



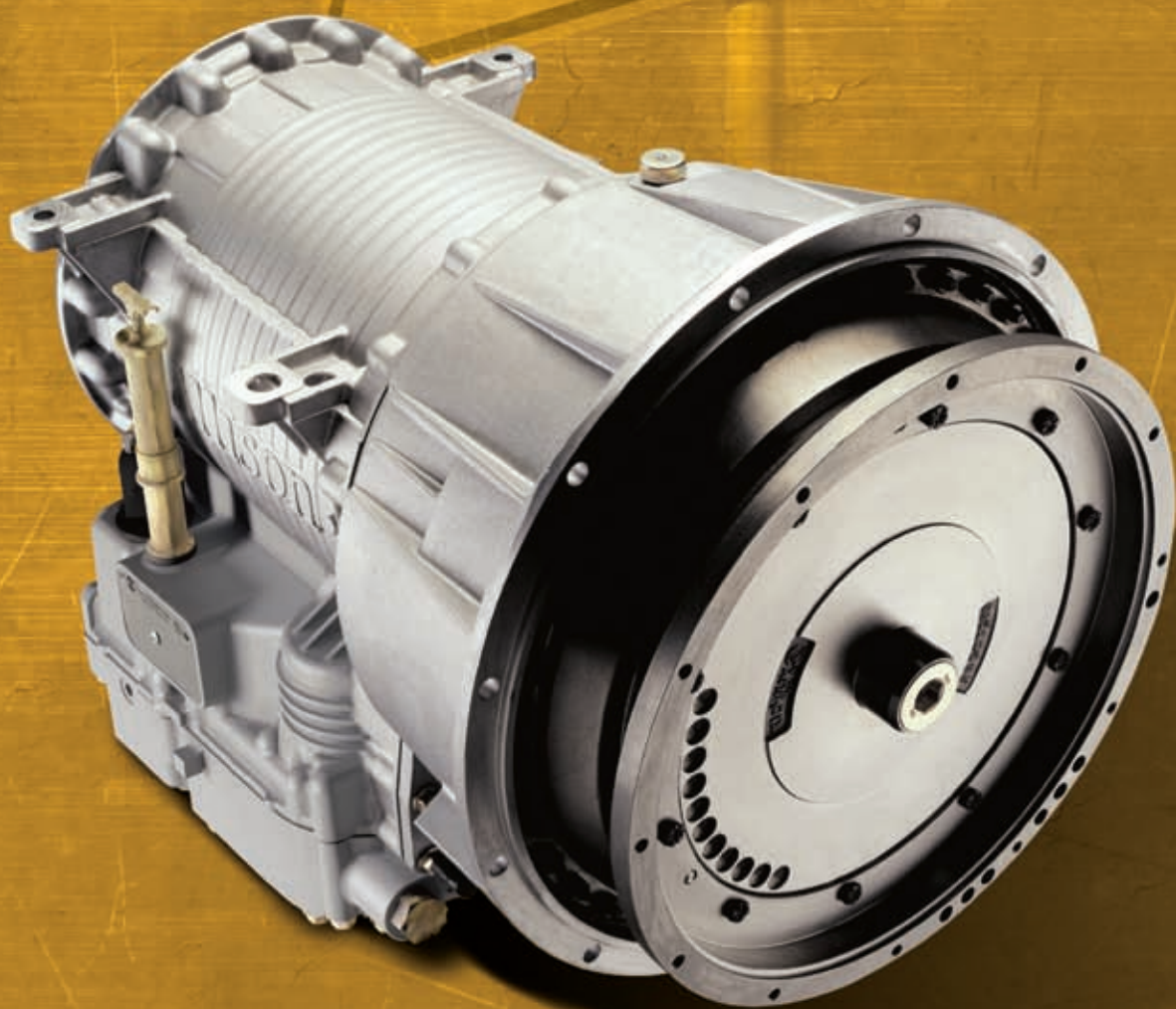
**Allison
Transmission**

DRIVING TRANSMISSION TECHNOLOGY®



XING

PUPIL TRANSPORT/SHUTTLE SERIES



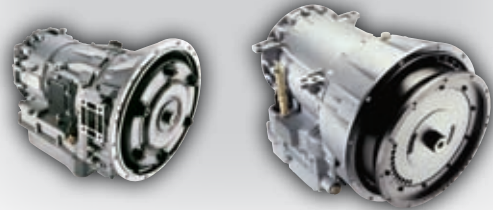


Allison fully automatic transmissions revolutionized people transportation over 40 years ago, and our Pupil Transport/Shuttle Series models continue to improve passenger comfort and safety today.

