



ALLISON TRANSMISSION
VOCATIONAL MODEL GUIDE

DRIVING TRANSMISSION TECHNOLOGY™

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)	550-1770	(746-2400)
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, non-school and shuttle bus use.

ENGINE	hp (kW)	TORQUE	lb-ft (N • m)
300	(224)	550-950	(746-1288)
GVW	lbs (kg)	19,500-unlimited (8,845-unlimited)	
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)	550-1850	(746-2508)
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, and shuttle buses exceeding 33,000 lbs GVW.

ENGINE	hp (kW)	TORQUE	lb-ft (N • m)
200-550	(149-410)	425-1650	(576-2237)
GVW	lbs (kg)	26,000-unlimited (11,800-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)
300-680	(224-507)	550-1950	(746-2644)
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)	550-1950	(746-2644)
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)
310-550	(231-410)	950-1770	(1288-2400)
GVW	lbs (kg)	Unlimited	



Vocational Model Product Review

HIGHWAY SERIES
PUPIL TRANSPORT/SHUTTLE SERIES
RUGGED DUTY SERIES
BUS SERIES
EMERGENCY VEHICLE SERIES
MOTORHOME SERIES
TRUCK RV SERIES

1000 HS	1000 PTS	1000 RDS	B 210	1000 EVS	1000 MH	3000 TRV
2100 HS	2100 PTS	2100 RDS	B 220	2100 EVS	2100 MH	3200 TRV
2200 HS	2200 PTS	2200 RDS	B 300	2200 EVS	2200 MH	4000 TRV
2300 HS	2300 PTS	2350 RDS	B 400	2350 EVS	2350 MH	
2350 HS	2350 PTS	2300 RDS	B 500	2500 EVS	2500 MH	
2500 HS	2500 PTS	2550 RDS		2550 EVS	2550 MH	
2550 HS	2550 PTS	2500 RDS		3000 EVS	3000 MH	
3000 HS	3000 PTS	3000 RDS		3500 EVS	4000 MH	
4000 HS		3500 RDS		4000 EVS		
4500 HS		4000 RDS		4500 EVS		
		4500 RDS		4700 EVS		
		4700 RDS		4800 EVS		

Global models available: OIL FIELD SERIES* OFF ROAD SERIES* SPECIALTY SERIES*

*Contact your Allison Representative for details.



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 ^{4,8} (254) ^{4,8}	550 (746)	660 ^{4,8,9} (895) ^{4,8,9}	850 (1152)	19,500 (8,845)	26,000 (11,800)
2100 HS	6310	Close Ratio	No	340 ^{4,8} (254) ^{4,8}	550 (746)	660 ^{4,8,9} (895) ^{4,8,9}	850 (1152)	26,000 (11,800)	26,000 (11,800)
2200 HS	6310	Close Ratio	Yes	340 ^{4,8} (254) ^{4,8}	550 (746)	660 ^{4,8,9} (895) ^{4,8,9}	850 (1152)	26,000 (11,800)	26,000 (11,800)
2300 HS ⁵	6310	Close Ratio	No	325 (242)	n/a	450 (610)	850 (1152)	33,000 (15,000)	33,000 (15,000)
2350 HS ⁸	6310	Close Ratio	Yes	340 ⁴ (254) ⁴	550 (746)	660 ^{4,9} (895) ^{4,9}	850 (1152)	30,000 (13,600)	30,000 (13,600)
2500 HS	6310	Wide Ratio	No	340 ^{4,8} (254) ^{4,8}	550 (746)	660 ^{4,8,9} (895) ^{4,8,9}	850 (1152)	33,000 (15,000)	33,000 (15,000)
2550 HS ⁸	6310	Wide Ratio	Yes	340 ⁴ (254) ⁴	550 (746)	660 ^{4,9} (895) ^{4,9}	850 (1152)	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)	n/a	2600 (3525)	—	—
4500 HS	6610	Wide Ratio	n/a	550 (410)	1650 (2237)	1770 ⁷ (2400) ⁷	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 iSCAN 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 Available in gears two through six. 8 Check with your OEM to ensure offerings.
9 Only available in gears 3 through 6.

