Allison Transmission

DRIVING TRANSMISSION TECHNOLOGY™

Allison Transmission

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Information or specifications subject to change without notice or obligation.

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ISO/QS 9000 and ISO 14001 Certified

www.allisontransmission.com

DRIVING TRANSMISSION TECHNOLOGY™

Allison Transmission

VOCATIONAL MODEL GUIDE

SEPTEMBER 2009

ALLISON TRANSMISSION VOCATIONAL MODEL GUIDE

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

Allison Transmission Fourth Generation Electronic Controls

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)
300–550 (224–410)	575[1]–1850 (780[1]–2508)

GVW lbs (kg)

19,500–unlimited (8,845–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)
300–325 (224–242)	550–950 (746–1288)

GVW lbs (kg)

SCHOOL BUS 19,500–unlimited (8,845–unlimited)

SHUTTLE BUS 19,500–33,000 (8,845–15,000)

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)
300–600 (224–447)	575[1]–1850 (780[1]–2508)

GVW lbs (kg)

19,500–unlimited (8,845–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)
230[1]–550 (172[1]–410)	520[1]–1700 (705[1]–2305)

GVW lbs (kg)

29,000[1]–unlimited (13,150[1]–unlimited)

1 Beginning in 2010.

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)
300–680 (224–507)	575[1]–1950 (780[1]–2644)

GVW lbs (kg)

19,500–unlimited (8,845–unlimited)

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)
300–650 (224–485)	575[1]–1950 (780[1]–2644)

GVW lbs (kg)

22,000–unlimited (10,000–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)
310–600 (231–447)	950–1850 (1288–2508)

GVW lbs (kg)

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)
300–800 (224–597)	575–1950 (780–2644)

GVW lbs (kg)

22,000–unlimited (10,000–unlimited)




Vocational Model Product Review

HIGHWAY SERIES	PUPIL TRANSPORT/SHUTTLE SERIES	RUGGED DUTY SERIES	BUS SERIES	EMERGENCY VEHICLE SERIES	MOTORHOME SERIES	TRUCK RV SERIES	SPECIALTY SERIES
1000 HS	1000 PTS	1000 RDS	B 210	1000 EVS	1000 MH	3000 TRV	1000 SP
2100 HS	2100 PTS	2100 RDS	B 220	2100 EVS	2100 MH	3200 TRV	2100 SP
2200 HS	2200 PTS	2200 RDS	B 300	2200 EVS	2200 MH	4000 TRV	2200 SP
2300 HS	2300 PTS	2300 RDS	B 400	2350 EVS	2350 MH		2350 SP
2350 HS	2350 PTS	2350 RDS	B 500	2500 EVS	2500 MH		2500 SP
2500 HS	2500 PTS	2500 RDS		2550 EVS	2550 MH		2550 SP
2550 HS	2550 PTS	2550 RDS		3000 EVS	3000 MH		3000 SP
3000 HS	3000 PTS	3000 RDS		3500 EVS	4000 MH		3200 SP
4000 HS		3500 RDS		4000 EVS			3500 SP
4500 HS		4000 RDS		4500 EVS			3700 SP
		4500 RDS		4700 EVS			4000 SP
		4700 RDS		4800 EVS			4430 SP
							4500 SP
							4700 SP
							4800 SP

Additional models available: OIL FIELD SERIES OFF ROAD SERIES

Contact your Allison Representative for details.

Allison Transmission

HIGHWAY SERIES

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)	MAX TURBINE TORQUE[3] lb-ft (N • m)	MAX GVW lbs (kg)	MAX GCW lbs (kg)
1000 HS	6310	Close Ratio	Yes	340[4,7] (254)[4,7]	575[9] (780)[9]	660[4,7,8] (895)[4,7,8]	950[4,9] (1288)[4,9]	19,500 (8,845)	26,001 (11,800)
2100 HS	6310	Close Ratio	No	340[4,7] (254)[4,7]	575[9] (780)[9]	660[4,7,8] (895)[4,7,8]	950[4,9] (1288)[4,9]	26,000 (11,800)	26,000 (11,800)
2200 HS	6310	Close Ratio	Yes	340[4,7] (254)[4,7]	575[9] (780)[9]	660[4,7,8] (895)[4,7,8]	950[4,9] (1288)[4,9]	26,000 (11,800)	26,001 (11,800)
2300 HS[5]	6310	Close Ratio	No	325 (242)	n/a	450 (610)	950[4,9] (1288)[4,9]	33,000 (15,000)	33,000 (15,000)
2350 HS[7]	6310	Close Ratio	Yes	340[4] (254)[4]	575[9] (780)[9]	660[4,8] (895)[4,8]	950[4,9] (1288)[4,9]	30,000 (13,600)	30,000 (13,600)
2500 HS	6310	Wide Ratio	No	340[4,7] (254)[4,7]	575[9] (780)[9]	660[4,7,8] (895)[4,7,8]	950[4,9] (1288)[4,9]	33,000 (15,000)	33,000 (15,000)
2550 HS[7]	6310	Wide Ratio	Yes	340[4] (254)[4]	575[9] (780)[9]	660[4,8] (895)[4,8]	950[4,9] (1288)[4,9]	30,000 (13,600)	30,000 (13,600)
3000 HS	6510	Close Ratio	n/a	370 (276)	1100 (1491)	1250[6] (1695)[6]	1600 (2169)	80,000 (36,288)	80,000 (36,288)
4000 HS	6610	Close Ratio	n/a	550 (410)	1770 (2400)	1850[10] (2508)[10]	2600 (3525)	–	–
4500 HS	6610	Wide Ratio	n/a	550 (410)	1650 (2237)	1850[10] (2508)[10]	2600 (3525)	–	–

