

# Spanish Cavalry Will Acquire Italian Centauro AFVs

by Colonel Antonio J. Candil

After several years of trying, and always restrained by a limited budget, the Spanish Cavalry is finally getting its future workhorse: it is the Italian 8x8 wheeled armored vehicle called the Centauro B1, currently in service only with the Italian Army.

This well-proven design has already shown its capabilities and has performed very well in Somalia and in Bosnia. With the adoption of the vehicle by the Spanish Army, the Centauro is likely to also be adopted by other armies. It was developed in Italy by Fiat Iveco-Oto Melara and integrates much of the technology learned by Italian industry in the course of producing the Leopard 1 Main Battle Tank under license. As a matter of fact, there are a great number of small details in the Centauro that make us to think of the Leopard 1. In the Spanish Army, the Centauro will be known as the VRC-105 (Combat and Reconnaissance Vehicle, armed with a 105 gun) and could become the standard armored system of the Spanish Cavalry in due course.

According to Spanish Army doctrine, the Cavalry is the combat arm that specializes in reconnaissance, screening, scouting, covering force, flank protection, exploitation, pursuit, delay maneuvers, and withdrawal protection. To accomplish these duties, the Cavalry uses a mix of tanks, armored fighting vehicles, and helicopters: tracks, wheels, and wings, as the Spanish cavalrymen say.

For the time being, both wheeled and tracked armored fighting vehicles are mixed in units even at platoon level in the light armored regiments, but apart from the main battle tank, the heaviest vehicle in today's Spanish Cavalry is the ASCOD (Pizarro), a tracked AFV, and the 6x6 wheeled VEC (Scout Cavalry Vehicle). Both are lightly armed and lightly protected. Neither vehicle has great firepower — the main armament in the ASCOD is a 30mm gun and in the VEC, it is a 25mm Chain Gun, both offering low survivability in a high intensity combat environment.

The Spanish Rapid Reaction Force (FAR) has within its structure a Light Armored Cavalry Regiment, which was



**The Spanish Army is acquiring 22 of these 8x8 Centauro vehicles, built in Italy and in current use by the Italian Army.**

**The 25-ton Centauro mounts a NATO-standard 105mm rifled cannon similar to the weapon system on the U.S. M60 series and the early versions of the M1 tank.**

**Some Centauros are also on loan to the U.S. Army for training the new medium-weight brigades (see related story).**



in need of an armored system with enough firepower and protection. It also needed to be capable of being airlifted with the present medium transport aircraft of the Spanish Air Force, the C-130H Hercules. Several options were available on the world market, but only two seemed to answer the Spanish Army requirements: the Italian AFV Centauro and the French AMX-10RC.

The Spanish Army would have preferred to launch the Centauro procurement program long ago, but funding priority was being committed to the other two main acquisition programs in progress — the MBT Leopard 2 and the AIFV Pizarro/ASCOD. More recently, Spain assumed a bigger role in Allied intervention forces, requiring the Centauro acquisition to be accelerated, despite the budget considerations. The acquisition is not a real program in its

full sense, but an “off-the-shelf” procurement to equip only the Armored Light Cavalry Regiment of the FAR. This will require 22 Centauros for the 8th Light Armored Cavalry Regiment “Lusitania,” in the short term, while a major acquisition program, or even coproduction in Spain, will have to wait for a while.

The Centauro's 8x8 high mobility and its still powerful NATO standard 105-mm main gun in a fast, 25-ton AFV answers the needs of reconnaissance forces and fills the gap between the heavy main battle tanks and lighter armored vehicles.

The Centauro's 8x8 wheels are fitted with an automatic variable inflatable pressure system, CTIS, controlled by the driver, that can provide a low ground pressure of 1 Kg/cm<sup>2</sup>. Due to

the magnificent FIAT/IVECO V6 520 CV diesel engine, Centauro has an overall power/weight ratio that places the vehicle in the lead of the best light armored mobile systems in service by Western armored forces.

The Centauro has been proven extensively in all kinds of terrain, sand, mud and especially rocky grounds with excellent results. In rocky terrain, wheels wear down less than the conventional rubber pads normally used on the Western types of tracks. While a broken track fully immobilizes a tank, the Centauro can still move, even with one or more damaged wheels. The run-flat tires can be used even if they have been damaged by gun fire.

With a German ZF automatic gearbox linked to a powerful diesel engine, the Centauro can negotiate road or motorway movements at high speeds — over 100 kms per hour — exceeding considerably the timing and deployment capabilities offered by main battle tanks and other armored vehicles. In low intensity conflicts — or in peacekeeping operations — such capability would prove extremely useful when long distance movements are required.

With the standard NATO 105/51 rifled gun (the standard cannon on the M60 and early M1-series tanks) as its main armament, the Centauro is the most powerful light armored reconnaissance vehicle deployed so far, and is able to engage not only all the vehicles of its kind, but even most main battle tanks in service. The gun can fire all existing types of ammunition, especially the latest generation APFSDS rounds and even the new high-explosive HE types that are under development in several leading ammunition-producing countries. Of course, it also shoots all the conventional ammunition that is NATO standardized and in service for the 105/51 main gun. The Centauro's full combat load is 40 main gun rounds, guaranteeing a high degree of sustainability in combat, with 14 rounds ready for immediate use inside the turret, while 26 rounds are stored in a special compartment in the hull. A first hit-kill probability is guaranteed by the employment of a highly efficient, two-axis stabilization system as part of the fire control system. A thermal sight provides for night combat, serving both the gunner and the tank commander.