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 models
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/1770 lb-ft for 4500 HS

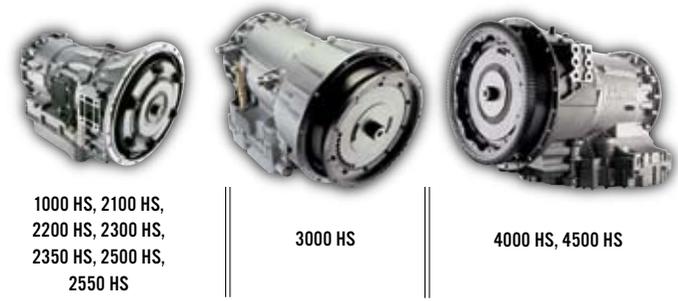
High density start/stop calibrations
Improves shift operation, especially in congested traffic environments
Available for 1000, 2100, 2200 and 2300 HS models

Reduced Energy Load at Stop RELS
Enhances fuel economy and helps reduce emissions
Available for 3000 HS, 4000 HS 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 models

Additional speeds
Five forward speeds standard on 3000 HS.**

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



HIGHWAY SERIES

*With Allison Transmission Fourth Generation Electronic Controls
**Six-speed applications are restricted for engine speeds which exceed 2200 rpm. The maximum engine speed in sixth range at 105 km/hr (65 mph) must be less than or equal to 88% of the engine full-load governed rpm. NOTE: This is not the same as no-load governed speed or high idle governed speed.

VEHICLE APPLICATIONS

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

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

MARKETING PUBLICATIONS AND VIDEOS

- SERIES BROCHURE**
- Highway Series Individual Brochure SA3741EN
- GENERAL BROCHURES**
- Allison Challenge Brochure SA3896EN
 - Allison Shift Selector Operation and Code Manual SA3360EN
 - Filter and TranSynd™ Flyer Packet SA4031EN
 - Filter is a Filter Flyer SA3980EN
 - Fourth Generation “Electronic” Controls I/O Group and Package Info Sheets (Complete Packets) IO4105EN
 - Food and Beverage Brochure SA5226EN
 - TranSynd™ Flyer SA3239EN
 - USAC Productivity/Fuel Economy Study SA3528EN
 - Fluid and Filter Change Recommendations SA5429EN

- VIDEOS**
- Allison At Work DV3719EN
 - Allison Challenge Video DV3896EN
 - Blue Bell Creameries CD5361EN
 - Eddie Nichols: One Million Miles and Counting CD5359EN
 - How an Allison Automatic Performs DV5377EN
 - Kramer Beverage Company CD5363EN
 - Perry Distributors CD5369EN
 - Four Truckers Testimonial CD5565EN & DV5566EN

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 Enable	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	Refuse Packer Step Switch	Yes		
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

PUPIL TRANSPORT/SHUTTLE SERIES



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 and shuttle bus fleets everywhere.

ALLISON TRANSMISSION PUPIL TRANSPORT/SHUTTLE 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 PTS	6310								
- School Bus		Close Ratio	Yes	300 ⁴ (224) ⁴	550 (746)	660 ^{6,7,8} (895) ^{6,7,8}	850 (1152)	19,500 (8,845)	26,000 (11,800)
- Shuttle Bus		Close Ratio	Yes	300 ⁴ (224) ⁴	550 (746)	565 (766)	850 (1152)	19,500 (8,845)	26,000 (11,800)
2100 PTS	6310								
- School Bus		Close Ratio	No	300 ⁴ (224) ⁴	550 (746)	660 ^{6,7,8} (895) ^{6,7,8}	850 (1152)	26,000 (11,800)	26,000 (11,800)
- Shuttle Bus		Close Ratio	No	300 ⁴ (224) ⁴	550 (746)	565 (766)	850 (1152)	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}	850 (1152)	26,000 (11,800)	26,000 (11,800)
- Shuttle Bus		Close Ratio	Yes	300 ⁴ (224) ⁴	550 (746)	565 (766)	850 (1152)	26,000 (11,800)	26,000 (11,800)
2300 PTS⁹	6310								
- School Bus		Close Ratio	No	325 (242)	n/a	450 (610)	850 (1152)	33,000 (15,000)	33,000 (15,000)
2350 PTS⁶	6310								
- School Bus		Close Ratio	Yes	300 ⁴ (224) ⁴	550 (746)	660 ^{7,8} (895) ^{7,8}	850 (1152)	30,000 (13,600)	30,000 (13,600)
2500 PTS⁵	6310								
- School Bus		Wide Ratio	No	300 (224)	550 (746)	660 ^{6,7,8} (895) ^{6,7,8}	850 (1152)	33,000 (15,000)	33,000 (15,000)
2550 PTS⁶	6310								
- School Bus		Wide Ratio	Yes	300 (224)	550 (746)	660 ^{7,8} (895) ^{7,8}	850 (1152)	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 3 through 6. 8 SEM and torque limiting are required to obtain this rating. 9 Only available with VORTEC 8.1L gasoline powered engine applications.