Proven reliability and durability. Allison Transmission has built a reputation on our ability to build transmissions that last just about forever. Allison Automatics are truck-based transmissions designed to withstand the rigors of heavy-duty usage and engineered to meet the demands of your particular fleet while providing outstanding value. That is why Allison Pupil Transport/Shuttle Series automatic transmissions are the preferred choice for school, non-school and shuttle buses.



ENGINE	hp (kW)	TORQUE	lb-ft (N • m)
	165-325 (123-242)		420-950 (569-1288)
GVW	lbs (kg)		
	14,000-unlimited (6,350-unlimited)		

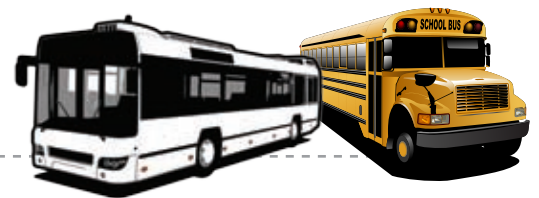


1000 PTS, 2100 PTS, 2200 PTS,
2300 PTS, 2350 PTS, 2500 PTS,
2550 PTS

3000 PTS

Comprehensive coverage. All Allison Pupil Transport/Shuttle Series automatic transmission models offer three-year Standard Warranty Coverage with unlimited miles and 100% parts and labor. Extended Transmission Coverage is available and varies by OEM, model and application. Contact your Allison representative for details.

Our extensive network of over 1,200 authorized Allison Distributors and Dealers in North America, along with over 1,500 worldwide, means convenient, factory-quality Allison service is always close at hand.



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

*Results may vary depending on your operating conditions. See your local Allison representative to find the potential gains for your particular application.





Smart Controls. Our experience in this vocation has given us the knowledge and insight to design features into our transmissions that help make drivers' jobs easier and passengers' trips safer. Allison Pupil Transport/Shuttle Series automatic transmissions are available with electronic controls that meet the specific needs of school bus, non-school bus and shuttle bus operations.

Load-Based Shift Scheduling (LBSS)

To optimize fuel economy and maintain superior Allison Automatic performance, Allison LBSS automatically selects between Economy and Performance shift schedules based on the vehicle's actual payload and the grade on which it is operating. It has proven to increase fuel economy by up to 5%*.

*Results may vary depending on operating conditions.

Prognostics

Calibrated to the vehicle's particular operating requirements, Allison prognostics monitor various operating parameters — oil level, oil life, filter life and transmission health — to determine and alert when service is due. This eliminates unnecessary oil and filter changes and provides maximum transmission protection.

Reduced Engine Load at Stop (RELS)

With RELS, available on 3000 PTS, the transmission automatically reduces the load on the engine when the bus is at a full stop. This not only saves fuel, it reduces overall vehicle emissions.

Shift Energy Management (SEM)

Provides better engine/transmission integration to optimize the entire driveline system. The result is faster, smoother, more consistent shift quality, increased powertrain durability, improved performance and an overall more efficient vehicle operation leading to greater fuel economy.

Direction Change Enable

To safeguard against unwanted direction changes, the transmission electronic controls prohibit the driver from shifting out of Neutral into Drive or Reverse without first pressing a dash switch or applying the service brakes.

Automatic Neutral

Improves safety, fuel efficiency and productivity. With Automatic Neutral on the Park Brake, the transmission electronic controls know when to command Neutral — automatically. No need for the driver to shift.

