News Release

Refuse fleet test demonstrates extended maintenance intervals and reduced wear and tear with TES-295 fluid

In seven years and 14,000 hours of operation with German refuse company Frankfurter Entsorgungs- und Service GmbH (FES), Allison Automatics with fully-synthetic TES-295 transmission fluid ran virtually free of wear and tear and without needing a single oil change.

FRANKFURT AM MAIN, Germany – In partnership with German refuse service company Frankfurter Entsorgungs- und Service GmbH (FES), Allison has been testing its fully automatic transmissions in conjunction with a TES-295 transmission fluid (in this case, Castrol TranSynd™) to determine the effect on vehicle uptime, maintenance and operating cost. After approximately seven years and about 14,000 hours of operation per truck, the results are in: FES reports, Allison fully automatic transmissions ran virtually free of wear and tear and without needing a single oil change.

The FES fleet has around 100 vehicles fitted with Allison transmissions and driven with TES-295 fluid. For the test, eight Mercedes-Benz Econic rear loaders equipped with OM 926 LA engines and Allison 3000 Series transmissions were strictly monitored between 2006 and 2013. When put into service, each was filled with 32 litres of TranSynd fluid and then began normal operation, collecting mainly residual waste, but also wastepaper and lightweight packaging, five days a week for nine hours a day on average.

Only four filter changes needed in seven years

Every six months each vehicle underwent a thorough inspection: checking the transmission and drivetrain for defects, measuring the oil level and taking oil samples. Analysing oil test samples was critical to determining how long TES-295 transmission fluid can be used in severe-duty applications such as refuse collection. Based on Allison's recommended service intervals, oil filters were replaced after 3,000 hours of operation with samples showing that oil viscosity and composition remained constant during the seven-year test phase. No oil changes were needed and only six litres of fresh TES-295 fluid were required to compensate for oil loss during filter changes. In total, each vehicle needed only four filter changes and 24 additional litres of TES-295 transmission fluid during the test.

Once the endurance test was complete, two transmissions were completely disassembled and thoroughly examined to comprehensively check transmission health.

One was removed from a vehicle in operation for 14,219 hours and 162,609 kilometres; the other for 13,344 hours and 168,141 kilometres. Upon examination transmission parts were still in excellent operative condition. The torque converter lock-up clutch showed only minimal wear, typical in the stop and go duty-cycle of refuse collection applications, and it was the only component replaced during the re-assembly process.

Vehicles last up to 12 times longer between oil changes

This extreme use of the TES-295 transmission fluid was only possible because all vehicles were subject to regular, extensive controls during the endurance test. Close monitoring was crucial to ensuring transmission health, as deteriorated fluid can result in insufficient protection from corrosion or reduced shifting quality.

Despite the excellent test results, Allison Transmission recommends waste management fleets change TES-295 fluids such as TranSynd after 240,000 kilometres, 6,000 hours or 48 months – whichever occurs first. Compared to conventional mineral-oil based transmission fluids, recommended service intervals for TES-295 fluids are up to 12 times longer. While no oil changes were necessary during the FES endurance test, a comparable vehicle with 13,300 hours of operation would have required 26 recommended mineral-oil changes versus only two recommended oil changes using TranSynd.

Allison Transmission + TES-295 fluids = Shorter downtimes + reduced costs

“We are happy we took part in this test because it has demonstrated that our fleet can rely on Allison transmissions in combination with TranSynd. Besides, we benefit from the extended service intervals – vehicles spend less time in the workshop, and we save costs while protecting the environment,” said Uwe Klein, workshop manager at FES. “As a result of the test, we have consciously decided to choose vehicles with Allison transmissions in the future.”

Since 2012, FES has purchased seven new Econic vehicles; all equipped with Allison 3000 Series transmissions and using TES-295 fluid.

“The test in Frankfurt went great. We gathered comprehensive data and gained experience while delivering benefits from the extended service intervals to the customer. It has been demonstrated that further reductions in life cycle costs can be achieved with the combination of Allison fully automatic transmissions and fully-synthetic TES-295 transmission fluids such as TranSynd,” says Steve Graddy, service engineer at Allison Transmission, who was part of the test over the entire period.

Recommended for Allison 3000 Series Transmission in Severe-duty Applications*		
Service Intervals	**Approved TES-295**	**Approved mineral fluid TES-389**
Filter	120,000 km (75,000 miles)	20,000 km (12,000 miles)
	3,000 hours of operation	500 hours of operation
	36 months	6 months
Fluid	240,000 km (150,000 miles)	20,000 km (12,000 miles)
	6,000 hours of operation	500 hours of operation
	48 months	6 months

*Applications with one or more stops per 1.6 km (1 mile) for warranty claim. Service intervals depend on distance driven or time elapsed, whichever occurs first.

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 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.

About Frankfurter Entsorgungs- und Service GmbH (FES)

FES is the largest refuse collection company in the German Rhine/Main area. Together with its subsidiaries FES has 1,700 employees and offers complete refuse and cleaning services covering in Frankfurt am Main and surroundings. In 2013 the FES group collected about 156,000 tons of residual waste, 42,000 tons of wastepaper and 12,000 tons of lightweight packaging.

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Pictures

 © Allison Transmission	TES-295 approved fluids use performance additives; pure synthetic lubricants with antioxidant properties, thus ensuring an extremely durable and persistent transmission fluid.
 © FES	For the test, eight Mercedes-Benz Econic rear loaders equipped with OM 926 LA engines and Allison 3000 Series transmissions were strictly monitored from 2006 through 2012.
 © FES	Every six months each vehicle underwent a thorough inspection: checking the transmission and drivetrain for defects, measuring the oil level and taking oil samples.
 © Allison Transmission	The eight Mercedes-Benz Econic test vehicles are all equipped with Allison fully automatic transmissions 3000 Series.

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