HEAD OF THE CLASS



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

3000 PTS

PUPIL TRANSPORT/SHUTTLE SERIES

PUPIL TRANSPORT/SHUTTLE FEATURES AND ADVANTAGES

Shift Energy Management (SEM) torque limiting*

Ratings up to 300 hp/660 lb-ft for 1000, 2100 and 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

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

*With Allison Transmission Fourth Generation Electronic Controls

MARKETING PUBLICATIONS AND VIDEOS

SERIES BROCHURE

- Pupil Transport/Shuttle Series Individual Brochure SA3742EN

GENERAL BROCHURES

- Filter and TranSynd™ Flyer Packet SA4031EN
- Filter is a Filter Flyer SA3980EN
- Fourth Generation "Electronic" Controls I/O Group and Package Info Sheets (Complete Packets) I04105EN
- Retarder Brochure SA2953EN
- Shift Selector Operation and Code Manual SA3360EN
- TranSynd™ Flyer SA3239EN
- Fluid and Filter Change Recommendations SA5429EN

VIDEOS

- Allison At Work DV3719EN
- How an Allison Automatic Performs DV5377EN
- San Diego Unified School District CD5371EN

VEHICLE APPLICATIONS

CLASS 5-8 SCHOOL BUS

School use

School Bus

Non-school use

Church Bus

Private Academy Bus

Prison Bus

Work Bus

CLASS 5-7 SHUTTLE BUS

(UP TO 33,000 LBS GVW)*

Airfield Bus

Airport Shuttle

Casino Bus

Dedicated Handicap Shuttle

Hotel Shuttle

Intercity Bus

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 Enable	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		**	**	**
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. ** Wire 123 is assigned to RELS in this package, but the feature is not available for these transmission models.
M = Mode button

RUGGED DUTY SERIES



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	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 RDS	6310	Close Ratio	Yes	340 ^{4,7} (254) ^{4,7}	550 (746)	660 ^{4,7,9} (895) ^{4,7,9}	850 (1152)	19,500 (8,845)	26,000 (11,800)
2100 RDS	6310	Close Ratio	No	340 ^{4,7} (254) ^{4,7}	550 (746)	660 ^{4,7,9} (895) ^{4,7,9}	850 (1152)	26,000 (11,800)	26,000 (11,800)
2200 RDS	6310	Close Ratio	Yes	340 ^{4,7} (254) ^{4,7}	550 (746)	660 ^{4,7,9} (895) ^{4,7,9}	850 (1152)	26,000 (11,800)	26,000 (11,800)
2300 RDS ⁵	6310	Close Ratio	No	325 (242)	n/a	450 (610)	850 (1152)	33,000 (15,000)	33,000 (15,000)
2350 RDS ⁷	6310	Close Ratio	Yes	340 ⁴ (254) ⁴	550 (746)	660 ^{4,9} (895) ^{4,9}	850 (1152)	30,000 (13,600)	30,000 (13,600)
2500 RDS	6310								
- On/Off Highway		Wide Ratio	No	340 ^{4,7} (254) ^{4,7}	550 (746)	660 ^{4,7,9} (895) ^{4,7,9}	850 (1152)	33,000 (15,000)	33,000 (15,000)
- Refuse		Wide Ratio	No	300 (224)	550 (746)	565 (766)	850 (1152)	24,200 (11,000)	24,200 (11,000)
2550 RDS ⁷	6310	Wide Ratio	Yes	340 ⁴ (254) ⁴	550 (746)	660 ^{4,9} (895) ^{4,9}	850 (1152)	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)	60,000 (28,123)	—
- Refuse		Close Ratio	n/a	370 (276)	1100 (1491)	1250 ^{6,7} (1695) ^{6,7}	1600 (2169)	60,000 (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)	—
- HET		Wide Ratio	n/a	330 (246)	985 (1335)	n/a	1450 (1966)	—	—
- Specialty PTO		Wide Ratio	n/a	315 (235)	950 (1288)	n/a	1450 (1966)	—	—
4000 RDS	6610								
- On/Off Highway		Close Ratio	n/a	550 (410)	1770 (2400)	n/a	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)	1770 ⁸ (2400) ⁸	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)	n/a	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 3 through 6.