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 Only available in gears three through six. Ratings available in all gear ranges January 2010. 9 Ratings available January 2010. 10 Only 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 for 1000, 2100, 2200, 2350, 2500 and 2550 HS
Ratings up to 325 hp/450 lb-ft for 2300 HS
Ratings up to 370 hp/1250 lb-ft for 3000 HS
Ratings up to 550 hp/1850 lb-ft for 4000 and 4500 HS

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

Reduced Engine Load at Stop (RELS)
Enhances fuel economy and helps reduce emissions
Available for 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 in 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)
Automatically selects between Economy and Performance shift schedules based on the vehicle's payload and the grade on which it is operating 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

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
- Load-Based Shift Schedule 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
- Ukrops Testimonial Flyer SA5699EN
- Kramer Testimonial Flyer SA5417EN
- Perry Testimonial Flyer SA5418EN

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 CD5363EN & DV5362EN
- Perry Distributors CD5369EN & DV5368EN
- Blue Bell Creameries CD5361EN
- Eddie Nichols: One Million Miles and Counting CD5359EN

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	
		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 with Park Brake	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 Request	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.

PUPIL TRANSPORT/SHUTTLE SERIES

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)	MAX TURBINE TORQUE[3] lb-ft (N • m)	MAX GVW lbs (kg)	MAX GCW lbs (kg)
1000 PTS	6310								
– School Bus		Close Ratio	Yes	300[4] (224)[4]	550 (746)	660[6,7,8] (895)[6,7,8]	950[8,10] (1288)[8,10]	19,500 (8,845)	26,001 (11,800)
– Shuttle Bus		Close Ratio	Yes	300[4] (224)[4]	550 (746)	565 (766)	950[8,10] (1288)[8,10]	19,500 (8,845)	26,001 (11,800)
2100 PTS	6310								
– School Bus		Close Ratio	No	300[4] (224)[4]	550 (746)	660[6,7,8] (895)[6,7,8]	950[8,10] (1288)[8,10]	26,000 (11,800)	26,000 (11,800)
– Shuttle Bus		Close Ratio	No	300[4] (224)[4]	550 (746)	565 (766)	950[8,10] (1288)[8,10]	26,000 (11,800)	26,000 (11,800)
2200 PTS	6310								
– School Bus		Close Ratio	Yes	300[4] (224)[4]	550 (746)	660[6,7,8] (895)[6,7,8]	950[8,10] (1288)[8,10]	26,000 (11,800)	26,001 (11,800)
– Shuttle Bus		Close Ratio	Yes	300[4] (224)[4]	550 (746)	565 (766)	950[8,10] (1288)[8,10]	26,000 (11,800)	26,001 (11,800)
2300 PTS[9]	6310								
– School Bus		Close Ratio	No	325 (242)	n/a	450 (610)	950[8,10] (1288)[8,10]	33,000 (15,000)	33,000 (15,000)
2350 PTS[6]	6310								
– School Bus		Close Ratio	Yes	300[4] (224)[4]	550 (746)	660[7,8] (895)[7,8]	950[8,10] (1288)[8,10]	30,000 (13,600)	30,000 (13,600)
2500 PTS[5]	6310								
– School Bus		Wide Ratio	No	300 (224)	550 (746)	660[6,7,8] (895)[6,7,8]	950[8,10] (1288)[8,10]	33,000 (15,000)	33,000 (15,000)
2550 PTS[6]	6310								
– School Bus		Wide Ratio	Yes	300 (224)	550 (746)	660[7,8] (895)[7,8]	950[8,10] (1288)[8,10]	30,000 (13,600)	30,000 (13,600)
3000 PTS	6510								
– School Bus		Close Ratio	n/a	300 (224)	950 (1288)	n/a	1470 (1995)	–	–
– Shuttle Bus		Close Ratio	n/a	300 (224)	950 (1288)	n/a	1470 (1995)	33,000 (15,000)	33,000 (15,000)

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 Only available in gears three through six. Ratings available in all gear ranges January 2010. 8 SEM and torque limiting are required to obtain this rating.
9 Only available with VORTEC 8.1L gasoline powered engine applications. 10 Ratings available January 2010.

PUPIL TRANSPORT/SHUTTLE FEATURES AND ADVANTAGES

Shift Energy Management (SEM) torque limiting*
Ratings up to 300 hp/660 lb-ft for 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 for 3000 PTS

*With Allison Transmission Fourth Generation Electronic Controls

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)
Automatically selects between Economy and Performance shift schedules based on the vehicle's payload and the grade on which it is operating 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.

PUPIL TRANSPORT/SHUTTLE SERIES

HEAD OF THE CLASS

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

3000 PTS

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 Schedule 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 Bus Testimonial Flyer SA5413EN

VIDEOS

- Allison At Work DV3719EN
- How an Allison Automatic Performs DV5377EN
- Shift Selector Interactive DV5376EN
- San Diego Unified School District 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 (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	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 with Park Brake	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 Request	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

