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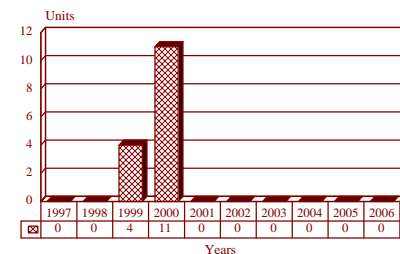
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Commando Scout - Archived 8/98

Outlook

- Production of the Commando Scout is on an as-needed basis but has been dormant for some time
- This vehicle continues to be promoted on the export market but sales have been less than sanguine
- This vehicle represents only a minimal potential for modernization and retrofit

10 Year Unit Production Forecast
1997-2006



Orientation

Description. A wheeled vehicle

Sponsor. The Commando Scout vehicle is a private development program funded by the contractor Textron Marine & Land Systems.

Contractors. The Commando Scout was developed and is manufactured by Textron Marine & Land Systems, New Orleans, Louisiana, United States of America (formerly Cadillac Gage Textron Incorporated). Major subcontractors include Cummins Engine Company and the Allison Transmission Division of General Motors Corporation.

Licensees. None

Status. The production of the Commando Scout is on an as needed basis; the vehicle is in service in several countries.

Total Produced. As of January 1, 1997, a total of 142 Commando Scout vehicles had been manufactured.

Application. A light armored scout and reconnaissance vehicle for the support of the combined arms team, border patrol, counterinsurgency, internal/base security or police missions.

Price Range. In 1997 United States dollars, the Commando Scout has a unit price of \$203,050 for the basic vehicle.

Technical Data

Crew. Two or three, dependent on armament configuration

Configuration. 4x4

Dimensions. The following data are for the latest production standard of the basic vehicle. The height is with the One Meter Turret equipped with twin 7.62 millimeter machine guns.

	SI units	US units
Length	5.01 meters	16.5 feet
Width	2.06 meters	6.76 feet
Height	2.16 meters	7.08 feet
Combat weight	7.24 tonnes	7.98 tons
Fuel capacity	378 liters	100.53 gallons

Performance. The maximum speed and range figures are on a metalled road.

Maximum speed	96 kilometers per hour	59.61 miles per hour
Maximum range	1,287 kilometers	799.23 statute miles
Step	61 centimeters	2.00 feet
Trench	60 centimeters	1.96 feet
Slope	30%	30%
Gradient	60%	60%
Fording	1.17 meters	3.83 feet

Engine. This vehicle is fitted with the Cummins V-378 diesel engine of V-6 configuration. This engine is rated at 111.15 kilowatts (149 horsepower) at 55 revolutions per second (3,300 revolutions per minute). The power-to-weight ratio is 15.35 kilowatts per tonne (18.67 horsepower per ton). A 24 volt generator and two 12 volt 100 ampere-hour batteries comprise the electrical fit for the Commando Scout.

Gearbox. The Allison Transmission Division of General Motors Corporation provides the automatic unit with four forward and one reverse gear ratios and manual selection of two or four wheel drive through a two speed transfer case.

Suspension and Running Gear. The 4x4 Commando Scout uses coil springs over a solid axle linked to trailing arms for the front two wheels. The rear wheels are mounted on an independently sprung rear axle with

coil springs fitted on each wheel station. Hydraulic steering is used and radial type 15.5x21 run flat tires are used; a dual braking system is fitted.

Armament. The weapons suite of the Commando Scout depends upon the variant. The basic One Meter Turret on the scout/reconnaissance vehicle has several options for machine guns. The options are either twin 7.62 millimeter, or 12.7 millimeter machine guns, or a combination of these. The maximum ammunition load is 2,400 rounds (with 200 rounds at the ready) for twin 7.62 millimeter machine guns. Anti-tank versions are equipped with the BGM-71 TOW anti-tank missile system or the M40 106 millimeter recoilless rifle. Another fitting is the 40 millimeter/12.7 millimeter two man turret as used on the AAV-7. This turret mounts the Mark 19 Mod 3 40 millimeter automatic grenade launcher and a M2HB 12.7 millimeter machine gun.

Variants/Upgrades

Variants. The Commando Scout has been developed into a number of variants as described below:

Command Pod Scout. This is the standard vehicle fitted with a command pod, which is mounted on top of the vehicle, is fitted with four direct view vision blocks with shields and two firing ports. On top of the pod is a hatch and a pintle mounted 7.62 millimeter machine gun with shield; 3,000 rounds of ammunition is carried. The vehicle is crewed by three; it carries additional communications equipment with the antennas mounted on the rear of the hull.

