The maximum speed and vehicle range data are for a metalled road.

Maximum speed	60 kilometers per hour	37.3 miles per hour
Maximum range	511 kilometers	317.3 statute miles
Step	60 centimeters	1.96 feet
Trench	2.2 meters	7.22 feet
Slope	29%	29%
Gradient	53%	53%
Fording	amphibious	amphibious
Elevation	+70°	+70°
Depression	-5°	-5°
Traverse	22.5° left and right	22.5° left and right
Maximum ordnance range	21.01 kilometers	22,976.5 yards
Maximum rate of fire	8 rounds per minute	8 rounds per minute
Sustained rate of fire	2 rounds per minute	2 rounds per minute

Engine. The Type 85 uses the Type BF8L413F diesel engine; this air-cooled engine is rated at 238.72 kilowatts (320 horsepower) and is provided by the Chinese State Factories. The power-to-weight ratio is 14.47 kilowatts per tonne (17.59 horsepower per ton).

Gearbox. The Type 85 uses an unidentified manually operated constant mesh type gearbox with five forward and one reverse gear ratios. This unit is provided by the Chinese State Factories.

Suspension and Running Gear. The Type 85 uses a torsion bar type suspension with five dual-tired road

wheels and three return rollers on each side. The drive sprocket is at the front, while the rear road wheel acts as the idler.

Fire Control. The fire control suite of the Type 85 is very austere. Normally used for indirect fires, the Type 85 usually receives target data from a forward controller through a command post; the crew of the Type 85 then lays the cannon accordingly. A direct fire telescope is provided.

Variants/Upgrades

Variants. The Type 85 122 millimeter self-propelled artillery system is based on the chassis of the Type 85 (Type YW 531H) armored personnel carrier, which is in

turn a slightly modified Type YW 534. Both these vehicles are described in the military vehicles book that is a companion volume to this.

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