DRIVING TRANSMISSION TECHNOLOGY®

Allison Transmission

VOCATIONAL MODEL GUIDE

JANUARY 2011

ALLISON TRANSMISSION VOCATIONAL MODEL GUIDE

Allison Vocational Models offer tailored vocational features, advantages and benefits to better meet the individual needs of our customers.

HIGHWAY SERIES

Allison Highway Series automatic transmissions are designed to meet all the horsepower needs of strictly on-highway vehicles that do not require PTO operation.

ENGINE hp (kW)	TORQUE lb-ft (N • m)
165–565 (123–421)	420–1850 (569–2508)

GVW lbs (kg)

14,000–unlimited (6,350–unlimited)

PUPIL TRANSPORT/SHUTTLE SERIES

Allison Pupil Transport/Shuttle Series automatic transmissions are ideally suited for school bus, shuttle bus and other select non-school applications.

ENGINE hp (kW)	TORQUE lb-ft (N • m)
165–340[1] (123–254[1])	420–950 (569–1288)

GVW lbs (kg)

14,000–unlimited (6,350–unlimited)

RUGGED DUTY SERIES

Allison Rugged Duty Series automatic transmissions are suited for any vehicle that operates on/off highway and/or requires PTO operation.

ENGINE hp (kW)	TORQUE lb-ft (N • m)
165–600 (123–447)	420–1850 (569–2508)

GVW lbs (kg)

14,000–unlimited (6,350–unlimited)

BUS SERIES

Allison Bus Series automatic transmissions are ideally suited for Federal Transit Authority (FTA) funded transit properties, FTA-like transit properties and tour coaches exceeding 33,000 lbs GVW.

ENGINE hp (kW)	TORQUE lb-ft (N • m)
165–550 (123–410)	420–1700 (569–2305)

GVW lbs (kg)

14,000–unlimited (6,350–unlimited)

EMERGENCY VEHICLE SERIES

Allison Emergency Vehicle Series offers a complete family of automatic transmissions to meet the special needs of fire and emergency vehicles.

ENGINE hp (kW)	TORQUE lb-ft (N • m)
165–680 (123–507)	420–1950 (569–2644)

GVW lbs (kg)

14,000–unlimited (6,350–unlimited)

1 Only available with gasoline powered engine applications.

MOTORHOME SERIES

Allison Motorhome Series automatic transmissions are designed to provide enhanced performance and exceptional value to the motorhome market.

ENGINE hp (kW)	TORQUE lb-ft (N • m)
165–650 (123–485)	420–1950 (569–2644)

GVW lbs (kg)

14,000–unlimited (6,350–unlimited)

TRUCK RV SERIES

Allison Truck RV Series automatic transmissions are specifically designed to provide more power and more performance for truck recreational vehicles.

ENGINE hp (kW)	TORQUE lb-ft (N • m)
200–600 (149–447)	520–1850 (705–2508)

GVW lbs (kg)

20,000–unlimited (9,072–unlimited)

SPECIALTY SERIES

Allison Specialty Series automatic transmissions provide extended torque range, higher GVW capacity and advanced electronic controls to get the most performance out of higher horsepower engines, suited for military, tactical, combat and support vehicles.

ENGINE hp (kW)	TORQUE lb-ft (N • m)
165–800 (123–597)	420–1950 (569–2644)

GVW lbs (kg)

14,000–unlimited (6,350–unlimited)

OIL FIELD SERIES

Allison Oil Field Series automatic transmissions are the only Allison transmissions certified for well servicing rig propulsion and auxiliary power applications such as high pressure pumping and hoisting.

ENGINE hp (kW)	TORQUE lb-ft (N • m)
300–600 (224–447)	950–1850 (1288–2508)

GVW lbs (kg)

30,000–unlimited (13,608–unlimited)

OFF ROAD SERIES

Allison Off Road Series provides technologically advanced, smaller, lighter, yet very robust automatic transmissions for articulated dumps, rigid dumps and other off-road applications.

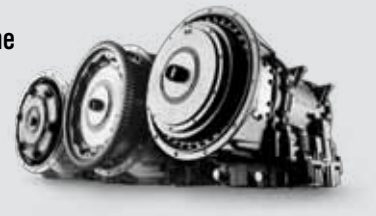
ENGINE hp (kW)	TORQUE lb-ft (N • m)
200–480 (149–358)	520–1700 (705–2305)

GVW lbs (kg)

30,000–178,574 (13,608–81,000)

FEATURES & BENEFITS

Specifying a vehicle is an important business proposition. And specifying the right transmission for the vehicle is one of the most critical decisions that will impact the performance of that vehicle and a company's bottom line. The right combination of drivetrain components will not only improve vehicle performance, it can improve the operating cost of the vehicle over its lifetime.



PROVEN RELIABILITY AND DURABILITY Allison Transmission has built a reputation on our ability to build transmissions that last just about forever. That is why Allison Automatics are the preferred choice for all types of on-highway vehicles. They are engineered to meet the demands of your particular business while providing outstanding value.

COMPREHENSIVE COVERAGE All Allison automatic transmission models offer comprehensive coverage with 100% parts and labor. Coverage may vary by model and by application. Contact your Allison representative for details. Our extensive network of over 1,500 authorized Allison Distributors and Dealers worldwide means convenient, factory-quality Allison Transmission service is always close at hand.

TORQUE CONVERTER Increased shifting performance, faster acceleration, greater operating flexibility and minimal rollback are all advantages attributed to the patented heavy-duty Allison torque converter. The torque converter's cushion effect reduces shock and strain on all driveline components.

STARTABILITY Startability is a vehicle's capability to launch and pull a load. Simply put, it's the 'grunt' or 'get-up-and-go' of a truck. Often only the 1st gear ratio is used to judge a vehicle's startability. The truth is, one has to consider the engine torque at the required launch rpm and torque multiplication of the Allison torque converter. Manual and automated manual transmissions have to launch at very low engine rpm in order to prevent damage to the clutch. This means less torque, which is why they have very deep 1st gear ratios to help them overcome their clutch limitations. An Allison Automatic uses the full torque from the engine and multiplies it with the torque converter. Then, when the 1st gear ratio and rear axle ratio are factored in, the Allison provides greater startability.

SHIFT ENERGY MANAGEMENT (SEM) Allison's SEM system provides better engine/transmission integration to optimize the entire driveline system. The result is faster, smoother, more consistent shift quality; increased powertrain durability; improved performance; and an overall more efficient vehicle operation leading to greater fuel economy.

PROGNOSTICS Most Allison Vocational Models are now available with Allison prognostics at no additional charge. Calibrated to the vehicle's particular operating requirements, Allison prognostics monitor various operating parameters – oil level, oil life, filter life and transmission health – to determine and alert when service is due. This eliminates unnecessary oil and filter changes and provides maximum transmission protection.

LOAD-BASED SHIFT SCHEDULING (LBSS) To further optimize fuel economy and maintain superior Allison Automatic performance, several Allison Vocational Models feature LBSS. This feature automatically selects between Performance, Economy and Super Economy shift schedules based on the vehicle's actual payload and the grade on which it is operating.
While results may vary depending on operating conditions, LBSS has proven to increase fuel economy by up to 5%.

REDUCED ENGINE LOAD AT STOP (RELS) RELS helps improve fuel economy for high density, stop-and-go duty cycles like pick-up and delivery applications. With RELS, the transmission automatically reduces the load on the engine when the vehicle is at a full stop. This not only saves fuel, it reduces overall vehicle emissions. RELS is available on 3000 series and 4000 series models.

MAINTENANCE MADE EASY Routine oil and filter changes are the only regular preventive maintenance required with an Allison Automatic. Easily accessible integral and spin-on oil filters reduce labor costs and valuable downtime. TranSynd® TES 295 transmission fluid greatly extends oil change intervals for most applications.

IMPROVED OPERATING SAFETY Rollback is a concern for drivers of vehicles equipped with manuals and automated manuals because it can cause accidents and product/load damage. Since there is very little rollback on vehicles equipped with Allison Automatics, drivers don't have that concern. More vehicle control under all conditions, far less fatigue for drivers since they're not shifting hundreds of times a day and so much simpler operation than a manual or automated manual transmission means there simply aren't as many distractions for the driver of an Allison Automatic-equipped vehicle.

CHECK THE RPMS A driver's performance correlates to the equipment they are driving. It's physically impossible for a driver in a manual- or automated manual-equipped vehicle to shift at optimum points and behave in such a way to optimize productivity. An Allison Automatic makes the decision for the driver and makes the right shift at the right time.

2ND REVERSE Allison 2nd Reverse offers a second "deep reverse" in addition to the standard reverse to provide greater control and engine braking during operation on steep grades. It also enables more maneuverability when operating in confined spaces. When a vehicle is in 2nd Reverse, it will have a slow creep capability with high engine speeds. With a mechanical ratio of 17.12:1, it will have an effective torque converter multiplied ratio up to 32.5:1. 2nd Reverse provides overall better performance and enhanced applicability for a variety of applications. Available on 4700 and 4800 Rugged Duty Series and Emergency Vehicle Series vocational models.

VEHICLE ACCELERATION CONTROL (VAC) VAC controls aggressive driving practices to improve overall fuel economy. It limits acceleration by controlling the amount of engine torque based on vehicle load. Available on select Pupil Transport/Shuttle Series and Bus Series vocational models.

LIFE CYCLE VALUE When you factor in all life cycle costs – vehicle purchase price, insurance, fuel, tires, preventive maintenance, component repair, driver wages, taxes, license, permits and retail resale value – along with the increased productivity, an Allison Automatic-equipped vehicle costs less to operate than a comparable competitively equipped vehicle.

FOURTH GENERATION ELECTRONIC CONTROLS All Allison Vocational Models benefit from Allison's Fourth Generation Electronic Controls. These controls incorporate a faster processing speed, enhanced communication between the engine and transmission and improved algorithms, which deliver smooth, precise shifts. The controls also provide simplified vehicle integration and a common electronic platform for all vocational model families.



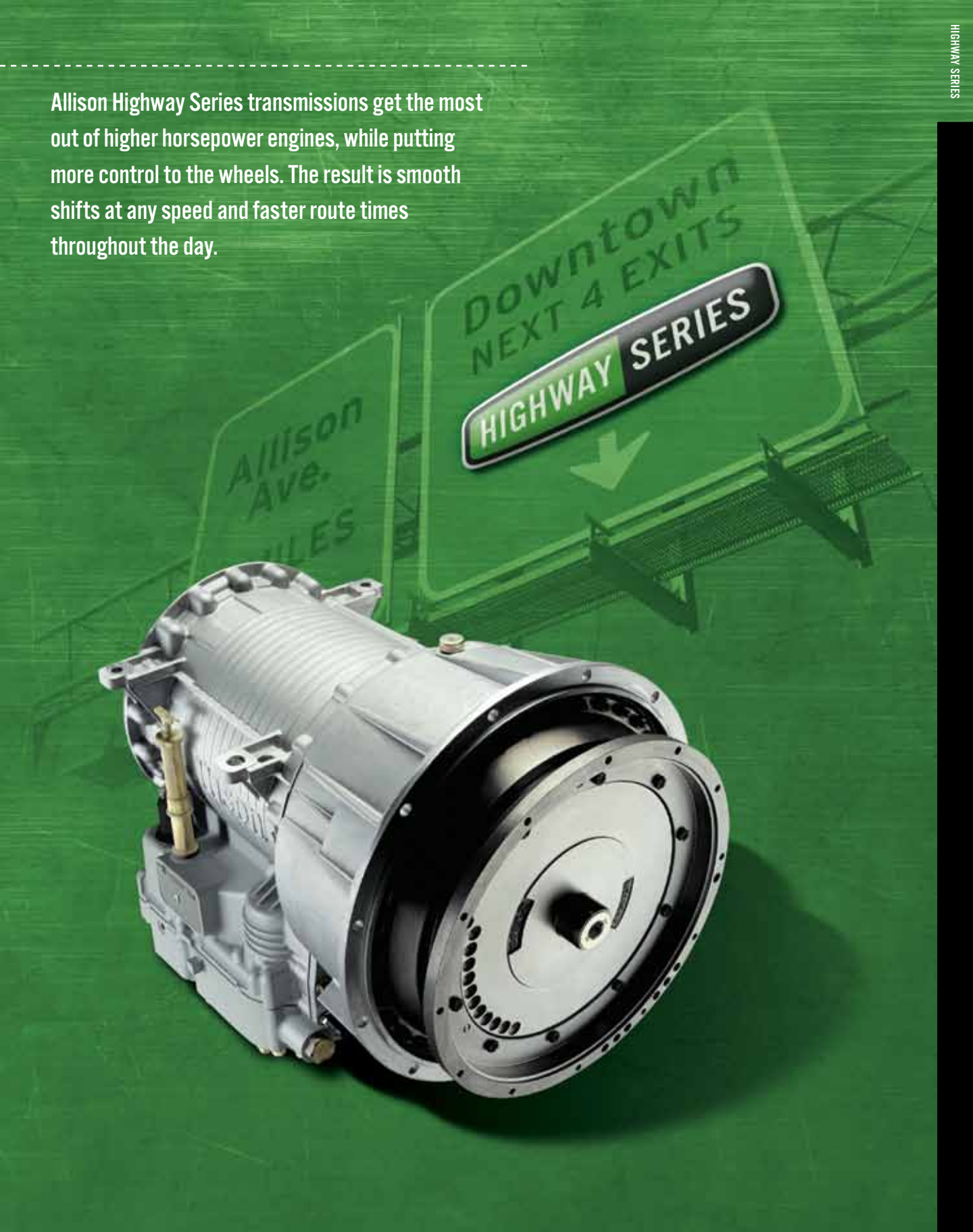

Vocational Model Product Review

HIGHWAY SERIES	PUPIL TRANSPORT/SHUTTLE SERIES	RUGGED DUTY SERIES	BUS SERIES	EMERGENCY VEHICLE SERIES
1000 HS	1000 PTS	1000 RDS	B 210	1000 EVS
2100 HS	2100 PTS	2100 RDS	B 220	2100 EVS
2200 HS	2200 PTS	2200 RDS	B 300	2200 EVS
2300 HS	2300 PTS	2300 RDS	B 400	2350 EVS
2350 HS	2350 PTS	2350 RDS	B 500	2500 EVS
2500 HS	2500 PTS	2500 RDS		2550 EVS
2550 HS	2550 PTS	2550 RDS		3000 EVS
3000 HS	3000 PTS	3000 RDS		3500 EVS
4000 HS		3500 RDS		4000 EVS
4500 HS		4000 RDS		4500 EVS
		4500 RDS		4700 EVS
		4700 RDS		4800 EVS

MOTORHOME SERIES	TRUCK RV SERIES	SPECIALTY SERIES	OIL FIELD SERIES	OFF ROAD SERIES
1000 MH	3000 TRV	1000 SP	3500 OFS	3000 ORS
2100 MH	3200 TRV	2100 SP	4500 OFS	3200 ORS
2200 MH	4000 TRV	2200 SP	4700 OFS	3500 ORS
2350 MH		2350 SP		4000 ORS
2500 MH		2500 SP		4200 ORS
2550 MH		2550 SP		4430 ORS
3000 MH		3000 SP		4500 ORS
4000 MH		3200 SP		4600 ORS
		3500 SP		
		3700 SP		
		4000 SP		
		4430 SP		
		4500 SP		
		4700 SP		
		4800 SP		

Allison Transmission

Allison Highway Series transmissions get the most out of higher horsepower engines, while putting more control to the wheels. The result is smooth shifts at any speed and faster route times throughout the day.



ALLISON TRANSMISSION HIGHWAY SERIES

RATINGS

MODEL	SERIAL NUMBER	RATIO	PARK PAWL	MAX INPUT POWER[1] hp (kW)	MAX INPUT TORQUE[1] lb-ft (N • m)	MAX INPUT TORQUE w/SEM OR TORQUE LIMITING[1,2] lb-ft (N • m)
1000 HS	6310	Close Ratio	Yes	340[4,7] (254)[4,7]	575 (780)	660[4,7] (895)[4,7]
2100 HS	6310	Close Ratio	No	340[4,7] (254)[4,7]	575 (780)	660[4,7] (895)[4,7]
2200 HS	6310	Close Ratio	Yes	340[4,7] (254)[4,7]	575 (780)	660[4,7] (895)[4,7]
2300 HS[5]	6310	Close Ratio	No	325 (242)	n/a	450 (610)
2350 HS[7]	6310	Close Ratio	Yes	340[4] (254)[4]	575 (780)	660[4] (895)[4]
2500 HS	6310	Wide Ratio	No	340[4,7] (254)[4,7]	575 (780)	660[4,7] (895)[4,7]
2550 HS[7]	6310	Wide Ratio	Yes	340[4] (254)[4]	575 (780)	660[4] (895)[4]
3000 HS	6510	Close Ratio	n/a	370 (276)	1100 (1491)	1250[6] (1695)[6]
4000 HS	6610	Close Ratio	n/a	565 (421)	1770 (2400)	1850[8] (2508)[8]
4500 HS	6610	Wide Ratio	n/a	565 (421)	1650 (2237)	1850[8] (2508)[8]

1 Gross ratings as defined by ISO 1585 or SAE J1995. 2 SEM = engine controls with Shift Energy Management. 3 Turbine torque limit based on iSCAAN standard deductions.
4 SEM and torque limiting are required to obtain this rating. 5 Only available with VORTEC 8.1L gasoline powered engine applications.
6 Requires Allison Transmission engine-transmission combination approval. Only available in gears three through six. 7 Check with your OEM to ensure offerings. 8 Available in gears three through six.