The Centauro has a conventional loading system and a crew of four — commander, gunner, loader, and driver —

accommodated in a well organized but roomy fighting compartment that offers the same firing speed and combat readiness as most main battle tanks. As secondary armament, the Centauro has two MG3 7.62mm NATO machine guns, one coaxial to the main gun and the other for external use, to be manned by the tank commander. Standard equipment for the Spanish Army in most of its armored vehicles, the Wegmann-type smoke grenade launchers are integrated in the turret, four in each side.

While protection is not on a par with the armor of main battle tanks, it is possible as an option to install add-on armor of different types. The Spanish Army is already considering this possibility so that the vehicle can be tailored to the expected threat. The Spanish company, Empresa Nacional Santa Barbara (ENSB) — soon to merge with General Dynamics — will provide such an armor package when needed, including reactive armor. The Centauro is also equipped with NBC protection and a fire-suppression system.

Ever since the so called New World Order started and defense budgets were severely reduced, the Spanish Cavalry has been under permanent scrutiny and perhaps it is the branch of the Spanish Army that has suffered most. Today's Spanish Cavalry bears only a vague resemblance to its proud past while its missions and role have not diminished. The organization once fielded almost 11 cavalry squadrons for home defense, and two independent armored brigades, plus the divisional units — three more light armored cavalry regiments. Today, only an independent light armored brigade — Armored Cavalry Brigade n.2 "*Castillejos*," plus a light armored regiment — Light Armored Cavalry Regiment n.14 "*Villaviciosa*" (integrated in the mechanized infantry division "*Brunete*") besides the already mentioned Regiment "*Lusitania*" of the FAR, remain active and can be considered operational. Under the new strategic environment, the Spanish Cavalry has been extensively involved in the Balkans, either in Bosnia or in Kosovo, while its equipment and doctrine were not entirely adequate to the new tasks, specifically for the scouting/recce jobs in the out-of-area and other-than-war operations environment.

One interesting development is the *de facto* disappearance of the divisional level in the organization of the Spanish Army. Certainly there is still one division-type unit in the Spanish Army, but

the philosophy now, as in most of the NATO countries, is to employ mainly brigade-size forces, integrated in a multinational component. The new policy is also to allow the modern mechanized infantry brigades to provide for their own security and scouting, taking over the responsibilities once carried out by cavalry units. This is perhaps not the most effective approach, but it is mandated by budget and personnel concerns.

The disappearance of the so-called traditional enemy and the increasing contribution of the Army to peacekeeping or peacemaking missions, has helped make the role of the Cavalry increasingly ambiguous and vague. This situation has led ultimately to the disappearance of the divisional level and has made the brigade-size unit the usual basis in today's European armies. At the same time, these missions have made redundant the traditional operational mission of the cavalry; in most cases, cavalry units were doing no more and no less than mechanized infantry units. This is not intended to be a criticism of the mechanized infantry, but only makes it obvious that the Cavalry — without a clear and different organization, without specific means and particular weaponry, and without a specific role and missions to accomplish — was on the verge of being considered redundant by the budgeteers in the majority of Western countries.

The Centauro AFV will make it possible for the Cavalry to assert its role on the modern battlefield and offers an adequate means for participation of light armored forces in a low intensity conflict of the Kosovo or Bosnia type.

There is no doubt that the introduction of the Centauro AFV will be criticized in some circles of the Spanish Army as another source of logistical problems, adding more difficulties to the present situation where Leopard tanks and Pizarro infantry vehicles have to live together in harmony, without forgetting the still impressive mixed fleet of M60 tanks, M113s, and wheeled BMRs and VECs.

The procurement of the Centauro was finally given a green light by the Spanish Council of Ministers on June 25th, 1999, approving at the same time a total budget of 70 million U.S. dollars to acquire the whole batch of 22 vehicles, plus a limited integrated logistic support package. Deliveries to the Spanish Army will run throughout the present year 2000 — with just seven

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vehicles — and will end in the year 2001 with the remaining 15 vehicles.

The Spanish and the Italian governments agreed on 100 percent industrial offsets, so that the Italian consortium, Fiat Iveco-Oto Melara, will generate work for Spanish companies during the next seven years, 45 percent of which will be directly linked to the production of the AFV Centauro and 55 percent related to other activities. Among the latter, Empresa Nacional Santa Barbara (ENSB) will produce about 100 chassis and 50 turrets for the IFV VCC-80 Dardo to be delivered to the Italian Army. INDRA-EWS, the leading Spanish electronics company, linked to Raytheon, will carry on the maintenance of all the optronic equipment integrated in the Centauro, while IVECO/Pegaso of Spain will be responsible for the logistic support of the vehicle during its entire life cycle. The whole technical documentation, publication of interactive manuals, and computer-based training aids are being developed by Spanish companies, following the operational requirements established by the Spanish Army.

INDRA Simulation Systems is also developing a tactical and combat simulator for the Centauro that will be the first in its kind and it is expected to be adopted by the Spanish Army. It may be also chosen by the Italian Army in the future. INDRA has been also chosen as prime contractor for the simulator adopted by the Italian, Spanish and U.S. navies for the Harrier AV-8 Plus and it is already a well known company in Italy, Spain, and in the U.S., where recently it was awarded a contract for the upgrading of the U.S. Navy simulators for the F-14.

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