

■ Sisu introduced the new A2045 at Security and Defence 2008 in Lahti, Finland. Currently only the prototype below exists, which *Suomen Sotilas* put through its paces.

**S**isu Defence is rolling out HMTV, a new family of all-wheel drive vehicles for military purposes. In Finland the new vehicles replace the fleet of Sisu A-45, affectionately dubbed "Proto". Suomen Sotilas's test drive earlier this year found a 2008 prototype of the 4x4 HMTV very mature, for reasons outlined in this article.

The SISU A2054 HMTV 4x4 premiered at the Security and Defence exhibition in September 2008. A medium-weight off-road truck, it will serve the training and maintenance needs of the Finnish Defense Forces, and is the chosen logistics platform for various air defense, artillery, and command and control systems.

The off-road vehicle acquisition is part of the Army's mobility development initiative and replaces the already retired Sisu A-45 light trucks. In keeping with the times, the vehicle complies with NATO standards, which have influenced the design. This reflects in the designation, High Mobility Tactical Vehicle, too.

In June 2008 The Ministry of Defence authorised the Army to procure 232 off-road vehicles from Sisu Defence Ltd, to be delivered in 2009–2010. Some vehicles may be fitted with extra protection, and a separate order of about 30 vehicles of the same type will be delivered outfitted as support vehicles for the new NASAMS air defense system. The deal totals 29 million Euros, and includes an option for further 240 vehicles. It is expected that Sisu starts production at the turn of the year.

**Proven technology**

What does the new Sisu look like under the bonnet? It seems a largely conventional, albeit modern implementation of a medium heavy off-road truck



**SISU  
A2045  
HMTV 4X4**

**The Sisu line of vehicles known to most Finnish conscripts boasts a new addition. Suomen Sotilas met the new, spunky junior Sisu of Finnish-Austrian pedigree.**

TEKSTI: KARI KUUSELA

built using proven and known reliable technology. The design is modern and in line with the rest of Sisu's military offering.

The basic construction is very ordinary: engine up front, followed by the gearbox, with cabin on top of the engine, a design ubiquitous in European trucks. The solid axles are equipped with Sisu's parabolic dual-leaf suspension springs in the front, and driver controllable air suspension in the rear.

The engine in the production version will be MAN D0836 LFL63 Euro 5, a 250hp 6-cylinder compressed diesel engine, typical of this class of vehicles. Two gearboxes are offered, a 12-speed automatic ZF 12 AS 1210 or a 9-speed manual ZF 9S 1310D. According to Sisu the majority of FDF's order will be equipped with the automatic gearbox. Both MAN and ZF are venerable makes of international repute.

The vehicle features a continuous four-wheel drive and differential locks, meaning the off-road capability is as good as it generally can be in this class, and definitely adequate for the planned use. As some of the vehicles are likely to be applied in the much discussed international missions, it is possible to add to the cabin a ballistic protection corresponding to the NATO Stanag 4569 standard level I. In other words, this means resistance to a Nato 7.62mm bullet shot from 30m, a normal hand grenade exploding under the truck, or a 155mm artillery round a hundred meters away. As such, the cabin is not proof against any bullets or shrapnel, meaning it should not be confused with other up-armored truck cabins Sisu offers.

*For further reading on this topic, visit [www.suomensotilas.fi](http://www.suomensotilas.fi) or read special article on "FDF's new Sisu", Suomen Sotilas 5/2009 (November 2009).*

**SISU 4x4**



**A2045 HMTV 4X4**

**FDF'S NEW SISU**