HIGHWAY SERIES FEATURES AND ADVANTAGES

Shift Energy Management (SEM) torque limiting*
Ratings up to 340 hp/660 lb-ft on 1000, 2100, 2200, 2350, 2500 and 2550 HS
Ratings up to 325 hp/450 lb-ft on 2300 HS
Ratings up to 370 hp/1250 lb-ft on 3000 HS
Ratings up to 565 hp/1850 lb-ft on 4000 and 4500 HS

High density start/stop calibrations
Improves shift operation, especially in congested traffic environments
Available on 1000, 2100, 2200 and 2300 HS

Reduced Engine Load at Stop (RELS)
Enhances fuel economy and helps reduce emissions
Available on 3000, 4000 and 4500 HS

Oil Level Sensor (OLS)
At the push of a button, oil levels are displayed on shift selectors for easy identification
Standard on 3000, 4000 and 4500 HS

Additional speeds
Five forward speeds standard on 3000 HS

Deep oil pan/sump standard
Optional shallow oil pan available on 1000 HS

Load-Based Shift Scheduling (LBSS)
This feature automatically selects between Performance, Economy and Super Economy shift schedules based on the vehicle's actual payload and the grade on which it is operating. This helps to optimize fuel economy and maintain productivity.

Prognostics
Eliminates unnecessary oil and filter changes by monitoring various operating parameters to determine and alert when a specific maintenance function is required.

1000 HS, 2100 HS, 2200 HS, 2300 HS, 2350 HS, 2500 HS, 2550 HS | 3000 HS | 4000 HS, 4500 HS

HIGHWAY SERIES

*With Allison Transmission Fourth Generation Electronic Controls

MAX TURBINE TORQUE[3]	MAX GVW	MAX GCW
lb-ft (N • m)	lbs (kg)	lbs (kg)
950[4] (1288)[4]	19,500 (8,845)	26,001 (11,800)
950[4] (1288)[4]	26,000 (11,800)	26,000 (11,800)
950[4] (1288)[4]	26,000 (11,800)	26,001 (11,800)
950[4] (1288)[4]	33,000 (15,000)	33,000 (15,000)
950[4] (1288)[4]	30,000 (13,600)	30,000 (13,600)
950[4] (1288)[4]	33,000 (15,000)	33,000 (15,000)
950[4] (1288)[4]	30,000 (13,600)	30,000 (13,600)
1600 (2169)	80,000 (36,288)	80,000 (36,288)
2600 (3525)	–	–
2600 (3525)	–	–

TYPICAL VEHICLE APPLICATIONS

Any vehicle that operates on highway and does not need a PTO requires an Allison Highway Series transmission

- Armored Car
- Automobile Transporter
- Beverage Delivery
- Distribution
- Dry Bulk
- Equipment Hauler (no permit/escort)
- Flatbed
- Food Distribution
- General Freight
- Line Haul
- Livestock Hauler
- Manufacturing
- Moving/Storage
- One-way Rental Truck
- Recycling
- Shorthaul/LTL
- Stake Truck
- Van
- Walk-in Van

MARKETING PUBLICATIONS AND VIDEOS

SERIES BROCHURE

- Highway Series Individual Brochure SA3741EN (English)
- Highway Series Individual Brochure SA3741ES (Spanish)
- Highway Series Individual Brochure SA3741FR (French)

GENERAL BROCHURES

- Food and Beverage Brochure SA5226EN
- Short Haul LTL Brochure SA5311EN
- SEM Brochure SA5388EN
- Superior Fuel Efficiency. Optimum Fuel Economy. SA5704EN
- Prognostics Brochure SA5657EN
- Residual Value Brochure SA3737EN
- Load-Based Shift Scheduling Flyer SA5658EN
- Startability Flyer SA5889EN
- Shift Selector Operation and Code Manual SA3360EN
- Fluid and Filter Change Recommendations SA5429EN
- Fourth Generation "Electronic" Controls I/O Group and Package Info Sheets (Complete Packets) I04105EN
- Ukrops Testimonial Flyer SA5699EN
- Kramer Testimonial Flyer SA5417EN
- Perry Testimonial Flyer SA5418EN
- Tractor Brochure SA5999EN

VIDEOS

- Allison At Work DV3719EN
- How an Allison Automatic Performs DV5377EN
- Shift Selector Interactive DV5376EN
- Ukrops Testimonial CD5690EN & DV5687EN
- Four Truckers Testimonial CD5565EN & DV5566EN
- Kramer Beverage Company Testimonial CD5363EN & DV5362EN
- Perry Distributors Testimonial CD5369EN & DV5368EN
- Blue Bell Creameries Testimonial CD5361EN & DV5360EN
- Eddie Nichols: One Million Miles and Counting Testimonial CD5359EN & DV5358EN

Allison Transmission Fourth Generation Electronic Controls

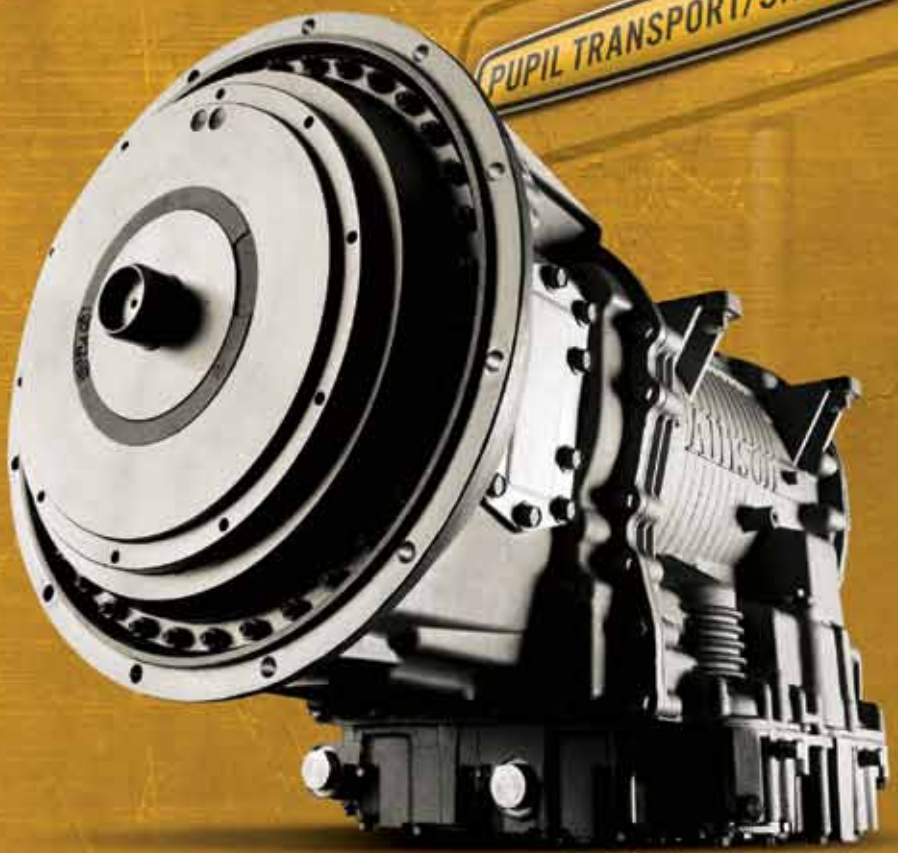
HIGHWAY SERIES I/O Groups and Packages

			1000/2000 PRODUCT FAMILIES	3000/4000 PRODUCT FAMILIES	
			GROUP 300	GROUP 98	
			On-Highway	On-Highway	
		VOCATION PACKAGE NUMBER	350	200	201
INPUT FUNCTIONS		NORMALLY ACTIVATED			
A	Secondary Mode Input	Yes	142	M	142
B	D-1 Selection	Yes			
C	PTO Request	Yes			
D	Shift Selector Transition	No*			
E	Auxiliary Function Range Inhibit (Standard)	No	101	101	101
F	Auxiliary Function Range Inhibit (Special)	Yes			
G	Auxiliary Hold	Yes		142	
H	Engine Brake Enable & Preselect Request (Standard)	Yes	102	102/157	102/157
L	Automatic Neutral – Single Input	No	123	117	117
Q	Two Speed Axle Enable	Yes			
V	Reverse Enable	No			
W	Direction Change Enable	No		122	
Y	Anti-Lock Brake Response	Yes	121	121	121
Z	Retarder Enable	Yes		161	161
AA	Service Brake Status	Yes	162	162	162
AF	Differential Clutch Request	Yes			
AG	Automatic Neutral – Dual Input	Yes			
AH	Kickdown	Yes			
AJ	4th Lockup Pump Mode	No			
AK	Auto Neutral – Dual Input with Service Brake Status	Yes			
AL	Shift Selector Transition/Secondary Shift Schedule	Yes			
AM	Reverse Inhibit with Preselect Request	Yes/No***			
AR	Overdrive Disable	Yes	161		
AS	Reduced Engine Load at Stop (RELS)	No**		123	123
OUTPUT FUNCTIONS					
A	Engine Brake Enable	Yes	104	104	104
B	Sump/Retarder Temperature Indicator	Yes	164	164	164
C	Range Indicator	Yes	145	145	145
D	Output Speed Indicator A	Yes	105	105	105
E	Output Speed Indicator B	Yes			
G	PTO Enable	Yes			
I	Engine Overspeed Indicator	Yes			
J	Two Speed Axle Enable	Yes			
K	Lockup Indicator	Yes			
N	Secondary Mode Indicator	Yes			
O	Service Indicator	Yes			
Q	Retarder Indicator	Yes		124	124
S	Neutral Indicator for PTO	Yes			

*Can be "Yes" depending on the number of selectors chosen for calibration. **Must be requested when calibration is specified. Cannot be activated with ProLink diagnostic tool. M = Mode button

***"Yes" normally activated for 1000/2000 Product Families, "No" not normally activated for 3000/4000 Product Families.

The same technology that has made Allison the most trusted name at neighborhood bus stops also provides easy operation, reliable performance and economical maintenance to non-school applications and shuttle bus fleets everywhere.



ALLISON TRANSMISSION PUPIL TRANSPORT/SHUTTLE SERIES

RATINGS

MODEL	SERIAL NUMBER	RATIO	PARK PAWL	MAX INPUT POWER[1] hp (kW)	MAX INPUT TORQUE[1] lb-ft (N • m)	MAX INPUT TORQUE w/SEM OR TORQUE LIMITING[1,2] lb-ft (N • m)
1000 PTS	6310					
– School Bus		Close Ratio	Yes	300[4] (224)[4]	550 (746)	660[6,7] (895)[6,7]
– Shuttle Bus		Close Ratio	Yes	300[4] (224)[4]	550 (746)	565 (766)
2100 PTS	6310					
– School Bus		Close Ratio	No	300[4] (224)[4]	550 (746)	660[6,7] (895)[6,7]
– Shuttle Bus		Close Ratio	No	300[4] (224)[4]	550 (746)	565 (766)
2200 PTS	6310					
– School Bus		Close Ratio	Yes	300[4] (224)[4]	550 (746)	660[6,7] (895)[6,7]
– Shuttle Bus		Close Ratio	Yes	300[4] (224)[4]	550 (746)	565 (766)
2300 PTS[8]	6310					
– School Bus		Close Ratio	No	325 (242)	n/a	450 (610)
2350 PTS[6]	6310					
– School Bus		Close Ratio	Yes	300[4] (224)[4]	550 (746)	660[7] (895)[7]
2500 PTS[5]	6310					
– School Bus		Wide Ratio	No	300 (224)	550 (746)	660[6,7] (895)[6,7]
2550 PTS[6]	6310					
– School Bus		Wide Ratio	Yes	300 (224)	550 (746)	660[7] (895)[7]
3000 PTS	6510					
– School Bus		Close Ratio	n/a	300 (224)	950 (1288)	n/a
– Shuttle Bus		Close Ratio	n/a	300 (224)	950 (1288)	n/a

1 Gross ratings as defined by ISO 1585 or SAE J1995. 2 SEM = engine controls with Shift Energy Management. 3 Turbine torque limit based on iSCAAN standard deductions.
4 Gross input power rating is 340 hp/254 kW for VORTEC 8.1L gasoline powered engines. 5 2500 PTS available for School Bus applications only. 6 Check with your OEM to ensure offerings.
7 SEM and torque limiting are required to obtain this rating. 8 Only available with VORTEC 8.1L gasoline powered engine applications.

PUPIL TRANSPORT/SHUTTLE SERIES FEATURES AND ADVANTAGES

Shift Energy Management (SEM) torque limiting*
Ratings up to 300 hp/660 lb-ft on 1000, 2100, 2200, 2350, 2500 and 2550 PTS

High-density start/stop calibrations
Improves shift operations especially in congested traffic environments
Available on 1000, 2100, 2200 and 2500 PTS

Reduced Engine Load at Stop (RELS)
Enhances fuel economy and helps reduce emissions
Available on 3000 PTS

Oil Level Sensor
At the push of a button, oil levels are displayed on shift selectors for easy identification. Standard on 3000 PTS

Deep oil pan/sump standard
Shallow oil pan optional on 1000 PTS

Load-Based Shift Scheduling (LBSS)
This feature automatically selects between Performance, Economy and Super Economy shift schedules based on the vehicle's actual payload and the grade on which it is operating. This helps to optimize fuel economy and maintain productivity.

Prognostics
Eliminates unnecessary oil and filter changes by monitoring various operating parameters to determine and alert when a specific maintenance function is required.

Vehicle Acceleration Control (VAC)
VAC controls aggressive driving practices to improve overall fuel economy. It limits acceleration by controlling the amount of engine torque based on vehicle load. Available on select Pupil Transport/Shuttle Series vocational models.

*With Allison Transmission Fourth Generation Electronic Controls

MAX TURBINE TORQUE[3] lb-ft (N • m)	MAX GVW lbs (kg)	MAX GCW lbs (kg)
950[7] (1288)[7]	19,500 (8,845)	26,001 (11,800)
950[7] (1288)[7]	19,500 (8,845)	26,001 (11,800)
950[7] (1288)[7]	26,000 (11,800)	26,000 (11,800)
950[7] (1288)[7]	26,000 (11,800)	26,000 (11,800)
950[7] (1288)[7]	26,000 (11,800)	26,001 (11,800)
950[7] (1288)[7]	26,000 (11,800)	26,001 (11,800)
950[7] (1288)[7]	33,000 (15,000)	33,000 (15,000)
950[7] (1288)[7]	30,000 (13,600)	30,000 (13,600)
950[7] (1288)[7]	33,000 (15,000)	33,000 (15,000)
950[7] (1288)[7]	30,000 (13,600)	30,000 (13,600)
1470 (1995)	–	–
1470 (1995)	33,000 (15,000)	33,000 (15,000)

HEAD OF THE CLASS

1000 PTS,
2100 PTS, 2200 PTS,
2300 PTS, 2350 PTS,
2500 PTS, 2550 PTS

3000 PTS

PUPIL TRANSPORT/SHUTTLE SERIES

MARKETING PUBLICATIONS AND VIDEOS

SERIES BROCHURE

- Pupil Transport/Shuttle Series Individual Brochure SA3742EN

GENERAL BROCHURES

- Superior Fuel Efficiency. Optimum Fuel Economy. SA5704EN
- SEM Brochure SA5388EN
- Prognostics Brochure SA5657EN
- Load-Based Shift Scheduling Flyer SA5658EN
- Shift Selector Operation and Code Manual SA3360EN
- Fluid and Filter Change Recommendations SA5429EN
- Retarder Brochure SA2953EN
- Filter and TranSynd™ Flyer SA4031EN
- Fourth Generation "Electronic" Controls I/O Group and Package Info Sheets (Complete Packets) I04105EN
- TranSynd™ Maximum Protection Flyer SA3239EN
- San Diego Unified School District Testimonial Flyer SA5413EN
- MY2011 School Bus Flyer SA6006EN

VIDEOS

- Allison At Work DV3719EN
- How an Allison Automatic Performs DV5377EN
- Shift Selector Interactive DV5376EN
- San Diego Unified School District Testimonial CD5371EN & DV5370EN

TYPICAL VEHICLE APPLICATIONS

CLASS 5-8 SCHOOL BUS

School use

School Bus

Non-school use

Church Bus

Private Academy Bus

Prison Bus

Work Bus

Poultry Bus

CLASS 5-7 SHUTTLE BUS (UP TO 33,000 LBS GVW)*

Airfield Bus

Airport Shuttle

Casino Bus

Dedicated Handicap Shuttle

Hotel Shuttle

Rental Car Shuttle

Retirement Community Shuttle

Scenic Tour Bus

*Buses requiring PTO must use Bus Series models. All shuttle applications greater than 33,000 lbs GVW require B 300 or B 400 transmissions. Revenue-generating/FTA transit bus applications are excluded from Pupil Transport/Shuttle Series usage.