RUGGED DUTY SERIES

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] hp (kW)	MAX INPUT TORQUE[1] lb-ft (N • m)	MAX INPUT TORQUE w/SEM OR TORQUE LIMITING[1,2] lb-ft (N • m)	MAX TURBINE TORQUE[3] lb-ft (N • m)	MAX GVW lbs (kg)	MAX GCW lbs (kg)
1000 RDS	6310	Close Ratio	Yes	340[4,7] (254)[4,7]	575[11] (780)[11]	660[4,7,9] (895)[4,7,9]	950[4,11] (1288)[4,11]	19,500 (8,845)	26,001 (11,800)
2100 RDS	6310	Close Ratio	No	340[4,7] (254)[4,7]	575[11] (780)[11]	660[4,7,9] (895)[4,7,9]	950[4,11] (1288)[4,11]	26,000 (11,800)	26,000 (11,800)
2200 RDS	6310	Close Ratio	Yes	340[4,7] (254)[4,7]	575[11] (780)[11]	660[4,7,9] (895)[4,7,9]	950[4,11] (1288)[4,11]	26,000 (11,800)	26,001 (11,800)
2300 RDS[5]	6310	Close Ratio	No	325 (242)	n/a	450 (610)	950[4,11] (1288)[4,11]	33,000 (15,000)	33,000 (15,000)
2350 RDS[7]	6310	Close Ratio	Yes	340[4] (254)[4]	575[11] (780)[11]	660[4,9] (895)[4,9]	950[4,11] (1288)[4,11]	30,000 (13,600)	30,000 (13,600)
2500 RDS	6310								
– On-/Off- Highway		Wide Ratio	No	340[4,7] (254)[4,7]	575[11] (780)[11]	660[4,7,9] (895)[4,7,9]	950[4,11] (1288)[4,11]	33,000 (15,000)	33,000 (15,000)
– Refuse		Wide Ratio	No	300 (224)	550 (746)	565 (766)	950[4,11] (1288)[4,11]	24,200 (11,000)	24,200 (11,000)
2550 RDS[7]	6310	Wide Ratio	Yes	340[4] (254)[4]	575[11] (780)[11]	660[4,9] (895)[4,9]	950[4,11] (1288)[4,11]	30,000 (13,600)	30,000 (13,600)
3000 RDS	6510								
– On-/Off- Highway		Close Ratio	n/a	370 (276)	1100 (1491)	1250[6,7] (1695)[6,7]	1600 (2169)	80,000 (36,288)	80,000 (36,288)
– On- Highway		Close Ratio	n/a	370 (276)	1100 (1491)	1250[6,7] (1695)[6,7]	1600 (2169)	80,000 (36,288)	80,000 (36,288)
– Mixer		Close Ratio	n/a	370 (276)	1100 (1491)	1250[6,7] (1695)[6,7]	1600 (2169)	62,000 (28,123)	–
– Refuse		Close Ratio	n/a	370 (276)	1100 (1491)	1250[6,7] (1695)[6,7]	1600 (2169)	62,000 (28,123)	–
– Specialty PTO, HET		Close Ratio	n/a	370 (276)	1250[7] (1695)[7]	n/a	1700 (2305)	–	–
3500 RDS	6510								
– On-/Off- Highway		Wide Ratio	n/a	300 (224)	860 (1166)	n/a	1420 (1925)	80,000 (36,288)	80,000 (36,288)
– Mixer/Refuse		Wide Ratio	n/a	300 (224)	860 (1166)	n/a	1420 (1925)	60,000 (27,216)	–
– Specialty PTO		Wide Ratio	n/a	315 (235)	950 (1288)	n/a	1450 (1966)	–	–
– HET		Wide Ratio	n/a	330 (246)	985 (1335)	n/a	1450 (1966)	–	–
4000 RDS	6610								
– On-/Off- Highway		Close Ratio	n/a	550 (410)	1770 (2400)	1850[12] (2508)[12]	2600 (3525)	–	–
– Refuse		Close Ratio	n/a	500 (373)	1550 (2102)	n/a	2450 (3322)	–	–
– Specialty PTO		Close Ratio	n/a	550 (410)	1770 (2400)	n/a	2600 (3525)	–	–
– HET		Close Ratio	n/a	600 (447)	1850 (2508)	n/a	2600 (3525)	–	–
4500 RDS	6610								
– On-/Off- Highway		Wide Ratio	n/a	550 (410)	1650 (2237)	1850[12] (2508)[12]	2450 (3322)	–	–
– Refuse		Wide Ratio	n/a	500 (373)	1550 (2102)	n/a	2450 (3322)	–	–
– Specialty PTO		Wide Ratio	n/a	550 (410)	1650 (2237)	1770[8] (2400)[8]	2600 (3525)	–	–
– HET		Wide Ratio	n/a	600 (447)	1650 (2237)	1850[8] (2508)[8]	2600 (3525)	–	–
4700 RDS	6610								
– On-/Off- Highway		Widest Ratio	n/a	550 (410)	1770 (2400)	1850[10] (2508)[10]	2600 (3525)	–	–
– Refuse		Widest Ratio	n/a	500 (373)	1550 (2102)	n/a	2450 (3322)	–	–
– HET		Widest Ratio	n/a	600 (447)	1850 (2508)	n/a	2600 (3525)	–	–

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 three through six. Ratings available in all gear ranges January 2010. 10 Only available in gears four through seven. 11 Ratings available January 2010.
12 Only available in gears three through six.