TOW Missile Scout. This variant is equipped with a BGM-71 TOW missile launcher. Two missiles are carried in the vehicle and four additional BGM-71 TOW missiles can be stored outside the vehicle. The system has a range of 3,000 meters and can be traversed through 120° and has an elevation of +30° and a depression angle of -10°. The two crew members enter through the rear access door which is in two sections. The top section opens laterally while the bottom section drops to the ground to form a ramp. A standard ground

mount for the TOW launcher is carried in the vehicle. Two mounting positions for a 7.62 millimeter machine gun are provided as is storage for 2,000 rounds of 7.62 millimeter ammunition.

Scout With 106 Millimeter Recoilless Rifle. This variant is equipped with a modified pod with top-opening doors. Mounted on a 150 degree traversing mount is a M40 106 (actually 105) millimeter recoilless rifle. The M40 is equipped with a 12.7 millimeter M-8C spotting rifle. The spotting rifle has 100 rounds stowed with 15 rounds of 106 millimeter ammunition stowed. The M40 can be elevated or depressed ten degrees.

Scout With Twin/Combination One Meter Turret. Textron Marine & Land Systems (Cadillac Gage) manufacturers the One Meter Turret which can be fitted with a variety of weapons. The turret is manually/electrically rotated by the Power Assist Traverse mechanism with a manual back-up. This turret, when equipped with twin 7.62 millimeter machine guns, has the following specifications:

Rotation Powered	360° at 60° per second
Elevation/depression	+55° to -8°
Type	Electro-hydraulic
Crew	One
Weight	1,115 kilograms (1.22 tons)
Power requirement	24 volts

Alternately, this turret can be fitted with twin 7.62 or 12.7 millimeter machine guns or a mix of these two weapons, or a 7.62 millimeter machine gun and a Mark 19 automatic grenade launcher.

The turret comes equipped with electrically operated smoke grenade launchers, an internally controlled weapons charging mechanism, eight vision blocks, a coaxially mounted twenty centimeter 500,000 candlepower spotlight and an emergency back-up mechanism to operate the turret in the event of damage or failure of the power equipment. A M28C sight (1.5x or 5x) is also fitted.

Scout With 20 millimeter One Meter Turret. The Textron Marine & Land Systems (Cadillac Gage) One Meter Turret can be fitted with a 20 millimeter

Örlikon cannon and 7.62 millimeter machine gun. The turret is fully powered with manual back-up and is fitted with a rate controller for the 20 millimeter cannon, hydraulically operated weapons charging system and ventilation system. A coaxially mounted twenty centimeter 500,000 candlepower spotlight and an emergency back-up mechanism to operate the turret in the event of damage or failure of the power equipment. A M28C sight (1.5x or 5x) are also fitted. A total of 200 ready use and 200 stored rounds of 20 millimeter ammunition is carried; 220 rounds of 7.62 millimeter rounds are at the ready and 2,200 rounds stored.

Scout with 40 millimeter/12.7 millimeter Turret. This version of the Scout mounts the same one-man 40 millimeter/12.7 millimeter turret as used on the AAV-7. The manually operated turret mounts a M2HB 12.7 millimeter machine gun and a Mark 19 automatic grenade launcher.

Modernization and Retrofit Overview. As of mid-1997, no significant modernization or retrofit programs had been developed for the Commando Scout.

Program Review

Background. The Commando Scout was initiated as a private venture for the United States Army's Combat Support Vehicle program by the then Cadillac Gage Textron and was unveiled in 1977. Basically, the vehicle has capitalized on the firm's expertise with the larger V-300 and V-150 armored personnel carrier vehicles. The Scout is a four wheel drive vehicle that is specifically designed for reconnaissance, but it can be readily modified for command and control as well as anti-tank missions. In 1994, in a reorganization of the parent firm, Cadillac Gage Textron was integrated with another division of the parent and became Textron Marine & Land Systems.

Description. The most striking characteristic of the Commando Scout is its shape. It resembles a modern sports type automobile rather than a military vehicle. The hull is of all welded steel/Cadloy armor construction affording protection from 7.62 millimeter Armor Piercing rounds as well as ballistic fragments. Adding to the survivability of the Commando Scout is its shape. The front of the vehicle slopes gradually upward at a 76° angle towards the rear cupola or turret. This allows for a good degree of ballistic deflection from the front; the sides and the rear of the vehicle are also angled. This gives the Commando Scout a rather futuristic appearance, especially with the low, raked silhouette. The fuel tank is positioned forward between the wheels. The driver is seated on the left side of the vehicle opposite the engine compartment. The driver is

provided with a single piece hatch cover and three periscopes. The engine and gearbox are easily accessed and can be removed and replaced in three hours. The turret or command pod is mounted to the rear of the vehicle; access is by a two-part hatch in the rear. Standard equipment on the Commando Scout includes run-flat tires, handheld fire extinguishers, an air compressor with a 15.24 meter (50-foot) hose, vehicle tool kit, pioneer tool kit and a first aid kit. Optional equipment includes a siren, public address system, various radio installations, a camouflage net, a smoke grenade launcher system and auxiliary fuel and water cans. No nuclear, biological and chemical defense system is fitted.