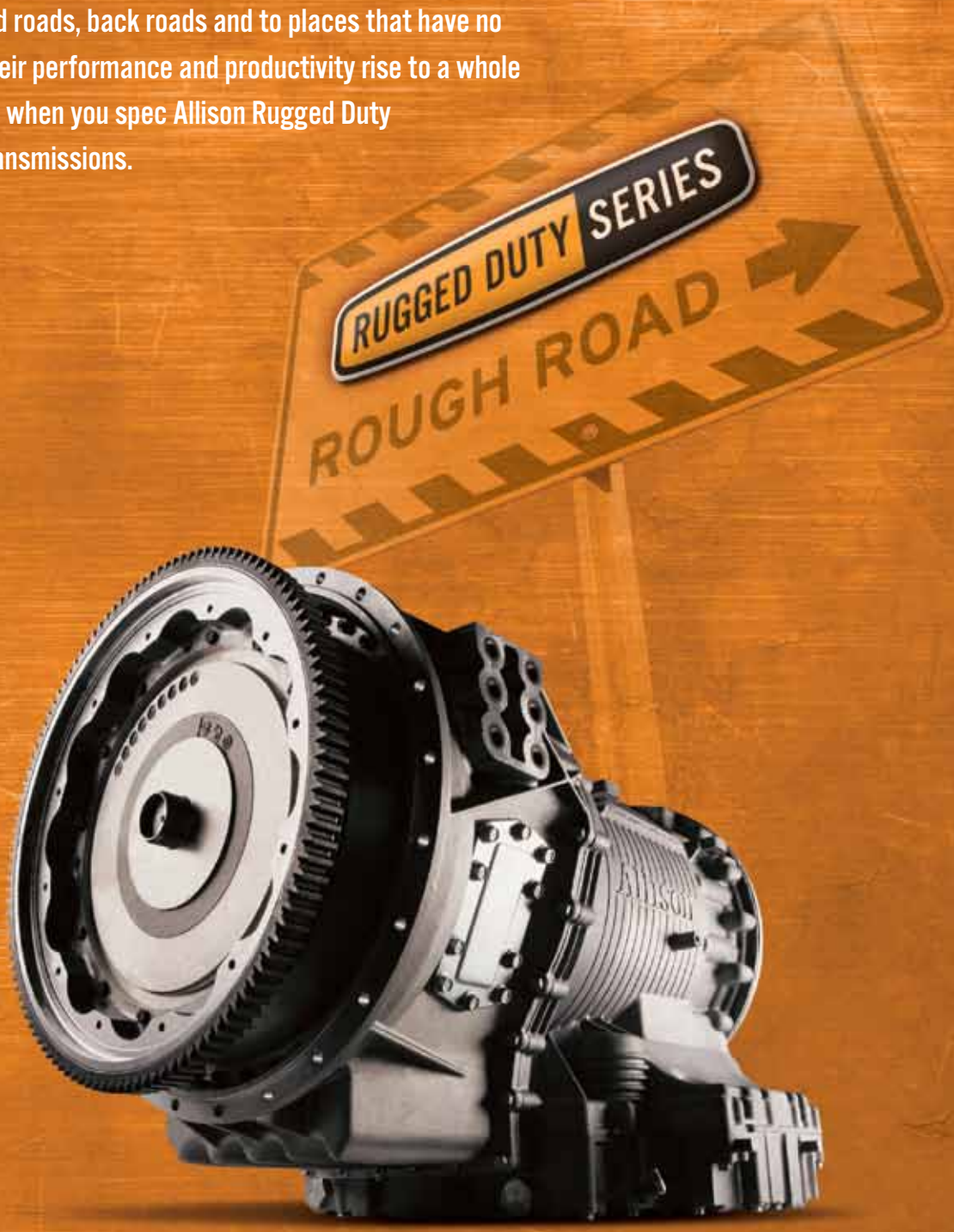
Allison Transmission Fourth Generation Electronic Controls

PUPIL TRANSPORT/SHUTTLE SERIES I/O Groups and Packages

			1000/2000 PRODUCT FAMILIES	3000 PRODUCT FAMILIES		
			GROUP 301	GROUP 111		
			School/ Shuttle Bus	School/ Shuttle Bus	School/Shuttle Bus (Maximum Economy Calibration)	
		VOCATION PACKAGE NUMBER	350	116	202	203
INPUT FUNCTIONS		NORMALLY ACTIVATED				
A	Secondary Mode Input	Yes	142	M	142	M
B	D-1 Selection	Yes				
C	PTO Request	Yes				
D	Shift Selector Transition	No*				
E	Auxiliary Function Range Inhibit (Standard)	No	101	101	101	101
F	Auxiliary Function Range Inhibit (Special)	Yes				
G	Auxiliary Hold	Yes				142
H	Engine Brake Enable & Preselect Request (Standard)	Yes	102	102/157	102/157	102/157
J	Fire Truck Pump Mode (4th Lockup)	No				
L	Automatic Neutral – Single Input	No	123			117
Q	Two Speed Axle Enable	Yes				
V	Reverse Enable	No				
W	Direction Change Enable	No		122	143	
Y	Anti-Lock Brake Response	Yes	121	121	121	121
Z	Retarder Enable	Yes		161	161	161
AA	Service Brake Status	Yes	162	162	162	162
AF	Differential Clutch Request	Yes				
AG	Automatic Neutral – Dual Input	Yes				
AH	Kickdown	Yes			122	122
AJ	4th Lockup Pump Mode	No				
AK	Auto Neutral – Dual Input with Service Brake Status	Yes				
AL	Shift Selector Transition/Secondary Shift Schedule	Yes				
AR	Overdrive Disable	Yes	161			
AS	Reduced Engine Load at Stop (RELS)	No**		123	123	123
OUTPUT FUNCTIONS						
A	Engine Brake Enable	Yes	104	104	104	104
B	Sump/Retarder Temperature Indicator	Yes	164	164	164	164
C	Range Indicator	Yes	145	145	145	145
D	Output Speed Indicator A	Yes	105	105	105	105
E	Output Speed Indicator B	Yes				
G	PTO Enable	Yes				
I	Engine Overspeed Indicator	Yes		130		
J	Two Speed Axle Enable	Yes				
K	Lockup Indicator	Yes				
N	Secondary Mode Indicator	Yes				
O	Service Indicator	Yes				
Q	Retarder Indicator	Yes		124	124	124
S	Neutral Indicator for PTO	Yes				
X	Overdrive Disable Indicator	Yes				

*Can be"Yes" depending on the number of selectors chosen for calibration. **Must be specified in the calibration. Cannot be activated with diagnostic tools/programs.
M = Mode button

Your trucks and drivers don't lead a pampered life. They travel bad roads, back roads and to places that have no roads. Their performance and productivity rise to a whole new level when you spec Allison Rugged Duty Series transmissions.



ALLISON TRANSMISSION RUGGED DUTY SERIES

RATINGS

MODEL	SERIAL NUMBER	RATIO	PARK PAWL	MAX INPUT POWER[1]	MAX INPUT TORQUE[1]	MAX INPUT TORQUE w/SEM OR TORQUE LIMITING[1,2]
				hp (kW)	lb-ft (N • m)	lb-ft (N • m)
1000 RDS	6310	Close Ratio	Yes	340[4,7] (254)[4,7]	575 (780)	660[4,7] (895)[4,7]
2100 RDS	6310	Close Ratio	No	340[4,7] (254)[4,7]	575 (780)	660[4,7] (895)[4,7]
2200 RDS	6310	Close Ratio	Yes	340[4,7] (254)[4,7]	575 (780)	660[4,7] (895)[4,7]
2300 RDS[5]	6310	Close Ratio	No	325 (242)	n/a	450 (610)
2350 RDS[7]	6310	Close Ratio	Yes	340[4] (254)[4]	575 (780)	660[4] (895)[4]
2500 RDS	6310					
– On-/Off- Highway		Wide Ratio	No	340[4,7] (254)[4,7]	575 (780)	660[4,7] (895)[4,7]
– Refuse		Wide Ratio	No	300 (224)	550 (746)	565 (766)
2550 RDS[7]	6310	Wide Ratio	Yes	340[4] (254)[4]	575 (780)	660[4] (895)[4]
3000 RDS	6510					
– On-/Off- Highway		Close Ratio	n/a	370 (276)	1100 (1491)	1250[6,7] (1695)[6,7]
– On- Highway		Close Ratio	n/a	370 (276)	1100 (1491)	1250[6,7] (1695)[6,7]
– Mixer		Close Ratio	n/a	370 (276)	1100 (1491)	1250[6,7] (1695)[6,7]
– Refuse		Close Ratio	n/a	370 (276)	1100 (1491)	1250[6,7] (1695)[6,7]
– Specialty PTO, HET		Close Ratio	n/a	370 (276)	1250[7] (1695)[7]	n/a
3500 RDS	6510					
– On-/Off- Highway		Wide Ratio	n/a	300 (224)	860 (1166)	n/a
– Mixer/Refuse		Wide Ratio	n/a	300 (224)	860 (1166)	n/a
– Specialty PTO		Wide Ratio	n/a	315 (235)	950 (1288)	n/a
– HET		Wide Ratio	n/a	330 (246)	985 (1335)	n/a
4000 RDS	6610					
– On-/Off- Highway		Close Ratio	n/a	565[11] (421)[11]	1770 (2400)	1850[10] (2508)[10]
– Refuse		Close Ratio	n/a	500 (373)	1550 (2102)	n/a
– Specialty PTO		Close Ratio	n/a	565[11] (421)[11]	1770 (2400)	n/a
– HET		Close Ratio	n/a	600 (447)	1850 (2508)	n/a
4500 RDS	6610					
– On-/Off- Highway		Wide Ratio	n/a	565[11] (421)[11]	1650 (2237)	1850[10] (2508)[10]
– Refuse		Wide Ratio	n/a	500 (373)	1550 (2102)	n/a
– Specialty PTO		Wide Ratio	n/a	565[11] (421)[11]	1650 (2237)	1770[8] (2400)[8]
– HET		Wide Ratio	n/a	600 (447)	1650 (2237)	1850[8] (2508)[8]
4700 RDS	6610					
– On-/Off- Highway		Widest Ratio	n/a	565[11] (421)[11]	1770 (2400)	1850[9] (2508)[9]
– Refuse		Widest Ratio	n/a	500 (373)	1550 (2102)	n/a
– HET		Widest Ratio	n/a	600 (447)	1850 (2508)	n/a

1 Gross ratings as defined by ISO 1585 or SAE J1995. 2 SEM = engine controls with Shift Energy Management. 3 Turbine torque limit based on iSCAAN standard deductions.
4 SEM and torque limiting are required to obtain this rating. 5 Only available for VORTEC 8-1L gasoline powered engine applications.
6 Requires Allison Transmission engine-transmission combination approval. Only available in gears three through six. 7 Check with your OEM to ensure offerings.
8 Available in gears two through six. 9 Only available in gears four through seven. 10 Only available in gears three through six. 11 With and without torque limiting.

MAX TURBINE TORQUE[3]	MAX GVW	MAX GCW
lb-ft (N • m)	lbs (kg)	lbs (kg)
950[4] (1288)[4]	19,500 (8,845)	26,001 (11,800)
950[4] (1288)[4]	26,000 (11,800)	26,000 (11,800)
950[4] (1288)[4]	26,000 (11,800)	26,001 (11,800)
950[4] (1288)[4]	33,000 (15,000)	33,000 (15,000)
950[4] (1288)[4]	30,000 (13,600)	30,000 (13,600)
950[4] (1288)[4]	33,000 (15,000)	33,000 (15,000)
950[4] (1288)[4]	24,200 (11,000)	24,200 (11,000)
950[4] (1288)[4]	30,000 (13,600)	30,000 (13,600)
1600 (2169)	80,000 (36,288)	80,000 (36,288)
1600 (2169)	80,000 (36,288)	80,000 (36,288)
1600 (2169)	62,000 (28,123)	–
1600 (2169)	62,000 (28,123)	–
1700 (2305)	–	–
1420 (1925)	80,000 (36,288)	80,000 (36,288)
1420 (1925)	60,000 (27,216)	–
1450 (1966)	–	–
1450 (1966)	–	–
2600 (3525)	–	–
2450 (3322)	–	–
2600 (3525)	–	–
2600 (3525)	–	–
2450 (3322)	–	–
2450 (3322)	–	–
2600 (3525)	–	–
2600 (3525)	–	–
2600 (3525)	–	–
2450 (3322)	–	–
2600 (3525)	–	–

RUGGED DUTY SERIES FEATURES AND ADVANTAGES

Shift Energy Management (SEM) with torque limiting*

Ratings up to 340 hp/660 lb-ft on 1000, 2100 , 2200, 2350 and 2550 RDS

Ratings up to 325 hp/450 lb-ft on 2300 RDS On-/Off- Highway applications

Ratings up to 300 hp/565 lb-ft on 2500 RDS for Refuse applications

Ratings up to 370 hp/1250 lb-ft on 3000 RDS for On-/Off- Highway, Mixer, and Refuse applications[7]

Ratings up to 565 hp/1850 lb-ft on 4500 RDS for On-/Off- Highway and Specialty PTO applications

Ratings up to 600 hp/1850 lb-ft on 4500 RDS for HET applications

Oil Level Sensor (OLS)

At the push of a button, oil levels are displayed on shift selectors for easy identification

Standard on standard 3000, 3500, 4000, 4500 and 4700 RDS**

PTO delete option

Available on 3000, 3500, 4000 and 4500 RDS

Deep oil pan/sump

Standard for all Rugged Duty Series models

Load-Based Shift Scheduling (LBSS)

This feature automatically selects between Performance, Economy and Super Economy shift schedules based on the vehicle's actual payload and the grade on which it is operating. This helps to optimize fuel economy and maintain productivity.

Prognostics

Eliminates unnecessary oil and filter changes by monitoring various operating parameters to determine and alert when a specific maintenance function is required.

2nd Reverse

Allison 2nd Reverse offers a second "deep reverse" in addition to the standard reverse to provide greater control and engine braking during operation on steep grades. It also enables more maneuverability when operating in confined spaces. Available on 4700 RDS models.

