Allison 5th Gen

Vocational Model Guide 2017

Improving The Way The World Works

Allison Transmission®

ALLISON TRANSMISSION VOCATIONAL MODEL GUIDE

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

FUELSENSE® 2.0 with DynActive™ Shifting

FuelSense® is the next generation in fuel-saving technology from Allison Transmission. It is a unique set of software and electronic controls that improve fuel utilization.

TRACTOR SERIES™

The Allison TC10® is engineered specifically for Class 8 tractor applications. The TC10 maximizes drivetrain efficiency while achieving and maintaining highway cruising speeds to save you time and money.

ENGINE hp (kW)	TORQUE lb-ft (N•m)
600 (447)	1700-1850 (2305-2508)

GCW lbs (kg)

80,000–110,000 (36,288–49,895)

HIGHWAY SERIES™

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

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

GVW lbs (kg)

14,000–unlimited (6,350–unlimited)

MOTORHOME SERIES™

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

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

GVW lbs (kg)

14,000–unlimited (6,350–unlimited)

BUS SERIES™

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

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

GVW lbs (kg)

14,000–unlimited (6,350–unlimited)

EMERGENCY VEHICLE SERIES™

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

ENGINE hp (kW)	TORQUE lb-ft (N•m)
165–770 (123–574)	420–1950 (569–2644)

GVW lbs (kg)

14,000–unlimited (6,350–unlimited)

RUGGED DUTY SERIES™

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

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

GVW lbs (kg)

14,000–unlimited (6350–unlimited)

PUPIL TRANSPORT/SHUTTLE SERIES™

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

ENGINE hp (kW)	TORQUE lb-ft (N•m)
165–365[1] (123–272[1])	420–950 (569–1288)

GVW lbs (kg)

14,000–unlimited (6350–unlimited)

TRUCK RV SERIES™

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

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

GVW lbs (kg)

20,000–unlimited (9072–unlimited)

SPECIALTY SERIES™

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

ENGINE hp (kW)	TORQUE lb-ft (N•m)
165–1025 (123–764)	420–3300 (569–4474)

GVW lbs (kg)

14,000–unlimited (6350–unlimited)

OIL FIELD SERIES™

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

ENGINE hp (kW)	TORQUE lb-ft (N•m)
300–3200 (224–2386)	950–9000 (1288–12,200)

GVW lbs (kg)

30,000–unlimited (13,608–unlimited)

OFF ROAD SERIES™

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

ENGINE hp (kW)	TORQUE lb-ft (N•m)
250–1350 (186–1007)	520–4000 (705–5423)

GVW lbs (kg)

98,150–unlimited (44,500–unlimited)

HYBRID BUS™

Allison Transmission offers parallel hybrid architectures for a wide range of transit and city buses. With thousands of Allison hybrid propulsion systems in operation worldwide, we are one of the world's largest producers of hybrid systems for transit and city buses.

1 Only available with SEM/LRTP – gasoline powered engine applications.

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.

RELIABILITY

Our customers' ability to perform and produce is directly tied to the vehicle and equipment used to do work. By engineering and manufacturing reliable, fully automatic transmissions and propulsion solutions, our customers experience reduced downtime and get more work done.

LIFECYCLE VALUE

Allison Automatics are engineered and manufactured to last. When you factor in all lifecycle costs — vehicle purchase price, insurance, fuel, tires, preventive maintenance, component repair, driver wages and retail resale value — along with the increased productivity, an Allison Automatic-equipped vehicle costs less to operate than a comparable competitively equipped vehicle.

FULLY AUTOMATIC ADVANTAGE

Our patented Continuous Power Technology™ delivers smoother, seamless, full-power shifts and superior acceleration and startability. Each shift is made automatically when appropriate, allowing drivers to precisely manage performance and exercise superior vehicle control.

ALLISON TORQUE CONVERTER

Allison's torque converter smoothly multiplies peak engine torque, delivering more power to the wheels. By multiplying the engine power, drivers get increased performance, faster acceleration and greater operational flexibility. An Allison fully automatic transmission increases power while a manual or automated manual transmission (AMT) loses power with every shift. An Allison Automatic eliminates power interrupts so you can accomplish more.

DRIVER BENEFITS

Once behind the wheel of an Allison fully automatic-equipped vehicle, drivers are more alert and in tune with the vehicle, leading to increased driver retention and better safety records. Even experienced drivers benefit from more precise, safer handling and improved comfort. Also, today's drivers are less familiar with driving manual transmissions. This is not a problem with an Allison Automatic.

PERFORMANCE AND PRODUCTIVITY

Allison Automatics perform better than manual or automated manual transmissions (AMTs), that lose power and torque every time they shift, resulting in inefficient operation and less ground traveled. Faster acceleration means more work accomplished, which means more to your bottom line.

FUEL UTILIZATION

Allison fully automatic transmissions offer the best combination of economy and productivity. To get the most benefit out of every drop of fuel, our sophisticated FuelSense® packages increase fuel economy for a specific vehicle's needs. Allison is also the preferred transmission for alternative fuel applications, such as natural gas.

CUSTOMER SUPPORT

From our headquarters in Indianapolis, Indiana, USA, to our manufacturing plants in Hungary and India to approximately 1,400 Allison Authorized Distributors and Dealers around the globe, customers are never far from the trained technicians, products, training, service and support they demand.

EASY MAINTENANCE

A fully automatic transmission from Allison, a trusted brand around the world, is the best way to keep your fleet on the road while reducing total cost of ownership. With extended periods between maintenance and a proven track record of reliability, Allison puts you in control of your fleet and of your budget.

Fuel Efficiency

Take your fuel economy to the next level by utilizing the smart technology Allison provides with innovative features such as FuelSense® 2.0 and xFE.

FUELSENSE® 2.0 with DynActive™ Shifting

Features

FuelSense® 2.0 presents new and upgraded FuelSense features to provide even more precise balancing of fuel economy and performance:

DynActive™ Shifting—This new innovative shift scheduling uses an algorithm to choose the most efficient shift point, based on your specifications, vehicle and environmental parameters. Older shifting technologies use shift schedules with fixed shift points.

Neutral at Stop—This feature trims fuel consumption and emissions by reducing or eliminating the load on the engine when the vehicle is stopped. There are two versions of Neutral at Stop:

- Standard – Provides partial (first-level) neutral at stop.
- Premium – Provides full neutral at stop and a new, low-speed coasting capability.

Both versions lock the output while stopped to prevent rollback.

Acceleration Rate Management—A feature that mitigates aggressive driving by automatically controlling engine torque. Newly updated, in addition to five levels of control, it provides more precision by limiting vehicle acceleration to a customized calibrated rate.

FuelSense® 2.0 with DynActive™ Shifting
Our standard package of FuelSense features gives you infinitely variable shift scheduling instead of traditional table-based scheduling.

FuelSense® 2.0 Plus with DynActive™ Shifting
Adds an improved Neutral at Stop, which reduces the load on the engine when the vehicle is stopped and while coasting at low speeds, for additional fuel savings.

FuelSense® 2.0 Max with DynActive™ Shifting
Includes both Neutral at Stop and enhanced Acceleration Rate Management features. Not only can you save fuel when your vehicle is stopped, you can limit vehicle acceleration to a rate set just for you.

MARKETING PUBLICATIONS AND VIDEOS

SERIES BROCHURE
- FuelSense 2.0 Brochure
- xFE Brochure
- Two Maxes FuelSense 2.0 Video
- FuelSense 2.0 Overview Video

xFE

Stretch your Fuel Dollars Further. Specify An Allison Automatic With xFE

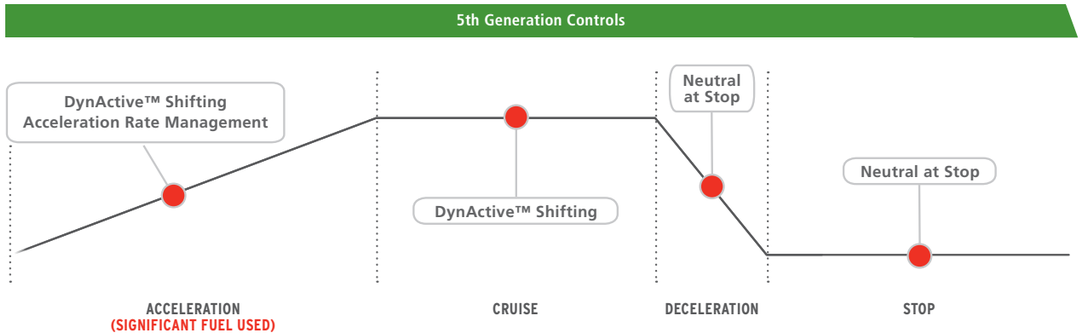
xFE is another in a string of innovative, fuel saving ideas from Allison. This fuel savings results from gear ratios designed to squeeze more value from every tank of fuel.

Earlier Lock Up + Lower Engine Speeds = Extra Fuel Economy

xFE models have been designed to deliver significantly more torque converter lock up operation and spend more time in higher ranges at lower engine speeds producing exceptional fuel savings. Real-world tests with customer fleets demonstrate xFE's ability to improve fuel economy up to 7% over comparatively-equipped models.

AVAILABLE PACKAGES		
FuelSense® 2.0	**FuelSense® 2.0 Plus**	**FuelSense® 2.0 Max**
5th Generation Controls	5th Generation Controls	5th Generation Controls
DynActive™ Shifting	DynActive™ Shifting	DynActive™ Shifting
	Neutral at Stop	Neutral at Stop
		Acceleration Rate Management

FUELSENSE® 2.0 FEATURES SAVE FUEL ACROSS THE DUTY CYCLE



THE MORE YOU START AND STOP, THE MORE YOU SAVE

VOCATIONAL MODEL PRODUCT CONTENT

FUELSENSE® 2.0 + xFE

TRACTOR SERIES™

TC10® TS	1700-80
TC10® TS	1750-90
TC10® TS	1850-90
TC10® TS	1850-110

HIGHWAY SERIES™

1000 HS	2300 HS	3000 HS
1350 HS	2350 HS	4000 HS
2100 HS	2500 HS	4500 HS
2200 HS	2550 HS	

MOTORHOME SERIES™

1000 MH	2200 MH	2550 MH
1350 MH	2350 MH	3000 MH
2100 MH	2500 MH	4000 MH

BUS SERIES™

B 210	B 300	B 500
B 220	B 400	
B 295	B 3400 xFE	

EMERGENCY VEHICLE SERIES™

1000 EVS	2500 EVS	4500 EVS
1350 EVS	2550 EVS	4700 EVS
2100 EVS	3000 EVS	4800 EVS
2200 EVS	3500 EVS	4850 EVS
2350 EVS	4000 EVS	

RUGGED DUTY SERIES™

1000 RDS	2350 RDS	4000 RDS
1350 RDS	2500 RDS	4500 RDS
2100 RDS	2550 RDS	4700 RDS
2200 RDS	3000 RDS	
2300 RDS	3500 RDS	

PUPIL TRANSPORT/SHUTTLE SERIES™

1000 PTS	2200 PTS	2500 PTS
1350 PTS	2300 PTS	2550 PTS
2100 PTS	2350 PTS	3000 PTS

TRUCK RV SERIES™

3000 TRV	3200 TRV	4000 TRV

SPECIALTY SERIES™

1000 SP	2550 SP	4430 SP	6625 SP
1350 SP	3000 SP	4500 SP	8610 SP
2100 SP	3200 SP	4700 SP	9610 SP
2200 SP	3500 SP	4800 SP	
2350 SP	3700 SP	5620 SP	
2500 SP	4000 SP	6620 SP	

OIL FIELD SERIES™

3500 OFS	4750 OFS	9817 OFS
4430 OFS	5620 OFS	9823 OFS
4500 OFS	6620 OFS	9826 OFS
4700 OFS	8610 OFS	9832 OFS

OFF ROAD SERIES™

3000 ORS	4200 ORS	4700 ORS	6625 ORS
3200 ORS	4430 ORS	4800 ORS	6630 ORS
3500 ORS	4500 ORS	5620 ORS	8610 ORS
4000 ORS	4600 ORS	6620 ORS	9610 ORS

HYBRID BUS™

H 40 EP	H 50 EP

GEAR RATIOS – TORQUE CONVERTER MULTIPLICATION NOT INCLUDED

MODEL	VOCATION	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH	REVERSE	2ND REVERSE
1000/1350/2100/2200/ 2350/B 210/B 220/B 295	HS, PTS, RDS, BUS, EVS, MH, SP	3.10:1	1.81:1	1.41:1	1.00:1	0.71:1	0.61:1[1]	—	-4.49:1	—
2300	HS, PTS, RDS	3.10:1	1.81:1	1.41:1	1.00:1	0.71:1	0.61:1[1]	—	-4.49:1	—
2500/2550	HS, PTS, RDS, EVS, MH, SP	3.51:1	1.90:1	1.44:1	1.00:1	0.74:1	0.64:1[1]	—	-5.09:1	—
3000/B 300/B 400	HS, PTS, RDS, BUS, EVS, MH, TRV, SP, ORS	3.49:1	1.86:1	1.41:1	1.00:1	0.75:1	0.65:1	—	-5.03:1	—
3200	TRV, SP, ORS	3.49:1	1.86:1	1.41:1	1.00:1	0.75:1	0.65:1	—	-5.03:1	—
B 3400 xFE	BUS	3.49:1	2.03:1	1.47:1	1.00:1	0.69:1	.59:1	—	-3.80:1	—
3500	RDS, EVS, SP, OFS, ORS	4.59:1	2.25:1	1.54:1	1.00:1	0.75:1	0.65:1	—	-5.00:1	—
3700	SP	6.93:1	4.18:1	2.24:1	1.69:1	1.20:1	0.90:1	0.78:1	-6.03:1	—
4000/4200 ORS/B 500	HS, RDS, BUS, EVS, MH, TRV, SP, ORS	3.51:1	1.91:1	1.43:1	1.00:1	0.74:1	0.64:1	—	-4.80:1	—
4430 SP/4430 4500 4600 ORS/4430 OFS	HS, RDS, EVS, SP, OFS, ORS	4.70:1	2.21:1	1.53:1	1.00:1	0.76:1	0.67:1	—	-5.55:1	—
4700/4750 ORS/4750 OFS	RDS, EVS, SP[2], OFS, ORS	7.63:1[3]	3.51:1	1.91:1	1.43:1	1.00:1	0.74:1	0.64:1	-4.80:1	-17.12:1[4]
4800/4850 EVS	EVS, SP[2], ORS	7.63:1[3]	3.51:1	1.91:1	1.43:1	1.00:1	0.74:1	0.64:1	-4.80:1	-17.12:1[4]

1 Check with your OEM to ensure offerings. 2 Second reverse not available. 3 Manually selected first gear. 4 SEM/LRTP or LRTP only is required.

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 – 1000/1350/2000/B 210/B 220	RDS, BUS[1], EVS, MH[1], SP[1]	3 and 9 o'clock	250 (339)	200[2] (271)[2]	Turbine
SIDE/SIDE – 3000[1]/B 300[1]/B 400[1]/ B 3400 xFE[1]	RDS, BUS, EVS, MH,TRV, SP, OFS, ORS	4 and 8 o'clock	485 (660)	685[3,4] (930)[3,4]	Engine
TOP/SIDE – 3000	RDS, SP, OFS, ORS	1 and 8 o'clock	485 (660)	685[3,4] (930)[3,4]	Engine
	EVS	1 and 8 o'clock	670 (910)	685[3,4] (930)[3,4]	Engine
3700	SP	8 o'clock	485 (660)	—	Engine
4000[1]/B 500[1]	RDS, BUS, EVS, MH, TRV, SP, OFS, ORS	1 and 8 o'clock	685 (930)	1175[3,4] (1595)[3,4]	Engine

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

ENGINE SPEEDS

MODEL	VOCATION	FULL LOAD GOVERNED SPEED Min-Max (rpm)	IDLE SPEED IN DRIVE Min-Max (rpm)	OUTPUT SHAFT SPEED (rpm)
1000/1350/2100/2200/ 2350/B 210/B 220/B 295	HS, PTS, RDS, BUS, EVS, MH, SP	2200-5000[1]	500-820	5000
2300	HS, PTS, RDS	2200-5000[1]	500-820	5000
2500/2550/B 210/B 220	HS, PTS, RDS, BUS, EVS, MH, SP	2200-3800	500-820	4500
3000/B 300/B 400/ B 3400 xFE	HS, PTS, RDS, BUS, EVS, MH, TRV, SP, ORS	1950-2800	500-800	3600[2]
3200	TRV, SP, ORS	1950-2800	500-800	3600[2]
3500	RDS, EVS, SP, OFS, ORS	1950-2800	500-800	3600[2]
3700	SP	1950-2800	500-800	—
4000/B 500	HS, RDS, BUS, EVS, MH, TRV, SP, ORS	1700-2300	500-800	—
4430 OFS/4430 ORS/ 4430 SP/4500	HS, RDS, EVS, SP, OFS, ORS	1700-2300	500-800	
4600 ORS/4700 ORS/4750 OFS	RDS, EVS, SP, OFS, ORS	1700-2300	500-800	
4800/4850 EVS	EVS, SP[3]	1700-2300[3]	500-800	

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

TORQUE CONVERTER SPECIFICATIONS

BASE MODEL	VOCATION	TORQUE CONVERTER	NOMINAL STALL TORQUE
1000/2000/ B 210/B 220/ B 295	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/ B 3400 xFE	HS, PTS, RDS, BUS, EVS, MH, TRV, SP, OFS, ORS	TC-411	2.71
		TC-413	2.44
		TC-415	2.35
		TC-417	2.20
		TC-418	1.98
		TC-419	2.02
		TC-421	1.77
4000/B 500	HS, RDS, BUS, EVS, MH, TRV, SP, OFS, ORS	TC-521	2.42
		TC-531	2.34
		TC-541	1.90
		TC-551	1.79
		TC-561	1.58
		TC-571	1.62

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/B 295					
– SAE No. 3 mounting	HS, PTS, RDS, BUS, EVS, MH, SP	28.01 (711.4)	11.22 (285.1)	10.71 (272.0)	323 (146.5)
– SAE No. 2 mounting	HS, PTS, RDS, BUS, EVS, MH, SP	28.39 (721.1)	11.22 (285.1)	10.71 (272.0)	323 (146.5)
3000/B 300/B 400/B 3400 xFE					
– Basic model	HS[4], RDS[4], PTS[4], BUS, EVS, MH, TRV, SP, OFS, ORS	28.3 (718.7)	12.90 (327.7)	11.14 (283.0)	535 (243)
– With PTO only	RDS[4], BUS, EVS, MH, TRV, SP, OFS, ORS	32.5 (825.4)	12.90 (327.7)	11.14 (283.0)	575 (261)
– With retarder only	HS[4], RDS[4], PTS[4], BUS, EVS, MH, TRV, SP, OFS, ORS	28.29 (718.5)	12.90 (327.7)	11.14 (283.0)	615 (279)
– With PTO & retarder	RDS[4], BUS, EVS, MH, TRV, SP, OFS, ORS	32.49 (825.4)	12.90 (327.7)	11.14 (283.0)	655 (298)
3700					
– Basic model	SP	51.58 (1310.3)	21.90 (555.0)	—	1170 (530)
4000/4430[6]/4500/B 500					
– Basic model	HS[5], RDS[5], BUS, EVS, MH, TRV, SP[5], ORS	30.54 (775.8)	14.75 (374.7)	13.29 (337.6)	831 (377)
– With PTO only	RDS[5], BUS, EVS, MH, TRV, SP[5], ORS	33.41 (848.7)	14.75 (374.7)	13.29 (337.6)	893 (405)
– With retarder only	HS[5], RDS[5], BUS, EVS, MH, TRV, SP[5], ORS	30.54 (775.7)	14.75 (374.7)	13.29 (337.6)	906 (411)
– With PTO & retarder	RDS[5], BUS, EVS, MH, TRV, SP[5], OFS, ORS	33.41 (848.7)	14.75 (374.7)	13.29 (337.6)	968 (439)
4700/4750 OFS/4800/4850 EVS					
– Basic model	RDS, EVS, SP	40.61 (1031.5)	14.89 (378.2)	—	1087 (493)
– With PTO only	RDS, EVS, SP	43.49 (1104.5)	14.89 (378.2)	—	1149 (521)
– With retarder only	RDS, EVS, SP	40.61 (1031.6)	14.89 (378.2)	—	1162 (527)
– With PTO & retarder	RDS, EVS, SP, OFS	43.49 (1104.6)	14.89 (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)
1000/2000[2]/B 210/B 220/B 295 (main circuit filter – spin-on canister)		
– Standard Oil Sump	HS, PTS, RDS, BUS, EVS, MH, SP	13.7[4] (13.0)[4]
– Shallow Oil Sump	HS, PTS, RDS, BUS, EVS, MH, SP	11.6[4] (11.0)[4]
3000[3]/B 300[3]/B 400[3] /B 3400 xFE[3]		
– Deep Oil Sump w/PTO	RDS, BUS, EVS, MH, TRV, SP, OFS, ORS	29.75[4] (28.1)[4]
– Deep Oil Sump w/o PTO	HS, PTS, RDS, BUS, EVS, MH, TRV, SP, OFS, ORS	29[4] (27.4)[4]
– Shallow Oil Sump w/PTO	BUS, EVS, MH, TRV, SP	26.75[4] (25.3)[4]
– Shallow Oil Sump w/o PTO	BUS, EVS, MH, TRV, SP	26[4] (24.6)[4]
3700[3]		
– Deep Oil Sump w/PTO	SP	39[4] (37)[4]
4000[3]/4430[3, 5]/4500[3]/B 500[3]		
– Deep Oil Sump w/PTO	RDS, BUS, EVS, MH, TRV, SP, OFS, ORS	51[4] (48)[4]
– Deep Oil Sump w/o PTO	HS, RDS, BUS, EVS, TRV, SP, MH, OFS, ORS	48[4] (45)[4]
– Shallow Oil Sump w/PTO	EVS, MH, TRV, SP	43[4] (41)[4]
– Shallow Oil Sump w/o PTO	EVS, MH, SP, BUS, TRV	40[4] (38)[4]
4700[3]/4750 OFS[3]/4800/4850 EVS w/SEVEN SPEEDS[3, 6]		
– Deep Oil Sump and PTO	RDS, EVS, SP, OFS	54[4] (51)[4]
– Deep Oil Sump w/o PTO	RDS, EVS, SP, OFS	51[4] (48)[4]

Recommended oil types for all models are TranSynd®/TES 295® approved.
1 Transmission only. Does not include cooler, hoses or fittings. 2 2000 SP – Only 2000 model available with shallow oil pan.
3 Main and lube circuit filter are integral; electronic oil sensors are standard. 4 Amount of oil necessary to fill a dry transmission.
5 4430 is an SP model only – available only with deep oil pan. 6 Retarder models must use 4-inch sump without OLS.