RUGGED DUTY SERIES FEATURES AND ADVANTAGES

Shift Energy Management (SEM) with torque limiting*
Ratings up to 340 hp/660 lb-ft for 1000, 2100 , 2200, 2350 and 2550 RDS
Ratings up to 325 hp/450 lb-ft for 2300 RDS On-/Off- Highway applications
Ratings up to 300 hp/565 lb-ft in 2500 RDS for refuse applications
Ratings up to 370 hp/1250 lb-ft in 3000 RDS for On-/Off- Highway, Mixer, and Refuse applications[7]
Ratings up to 550 hp/1770 lb-ft in 4500 RDS for On-/Off- Highway and Specialty PTO applications
Ratings up to 600 hp/1850 lb-ft in 4500 RDS for HET

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)
Automatically selects between Economy and Performance shift schedules based on the vehicle's payload and the grade on which it is operating 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 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			3000/4000 PRODUCT FAMILIES																				
			GROUP 305			GROUP 99		GROUP 100	GROUP 101	GROUP 102				GROUP 103		GROUP 104		GROUP 105				GROUP 106		GROUP 132			
						On/Off-Highway		Construction	Construction	Premium Utility Split-Shaft				Street Sweeper		Basic Refuse		Refuse Auto-Neutral				Refuse Auto-Neutral with Service Brake		Premium Utility Split-Shaft			
	VOCATION PACKAGE NUMBER		354	360	365	113	114	146	175	149	150	172	216	167	169	115	144	142	143	145	183	168	170	219	220	221	222
	INPUT FUNCTIONS	**NORMALLY ACTIVATED**																								
A	Secondary Mode Input	Yes	142	142	142	M	142	M	122	142	M	142	M	142	M	M	M	M		122			M	142	M	142	M
B	D-1 Selection	Yes																									
C	PTO Request	Yes	143	143	143	143	M	143	143	M		M	143	M	142	143	143	143	143	143	143	143	143	M		M	143
D	Shift Selector Transition	No**										101					101	101		101			101			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			117							142	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	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
J	Fire Truck Pump Mode (4" Lockup)	No																									
L	Automatic Neutral – Single Input	No	123		123	117	117							117	117		117										
Q	Two Speed Axle Enable	Yes						142						101	101												
V	Reverse Enable	No										117		143												117	
W	Direction Change Enable	No				122				117	117		117		122									117	117		117
Y	Anti-Lock Brake Response	Yes	121	121	121	121	121	121	121	121	121	121	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	161	161	161	161	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	162	162	162	162	162	162	162	162	162	162	162	162	162
AF	Differential Clutch Request	Yes																									
AG	Automatic Neutral – Dual Input with Park Brake	Yes							142/101									117/142	117/142	117/142	117/142						
AH	Kickdown	Yes						122																			
AJ	4th Lockup Pump Mode	No								122/123	122/123	122/123	122/123											122/123	122/123	122/123	122/123
AK	Auto Neutral – Dual Input with Service Brake Status	Yes																				117/142	117/142				
AL	Shift Selector Transition/Secondary Shift Schedule	Yes																	101		101	101					
AM	Reverse Inhibit – Refuse Packer Step Switch	Yes/No*							123																		
AR	Overdrive Disable	Yes	161	161	161																						
AS	Reduced Engine Load at Stop (RELS)	No***				123	123			143	143	143				123								143	143	143	
BQ	3rd Lockup Pump Mode	No		122/123																							
CB	Preselect Request	Yes	122																								
CC	High/NV	Yes			102/122																						
CE	Direct Hold Input	Yes																						179	179	179	179
	OUTPUT FUNCTIONS																										
A	Engine Brake Enable	Yes	104	104		104	104	104	104	104	104	104	104	104	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	164	164	164	164	164	164	164	164	164	164	164	164	164	164
C	Range Indicator	Yes	145	145	145	145	145			145 (4TH)	145 (4TH)	145 (4TH)	145 (4TH)	113	113		113						113	145 (4TH)	145 (4TH)	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	105	105	105	105	105	105	105	105	105	105
E	Output Speed Indicator B	Yes																									
G	PTO Request	Yes	150	150	150	130	130	130	130	130		130	130	130	130	130	130	130	130	130	130	130	130	130		130	130
I	Engine Overspeed Indicator	Yes									130														130		
J	Two Speed Axle Enable	Yes						145						145	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	124	124	124	124	124	124	124	124	124	124	124	124	124
S	Neutral Indicator for PTO	Yes							145							145	145	145	145	145	145	145	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. ***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
- Load-Based Shift Schedule 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
- 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 Customer Testimonial CD5526EN & DV5527EN
- U.S. Concrete Customer Testimonial CD5522EN & DV5524EN
- Dunning Sand & Gravel CD5367EN
- Canadian Logging Customer Testimonial CD5357EN & DV5356EN