1000 RDS, 2100 RDS, 2200 RDS, 2300 RDS, 2350 RDS, 2500 RDS, 2550 RDS

3000 RDS, 3500 RDS

4000 RDS, 4500 RDS 4700 RDS

RUGGED DUTY SERIES

*With Allison Transmission Fourth Generation Electronic Controls

**OLS is not available for 4700 RDS with retarder

Allison Transmission Fourth Generation Electronic Controls

RUGGED DUTY SERIES

I/O Groups and Packages

			1000/2000 PRODUCT FAMILIES											
			GROUP 305			GROUP 99				GROUP 100	GROUP 101	GROUP 102		
			RDS Models			On-/Off-Highway				Construction	Construction	Premium Utility with Split-S		
	VOCATION PACKAGE NUMBER		354	360	365	113	114	1113	1114	146	175	149	150	172
	INPUT FUNCTIONS	**NORMALLY ACTIVATED**												
A	Secondary Mode Input	Yes	142	142	142	M	142			M	122	142	M	142
B	D-1 Selection	Yes												
C	PTO Request	Yes	143	143	143	143	M	143	M	143	143	M		M
D	Shift Selector Transition	No**												101
E	Auxiliary Function Range Inhibit (Standard)	No	101		101	101	101	101	101	101		101	101	
F	Auxiliary Function Range Inhibit (Special)	Yes												
G	Auxiliary Hold	Yes				142		142			117			
H	Engine Brake Enable & Preselect Request (Standard)	Yes	102	102		102/157	102/157	102/157	102/157	102/157	102/157	102/157	102/157	102/157
J	Fire Truck Pump Mode (4th Lockup)	No												
L	Automatic Neutral – Single Input	No	123		123	117	117	117	117					
Q	Two Speed Axle Enable	Yes								142				
V	Reverse Enable	No												117
W	Direction Change Enable	No				122		122				117	117	
Y	Anti-Lock Brake Response	Yes	121	121	121	121	121	121	121	121	121	121	121	121
Z	Retarder Enable	Yes				161	161	161	161	161	161	161	161	161
AA	Service Brake Status	Yes	162	162	162	162	162	162	162	162	162	162	162	162
AF	Differential Clutch Request	Yes												
AG	Automatic Neutral – Dual Input	Yes									142/101			
AH	Kickdown	Yes								122				
AJ	4th Lockup Pump Mode	No										122/123	122/123	122/123
AK	Auto Neutral – Dual Input with Service Brake Status	Yes												
AL	Shift Selector Transition/Secondary Shift Schedule	Yes												
AM	Reverse Inhibit – w/Preselect Request	Yes/No*									123			
AQ	Selector Display Blanking	Yes								123				
AR	Overdrive Disable	Yes	161	161	161									
AS	Reduced Engine Load at Stop (RELS)	No***				123	123	123	123			143	143	143
AW	R1 & R2 Reverse Operation w/Single Reverse Selector	No												
BQ	3rd Lockup Pump Mode	No		122/123										
BY	Aux. Box Transition	Yes												
CB	Preselect Request	Yes	122											
CC	High/NV	Yes			102/122									
CD	Auto Neutral - Single Input with Selector Override	Yes												
CE	Direct Hold Input	Yes												
	OUTPUT FUNCTIONS													
A	Engine Brake Enable	Yes	104	104		104	104	104	104	104	104	104	104	104
B	Sump/Retarder Temperature Indicator	Yes	164	164	164	164	164	164	164	164	164	164	164	164
C	Range Indicator	Yes	145 (3RD)	145 (3RD)	145 (3RD)	145	145	145	145			145 (4TH)	145 (4TH)	145 (4TH)
D	Output Speed Indicator A	Yes	105	105	105	105	105	105	105	105	105	105	105	105
G	PTO Enable	Yes	150	150	150	130	130	130	130	130	130	130		130
I	Engine Overspeed Indicator	Yes											130	
J	Two Speed Axle Enable	Yes								145				
N	Secondary Mode Indicator	Yes						113	113		113			
O	Service Indicator	Yes												
Q	Retarder Indicator	Yes				124	124	124	124	124	124	124	124	124
S	Neutral Indicator for PTO	Yes									145			

*"Yes" normally activated for 1000/2000 Product Families, "No" not normally activated for 3000/4000 Product Families. **Can be "Yes" depending on the number of selectors chosen for calibration.

3000/4000 PRODUCT FAMILIES

haft	GROUP 103		GROUP 104		GROUP 105				GROUP 106		GROUP 132				GROUP 136		GROUP 145	
	Street Sweeper		Basic Refuse		Refuse Auto-Neutral				Refuse Auto Neutral with Service Brake		Premium Utility with Split-Shaft				On-/Off-Highway with 2nd Reverse			
															No Secondary Mode Indicator		With Secondary Mode Indicator	
216	167	169	115	144	142	143	145	183	168	170	219	220	221	222	2113	3113	4113	6113
M	142	M	M	M	M		122			M	142	M	142	M	M	M	M	M
143	M	142	143	143	143	143	143	143	143	143	M		M	143	143	143	143	143
				101	101		101			101			101					
101			101								101	101		101	101	101	101	101
			142	142											142	142	142	142
102/157	102/157	102/157	102/157	102/157	102/157	102/157	102/157	102/157	102/157	102/157	102/157	102/157	102/157	102/157	102/157	102/157	102/157	102/157
	117	117		117											117		117	
	101	101																
	143												117					
117		122									117	117		117	122	122	122	122
121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121
161	161	161	161	161	161	161	161	161	161	161	161	161	161	161	161	161	161	161
162	162	162	162	162	162	162	162	162	162	162	162	162	162	162	162	162	162	162
					117/142	117/142	117/142	117/142										
122/123																		
									117/142	117/142								
						101		101	101									
			123								143	143	143		123	123	123	123
															179	179	179	179
											123	123	123	123				
																117		117
											122	122	122	122				
104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
164	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164
145 (4TH)	113	113		113						113	145 (4TH)	145 (4TH)	145 (4TH)	145 (4TH)	145	145	145	145
105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
130	130	130	130	130	130	130	130	130	130	130	130		130	130	130	130	130	130
												130						
	145	145																
								113	113								113	113
124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124
			145	145	145	145	145	145	145	145								

***Must be specified in the calibration. Cannot be activated with diagnostic tools/programs. M = Mode button

MARKETING PUBLICATIONS AND VIDEOS

SERIES BROCHURE

- Rugged Duty Series Individual Brochure SA3743EN (English)
- Rugged Duty Series Individual Brochure SA3743ES (Spanish)
- Rugged Duty Series Individual Brochure SA3743FR (French)

GENERAL BROCHURES

- Superior Fuel Efficiency. Optimum Fuel Economy. SA5704EN
- SEM Brochure SA5388EN
- Prognostics Brochure SA5657EN
- Construction Brochure SA5895EN
- Residual Value Brochure SA3737EN
- 2nd Reverse Flyer SA5865EN
- Startability Flyer SA5889EN
- Load-Based Shift Scheduling Flyer SA5658EN
- Shift Selector Operation and Code Manual SA3360EN
- Fluid and Filter Change Recommendations SA5429EN
- Retarder Brochure SA2953EN
- Fourth Generation "Electronic" Controls I/O Group and Package Info Sheets (Complete Packets) I04105EN
- TranSynd™ Maximum Protection Flyer SA3239EN
- Northern Energy Testimonial Flyer SA5530EN
- Tractor Brochure SA5999EN
- U.S. Concrete Testimonial Flyer SA5531EN

VIDEOS

- Allison At Work DV3719EN
- How an Allison Automatic Performs DV5377EN
- Shift Selector Interactive DV5376EN
- Pea Gravel Demo CD5451EN
- Backing Down Grades CD5461EN
- Construction CD5460EN
- Northern Energy Testimonial CD5526EN & DV5527EN
- U.S. Concrete Testimonial CD5522EN & DV5524EN
- Dunning Sand & Gravel Testimonial CD5367EN & DV5366EN
- Canadian Logging Testimonial CD5357EN & DV5356EN

TYPICAL VEHICLE APPLICATIONS

Airport Support
Baggage Transport Vehicle
Concrete Mixer
Concrete Pumper
Dump Truck
Equipment Hauler
Farm/Agriculture
Refuse Front Loader – Landfill
Refuse Front Loader – No Landfill
Heavy Equipment Transport (HET)
Liquid Waste Hauler
Materials Hauler
Municipal Services Maintenance Vehicle
Packing Recycling Truck
Public Utility Vehicle
Rear Loader – Landfill
Rear Loader – No Landfill
Roll On/Roll Off – Landfill
Roll On/Roll Off – No Landfill
Sewer/Septic Vacuum – Landfill
Sewer/Septic Vacuum – No Landfill
Refuse Side Loader – Landfill
Refuse Side Loader – No Landfill
Special Snow Removal Vehicle
Street Cleaning Vehicle
Transfer/Relocation Vehicle
Wood Chip Hauler
Wrecker
Yard Tractor/Spotter

RUGGED DUTY SERIES

Allison's Bus Series automatics help put your vehicles and your business on schedule for superior operating economies, improved vehicle performance and better passenger comfort.

ALLISON TRANSMISSION BUS SERIES

RATINGS

MODEL	SERIAL NUMBER	RATIO	PARK PAWL	MAX INPUT POWER[1] w/o SEM hp (kW)	MAX INPUT TORQUE[1] w/o SEM lb-ft (N • m)	MAX INPUT POWER w/SEM OR TORQUE LIMITING[1,2] hp (kW)	MAX INPUT TORQUE w/SEM OR TORQUE LIMITING[1,2] lb-ft (N • m)
B 210	6310						
– Transit		Close Ratio	No	230[4] (172)[4]	520[4] (705)[4]	270[4,5] (201)[4,5]	575[4,5] (780)[4,5]
B 220	6310						
– Transit		Close Ratio	Yes	230[4] (172)[4]	520[4] (705)[4]	270[4,5] (201)[4,5]	575[4,5] (780)[4,5]
B 300	6510						
– Transit		Close Ratio	n/a	280 (209)	735 (997)	n/a	n/a
B 400	6510						
– Transit		Close Ratio	n/a	300 (224)	925 (1254)	n/a	n/a
– Tour Coach		Close Ratio	n/a	330 (246)	1000 (1356)	n/a	n/a
B 500	6610						
– Transit		Close Ratio	n/a	420 (313)	1300 (1763)	n/a	n/a
– Intercity Coach		Close Ratio	n/a	550 (410)	1700 (2305)	n/a	n/a

1 Gross ratings as defined by ISO 1585 or SAE J1995. 2 SEM = engine controls with Shift Energy Management. 3 Turbine torque limit based on iSCAAN standard deductions.
4 Ratings available January 2010. 5 With SEM available 2010.

BUS SERIES FEATURES AND ADVANTAGES

Shift Energy Management (SEM) torque limiting*
Ratings up to 270 hp/575 lb-ft on B 210 and B 220

High-density start/stop calibrations
Improves shift operations especially in congested traffic environments
Available on B 210 and B 220

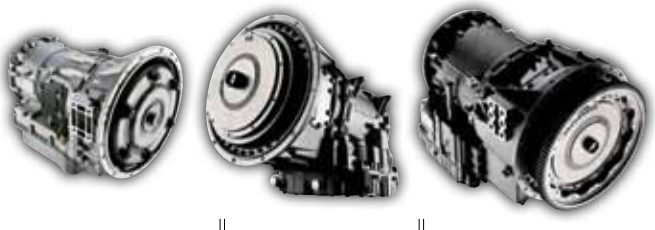
Reduced Engine Load at Stop (RELS)
Enhances fuel economy and helps reduce emissions
Available on B 300, B 400 and B 500

Load-Based Shift Scheduling (LBSS)
This feature automatically selects between Performance, Economy and Super Economy shift schedules based on the vehicle's actual payload and the grade on which it is operating. This helps to optimize fuel economy and maintain productivity.

Prognostics
Eliminates unnecessary oil and filter changes by monitoring various operating parameters to determine and alert when a specific maintenance function is required.

Vehicle Acceleration Control (VAC)
VAC controls aggressive driving practices to improve overall fuel economy. It limits acceleration by controlling the amount of engine torque based on vehicle load. Available on select Bus Series vocational models.

BUS SERIES



B 210, B 220 | B 300, B 400 | B 500

MAX TURBINE TORQUE[3]	MAX GVW	MAX GCW
lb-ft (N • m)	lbs (kg)	lbs (kg)
850 (1152)	29,000 (13,150)	29,000 (13,150)
850 (1152)	29,000 (13,150)	29,000 (13,150)
1370 (1857)	38,000 (17,236)	38,000 (17,236)
1370 (1857)	45,000 (20,412)	45,000 (20,412)
1600 (2170)	45,000 (20,412)	45,000 (20,412)
2450 (3322)	–	–
2450 (3322)	–	–

TYPICAL VEHICLE APPLICATIONS

Revenue-Generating/
FTA Transit Bus Applications

Transit Bus

Intercity Bus less than 53,000 lbs GVW

Tour Coach

Shuttle Bus over 33,000 lbs GVW

MARKETING PUBLICATIONS AND VIDEOS

SERIES BROCHURE

- Bus Series Individual Brochure SA3740EN (English)
- Bus Series Individual Brochure SA3740ES (Spanish)

GENERAL BROCHURES

- Optimization Case Study – Greyhound SA5841EN
- Superior Fuel Efficiency. Optimum Fuel Economy. SA5704EN
- SEM Brochure SA5388EN
- Prognostics Brochure SA5657EN
- Load-Based Shift Scheduling Flyer SA5658EN
- Shift Selector Operation and Code Manual SA3360EN
- Fluid and Filter Change Recommendations SA5429EN
- Fourth Generation "Electronic" Controls I/O Group and Package Info Sheets (Complete Packets) I04105EN
- Retarder Brochure SA2953EN

VIDEOS

- Allison At Work DV3719EN
- How an Allison Automatic Performs DV5377EN
- Shift Selector Interactive DV5376EN
- Greyhound Testimonial DV5908EN

MOVE PEOPLE MORE ECONOMICALLY,
MORE COMFORTABLY.

*With Allison Transmission Fourth Generation Electronic Controls

Allison Transmission Fourth Generation Electronic Controls

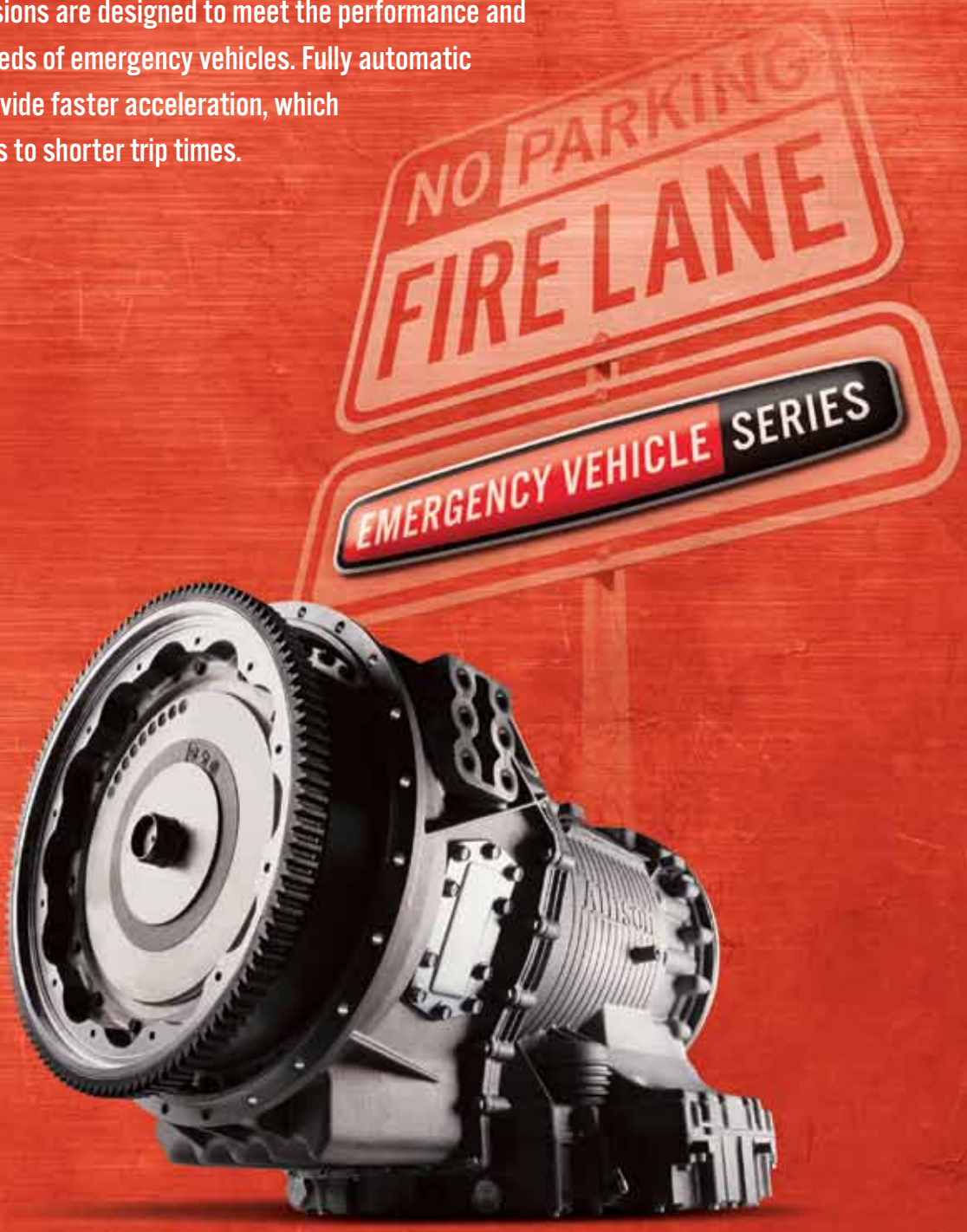
BUS SERIES I/O Groups and Packages

			1000/2000 PRODUCT FAMILIES	3000/4000 PRODUCT FAMILIES		
			GROUP 304	GROUP 112		
			Bus Models	Transit/City Bus (Maximum Economy Calibration)		Transit/ City Bus
		VOCATION PACKAGE NUMBER	351	147	148	159
INPUT FUNCTIONS		NORMALLY ACTIVATED				
A	Secondary Mode Input	Yes	142	142	M	M
C	PTO Request	Yes	143	M	143	
D	Shift Selector Transition	No*				
E	Auxiliary Function Range Inhibit (Standard)	No	101	101	101	101
G	Auxiliary Hold	Yes			142	142
H	Engine Brake Enable & Preselect Request (Standard)	Yes	102	102/157	102/157	102/157
L	Automatic Neutral – Single Input	No	123		117	117
V	Reverse Enable	No				
W	Direction Change Enable	No		143		143
Y	Anti-Lock Brake Response	Yes	121	121	121	121
Z	Retarder Enable	Yes		161	161	161
AA	Service Brake Status	Yes	162	162	162	162
AH	Kickdown	Yes		122	122	122
AK	Auto Neutral – Dual Input with Service Brake Status	Yes				
AL	Shift Selector Transition/Secondary Shift Schedule	Yes				
AM	Reverse Inhibit with Preselect Request	Yes/No***				
AR	Overdrive Disable	Yes	161			
AS	Reduced Engine Load at Stop (RELS)	No**		123	123	123
BQ	3rd Lockup Pump Mode	No				
BS	Grade Braking Enable	Yes				
BT	Crank Input	Yes				
OUTPUT FUNCTIONS						
A	Engine Brake Enable	Yes	104	104	104	104
B	Sump/Retarder Temperature Indicator	Yes	164	164	164	164
C	Range Indicator	Yes	145	145	145	145
D	Output Speed Indicator A	Yes	105	105	105	105
E	Output Speed Indicator B	Yes				
G	PTO Enable	Yes	150	130	130	
I	Engine Overspeed Indicator	Yes				113
J	Two Speed Axle Enable	Yes				
K	Lockup Indicator	Yes				
N	Secondary Mode Indicator	Yes				130
O	Service Indicator	Yes				
Q	Retarder Indicator	Yes		124	124	124
S	Neutral Indicator for PTO	Yes				
X	Overdrive Disable Indicator	Yes				

*Can be "Yes" depending on the number of selectors chosen for calibration. **Must be requested when calibration is specified. Cannot be activated with ProLink diagnostic tool. M = Mode button

***"Yes" normally activated for 1000/2000 Product Families, "No" not normally activated for 3000/4000 Product Families.

The Allison Emergency Vehicle Series automatic transmissions are designed to meet the performance and safety needs of emergency vehicles. Fully automatic shifts provide faster acceleration, which translates to shorter trip times.