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/ B 3400 xFE	HS, PTS, RDS, BUS, EVS, MH, TRV, SP, OFS, ORS		
– High		1600 (2170)	600 (447)
– Medium		1300 (1763)	500 (373)
– Low		1100 (1490)	400 (298)
– Very Low		811 (1100)	–
– Ultra Low		553 (750)	–
4000[1]/B 500	HS, RDS, BUS, EVS, MH, TRV, SP, OFS, ORS		
– High		2000 (2712)	600 (447)
– Medium		1600 (2170)	600 (447)
– Low		1300 (1763)	500 (373)

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

5000-9000 SERIES™ SPECIFICATIONS

GEAR RATIOS – TORQUE CONVERTER MULTIPLICATION NOT INCLUDED											
MODEL	VOCATION	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH	EIGHTH	REVERSE	2ND REVERSE
5620	OFS, ORS, SP	4.00:1	2.68:1	2.01:1	1.35:1	1.00:1	0.67:1	—	—	-5.15:1	-3.46:1
6620	OFS, ORS, SP	4.00:1	2.68:1	2.01:1	1.35:1	1.00:1	0.67:1	—	—	-5.15:1	-3.46:1
6625	ORS, SP	4.00:1	2.68:1	2.01:1	1.35:1	1.00:1	0.67:1	—	—	-5.15:1	-3.46:1
6630	ORS	4.00:1	2.68:1	2.01:1	1.35:1	1.00:1	0.67:1	—	—	-5.15:1	-3.46:1
8610	OFS, ORS, SP	4.24:1	2.32:1	1.69:1	1.31:1	1.00:1	0.73:1	—	—	-5.75:1	—
9610	ORS	4.24:1	3.05:1	2.32:1	1.67:1	1.00:1	0.72:1	—	—	-5.75:1	4.13:1
9817	OFS	3.75:1	2.69:1	2.20:1	1.77:1	1.58:1	1.27:1	1.00:1	0.72	—	—
9823	OFS	3.75:1	2.69:1	2.20:1	1.77:1	1.58:1	1.27:1	1.00:1	0.72	—	—
9826	OFS	3.75:1	2.69:1	2.20:1	1.77:1	1.58:1	1.27:1	1.00:1	0.72	—	—
9832	OFS	3.75:1	2.69:1	2.20:1	1.77:1	1.58:1	1.27:1	1.00:1	0.72	—	—

1 Manually selected first gear. 2 SEM/LRTP or LRTP only is required.

STANDARD POWER TAKEOFF – CONTINUOUS OPERATION					
BASE MODEL	VOCATION	SIDE MOUNTING PAD POSITIONS VIEWED FROM REAR	TOP MOUNTING PAD POSITIONS VIEWED FROM REAR	DRIVE GEAR RATING W/ INTERMITTENT PTO lb-ft (N•m)	DRIVE GEAR RATING WITH CONTINUOUS PTO lb-ft (N•m)
5620	OFS, ORS, SP	5 o'clock position	12 o'clock position	500 (678)	313 (424)
6620	OFS, ORS, SP	5 o'clock position	12 o'clock position	500 (678)	313 (424)
6625	ORS, SP	5 o'clock position	12 o'clock position	500 (678)	313 (424)
6630	ORS	5 o'clock position	12 o'clock position	500 (678)	313 (424)
8610	OFS, ORS, SP	5 o'clock position	12 o'clock position	1000 (1356)	750 (1017)
9610	ORS	5 o'clock position	12 o'clock position	1000 (1356)	750 (1017)
9817	OFS	5 o'clock position	12 o'clock position	1000 (1356)	750 (1017)
9823	OFS	5 o'clock position	12 o'clock position	1000 (1356)	750 (1017)
9826	OFS	5 o'clock position	12 o'clock position	1000 (1356)	750 (1017)
9832	OFS	5 o'clock position	12 o'clock position	1000 (1356)	750 (1017)

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

PHYSICAL DESCRIPTION						
BASE MODEL	VOCATION	LENGTH[1] w/o RETARDER in (mm)	LENGTH[1] w/RETARDER in (mm)	DEPTH (BASIC MODEL) in (mm)	DEPTH W/DIRECT MOUNT FILTERS in (mm)	DRY WEIGHT lbs (kg)
5620	OFS, ORS, SP	43.1 (1095)	46.6 (1182)	31.0 (788)	35.6 (904)	2200 (998)
5620 w/Dropbox	OFS, ORS, SP	46.7 (1185)	50.1 (1273)	40.7 (1034)	45.3 (1150)	2750 (1247)
6620	OFS, ORS, SP	43.1 (1095)	46.6 (1182)	34.1 (866)	38.7 (982)	2260 (1025)
6625	ORS, SP	43.1 (1095)	46.6 (1182)	34.1 (866)	38.7 (982)	2260 (1025)
6630	ORS	43.1 (1095)	46.6 (1182)	34.1 (866)	38.7 (982)	2260 (1025)
8610	OFS, ORS, SP	55.5 (1411)	—	35.3 (896)	39.8 (1011)	3700 (1678)
9610	ORS	55.5 (1411)	—	35.3 (896)	39.8 (1011)	3700 (1678)
9817	OFS	56.5 (1435)	—	35.3 (896)	39.8 (1011)	3610 (1637)
9823	OFS	56.5 (1435)	—	35.3 (896)	39.8 (1011)	3610 (1637)
9826	OFS	56.5 (1435)	—	35.3 (896)	39.8 (1011)	3710 (1683)
9832	OFS	56.5 (1435)	—	35.3 (896)	39.8 (1011)	3720 (1687)

1 Length measured from flywheel housing to end of output shaft.

OIL SYSTEM		
BASE MODEL	VOCATION	CAPACITY[1] QUARTS (LITERS)
5620	OFS, ORS, SP	72 (68)
6620	OFS, ORS, SP	72 (68)
6625	ORS, SP	72 (68)
6630	ORS	72 (68)
8610	OFS, ORS, SP	84 (79)
9610	ORS, SP	84 (79)
9817	OFS	84 (79)
9823	OFS	84 (79)
9826	OFS	84 (79)
9832	OFS	84 (79)

Recommended oil types for all models are TranSynd®/TES 295® approved.
1 Transmission only. Does not include cooler, hoses or fittings. 2 Main and lube circuit filter are integral; electronic oil sensors are standard. 3 Amount of oil necessary to fill a dry transmission. 4 Retarder models must use 4-inch sump without OLS.

ENGINE SPEEDS				
MODEL	VOCATION	FULL LOAD GOVERNED SPEED Min-Max (rpm)	IDLE SPEED IN DRIVE Min-Max (rpm)	OUTPUT SHAFT SPEED (rpm)
5620	OFS, ORS, SP	1900-2500	550	—
6620	OFS, ORS, SP	1900-2500	550	—
6625	ORS, SP	1900-2500	550	—
6630	ORS	1900-2500	550	—
8610	OFS, ORS, SP	1800-2300	550	—
9610	ORS	1800-2100	550	—
9817	OFS	1800-2100	550	—
9823	OFS	1800-2100	550	—
9826	OFS	1800-2100	550	—
9832	OFS	1800-2100	550	—

1 Retarder equipped models only.

OPTIONAL RETARDER PROVISION – INTEGRAL, HYDRAULIC TYPE			
BASE MODEL	VOCATION	TORQUE CAPACITY lb-ft (N•m)	POWER CAPACITY hp (Kw)
5620	OFS, ORS, SP	1500 (2034)	600 (447)
6620	OFS, ORS, SP	1500 (2034)	600 (447)
6625	ORS, SP	1500 (2034)	600 (447)
6630	ORS	1500 (2034)	600 (447)
8610	OFS, ORS, SP	3451 (4679)	1380 (1029)
9610	ORS	4152 (5630)	1660 (1238)
9817	OFS	—	—
9823	OFS	—	—
9826	OFS	—	—
9832	OFS	—	—

TORQUE CONVERTER SPECIFICATIONS			
BASE MODEL	VOCATION	TORQUE CONVERTER	NOMINAL STALL TORQUE
5620 6620 6625 6630	OFS, ORS, SP	TC-580	2.89
		TC-680 (retarder)	2.17
		TC-680 (no retarder)	2.08
		TC-682	1.77
		TC-683	1.85
8610	OFS, ORS, SP	TC-860	2.33
		TC-880	2.20
		TC-890	1.86
		TC-1060	1.86
		TC-1070	1.78
		TC-1078	1.84
9610 9817 9823 9826 9832	OFS, ORS	TC-1060	1.86
		TC-1070	1.78
		TC-1078	1.84
		TC-1080	1.61
		TC-1090	1.31

Tractor Series™ and The Allison TC10® TS

Class 8 tractors have historically been forced to compromise overall vehicle drivability, along with transmission reliability, dependability and performance, in favor of fuel economy. Not any longer.

ALLISON TRANSMISSION TRACTOR SERIES™

RATINGS

MODEL	MAX INPUT POWER hp (kW)	MAX INPUT TORQUE[1] lb-ft (N•m)	MAX OUTPUT TORQUE[1] lb-ft (N•m)	MAX TURBINE TORQUE[2,3] lb-ft (N•m)	MAX GVW lbs (kg)	MAX GCW lbs (kg)
TC10® TS 1700-80	600 (447)	1700 (2305)	13,000 (17,625)	1750 (2373)	–	80,000 (36,288)
TC10® TS 1750-90	600 (447)	1750 (2373)	13,000 (17,625)	1750 (2372)	–	90,000 (40,823)
TC10® TS 1850-90	600 (447)	1850 (2508)	13,000 (17,625)	1850 (2508)	–	90,000 (40,823)
TC10® TS 1850-110	600 (447)	1850 (2508)	13,000 (17,625)	1850 (2508)	–	110,000 (49,895)

1 Gross power rating as defined by ISO 1585 or SAE J1995. 2 Turbine Torque limit based on iSCAAN standard deductions.
3 Lower Range Torque Protection (LRTP) required to limit turbine torque and to limit output torque to 13,000 lb-ft (17,625 Nm) or less.

GEAR RATIOS – TORQUE CONVERTER MULTIPLICATION NOT INCLUDED

RANGE	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH	EIGHTH	NINTH	TENTH	STANDARD REVERSE	ALTERNATE REVERSE
RATIO	7.40:1	5.44:1	4.25:1	3.43:1	2.94:1	2.16:1	1.59:1	1.24:1	1.00:1	0.86:1	-6.71:1	-1.96:1
STEP %	–	36%	28%	24%	17%	36%	36%	28%	24%	16.28%		

STANDARD POWER TAKEOFF PROVISION[2]

BASE MODEL	MOUNTING PAD POSITIONS	MAXIMUM VALUE lb-ft (N•m)	DRIVE SPEED RPM
TC10® TS	Rear		1.28 x Turbine Speed
Continuous Operation[1]		475 (645)	
Intermittent Operation		650 (880)	

1 Drive shaft torque must not exceed continuous rating for more than one-third of the PTO operation.
2 The PTO Provision is optional for the TC10. All TC10 Transmissions have a PTO pad and cover located on the rear cover. The TC10 includes the PTO drive shaft if the PTO option is ordered with the transmission. Contact your Allison representative for more information.

ENGINE SPEEDS

MODEL	FULL LOAD GOVERNED SPEED Min-Max (rpm)	IDLE SPEED IN DRIVE Min-Max (rpm)	OUTPUT SHAFT SPEED FORWARD rpm
TC10® TS	1700-2100	600-800	2440

PHYSICAL DESCRIPTION

BASE MODEL	LENGTH[1] in (mm)	OIL PAN DEPTH[2] in (mm)	DRY WEIGHT lbs (kg)
TC10® TS	40.98 (1040.9)	16.83 (427.5)	1074 (487)

1 Length from the engine transmission split line to the end of output shaft.
2 Depth below the transmission centerline.

TORQUE CONVERTER SPECIFICATIONS

BASE MODEL	TORQUE CONVERTER	NOMINAL STALL TORQUE
TC10® TS	TC-633	1.84

OIL SYSTEM

BASE MODEL	CAPACITY[1] quarts (liters)
TC10® TS	56[2] (53)[2]

Recommended oil types for all models is Allison Approved TES 295® transmission fluid.

1 Amount to fill a dry transmission after assembly and rebuild. The initial fill for a transmission as received from the Allison factory will be less. Residual fluid remains in the transmission after acceptance testing.

2 Transmission only. Does not include external circuits or additional volume which may be required if installed angle of the transmission is greater than zero degrees.

TC10® TS

ALLISON TC10® TRACTOR SERIES™ FEATURES AND ADVANTAGES

5% Better Fuel Economy
Real-world fleets have documented 5% better fuel economy with Allison TC10® equipped tractors over their current manual or automated manual transmission (AMT) equipped tractors. Thanks to FuelSense®, the TC10 achieves the best fuel economy, regardless of driver experience or expertise. It shifts at just the right points to maintain vehicle performance and maximize fuel economy.

Blended Architecture
The TC10 represents the best of both worlds by combining drivability, performance and durability benefits of Allison's fully automatic transmissions with the cruising fuel economy inherent in twin countershaft architecture.

Additional Speeds
10 forward speeds standard

Standard and Alternate Reverse
TC10 features a standard and alternate reverse. Standard -6.710 and Alternate -1.957

DynActive™ Shifting
New innovative shift scheduling uses an algorithm to choose the most efficient shift point, based on specs, vehicle and environmental parameters.

Neutral at Stop
Automatically eliminates the transmission load on the engine when the vehicle is at a full stop to save fuel and reduce overall vehicle emissions.

Acceleration Rate Management
Mitigates aggressive driving by controlling engine torque based on the vehicle's grade and load.

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

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

PTO
The PTO provision is optional for the TC10. All TC10 transmissions have a PTO pad and cover located on the rear cover. The TC10 includes the PTO drive shaft if the PTO option is ordered with the transmission.

MARKETING PUBLICATIONS AND VIDEOS

SERIES BROCHURE
- TC10® TS Brochure
- TC10 Engineering Brochure
- Tractor Vocational Brochure

VIDEOS
- Sarah Fisher Hartman Racing Testimonial
- Navistar TC10 Testimonial
- Mesilla Valley Transportation Testimonial
- U.S. Xpress Testimonial

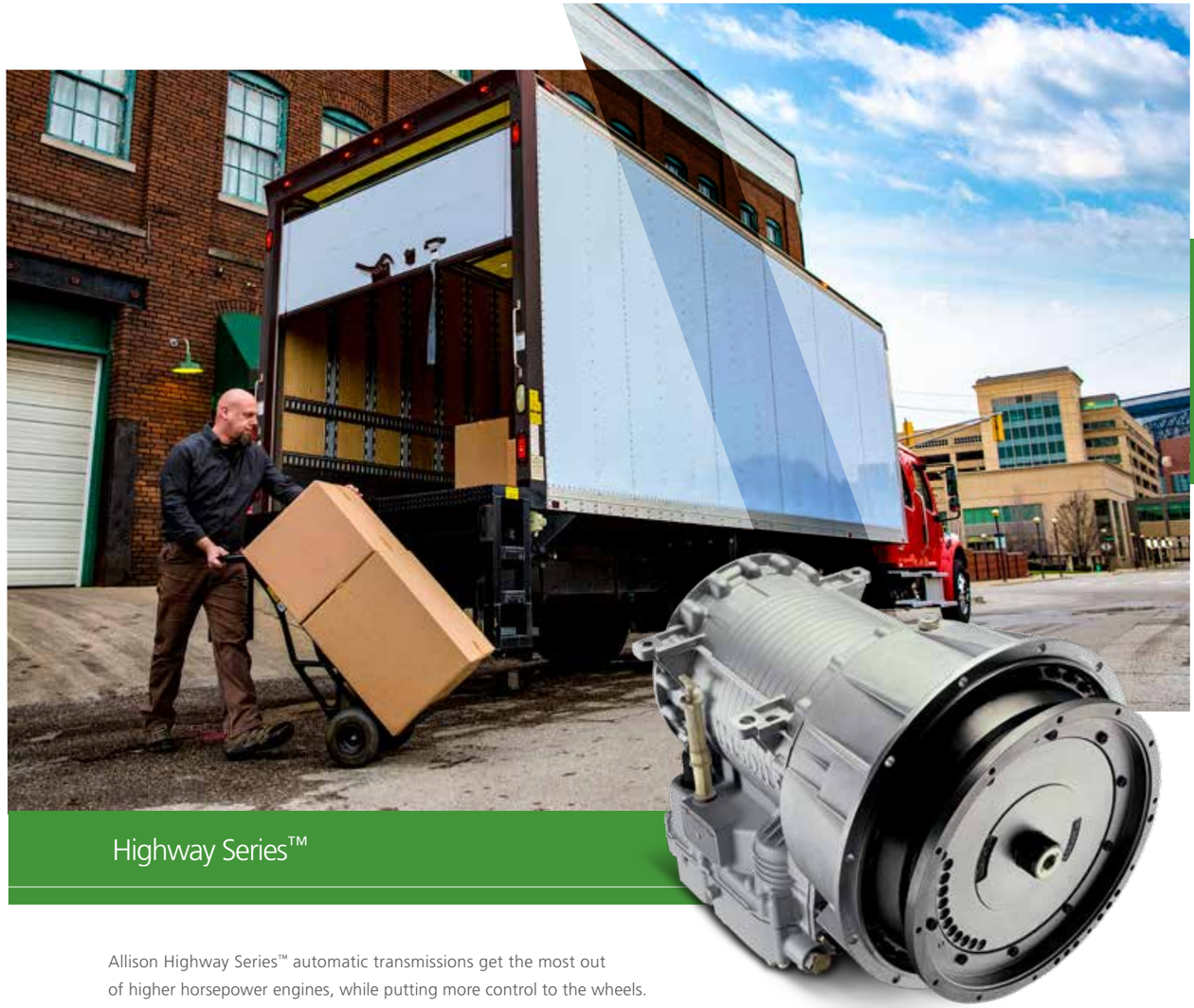
TYPICAL VEHICLE APPLICATIONS

Distribution
Short Haul
Regional Haul
Line Haul

TRACTOR™ SERIES I/O Packages

Allison Transmission Fifth Generation Electronic Controls

				Tractor-Trailer				
	VOCATION PACKAGE NUMBER			401	402	403	404	405
	INPUT FUNCTIONS	Default Enabled?	Available Over Datalink?					
A	Secondary Mode Input	Yes	Yes	M	M			
C1	PTO Drive Interface 1 Input	Yes	Yes	113		113	113	
E	Auxiliary Function Range Inhibit – Single Input	No	Yes	101	101	101	101	101
H	Engine Brake Interface Input (Standard)	Yes	Yes					
W	Direction Change Enable Input	No	Yes					
Y	Anti-Lock Brake System (ABS) Input	Yes	Yes					
AA	Service Brake Status Input	Yes	Yes					
AH	Kickdown Input	No	Yes			M	M	M
AS	Neutral at Stop Input	Yes	Yes	107	107		107	107
AW	2nd Reverse Input	Yes	No					
BS	Grade Braking/Regenerative Input	No	No			107		
CD	Automatic Neutral – Single Input with Selector Override	Yes	Yes					
CP	Alternate Gear Start Input	No	Yes		113			113
	OUTPUT FUNCTIONS							
A	Engine Brake Interface Output	No	Yes					
C	Range Indicator	Yes	Yes	109	109	109	109	109
D	Output Speed Indicator A	Yes	Yes		115			115
G1	PTO Drive Interface 1 Output	Yes	Yes	115		115	115	
K	Lockup Indicator	Yes	Yes					
N	Secondary Mode Indicator	Yes	Yes					
O	Transmission Service Indicator	Yes	Yes					
AD	Range Inhibitor Indicator	Yes	Yes					



Highway Series™

Allison Highway Series™ automatic 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.