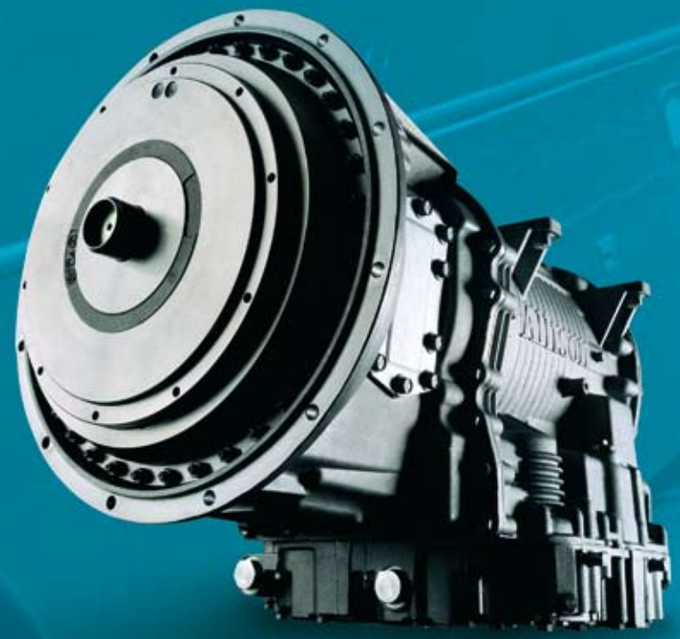
TYPICAL VEHICLE APPLICATIONS

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

BUS 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)	MAX TURBINE TORQUE[3] lb-ft (N • m)	MAX GVW lbs (kg)	MAX GCW lbs (kg)
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]	850 (1152)	29,000 (13,150)	29,000 (13,150)
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]	850 (1152)	29,000 (13,150)	29,000 (13,150)
B 300	6510									
– Transit		Close Ratio	n/a	280 (209)	735 (997)	n/a	n/a	1370 (1857)	38,000 (17,236)	38,000 (17,236)
B 400	6510									
– Transit		Close Ratio	n/a	300 (224)	925 (1254)	n/a	n/a	1370 (1857)	45,000 (20,412)	45,000 (20,412)
– Tour Coach		Close Ratio	n/a	325 (242)	925 (1254)	n/a	n/a	1370 (1857)	45,000 (20,412)	45,000 (20,412)
B 500	6610									
– Transit		Close Ratio	n/a	420 (313)	1300 (1763)	n/a	n/a	2450 (3322)	–	–
– Intercity Coach		Close Ratio	n/a	550 (410)	1700 (2305)	n/a	n/a	2450 (3322)	–	–

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 for B 210 and B 220

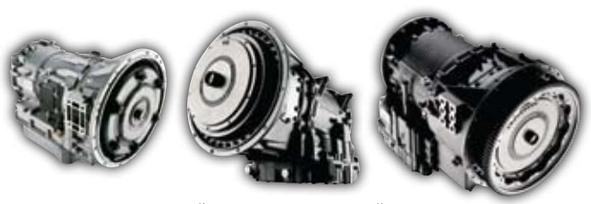
High-density start/stop calibrations
Improves shift operations especially in congested traffic environments
Available on B 210 and B 220

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

Load-Based Shift Scheduling (LBSS)
Automatically selects between Economy and Performance shift schedules based on the vehicle's payload and the grade on which it is operating 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.

MOVE PEOPLE MORE ECONOMICALLY, MORE COMFORTABLY.



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

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

*With Allison Transmission Fourth Generation Electronic Controls

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 Schedule 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

Allison Transmission Fourth Generation Electronic Controls

BUS SERIES I/O Groups and Packages

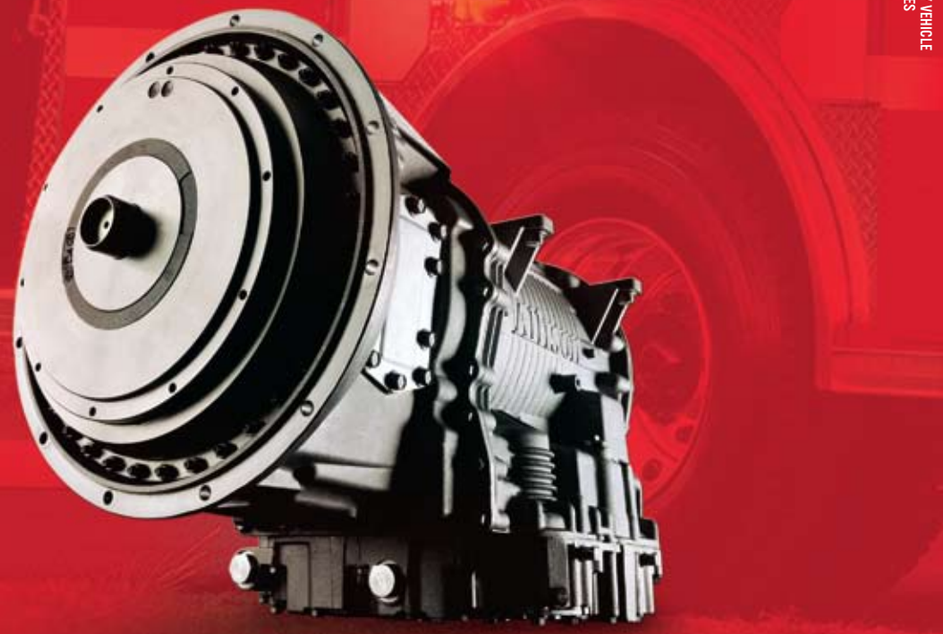
			1000/2000 PRODUCT FAMILIES	3000/4000 PRODUCT FAMILIES		
			GROUP 304	GROUP 112		
				Transit/City Bus (Maximum Economy Calibration)		Transit/ City Bus
		VOCATION PACKAGE NUMBER	351	147	148	159
INPUT FUNCTIONS		NORMALLY ACTIVATED				
A	Secondary Mode Input	Yes	142	142	M	M
C	PTO Request	Yes	143	M	143	
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 Request	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.