ALLISON TRANSMISSION EMERGENCY VEHICLE SERIES

RATINGS

MODEL	SERIAL NUMBER	RATIO	PARK PAWL	MAX INPUT POWER[1] hp (kW)	MAX INPUT TORQUE[1] lb-ft (N • m)	MAX INPUT TORQUE w/SEM OR TORQUE LIMITING[1,2] lb-ft (N • m)
1000 EVS	6310	Close Ratio	Yes	340[4,6] (254)[4,6]	575 (780)	660[4,6] (895)[4,6]
2100 EVS	6310	Close Ratio	No	340[4,6] (254)[4,6]	575 (780)	660[4,6] (895)[4,6]
2200 EVS	6310	Close Ratio	Yes	340[4,6] (254)[4,6]	575 (780)	660[4,6] (895)[4,6]
2350 EVS[6]	6310	Close Ratio	Yes	340[4] (254)[4]	575 (780)	660[4] (895)[4]
2500 EVS	6310	Wide Ratio	No	340[4,6] (254)[4,6]	575 (780)	660[4,6] (895)[4,6]
2550 EVS[6]	6310	Wide Ratio	Yes	340[4] (254)[4]	575 (780)	660[4] (895)[4]
3000 EVS	6510	Close Ratio	n/a	450 (336)	1250 (1695)	n/a
3500 EVS	6510	Wide Ratio	n/a	330 (246)	985 (1335)	n/a
4000 EVS	6610					
– Emergency		Close Ratio	n/a	600 (447)	1850 (2508)	n/a
– ARFF[7]		Close Ratio	n/a	600 (447)	1675 (2271)	n/a
4500 EVS	6610	Wide Ratio	n/a	600 (447)	1770 (2400)	1850[5] (2508)[5]
4700 EVS	6610					
– ARFF[7]		Widest Ratio	n/a	600 (447)	1850 (2508)	n/a
4800 EVS	6610					
– ARFF[7]		Widest Ratio	n/a	680 (507)	1950 (2644)	n/a

1 Gross ratings as defined by ISO 1585 or SAE J1995. 2 SEM = engine controls with Shift Energy Management. 3 Turbine torque limit based on iSCAAN standard deductions.
4 SEM and torque limiting are required to obtain this rating. 5 Available in gears two through six. 6 Check with your OEM to ensure offerings. 7 Aircraft Rescue and Fire-Fighting Vehicle.

EMERGENCY VEHICLE SERIES FEATURES AND ADVANTAGES

Shift Energy Management (SEM) with torque limiting*

Ratings up to 340 hp/660 lb-ft on 1000, 2100, 2200, 2350, 2500 and 2550 EVS

Ratings up to 600 hp/1850 lb-ft on 4500 EVS

Oil Level Sensor (OLS)

At the push of a button, oil levels are displayed on shift selectors for easy identification

Standard on 3000, 3500, 4000, 4500 and 4700 EVS**

2nd Reverse

Allison 2nd Reverse offers a second "deep reverse" in addition to the standard reverse to provide greater control and engine braking during operation on steep grades. It also enables more maneuverability when operating in confined spaces. Available on 4700 and 4800 EVS models.

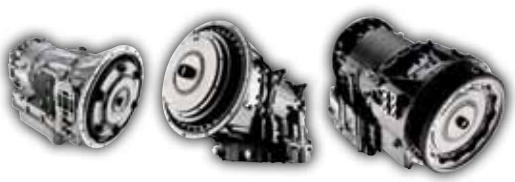
Deep oil pan/sump standard on all Emergency Vehicle Series models

Shallow sump with OLS optional on 3000, 3500, 4000 and 4500 EVS

Shallow pan optional on 1000 EVS

Prognostics

Eliminates unnecessary oil and filter changes by monitoring various operating parameters to determine and alert when a specific maintenance function is required.



1000 EVS, 2100 EVS, 2200 EVS, 2350 EVS, 2500 EVS, 2550 EVS | 3000 EVS, 3500 EVS | 4000 EVS, 4500 EVS, 4700 EVS, 4800 EVS

*With Allison Transmission Fourth Generation Electronic Controls
**OLS is not available for 4700 EVS with retarder

MAX TURBINE TORQUE[3]	MAX GVW	MAX GCW
lb-ft (N • m)	lbs (kg)	lbs (kg)
950[4] (1288)[4]	19,500 (8,845)	26,001 (11,800)
950[4] (1288)[4]	26,000 (11,800)	26,000 (11,800)
950[4] (1288)[4]	26,000 (11,800)	26,001 (11,800)
950[4] (1288)[4]	30,000 (13,600)	30,000 (13,600)
950[4] (1288)[4]	33,000 (15,000)	33,000 (15,000)
950[4] (1288)[4]	30,000 (13,600)	30,000 (13,600)
1700 (2305)	–	–
1500 (2034)	–	–
2600 (3525)	–	–
2600 (3525)	–	–
2600 (3525)	–	–
2800 (3795)	–	–
2800 (3795)	–	–

EMERGENCY CALIBRATIONS

Emergency Vehicle Series calibrated with unique shift inhibit tolerances to meet special needs of emergency vehicles

Low-voltage detection set at two minutes for emergency cals

General truck cals will not permit shift into range after 10 seconds

Emergency cals will not permit a shift into range for engine rpms above 1260

General truck cals will not permit shift into range above 900 rpm

No shift inhibit detection of high output speed/high throttle position for emergency cals

General truck cals will not permit a shift into range when output speed is at or above 200 rpm/throttle position is beyond 40%

EMERGENCY VEHICLE SERIES

MARKETING PUBLICATIONS AND VIDEOS

SERIES BROCHURE

- Emergency Vehicle Series Individual Brochure SA3564EN

GENERAL BROCHURES

- Superior Fuel Efficiency. Optimum Fuel Economy. SA5704EN
- SEM Brochure SA5388EN
- Prognostics Brochure SA5657EN
- Shift Selector Operation and Code Manual SA3360EN
- Fluid and Filter Change Recommendations SA5429EN
- Retarder Brochure SA2953EN
- Fourth Generation "Electronic" Controls I/O Group and Package Info Sheets (Complete Packets) I04105EN
- 2nd Reverse Flyer SA5865EN
- Manville Fire Department Testimonial Flyer SA5552EN

VIDEOS

- Allison At Work DV3719EN
- How an Allison Automatic Performs DV5377EN
- Shift Selector Interactive DV5376EN
- Manville Fire Department Testimonial CD5550EN & DV5551EN

TYPICAL VEHICLE APPLICATIONS

Any vehicle equipped with emergency signaling such as a siren, light bar, grill signal, porter light, etc. allowing the vehicle to ignore general traffic laws in emergency situations requires an Allison Emergency Vehicle Series transmission.

Aerial Ladder Platform

Aircraft Rescue and Fire-Fighting Vehicle

Ambulance

Hazardous Material Vehicle

Mobile Command Center

Fire Truck Pumper – With Split-Shaft PTO

Fire Truck Pumper – Without Split-Shaft PTO

Support Vehicle

Allison Transmission Fourth Generation Electronic Controls

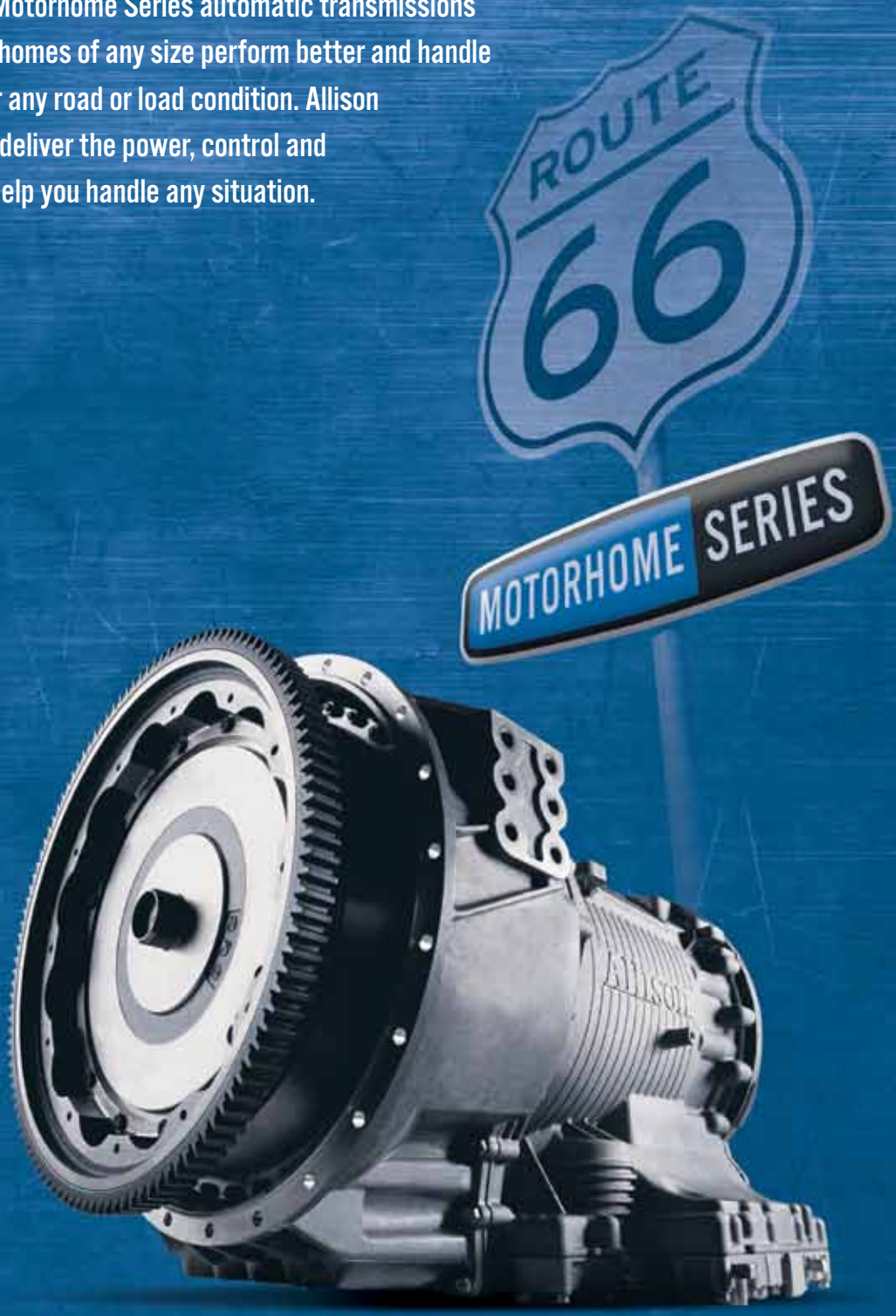
EMERGENCY VEHICLE SERIES

I/O Groups and Packages

			1000/2000 PRODUCT FAMILIES						3000/4000 PRODUCT FAMILIES								
			GROUP 303			GROUP 313			GROUP 107			GROUP 137	GROUP 146	GROUP 108	GROUP 127		
			EVS Models			EVS Models			Split-Shaft		Non Split-Shaft	With 2nd Reverse; No Split-Shaft PTO		Emergency	Split-Shaft		NonSplit-Shaft
												No Secondary Mode Indicator	w/Secondary Mode Indicator				
	VOCATION PACKAGE NUMBER		355	360	364	366	367	368	118	120	119	1119	2119	174	197	198	199
	INPUT FUNCTION	NORMALLY ACTIVATED															
A	Secondary Mode Input	Yes	142	142	142	142	142	142	142	M	M	M	M	M	142	M	M
B	D-1 Selection	Yes															
C	PTO Request	Yes	143	143	143	143	143	143	M	142	143	143	143	143	M	142	143
D	Shift Selector Transition	No*												101			
E	Auxiliary Function Range Inhibit (Standard)	No															
F	Auxiliary Function Range Inhibit (Special)	Yes									142/101	101/142	101/142				142/101
G	Auxiliary Hold	Yes															
H	Engine Brake Enable & Preselect Request (Standard)	Yes	102	102		102	102		102/157	102/157	102/157	102/157	102/157	102/157	102/157	102/157	102/157
J	Fire Truck Pump Mode (4th Lockup)	No							122/123	122/123					122/123	122/123	
L	Automatic Neutral – Single Input	No															
Q	Two Speed Axle Enable	Yes															
V	Reverse Enable	No															
W	Direction Change Enable	No															
Y	Anti-Lock Brake Response	Yes	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121
Z	Retarder Enable	Yes							161	161	161	161	161	161	161	161	161
AA	Service Brake Status	Yes	162	162	162				162	162	162	162	162	162	162	162	162
AF	Differential Clutch Request	Yes															
AG	Automatic Neutral – Dual Input	Yes															
AH	Kickdown	Yes															
AJ	4th Lockup Pump Mode	No															
AK	Auto Neutral – Dual Input with Service Brake Status	Yes												117/142			
AL	Shift Selector Transition/ Secondary Shift Schedule	Yes															
AR	Overdrive Disable	Yes	161	161	161	161	161	161									
AS	Reduced Engine Load at Stop (RELS)	No															
AW	R1 & R2 Reverse Operation w/ Single Reverse Selector	No										179	179				
BQ	3rd Lockup Pump Mode	No		122/123	122/123		122/123	122/123									
CC	High N/V	Yes			102/101			102/101									
CD	Auto Neutral - Single Input w/ Selector Override	Yes				162	162	162				117	117		117	117	117
	OUTPUT FUNCTIONS																
A	Engine Brake Enable	Yes	104	104		104	104		104	104	104	104	104	104	104	104	104
B	Sump/Retarder Temperature Indicator	Yes	164	164	164	164	164	164	164	164				164	164	164	
C	Range Indicator	Yes	145 (3RD)	145 (3RD)	145 (3RD)	145 (3RD)	145 (3RD)	145 (3RD)	145 (4TH)	145 (4TH)				113	145 (4TH)	145 (4TH)	
D	Output Speed Indicator A	Yes	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
G	PTO Enable	Yes	150	150	150	150	150	150	130	130	130	130	130	130	130	130	130
I	Engine Overspeed Indicator	Yes															
J	Two Speed Axle	Yes															
K	Lockup Indicator	Yes															
N	Secondary Mode Indicator	Yes											113				
O	Service Indicator	Yes									164	164	164				164
Q	Retarder Indicator	Yes							124	124	124	124	124	124	124	124	124
S	Neutral Indicator for PTO	Yes							113	113	145	145	145	145	113	113	145

* Can be "Yes" depending on the number of selectors chosen for calibration. M = Mode button

The Allison Motorhome Series automatic transmissions make motorhomes of any size perform better and handle easier under any road or load condition. Allison Automatics deliver the power, control and traction to help you handle any situation.



