

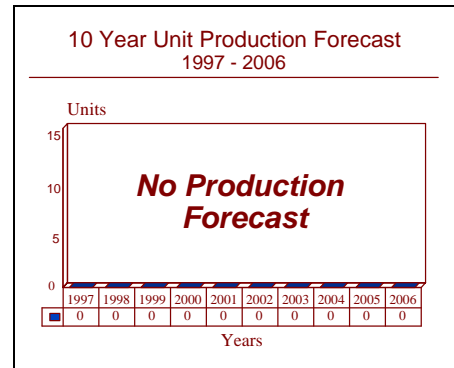
ARCHIVED REPORT

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FV433 Abbot 105 mm Self-Propelled Howitzer - Archived 4/97

Outlook

- The serial production of the FV433 Abbot was completed in 1967
- A total of 246 Abbot systems was manufactured
- The Abbot remains in service in India
- No significant modernization or retrofit of the Abbot is expected for the remainder of its service life



Orientation

Description. A tracked 105 millimeter self-propelled artillery system

Sponsor. The development and procurement of the Abbot was sponsored by the United Kingdom Ministry of Defence, Ministry of Defence Procurement Executive through the Ordnance Board and the Ministry of Defence Army Department, the British Army.

Contractors. The Abbot was developed and manufactured by Vickers Defence Systems, Newcastle-Upon-Tyne, England, United Kingdom. Major subcontractors include the Allison Transmission Division of General Motors Corporation, Perkins Engines and Royal Ordnance.

Licensees. None

Status. The production of the Abbot for the British and export is complete and the system remains in service in India. The United Kingdom has retired its Abbots and scrapped a portion of the inventory.

Total Produced. A total of 246 Abbot systems was manufactured.

Application. Mobile artillery support at the battalion level.

Price Range. In equivalent 1967 United States dollars, the Abbot had a unit price of \$208,000. This vehicle has not yet been traded on the export market.

Technical Data

Crew. Four

Muzzle Brake. Double baffle

Recoil System. Hydropneumatic

Dimensions. The following data are for the British Army Abbot with the British Army Value Engineered Abbot in parentheses.

Breech Mechanism. Vertical sliding block

Ammunition. L31 (High Explosive), L42 (High Explosive Squash Head), L41 (Squash Head/Practice), L45 (Smoke), L37 (Smoke) and L38 (Smoke).

SI units

US units

Length	5.84 (5.71) meters	19.2 (18.73) feet
Width	2.64 meters	8.66 feet
Height	2.5 meters	8.2 feet
Combat weight	16.56 (15.9) tonnes	18.25 (17.53) tons
Fuel capacity	386 liters	102.66 gallons
Ordnance caliber	105 millimeters	4.13 inches

Performance. The maximum vehicle speed and range are on a surfaced road. The maximum ordnance range is when firing the High Explosive projectile.

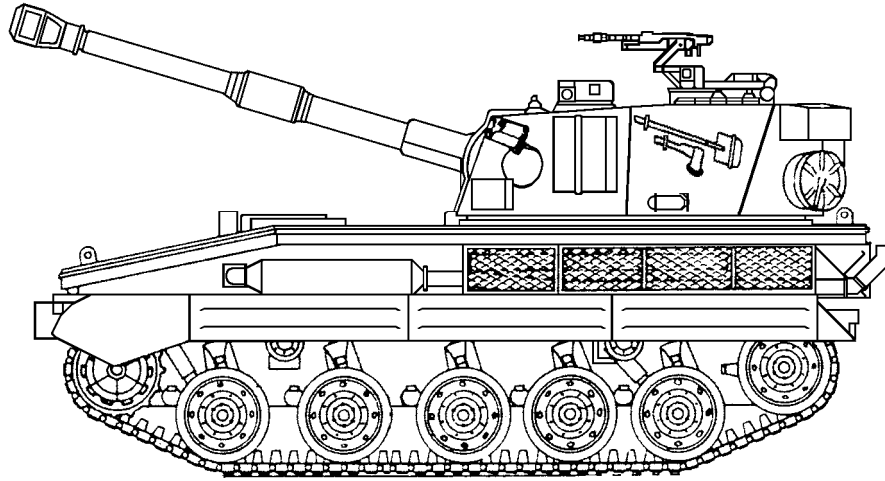
	<u>SI units</u>	<u>US units</u>
Maximum speed	47.5 kilometers per hour	29.5 miles per hour
Maximum range	390 kilometers	242.2 statute miles
Step	61 centimeters	2.0 feet
Trench	2.06 meters	6.76 feet
Slope	30%	30%
Gradient	60%	60%
Fording	1.22 (1.12) meters	4.0 (3.67) feet
Elevation	+70°	+70°
Depression	-5°	-5°
Traverse	360°	360°
Maximum ordnance range	17,000 meters	18,591.2 yards
Maximum rate of fire	12 rounds per minute	12 rounds per minute

Engine. The basic Abbot is fitted with a Perkins Engines K60 Mark 4G six cylinder multi-fuel diesel engine rated at 179.04 kilowatts (240 horsepower) at 62.5 revolutions per second (3,750 revolutions per minute). The power-to-weight ratio is 10.81 kilowatts per tonne (13.15 horsepower per ton). The Value Engineered Abbot is equipped with the very similar K60 Mark 60G/1 diesel engine rated at 158.89 kilowatts (213 horsepower) at 62.5 revolutions per second (3,750 revolutions per minute). The power-to-weight ratio is 9.99 kilowatts per tonne (12.15 horsepower per ton). A 24 volt electrical system with four 12 volt batteries (two in Value Engineered Abbot) is the standard electric fit.

Gearbox. The Allison Transmission Division of General Motors Corporation supplies the TX-200 automatic gearbox with six forward and one reverse gear ratios.

Suspension and Running Gear. The Abbot uses a torsion bar type suspension system with five dual tired roadwheels and two track return rollers. The drive sprocket is at the front with the idler at the rear and the first and last roadwheel stations are fitted with hydraulic shock dampers.

Fire Control. The Abbot is normally used in indirect fire missions with target data provided by a forward observer and relayed to a command post for transmission to the Abbot crew which then lays the cannon. A roof-mounted periscopic sight is fitted on a rotating cupola. A direct fire sight is also fitted.



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