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 models

Ratings up to 325 hp/450 lb-ft for 2300 RDS models

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 applications⁷

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 models

Deep oil pan/sump

Standard for all Rugged Duty Series 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

VOCATION PACKAGE NUMBER

INPUT FUNCTIONS NORMALLY ACTIVATED

			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	
			354	360	On/Off-Highway		Construction	Construction	Premium Utility Split-Shaft			Street Sweeper		Basic Refuse		Refuse Auto-Neutral				Refuse Auto-Neutral with Service Brake	
			113	114	146	175	149	150	172	167	169	115	144	142	143	145	183	168	170		
			142	142	M	142	M	122	142	M	142	142	M	M	M		122			M	
A	Secondary Mode Input	Yes	142	142	M	142	M	122	142	M	142	142	M	M	M		122			M	
B	D-1 Selection	Yes																			
C	PTO Enable	Yes	143	143	143	M	143	143	M		M	M	142	143	143	143	143	143	143	143	
D	Shift Selector Transition	No**																			
E	Auxiliary Function Range Inhibit (Standard)	No	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	
J	Fire Truck Pump Mode (4" Lockup)	No																			
L	Automatic Neutral - Single Input	No	123		117	117								117	117		117				
Q	Two Speed Axle Enable	Yes					142							101	101						
V	Reverse Enable	No										117	143								
W	Direction Change Enable	No			122					117	117			122							
Y	Anti-Lock Brake Response	Yes	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	
AA	Service Brake Status	Yes	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										
AK	Auto Neutral - Dual Input with Service Brake Status	Yes																		117/142	
AL	Shift Selector Transition/Secondary Shift Schedule	Yes															101	101	101	101	
AM	Refuse Packer Step Switch	Yes/No*						123													
AR	Overdrive Disable	Yes	161	161																	
AS	Reduced Engine Load at Stop (RELS)	No			***	***			***	***	***			***							
BQ	3rd Lockup Pump Mode	No		122/123																	
BR	Transfer Case Low	Yes	122																		
BS	Grade Braking Enable	Yes																			
BT	Crank Input	Yes																			
			GROUP 305		GROUP 99		GROUP 100	GROUP 101	GROUP 102			GROUP 103		GROUP 104		GROUP 105				GROUP 106	
			104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	
A	Engine Brake Enable	Yes	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	
C	Range Indicator	Yes	145	145	145	145			145	145	145	113	113		113					113	
D	Output Speed Indicator A	Yes	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 Enable	Yes	150	150	130	130	130	130	130		130	130	130	130	130	130	130	130	130	130	
I	Engine Overspeed Indicator	Yes									130										
J	Two Speed Axle Enable	Yes					145						145	145							
K	Lockup Indicator	Yes																			
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	
S	Neutral Indicator for PTO	Yes						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.

*** Wire 123 is assigned to RELS in this package, but the feature is not available for these transmission models. M = Mode button

MARKETING PUBLICATIONS AND VIDEOS

SERIES BROCHURE

- Rugged Duty Series Individual Brochure SA3743EN

GENERAL BROCHURES

- Filter and TranSynd™ Flyer Packet SA4031EN
- Filter is a Filter Flyer SA3980EN
- Fourth Generation "Electronic" Controls I/O Group and Package Info Sheets (Complete Packets) IO4105EN
- Retarder Brochure SA2953EN
- Shift Selector Operation and Code Manual SA3360EN
- TranSynd™ Flyer SA3239EN
- Fluid and Filter Change Recommendations SA5429EN

VIDEOS

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

VEHICLE APPLICATIONS

Airport Support
Baggage Transport Vehicle
Concrete Mixer
Concrete Pumper
Dump Truck
Equipment Hauler
Farm/Agriculture
Front Loader – Landfill
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
Side Loader – Landfill
Side Loader – No Landfill
Special Snow Removal Vehicle
Street Cleaning Vehicle
Transfer/Relocation Vehicle
Wood Chip Hauler
Wrecker
Yard Tractor/Spotter