Secondary Shift Schedule

Allows drivers to select between two pre-programmed shift patterns — quickly and easily. Shift characteristics are matched to driving conditions with the simple push of a button.

Auxiliary Function Range Inhibit

It's like having an extra set of eyes so the driver always knows it's safe to shift out of Neutral and into Drive or Reverse. The vehicle simply will not shift into a moving range unless the service brakes are applied. It's that simple and safe.

Vehicle Acceleration Control (VAC)

Controls aggressive driving practices to improve overall fuel economy. VAC limits acceleration by controlling amount of engine torque based on vehicle load. Tests using a simulated bus duty cycle show VAC helps improve fuel economy by up to 3%**.

**Results may vary depending on operating conditions.

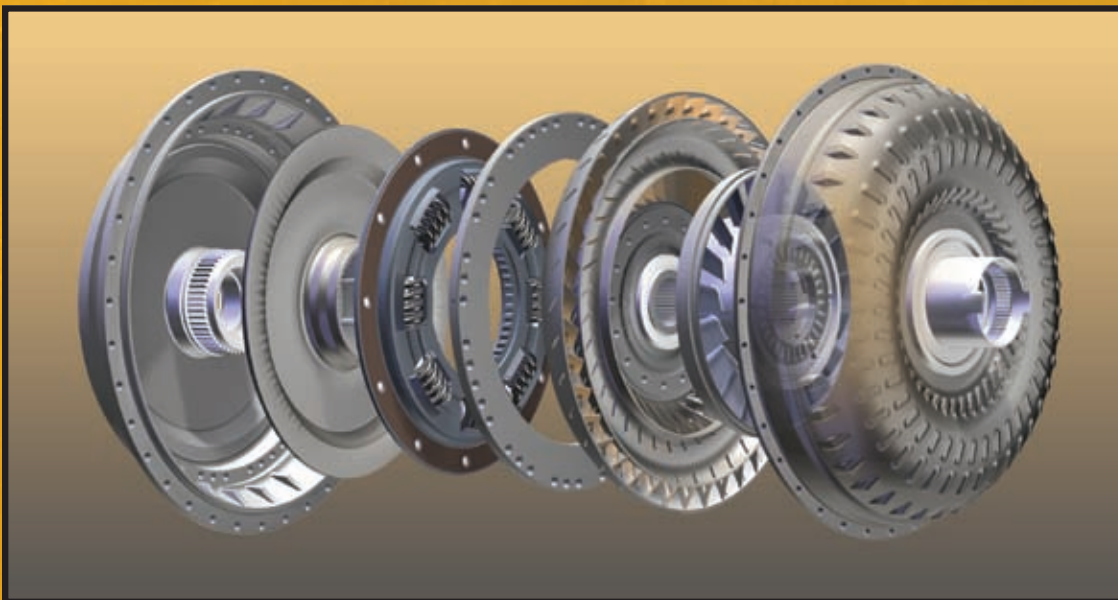


Keeping it safe. Since an Allison Automatic is a true, fully automatic transmission, the driver has more time to check mirrors and to look forward and behind. There simply aren't as many distractions. And that gives the driver more time to do what's necessary. And what's necessary is being safe on the street and at bus stops.



No power interrupts. On a vehicle with an automated manual transmission, the power interrupts that occur during shift changes result in lower average wheel horsepower. With an Allison Automatic, there is no power interrupt during shift changes so Allison Automatics can make full use of the engine's horsepower. No power interrupts also contribute to a smoother ride.

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



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



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



Information Highway

Visit www.allisontransmission.com for a comprehensive library of informational brochures, including Mechanic's Tips, Operator's Manuals, Parts Catalogs, Troubleshooting Flyers and Service Manuals.