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 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 (780)	660[4,7] (895)[4,7]	950[4] (1288)[4]	19,500 (8845)	26,000 (11,800)
1000 HS xFE	6310	Close Ratio	Yes	340[4,7] (254)[4,7]	575 (780)	660[4,7] (895)[4,7]	950[4] (1288)[4]	19,500 (8845)	26,000 (11,800)
1350 HS	6310	Close Ratio	Yes	340[4,7] (254)[4,7]	575 (780)	660[4,7] (895)[4,7]	950[4] (1288)[4]	19,500 (8845)	30,000 (13,600)
1350 HS xFE	6310	Close Ratio	Yes	340[4,7] (254)[4,7]	575 (780)	660[4,7] (895)[4,7]	950[4] (1288)[4]	19,500 (8845)	30,000 (13,600)
2100 HS	6310	Close Ratio	No	340[4,7] (254)[4,7]	575 (780)	660[4,7] (895)[4,7]	950[4] (1288)[4]	26,000 (11,800)	26,000 (11,800)
2100 HS xFE	6310	Close Ratio	No	340[4,7] (254)[4,7]	575 (780)	660[4,7] (895)[4,7]	950[4] (1288)[4]	26,000 (11,800)	26,000 (11,800)
2200 HS	6310	Close Ratio	Yes	340[4,7] (254)[4,7]	575 (780)	660[4,7] (895)[4,7]	950[4] (1288)[4]	26,000 (11,800)	26,000 (11,800)
2200 HS xFE	6310	Close Ratio	Yes	340[4,7] (254)[4,7]	575 (780)	660[4,7] (895)[4,7]	950[4] (1288)[4]	26,000 (11,800)	26,000 (11,800)
2300 HS[5]	6310	Close Ratio	No	365[4] (272)[4]	N/A	510[4] (691)[4]	950[4] (1288)[4]	33,000 (15,000)	33,000 (15,000)
2350 HS[7]	6310	Close Ratio	Yes	340[4] (254)[4]	575 (780)	660[4] (895)[4]	950[4] (1288)[4]	30,000 (13,600)	30,000 (13,600)
2350 HS[7] xFE	6310	Close Ratio	Yes	340[4] (254)[4]	575 (780)	660[4] (895)[4]	950[4] (1288)[4]	30,000 (13,600)	30,000 (13,600)
2500 HS	6310	Wide Ratio	No	340[4,7] (254)[4,7]	575 (780)	660[4,7] (895)[4,7]	950[4] (1288)[4]	33,000 (15,000)	33,000 (15,000)
2500 HS xFE	6310	Wide Ratio	No	340[4,7] (254)[4,7]	575 (780)	660[4,7] (895)[4,7]	950[4] (1288)[4]	33,000 (15,000)	33,000 (15,000)
2550 HS[7]	6310	Wide Ratio	Yes	340[4] (254)[4]	575 (780)	660[4] (895)[4]	950[4] (1288)[4]	30,000 (13,600)	30,000 (13,600)
2550 HS[7] xFE	6310	Wide Ratio	Yes	340[4] (254)[4]	575 (780)	660[4] (895)[4]	950[4] (1288)[4]	30,000 (13,600)	30,000 (13,600)
3000 HS	6510	Close Ratio	N/A	370 (276)	1100 (1491)	1250[4,6] (1695)[4,6]	1600 (2169)	80,000 (36,288)	80,000 (36,288)
4000 HS	6610	Close Ratio	N/A	565 (421)	1770 (2400)	1850[8] (2508)[8]	2600 (3525)	—	—
4500 HS	6610	Wide Ratio	N/A	565 (421)	1650 (2237)	1850[8] (2508)[8]	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 Available in gears three through six.

HIGHWAY SERIES™ FEATURES AND ADVANTAGES

Shift Energy Management (SEM) with torque limiting
Ratings up to 340 hp/660 lb-ft on 1000, 1350, 2100, 2200, 2350, 2500 and 2550 HS.
Ratings up to 365 hp/510 lb-ft on 2300 HS.
Ratings up to 370 hp/1250 lb-ft on 3000 HS.
Ratings up to 565 hp/1850 lb-ft on 4000 and 4500 HS.

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

Neutral at Stop
Automatically eliminates the transmission load on the engine when the vehicle is at a full stop to save fuel and reduce overall vehicle emissions.

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

Additional speeds
Five forward speeds standard on 3000 HS.

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

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

Acceleration Rate Management
Mitigates aggressive driving by controlling engine torque based on the vehicle's grade and load.

DynActive™ Shifting
New innovative shift scheduling uses an algorithm to choose the most efficient shift point, based on specs, vehicle and environmental parameters.

1000 HS, 1350 HS, 2100 HS, 2200 HS, 2300 HS, 2350 HS, 2500 HS, 2550 HS

3000 HS

4000 HS, 4500 HS

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

- Ford® 2000 Series Brochure
- Highway Series Individual Brochure
- Highway Series Individual Brochure (Spanish)
- Highway Series Individual Brochure (French)
- Distribution Vocational Brochure
- Tractor Vocational Brochure

GENERAL BROCHURES

- Saddle Creek Customer Profile
- Prognostics Brochure
- Residual Value Brochure
- Startability Flyer
- Shift Selector Operation and Code Manual
- Fluid and Filter Change Recommendations
- Torque Converter Brochure
- Blue Bell Creameries Testimonial Flyer
- Kramer Testimonial Flyer
- Perry Testimonial Flyer
- Ukrops Testimonial Flyer
- Allison vs. Dual Clutch Technology

VIDEOS

- Allison At Work
- How an Allison Automatic Performs
- Ukrops Testimonial
- Four Truckers Testimonial
- Kramer Beverage Company Testimonial
- Perry Distributors Testimonial
- Blue Bell Creameries Testimonial
- Eddie Nichols: One Million Miles and Counting Testimonial
- Saddle Creek Customer Profile

HIGHWAY SERIES™ I/O Packages*

			1000/2000 PRODUCT FAMILIES		3000/4000 PRODUCT FAMILIES		
			On-Highway Vehicles				
	VOCATION PACKAGE NUMBER		354	374	226	235	247
INPUT FUNCTIONS		Default Enabled?					
A	Secondary Mode Input	Yes	142	142	M	142	142
C1	**PTO Drive Interface Input 1	Yes	143	162		M	143
C2	**PTO Drive Interface Input 2	No					
D	Shift Selector Transition Input	No					
E	Auxiliary Function Range Inhibit – Single Input	No	101	101	101	101	101
F	Auxiliary Function Range Inhibit – Dual Input	Yes					
G	Auxiliary Hold Input	Yes			142		M
H	Engine Brake Interface Input (Standard)	No	102	102	102/157	102/157	102/157
I	Engine Brake Interface Input (Special)	No					
J	Pump Mode Input (Fire Truck Pump Mode 4th Lockup)	No					
K	Quick-to-Neutral Input	No					
L	Automatic Neutral – Single Input	No	123	123	117	117	117
Q	Two Speed Axle Interface Input	Yes					
R	Manual Lockup Control Input	No					
V	Reverse Enable Input	No					
W	Direction Change Enable Input	No			122	143	
Y	Anti-Lock Brake System (ABS) Input	Yes	121	121	121	121	121
Z	Retarder Interface Input	Yes			161	161	161
AA	Service Brake Status Input	Yes	162		162	162	162
AF	Differential Clutch Interface Input (3700 Only)	Yes					
AG	Automatic Neutral – Dual Input	Yes					
AH	Accelerator Pedal Kickdown Input	Yes				122	122
AI	Auxiliary Function Range Inhibit – Single Input (Specialty Vehicle)	No					
AJ	Pump Mode Input (4th Lockup)	No					
AK	Automatic Neutral – Dual Input with Service Brake Status	Yes					
AL	Shift Selector Transition & Secondary Shift Schedule Input	Yes					
AM	Reverse Inhibit with Preselect Request Interface Input	No					
AQ	Shift Selector Display Blanking Input	Yes					
AR	Overdrive Disable Interface Input	Yes	161	161			
AS	Neutral at Stop Input	No		143	123	123	123
AW	2nd Reverse Input	No					
BD	Automatic 2-1 Preselect Input (4000 7-Speed Only)	Yes					
BS	Grade Braking/Regenerative Input	No					
BY	Aux. Box Transition Input	Yes					
BZ	Shift Selector Transition & Oil Field Pumping Input	Yes					
CA	Automatic Neutral – Brake-Based (BBAN) Input for PTO	No					
CB1	Preselect Request 1 Input	Yes	122	122			
CB2	Preselect Request 2 Input	Yes					
CC	High N/V Ratio Input	No					
CD	Automatic Neutral – Single Input with Selector Override	Yes					
CE	Direct Hold Input	No					
CF	Automatic Neutral – Idle Start/Stop Input	Yes					
CH	Automatic Neutral – Single Input, Inverted	No					
CN	Automatic Neutral – Dual Input with Automatic Return-to-Range	No					
OUTPUT FUNCTIONS							
A	Engine Brake Interface Output	No	104	104	104	104	104
B	Sump/Retarder Temperature Indicator	Yes	164	164	164	164	164
C	Range Indicator (5th Gen default is always Neutral)	Yes	145	145	145	145	145
D	Output Speed Indicator A	Yes	105	105	105	105	105
G1	**PTO Drive Interface 1 Indicator	Yes	150	150		130	130
G2	**PTO Drive Interface 2 Indicator	No					
I	Engine Overspeed Indicator	Yes			130		
J	Two Speed Axle Interface Indicator	Yes					
K	Lockup Indicator	Yes					
N	Secondary Mode Indicator	Yes			113	113	
O	Transmission Service Indicator	Yes	113	113			
Q	Retarder Interface Indicator	Yes			124	124	124
R	Differential Clutch Interface Indicator (3700 Only)	Yes					
S	Neutral Indicator for PTO and PTO Request (NIPTO)	Yes					
AD	Range Inhibited Indicator	Yes	124	124			
AJ	Output Speed Indicator A, Inverted	Yes					

* Additional packages available. Please reference Tech Data. ** PTOs are not available with HS Series hardware even though the wire option is shown in the package.

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] hp (kW)	MAX INPUT TORQUE[1] lb-ft (N•m)	MAX INPUT TORQUE w/SEM 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 MH	6310 MH	Close Ratio	Yes	340[4,5] (254)[4,5]	575 (780)	660[4,5] (895)[4,5]	950[4] (1288)[4]	22,000 (10,000)	26,000 (11,800)
1000 MH xFE	6310 MH	Close Ratio	Yes	340[4,5] (254)[4,5]	575 (780)	660[4,5] (895)[4,5]	950[4] (1288)[4]	22,000 (10,000)	26,000 (11,800)
1350 MH	6310 MH	Close Ratio	Yes	340[4,5] (254)[4,5]	575 (780)	660[4,5] (895)[4,5]	950[4] (1288)[4]	22,000 (10,000)	30,000 (13,600)
1350 MH xFE	6310 MH	Close Ratio	Yes	340[4,5] (254)[4,5]	575 (780)	660[4,5] (895)[4,5]	950[4] (1288)[4]	22,000 (10,000)	30,000 (13,600)
2100 MH	6310 MH	Close Ratio	No	340[4,5] (254)[4,5]	575 (780)	700[4,7] (950)[4,7]	950[4] (1288)[4]	26,000 (11,800)	30,000 (13,600)
2100 MH xFE	6310 MH	Close Ratio	No	340[4,5] (254)[4,5]	575 (780)	700[4,7] (950)[4,7]	950[4] (1288)[4]	26,000 (11,800)	30,000 (13,600)
2200 MH	6310 MH	Close Ratio	Yes	340[4,5] (254)[4,5]	575 (780)	700[4,7] (950)[4,7]	950[4] (1288)[4]	26,000 (11,800)	26,000 (11,800)
2200 MH xFE	6310 MH	Close Ratio	Yes	340[4,5] (254)[4,5]	575 (780)	700[4,7] (950)[4,7]	950[4] (1288)[4]	26,000 (11,800)	26,000 (11,800)
2350 MH	6310 MH	Close Ratio	Yes	340[4] (254)[4]	575 (780)	700[4,7] (950)[4,7]	950[4] (1288)[4]	30,000 (13,600)	30,000 (13,600)
2350 MH xFE	6310 MH	Close Ratio	Yes	340[4] (254)[4]	575 (780)	700[4,7] (950)[4,7]	950[4] (1288)[4]	30,000 (13,600)	30,000 (13,600)
2500 MH	6310 MH	Wide Ratio	No	340[4,5] (254)[4,5]	575 (780)	700[4,5,6] (950)[4,5,6]	950[4] (1288)[4]	33,000 (15,000)	33,000 (15,000)
2500 MH xFE	6310 MH	Wide Ratio	No	340[4,5] (254)[4,5]	575 (780)	700[4,5,6] (950)[4,5,6]	950[4] (1288)[4]	33,000 (15,000)	33,000 (15,000)
2550 MH	6310 MH	Wide Ratio	Yes	340[4] (254)[4]	575 (780)	700[4,7] (950)[4,7]	950[4] (1288)[4]	30,000 (13,600)	30,000 (13,600)
2550 MH xFE	6310 MH	Wide Ratio	Yes	340[4] (254)[4]	575 (780)	700[4,7] (950)[4,7]	950[4] (1288)[4]	30,000 (13,600)	30,000 (13,600)
3000 MH	6510 MH	Close Ratio	N/A	450 (336)	1250 (1695)	N/A	1700 (2305)	—	—
4000 MH	6610 MH	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 Available in gears three through five. 7 With 5th Gen controls. In ranges three through five.

MOTORHOME SERIES™ FEATURES AND ADVANTAGES

Shift Energy Management (SEM) with torque limiting
Ratings up to 340 hp/660 lb-ft on 1000 and 1350 MH.
Ratings up to 340 hp/700 lb-ft on 2100, 2200, 2350, 2500 and 2550 MH.

PTO option available
All Motorhome Series™ models.

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

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

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

Neutral at Stop
Automatically eliminates the load on the engine when the vehicle is at a full stop to save fuel and reduce overall vehicle emissions.

Acceleration Rate Management
Mitigates aggressive driving by controlling engine torque based on the vehicle's grade and load.

DynActive™ Shifting
New innovative shift scheduling uses an algorithm to choose the most efficient shift point, based on specs, vehicle and environmental parameters.

TYPICAL VEHICLE APPLICATIONS

Type A and Bus Conversion Motorhomes Class 5–8

Type C Motorhomes Class 4–5

Motorhomes

Entertainer Travel Coaches

Class 6–8 Type C Motorhomes require Truck RV Series

1000 MH, 1350 MH, 2100 MH, 2200 MH, 2350 MH, 2500 MH, 2550 MH

3000 MH

4000 MH

MARKETING PUBLICATIONS AND VIDEOS

SERIES BROCHURE
- Motorhome Series™ Individual Brochure

GENERAL BROCHURES
- Prognostics Brochure
- Residual Value Brochure
- Startability Flyer
- Shift Selector Operation and Code Manual
- Fluid and Filter Change Recommendations
- Motorhome Tips
- Torque Converter Brochure
- Retarder Brochure
- FMCA Testimonial Flyer
- Dreyer and Reinbold Racing Testimonial Flyer

VIDEOS
- Allison At Work
- How an Allison Automatic Performs
- FMCA Testimonial
- Dreyer and Reinbold Racing Testimonial

MOTORHOME SERIES™ I/O Packages*

			1000/2000 PRODUCT FAMILIES		3000/4000 PRODUCT FAMILIES	
			Motorhome		Motorhome	
	VOCATION PACKAGE NUMBER		354	374	223	226
	INPUT FUNCTIONS	Default Enabled?				
A	Secondary Mode Input	Yes	142	142	M	M
C1	PTO Drive Interface Input 1	Yes	143	162	143	
C2	PTO Drive Interface Input 2	No				
D	Shift Selector Transition Input	No				
E	Auxiliary Function Range Inhibit – Single Input	No	101	101	101	101
F	Auxiliary Function Range Inhibit – Dual Input	Yes				
G	Auxiliary Hold Input	Yes			142	142
H	Engine Brake Interface Input (Standard)	No	102	102	102/157	102/157
I	Engine Brake Interface Input (Special)	No				
J	Pump Mode Input (Fire Truck Pump Mode 4th Lockup)	No				
K	Quick-to-Neutral Input	No				
L	Automatic Neutral – Single Input	No	123	123	117	117
Q	Two Speed Axle Interface Input	Yes				
R	Manual Lockup Control Input	No				
V	Reverse Enable Input	No				
W	Direction Change Enable Input	No			122	122
Y	Anti-Lock Brake System (ABS) Input	Yes	121	121	121	121
Z	Retarder Interface Input	Yes			161	161
AA	Service Brake Status Input	Yes	162		162	162
AF	Differential Clutch Interface Input (3700 Only)	Yes				
AG	Automatic Neutral – Dual Input	Yes				
AH	Accelerator Pedal Kickdown Input	Yes				
AI	Aux. Function Range Inhibit – Single Input (Specialty Vehicle)	No				
AJ	Pump Mode Input (4th Lockup)	No				
AK	Automatic Neutral – Dual Input with Service Brake Status	Yes				
AL	Shift Selector Transition & Secondary Shift Schedule Input	Yes				
AM	Reverse Inhibit with Preselect Request Interface Input	No				
AQ	Shift Selector Display Blanking Input	Yes				
AR	Overdrive Disable Interface Input	Yes	161	161		
AS	Neutral at Stop Input	No		143	123	123
AW	2nd Reverse Input	No			179	
BD	Automatic 2-1 Preselect Input (4000 7-Speed Only)	Yes				
BS	Grade Braking/Regenerative Input	No				
BY	Aux. Box Transition Input	Yes				
BZ	Shift Selector Transition & Oil Field Pumping Input	Yes				
CA	Automatic Neutral – Brake-Based (BBAN) Input for PTO	No				
CB1	Preselect Request 1 Input	Yes	122	122		
CB2	Preselect Request 2 Input	Yes				
CC	High N/V Ratio Input	No				
CD	Automatic Neutral – Single Input with Selector Override	Yes				
CE	Direct Hold Input	No				
CF	Automatic Neutral – Idle Start/Stop Input	Yes				
CH	Automatic Neutral – Single Input, Inverted	No				
CN	Automatic Neutral – Dual Input with Automatic Return-to-Range	No				
	OUTPUT FUNCTIONS					
A	Engine Brake Interface Output	No	104	104	104	104
B	Sump/Retarder Temperature Indicator	Yes	164	164	164	164
C	Range Indicator (5th Gen default is always Neutral)	Yes	145	145	145	145
D	Output Speed Indicator A	Yes	105	105	105	105
G1	PTO Drive Interface 1 Indicator	Yes	150	150	130	
G2	PTO Drive Interface 2 Indicator	No				
I	Engine Overspeed Indicator	Yes				130
J	Two Speed Axle Interface Indicator	Yes				
K	Lockup Indicator	Yes				
N	Secondary Mode Indicator	Yes			113	113
O	Transmission Service Indicator	Yes	113	113		
Q	Retarder Interface Indicator	Yes			124	124
R	Differential Clutch Interface Indicator (3700 Only)	Yes				
S	Neutral Indicator for PTO and PTO Request (NIPTO)	Yes				
AD	Range Inhibited Indicator	Yes	124	124		
AJ	Output Speed Indicator A, Inverted	Yes				

* Additional packages available. Please reference Tech Data.

Bus Series™

Allison's Bus Series™ automatic transmissions 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 POWER w/SEM TORQUE LIMITING[1,2] hp (kW)	MAX INPUT TORQUE[1] w/o SEM lb-ft (N•m)	MAX INPUT TORQUE w/SEM 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 (172)	270 (201)	520 (705)	575 (780)	850 (1152)	29,000 (13,150)	29,000 (13,150)
– xFE		Close Ratio	No	230 (172)	270 (201)	520 (705)	575 (780)	850 (1152)	29,000 (13,150)	29,000 (13,150)
B 220	**6310**									
– Transit		Close Ratio	Yes	230 (172)	270 (201)	520 (705)	575 (780)	850 (1152)	29,000 (13,150)	29,000 (13,150)
– xFE		Close Ratio	Yes	230 (172)	270 (201)	520 (705)	575 (780)	850 (1152)	29,000 (13,150)	29,000 (13,150)
B 295	**6510**									
– Transit		Close Ratio	N/A	230 (172)	N/A	620 (841)	N/A	1370 (1857)	33,000 (14,968)	33,000 (14,968)
B 300	**6510**									
– Transit		Close Ratio	N/A	280 (209)	N/A	735 (997)	N/A	1370 (1857)	38,000 (17,236)	38,000 (17,236)
B 400	**6510**									
– Transit		Close Ratio	N/A	300 (224)	N/A	925 (1254)	N/A	1370 (1857)	45,000 (20,412)	45,000 (20,412)
– Tour Coach		Close Ratio	N/A	330 (246)	N/A	1000 (1356)	N/A	1600 (2170)	45,000 (20,412)	45,000 (20,412)
B 3400 XFE	**6510**									
– Transit		Close Ratio	N/A	300 (224)	N/A	925 (1254)	N/A	1370 (1857)	45,000 (20,412)	45,000 (20,412)
B 500	**6610**									
– Transit		Close Ratio	N/A	420 (313)	N/A	1300 (1763)	N/A	2450 (3322)	—	—
– Intercity Coach		Close Ratio	N/A	550 (410)	N/A	1700 (2305)	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.

BUS SERIES™ FEATURES AND ADVANTAGES

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

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

Neutral at Stop
Automatically eliminates the load on the engine when the vehicle is at a full stop to save fuel and reduce overall vehicle emissions.

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

Acceleration Rate Management
Mitigates aggressive driving by controlling engine torque based on the vehicle's grade and load.