BUS SERIES

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	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)
B 210	6310								
- Transit		Close Ratio	No	220 (164)	425 (576)	520 (705)	850 (1152)	26,000 (11,800)	26,000 (11,800)
B 220	6310								
- Transit		Close Ratio	Yes	220 (164)	425 (576)	520 (705)	850 (1152)	26,000 (11,800)	26,000 (11,800)
B 300	6510								
- Transit		Close Ratio	n/a	280 (209)	735 (997)	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	1370 (1857)	45,000 (20,412)	45,000 (20,412)
- Tour Coach		Close Ratio	n/a	325 (242)	925 (1254)	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	2450 (3322)	—	—
- Intercity Coach		Close Ratio	n/a	550 (410)	1650 (2237)	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.

MARKETING PUBLICATIONS AND VIDEOS

SERIES BROCHURE

- Bus Series Individual Brochure SA3740EN

GENERAL BROCHURES

- Filter and TranSynd™ Flyer Packet SA4031EN
- Filter is a Filter Flyer SA3980EN
- Fourth Generation “Electronic” Controls I/O Group and Package Info Sheets (Complete Packets) I04105EN
- Retarder Brochure SA2953EN
- Shift Selector Operation and Code Manual SA3360EN
- TranSynd™ Flyer SA3239EN
- Fluid and Filter Change Recommendations SA5429EN

VIDEOS

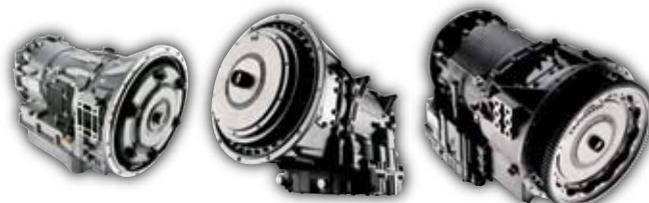
- Allison At Work DV3719EN
- How an Allison Automatic Performs DV5377EN

BUS SERIES FEATURES AND ADVANTAGES

Shift Energy Management (SEM) with torque limiting*
Ratings up to 220 hp/520 lb-ft for B 210, B 220 models

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

MOVE PEOPLE MORE ECONOMICALLY,
MORE COMFORTABLY.



B 210, B 220

B 300, B 400

B 500

VEHICLE APPLICATIONS

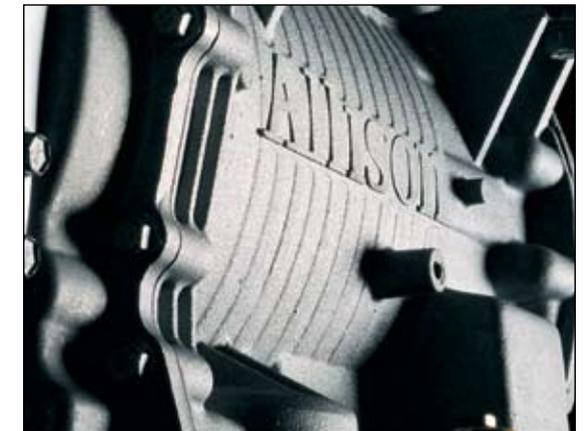
Revenue-Generating/
FTA Transit Bus Applications

Transit Bus

Tour Coach

Shuttle Bus over 33,000 lbs GVW

*MY06 Allison Transmission Fourth Generation Electronic Controls



		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 Enable	Yes	143	M	143	
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	Refuse Packer Step Swith	Yes				
AR	Overdrive Disable	Yes	161			
AS	Reduced Engine Load at Stop (RELS)	No		123	123	123
BQ	3rd Lockup Pump Mode	No				
BR	Transfer Case Low	Yes				
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

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. On scene, precise vehicle positioning is accomplished with just subtle pressure on the accelerator. No other transmission contributes so much to getting the job done faster and better.