EMERGENCY VEHICLE SERIES

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)	MAX TURBINE TORQUE[3] lb-ft (N • m)	MAX GVW lbs (kg)	MAX GCW lbs (kg)
1000 EVS	6310	Close Ratio	Yes	340[4,6] (254)[4,6]	575[9] (780)[9]	660[4,6,7] (895)[4,6,7]	950[4,9] (1288)[4,9]	19,500 (8,845)	26,001 (11,800)
2100 EVS	6310	Close Ratio	No	340[4,6] (254)[4,6]	575[9] (780)[9]	660[4,6,7] (895)[4,6,7]	950[4,9] (1288)[4,9]	26,000 (11,800)	26,000 (11,800)
2200 EVS	6310	Close Ratio	Yes	340[4,6] (254)[4,6]	575[9] (780)[9]	660[4,6,7] (895)[4,6,7]	950[4,9] (1288)[4,9]	26,000 (11,800)	26,001 (11,800)
2350 EVS[6]	6310	Close Ratio	Yes	340[4] (254)[4]	575[9] (780)[9]	660[4,7] (895)[4,7]	950[4,9] (1288)[4,9]	30,000 (13,600)	30,000 (13,600)
2500 EVS	6310	Wide Ratio	No	340[4,6] (254)[4,6]	575[9] (780)[9]	660[4,6,7] (895)[4,6,7]	950[4,9] (1288)[4,9]	33,000 (15,000)	33,000 (15,000)
2550 EVS[6]	6310	Wide Ratio	Yes	340[4] (254)[4]	575[9] (780)[9]	660[4,7] (895)[4,7]	950[4,9] (1288)[4,9]	30,000 (13,600)	30,000 (13,600)
3000 EVS	6510	Close Ratio	n/a	450 (336)	1250 (1695)	n/a	1700 (2305)	–	–
3500 EVS	6510	Wide Ratio	n/a	330 (246)	985 (1335)	n/a	1500 (2034)	–	–
4000 EVS	6610								
– Emergency		Close Ratio	n/a	600 (447)	1850 (2508)	n/a	2600 (3525)	–	–
– ARFF[8]		Close Ratio	n/a	600 (447)	1675 (2271)	n/a	2600 (3525)	–	–
4500 EVS	6610	Wide Ratio	n/a	600 (447)	1770 (2400)	1850[5] (2508)[5]	2600 (3525)	–	–
4700 EVS	6610								
– ARFF[8]		Widest Ratio	n/a	600 (447)	1850 (2508)	n/a	2800 (3795)	–	–
4800 EVS	6610								
– ARFF[8]		Widest Ratio	n/a	680 (507)	1950 (2644)	n/a	2800 (3795)	–	–

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 Only available in gears three through six. Ratings available in all gear ranges January 2010. 8 Aircraft Rescue and Fire-Fighting Vehicle. 9 Ratings available January 2010.

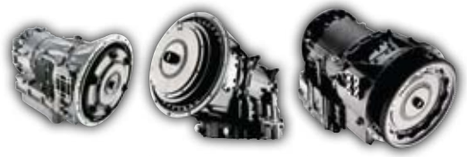
EMERGENCY VEHICLE SERIES FEATURES AND ADVANTAGES

Shift Energy Management (SEM) with torque limiting*
Ratings up to 340 hp/660 lb-ft for 1000, 2100, 2200, 2350, 2500 and 2550 EVS
Ratings up to 600 hp/1850 lb-ft for 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**

Deep oil pan/sump standard on all Emergency Vehicle Series models
Shallow sump with OLS optional for 3000, 3500, 4000 and 4500 EVS
Shallow pan optional for 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

EMERGENCY VEHICLE SERIES

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

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%

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
- 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 108	GROUP 127		
									Split Shaft		Non-Split Shaft	Emergency	Split Shaft		Non-Split Shaft
	VOCATION PACKAGE NUMBER		355	360	364	366	367	368	118	120	119	174	197	198	199
	INPUT FUNCTION	NORMALLY ACTIVATED													
A	Secondary Mode Input	Yes	142	142	142	142	142	142	142	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	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				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
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
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													
AG	Automatic Neutral – Dual Input with Park Brake	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													
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
	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	
C	Range Indicator	Yes	145	145	145	145	145	145	145	145		113	145	145	
D	Output Speed Indicator A	Yes	105	105	105	105	105	105	105	105	105	105	105	105	105
E	Output Speed Indicator B	Yes													
G	PTO Request	Yes	150	150	150	150	150	150	130	130	130	130	130	130	130
I	Engine Overspeed Indicator	Yes													
J	Two Speed Axle Enable	Yes													
K	Lockup Indicator	Yes													
N	Secondary Mode Indicator	Yes													
O	Service Indicator	Yes									164				164
Q	Retarder Indicator	Yes							124	124	124	124	124	124	124
S	Neutral Indicator for PTO	Yes							113	113	145	145	113	113	145

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

MOTORHOME SERIES

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]	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)
1000 MH	6310	Close Ratio	Yes	340[4,5] (254)[4,5]	575[7] (780)[7]	660[5,6] (895)[5,6]	950[4,7] (1288)[4,7]	22,000 (10,000)	26,001 (11,800)
2100 MH	6310	Close Ratio	No	340[4,5] (254)[4,5]	575[7] (780)[7]	660[5,6] (895)[5,6]	950[4,7] (1288)[4,7]	26,000 (11,800)	30,000 (13,600)
2200 MH	6310	Close Ratio	Yes	340[4,5] (254)[4,5]	575[7] (780)[7]	660[5,6] (895)[5,6]	950[4,7] (1288)[4,7]	26,000 (11,800)	26,001 (11,800)
2350 MH[5]	6310	Close Ratio	Yes	340[4] (254)[4]	575[7] (780)[7]	660[5,6] (895)[5,6]	950[4,7] (1288)[4,7]	30,000 (13,600)	30,000 (13,600)
2500 MH	6310	Wide Ratio	No	340[4,5] (254)[4,5]	575[7] (780)[7]	700[5,8,7] (950)[5,8,7]	950[4,7] (1288)[4,7]	33,000 (15,000)	33,000 (15,000)
2550 MH[5]	6310	Wide Ratio	Yes	340[4] (254)[4]	575[7] (780)[7]	660[5,6] (895)[5,6]	950[4,7] (1288)[4,7]	30,000 (13,600)	30,000 (13,600)
3000 MH	6510	Close Ratio	n/a	450 (336)	1250 (1695)	n/a	1700 (2305)	–	–
4000 MH	6610	Close Ratio	n/a	650 (485)	1950 (2644)	n/a	2800 (3795)	–	–

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 Only available in gears three through six. Ratings available in all gear ranges January 2010.
7 Ratings available January 2010. 8 Available in gears three through five in January 2010.