ALLISON TRANSMISSION MOTORHOME SERIES

RATINGS

MODEL	SERIAL NUMBER	RATIO	PARK PAWL	MAX INPUT POWER[1]	MAX INPUT TORQUE[1]	MAX INPUT TORQUE w/SEM OR TORQUE LIMITING[1,2]
				hp (kW)	lb-ft (N • m)	lb-ft (N • m)
1000 MH	6310	Close Ratio	Yes	340[4,5] (254)[4,5]	575 (780)	660[5] (895)[5]
2100 MH	6310	Close Ratio	No	340[4,5] (254)[4,5]	575 (780)	660[5] (895)[5]
2200 MH	6310	Close Ratio	Yes	340[4,5] (254)[4,5]	575 (780)	660[5] (895)[5]
2350 MH[5]	6310	Close Ratio	Yes	340[4] (254)[4]	575 (780)	660[5] (895)[5]
2500 MH	6310	Wide Ratio	No	340[4,5] (254)[4,5]	575 (780)	700[5,6] (950)[5,6]
2550 MH[5]	6310	Wide Ratio	Yes	340[4] (254)[4]	575 (780)	660[5] (895)[5]
3000 MH	6510	Close Ratio	n/a	450 (336)	1250 (1695)	n/a
4000 MH	6610	Close Ratio	n/a	650 (485)	1950 (2644)	n/a

1 Gross ratings as defined by ISO 1585 or SAE J1995. 2 SEM = engine controls with Shift Energy Management. 3 Turbine torque limit based on iSCAAN standard deductions.
4 SEM and torque limiting are required to obtain this rating. 5 Check with your OEM to ensure offerings. 6 Available in gears three through five.

MOTORHOME SERIES FEATURES AND ADVANTAGES

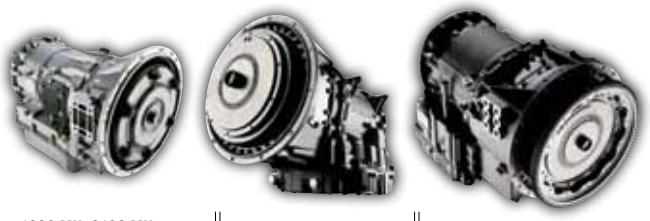
Shift Energy Management (SEM) with torque limiting*
Ratings up to 340 hp/660 lb-ft on 1000, 2100, 2200, 2350, and 2550 MH
Ratings up to 340 hp/700 lb-ft on 2500 MH

PTO option available
All Motorhome Series models

Deep oil sump/pan standard
Shallow pan option available on 1000 MH

Oil Level Sensor (OLS)
At the push of a button, oil levels are displayed on shift selectors for easy identification
Standard on 3000 and 4000 MH

Prognostics
Eliminates unnecessary oil and filter changes by monitoring various operating parameters to determine and alert when a specific maintenance function is required.



1000 MH, 2100 MH, 2200 MH, 2350 MH, 2500 MH | 3000 MH | 4000 MH

MOTORHOME SERIES

*With Allison Transmission Fourth Generation Electronic Controls

MAX TURBINE TORQUE[3]	MAX GVW	MAX GCW
lb-ft (N • m)	lbs (kg)	lbs (kg)
950[4] (1288)[4]	22,000 (10,000)	26,001 (11,800)
950[4] (1288)[4]	26,000 (11,800)	30,000 (13,600)
950[4] (1288)[4]	26,000 (11,800)	26,001 (11,800)
950[4] (1288)[4]	30,000 (13,600)	30,000 (13,600)
950[4] (1288)[4]	33,000 (15,000)	33,000 (15,000)
950[4] (1288)[4]	30,000 (13,600)	30,000 (13,600)
1700 (2305)	–	–
2800 (3795)	–	–

TYPICAL VEHICLE APPLICATIONS

Type A and Bus Conversion Motorhomes Class 5–8

Type C Motorhomes Class 4–5

Motorhome

Entertainer Travel Coach

Class 6–8 Type C Motorhomes require Truck RV Series

FOR THOSE WHO LOVE TO DRIVE, IT DOESN'T GET ANY BETTER THAN THIS.

MARKETING PUBLICATIONS AND VIDEOS

SERIES BROCHURE

- Motorhome Series Individual Brochure SA3362EN

GENERAL BROCHURES

- Superior Fuel Efficiency. Optimum Fuel Economy. SA5704EN
- SEM Brochure SA5388EN
- Prognostics Brochure SA5657EN
- Residual Value Brochure SA3737EN
- Startability Flyer SA5889EN
- Shift Selector Operation and Code Manual SA3360EN
- Fluid and Filter Change Recommendations SA5429EN
- Fourth Generation "Electronic" Controls I/O Group and Package Info Sheets (Complete Packets) I04105EN
- Motorhome Tips SA2742EN
- Retarder Brochure SA2953EN
- FMCA Testimonial Flyer SA5514EN
- Dreyer and Reinbold Racing Testimonial Flyer SA5419EN

VIDEOS

- Allison At Work DV3719EN
- How an Allison Automatic Performs DV5377EN
- Shift Selector Interactive DV5376EN
- FMCA Testimonial CD5371EN & DV5370EN
- Dreyer and Reinbold Racing Testimonial CD5365EN & DV5364EN

Allison Transmission Fourth Generation Electronic Controls

MOTORHOME SERIES I/O Groups and Packages

			1000/2000 PRODUCT FAMILIES	3000/4000 PRODUCT FAMILIES	
			GROUP 302	GROUP 109	
			Motorhome	Motorhome	
		VOCATION PACKAGE NUMBER	351	113	116
INPUT FUNCTIONS		NORMALLY ACTIVATED			
A	Secondary Mode Input	Yes	142	M	M
B	D-1 Selection	Yes			
C	PTO Request	Yes	143	143	
D	Shift Selector Transition	No*			
E	Auxiliary Function Range Inhibit (Standard)	No	101	101	101
F	Auxiliary Function Range Inhibit (Special)	Yes			
G	Auxiliary Hold	Yes		142	
H	Engine Brake Enable & Preselect Request (Standard)	Yes	102	102/157	102/157
J	Fire Truck Pump Mode (4th Lockup)	No			
L	Automatic Neutral – Single Input	No	123	117	
Q	Two Speed Axle Enable	Yes			
V	Reverse Enable	No			
W	Direction Change Enable	No		122	122
Y	Anti-Lock Brake Response	Yes	121	121	121
Z	Retarder Enable	Yes		161	161
AA	Service Brake Status	Yes	162	162	162
AF	Differential Clutch Request	Yes			
AG	Automatic Neutral – Dual Input	Yes			
AH	Kickdown	Yes			
AJ	4th Lockup Pump Mode	No			
AK	Auto Neutral – Dual Input with Service Brake Status	Yes			
AL	Shift Selector Transition/Secondary Shift Schedule	Yes			
AM	Reverse Inhibit with Preselect Request	Yes/No***			
AR	Overdrive Disable	Yes	161		
AS	Reduced Engine Load at Stop (RELS)	No**		123	123
OUTPUT FUNCTIONS					
A	Engine Brake Enable	Yes	104	104	104
B	Sump/Retarder Temperature Indicator	Yes	164	164	164
C	Range Indicator	Yes	145	145	145
D	Output Speed Indicator A	Yes	105	105	105
E	Output Speed Indicator B	Yes			
G	PTO Enable	Yes	150	130	
I	Engine Overspeed Indicator	Yes			130
J	Two Speed Axle Enable	Yes			
K	Lockup Indicator	Yes			
N	Secondary Mode Indicator	Yes			
O	Service Indicator	Yes			
Q	Retarder Indicator	Yes		124	124
S	Neutral Indicator for PTO	Yes			

*Can be "Yes" depending on the number of selectors chosen for calibration. **Must be specified in the calibration. Cannot be activated with diagnostic tools/programs.

M = Mode button ***"Yes" normally activated for 1000/2000 Product Families, "No" not normally activated for 3000/4000 Product Families.

Allison Truck RV Series automatic transmissions offer more power and more performance for more enjoyment on the road. Specifically designed for truck recreational vehicles, Allison Truck RV Series transmissions provide smooth, full-power automatic shifts.

ALLISON TRANSMISSION TRUCK RV SERIES

RATINGS

MODEL	SERIAL NUMBER	RATIO	MAX INPUT POWER[1]	MAX INPUT TORQUE[1]	MAX INPUT TORQUE w/SEM OR TORQUE LIMITING[1,2]	MAX TURBINE TORQUE[3]	MAX GVW	MAX GCW
			hp (kW)	lb-ft (N • m)	lb-ft (N • m)	lb-ft (N • m)	lbs (kg)	lbs (kg)
3000 TRV	6510	Close Ratio	310 (231)	950 (1288)	n/a	1700 (2305)	–	40,000 (18,144)
3200 TRV	6510	Close Ratio	450 (336)	1200 (1627)	1250 (1695)	1700 (2305)	–	–
4000 TRV	6610	Close Ratio	600 (447)	1850 (2508)	n/a	2800 (3795)	52,000 (23,587)	72,000 (32,659)

1 Gross ratings as defined by ISO 1585 or SAE J1995. 2 SEM = engine controls with Shift Energy Management. 3 Turbine torque limit based on iSCAAN standard deductions.

MARKETING PUBLICATIONS AND VIDEOS

SERIES BROCHURE

- Truck RV Series Individual Brochure SA3565EN

GENERAL BROCHURES

- Superior Fuel Efficiency. Optimum Fuel Economy. SA5704EN
- SEM Brochure SA5388EN
- Prognostics Brochure SA5657EN
- Residual Value Brochure SA3737EN
- Startability Flyer SA5889EN
- Shift Selector Operation and Code Manual SA3360EN
- Fluid and Filter Change Recommendations SA5429EN
- Retarder Brochure SA2953EN
- Fourth Generation "Electronic" Controls I/O Group and Package Info Sheets (Complete Packets) I04105EN

VIDEOS

- Allison At Work DV3719EN
- How an Allison Automatic Performs DV5377EN
- Shift Selector Interactive DV5376EN

TRUCK RV SERIES

*With Allison Transmission Fourth Generation Electronic Controls

TYPICAL VEHICLE APPLICATIONS

Truck-Based Recreational Vehicles

Class 6–8 Type C Motorhomes

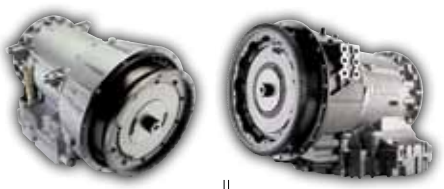
TRUCK RV SERIES FEATURES AND ADVANTAGES

Shift Energy Management (SEM) torque limiting*
Ratings up to 450 hp/1250 lb-ft on 3200 TRV

Prognostics
Eliminates unnecessary oil and filter changes by monitoring various operating parameters to determine and alert when a specific maintenance function is required.

Reduced Engine Load at Stop (RELS)
Enhances fuel economy and helps reduce emissions
Available on 3000, 3200 and 4000 TRV

ALL THE MUSCLE YOU NEED TO GET UP TO SPEED.



3000 TRV, 3200 TRV | 4000 TRV

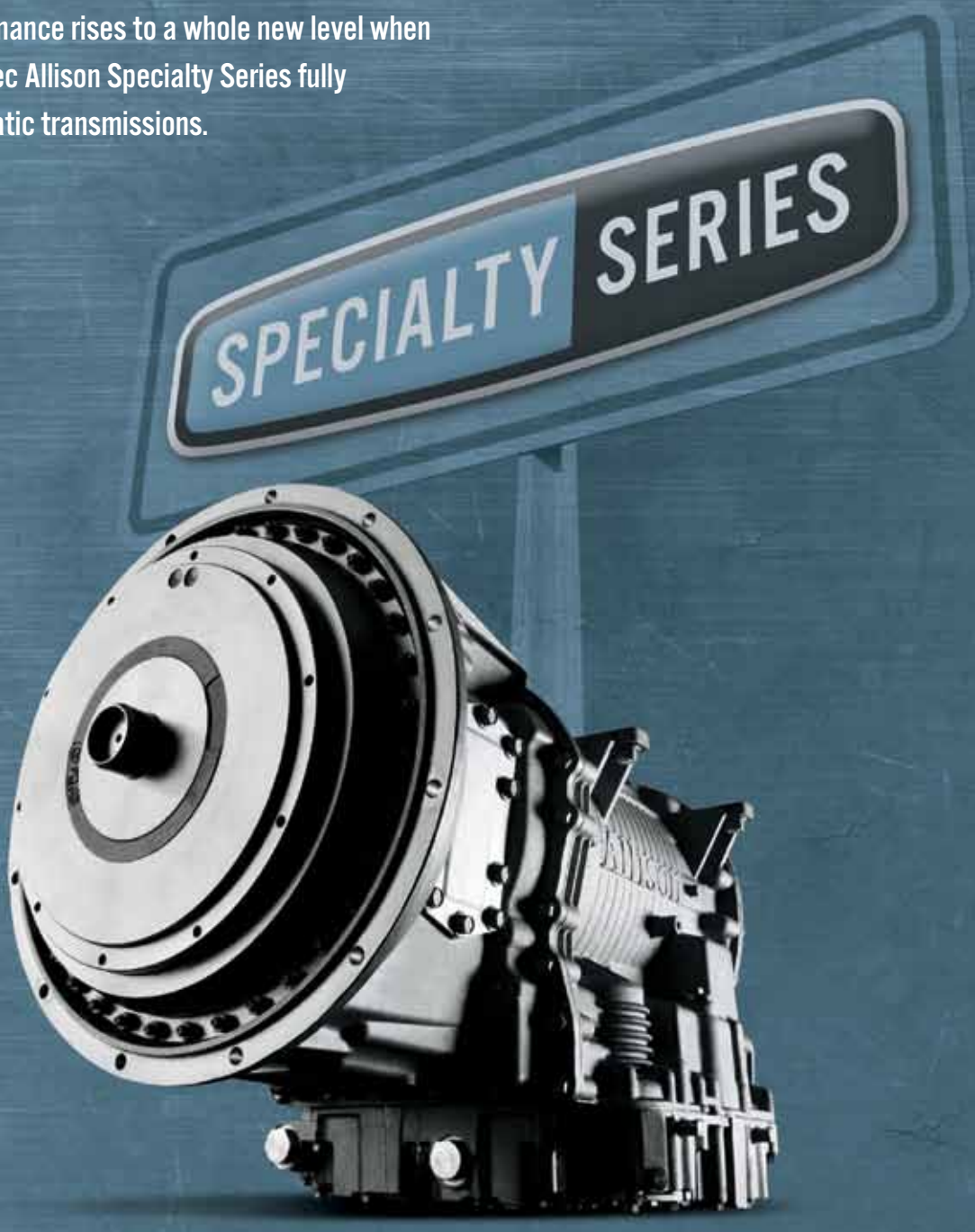
Allison Transmission Fourth Generation Electronic Controls

TRUCK RV SERIES I/O Groups and Packages

			3000/4000 PRODUCT FAMILIES	
			GROUP 110	
			Truck RV	
		VOCATION PACKAGE NUMBER	113	116
INPUT FUNCTIONS		NORMALLY ACTIVATED		
A	Secondary Mode Input	Yes	M	M
B	D-1 Selection	Yes		
C	PTO Request	Yes	143	
D	Shift Selector Transition	No*		
E	Auxiliary Function Range Inhibit (Standard)	No	101	101
F	Auxiliary Function Range Inhibit (Special)	Yes		
G	Auxiliary Hold	Yes	142	
H	Engine Brake Enable & Preselect Request (Standard)	Yes	102/157	102/157
J	Fire Truck Pump Mode (4th Lockup)	No		
L	Automatic Neutral – Single Input	No	117	
Q	Two Speed Axle Enable	Yes		
V	Reverse Enable	No		
W	Direction Change Enable	No	122	122
Y	Anti-Lock Brake Response	Yes	121	121
Z	Retarder Enable	Yes	161	161
AA	Service Brake Status	Yes	162	162
AF	Differential Clutch Request	Yes		
AG	Automatic Neutral – Dual Input	Yes		
AH	Kickdown	Yes		
AJ	4th Lockup Pump Mode	No		
AK	Auto Neutral – Dual Input with Service Brake Status	Yes		
AL	Shift Selector Transition/Secondary Shift Schedule	Yes		
AS	Reduced Engine Load at Stop (RELS)	No**	123	123
OUTPUT FUNCTIONS				
A	Engine Brake Enable	Yes	104	104
B	Sump/Retarder Temperature Indicator	Yes	164	164
C	Range Indicator	Yes	145	145
D	Output Speed Indicator A	Yes	105	105
E	Output Speed Indicator B	Yes		
G	PTO Enable	Yes	130	
I	Engine Overspeed Indicator	Yes		130
J	Two Speed Axle Enable	Yes		
K	Lockup Indicator	Yes		
N	Secondary Mode Indicator	Yes		
O	Service Indicator	Yes		
Q	Retarder Indicator	Yes	124	124
S	Neutral Indicator for PTO	Yes		

*Can be "Yes" depending on the number of selectors chosen for calibration. **Must be specified in the calibration. Cannot be activated with diagnostic tools/programs. M = Mode button

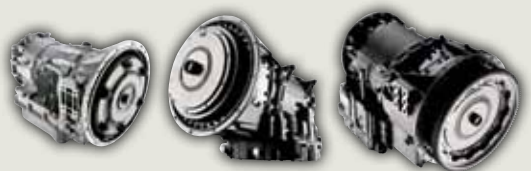
Your vehicles are specially built to work hard in tough conditions, day in, day out. They travel long roads, back roads and to places that have no roads. Their performance rises to a whole new level when you spec Allison Specialty Series fully automatic transmissions.