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}	550 (746)	660 ^{4,6,7} (895) ^{4,6,7}	850 (1152)	19,500 (8,845)	26,000 (11,800)
2100 EVS	6310	Close Ratio	No	340 ^{4,6} (254) ^{4,6}	550 (746)	660 ^{4,6,7} (895) ^{4,6,7}	850 (1152)	26,000 (11,800)	26,000 (11,800)
2200 EVS	6310	Close Ratio	Yes	340 ^{4,6} (254) ^{4,6}	550 (746)	660 ^{4,6,7} (895) ^{4,6,7}	850 (1152)	26,000 (11,800)	26,000 (11,800)
2350 EVS ⁶	6310	Close Ratio	Yes	340 ⁴ (254) ⁴	550 (746)	660 ^{4,7} (895) ^{4,7}	850 (1152)	30,000 (13,600)	30,000 (13,600)
2500 EVS	6310	Wide Ratio	No	340 ^{4,6} (254) ^{4,6}	550 (746)	660 ^{4,6,7} (895) ^{4,6,7}	850 (1152)	33,000 (15,000)	33,000 (15,000)
2550 EVS ⁶	6310	Wide Ratio	Yes	340 ⁴ (254) ⁴	550 (746)	660 ^{4,7} (895) ^{4,7}	850 (1152)	30,000 (13,600)	30,000 (13,600)
3000 EVS	6510	Close Ratio	n/a	425 (316)	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)	—	—
– Crash Truck		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								
– Crash Truck		Wide Ratio	n/a	600 (447)	1850 (2508)	n/a	2800 (3795)	—	—
4800 EVS	6610								
– Crash Truck		Wide 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 3 through 6.

MARKETING PUBLICATIONS AND VIDEOS

SERIES BROCHURE

- Emergency Vehicle Series Individual Brochure SA3564EN

GENERAL BROCHURES

- Filter and TranSynd™ Flyer Packet SA4031EN
- Filter is a Filter Flyer SA3980EN
- Fourth Generation “Electronic” Controls I/O Group and Package Info Sheets (Complete Packets) IO4105EN
- Retarder Brochure SA2953EN
- Shift Selector Operation and Code Manual SA3360EN
- TranSynd™ Flyer SA3239EN
- Fluid and Filter Change Recommendations SA5429EN

VIDEOS

- Allison At Work DV3719EN
- How an Allison Automatic Performs DV5377EN
- Manville Fire Department Customer Testimonial CD5550EN, DV5551EN

EMERGENCY VEHICLE SERIES PRODUCT 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



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 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 without output speed at or above 200 rpm/throttle position beyond 40%

EMERGENCY VEHICLE SERIES

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

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	Pumper – With Split Shaft PTO
Airport Crash/Fire/Rescue Vehicle	Pumper – Without Split Shaft PTO
Ambulance	Support Vehicle
Hazardous Material Vehicle	Tanker
Mobile Command Center	

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 107		GROUP 108	
					Split Shaft	Non Split-Shaft	Emergency	
VOCATION PACKAGE NUMBER			355	360	118	120	119	174
INPUT FUNCTIONS			NORMALLY ACTIVATED					
A	Secondary Mode Input	Yes	142	142	142	M	M	M
B	D-1 Selection	Yes						
C	PTO Enable	Yes	143	143	M	142	143	143
D	Shift Selector Transition	No*						101
E	Auxiliary Function Range Inhibit (Standard)	No						
F	Auxiliary Function Range Inhibit (Special)	Yes					142/101	
G	Auxiliary Hold	Yes						
H	Engine Brake Enable & Preselect Request (Standard)	Yes	102	102	102/157	102/157	102/157	102/157
J	Fire Truck Pump Mode (4th Lockup)	No			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
Z	Retarder Enable	Yes			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 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				
AS	Reduced Engine Load at Stop (RELS)	No						
BQ	3rd Lockup Pump Mode	No		122/123				
OUTPUT FUNCTIONS								
A	Engine Brake Enable	Yes	104	104	104	104	104	104
B	Sump/Retarder Temperature Indicator	Yes	164	164	164	164		164
C	Range Indicator	Yes	145	145	145	145		113
D	Output Speed Indicator A	Yes	105	105	105	105	105	105
E	Output Speed Indicator B	Yes						
G	PTO Enable	Yes	150	150	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	
Q	Retarder Indicator	Yes			124	124	124	124
S	Neutral Indicator for PTO	Yes					145	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}	550 (746)	660 ^{4,5,6} (895) ^{4,5,6}	850 (1152)	22,000 (10,000)	26,000 (11,800)
2100 MH	6310	Close Ratio	No	340 ^{4,5} (254) ^{4,5}	550 (746)	660 ^{4,5,6} (895) ^{4,5,6}	850 (1152)	26,000 (11,800)	30,000 (13,600)
2200 MH	6310	Close Ratio	Yes	340 ^{4,5} (254) ^{4,5}	550 (746)	660 ^{4,5,6} (895) ^{4,5,6}	850 (1152)	26,000 (11,800)	26,000 (11,800)
2350 MH ⁵	6310	Close Ratio	Yes	340 ⁴ (254) ⁴	550 (746)	660 ^{4,6} (895) ^{4,6}	850 (1152)	30,000 (13,600)	30,000 (13,600)
2500 MH	6310	Wide Ratio	No	340 ^{4,5} (254) ^{4,5}	550 (746)	660 ^{4,5,6} (895) ^{4,5,6}	850 (1152)	33,000 (15,000)	33,000 (15,000)
2550 MH ⁵	6310	Wide Ratio	Yes	340 ⁴ (254) ⁴	550 (746)	660 ^{4,6} (895) ^{4,6}	850 (1152)	30,000 (13,600)	30,000 (13,600)
3000 MH	6510	Close Ratio	n/a	425 (316)	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 3 through 6.