The Commando Scout has been designed primarily for reconnaissance/surveillance missions. This specific mission requires no heavy armament, but the design of the vehicle lends itself to being fitted with various weapon systems. The various armament fittings are described above.

Operational Analysis. For the often highly publicized "Rat Patrol" type missions, the Commando Scout seems to be an ideal choice. Why the United States Army, particularly the Ninth Infantry Division, has not embraced this unique and capable vehicle is unclear. Instead, the Fast Attack Vehicle, essentially an overpriced "dune buggy," was chosen to fill this mission area. It should be noted that the Army's (as well as other services') existing Fast Attack Vehicle

offers no protection to its crew (or engine) and is not so tactically versatile as the Commando Scout. In any

event, due to official Army statements, any Army procurement of this vehicle is doubtful at best.

Funding

The funding for the development of the Commando Scout was provided by the contractor.

Recent Contracts

Not available as contractual information is not released.

Timetable

This timetable is for the Commando Scout only and does not relate to any of the other Commando vehicles manufactured by Cadillac Gage.

	1975	Private development initiated
Early	1977	Commando Scout unveiled
	1978	Initial development and testing completed
Mar	1983	Limited production started
	1984	First production deliveries
	1985	Final deliveries to Indonesia
Oct	1986	Egyptian order placed
Jul	1987	Egyptian order completed
Mid	1997	Awaiting further production orders

Worldwide Distribution

Export Potential. Despite the fact that the Commando Scout fills an obvious need, six years elapsed before the first order was given for this vehicle. The order was from Indonesia for 28 vehicles. In October of 1986, Egypt placed a \$22.8 million order for the Scout. The contractor Textron Marine & Land Systems continues to use the familiar Cadillac Gage and Commando names in its marketing effort for the Commando Scout. The firm continues to market the Commando Scout, especially in Latin America, with its various options. However, the increasing glut of both new and used vehicles of this type is hindering the marketing effort.

Countries. **Egypt** (112); **Indonesia** (28).

Forecast Rationale

As has been the norm for this program for some time now, nothing new has been heard from the Commando Scout program in the last year. Our research into the program continues to indicate that, other than the glutted conditions of the light wheeled vehicle market, we are still unable to find a reason for the Commando Scout's rather lackluster sales performance. Based on the latest evidence, we can not forecast any procurement of the Commando Scout by the US Army. Since the United States Marine Corps remains fully committed to the LAV-25 (as well as the ridiculous Fast Attack Vehicle), no procurement by the Marines is expected either.

Our research has long indicated (and still does) that the main sales potential for the Commando Scout lies in the export market, particularly those countries that already operate the other Commando range of vehicles. Many of these nations are in Latin America and the Far East, and it is here that we foresee the majority of the sales of this vehicle. Of course, the firm will have to contend with France (as always), as well as the steadily increasing number of new players with a variety of vehicles in this class.

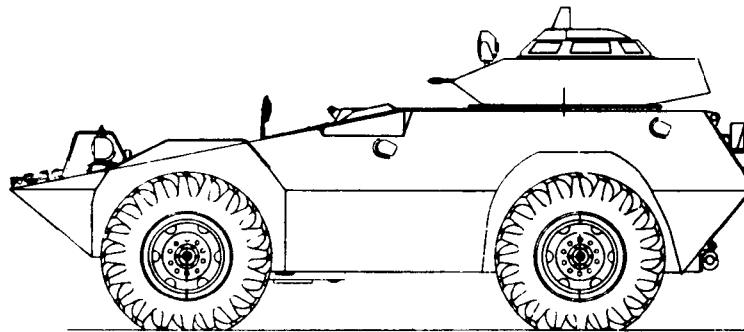
The available evidence supports our forecast for the production of the Commando Scout vehicle to be in an extremely mercurial manner through the coming ten years; in fact, only one order is forecast.

Ten-Year Outlook

ESTIMATED CALENDAR YEAR PRODUCTION

Vehicle	(Engine)	through 96	High Confidence				Good Confidence		Speculative				Total	
			97	98	99	00	01	02	03	04	05	06		
TEXTRON MARINE & LAND SYSTEMS														97-06
COMMANDO SCOUT(a)	V-378	142	0	0	4	11	0	0	0	0	0	0		
Total Production		142	0	0	4	11	0	0	0	0	0	0	15	

(a) The historical production includes two prototype and development vehicles.



Commando Scout

Source: Textron Marine & Land Systems