ALLISON TRANSMISSION SPECIALTY SERIES

RATINGS								
MODEL	RATIO	PARK PAWL	MAX INPUT POWER[1]	MAX INPUT TORQUE[1]	MAX INPUT TORQUE w/SEM OR TORQUE LIMITING	MAX TURBINE TORQUE[2]	MAX GVW	MAX GCW
			hp (kW)	lb-ft (N • m)	lb-ft (N • m)	lb-ft (N • m)	lbs (kg)	lbs (kg)
1000 SP	Close Ratio	Yes	340[3,5] (254)[3,5]	575 (780)	660[3] (895)[3]	950[5] (1288)[5]	22,000 (10,000)	26,001 (11,800)
2100 SP	Close Ratio	–	340[3,5] (254)[3,5]	575 (780)	700[3,4] (950)[3,4]	950[5] (1288)[5]	26,500 (12,000)	26,500 (12,000)
2200 SP	Close Ratio	Yes	340[3,5] (254)[3,5]	575 (780)	700[3,4] (950)[3,4]	950[5] (1288)[5]	26,000 (11,800)	26,001 (11,800)
2350 SP	Close Ratio	Yes	340[5] (254)[5]	575 (780)	700[3,4] (950)[3,4]	950[5] (1288)[5]	30,000 (13,600)	30,000 (13,600)
2500 SP	Wide Ratio	–	340[3,5] (254)[3,5]	575 (780)	700[3,4] (950)[3,4]	950[5] (1288)[5]	33,000 (15,000)	33,000 (15,000)
2550 SP	Wide Ratio	Yes	340[5] (254)[5]	575 (780)	700[3,4] (950)[3,4]	950[5] (1288)[5]	30,000 (13,600)	30,000 (13,600)
3000 SP								
– Specialty/Military	Close Ratio	–	350 (261)	1050 (1424)	n/a	1700 (2305)	–	–
3200 SP								
– Specialty/Military	Close Ratio	–	450 (336)	1250 (1695)	n/a	1700 (2305)	–	–
3500 SP								
– Specialty/Military	Wide Ratio	–	330 (246)	985 (1335)	n/a	1500 (2034)	–	–
3700 SP								
– Specialty/Military	Widest Ratio	–	330 (246)	875 (1186)	n/a	1450 (1966)	–	–
4000 SP								
– Specialty/Military	Close Ratio	–	650 (485)	1950 (2644)	n/a	2800 (3795)	–	–
4430 SP								
– Specialty	Wide Ratio	–	380 (283)	1180 (1600)	n/a	2600 (3525)	–	–
4500 SP								
– Specialty/Military	Wide Ratio	–	600 (447)	1770 (2400)	1850[2] (2508)[2]	2600 (3525)	–	–
4700 SP								
– Specialty/Military	Widest Ratio	–	600 (447)	1850 (2508)	n/a	3000 (4067)	–	–
4800 SP								
– Specialty/Military	Widest Ratio	–	800 (597)	1950 (2644)	n/a	3000 (4067)	–	–

1 Gross ratings as defined by ISO 1585 or SAE J1995. 2 Available in gears two through six. 3 Check with your OEM to ensure offerings.
4 Only available in gears three through five. 5 SEM and torque limiting are required to obtain this rating.



1000 SP, 2100 SP, 2200 SP, 2350 SP, 2500 SP, 2550 SP

3000 SP, 3200 SP, 3500 SP, 3700 SP

4000 SP, 4430 SP, 4500 SP, 4700 SP, 4800 SP

SPECIALTY SERIES

Allison Transmission Fourth Generation Electronic Controls

SPECIALTY SERIES

I/O Groups and Packages

			1000/2000 PRODUCT FAMILIES			3000/4000 PRODUCT FAMILIES							
			GROUP 306			GRP. 113	GROUP 114				GRP. 115	GRP. 116	
	VOCATION PACKAGE NUMBER		354	360	365	153	163	164	165	171	166	182	213
	INPUT FUNCTIONS	NORMALLY ACTIVATED											
A	Secondary Mode Input	Yes	142	142	142	M	M	142	142	142	M	142	142
B	D-1 Selection	Yes											
C	PTO Request	Yes	143	143	143	143	143	M		143	143	M	117
D	Shift Selector Transition	No**											
E	Auxiliary Function Range Inhibit (Standard)	No	101		101								
F	Auxiliary Function Range Inhibit (Special)	Yes											
G	Auxiliary Hold	Yes					142						
H	Engine Brake Enable & Preselect Request (Standard)	Yes	102	102		102/157	102/157	102/157	102/157	102/157	102/157	102/157	102/157
J	Fire Truck Pump Mode (4th Lockup)	No											
L	Automatic Neutral – Single Input	No	123		123								
Q	Two Speed Axle Enable	Yes									142		
V	Reverse Enable	No											
W	Direction Change Enable	No											
Y	Anti-Lock Brake Response	Yes	121	121	121	121	121	121	121	121	121	121	121
Z	Retarder Enable	Yes					161	161	161	161	161	161	161
AA	Service Brake Status	Yes	162	162	162		162	162	162	162	162	162	162
AF	Differential Clutch Request	Yes				161							
AG	Automatic Neutral – Dual Input	Yes											
AH	Kickdown	Yes											
AI	Specialty Vehicle Aux. Function Range Inhibit (Std.)	Yes				142	101	101	101	101	101	101	101
AJ	4th Lockup Pump Mode	No										122/123	122/123
AK	Auto Neutral – Dual Input with Service Brake Status	Yes											
AL	Shift Selector Transition/Secondary Shift Schedule	Yes											
AM	Reverse Inhibit with Preselect Request	Yes/No*											
AQ	Selector Display Blanking	Yes				123	123	123	123	123	123	123	123
AR	Overdrive Disable	Yes	161	161	161								
BD	Auto 2-1 Preselect for 7-Speed	Yes							M	M			M
BQ	3rd Lockup Pump Mode	No		122/123									
BS	Grade Braking Enable	Yes											
BT	Crank Input	Yes											
CB	Preselect Request	Yes	122										
CC	High/NV	Yes			102/122								
	OUTPUT FUNCTIONS												
A	Engine Brake Enable	Yes	104	104		104	104	104	104	104	104	104	104
B	Sump/Retarder Temperature Indicator	Yes	164	164	164	164	164	164	164	164	164	164	164
C	Range Indicator	Yes	145	145	145	145	145	145	145	145		145 (4TH)	145 (4TH)
D	Output Speed Indicator A	Yes	105	105	105		105	105	105	105	105	105	105
E	Output Speed Indicator B	Yes											
G	PTO Enable	Yes	150	150	150	130	130	130		130	130	130	130
I	Engine Overspeed Indicator	Yes							130				
J	Two Speed Axle Enable	Yes									145		
N	Secondary Mode Indicator	Yes				113			113		113		
O	Service Indicator	Yes											
Q	Retarder Indicator	Yes					124	124	124	124	124	124	124
R	Differential Clutch Indicator	Yes				124							
S	Neutral Indicator for PTO	Yes											

*"Yes" normally activated for 1000/2000 Product Families, "No" not normally activated for 3000/4000 Product Families. **Can be "Yes" depending on the number of selectors chosen for calibration.

TYPICAL VEHICLE APPLICATIONS

Military

Crane Carrier

Equipment Hauler with Escort or Permit

Molten Metal/Slag Hauler

Power Plant Generator Hauler

Heavy Equipment Hauler

SPECIALTY SERIES FEATURES AND ADVANTAGES

Shift Energy Management (SEM) torque limiting*

Ratings up to 340 hp/700 lb-ft on 2100, 2200, 2350, 2500 and 2550 SP

Ratings up to 600 hp/1850 lb-ft on 4500 SP

Prognostics

Eliminates unnecessary oil and filter changes by monitoring various operating parameters to determine and alert when a specific maintenance function is required.

MARKETING PUBLICATIONS AND VIDEOS

SERIES BROCHURE

- Specialty Series Individual Brochure SA4047EN

GENERAL BROCHURES

- Superior Fuel Efficiency. Optimum Fuel Economy. SA5704EN
- SEM Brochure SA5388EN
- Prognostics Brochure SA5657EN
- Shift Selector Operation and Code Manual SA3360EN
- Fluid and Filter Change Recommendations SA5429EN
- Retarder Brochure SA2953EN
- Fourth Generation "Electronic" Controls I/O Group and Package Info Sheets (Complete Packets) I04105EN

VIDEOS

- Allison At Work DV3719EN
- How an Allison Automatic Performs DV5377EN
- Shift Selector Interactive DV5376EN

ON ROAD
OFF ROAD
NO ROAD

SPECIALTY SERIES

*With Allison Transmission Fourth Generation Electronic Controls

Allison Oil Field Series fully automatic transmissions are designed and engineered specifically for the rigors of oil field operations. They work harder, faster and more reliably, allowing you to stay in production longer.

ALLISON TRANSMISSION OIL FIELD SERIES

RATINGS

MODEL	RATIO	PARK PAWL	GROSS INPUT POWER	GROSS INPUT TORQUE	MAX INPUT TORQUE w/SEM OR TORQUE LIMITING	NET TURBINE TORQUE	MAX GVW	MAX GCW
			hp (kW)	lb-ft (N • m)	lb-ft (N • m)	lb-ft (N • m)	lbs (kg)	lbs (kg)
3500 OFS[1]	Wide Ratio	n/a	320 (246)	–	985 (1335)[2]	1450 (1966)	–	–
4500 OFS	Wide Ratio	n/a	565 (421)	1650 (2237)	n/a	2600 (3525)	–	–
4700 OFS	Close Ratio	n/a	600 (447)	1850 (2508)	n/a	2600 (3525)	–	–

1 With SEM/LRTP. 2 In gears three through six.

MARKETING PUBLICATIONS AND VIDEOS

SERIES BROCHURE

- Oil Field Series Individual Brochure SA3933EN

GENERAL BROCHURES

- Prognostics Brochure SA5657EN
- Shift Selector Operation and Code Manual SA3360EN

4500 OFS w/o PTO

4700 OFS w/PTO

TYPICAL VEHICLE APPLICATIONS

Drilling
Cementing
Fracturing
Hoisting
Pumping

OIL FIELD SERIES

Allison Transmission Fourth Generation Electronic Controls

OIL FIELD SERIES

I/O Groups and Packages

			SKID-MOUNTED PUMP		DUAL MODE	DUAL MODE		DUAL MODE
			GROUP 122		GROUP 123	GROUP 126		GROUP 131
	VOCATION PACKAGE NUMBER		192	209	193	194	208	218
	INPUT FUNCTIONS	NORMALLY ACTIVATED						
A	Secondary Mode Input	Yes	*	*				
B	D-1 Selection	Yes						
C	PTO Request	Yes				143	102	
D	Shift Selector Transition	No	142	142				
E	Auxiliary Function Range Inhibit (Standard)	No	101	101	101	101	101	101
F	Auxiliary Function Range Inhibit (Special)	Yes						
G	Auxiliary Hold	Yes						
H	Engine Brake Enable & Preselect Request (Standard)	Yes			102/157			
I	Engine Brake Enable & Preselect Request (Special)	Yes						
J	Fire Truck Pump Mode (4th Lockup)	No						
K	Quick- To-Neutral Pump	No	143	143	143	102	143	143
L	Automatic Neutral – Single Input	No						
Q	Two Speed Axle Enable	Yes						
R	Manual Lockup Enable	No	161/179	161/179	123/179	123/179	123/179	123/179
V	Reverse Enable	No	122	122	122	122	122	122
W	Direction Change Enable	No						
Y	Anti-Lock Brake Response	Yes			121	121	121	121
Z	Retarder Enable	Yes			161	161	161	161
AA	Service Brake Status	Yes			162	162	162	162
AF	Differential Clutch Request	Yes						
AG	Automatic Neutral – Dual Input	Yes						
AH	Kickdown	Yes						
AJ	Pump Mode (4th Lockup)	No						
AK	Auto Neutral – Dual Input with Service Brake Status	Yes						
AL	Shift Selector Transition/Secondary Shift Schedule	Yes						
AM	Reverse Inhibit with Preselect Request	No						
AQ	Selector Display Blanking	Yes	102					102
AS	Reduced Engine Load at Stop (RELS)	No**						
BB	RELS With Service Brake Status	No						
BD	Auto 2-1 Preselect for 7-Speed	Yes	M		M	M	M	M
BY	Aux. Box Transition	Yes	117	117	117	117	117	117
BZ	Shift Selector Transition & Oil Field Pumping	Yes			142	142	142	142
CA	Brake-Based Automatic Neutral (BBAN)	Yes						
CB	Preselect Request	Yes						
CC	High/NV	Yes						
CD	Auto Neutral - Single Input with Selector Override	Yes						
CE	Direct Hold Input	Yes		M				
	OUTPUT FUNCTIONS							
A	Engine Brake Enable	Yes			104			104
B	Sump/Retarder Temperature Indicator	Yes	164	164	164	164	164	164
C	Range Indicator	Yes	145	145	145	145	145	145
D	Output Speed Indicator A	Yes	124	124				
E	Output Speed Indicator B	Yes						
G	PTO Enable	Yes				130	130	
I	Engine Overspeed Indicator	Yes						
J	Two Speed Axle Enable	Yes						
K	Lockup Indicator	Yes	105	105	105	105	105	105
N	Secondary Mode Indicator	Yes	113	113	113	113	113	113
O	Service Indicator	Yes						
Q	Retarder Indicator	Yes			124	124	124	124
R	Differential Clutch Indicator	Yes						
S	Neutral Indicator for PTO	Yes						

* No primary mode. By calibration, skid-mounted pump operation is forced and limited to secondary mode. **Must be specified in the calibration. Cannot be activated with diagnostic tools/programs.

Allison Off Road Series fully automatic transmissions are a better way to work in the dirt. They offer higher horsepower and torque ratings that not only help increase the number of deliveries daily, they allow larger payloads.

ALLISON TRANSMISSION OFF ROAD SERIES

RATINGS

MODEL	RATIO	PARK PAWL	GROSS INPUT POWER hp (kW)	GROSS INPUT TORQUE lb-ft (N • m)	MAX INPUT TORQUE w/SEM OR TORQUE LIMITING lb-ft (N • m)	NET TURBINE TORQUE lb-ft (N • m)	MAX GVW lbs (kg)	MAX GCW lbs (kg)
3000 ORS	Close Ratio	No						
– Articulated Dump			250 (186)	664 (900)	–	1575 (2135)	98,106 (44,500)	n/a
– Rigid Dump			250 (186)	664 (900)	–	1575 (2135)	98,106 (44,500)	n/a
3200 ORS	Close Ratio	No						
– Articulated Dump			300 (224)	811 (1100)	–	1575 (2135)	98,106 (44,500)	n/a
– Rigid Dump			300 (224)	811 (1100)	–	1575 (2135)	98,106 (44,500)	n/a
– Other			Contact your Allison representative for details					
3500 ORS	Wide Ratio	No						
– Articulated Dump			300 (224)	811 (1100)	–	1420 (1925)	98,106 (44,500)	n/a
– Rigid Dump			300 (224)	811 (1100)	–	1420 (1925)	98,106 (44,500)	n/a
– Other			Contact your Allison representative for details					
4000 ORS	Close Ratio	No						
– Articulated Dump			480 (358)	1625 (2203)	–	2450 (3322)	151,017 (68,500)	n/a
– Rigid Dump			480 (358)	1550 (2100)	–	2450 (3322)	125,660 (57,000)	n/a
– Other			Contact your Allison representative for details					
4200 ORS	Close Ratio	No						
– Articulated Dump			480 (358)	1700 (2305)	–	2450 (3322)	178,574 (81,000)	n/a
4430 ORS	Wide Ratio	No						
– Articulated Dump			380 (283)	1180 (1600)	–	2450 (3322)	151,017 (68,500)	n/a
– Rigid Dump			380 (283)	1180 (1600)	–	2450 (3322)	151,017 (68,500)	n/a
– Other			Contact your Allison representative for details					
4500 ORS	Wide Ratio	No						
– Articulated Dump			480 (358)	1550 (2100)	1625* (2203)*	2450 (3322)	151,017 (68,500)	n/a
– Rigid Dump			480 (358)	1550 (2100)	1625* (2203)*	2450 (3322)	151,017 (68,500)	n/a
– Other			Contact your Allison representative for details					
4600 ORS	Wide Ratio	No						
– Articulated Dump			480 (358)	1550 (2100)	1700* (2305)*	2450 (3322)	178,574 (81,000)	n/a

* Available in gears three through six.