MOTORHOME SERIES FEATURES AND ADVANTAGES

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

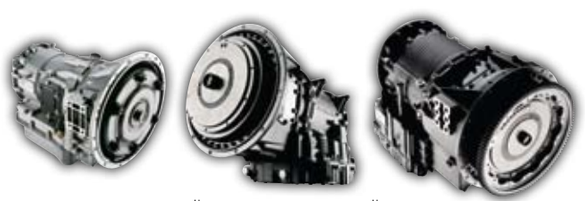
PTO Option available
All Motorhome Series models

Deep Oil Sump/Pan Standard
Shallow pan option available in 1000 MH

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

Reduced Engine Load at Stop (RELS)
Enhances fuel economy and helps reduce emissions
Available for 3000 and 4000 MH



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

MOTORHOME SERIES

*With Allison Transmission Fourth Generation Electronic Controls

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
- 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 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 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	
		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	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 with Park Brake	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 Request	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.

TRUCK RV SERIES

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] hp (kW)	MAX INPUT TORQUE[1] lb-ft (N • m)	MAX INPUT TORQUE w/SEM OR TORQUE LIMITING[1,2] lb-ft (N • m)	MAX TURBINE TORQUE[3] lb-ft (N • m)	MAX GVW lbs (kg)	MAX GCW 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
- 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 for 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 for 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

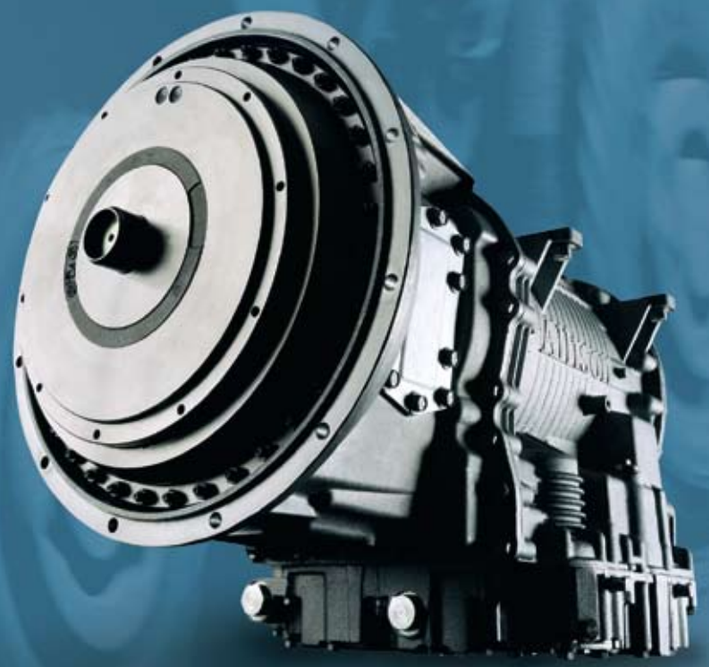
TRUCK RV SERIES I/O Groups and Packages

		VOCATION PACKAGE NUMBER	3000/4000 PRODUCT FAMILIES GROUP 110 Truck RV 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	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 with Park Brake	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 Request	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

SPECIALTY SERIES

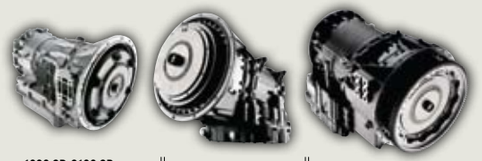
Your vehicles are specially built to work hard in tough conditions, day in, day out. They travel long roads, back roads and to places that have no roads. Their performance rises to a whole new level when you spec Allison Specialty Series fully automatic transmissions.



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]	GVW	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[3,4] (895)[3,4]	950[5,6] (1288)[5,6]	22,000 (10,000)	26,001 (11,800)
2100 SP	Close Ratio	–	340[3,5] (254)[3,5]	575 (780)	660[3,4] (895)[3,4]	950[5,6] (1288)[5,6]	26,500 (12,000)	26,500 (12,000)
2200 SP	Close Ratio	Yes	340[3,5] (254)[3,5]	575 (780)	660[3,4] (895)[3,4]	950[5,6] (1288)[5,6]	26,000 (11,800)	26,001 (11,800)
2350 SP	Close Ratio	Yes	340[5] (254)[5]	575 (780)	660[4] (895)[4]	950[5,6] (1288)[5,6]	30,000 (13,600)	30,000 (13,600)
2500 SP	Wide Ratio	–	340[3,5] (254)[3,5]	575 (780)	660[3,4] (895)[3,4]	950[5,6] (1288)[5,6]	33,000 (15,000)	33,000 (15,000)
2550 SP	Wide Ratio	Yes	340[5] (254)[5]	575 (780)	660[4] (895)[4]	950[5,6] (1288)[5,6]	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 six. Ratings available in all gear ranges January 2010. 5 SEM and torque limiting are required to obtain this rating. 6 Ratings available January 2010.



1000 SP, 2100 SP, 2200 SP, 2350 SP, 2500 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 (4" 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 with Park Brake	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	145
D	Output Speed Indicator A	Yes	105	105	105		105	105	105	105	105	105	105
E	Output Speed Indicator B	Yes											
G	PTO Request	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

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

SPECIALTY SERIES FEATURES AND ADVANTAGES

Shift Energy Management (SEM) torque limiting*

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

Ratings up to 600 hp/1850 lb-ft for 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.