DynActive™ Shifting
New innovative shift scheduling uses an algorithm to choose the most efficient shift point, based on specs, vehicle and environmental parameters.

xFE

xFE models are designed to lock up at lower speeds specifically for the constant shifting and lower average speeds of city and transit buses. xFE models can improve fuel economy by up to 7 percent, depending on duty cycle.*

*Results depend on duty cycle. xFE provides maximum fuel savings in high start-stop duty-cycles with low average speeds. Contact your Allison representative to ensure xFE is the best choice for your specific need.

B 210, B 220, B 295

B 300, B 400, B 3400 xFE

B 500

MARKETING PUBLICATIONS AND VIDEOS

SERIES BROCHURE
- City Bus Vocational Brochure
- Bus Series Individual Brochure (English)
- Bus Series Individual Brochure (Spanish)
- Bus Series Individual Brochure (French)

GENERAL BROCHURES
- Prognostics Brochure
- Load-Based Shift Scheduling Flyer
- Shift Selector Operation and Code Manual
- Fluid and Filter Change Recommendations
- Torque Converter Brochure
- Retarder Brochure
- PSTA Customer Profile
- xFE Brochure

VIDEOS
- Allison At Work
- How an Allison Automatic Performs
- Greyhound Testimonial
- PSTA Customer Profile

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

BUS SERIES™ I/O Packages*

			1000/2000 PRODUCT FAMILIES		3000/4000 PRODUCT FAMILIES			
			Bus Models		Transit Bus and Intercity Coach (Maximum Economy Calibration)			
	VOCATION PACKAGE NUMBER		354	374	148	159	235	262
	INPUT FUNCTIONS	Default Enabled?						
A	Secondary Mode Input	Yes	142	142	M	M	142	M
C1	PTO Drive Interface Input 1	Yes	143	162	143		M	
C2	PTO Drive Interface Input 2	No						
D	Shift Selector Transition Input	No						
E	Auxiliary Function Range Inhibit – Single Input	No	101	101	101	101	101	101
F	Auxiliary Function Range Inhibit – Dual Input	Yes						
G	Auxiliary Hold Input	Yes			142	142		142
H	Engine Brake Interface Input (Standard)	No	102	102	102/157	102/157	102/157	102/157
I	Engine Brake Interface Input (Special)	No						
J	Pump Mode Input (Fire Truck Pump Mode 4th Lockup)	No						
K	Quick-to-Neutral Input	No						
L	Automatic Neutral – Single Input	No	123	123	117	117	117	
Q	Two Speed Axle Interface Input	Yes						
R	Manual Lockup Control Input	No						
V	Reverse Enable Input	No						
W	Direction Change Enable Input	No				143	143	143
Y	Anti-Lock Brake System (ABS) Input	Yes	121	121	121	121	121	121
Z	Retarder Interface Input	Yes			161	161	161	161
AA	Service Brake Status Input	Yes	162		162	162	162	162
AF	Differential Clutch Interface Input (3700 Only)	Yes						
AG	Automatic Neutral – Dual Input	Yes						
AH	Accelerator Pedal Kickdown Input	Yes			122	122	122	122
AI	Auxiliary Function Range Inhibit – Single Input (Specialty Vehicle)	No						
AJ	Pump Mode Input (4th Lockup)	No						
AK	Automatic Neutral – Dual Input with Service Brake Status	Yes						
AL	Shift Selector Transition & Secondary Shift Schedule Input	Yes						
AM	Reverse Inhibit with Preselect Request Interface Input	No						
AQ	Shift Selector Display Blanking Input	Yes						
AR	Overdrive Disable Interface Input	Yes	161	161				
AS	Neutral at Stop Input	No		143	123	123	123	123
AW	2nd Reverse Input	No						
BD	Automatic 2-1 Preselect Input (4000 7-Speed Only)	Yes						
BS	Grading Branding/Regenerative Input	No						
BY	Aux. Box Transition Input	Yes						
BZ	Shift Selector Transition & Oil Field Pumping Input	Yes						
CA	Automatic Neutral – Brake-Based (BBAN) Input for PTO	No						
CB1	Preselect Request 1 Input	Yes	122	122				
CB2	Preselect Request 2 Input	Yes						
CC	High N/V Ratio Input	No						
CD	Automatic Neutral – Single Input with Selector Override	Yes						
CE	Direct Hold Input	No						
CF	Automatic Neutral – Idle Start/Stop Input	Yes						
CH	Automatic Neutral – Single Input, Inverted	No						
CN	Automatic Neutral – Dual Input with Automatic Return-to-Range	No						117
	OUTPUT FUNCTIONS							
A	Engine Brake Interface Output	No	104	104	104	104	104	104
B	Sump/Retarder Temperature Indicator	Yes	164	164	164	164	164	164
C	Range Indicator (5th Gen default is always Neutral)	Yes	145	145	145	145	145	145
D	Output Speed Indicator A	Yes	105	105	105	105	105	105
G1	PTO Drive Interface 1 Indicator	Yes	150	150	130		130	
G2	PTO Drive Interface 2 Indicator	No						
I	Engine Overspeed Indicator	Yes				113		113
J	Two Speed Axle Interface Indicator	Yes						
K	Lockup Indicator	Yes						
N	Secondary Mode Indicator	Yes				130	113	130
O	Transmission Service Indicator	Yes	113	113				
Q	Retarder Interface Indicator	Yes			124	124	124	124
R	Differential Clutch Interface Indicator (3700 Only)	Yes						
S	Neutral Indicator for PTO and PTO Request (NIPTO)	Yes						
AD	Range Inhibited Indicator	Yes	124	124				
AJ	Output Speed Indicator A, Inverted	Yes						

* Additional packages available. Please reference Tech Data.

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 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 (780)	660[4,6] (895)[4,6]	950[4] (1288)[4]	19,500 (8845)	26,000 (11,800)
1350 EVS	6310	Close Ratio	Yes	340[4,6] (254)[4,6]	575 (780)	660[4,6] (895)[4,6]	950[4] (1288)[4]	19,500 (8845)	30,000 (13,600)
2100 EVS	6310	Close Ratio	No	340[4,6] (254)[4,6]	575 (780)	700[8] (950)[8]	950[4] (1288)[4]	26,000 (11,800)	26,000 (11,800)
2200 EVS	6310	Close Ratio	Yes	340[4,6] (254)[4,6]	575 (780)	700[8] (950)[8]	950[5] (1288)[4]	26,000 (11,800)	26,000 (11,800)
2350 EVS[6]	6310	Close Ratio	Yes	340[4] (254)[4]	575 (780)	700[8] (950)[8]	950[4] (1288)[4]	30,000 (13,600)	30,000 (13,600)
2500 EVS	6310	Wide Ratio	No	340[4,6] (254)[4,6]	575 (780)	700[8] (950)[8]	950[4] (1288)[4]	33,000 (15,000)	33,000 (15,000)
2550 EVS[6]	6310	Wide Ratio	Yes	340[4] (254)[4]	575 (780)	700[8] (950)[8]	950[4] (1288)[4]	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 Vehicle		Close Ratio	N/A	600 (447)	1850 (2508)	N/A	2600 (3525)	—	—
– ARFF		Close Ratio	N/A	600 (447)	1675 (2271)	N/A	2600 (3525)	—	—
4500 EVS[7]	6610	Wide Ratio	N/A	600 (447)	1770 (2400)	1850[5] (2508)[5]	2600 (3525)[5]	—	—
4700 EVS	6610								
– ARFF[7]		Widest Ratio	N/A	600 (447)	1850 (2508)	N/A	2800 (3795)	—	—
4800 EVS	6610								
– ARFF[7]		Widest Ratio	N/A	700 (522)	1950 (2644)	N/A	2800 (3795)	—	—
4850 EVS	6610								
– ARFF[7]		Widest Ratio	N/A	770 (574)	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 Aircraft Rescue and Fire-Fighting Vehicle.
8 With 5th Gen controls. In ranges three through five.

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

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.

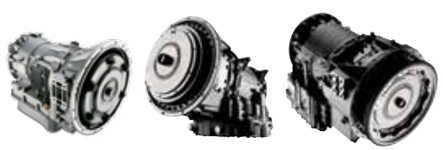
General truck cals will not permit shift into range after 10 seconds.

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 and/or throttle position is beyond 40%.



1000 EVS, 1350 EVS, 2100 EVS, 2200 EVS, 2350 EVS, 2500 EVS, 2550 EVS | 3000 EVS, 3500 EVS | 4000 EVS, 4500 EVS, 4700 EVS, 4800 EVS, 4850 EVS

MARKETING PUBLICATIONS AND VIDEOS

SERIES BROCHURE
- Fire + Emergency Vocational Brochure

GENERAL BROCHURES
- Prognostics Brochure
- Shift Selector Operation and Code Manual
- Fluid and Filter Change Recommendations
- Retarder Brochure
- 2nd Reverse Flyer
- Torque Converter Brochure
- Manville Fire Department Testimonial Flyer

VIDEOS
- Allison At Work
- How an Allison Automatic Performs
- Manville Fire Department Testimonial
- Hannover Fire Department Testimonal Video
- Power Take-Off (PTO) Video

EMERGENCY VEHICLE SERIES™ FEATURES AND ADVANTAGES

Shift Energy Management (SEM) with torque limiting
Ratings up to 340 hp/660 lb-ft with 5th Gen controls on 1000, 1350, 2100, 2200, 2350, 2500 and 2550 EVS. Ratings up to 600 hp/1850 lb-ft on 4500 EVS.

Oil Level Sensor
At the push of a button, oil levels are displayed on shift selectors for easy identification. Standard on 3000, 3500, 4000, 4500 and 4700 EVS.*

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

Deep oil pan/sump standard on all Emergency Vehicle Series models
Shallow sump with OLS optional on 3000, 3500, 4000 and 4500 EVS. Shallow pan optional on 1000 EVS.

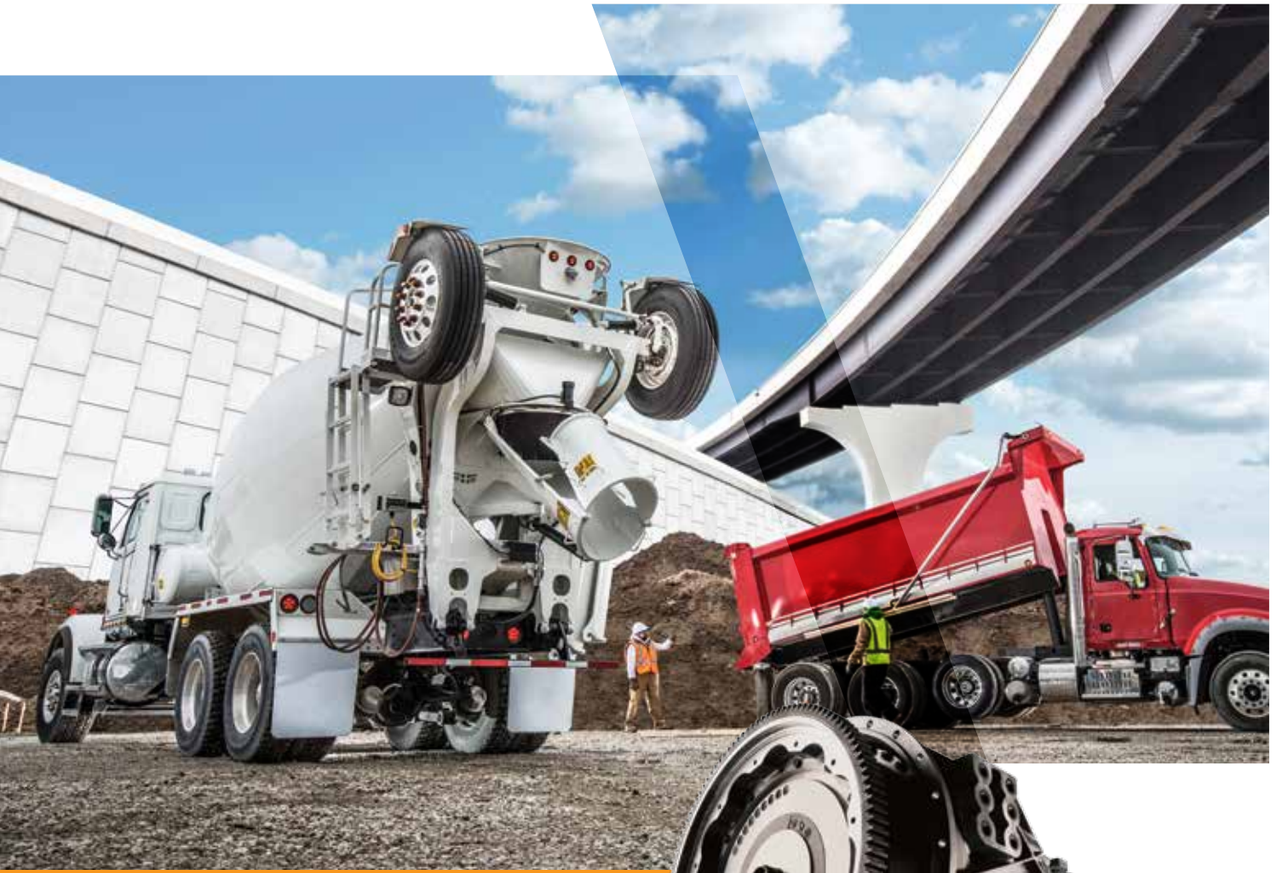
Prognostics
Eliminates unnecessary oil and filter changes by monitoring various operating parameters to determine and alert when a specific maintenance function is required.

*OLS is not available for 4700 EVS with retarder

EMERGENCY VEHICLE SERIES™ I/O Packages

			1000/2000 PRODUCT FAMILIES							
			EVS Models							
	VOCATION PACKAGE NUMBER		354	360	364	367	368	374	376	380
INPUT FUNCTIONS		Default Enabled?								
A	Secondary Mode Input	Yes	142	142	142	142	142	142	142	142
C1	PTO Drive Interface Input 1	Yes	143	143	143	143	143	162	101	143
C2	PTO Drive Interface Input 2	No								102
D	Shift Selector Transition Input	No								
E	Auxiliary Function Range Inhibit – Single Input	No	101					101		101
F	Auxiliary Function Range Inhibit – Dual Input	Yes								
G	Auxiliary Hold Input	Yes								
H	Engine Brake Interface Input (Standard)	No	102	102		102		102	102	
I	Engine Brake Interface Input (Special)	No								
J	Pump Mode Input (Fire Truck Pump Mode 4th Lockup)	No								
K	Quick-to-Neutral Input	No								
L	Automatic Neutral – Single Input	No	123					123		123
Q	Two Speed Axle Interface Input	Yes								
R	Manual Lockup Control Input	No								
V	Reverse Enable Input	No								
W	Direction Change Enable Input	No								
Y	Anti-Lock Brake System (ABS) Input	Yes	121	121	121	121	121	121	121	121
Z	Retarder Interface Input	Yes								
AA	Service Brake Status Input	Yes	162	162	162				162	162
AF	Differential Clutch Interface Input (3700 Only)	Yes								
AG	Automatic Neutral – Dual Input	Yes								
AH	Accelerator Pedal Kickdown Input	Yes								
AI	Auxiliary Function Range Inhibit – Single Input (Specialty Vehicle)	No								
AJ	Pump Mode Input (4th Lockup)	No								
AK	Automatic Neutral – Dual Input with Service Brake Status	Yes								
AL	Shift Selector Transition & Secondary Shift Schedule Input	Yes								
AM	Reverse Inhibit with Preselect Request Interface Input	No								
AQ	Shift Selector Display Blanking Input	Yes								
AR	Overdrive Disable Interface Input	Yes	161	161	161	161	161	161	161	161
AS	Neutral at Stop Input	No						143	143	
AW	2nd Reverse Input	No								
BD	Automatic 2-1 Preselect Input (4000 7-Speed Only)	Yes								
BQ	Pump Mode Input (3rd Lockup)	No		122/123	122/123	122/123	122/123		122/123	
BS	Grade Braking/Regenerative Input	No								
BY	Aux. Box Transition Input	Yes								
BZ	Shift Selector Transition & Oil Field Pumping Input	Yes								
CA	Automatic Neutral – Brake-Based (BBAN) Input for PTO	No								
CB1	Preselect Request 1 Input	Yes	122					122		122
CB2	Preselect Request 2 Input	Yes								
CC	High N/V Ratio Input	No			101/102		101/102			
CD	Automatic Neutral – Single Input with Selector Override	Yes				162	162			
CE	Direct Hold Input	No								
CF	Automatic Neutral – Idle Start/Stop Input	Yes								
CH	Automatic Neutral – Single Input, Inverted	No								
CN	Automatic Neutral – Dual Input with Automatic Return-to-Range	No								
OUTPUT FUNCTIONS										
A	Engine Brake Interface Output	No	104	104		104		104	104	
B	Sump/Retarder Temperature Indicator	Yes	164	164	164	164	164	164	164	164
C	Range Indicator (5th Gen default is always Neutral)	Yes	145	145	145	145	145	145	145	145
D	Output Speed Indicator A	Yes	105	105	105	105	105	105	105	105
G1	PTO Drive Interface 1 Indicator	Yes	150	150	150	150	150	150	150	150
G2	PTO Drive Interface 2 Indicator	No								104
I	Engine Overspeed Indicator	Yes								
J	Two Speed Axle Interface Indicator	Yes								
K	Lockup Indicator	Yes								
N	Secondary Mode Indicator	Yes								
O	Transmission Service Indicator	Yes	113	113	113	113	113	113	113	113
Q	Retarder Interface Indicator	Yes								
R	Differential Clutch Interface Indicator (3700 Only)	Yes								
S	Neutral Indicator for PTO and PTO Request (NIPTO)	Yes								
AD	Range Inhibited Indicator	Yes	124	124	124	124	124	124	124	124
AJ	Output Speed Indicator A, Inverted	Yes								

			3000/4000 PRODUCT FAMILIES						
			With Split-Shaft PTO				Emergency	No Split-Shaft PTO (2nd Reverse Capable)	
	VOCATION PACKAGE NUMBER		135	197	198	246	170	227	265
INPUT FUNCTIONS		Default Enabled?							
A	Secondary Mode Input	Yes	M	142	M	M	M	M	M
C1	PTO Drive Interface Input 1	Yes	143	M	142	143	143	143	143
C2	PTO Drive Interface Input 2	No							102
D	Shift Selector Transition Input	No					101		
E	Auxiliary Function Range Inhibit – Single Input	No	101						
F	Auxiliary Function Range Inhibit – Dual Input	Yes				101/142		101/142	101/142
G	Auxiliary Hold Input	Yes	142						
H	Engine Brake Interface Input (Standard)	No	102/157	102/157	102/157	102/157	102/157	102/157	
I	Engine Brake Interface Input (Special)	No							
J	Pump Mode Input (Fire Truck Pump Mode 4th Lockup)	No	122/123	122/123	122/123	122/123			
K	Quick-to-Neutral Input	No							
L	Automatic Neutral – Single Input	No							
Q	Two Speed Axle Interface Input	Yes							
R	Manual Lockup Control Input	No							
V	Reverse Enable Input	No							
W	Direction Change Enable Input	No							
Y	Anti-Lock Brake System (ABS) Input	Yes	121	121	121	121	121	121	121
Z	Retarder Interface Input	Yes	161	161	161	161	161	161	161
AA	Service Brake Status Input	Yes	162	162	162	162	162	162	162
AF	Differential Clutch Interface Input (3700 Only)	Yes							
AG	Automatic Neutral – Dual Input	Yes							
AH	Accelerator Pedal Kickdown Input	Yes							
AI	Auxiliary Function Range Inhibit – Single Input (Specialty Vehicle)	No							
AJ	Pump Mode Input (4th Lockup)	No							
AK	Automatic Neutral – Dual Input with Service Brake Status	Yes					117/142		
AL	Shift Selector Transition & Secondary Shift Schedule Input	Yes							
AM	Reverse Inhibit with Preselect Request Interface Input	No							
AQ	Shift Selector Display Blanking Input	Yes							
AR	Overdrive Disable Interface Input	Yes							
AS	Neutral at Stop Input	No					123		
AW	2nd Reverse Input	No						179	179
BD	Automatic 2-1 Preselect Input (4000 7-Speed Only)	Yes							
BQ	Pump Mode Input (3rd Lockup)	No							
BS	Grade Braking/Regenerative Input	No							
BY	Aux. Box Transition Input	Yes							
BZ	Shift Selector Transition & Oil Field Pumping Input	Yes							
CA	Automatic Neutral – Brake-Based (BBAN) Input for PTO	No							
CB1	Preselect Request 1 Input	Yes							
CB2	Preselect Request 2 Input	Yes							
CC	High N/V Ratio Input	No							
CD	Automatic Neutral – Single Input with Selector Override	Yes		117	117	117		117	117
CE	Direct Hold Input	No							
CF	Automatic Neutral – Idle Start/Stop Input	Yes							
CH	Automatic Neutral – Single Input, Inverted	No							
CN	Automatic Neutral – Dual Input with Automatic Return-to-Range	No							
OUTPUT FUNCTIONS									
A	Engine Brake Interface Output	No	104	104	104	104	104	104	
B	Sump/Retarder Temperature Indicator	Yes	164	164	164	164	164		
C	Range Indicator (5th Gen default is always Neutral)	Yes	145	145	145	145	113		
D	Output Speed Indicator A	Yes	105	105	105	105	105	105	105
G1	PTO Drive Interface 1 Indicator	Yes	130	130	130	130	130	130	130
G2	PTO Drive Interface 2 Indicator	No							104
I	Engine Overspeed Indicator	Yes							
J	Two Speed Axle Interface Indicator	Yes							
K	Lockup Indicator	Yes							
N	Secondary Mode Indicator	Yes						113	113
O	Transmission Service Indicator	Yes						164	164
Q	Retarder Interface Indicator	Yes	124	124	124	124	124	124	124
R	Differential Clutch Interface Indicator (3700 Only)	Yes							
S	Neutral Indicator for PTO and PTO Request (NIPTO)	Yes		113	113	113	145	145	145
AD	Range Inhibited Indicator	Yes							
AJ	Output Speed Indicator A, Inverted	Yes							



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™ automatic transmissions.