TYPICAL VEHICLE APPLICATIONS

Articulated Dump
Rigid Dump
Contact your Allison representative for other applications

4500 OFS w/o PTO

OFF ROAD SERIES

Allison Transmission Fourth Generation Electronic Controls

OFF ROAD SERIES

I/O Groups and Packages

			EURO REFUSE TRUCK	PREMIUM OFF-HIGHWAY				
			GROUP 120	GROUP 121				
		VOCATION PACKAGE NUMBER	127	190	175	191	195	196
INPUT FUNCTIONS		NORMALLY ACTIVATED						
A	Secondary Mode Input	Yes	M	M	122	M	M	M
B	D-1 Selection	Yes						
C	PTO Request	Yes	143	143	143	143	143	143
D	Shift Selector Transition	No*						
E	Auxiliary Function Range Inhibit (Standard)	No	101	101		101		101
F	Auxiliary Function Range Inhibit (Special)	Yes						
G	Auxiliary Hold	Yes		142	117	142	117	142
H	Engine Brake Enable & Preselect Request (Standard)	Yes		102/157	102/157	102/157	102/157	102/157
I	Engine Brake Enable & Preselect Request (Special)	Yes	102/157					
J	Fire Truck Pump Mode (4th Lockup)	No						
K	Quick- To-Neutral Pump	No						
L	Automatic Neutral – Single Input	No	117	117		117		117
Q	Two Speed Axle Enable	Yes						
R	Manual Lockup Enable	No						
V	Reverse Enable	No						
W	Direction Change Enable	No						
Y	Anti-Lock Brake Response	Yes	121	121	121	121	121	121
Z	Retarder Enable	Yes	161	161	161	161	161	161
AA	Service Brake Status	Yes	162	162	162	162	162	162
AF	Differential Clutch Request	Yes						
AG	Automatic Neutral – Dual Input	Yes			142/101		142/101	
AH	Kickdown	Yes	122					
AJ	Pump Mode (4th Lockup)	No						
AK	Auto Neutral – Dual Input with Service Brake Status	Yes						
AL	Shift Selector Transition/Secondary Shift Schedule	Yes						
AM	Reverse Inhibit with Preselect Request	Yes	123		123	123	123	
AQ	Selector Display Blanking	Yes						
AS	Reduced Engine Load at Stop (RELS)	No**						
BB	RELS With Service Brake Status	No						
BD	Auto 2-1 Preselect for 7-Speed	Yes						
BY	Aux. Box Transition	Yes						
BZ	Shift Selector Transition & Oil Field Pumping	Yes						
CA	Brake-Based Automatic Neutral (BBAN)	Yes						
CB	Preselect Request	Yes						
CC	High/NV	Yes						
CD	Auto Neutral - Single Input with Selector Override	Yes						
OUTPUT FUNCTIONS								
A	Engine Brake Enable	Yes	104	104	104	104	104	104
B	Sump/Retarder Temperature Indicator	Yes	164	164	164	164	164	164
C	Range Indicator	Yes	113	113		113		
D	Output Speed Indicator A	Yes	105	105	105	105	105	105
E	Output Speed Indicator B	Yes						
G	PTO Enable	Yes	130	130	130	130	130	130
I	Engine Overspeed Indicator	Yes		145				145
J	Two Speed Axle Enable	Yes						
K	Lockup Indicator	Yes						113
N	Secondary Mode Indicator	Yes			113		113	
O	Service Indicator	Yes						
Q	Retarder Indicator	Yes	124	124	124	124	124	124
R	Differential Clutch Indicator	Yes						
S	Neutral Indicator for PTO	Yes	145		145	145	145	

* Can be "Yes" depending on the number of selectors chosen for calibration. **Must be specified in the calibration. Cannot be activated with diagnostic tools/programs.

SPECIFICATIONS





GEAR RATIOS – TORQUE CONVERTER MULTIPLICATION NOT INCLUDED										
MODEL	VOCATION	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH	REVERSE	2ND REVERSE
1000/2100/ 2200/2350/ B 210/B 220	HS, PTS, RDS, BUS, EVS, MH, SP	3.10:1	1.81:1	1.41:1	1.00:1	0.71:1	0.61:1[1]	–	-4.49:1	–
2300	HS, PTS, RDS	3.10:1	1.81:1	1.41:1	1.00:1	0.71:1	0.61:1[1]	–	-4.49:1	–
2500/2550	HS, PTS, RDS, EVS, MH, SP	3.51:1	1.90:1	1.44:1	1.00:1	0.74:1	0.64:1[1]	–	-5.09:1	–
3000/B 300/ B 400	HS, PTS, RDS, BUS, EVS, MH, TRV, SP, ORS	3.49:1	1.86:1	1.41:1	1.00:1	0.75:1	0.65:1	–	-5.03:1	–
3200	TRV, SP, ORS	3.49:1	1.86:1	1.41:1	1.00:1	0.75:1	0.65:1	–	-5.03:1	–
3500	RDS, EVS, SP, ORS, OFS	4.59:1	2.25:1	1.54:1	1.00:1	0.75:1	0.65:1	–	-5.00:1	–
3700	SP	6.93:1	4.18:1	2.24:1	1.69:1	1.20:1	0.90:1	0.78:1	-6.03:1	–
4000/4200 ORS/ B 500	HS, RDS, BUS, EVS, MH, TRV, SP, ORS	3.51:1	1.91:1	1.43:1	1.00:1	0.74:1	0.64:1	–	-4.80:1	–
4430 SP/4500/ 4600 ORS	HS, RDS, EVS, SP, OFS, ORS	4.70:1	2.21:1	1.53:1	1.00:1	0.76:1	0.67:1	–	-5.55:1	–
4700	RDS, EVS, SP[2], OFS[2]	7.63:1[3]	3.51:1	1.91:1	1.43:1	1.00:1	0.74:1	0.64:1	-4.80:1	-17.12:1
4800	EVS, SP[2]	7.63:1[3]	3.51:1	1.91:1	1.43:1	1.00:1	0.74:1	0.64:1	-4.80:1	-17.12:1

1 Check with your OEM to ensure offerings. 2 Second reverse not available. 3 Manually selected first gear.

STANDARD POWER TAKEOFF – CONTINUOUS OPERATION					
BASE MODEL	VOCATION	MOUNTING PAD POSITIONS VIEWED FROM REAR	DRIVE GEAR RATING WITH ONE PTO lb-ft (N • m)	DRIVE GEAR RATING WITH TWO PTOs lb-ft (N • m)	DRIVE
SIDE/SIDE 1000/2000/B 210/B 220	RDS, BUS[1], EVS, MH[1], SP	3 and 9 o'clock	250 (339)	200[2] (271)[2]	Turbine
SIDE/SIDE 3000[1]/B 300[1]/B 400[1]	RDS, BUS, EVS, MH, TRV, SP, ORS, OFS	4 and 8 o'clock	485 (660)	685[3,4] (930)[3,4]	Engine
TOP/SIDE 3000	RDS, SP, ORS, OFS	1 and 8 o'clock	485 (660)	685[3,4] (930)[3,4]	Engine
	EVS	1 and 8 o'clock	670 (910)	685[3,4] (930)[3,4]	Engine
3700	SP	8 o'clock	485 (660)	–	Engine
4000[1]/B 500[1]	RDS, BUS, EVS, MH, TRV, SP, OFS, ORS	1 and 8 o'clock	685 (930)	1175[3,4] (1595)[3,4]	Engine

1 PTO-delete option available. 2 Rating per PTO. 3 Total on the drive gear. 4 Minimum 600 rpm idle speed required when dual PTOs are used simultaneously.

ENGINE SPEEDS				
MODEL	VOCATION	FULL LOAD GOVERNED SPEED Min-Max (rpm)	IDLE SPEED IN DRIVE Min-Max (rpm)	OUTPUT SHAFT SPEED (rpm)
1000/2100/2200/ 2350/B 210/B 220	HS, PTS, RDS, BUS, EVS, MH, SP	2200-4600[1]	500-820	5000
2300	HS, PTS, RDS	2200-4600[1]	500-820	5000
2500/2550/ B 210/B 220	HS, PTS, RDS, BUS, EVS, MH, SP	2200-3200	500-820	4500
3000/B 300/B 400	HS, PTS, RDS, BUS, EVS, MH, TRV, SP, ORS	1950-2800	500-800	3600[2]
3200	TRV, SP, ORS	1950-2800	500-800	3600[2]
3500	RDS, EVS, SP, ORS, OFS	1950-2800	500-800	3600[2]
3700	SP	1950-2800	500-800	3600[2]
4000/B 500	HS, RDS, BUS, EVS, MH, TRV, SP, ORS	1700-2300	500-800	
4430 ORS/4430 SP/4500	HS, RDS, EVS, SP, OFS, ORS	1700-2300	500-800	
4600 ORS/4700	RDS, EVS, SP, OFS, ORS	1700-2300	500-800	
4800	EVS, SP[3]	1700-2300[3]	500-800	

1 Engines with full-load governed speed greater than 3800 rpm require Application Engineering review.
2 Retarder equipped models only. 3 2400 rpm for Military Combat vehicle applications.

TORQUE CONVERTER SPECIFICATIONS			
BASE MODEL	VOCATION	TORQUE CONVERTER	NOMINAL STALL TORQUE
1000/ 2000/ B 210/ B 220	HS, PTS, RDS, BUS, EVS, MH, SP	TC-210	2.05
		TC-211	1.91
		TC-221	1.73
		TC-222	1.58
3000/ B 300/ B 400	HS, PTS, RDS, BUS, EVS, MH,TRV, SP, ORS, OFS	TC-411	2.71
		TC-413	2.44
		TC-415	2.35
		TC-417	2.20
		TC-418	1.98
		TC-419	2.02
		TC-421	1.77
4000/ B 500	HS, RDS, BUS, EVS, MH, TRV, SP, OFS, ORS	TC-521	2.42
		TC-531	2.34
		TC-541	1.90
		TC-551	1.79
		TC-561	1.58

OPTIONAL RETARDER PROVISION – INTEGRAL, HYDRAULIC TYPE			
BASE MODEL	VOCATION	TORQUE CAPACITY lb-ft (N • m)	POWER CAPACITY hp (Kw)
3000[2]/B 300/B 400	HS, PTS, RDS, BUS, EVS, MH, TRV, SP, ORS, OFS		
- High		1600 (2170)	600 (447)
- Medium		1300 (1760)	500 (373)
- Low		1100 (1490)	400 (298)
4000[1]/B 500	HS, RDS, BUS, EVS, MH, TRV, SP, OFS, ORS		
- High		2000 (2710)	600 (447)
- Medium		1600 (2170)	600 (447)
- Low		1300 (1760)	500 (373)

1 Only medium-capacity available on 4700 EVS, RDS, SP and 4800 EVS. 2 Excluding 3700 SP.

PHYSICAL DESCRIPTION					
BASE MODEL	VOCATION	LENGTH[1] in (mm)	DEPTH[2] w/DEEP OIL PAN/SUMP in (mm)	DEPTH[2] w/SHALLOW OIL PAN/SUMP in (mm)	DRY WEIGHT lbs (kg)
1000/2000[3]/B 210/B 220					
– SAE No. 3 mounting	HS, PTS, RDS, BUS, EVS, MH, SP	28.01 (711.4)	11.22 (284.9)	10.71 (272.0)	330 (150)
– SAE No. 2 mounting	HS, PTS, RDS, BUS, EVS, MH, SP	28.39 (721.1)	11.22 (284.9)	10.71 (272.0)	330 (150)
3000/ B 300/B 400					
– Basic model	HS[4], RDS[4], PTS[4], BUS, EVS, MH, TRV, SP, ORS, OFS	28.29 (718.6)	12.90 (327.8)	11.14 (283.1)	535 (243)
– With PTO only	RDS[4], BUS, EVS, MH, TRV, SP, ORS, OFS	32.49 (825.4)	12.90 (327.8)	11.14 (283.1)	575 (261)
– With retarder only	HS[4], RDS[4], PTS[4], BUS, EVS, MH, TRV, SP, ORS, OFS	28.29 (718.6)	12.90 (327.8)	11.14 (283.1)	615 (279)
– With PTO & retarder	RDS[4], BUS, EVS, MH, TRV, SP, ORS, OFS	32.49 (825.4)	12.90 (327.8)	11.14 (283.1)	655 (298)
3700					
– Basic model	SP	51.00 (1295.0)	21.90 (555.0)	–	1170 (530)
4000/4430[6]/4500/B 500					
– Basic model	HS[5], RDS[5], BUS, EVS, MH, TRV, SP[5], ORS	30.54 (775.8)	14.75 (374.7)	13.17 (334.6)	831 (377)
– With PTO only	RDS[5], BUS, EVS, MH, TRV, SP[5], ORS	33.42 (848.8)	14.75 (374.7)	13.17 (334.6)	893 (405)
– With retarder only	HS[5], RDS[5], BUS, EVS, MH, TRV, SP[5], ORS	30.54 (775.8)	14.75 (374.7)	13.17 (334.6)	906 (411)
– With PTO & retarder	RDS[5], BUS, EVS, MH, TRV, SP[5], OFS, ORS	33.42 (848.8)	14.75 (374.7)	13.17 (334.6)	968 (439)
4700/4800					
– Basic model	RDS, EVS, SP	40.61 (1031.6)	14.88 (378.2)	–	1087 (493)
– With PTO only	RDS, EVS, SP	43.48 (1104.6)	14.88 (378.2)	–	1149 (521)
– With retarder only	RDS, EVS, SP	40.61 (1031.6)	14.88 (378.2)	–	1162 (527)
– With PTO & retarder	RDS, EVS, SP, OFS	43.48 (1104.6)	14.88 (378.2)	–	1224 (555)

1 Length measured from flywheel housing to end of output shaft. 2 Depth measured below transmission centerline. 3 2000 SP - only 2000 model available with shallow oil pan. 4 3000 HS, RDS, PTS - Available with deep oil pan only. 5 4000 HS, RDS, SP - Available with deep oil pan only.
6 4430 is an SP model only - available only with deep oil pan.





OIL SYSTEM					
BASE MODEL	VOCATION	CAPACITY[1] QUARTS (LITERS)	MAIN CIRCUIT FILTER	LUBE CIRCUIT FILTER	ELECTRONIC OIL LEVEL SENSOR (OLS)
1000/2000[4]/B 210/B 220			SPIN-ON CANISTER		
– Standard Oil Sump	HS, PTS, RDS, BUS, EVS, MH, SP	14.8[2] (14)[2]			
– Shallow Oil Sump	HS, PTS, RDS, BUS, EVS, MH, SP	12.7[2] (12)[2]			
3000/B 300/B 400			INTEGRAL	INTEGRAL	STANDARD
– Deep Oil Sump w/PTO	RDS, BUS, EVS, MH, TRV, SP, ORS, OFS	29.75[2] (28.1)[2]			
– Deep Oil Sump w/o PTO	HS, PTS, RDS, BUS, EVS, MH, TRV, SP, ORS, OFS	29[2] (27.4)[2]			
– Shallow Oil Sump w/PTO	BUS, EVS, MH, TRV, SP	26.75[2] (25.3)[2]			
– Shallow Oil Sump w/o PTO	BUS, EVS, MH, TRV, SP	26[2] (24.6)[2]			
3700			INTEGRAL	INTEGRAL	STANDARD
– Deep Oil Sump w/PTO	SP	39[2] (37)[2]			
4000/4430[5]/4500/B 500			INTEGRAL	INTEGRAL	STANDARD
– Deep Oil Sump w/PTO	RDS, BUS, EVS, MH, TRV, SP, OFS, ORS	51[2] (48)[2]			
– Deep Oil Sump w/o PTO	HS, RDS, BUS, EVS, TRV, SP, MH, OFS, ORS	48[2] (45)[2]			
– Shallow Oil Sump w/PTO	EVS, MH, TRV, SP	43[2] (41)[2]			
– Shallow Oil Sump w/o PTO	EVS, MH, SP, BUS, TRV	40[2] (38)[2]			
4700[3]/4800[3] w/SEVEN SPEEDS			INTEGRAL	INTEGRAL	STANDARD[3]
– Deep Oil Sump and PTO	RDS, EVS, SP, OFS	54[2] (51)[2]			
– Deep Oil Sump w/o PTO	RDS, EVS, SP, OFS	51[2] (48)[2]			

Recommended oil types for all models are TranSynd™/ TES 295 approved. 1 Transmission only. Does not include cooler, hoses or fittings. 2 Amount of oil necessary to fill a dry transmission. 3 Retarder models must use 4-inch sump without OLS. 4 2000 SP - Only 2000 model available with shallow oil pan. 5 4430 is an SP model only - available only with deep oil pan.

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