ON ROAD
OFF ROAD
NO ROAD

SPECIALTY SERIES

*With Allison Transmission Fourth Generation Electronic Controls

SPECIFICATIONS





GEAR RATIOS – TORQUE CONVERTER MULTIPLICATION NOT INCLUDED									
MODEL	VOCATION	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH	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	3.49:1	1.86:1	1.41:1	1.00:1	0.75:1	0.65:1	–	-5.03:1
3200	TRV, SP	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	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/B 500	HS, RDS, BUS, EVS, MH, TRV, SP	3.51:1	1.91:1	1.43:1	1.00:1	0.74:1	0.64:1	–	-4.80:1
4430 SP/4500	HS, RDS, EVS, SP	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	7.63:1*	3.51:1	1.91:1	1.43:1	1.00:1	0.74:1	0.64:1	-4.80:1
4800	EVS, SP	7.63:1*	3.51:1	1.91:1	1.43:1	1.00:1	0.74:1	0.64:1	-4.80:1

1 Check with your OEM to ensure offerings. * 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	4 and 8 o'clock	485 (660)	685[3,4] (930)[3,4]	Engine
TOP/SIDE 3000	RDS, SP	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	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	IDLE SPEED IN DRIVE	OUTPUT SHAFT SPEED
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	2000-2800	500-800	3600[2]
3200	TRV, SP	2000-2800	500-800	3600[2]
3500	RDS, EVS, SP	2000-2800	500-800	3600[2]
3700	SP	2000-2800	500-800	3600[2]
4000/B 500	HS, RDS, BUS, EVS, MH, TRV, SP	1700-2300	500-800	
4430 SP/4500	HS, RDS, EVS, SP	1700-2300	500-800	
4700	RDS, EVS, SP	1700-2300	500-800	
4800	EVS, SP*	1700-2300*	500-800	

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

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		
- 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		
- 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.

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	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	TC-521	2.42
		TC-531	2.34
		TC-541	1.90
		TC-551	1.79
		TC-561	1.58

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	28.29 (718.6)	12.90 (327.8)	11.14 (283.1)	535 (243)
– With PTO only	RDS[4], BUS, EVS, MH, TRV, SP	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	28.29 (718.6)	12.90 (327.8)	11.14 (283.1)	615 (279)
– With PTO & retarder	RDS[4], BUS, EVS, MH, TRV, SP	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]	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]	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]	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]	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	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.



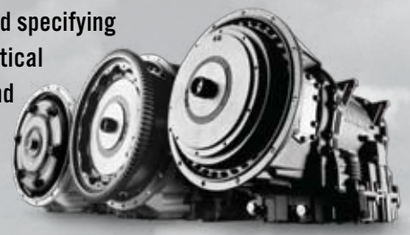


OIL SYSTEM					
BASE MODEL	VOCATION	CAPACITY[1] QUARTS (LITERS)	MAIN CIRCUIT FILTER	LUBE CIRCUIT FILTER	ELECTRONIC OIL LEVEL SENSOR (OLS)
1000/2000[4]/B 210/B 220			SPIN-ON CANISTER		
– Standard Oil Sump	HS, PTS, RDS, BUS, EVS, MH, SP	14.8[2] (14)[2]			
– Shallow Oil Sump	HS, PTS, RDS, BUS, EVS, MH, 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	29.75[2] (28.1)[2]			
– Deep Oil Sump w/o PTO	HS, PTS, RDS, BUS, EVS, MH, TRV, SP	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	51[2] (48)[2]			
– Deep Oil Sump w/o PTO	HS, RDS, BUS, EVS, TRV, SP, MH	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	54[2] (51)[2]			
– Deep Oil Sump w/o PTO	RDS, EVS, SP	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.

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.



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 faster acceleration, smoother operation, easier handling and increased productivity, an Allison Automatic-equipped vehicle costs less to operate than a comparable manual- or automated manual-equipped vehicle.

SHIFT ENERGY MANAGEMENT (SEM)

One of the many features of the Allison Transmission Fourth Generation Electronic Controls is Shift Energy Management (SEM). This function helps conserve fuel, provide better acceleration and helps carry a load more efficiently. In applications where SEM allows the use of higher torque engines than otherwise permitted, spec'ing a bigger engine won't necessarily mean spec'ing a bigger transmission. This makes engine up-sell a more attractive option.

FOURTH GENERATION ELECTRONIC CONTROLS

These controls have more features and more functions. They incorporate a faster processing speed, enhanced communication between the engine and transmission, and improved algorithms, which deliver simplified vehicle integration and a common electronic platform for all vocational models.

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)

This feature is specifically designed to meet the needs of high density, stop-and-go duty cycles. RELS ensures that the transmission won't waste energy when the vehicle is at full stop. The transmission reduces the load on the engine, achieving benefits similar to shifting into Neutral. This not only saves fuel, it helps reduce overall vehicular emissions.

LOAD-BASED SHIFT SCHEDULING (LBSS)

Automatically selects between Economy and Performance shift schedules based on the vehicle's payload and the grade on which it is operating to optimize fuel economy and maintain productivity.

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. Its cushion effect reduces shock and strain on all driveline components.

LOW MAINTENANCE COSTS

The single largest indirect cost of maintenance comes from downtime. 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

Accidents caused by rollback are a concern for drivers of manual- and automated manual-equipped vehicles. However, drivers of Allison-equipped vehicles don't have that concern since Allison Automatics allow only minimal rollback. Additionally, the driver of an Allison-equipped vehicle has more time to check the mirrors and to look forward and behind. There simply aren't as many distractions. And that gives the driver more time to do what's necessary. And what's necessary is being safe on the road.

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.