MARKETING PUBLICATIONS AND VIDEOS

SERIES BROCHURE

- Rugged Duty Series Individual Brochure (English)
- Rugged Duty Series Individual Brochure (Spanish)
- Rugged Duty Series Individual Brochure (French)

GENERAL BROCHURES

- Refuse Vocational Brochure
- Construction Vocational Brochure
- Superior Fuel Efficiency. Optimum Fuel Economy.
- Prognostics Brochure
- Residual Value Brochure
- 2nd Reverse Flyer
- Startability Flyer
- Shift Selector Operation and Code Manual
- Fluid and Filter Change Recommendations
- Retarder Brochure
- Torque Converter Brochure
- TranSynd® Maximum Protection Flyer
- Tractor Vocational Brochure
- Northern Energy Testimonial Flyer
- U.S. Concrete Testimonial Flyer
- Van Dyke Testimonial Flyer
- RMC Testimonial Flyer
- A&C Trucking Testimonial Flyer

VIDEOS

- A&C Trucking Testimonial
- Allison At Work
- How an Allison Automatic Performs
- Pea Gravel Demo
- Backing Down Grades
- Construction
- Northern Energy Testimonial
- U.S. Concrete Testimonial
- Dunning Sand & Gravel Testimonial
- Canadian Logging Testimonial
- Van Dyke Testimonial
- RMC Testimonial

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

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 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 (780)	660[4,7] (895)[4,7]	950[4] (1288)[4]	19,500 (8845)	26,000 (11,800)
– xFE	6310	Close Ratio	Yes	340[4,7] (254)[4,7]	575 (780)	660[4,7] (895)[4,7]	950[4] (1288)[4]	19,500 (8845)	26,000 (11,800)
1350 RDS	6310	Close Ratio	Yes	340[4,7] (254)[4,7]	575 (780)	660[4,7] (895)[4,7]	950[4] (1288)[4]	19,500 (8845)	30,000 (13,600)
– xFE	6310	Close Ratio	Yes	340[4,7] (254)[4,7]	575 (780)	660[4,7] (895)[4,7]	950[4] (1288)[4]	19,500 (8845)	30,000 (13,600)
2100 RDS	6310	Close Ratio	No	340[4,7] (254)[4,7]	575 (780)	660[4,7] (895)[4,7]	950[4] (1288)[4]	26,000 (11,800)	26,000 (11,800)
– xFE	6310	Close Ratio	No	340[4,7] (254)[4,7]	575 (780)	660[4,7] (895)[4,7]	950[4] (1288)[4]	26,000 (11,800)	26,000 (11,800)
2200 RDS	6310	Close Ratio	Yes	340[4,7] (254)[4,7]	575 (780)	660[4,7] (895)[4,7]	950[4] (1288)[4]	26,000 (11,800)	26,000 (11,800)
– xFE	6310	Close Ratio	Yes	340[4,7] (254)[4,7]	575 (780)	660[4,7] (895)[4,7]	950[4] (1288)[4]	26,000 (11,800)	26,000 (11,800)
2300 RDS[5]	6310	Close Ratio	No	365[4] (272)[4]	N/A	510[4] (691)[4]	950[4] (1288)[4]	33,000 (15,000)	33,000 (15,000)
2350 RDS[7]	6310	Close Ratio	Yes	340[4] (254)[4]	575 (780)	660[4] (895)[4]	950[4] (1288)[4]	30,000 (13,600)	30,000 (13,600)
– xFE	6310	Close Ratio	Yes	340[4] (254)[4]	575 (780)	660[4] (895)[4]	950[4] (1288)[4]	30,000 (13,600)	30,000 (13,600)
2500 RDS	6310								
– On-/Off-Highway		Wide Ratio	No	340[4,7] (254)[4,7]	575 (780)	660[4,7] (895)[4,7]	950[4] (1288)[4]	33,000 (15,000)	33,000 (15,000)
– Refuse		Wide Ratio	No	300 (224)	550 (746)	565[4] (766)[4]	950[4] (1288)[4]	24,200 (11,000)	24,200 (11,000)
– xFE		Wide Ratio	No	340[4] (254)[4]	575 (780)	660[4] (895)[4]	950[4] (1288)[4]	24,200 (11,000)	24,200 (11,000)
2550 RDS[7]	6310	Wide Ratio	Yes	340[4] (254)[4]	575 (780)	660[4] (895)[4]	950[4] (1288)[4]	33,000 (15,000)	33,000 (15,000)
– xFE	6310	Wide Ratio	Yes	340[4] (254)[4]	575 (780)	660[4] (895)[4]	950[4] (1288)[4]	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)
– 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	330 (246)	860 (1166)	1050[8] (1424)[8]	1450[4] (1966)[4]	80,000 (36,288)	80,000 (36,288)
– Mixer/Refuse		Wide Ratio	N/A	330 (246)	860 (1166)	N/A	1420 (1925)	60,000 (27,216)	—
– Specialty PTO		Wide Ratio	N/A	330 (246)	950 (1288)	1050[8] (1424)[8]	1450 (1966)	—	—
– HET		Wide Ratio	N/A	330 (246)	985 (1335)	1050[8] (1424)[8]	1450 (1966)	—	—
4000 RDS	6610								
– On-/Off-Highway		Close Ratio	N/A	565[11] (421)[11]	1770 (2400)	1850[10] (2508)[10]	2600 (3525)	—	—
– Refuse		Close Ratio	N/A	500 (373)	1550 (2102)	N/A	2450 (3322)	—	—
– Specialty PTO		Close Ratio	N/A	565 (421)	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	565[11] (421)[11]	1650 (2237)	1850[10] (2508)[10]	2450 (3322)	—	—
– Refuse		Wide Ratio	N/A	500 (373)	1550 (2102)	N/A	2450 (3322)	—	—
– Specialty PTO		Wide Ratio	N/A	565[11] (421)[11]	1650 (2237)	1770[8] (2400)[8]	2600 (3525)	—	—
– HET		Wide Ratio	N/A	600[11] (447)[11]	1650 (2237)	1850[8] (2508)[8]	2600 (3525)	—	—
4700 RDS	6610								
– On-/Off-Highway		Widest Ratio	N/A	565[11] (421)[11]	1770 (2400)	1850[9] (2508)[9]	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 four through seven.
10 Only available in gears three through six. 11 With and without torque limiting.

RUGGED DUTY SERIES™ FEATURES AND ADVANTAGES

Shift Energy Management (SEM) with torque limiting
Ratings up to 340 hp/660 lb-ft on 1000, 1350, 2100 , 2200, 2350, 2500 and 2550 RDS.
Ratings up to 365 hp/510 lb-ft on 2300 RDS for On-/Off-Highway applications.
Ratings up to 300 hp/565 lb-ft on 2500 RDS for Refuse applications.
Ratings up to 370 hp/1250 lb-ft on 3000 RDS for On-/Off-Highway, Mixer, and Refuse applications.
Ratings up to 565 hp/1850 lb-ft on 4500 RDS for On-/Off-Highway applications.

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

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

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

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

Acceleration Rate Management
Mitigates aggressive driving by controlling engine torque based on the vehicle's grade and load.

Neutral at Stop
Automatically eliminates the load on the engine when the vehicle is at a full stop to save fuel and reduce overall vehicle emissions.

DynActive™ Shifting
New innovative shift scheduling uses an algorithm to choose the most efficient shift point, based on specs, vehicle and environmental parameters.

*OLS is not available for 4700 RDS with retarder

1000 RDS, 1350 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™ I/O Packages*

			1000/2000 PRODUCT FAMILIES				
			RDS Models				
VOCATION PACKAGE NUMBER			354	360	365	374	376
INPUT FUNCTIONS		Default Enabled?					
A	Secondary Mode Input	Yes	142	142	142	142	142
C1	PTO Drive Interface Input 1	Yes	143	143	143	162	101
C2	PTO Drive Interface Input 2	No					
D	Shift Selector Transition Input	No					
E	Auxiliary Function Range Inhibit – Single Input	No	101		101	101	
F	Auxiliary Function Range Inhibit – Dual Input	Yes					
G	Auxiliary Hold Input	Yes					
H	Engine Brake Interface Input (Standard)	No	102	102		102	102
I	Engine Brake Interface Input (Special)	No					
J	Pump Mode Input (Fire Truck Pump Mode 4th Lockup)	No					
K	Quick-to-Neutral Input	No					
L	Automatic Neutral – Single Input	No	123		123	123	
Q	Two Speed Axle Interface Input	Yes					
R	Manual Lockup Control Input	No					
V	Reverse Enable Input	No					
W	Direction Change Enable Input	No					
Y	Anti-Lock Brake System (ABS) Input	Yes	121	121	121	121	121
Z	Retarder Interface Input	Yes					
AA	Service Brake Status Input	Yes	162	162	162		162
AF	Differential Clutch Interface Input (3700 Only)	Yes					
AG	Automatic Neutral – Dual Input	Yes					
AH	Accelerator Pedal Kickdown Input	Yes					
AI	Aux. Function Range Inhibit – Single Input (Specialty Vehicle)	No					
AJ	Pump Mode Input (4th Lockup)	No					
AK	Automatic Neutral – Dual Input with Service Brake Status	Yes					
AL	Shift Selector Transition & Secondary Shift Schedule Input	Yes					
AM	Reverse Inhibit with Preselect Request Interface Input	No					
AQ	Shift Selector Display Blanking Input	Yes					
AR	Overdrive Disable Interface Input	Yes	161	161	161	161	161
AS	Neutral at Stop Input	No				143	143
AW	2nd Reverse Input	No					
BD	Automatic 2-1 Preselect Input (4000 7-Speed Only)	Yes					
BQ	Pump Mode Input (3rd Lockup)	No		122/123			122/123
BS	Grade Braking/Regenerative Input	No					
BY	Aux. Box Transition Input	Yes					
BZ	Shift Selector Transition & Oil Field Pumping Input	Yes					
CA	Automatic Neutral – Brake-Based (BBAN) Input for PTO	No					
CB1	Preselect Request 1 Input	Yes	122			122	
CB2	Preselect Request 2 Input	Yes					
CC	High N/V Ratio Input	No			102/122		
CD	Automatic Neutral – Single Input with Selector Override	Yes					
CE	Direct Hold Input	No					
CF	Automatic Neutral – Idle Start/Stop Input	Yes					
CH	Automatic Neutral – Single Input, Inverted	No					
CN	Automatic Neutral – Dual Input with Automatic Return-to-Range	No					
OUTPUT FUNCTIONS							
A	Engine Brake Interface Output	No	104	104		104	104
B	Sump/Retarder Temperature Indicator	Yes	164	164	164	164	164
C	Range Indicator (5th Gen default is always Neutral)	Yes	145	145	145	145	145
D	Output Speed Indicator A	Yes	105	105	105	105	105
G1	PTO Drive Interface 1 Indicator	Yes	150	150	150	150	150
G2	PTO Drive Interface 2 Indicator	No					
I	Engine Overspeed Indicator	Yes					
J	Two Speed Axle Interface Indicator	Yes					
K	Lockup Indicator	Yes					
N	Secondary Mode Indicator	Yes					
O	Transmission Service Indicator	Yes	113	113	113	113	113
Q	Retarder Interface Indicator	Yes					
R	Differential Clutch Interface Indicator (3700 Only)	Yes					
S	Neutral Indicator for PTO and PTO Request (NIPTO)	Yes					
AD	Range Inhibited Indicator	Yes	124	124	124	124	124
AJ	Output Speed Indicator A, Inverted	Yes					

* Additional packages available. Please reference Tech Data.

			3000/4000 PRODUCT FAMILIES										
			On/Off-Highway (2nd Reverse Capable)					Construction		Street Sweeper		Basic Refuse	
VOCATION PACKAGE NUMBER			223	224	235	236	263	146	175	167	169	180	225
INPUT FUNCTIONS		Default Enabled?											
A	Secondary Mode Input	Yes	M	M	142	M	M	M	122	142	M	M	M
C1	PTO Drive Interface Input 1	Yes	143	143	M	143	143	143	143	M	142	143	143
C2	PTO Drive Interface Input 2	No					102						
D	Shift Selector Transition Input	No										101	
E	Auxiliary Function Range Inhibit – Single Input	No	101	101	101	101	101	101				122	101
F	Auxiliary Function Range Inhibit – Dual Input	Yes											
G	Auxiliary Hold Input	Yes	142	142		142	142		117			142	142
H	Engine Brake Interface Input (Standard)	No	102/157	102/157	102/157	102/157		102/157	102/157	102/157	102/157	102/157	102/157
I	Engine Brake Interface Input (Special)	No											
J	Pump Mode Input (Fire Truck Pump Mode 4th Lockup)	No											
K	Quick-to-Neutral Input	No											
L	Automatic Neutral – Single Input	No	117		117	117	117			117	117	117	
Q	Two Speed Axle Interface Input	Yes						142		101	101		
R	Manual Lockup Control Input	No											
V	Reverse Enable Input	No								143			
W	Direction Change Enable Input	No	122	122	143	122	122				122		
Y	Anti-Lock Brake System (ABS) Input	Yes	121	121	121	121	121	121	121	121	121	121	121
Z	Retarder Interface Input	Yes	161	161	161	161	161	161	161	161	161	161	161
AA	Service Brake Status Input	Yes	162	162	162	162	162	162	162	162	162	162	162
AF	Differential Clutch Interface Input (3700 Only)	Yes											
AG	Automatic Neutral – Dual Input	Yes							101/142				
AH	Accelerator Pedal Kickdown Input	Yes			122			122					
AI	Aux. Function Range Inhibit – Single Input (Specialty Vehicle)	No											
AJ	Pump Mode Input (4th Lockup)	No											
AK	Automatic Neutral – Dual Input with Service Brake Status	Yes											
AL	Shift Selector Transition & Secondary Shift Schedule Input	Yes											
AM	Reverse Inhibit with Preselect Request Interface Input	No							123				
AQ	Shift Selector Display Blanking Input	Yes						123					
AS	Neutral at Stop Input	No	123	123	123		123						123
AW	2nd Reverse Input	No	179	179			179						
BD	Automatic 2-1 Preselect Input (4000 7-Speed Only)	Yes											
BS	Grade Braking/Regenerative Input	No											
BY	Aux. Box Transition Input	Yes											
BZ	Shift Selector Transition & Oil Field Pumping Input	Yes											
CA	Automatic Neutral – Brake-Based (BBAN) Input for PTO	No											
CB1	Preselect Request 1 Input	Yes				123							
CB2	Preselect Request 2 Input	Yes											
CC	High N/V Ratio Input	No											
CD	Automatic Neutral – Single Input with Selector Override	Yes		117									
CE	Direct Hold Input	No											
CF	Automatic Neutral – Idle Start/Stop Input	Yes											
CH	Automatic Neutral – Single Input, Inverted	No											
CN	Automatic Neutral – Dual Input with Automatic Return-to-Range	No											
OUTPUT FUNCTIONS													
A	Engine Brake Interface Output	No	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 (5th Gen default is always Neutral)	Yes	145	145	145	145	145			113	113	113	
D	Output Speed Indicator A	Yes	105	105	105	105	105	105	105	105	105	105	105
G1	PTO Drive Interface 1 Indicator	Yes	130	130	130	130	130	130	130	130	130	130	130
G2	PTO Drive Interface 2 Indicator	No					104						
I	Engine Overspeed Indicator	Yes											
J	Two Speed Axle Interface Indicator	Yes						145		145	145		
K	Lockup Indicator	Yes											
N	Secondary Mode Indicator	Yes	113	113	113	113	113		113				113
O	Transmission Service Indicator	Yes											
Q	Retarder Interface Indicator	Yes	124	124	124	124	124	124	124	124	124	124	124
R	Differential Clutch Interface Indicator (3700 Only)	Yes											
S	Neutral Indicator for PTO and PTO Request (NIPTO)	Yes							145			145	145
AD	Range Inhibited Indicator	Yes											
AJ	Output Speed Indicator A, Inverted	Yes											

RUGGED DUTY SERIES™ I/O Packages*

			3000/4000 PRODUCT FAMILIES															
			Refuse with Auto-Neutral			Refuse w/Auto-Neutral & Service Brake		Premium Utility with Split-Shaft PTO					Premium Utility with Soft-Start for Split-Shaft PTO					
	VOCATION PACKAGE NUMBER		142	145	183	168	170	149	150	172	216	266	219	220	221	222	267	
INPUT FUNCTIONS		Default Enabled?																
A	Secondary Mode Input	Yes	M	122			M	142	M	142	M	142	142	M	142	M	142	
C1	PTO Drive Interface Input 1	Yes	143	143	143	143	143	M		M	143	M	M		M	143	M	
C2	PTO Drive Interface Input 2	No										102					102	
D	Shift Selector Transition Input	No	101	101			101			101		157			101		157	
E	Auxiliary Function Range Inhibit – Single Input	No						101	101		101	101	101	101		101	101	
F	Auxiliary Function Range Inhibit – Dual Input	Yes																
G	Auxiliary Hold Input	Yes																
H	Engine Brake Interface Input (Standard)	No	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		
I	Engine Brake Interface Input (Special)	No																
J	Pump Mode Input (Fire Truck Pump Mode 4th Lockup)	No																
K	Quick-to-Neutral Input	No																
L	Automatic Neutral – Single Input	No																
Q	Two Speed Axle Interface Input	Yes																
R	Manual Lockup Control Input	No																
V	Reverse Enable Input	No								117		117			117		117	
W	Direction Change Enable Input	No						117	117		117	179	117	117		117	179	
Y	Anti-Lock Brake System (ABS) Input	Yes	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	
Z	Retarder Interface Input	Yes	161	161	161	161	161	161	161	161	161	161	161	161	161	161	161	
AA	Service Brake Status Input	Yes	162	162	162	162	162	162	162	162	162	162	162	162	162	162	162	
AF	Differential Clutch Interface Input (3700 Only)	Yes																
AG	Automatic Neutral – Dual Input	Yes	117/142	117/142	117/142													
AH	Accelerator Pedal Kickdown Input	Yes																
AI	Aux. Function Range Inhibit – Single Input (Specialty Vehicle)	No																
AJ	Pump Mode Input (4th Lockup)	No						122/123	122/123	122/123	122/123	122/123						
AK	Automatic Neutral – Dual Input with Service Brake Status	Yes				117/142	117/142											
AL	Shift Selector Transition & Secondary Shift Schedule Input	Yes			101	101												
AM	Reverse Inhibit with Preselect Request Interface Input	No		123														
AQ	Shift Selector Display Blanking Input	Yes																
AS	Neutral at Stop Input	No	123		123	123	123	143	143	143		143	143	143	143		143	
AW	2nd Reverse Input	No																
BD	Automatic 2-1 Preselect Input (4000 7-Speed Only)	Yes																
BS	Grade Braking/Regenerative Input	No																
BY	Aux. Box Transition Input	Yes											123	123	123	123	123	
BZ	Shift Selector Transition & Oil Field Pumping Input	Yes																
CA	Automatic Neutral – Brake-Based (BBAN) Input for PTO	No																
CB1	Preselect Request 1 Input	Yes																
CB2	Preselect Request 2 Input	Yes																
CC	High N/V Ratio Input	No																
CD	Automatic Neutral – Single Input with Selector Override	Yes																
CE	Direct Hold Input	No											122	122	122	122	122	
CF	Automatic Neutral – Idle Start/Stop Input	Yes																
CH	Automatic Neutral – Single Input, Inverted	No																
CN	Automatic Neutral – Dual Input with Auto Return-to-Range	No																
OUTPUT FUNCTIONS																		
A	Engine Brake Interface Output	No	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	
C	Range Indicator (5th Gen default is always Neutral)	Yes					113	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	105	105	105	105	105	
G1	PTO Drive Interface 1 Indicator	Yes	130	130	130	130	130	130		130	130	130	130		130	130	130	
G2	PTO Drive Interface 2 Indicator	No										104					104	
I	Engine Overspeed Indicator	Yes							130					130				
J	Two Speed Axle Interface Indicator	Yes																
K	Lockup Indicator	Yes																
N	Secondary Mode Indicator	Yes			113	113												
O	Transmission Service Indicator	Yes																
Q	Retarder Interface Indicator	Yes	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	
R	Differential Clutch Interface Indicator (3700 Only)	Yes																
S	Neutral Indicator for PTO and PTO Request (NIPTO)	Yes	145	145	145	145	145											
AD	Range Inhibited Indicator	Yes																
AJ	Output Speed Indicator A, Inverted	Yes																

* Additional packages available. Please reference Tech Data.