MOTORHOME SERIES PRODUCT 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 models

PTO Option available

All Motorhome Series models

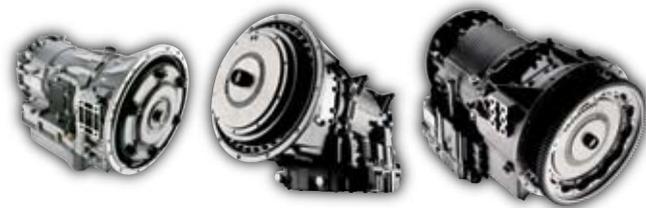
Deep Oil Sump/Pan Standard

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 models



1000 MH, 2100 MH,
2200 MH, 2350 MH,
2500 MH, 2550 MH

3000 MH

4000 MH

VEHICLE APPLICATIONS

Type A and Bus Conversion Motorhomes
Class 5-8 and Type C Motorhomes Class 4-5

Motorhome

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

- Filter and TranSynd™ Flyer Packet SA4031EN
- Filter is a Filter Flyer SA3980EN
- Fourth Generation “Electronic” Controls I/O Group and Package Info Sheets (Complete Packets) I04105EN
- Motorhome Uprate Kit Brochure SA3467EN
- Motorhome Tips SA2742EN
- Retarder Brochure SA2953EN
- Shift Selector Operation and Code Manual SA3360EN
- TranSynd™ Flyer SA3239EN
- Fluid and Filter Change Recommendations SA5429EN

VIDEOS

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



MOTORHOME SERIES

*With Allison Transmission Fourth Generation Electronic Controls

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	142	M	M
B	D-1 Selection			
C	PTO Enable	143	143	
D	Shift Selector Transition			
E	Auxiliary Function Range Inhibit (Standard)	101	101	101
F	Auxiliary Function Range Inhibit (Special)			
G	Auxiliary Hold		142	
H	Engine Brake Enable & Preselect Request (Standard)	102	102/157	102/157
J	Fire Truck Pump Mode			
L	Automatic Neutral - Single Input	123	117	
Q	Two Speed Axle Enable			
V	Reverse Enable			
W	Direction Change Enable		122	122
Y	Anti-Lock Brake Response	121	121	121
Z	Retarder Enable		161	161
AA	Service Brake Status	162	162	162
AF	Differential Clutch Request			
AG	Automatic Neutral - Dual Input with Park Brake			
AH	Kickdown			
AJ	4th Lockup Pump Mode			
AK	Auto Neutral-Dual Input with Service Brake Status			
AL	Shift Selector Transition/Secondary Shift Schedule			
AM	Refuse Packer Step Switch			
AR	Overdrive Disable	161		
AS	Reduced Engine Load at Stop (RELS)		**	**
OUTPUT FUNCTIONS				
A	Engine Brake Enable	104	104	104
B	Sump/Retarder Temperature Indicator	164	164	164
C	Range Indicator	145	145	145
D	Output Speed Indicator A	105	105	105
E	Output Speed Indicator B			
G	PTO Enable	150	130	
I	Engine Overspeed Indicator			130
J	Two Speed Axle Enable			
K	Lockup Indicator			
N	Secondary Mode Indicator			
O	Service Indicator			
Q	Retarder Indicator		124	124
S	Neutral Indicator for PTO			

* Can be "Yes" depending on the number of selectors chosen for calibration. ** Wire 123 is assigned to RELS in this package, but the feature is not available for these transmission models.
M = Mode button

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	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	425 (316)	1200 (1627)	1250 (1695)	1700 (2305)	—	—
4000 TRV	6610	Close Ratio	550 (410)	1770 (2400)	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.

