Allison Broadens Onboard Electrical Power Development for Army

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New project with Leonardo DRS will power THAAD missile launcher trucks

INDIANAPOLIS--(BUSINESS WIRE)--Oct. 25, 2018-- Allison Transmission, the world's largest manufacturer of commercial-duty automatic transmissions and a leader in hybrid propulsion systems, has expanded its partnership with Leonardo DRS to develop On-Board Vehicle Power (OBVP) systems for military vehicles.

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20181025006006/en/

The OBVP system is intended for a heavier class of military vehicle – the 44-ton Oshkosh Heavy Expanded Mobility Tactical Truck (HEMTT) equipped with Terminal High Altitude Area Defense (THAAD) anti-ballistic missile launchers. OBVP will improve agility and reduce logistics costs because the vehicle will no longer have to be equipped with an external or trailered generator. (Photo: Oshkosh Defense)

The latest collaboration involves a heavier class of military vehicles – the 44-ton Oshkosh Heavy Expanded Mobility Tactical Truck (HEMTT) equipped with Terminal High Altitude Area Defense (THAAD) anti-ballistic missile launchers.

A generator will be fully integrated within the housing of an Allison 4500 Specialty Series™ transmission and installed into the HEMTT's driveline in its original configuration, without affecting vehicle functionality. In fact, the OBVP will improve agility and reduce logistics costs because the vehicle will no longer have to be equipped with a separate generator. In addition, the OBVP is intended to improve mean time between mission failures.

Allison expects to complete the first 4500SP Series with OBVP capability in 2020. When matched with Leonardo DRS power electronics, the system has the capability to produce electrical power for use on- or off-board the vehicle – up to 120 kW when the vehicle is stationary. More significantly, unlike towed generators, the system will be able to provide power – up to 55 kW – while the vehicle is on the move.

"An OBVP system will give THAAD air defense operators continuous access to electrical power directly from the transmission without interruption. This capability will enhance soldier effectiveness and unit readiness," said Ken Adgie, director of North America and U.S. government defense business at Allison.

The OBVP system is compatible with the Department of Defense's objective of evolving from conducting operations from forward positioned bases, common in Iraq and Afghanistan, to an expeditionary mindset where units rapidly deploy to austere environments and are immediately prepared to begin operations.

The need for onboard electric power has grown as military vehicles are equipped with more sophisticated electronics including computers, air defense radar and directed energy weaponry.

"The electrical loads on vehicles have increased dramatically. It's getting more and more difficult to produce that level of power with an engine-driven generator/alternator. Allison is proud to be partnered with Leonardo DRS in the development of OBVP technology that will result in innovative and adaptive propulsion solutions that provide capabilities not available today," said Dana Pittard, Major General (Ret.) and vice president for defense programs at Allison.

Vehicles using OBVP technology consumed 23 percent less fuel than those using a Quiet Tactical Generator, according to a 2016 study by the U.S. Army Tank Automotive Research, Development and Engineering Center (TARDEC).

Allison and Leonardo DRS are exploring OBVP uses throughout the full range of wheeled and tracked vehicles. In recent years, the companies have been collaborating on an OBVP system based on the Allison 3200SP™ transmission for the Family of Medium Tactical Vehicles (FMTV), which travel in support of the larger, heavy-class THAAD launcher vehicles.

The OBVP systems being demonstrated by Leonardo DRS and Allison also have potential uses off the battlefield. State and local emergency response agencies could use such systems during natural disasters to power emergency shelters, for example. When daisy chained, such systems could power hospitals, senior citizen homes, water purification plants or other vital infrastructure.

Allison Transmission is celebrating 100 years of support to the U.S. Army. Allison provided aircraft engines during World War I and WW II. In the late-1940s, Allison developed automatic transmissions for tanks and other tracked vehicles, and later provided transmissions tailored for wheeled military vehicles. Today, Allison continues to reliably move equipment and soldiers with more than 100 fully automatic applications for tracked and wheeled military vehicles.

About Allison Transmission

Allison Transmission (NYSE: ALSN) is the world's largest manufacturer of fully automatic transmissions for medium- and heavy-duty commercial vehicles and is a leader in electric hybrid-propulsion systems for city buses. Allison transmissions are used in a variety of applications including refuse, construction, fire, distribution, bus, motorhomes, defense and energy. Founded in 1915, the company is headquartered in Indianapolis, Indiana, USA and employs approximately 2,700 people worldwide. With a market presence in more than 80 countries, Allison has regional headquarters in the Netherlands, China and Brazil with manufacturing facilities in the U.S., Hungary and India. Allison also has approximately 1,400 independent distributor and dealer locations worldwide. For more information, visit allisontransmission.com.

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