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 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] (895)[6,7]	950[7] (1288)[7]	19,500 (8845)	26,000 (11,800)
– Shuttle Bus		Close Ratio	Yes	300[4] (224)[4]	550 (746)	565[6,7] (766)[6,7]	950[7] (1288)[7]	19,500 (8845)	26,000 (11,800)
– xFE		Close Ratio	Yes	300[4] (224)[4]	550 (746)	565[6,7] (766)[6,7]	950[7] (1288)[7]	19,500 (8845)	26,000 (11,800)
1350 PTS	**6310**								
– School Bus		Close Ratio	Yes	300[4] (224)[4]	550 (746)	660[6,7] (895)[6,7]	950[7] (1288)[7]	19,500 (8845)	30,000 (13,600)
– Shuttle Bus		Close Ratio	Yes	300[4] (224)[4]	550 (746)	660[6,7] (895)[6,7]	950[7] (1288)[7]	19,500 (8845)	30,000 (13,600)
– xFE		Close Ratio	Yes	300[4] (224)[4]	550 (746)	660[6,7] (895)[6,7]	950[7] (1288)[7]	19,500 (8845)	30,000 (13,600)
2100 PTS	**6310**								
– School Bus		Close Ratio	No	300[4] (224)[4]	550 (746)	660[6,7] (895)[6,7]	950[7] (1288)[7]	26,000 (11,800)	26,000 (11,800)
– Shuttle Bus		Close Ratio	No	300[4] (224)[4]	550 (746)	565[6,7] (766)[6,7]	950[7] (1288)[7]	26,000 (11,800)	26,000 (11,800)
– xFE		Close Ratio	No	300[4] (224)[4]	550 (746)	660[6,7] (895)[6,7]	950[7] (1288)[7]	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] (895)[6,7]	950[7] (1288)[7]	26,000 (11,800)	26,000 (11,800)
– Shuttle Bus		Close Ratio	Yes	300[4] (224)[4]	550 (746)	565[6,7] (766)[6,7]	950[7] (1288)[7]	26,000 (11,800)	26,000 (11,800)
– xFE		Close Ratio	Yes	300[4] (224)[4]	550 (746)	660[6,7] (895)[6,7]	950[7] (1288)[7]	26,000 (11,800)	26,000 (11,800)
2300 PTS[5,8]	**6310**								
– School Bus		Close Ratio	No	365 (272)	N/A	510 (691)	950[7] (1288)[7]	33,000 (15,000)	33,000 (15,000)
2350 PTS[5]	**6310**								
– School Bus		Close Ratio	Yes	300[4] (224)[4]	550 (746)	660[7] (895)[7]	950[7] (1288)[7]	30,000 (13,600)	30,000 (13,600)
– xFE		Close Ratio	Yes	300[4] (224)[4]	550 (746)	660[7] (895)[7]	950[7] (1288)[7]	30,000 (13,600)	30,000 (13,600)
2500 PTS[5]	**6310**								
– School Bus		Wide Ratio	No	300 (224)	550 (746)	660[6,7] (895)[6,7]	950[7] (1288)[7]	33,000 (15,000)	33,000 (15,000)
– xFE		Wide Ratio	No	300 (224)	550 (746)	660[6,7] (895)[6,7]	950[7] (1288)[7]	33,000 (15,000)	33,000 (15,000)
2550 PTS[5]	**6310**								
– School Bus		Wide Ratio	Yes	300 (224)	550 (746)	660[7] (895)[7]	950[7] (1288)[7]	30,000 (13,600)	30,000 (13,600)
– xFE		Wide Ratio	Yes	300 (224)	550 (746)	660[7] (895)[7]	950[7] (1288)[7]	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 (15,500)	33,000 (15,500)

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 Available for School Bus applications only. 6 Check with your OEM to ensure offerings. 7 SEM and torque limiting are required to obtain this rating. 8 Only available with VORTEC 8.1L gasoline powered engine applications.

PUPIL TRANSPORT/SHUTTLE SERIES™ FEATURES AND ADVANTAGES

Shift Energy Management (SEM) with torque limiting
Ratings up to 300 hp/660 lb-ft on 1000, 1350, 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.

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

Neutral at Stop
Automatically eliminates the load on the engine when the vehicle is at a full stop to save fuel and reduce overall vehicle emissions.

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

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

Acceleration Rate Management
Mitigates aggressive driving by controlling engine torque based on the vehicle's grade and load.

DynActive™ Shifting
New innovative shift scheduling uses an algorithm to choose the most efficient shift point, based on specs, vehicle and environmental parameters.

1000 PTS, 1350 PTS, 2100 PTS, 2200 PTS, 2300 PTS, 2350 PTS, 2500 PTS, 2550 PTS

3000 PTS

MARKETING PUBLICATIONS AND VIDEOS

SERIES BROCHURE
- Ford® Pupil Transport Series Brochure
- Pupil Transport/Shuttle Series™ Individual Brochure

GENERAL BROCHURES
- Prognostics Brochure
- Shift Selector Operation and Code Manual
- Fluid and Filter Change Recommendations
- Retarder Brochure
- Filter and TranSynd® Flyer
- TranSynd® Maximum Protection Flyer
- San Diego Unified School District Testimonial Flyer
- Optimum Choice for School Bus Flyer
- Torque Converter Brochure
- Allison vs. Dual Clutch Technology

VIDEOS
- Allison At Work
- How an Allison Automatic Performs
- San Diego Unified School District Testimonial

TYPICAL VEHICLE APPLICATIONS

CLASS 5-8 SCHOOL BUS	CLASS 5-7 SHUTTLE BUS (UP TO 33,000 LBS GVW)*
School Use	Airfield Bus
School Bus	Airport Shuttle
Non-School Use	Casino Bus
Church Bus	Dedicated Handicap Shuttle
Private Academy Bus	Hotel Shuttle
Prison Bus	Rental Car Shuttle
Work Bus	Retirement Community Shuttle
Poultry Bus	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.

PUPIL TRANSPORT/SHUTTLE SERIES™ I/O Packages*

			1000/2000 PRODUCT FAMILIES		3000/4000 PRODUCT FAMILIES
			PTS Models		School & Shuttle Bus
		VOCATION PACKAGE NUMBER	354	374	226
INPUT FUNCTIONS		Default Enabled?			
A	Secondary Mode Input	Yes	142	142	M
C1	**PTO Drive Interface Input 1	Yes	143	162	
C2	**PTO Drive Interface Input 2	No			
D	Shift Selector Transition Input	No			
E	Auxiliary Function Range Inhibit – Single Input	No	101	101	101
F	Auxiliary Function Range Inhibit – Dual Input	Yes			
G	Auxiliary Hold Input	Yes			142
H	Engine Brake Interface Input (Standard)	No	102	102	102/157
I	Engine Brake Interface Input (Special)	No			
J	Pump Mode Input (Fire Truck Pump Mode 4th Lockup)	No			
K	Quick-to-Neutral Input	No			
L	Automatic Neutral – Single Input	No	123	123	117
Q	Two Speed Axle Interface Input	Yes			
R	Manual Lockup Control Input	No			
V	Reverse Enable Input	No			
W	Direction Change Enable Input	No			122
Y	Anti-Lock Brake System (ABS) Input	Yes	121	121	121
Z	Retarder Interface Input	Yes			161
AA	Service Brake Status Input	Yes	162		162
AF	Differential Clutch Interface Input (3700 Only)	Yes			
AG	Automatic Neutral – Dual Input	Yes			
AH	Accelerator Pedal Kickdown Input	Yes			
AI	Auxiliary Function Range Inhibit – Single Input (Specialty Vehicle)	No			
AJ	Pump Mode Input (4th Lockup)	No			
AK	Automatic Neutral – Dual Input with Service Brake Status	Yes			
AL	Shift Selector Transition & Secondary Shift Schedule Input	Yes			
AM	Reverse Inhibit with Preselect Request Interface Input	No			
AQ	Shift Selector Display Blanking Input	Yes			
AR	Overdrive Disable Interface Input	Yes	161	161	
AS	Neutral at Stop Input	No		143	123
AW	2nd Reverse Input	No			
BD	Automatic 2-1 Preselect Input (4000 7-Speed Only)	Yes			
BS	Grade Braking/Regenerative Input	No			
BY	Aux. Box Transition Input	Yes			
BZ	Shift Selector Transition & Oil Field Pumping Input	Yes			
CA	Automatic Neutral – Brake-Based (BBAN) Input for PTO	No			
CB1	Preselect Request 1 Input	Yes	122	122	
CB2	Preselect Request 2 Input	Yes			
CC	High N/V Ratio Input	No			
CD	Automatic Neutral – Single Input with Selector Override	Yes			
CE	Direct Hold Input	No			
CF	Automatic Neutral – Idle Start/Stop Input	Yes			
CH	Automatic Neutral – Single Input, Inverted	No			
CN	Automatic Neutral – Dual Input with Automatic Return-to-Range	No			
OUTPUT FUNCTIONS					
A	Engine Brake Interface Output	No	104	104	104
B	Sump/Retarder Temperature Indicator	Yes	164	164	164
C	Range Indicator (5th Gen default is always Neutral)	Yes	145	145	145
D	Output Speed Indicator A	Yes	105	105	105
G1	**PTO Drive Interface 1 Indicator	Yes	150	150	
G2	**PTO Drive Interface 2 Indicator	No			
I	Engine Overspeed Indicator	Yes			130
J	Two Speed Axle Interface Indicator	Yes			
K	Lockup Indicator	Yes			
N	Secondary Mode Indicator	Yes			113
O	Transmission Service Indicator	Yes	113	113	
Q	Retarder Interface Indicator	Yes			124
R	Differential Clutch Interface Indicator (3700 Only)	Yes			
S	Neutral Indicator for PTO and PTO Request (NIPTO)	Yes			
AD	Range Inhibited Indicator	Yes	124	124	
AJ	Output Speed Indicator A, Inverted	Yes			

* Additional packages available. Please reference Tech Data. ** PTOs are not available with PTS Series hardware even though the wire option is shown in the package.

			3000/4000 PRODUCT FAMILIES		
			School & Shuttle Bus (Maximum Economy Calibration)		
		VOCATION PACKAGE NUMBER	148	159	235
INPUT FUNCTIONS		Default Enabled?			
A	Secondary Mode Input	Yes	M	M	142
C1	**PTO Drive Interface Input 1	Yes	143		M
C2	**PTO Drive Interface Input 2	No			
D	Shift Selector Transition Input	No			
E	Auxiliary Function Range Inhibit – Single Input	No	101	101	101
F	Auxiliary Function Range Inhibit – Dual Input	Yes			
G	Auxiliary Hold Input	Yes	142	142	
H	Engine Brake Interface Input (Standard)	No	102/157	102/157	102/157
I	Engine Brake Interface Input (Special)	No			
J	Pump Mode Input (Fire Truck Pump Mode 4th Lockup)	No			
K	Quick-to-Neutral Input	No			
L	Automatic Neutral – Single Input	No	117	117	117
Q	Two Speed Axle Interface Input	Yes			
R	Manual Lockup Control Input	No			
V	Reverse Enable Input	No			
W	Direction Change Enable Input	No		143	143
Y	Anti-Lock Brake System (ABS) Input	Yes	121	121	121
Z	Retarder Interface Input	Yes	161	161	161
AA	Service Brake Status Input	Yes	162	162	162
AF	Differential Clutch Interface Input (3700 Only)	Yes			
AG	Automatic Neutral – Dual Input	Yes			
AH	Accelerator Pedal Kickdown Input	Yes	122	122	122
AI	Auxiliary Function Range Inhibit – Single Input (Specialty Vehicle)	No			
AJ	Pump Mode Input (4th Lockup)	No			
AK	Automatic Neutral – Dual Input with Service Brake Status	Yes			
AL	Shift Selector Transition & Secondary Shift Schedule Input	Yes			
AM	Reverse Inhibit with Preselect Request Interface Input	No			
AQ	Shift Selector Display Blanking Input	Yes			
AR	Overdrive Disable Interface Input	Yes			
AS	Neutral at Stop Input	No	123	123	123
AW	2nd Reverse Input	No			
BD	Automatic 2-1 Preselect Input (4000 7-Speed Only)	Yes			
BS	Grade Braking/Regenerative Input	No			
BY	Aux. Box Transition Input	Yes			
BZ	Shift Selector Transition & Oil Field Pumping Input	Yes			
CA	Automatic Neutral – Brake-Based (BBAN) Input for PTO	No			
CB1	Preselect Request 1 Input	Yes			
CB2	Preselect Request 2 Input	Yes			
CC	High N/V Ratio Input	No			
CD	Automatic Neutral – Single Input with Selector Override	Yes			
CE	Direct Hold Input	No			
CF	Automatic Neutral – Idle Start/Stop Input	Yes			
CH	Automatic Neutral – Single Input, Inverted	No			
CN	Automatic Neutral – Dual Input with Automatic Return-to-Range	No			
OUTPUT FUNCTIONS					
A	Engine Brake Interface Output	No	104	104	104
B	Sump/Retarder Temperature Indicator	Yes	164	164	164
C	Range Indicator (5th Gen default is always Neutral)	Yes	145	145	145
D	Output Speed Indicator A	Yes	105	105	105
G1	**PTO Drive Interface 1 Indicator	Yes	130		130
G2	**PTO Drive Interface 2 Indicator	No			
I	Engine Overspeed Indicator	Yes		113	
J	Two Speed Axle Interface Indicator	Yes			
K	Lockup Indicator	Yes			
N	Secondary Mode Indicator	Yes		130	113
O	Transmission Service Indicator	Yes			
Q	Retarder Interface Indicator	Yes	124	124	124
R	Differential Clutch Interface Indicator (3700 Only)	Yes			
S	Neutral Indicator for PTO and PTO Request (NIPTO)	Yes			
AD	Range Inhibited Indicator	Yes			
AJ	Output Speed Indicator A, Inverted	Yes			

** PTOs are not available with PTS Series hardware even though the wire option is shown in the package.

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 W/ SEM 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	6510	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.

TYPICAL VEHICLE APPLICATIONS

Truck-Based Recreational Vehicles

Class 6–8 Type C Motorhomes

TRUCK RV SERIES™ FEATURES AND ADVANTAGES

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

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

Neutral at Stop
Automatically eliminates the load on the engine when the vehicle is at a full stop to save fuel and reduce overall vehicle emissions.

Acceleration Rate Management
Mitigates aggressive driving by controlling engine torque based on the vehicle's grade and load.

DynActive™ Shifting
New innovative shift scheduling uses an algorithm to choose the most efficient shift point, based on specs, vehicle and environmental parameters.

3000 TRV, 3200 TRV

4000 TRV

MARKETING PUBLICATIONS AND VIDEOS

SERIES BROCHURE

- Truck RV Series Individual Brochure

GENERAL BROCHURES

- Superior Fuel Efficiency. Optimum Fuel Economy.
- Prognostics Brochure
- Residual Value Brochure
- Startability Flyer
- Shift Selector Operation and Code Manual
- Fluid and Filter Change Recommendations
- Retarder Brochure
- Torque Converter Brochure

VIDEOS

- Allison At Work
- How an Allison Automatic Performs
- Shift Selector Interactive

TRUCK RV SERIES™ I/O Packages

			3000/4000 PRODUCT FAMILIES		
			Truck-Based Recreational Vehicle		
	VOCATION PACKAGE NUMBER		223	226	263
INPUT FUNCTIONS		Default Enabled?			
A	Secondary Mode Input	Yes	M	M	M
C1	PTO Drive Interface Input 1	Yes	143		143
C2	PTO Drive Interface Input 2	No			102
D	Shift Selector Transition Input	No			
E	Auxiliary Function Range Inhibit – Single Input	No	101	101	101
F	Auxiliary Function Range Inhibit – Dual Input	Yes			
G	Auxiliary Hold Input	Yes	142	142	142
H	Engine Brake Interface Input (Standard)	No	102/157	102/157	
I	Engine Brake Interface Input (Special)	No			
J	Pump Mode Input (Fire Truck Pump Mode 4th Lockup)	No			
K	Quick-to-Neutral Input	No			
L	Automatic Neutral – Single Input	No	117	117	117
Q	Two Speed Axle Interface Input	Yes			
R	Manual Lockup Control Input	No			
V	Reverse Enable Input	No			
W	Direction Change Enable Input	No	122	122	122
Y	Anti-Lock Brake System (ABS) Input	Yes	121	121	121
Z	Retarder Interface Input	Yes	161	161	161
AA	Service Brake Status Input	Yes	162	162	162
AF	Differential Clutch Interface Input (3700 Only)	Yes			
AG	Automatic Neutral – Dual Input	Yes			
AH	Accelerator Pedal Kickdown Input	Yes			
AI	Auxiliary Function Range Inhibit -– Single Input (Specialty Vehicle)	No			
AJ	Pump Mode Input (4th Lockup)	No			
AK	Automatic Neutral – Dual Input with Service Brake Status	Yes			
AL	Shift Selector Transition & Secondary Shift Schedule Input	Yes			
AM	Reverse Inhibit with Preselect Request Interface Input	No			
AQ	Shift Selector Display Blanking Input	Yes			
AR	Overdrive Disable Interface Input	Yes			
AS	Neutral at Stop Input	No	123	123	123
AW	2nd Reverse Input	No	179		179
BD	Auto 2-1 Preselect Input (4000 7-Speed Only)	Yes			
BS	Grade Braking/Regenerative Input	No			
BY	Aux. Box Transition Input	Yes			
BZ	Shift Selector Transition & Oil Field Pumping Input	Yes			
CA	Automatic Neutral – Brake-Based (BBAN) Input for PTO	No			
CB1	Preselect Request 1 Input	Yes			
CB2	Preselect Request 2 Input	Yes			
CC	High N/V Ratio Input	No			
CD	Automatic Neutral – Single Input with Selector Override	Yes			
CE	Direct Hold Input	No			
CF	Automatic Neutral – Idle Start/Stop Input	Yes			
CH	Automatic Neutral – Single Input, Inverted	No			
CN	Automatic Neutral – Dual Input with Automatic Return-to-Range	No			
OUTPUT FUNCTIONS					
A	Engine Brake Interface Output	No	104	104	
B	Sump/Retarder Temperature Indicator	Yes	164	164	164
C	Range Indicator (5th Gen default is always Neutral)	Yes	145	145	145
D	Output Speed Indicator A	Yes	105	105	105
G1	PTO Drive Interface 1 Indicator	Yes	130		130
G2	PTO Drive Interface 2 Indicator	No			104
I	Engine Overspeed Indicator	Yes		130	
J	Two Speed Axle Interface Indicator	Yes			
K	Lockup Indicator	Yes			
N	Secondary Mode Indicator	Yes	113	113	113
O	Transmission Service Indicator	Yes			
Q	Retarder Interface Indicator	Yes	124	124	124
R	Differential Clutch Interface Indicator (3700 Only)	Yes			
S	Neutral Indicator for PTO and PTO Request (NIPTO)	Yes			
AD	Range Inhibited Indicator	Yes			
AJ	Output Speed Indicator A, Inverted	Yes			

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] hp (kW)	Max Input Torque[1] lb-ft (N•m)	Max Input Torque w/ SEM Torque Limiting lb-ft (N•m)	Max Turbine Torque[2] lb-ft (N•m)	MAX GVW lbs (kg)	MAX GCW lbs (kg)
1000 SP	Close Ratio	Yes	340[3,5] (254)[3,5]	575 (780)	660[3] (895)[3]	950[5] (1288)[5]	22,000 (10,000)	26,000 (11,800)
1350 SP	Close Ratio	Yes	340[3,5] (254)[3,5]	575 (780)	660[3] (895)[3]	950[5] (1288)[5]	22,000 (10,000)	30,000 (13,600)
2100 SP	Close Ratio	—	340[3,5] (254)[3,5]	575 (780)	700[3,4] (950)[3,4]	950[5] (1288)[5]	26,500 (12,000)	26,500 (12,000)
2200 SP	Close Ratio	Yes	340[3,5] (254)[3,5]	575 (780)	700[3,4] (950)[3,4]	950[5] (1288)[5]	26,000 (11,800)	26,000 (11,800)
2350 SP	Close Ratio	Yes	340[3,5] (254)[3,5]	575 (780)	700[3,4] (950)[3,4]	950[5] (1288)[5]	30,000 (13,600)	30,000 (13,600)
2500 SP	Wide Ratio	—	340[3,5] (254)[3,5]	575 (780)	700[3,4] (950)[3,4]	950[5] (1288)[5]	33,000 (15,000)	33,000 (15,000)
2550 SP	Wide Ratio	Yes	340[3,5] (254)[3,5]	575 (780)	700[3,4] (950)[3,4]	950[5] (1288)[5]	30,000 (13,600)	30,000 (13,600)
3000 SP								
– Specialty/Military	Close Ratio	—	350 (261)	1050 (1424)	N/A	1700 (2305)	—	—
3200 SP								
– Specialty/Military	Close Ratio	—	450 (336)	1250 (1695)	N/A	1700 (2305)	—	—
3500 SP								
– Specialty/Military	Wide Ratio	—	330 (246)	985 (1335)	N/A	1500 (2034)	—	—
3700 SP								
– Specialty/Military	Widest Ratio	—	330 (246)	875 (1186)	N/A	1450 (1966)	—	—
4000 SP								
– Specialty/Military	Close Ratio	—	650 (485)	1950 (2644)	N/A	2800 (3795)	—	—
4430 SP								
– Specialty/Military	Wide Ratio	—	380 (283)	1180 (1600)	N/A	2600 (3525)	—	—
4500 SP								
– Specialty/Military	Wide Ratio	—	605 (451)	1770 (2400)	1850[2] (2508)[2]	2600 (3525)	—	—
4700 SP								
– Specialty/Military	Widest Ratio	—	605 (451)	1850 (2508)	N/A	3000 (4067)	—	—
4800 SP								
– Specialty/Military	Widest Ratio	—	800 (597)	1950 (2644)	N/A	3000 (4067)	—	—
5620 SP								
– General		—	600 (447)	1875 (2542)	N/A	3475 (4711)	—	—
– Agricultural Tractor		—	500 (373)	1650 (2237)	N/A	3120 (4230)	—	—
– ARFF		—	750 (559)	2500 (3390)	N/A	3790 (5139)	—	—
6620 SP								
– General		—	760 (567)	2500 (3390)	N/A	3790 (5139)	—	—
– Agricultural Tractor		—	700 (522)	2000 (2712)	N/A	3340 (4528)	—	—
– ARFF		—	1025 (764)	3300 (4474)	N/A	5200 (7050)	—	—
6625 SP								
– General		—	760 (567)	2500 (3390)	N/A	3790 (5139)	—	—
– Agricultural Tractor		—	700 (522)	2000 (2712)	N/A	3340 (4528)	—	—
– ARFF		—	1025 (764)	3300 (4474)	N/A	5200 (7050)	—	—
8610 SP								
– General		—	1050 (783)	3600 (4881)	N/A	5650 (7660)	—	—
– Agricultural Tractor		—	850 (634)	3200 (4339)	N/A	5300 (7186)	—	—

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

MARKETING PUBLICATIONS AND VIDEOS

SERIES BROCHURE
- Specialty Series™ Individual Brochure

GENERAL BROCHURES
- Prognostics Brochure
- Shift Selector Operation and Code Manual
- Fluid and Filter Change Recommendations
- Retarder Brochure
- Torque Converter Brochure

VIDEOS
- Allison At Work
- How An Allison Automatic Performs

TYPICAL VEHICLE APPLICATIONS

Military

Crane Carrier

Equipment Hauler with Escort or Permit

Molten Metal/Slag Hauler

Power Plant Generator Hauler

Heavy Equipment Hauler

SPECIALTY SERIES™ FEATURES AND ADVANTAGES

Shift Energy Management (SEM) torque limiting
Ratings up to 340 hp/700 lb-ft on 2100, 2200, 2350, 2500 and 2550 SP.
Ratings up to 605 hp/1850 lb-ft on 4500 SP.