VEHICLE APPLICATIONS

Truck-Based Recreational Vehicles
Class 6-8 Type C Motorhomes

MARKETING PUBLICATIONS AND VIDEOS

SERIES BROCHURE

- Truck RV Series Individual Brochure SA3565EN

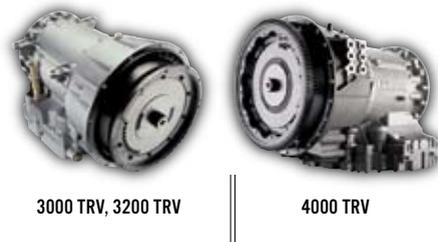
GENERAL BROCHURES

- Filter and TranSynd™ Flyer Packet SA4031EN
- Filter is a Filter Flyer SA3980EN
- Fourth Generation “Electronic” Controls I/O Group and Package Info Sheets (Complete Packets) IO4105EN
- Retarder Brochure SA2953EN
- Shift Selector Operation and Code Manual SA3360EN
- TranSynd™ Flyer SA3239EN
- Fluid and Filter Change Recommendations SA5429EN

VIDEOS

- Allison At Work DV3719EN
- How an Allison Automatic Performs DV5377EN

ALL THE MUSCLE YOU NEED
TO GET UP TO SPEED.



Allison Transmission Fourth Generation Electronic Controls

TRUCK RV SERIES I/O Groups and Packages

		3000/4000 PRODUCT FAMILIES	
		GROUP 110	
		Truck RV	
		113	116
		M	M
INPUT FUNCTIONS		VOCATION PACKAGE NUMBER	
		NORMALLY ACTIVATED	
A	Secondary Mode Input	Yes	
B	D-1 Selection	Yes	
C	PTO Enable	Yes	143
D	Shift Selector Transition	No*	
E	Auxiliary Function Range Inhibit (Standard)	No	101
F	Auxiliary Function Range Inhibit (Special)	Yes	
G	Auxiliary Hold	Yes	142
H	Engine Brake Enable & Preselect Request (Standard)	Yes	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
Y	Anti-Lock Brake Response	Yes	121
Z	Retarder Enable	Yes	161
AA	Service Brake Status	Yes	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	**
OUTPUT FUNCTIONS			
A	Engine Brake Enable	Yes	104
B	Sump/Retarder Temperature Indicator	Yes	164
C	Range Indicator	Yes	145
D	Output Speed Indicator A	Yes	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
S	Neutral Indicator for PTO	Yes	124

* Can be “Yes” depending on the number of selectors chosen for calibration. **Wire 123 is assigned to RELS in this package, but the feature is not available for these transmission models. M = Mode button

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.

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.



SHIFT ENERGY MANAGEMENT

One of the many features of the new 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.

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.

REDUCED ENERGY LOAD AT STOP (RELS)

This feature on the Allison Highway Series 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.

45 AND UNDER

Most vehicles spend the majority of their operating time below 45 mph. And data shows that for every 10% of time spent below 45 mph, an Allison Automatic is nearly 1% more productive*.

*Results may vary depending on the particular operating conditions.

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.

IMPROVED OPERATING SAFETY

Accidents caused by roll back 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 roll back. 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.

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 filters reduce labor costs and valuable downtime. And, using TranSynd™ synthetic transmission fluid helps extend oil change intervals up to 600% for most applications.

TORQUE CONVERTER

The torque converter is the most obvious component that elevates an Allison Automatic above other transmissions. The heavy-duty Allison torque converter is at the heart of what makes an Allison Automatic the most effective, efficient and productive commercial transmission in the world. Increased shifting performance, faster acceleration, greater operating flexibility and minimal roll-back are all advantages that can be attributed to it. Its cushion effect reduces shock and strain on the entire driveline – including engine, universal joints, driveshafts and rear axle – prolonging the operating life of the components.

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