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

Neutral at Stop
Automatically eliminates the load on the engine when the vehicle is at a full stop to save fuel and reduce overall vehicle emissions.

Acceleration Rate Management
Mitigates aggressive driving by controlling engine torque based on the vehicle's grade and load.

DynActive™ Shifting
New innovative shift scheduling uses an algorithm to choose the most efficient shift point, based on specs, vehicle and environmental parameters.

5620 SP

6620 SP, 6625 SP

8610 SP

9610 SP

SPECIALTY SERIES™ I/O Packages

			1000/2000 PRODUCT FAMILIES*						
			SPS Models						
	VOCATION PACKAGE NUMBER		352	354	360	362	365	372	377
	INPUT FUNCTIONS	Default Enabled?							
A	Secondary Mode Input	Yes	142	142	142	142	142	142	142
C1	PTO Drive Interface Input 1	Yes	143	143	143	143	143	162	162
C2	PTO Drive Interface Input 2	No							
D	Shift Selector Transition Input	No							
E	Auxiliary Function Range Inhibit – Single Input	No	101	101			101	101	
F	Auxiliary Function Range Inhibit – Dual Input	Yes							
G	Auxiliary Hold Input	Yes							
H	Engine Brake Interface Input (Standard)	No		102	102				
I	Engine Brake Interface Input (Special)	No	102			102		102	102
J	Pump Mode Input (Fire Truck Pump Mode 4th Lockup)	No							
K	Quick-to-Neutral Input	No							
L	Automatic Neutral – Single Input	No	123	123			123	123	
Q	Two Speed Axle Interface Input	Yes							
R	Manual Lockup Control Input	No							
V	Reverse Enable Input	No							
W	Direction Change Enable Input	No							
Y	Anti-Lock Brake System (ABS) Input	Yes	121	121	121	121	121	121	121
Z	Retarder Interface Input	Yes							
AA	Service Brake Status Input	Yes	162	162	162	162	162		
AF	Differential Clutch Interface Input (3700 Only)	Yes							
AG	Automatic Neutral – Dual Input	Yes							
AH	Accelerator Pedal Kickdown Input	Yes	122			122		122	122
AI	Auxiliary Function Range Inhibit – Single Input (Specialty Vehicle)	No							
AJ	Pump Mode Input (4th Lockup)	No							
AK	Automatic Neutral – Dual Input with Service Brake Status	Yes							
AL	Shift Selector Transition & Secondary Shift Schedule Input	Yes							
AM	Reverse Inhibit with Preselect Request Interface Input	No				123			123
AQ	Shift Selector Display Blanking Input	Yes							
AR	Overdrive Disable Interface Input	Yes	161	161	161	161	161	161	161
AS	Neutral at Stop Input	No						143	143
AW	2nd Reverse Input	No							
BD	Automatic 2-1 Preselect Input (4000 7-Speed Only)	Yes							
BQ	Pump Mode Input (3rd Lockup)	No			122/123				
BS	Grade Braking/Regenerative Input	No							
BY	Aux. Box Transition Input	Yes							
BZ	Shift Selector Transition & Oil Field Pumping Input	Yes							
CA	Automatic Neutral – Brake-Based (BBAN) Input for PTO	No				101			101
CB1	Preselect Request 1 Input	Yes		122					
CB2	Preselect Request 2 Input	Yes							
CC	High N/V Ratio Input	No					102/122		
CD	Automatic Neutral – Single Input with Selector Override	Yes							
CE	Direct Hold Input	No							
CF	Automatic Neutral – Idle Start/Stop Input	Yes							
CH	Automatic Neutral – Single Input, Inverted	No							
CN	Automatic Neutral – Dual Input with Automatic Return-to-Range	No							
	OUTPUT FUNCTIONS								
A	Engine Brake Interface Output	No	104	104	104	104		104	104
B	Sump/Retarder Temperature Indicator	Yes	164	164	164	164	164	164	164
C	Range Indicator (5th Gen default is always Neutral)	Yes	145	145	145		145	145	
D	Output Speed Indicator A	Yes	105	105	105	105	105	105	105
G1	PTO Drive Interface 1 Indicator	Yes	150	150	150	150	150	150	150
G2	PTO Drive Interface 2 Indicator	No							
I	Engine Overspeed Indicator	Yes							
J	Two Speed Axle Interface Indicator	Yes							
K	Lockup Indicator	Yes							
N	Secondary Mode Indicator	Yes							
O	Transmission Service Indicator	Yes	113	113	113	113	113	113	113
Q	Retarder Interface Indicator	Yes							
R	Differential Clutch Interface Indicator (3700 Only)	Yes							
S	Neutral Indicator for PTO and PTO Request (NIPTO)	Yes				145			145
AD	Range Inhibited Indicator	Yes	124	124	124	124	124	124	124
AJ	Output Speed Indicator A, Inverted	Yes							

*Additional packages available. See Tech Data I/O Package Guides – 5th Gen Controls. Reference packages 369, 374, 376, 379 and 380 in Rugged Duty Series section.

SPECIALTY SERIES™ I/O Packages

			3000/4000 PRODUCT FAMILIES*									
			Specialty Vehicles				Specialty Vehicles & Dock Spotter	Specialty Vehicles (2nd Reverse Capable)				
	VOCATION PACKAGE NUMBER		153	166	182	213	237	238	239	240	241	249	250
	INPUT FUNCTIONS	Default Enabled?											
A	Secondary Mode Input	Yes	M	M	142	142	M	142	142	142	142	142	142
C1	PTO Drive Interface Input 1	Yes	143	143	M	117	143			143	143	117	117
C2	PTO Drive Interface Input 2	No											
D	Shift Selector Transition Input	No											
E	Auxiliary Function Range Inhibit – Single Input	No											
F	Auxiliary Function Range Inhibit – Dual Input	Yes											
G	Auxiliary Hold Input	Yes					142						
H	Engine Brake Interface Input (Standard)	No	102/157	102/157	102/157	102/157	102/157	102/157	102/157	102/157	102/157	102/157	102/157
I	Engine Brake Interface Input (Special)	No											
J	Pump Mode Input (Fire Truck Pump Mode 4th Lockup)	No											
K	Quick-to-Neutral Input	No											
L	Automatic Neutral – Single Input	No						117		117		161	
Q	Two Speed Axle Interface Input	Yes		142									
R	Manual Lockup Control Input	No											
V	Reverse Enable Input	No											
W	Direction Change Enable Input	No					122						
Y	Anti-Lock Brake System (ABS) Input	Yes	121	121	121	121	121	121	121	121	121	121	121
Z	Retarder Interface Input	Yes		161	161	161	161	161	161	161	161		
AA	Service Brake Status Input	Yes		162	162	162	162	162	162	162	162	162	162
AF	Differential Clutch Interface Input (3700 Only)	Yes	161				117						
AG	Automatic Neutral – Dual Input	Yes											
AH	Accelerator Pedal Kickdown Input	Yes											
AI	Aux. Function Range Inhibit – Single Input (Specialty Vehicle)	No	142	101	101	101	101	101	101	101	101	101	101
AJ	Pump Mode Input (4th Lockup)	No			122/143	122/143						122/143	122/143
AK	Automatic Neutral – Dual Input with Service Brake Status	Yes											
AL	Shift Selector Transition & Secondary Shift Schedule Input	Yes											
AM	Reverse Inhibit with Preselect Request Interface Input	No											
AQ	Shift Selector Display Blanking Input	Yes	123	123	123	123	123	123	123	123	123	123	123
AR	Overdrive Disable Interface Input	Yes											
AS	Neutral at Stop Input	No											
AW	2nd Reverse Input	No						179	179	179	179	179	179
BD	Automatic 2-1 Preselect Input (4000 7-Speed Only)	Yes				M		M	M	M	M	M	M
BQ	Pump Mode Input (3rd Lockup)	No											
BS	Grade Braking/Regenerative Input	No											
BY	Aux. Box Transition Input	Yes											
BZ	Shift Selector Transition & Oil Field Pumping Input	Yes											
CA	Automatic Neutral – Brake-Based (BBAN) Input for PTO	No											
CB1	Preselect Request 1 Input	Yes											
CB2	Preselect Request 2 Input	Yes											
CC	High N/V Ratio Input	No											
CD	Automatic Neutral – Single Input with Selector Override	Yes							117		117		161
CE	Direct Hold Input	No											
CF	Automatic Neutral – Idle Start/Stop Input	Yes											
CH	Automatic Neutral – Single Input, Inverted	No											
CN	Automatic Neutral – Dual Input with Automatic Return-to-Range	No											
	OUTPUT FUNCTIONS												
A	Engine Brake Interface Output	No	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 (5th Gen default is always Neutral)	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
G1	PTO Drive Interface 1 Indicator	Yes	130	130	130	130	130			130	130	130	130
G2	PTO Drive Interface 2 Indicator	No											
I	Engine Overspeed Indicator	Yes						130	130				
J	Two Speed Axle Interface Indicator	Yes		145									
K	Lockup Indicator	Yes											
N	Secondary Mode Indicator	Yes	113	113				113	113	113	113	113	113
O	Transmission Service Indicator	Yes											
Q	Retarder Interface Indicator	Yes		124	124	124	124	124	124	124	124		
R	Differential Clutch Interface Indicator (3700 Only)	Yes	124				113						
S	Neutral Indicator for PTO and PTO Request (NIPTO)	Yes											
AD	Range Inhibited Indicator	Yes											
AJ	Output Speed Indicator A, Inverted	Yes											

*Additional packages available. See Tech Data I/O Package Guides – 5th Gen Controls.

SPECIALTY SERIES™ I/O Packages

		5000/6000/8000/9000 PRODUCT FAMILIES*						
		On/Off Highway		Coal Auger/ Trencher	Crash Truck			Crane
	VOCATION PACKAGE NUMBER	914	915	924	926	927	928	929
INPUT FUNCTIONS								
A	Secondary Mode Input	M	162	M	M	162	162	M
B	D-1 Selection	162	M	162	162	M	M	162
D	Shift Selector Transition Input							102
E	Auxiliary Function Range Inhibit – Single Input (Inverted)	161	161	161	161	161	161	161
G	Auxiliary Hold Input	101	101		101	101	101	101
K	Quick-to-Neutral Input (Normally Closed)			123				
Q	Two Speed Axle Interface Input	142	142					142
R	Manual Lockup Control Input							
Y	Anti-Lock Brake System (ABS) Input				121	121	121	121
Z	Retarder Interface Input	123	123		123	123	123	123
AM	Reverse Inhibit with Preselect Request Interface Input (Inverted)	121	121					
AW	2nd Reverse Input	157	157	157				157
AX	Manual Mode	143	143	143	143	143	143	143
AZ	Lockup Disable Request	122	122	122	122	122	122	122
BC	Shift Selector Transistion and Manual Mode							
BE	Engine Speed/Torque Control Input 1			142	142	142	142	
CE	Direct Hold	102	102	102				
CG	Engine Speed/Torque Control Input 2	117	117	117	117	117	117	117
CI	Quick-to-Neutral Input (Normally Open)							
CK	Pressure Test Mode							
CO	Shift Schedule 2	179	179	179	179	179	179	179
CQ	Mauanl Mode (Inverted)							
OUTPUT FUNCTIONS								
B	Sump/Retarder Temperature Indicator							
C	Range Indicator	145	145	145	145	145	145	145
D	Output Speed Indicator A	113	113					113
E	Ouput Overspeed Indicator B							
I	Engine Overspeed Indicator	130	130				130	130
J	Two Speed Axle Interface Indicator	105	105					105
K	Lockup Indicator	104	104	104	104	104	104	104
N	Secondary Mode Indicator	150	150	150	150	150	150	150
Q	Retarder Interface Indicator	124	124		124	124	124	124
V	Manual Mode Indicator			130	130	130		
W	Neutral to Range Brake	164	164	164	164	164	164	164
Z	Engine Speed/Torque Control Indicator			113	113	113	113	
AD	Range Inhibit Indicator							
AL	Transmission Filter Restriction Indicator			105	105	105	105	
AO	Shift Schedule 2 Indicator							

*Additional packages available. See Tech Data I/O Package Guides – 5th Gen Controls.

Oil Field Series™

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

ALLISON TRANSMISSION OIL FIELD SERIES™

RATINGS

MODEL	RATIO	MAX INPUT POWER hp (kW)	MAX INPUT TORQUE lb-ft (N•m)	MAX INPUT TORQUE w/SEM TORQUE LIMITING lb-ft (N•m)	MAX TURBINE TORQUE lb-ft (N•m)	MAX GVW lbs (kg)	MAX GCW lbs (kg)
3500 OFS	Wide Ratio	330 (246)	860 (1166)	985 (1335)[1]	1450 (1966)	–	–
4430 OFS	Wide Ratio	425 (317)	1217 (1650)	N/A	2600 (3525)	–	–
4500 OFS	Wide Ratio	565 (421)	1650 (2237)	N/A	2600 (3525)	–	–
4700 OFS	Widest Ratio	600 (447)	1850 (2508)	N/A	2600 (3525)	–	–
4750 OFS	Widest Ratio	665 (496)	1950 (2644)	N/A	3000 (4067)	–	–
5620 OFS - Mobile	–	600 (447)	1875 (2542)	N/A	3475 (4711)	–	–
5620 OFS [DB]	–	600 (447)	1875 (2542)	N/A	3475 (4711)	–	–
5620 OFS - Stationary	–	675 (503)	2150 (2915)	N/A	3475 (4711)	–	–
6620 OFS - Mobile	–	760 (567)	2500 (3390)	N/A	3790 (5139)	–	–
6620 OFS - Stationary	–	900 (671)	2750 (3729)	N/A	4000 (5423)	–	–
8610 OFS	–	1200 (895)	3600 (4881)	N/A	5966 (8089)	–	–
9817 OFS	–	1750 (1305)	5250 (7118)	N/A	7000 (9491)	–	–
9823 OFS	–	2350 (1752)	6300 (8542)	N/A	7550 (10,235)	–	–
9826 OFS	–	2600 (1939)	7750 (10,507)	N/A	8000 (10,847)	–	–
9832 OFS	–	3200 (2386)	9000 (12,200)	N/A	9400 (12, 745)	–	–

[1] Shift Energy Management (SEM) engine controls and torque limiting are required to obtain this rating.

TYPICAL VEHICLE APPLICATIONS

Drilling
Cementing
Fracturing

Hoisting
Pumping

4500 OFS w/o PTO

4700 OFS w/PTO

MARKETING PUBLICATIONS AND VIDEOS

SERIES BROCHURE

- Oil Field Series™ Individual Brochure
- Energy Brochure

GENERAL BROCHURES

- Prognostics Brochure
- Shift Selector Operation and Code Manual

OIL FIELD SERIES™ I/O Packages

			Skid-Mounted Pump		Dual Mode	
		VOCATION PACKAGE NUMBER	192	209	193	258
INPUT FUNCTIONS		Default Enabled?				
A	Secondary Mode Input	Yes	**	**		
C1	PTO Drive Interface Input 1	Yes				
C2	PTO Drive Interface Input 2	No				
D	Shift Selector Transition Input	No	142	142		
E	Auxiliary Function Range Inhibit – Single Input	No	101	101	101	101
F	Auxiliary Function Range Inhibit – Dual Input	Yes				
G	Auxiliary Hold Input	Yes				
H	Engine Brake Interface Input (Standard)	No			102/157	102/157
I	Engine Brake Interface Input (Special)	No				
J	Pump Mode Input (Fire Truck Pump Mode 4th Lockup)	No				
K	Quick-to-Neutral Input	No	143	143	143	143
L	Automatic Neutral – Single Input	No				
Q	Two Speed Axle Interface Input	Yes				
R	Manual Lockup Control Input	No	161/179	161/179	123/179	123/179
V	Reverse Enable Input	No	122	122	122	
W	Direction Change Enable Input	No				
Y	Anti-Lock Brake System (ABS) Input	Yes			121	121
Z	Retarder Interface Input	Yes			161	161
AA	Service Brake Status Input	Yes			162	162
AF	Differential Clutch Interface Input (3700 Only)	Yes				
AG	Automatic Neutral – Dual Input	Yes				
AH	Accelerator Pedal Kickdown Input	Yes				
AI	Auxiliary Function Range Inhibit – Single Input (Specialty Vehicle)	No				
AJ	Pump Mode Input (4th Lockup)	No				
AK	Automatic Neutral – Dual Input with Service Brake Status	Yes				
AL	Shift Selector Transition & Secondary Shift Schedule Input	Yes				
AM	Reverse Inhibit with Preselect Request Interface Input	No				
AQ	Shift Selector Display Blanking Input	Yes	102			
AR	Overdrive Disable Interface Input	Yes				
AS	Neutral at Stop Input	No				
AW	2nd Reverse Input	No				
BD	Automatic 2-1 Preselect Input (4000 7-Speed Only)	Yes	M		M	
BS	Grade Braking/Regenerative Input	No				
BY	Aux. Box Transition Input	Yes	117	117	117	117
BZ	Shift Selector Transition & Oil Field Pumping Input	Yes			142	142
CA	Automatic Neutral – Brake-Based (BBAN) Input for PTO	No				
CB1	Preselect Request 1 Input	Yes				M
CB2	Preselect Request 2 Input	Yes				122
CC	High N/V Ratio Input	No				
CD	Automatic Neutral – Single Input with Selector Override	Yes				
CE	Direct Hold Input	No		M		
CF	Automatic Neutral – Idle Start/Stop Input	Yes				
CH	Automatic Neutral – Single Input, Inverted	No				
CN	Automatic Neutral – Dual Input with Automatic Return-to-Range	No				
OUTPUT FUNCTIONS						
A	Engine Brake Interface Output	No			104	104
B	Sump/Retarder Temperature Indicator	Yes	164	164	164	164
C	Range Indicator (5th Gen default is always Neutral)	Yes	145	145	145	145
D	Output Speed Indicator A	Yes	124	124		
G1	PTO Drive Interface 1 Indicator	Yes				
G2	PTO Drive Interface 2 Indicator	No				
I	Engine Overspeed Indicator	Yes				
J	Two Speed Axle Interface Indicator	Yes				
K	Lockup Indicator	Yes	105	105	105	105
N	Secondary Mode Indicator	Yes	113	113	113	113
O	Transmission Service Indicator	Yes				
Q	Retarder Interface Indicator	Yes			124	124
R	Differential Clutch Interface Indicator (3700 Only)	Yes				
S	Neutral Indicator for PTO and PTO Request (NIPTO)	Yes				
AD	Range Inhibited Indicator	Yes				
AJ	Output Speed Indicator A, Inverted	Yes				

**No primary mode. Calibration forces skid-mounted pump to secondary mode.

OIL FIELD SERIES™ I/O Packages

			Dual Mode (2nd Reverse Capable)					
	VOCATION PACKAGE NUMBER		243	248	251	259	260	261
INPUT FUNCTIONS		Default Enabled?						
A	Secondary Mode Input	Yes						
C1	PTO Drive Interface Input 1	Yes	143	102		143	102	
C2	PTO Drive Interface Input 2	No						
D	Shift Selector Transition Input	No						
E	Auxiliary Function Range Inhibit – Single Input	No	101	101	101	101	101	101
F	Auxiliary Function Range Inhibit – Dual Input	Yes						
G	Auxiliary Hold Input	Yes						
H	Engine Brake Interface Input (Standard)	No						
I	Engine Brake Interface Input (Special)	No						
J	Pump Mode Input (Fire Truck Pump Mode 4th Lockup)	No						
K	Quick-to-Neutral Input	No	102	143	143	102	143	143
L	Automatic Neutral – Single Input	No						
Q	Two Speed Axle Interface Input	Yes						
R	Manual Lockup Control Input	No	123/179	123/179	123/179	123/179	123/179	123/179
V	Reverse Enable Input	No	122	122	122			
W	Direction Change Enable Input	No						
Y	Anti-Lock Brake System (ABS) Input	Yes	121	121	121	121	121	121
Z	Retarder Interface Input	Yes	161	161	161	161	161	161
AA	Service Brake Status Input	Yes	162	162	162	162	162	162
AF	Differential Clutch Interface Input (3700 Only)	Yes						
AG	Automatic Neutral – Dual Input	Yes						
AH	Accelerator Pedal Kickdown Input	Yes						
AI	Auxiliary Function Range Inhibit – Single Input (Specialty Vehicle)	No						
AJ	Pump Mode Input (4th Lockup)	No						
AK	Automatic Neutral – Dual Input with Service Brake Status	Yes						
AL	Shift Selector Transition & Secondary Shift Schedule Input	Yes						
AM	Reverse Inhibit with Preselect Request Interface Input	No						
AQ	Shift Selector Display Blanking Input	Yes			102			102
AR	Overdrive Disable Interface Input	Yes						
AS	Neutral at Stop Input	No						
AW	2nd Reverse Input	No						
BD	Automatic 2-1 Preselect Input (4000 7-Speed Only)	Yes	M	M	M			
BS	Grade Braking/Regenerative Input	No						
BY	Aux. Box Transition Input	Yes	117	117	117	117	117	117
BZ	Shift Selector Transition & Oil Field Pumping Input	Yes	142	142	142	142	142	142
CA	Automatic Neutral – Brake-Based (BBAN) Input for PTO	No						
CB1	Preselect Request 1 Input	Yes				M	M	M
CB2	Preselect Request 2 Input	Yes				122	122	122
CC	High N/V Ratio Input	No						
CD	Automatic Neutral – Single Input with Selector Override	Yes	157	157	157	157	157	157
CE	Direct Hold Input	No						
CF	Automatic Neutral – Idle Start/Stop Input	Yes						
CH	Automatic Neutral – Single Input, Inverted	No						
CN	Automatic Neutral – Dual Input with Automatic Return-to-Range	No						
OUTPUT FUNCTIONS								
A	Engine Brake Interface Output	No						
B	Sump/Retarder Temperature Indicator	Yes	164	164	164	164	164	164
C	Range Indicator (5th Gen default is always Neutral)	Yes	145	145	145	145	145	145
D	Output Speed Indicator A	Yes						
G1	PTO Drive Interface 1 Indicator	Yes	130	130		130	130	
G2	PTO Drive Interface 2 Indicator	No						
I	Engine Overspeed Indicator	Yes						
J	Two Speed Axle Interface Indicator	Yes						
K	Lockup Indicator	Yes	105	105	105	105	105	105
N	Secondary Mode Indicator	Yes	113	113	113	113	113	113
O	Transmission Service Indicator	Yes						
Q	Retarder Interface Indicator	Yes	124	124	124	124	124	124
R	Differential Clutch Interface Indicator (3700 Only)	Yes						
S	Neutral Indicator for PTO and PTO Request (NIPTO)	Yes						
AD	Range Inhibited Indicator	Yes						
AJ	Output Speed Indicator A, Inverted	Yes						

OIL FIELD SERIES™ I/O Packages

		Mobile/Dual Mode			Stationary		
VOCATION PACKAGE NUMBER		916	917	918	919	920	923
INPUT FUNCTIONS							
A	Secondary Mode Input	M	162	162	M	162	
B	D-1 Selection	162	M		162	M	M
D	Shift Selector Transition Input			102	102	102	142
E	Auxiliary Function Range Inhibit – Single Input (Inverted)	161	161	161	161	161	101
G	Auxiliary Hold Input	101	101	101			117
K	Quick-to-Neutral Input (Normally Closed)				123	123	143
Q	Two Speed Axle Interface Input						
R	Manual Lockup Control Input				117	117	179
Y	Anti-Lock Brake System (ABS) Input	121	121	121			
Z	Retarder Interface Input	123	123	123			
AM	Reverse Inhibit with Preselect Request Interface Input (Inverted)						
AW	2nd Reverse Input	157	157	157			
AX	Manual Mode			143	143	143	123
AZ	Lockup Disable Request	122	122	122	122	122	161
BC	Shift Selector Transistion and Manual Mode	143	143				
BE	Engine Speed/Torque Control Input 1	142	142	142	142	142	
CE	Direct Hold	102	102				
CG	Engine Speed/Torque Control Input 2	117	117	117			
CI	Quick-to-Neutral Input (Normally Open)						
CK	Pressure Test Mode				157	157	157
CO	Shift Schedule 2	179	179	179	179	179	
CQ	Mauanl Mode (Inverted)						
OUTPUT FUNCTIONS							
B	Sump/Retarder Temperature Indicator						
C	Range Indicator	145	145	145	145	145	145
D	Output Speed Indicator A						124
E	Ouput Overspeed Indicator B	105	105	105			
I	Engine Overspeed Indicator						
J	Two Speed Axle Interface Indicator						
K	Lockup Indicator	104	104	104	104	104	105
N	Secondary Mode Indicator	150	150	150	150	150	113
Q	Retarder Interface Indicator	124	124	124			
V	Manual Mode Indicator	130	130	130	130	130	130
W	Neutral to Range Brake	164	164	164	164	164	164
Z	Engine Speed/Torque Control Indicator	113	113	113	113	113	
AD	Range Inhibit Indicator						
AL	Transmission Filter Restriction Indicator				105	105	
AO	Shift Schedule 2 Indicator						

*Additional packages available. See Tech Data I/O Package Guides – 5th Gen Controls.

Off Road Series™

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

ALLISON TRANSMISSION OFF ROAD SERIES™

RATINGS

MODEL	RATIO	MAX INPUT POWER hp (kW)	MAX INPUT TORQUE lb-ft (N•m)	MAX INPUT TORQUE w/ SEM TORQUE LIMITING lb-ft (N•m)	MAX TURBINE TORQUE lb-ft (N•m)	MAX GVW lbs (kg)	MAX GCW lbs (kg)
3000 ORS	Close Ratio						
– Articulated/Rigid Dump		250 (186)	664 (900)	—	1575 (2135)	98,100 (44,500)	N/A
3200 ORS	Close Ratio						
– Articulated/Rigid Dump		300 (224)	811 (1100)	—	1575 (2135)	98,100 (44,500)	N/A
– Other		Contact your Allison representative for details					
3500 ORS	Wide Ratio						
– Articulated/Rigid Dump		330 (246)	811 (1100)	—	1420 (1925)	98,100 (44,500)	N/A
– Other		Contact your Allison representative for details					
4000 ORS	Close Ratio						
– Articulated Dump		480 (358)	1625 (2203)	—	2450 (3322)	151,017 (68,500)	N/A
– Rigid Dump		480 (358)	1550 (2102)	—	2450 (3322)	125,663 (57,000)	N/A
– Other		Contact your Allison representative for details					
4200 ORS	Close Ratio						
– Articulated Dump		480 (358)	1700 (2305)	—	2450 (3322)	178,574 (81,000)	N/A
4430 ORS	Wide Ratio						
– Articulated/Rigid Dump		380 (283)	1235 (1675)	—	2450 (3322)	151,017 (68,500)	N/A
– Other		Contact your Allison representative for details					
4500 ORS	Wide Ratio						
– Articulated Dump		480 (358)	1550 (2102)	1625[1] (2203)[1]	2450 (3322)	151,017 (68,500)	N/A
– Rigid Dump		480 (358)	1550 (2102)	—	2450 (3322)	151,017 (68,500)	N/A
– Other		Contact your Allison representative for details					
4600 ORS	Wide Ratio						
– Articulated/Rigid Rear Dump		480 (358)	1550 (2102)	1700[1] (2305)[1]	2450 (3322)	178,574 (81,000)	N/A
4700 ORS	Widest Ratio						
– Articulated Dump		500 (373)	1700 (2305)	—	2450 (3322)	178,574 (81,000)	N/A
4800 ORS	Widest Ratio						
– Articulated Dump		600 (447)	—	1850 (2508)[2]	2600 (3525)	211,644 (96,000)	N/A
5620 ORS	N/A						
– Articulated/Rigid Dump		600 (447)	1875 (2542)	—	3475 (4711)	—	N/A
6620 ORS	N/A						
– Articulated/Rigid Dump		760 (567)	2500 (3390)	—	3790 (5139)	—	N/A
6625 ORS	N/A						
– Articulated/Rigid Dump		760 (567)	2500 (3390)	—	3790 (5139)	—	N/A
6630 ORS	N/A						
– Articulated/Rigid Dump		760 (567)	2500 (3390)	—	3790 (5139)	—	N/A
8610 ORS	N/A						
– Rigid Dump		1050 (783)	3600 (4881)	—	5650 (7660)	—	N/A
9610 ORS	N/A						
– Rigid Dump		1350 (1007)	4000 (5423)	—	6000 (8135)	—	N/A

[1] Available in gears three through six with torque limiting. [2] For gears four through seven.

OFF ROAD SERIES™ I/O Packages

			Euro Refuse Truck	Premium Off-Highway								
VOCATION PACKAGE NUMBER			127	175	190	191	195	196	235	244	245	264
INPUT FUNCTIONS		Default Enabled?										
A	Secondary Mode Input	Yes	M	122	M	M	M	M	142	M	M	M
C1	PTO Drive Interface Input 1	Yes	143	143	143	143	143	143	M	143	143	143
C2	PTO Drive Interface Input 2	No										102
D	Shift Selector Transition Input	No										
E	Auxiliary Function Range Inhibit – Single Input	No	101		101	101		101	101			101
F	Auxiliary Function Range Inhibit – Dual Input	Yes										
G	Auxiliary Hold Input	Yes		117	142	142	117	142		117	117	142
H	Engine Brake Interface Input (Standard)	No		102/157	102/157	102/157	102/157	102/157	102/157	102/157	102/157	
I	Engine Brake Interface Input (Special)	No	102/157									
J	Pump Mode Input (Fire Truck Pump Mode 4th Lockup)	No										
K	Quick-to-Neutral Input	No										
L	Automatic Neutral – Single Input	No	117		117	117		117	117	122		117
Q	Two Speed Axle Interface Input	Yes										
R	Manual Lockup Control Input	No										
V	Reverse Enable Input	No										
W	Direction Change Enable Input	No							143			
Y	Anti-Lock Brake System (ABS) Input	Yes	121	121	121	121	121	121	121	121	121	121
Z	Retarder Interface Input	Yes	161	161	161	161	161	161	161	161	161	161
AA	Service Brake Status Input	Yes	162	162	162	162	162	162	162	162	162	162
AF	Differential Clutch Interface Input (3700 Only)	Yes										
AG	Automatic Neutral – Dual Input	Yes		101/142			101/142					
AH	Accelerator Pedal Kickdown Input	Yes	122						122			
AI	Auxiliary Function Range Inhibit – Single Input (Specialty Vehicle)	No										
AJ	Pump Mode Input (4th Lockup)	No										
AK	Automatic Neutral – Dual Input with Service Brake Status	Yes										
AL	Shift Selector Transition & Secondary Shift Schedule Input	Yes										
AM	Reverse Inhibit with Preselect Request Interface Input	No	123	123		123	123			123	123	123
AQ	Shift Selector Display Blanking Input	Yes										
AR	Overdrive Disable Interface Input	Yes										
AS	Neutral at Stop Input	No							123			
AW	2nd Reverse Input	No								179	179	
BD	Automatic 2-1 Preselect Input (4000 7-Speed Only)	Yes										
BS	Grade Braking/Regenerative Input	No										
BY	Aux. Box Transition Input	Yes										
BZ	Shift Selector Transition & Oil Field Pumping Input	Yes										
CA	Automatic Neutral – Brake-Based (BBAN) Input for PTO	No										
CB1	Preselect Request 1 Input	Yes										
CB2	Preselect Request 2 Input	Yes										
CC	High N/V Ratio Input	No										
CD	Automatic Neutral – Single Input with Selector Override	Yes									122	
CE	Direct Hold Input	No										
CF	Automatic Neutral – Idle Start/Stop Input	Yes										
CH	Automatic Neutral – Single Input, Inverted	No										
CN	Automatic Neutral – Dual Input with Automatic Return-to-Range	No										
OUTPUT FUNCTIONS												
A	Engine Brake Interface Output	No	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
C	Range Indicator (5th Gen default is always Neutral)	Yes	113		113	113			145			113
D	Output Speed Indicator A	Yes	105	105	105	105	105	105	105	105	105	105
G1	PTO Drive Interface 1 Indicator	Yes	130	130	130	130	130	130	130	130	130	130
G2	PTO Drive Interface 2 Indicator	No										104
I	Engine Overspeed Indicator	Yes			145			145				
J	Two Speed Axle Interface Indicator	Yes										
K	Lockup Indicator	Yes						113				
N	Secondary Mode Indicator	Yes		113			113		113	113	113	
O	Transmission Service Indicator	Yes										
Q	Retarder Interface Indicator	Yes	124	124	124	124	124	124	124	124	124	124
R	Differential Clutch Interface Indicator (3700 Only)	Yes										
S	Neutral Indicator for PTO and PTO Request (NIPTO)	Yes	145	145		145	145			145	145	145
AD	Range Inhibited Indicator	Yes										
AJ	Output Speed Indicator A, Inverted	Yes										

OFF ROAD SERIES™ I/O Packages

		Rear Dump				Bottom Dump
VOCATION PACKAGE NUMBER		910	911	912	922	913
INPUT FUNCTIONS						
A	Secondary Mode Input	M	162	162	162	M
B	D-1 Selection	162	M		M	162
D	Shift Selector Transition Input					
E	Auxiliary Function Range Inhibit – Single Input (Inverted)	161	161	161	161	161
G	Auxiliary Hold Input	101	101	M	101	101
K	Quick-to-Neutral Input (Normally Closed)					
Q	Two Speed Axle Interface Input					
R	Manual Lockup Control Input					
Y	Anti-Lock Brake System (ABS) Input					121
Z	Retarder Interface Input	123	123	123	123	123
AM	Reverse Inhibit with Preselect Request Interface Input (Inverted)	121	121	121	121	
AW	2nd Reverse Input	157	157	157	157	157
AX	Manual Mode	143	143	143	143	143
AZ	Lockup Disable Request	122	122	122	122	122
BC	Shift Selector Transistion and Manual Mode					
BE	Engine Speed/Torque Control Input 1	142	142	142	142	142
CE	Direct Hold	102	102	102	102	102
CG	Engine Speed/Torque Control Input 2	117	117	117	117	117
CI	Quick-to-Neutral Input (Normally Open)					
CK	Pressure Test Mode					
CO	Shift Schedule 2	179	179	179	179	179
CQ	Mauanl Mode (Inverted)					
OUTPUT FUNCTIONS						
B	Sump/Retarder Temperature Indicator					
C	Range Indicator	145	145	145	145	145
D	Output Speed Indicator A					
E	Ouput Overspeed Indicator B				105	
I	Engine Overspeed Indicator	130	130	130	130	130
J	Two Speed Axle Interface Indicator					
K	Lockup Indicator	104	104	104	104	104
N	Secondary Mode Indicator	150	150	150	150	150
Q	Retarder Interface Indicator	124	124	124	124	124
V	Manual Mode Indicator					
W	Neutral to Range Brake	164	164	164	164	164
Z	Engine Speed/Torque Control Indicator	113	113	113	113	113
AD	Range Inhibit Indicator					
AL	Transmission Filter Restriction Indicator	105	105	105		105
AO	Shift Schedule 2 Indicator					

*Additional packages available. See Tech Data I/O Package Guides – 5th Gen Controls.

TYPICAL VEHICLE APPLICATIONS

Articulated Dump
Rigid Dump
Rigid Rear Dump

Contact your Allison representative for other applications.

MARKETING PUBLICATIONS AND VIDEOS

SERIES BROCHURE

- Mining Vocational Brochure

GENERAL BROCHURES

- Prognostics Brochure
- Shift Selector Operation and Code Manual

Hybrid Bus™

All over the world, fleets, cities and passengers rely on Allison. No matter where the road leads, Allison Hybrid EP systems have demonstrated real, bottom-line operating benefits to municipalities and fleet operators. Since 2003, buses equipped with Allison H 40 EP™ and H 50 EP™ have provided reliable service without sacrificing performance.

Efficient By Design

The Allison Hybrid EP system features a two-mode split parallel architecture — a pure mechanical path and a pure electrical path — to achieve the highest energy efficiency. The technology uses both electrical and mechanical paths to provide an infinite number of ratios, optimizing performance and fuel economy. The efficiency gains over other technologies enable this system to perform in both transit buses and coaches.

Fuel and Emissions Reduced

The Allison Hybrid EP system dramatically reduces both diesel fuel consumption and CO2 emissions. An Allison Hybrid System improves fuel consumption up to 25 percent over a typical bus*.

The Allison Hybrid H 40/50 EP systems may also be equipped with a customized electric distribution platform that provides power from the hybrid system to accessory components such as electric air conditioning, electric air compressors and electric power steering systems, offering further economy improvements.

Regenerative Braking and Savings

When decelerating or stopping, the system converts the vehicle's kinetic energy to stored electric energy. In effect, the motor becomes a generator. The energy to accelerate the bus comes from the braking energy saved. The regenerative braking capability can significantly extend the brake change interval by as much as 350 percent.

Quiet Operation

The Allison Hybrid EP system helps reduce noise pollution compared to conventional buses. At 79 db @ 10 meters, buses equipped with the system approach the sound level of passenger cars. Allison also offers an optional hush mode feature, allowing buses to operate with enhanced or maximum noise reduction for designated quiet zones.

*Results can vary depending on the duty-cycles.

SPECIFICATIONS

Allison H 40 EP and H 50 EP Drive Unit

Physical Characteristics

- Weight: 919 lbs (417 kg) dry, 944 lbs (428 kg) wet
- Size: 32 (813) L x 17 (432) W x 12 (305) H* in (mm)
  *height measured from centerline to sump

Input: Allison H 40 EP Drive Unit - *Transit Bus*

- Continuous: 280 hp (209 kw)
- Rated Input Torque: 910 lb-ft (1234 nm)
- Rated Input Speed: 2300 rpm

Input: Allison H 50 EP Drive Unit - *Suburban Coach / Articulated Bus*

- Continuous: 330 hp (246 kw)
- Rated Input Torque: 1050 lb-ft (1424 nm)
- Rated Input Speed: 2300 rpm

Energy Storage System 3 (ESS3)

- Full regenerative braking recovery from 50 mph
- Weight: 970 lbs (440 kg)

Dual Power Inverter Module 2 (DPIM2)

- 430-900 vdc 160 kw continuous 3-phase AC
- Weight: 165 lbs (75 kg)

System Controller

- Allison Fourth Generation Electronic Controls
- Weight: 2.46 lbs (1.12 kg)

Performance

- Typical acceleration power with energy storage:
- H 40 EP Drive Unit – 240 hp (179 kw)
- H 50 EP Drive Unit – 300 hp (224 kw)

Available Engine Options

- Cummins B6.7 – 280 hp (209 kw)
- Cummins L9 – 280 hp (209 kw) or 330 hp (246 kw)

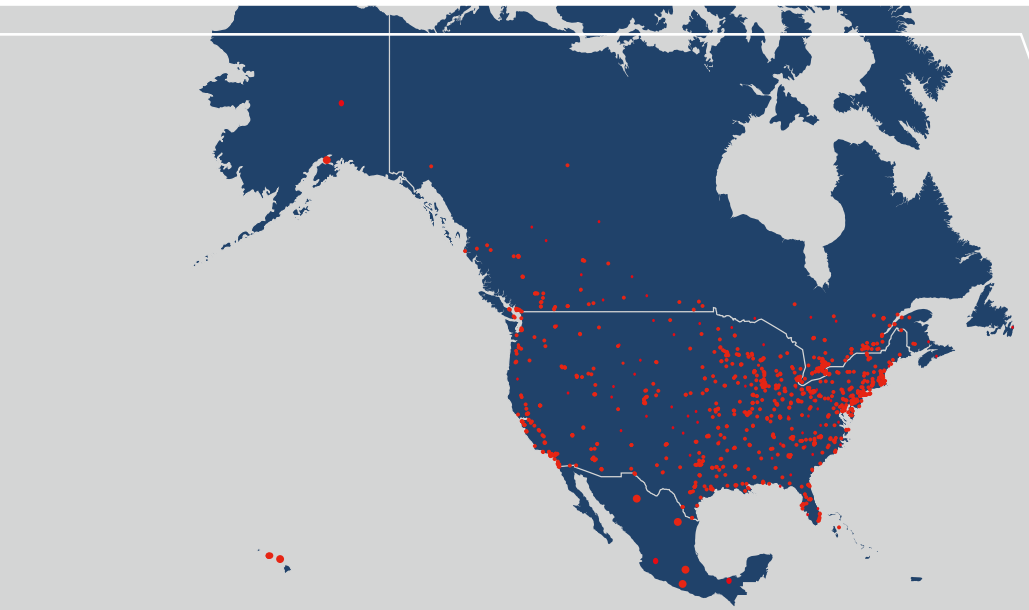
MARKETING PUBLICATIONS AND VIDEOS

SERIES BROCHURE

- Hybrid Bus Brochure

TYPICAL VEHICLE APPLICATIONS

Hybrid Bus
Straight/Solo Bus
Articulated Bus
BRT
Shuttle Bus
Intercity Bus
TOVK Coach



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