Ratings and Specifications

RATINGS

MODEL	RATIO	PARK PAWL	MAX INPUT POWER ¹ hp (kW)	MAX INPUT TORQUE ¹ lb-ft (N • m)	MAX INPUT TORQUE w/SEM OR TORQUE LIMITING ^{1,2} lb-ft (N • m)	MAX TURBINE TORQUE ³ lb-ft (N • m)	MAX GVW lbs (kg)	MAX GCW lbs (kg)
1000 PTS								
- School Bus	Close Ratio	Yes	300 ⁴ (224) ⁴	550 (746)	660 ^{6,7} (895) ^{6,7}	950 ⁷ (1288) ⁷	19,500 (8,845)	26,001 (11,800)
- Shuttle Bus	Close Ratio	Yes	300 ⁴ (224) ⁴	550 (746)	565 (766)	950 ⁷ (1288) ⁷	19,500 (8,845)	26,001 (11,800)
2100 PTS								
- 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 (766)	950 ⁷ (1288) ⁷	26,000 (11,800)	26,000 (11,800)
2200 PTS								
- 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)	26,001 (11,800)
- Shuttle Bus	Close Ratio	Yes	300 ⁴ (224) ⁴	550 (746)	565 (766)	950 ⁷ (1288) ⁷	26,000 (11,800)	26,001 (11,800)
2300 PTS⁸								
- School Bus	Close Ratio	No	325 (242)	n/a	450 (610)	950 ⁷ (1288) ⁷	33,000 (15,000)	33,000 (15,000)
2350 PTS⁶								
- 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)
2500 PTS⁵								
- 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)
2550 PTS⁶								
- 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)
3000 PTS								
- School Bus	Close Ratio	n/a	300 (224)	950 (1288)	n/a	1470 (1995)	—	—
- Shuttle Bus	Close Ratio	n/a	300 (224)	950 (1288)	n/a	1470 (1995)	33,000 (15,000)	33,000 (15,000)

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

GEAR RATIOS - TORQUE CONVERTER MULTIPLICATION NOT INCLUDED

MODEL	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	REVERSE
1000 PTS	3.10:1	1.81:1	1.41:1	1.00:1	0.71:1	0.61:1 ¹	-4.49:1
2100 PTS	3.10:1	1.81:1	1.41:1	1.00:1	0.71:1	0.61:1 ¹	-4.49:1
2200 PTS	3.10:1	1.81:1	1.41:1	1.00:1	0.71:1	0.61:1 ¹	-4.49:1
2300 PTS	3.10:1	1.81:1	1.41:1	1.00:1	0.71:1	0.61:1 ¹	-4.49:1
2350 PTS	3.10:1	1.81:1	1.41:1	1.00:1	0.71:1	0.61:1 ¹	-4.49:1
2500 PTS	3.51:1	1.90:1	1.44:1	1.00:1	0.74:1	0.64:1 ¹	-5.09:1
2550 PTS	3.51:1	1.90:1	1.44:1	1.00:1	0.74:1	0.64:1 ¹	-5.09:1
3000 PTS	3.49:1	1.86:1	1.41:1	1.00:1	0.75:1	0.65:1	-5.03:1

¹ Check with your OEM to ensure offerings.

ENGINE SPEEDS

MODEL	FULL LOAD GOVERNED SPEED Min-Max (rpm)	IDLE SPEED IN DRIVE Min-Max (rpm)	OUTPUT SHAFT SPEED rpm
1000 PTS	2200-4600 ¹	500-820	5000
2100/2200/2300/2350 PTS	2200-4600 ¹	500-820	5000
2500/2550 PTS	2200-3200	500-820	4500
3000 PTS	2000-2800	500-800	3600 ²

¹ Engines with full load governed speed greater than 3800 rpm require Application Engineering review. ² Retarder-equipped models only.

OPTIONAL RETARDER PROVISION
- INTEGRAL, HYDRAULIC TYPE

BASE MODEL	TORQUE CAPACITY lb-ft (N • m)	POWER CAPACITY hp (kW)
3000 PTS		
- High	1600 (2170)	600 (447)
- Medium	1300 (1760)	500 (373)
- Low	1100 (1490)	400 (298)

TORQUE CONVERTER SPECIFICATIONS

BASE MODEL	TORQUE CONVERTER	NOMINAL STALL TORQUE
1000 PTS		
	TC-210	2.05
	TC-211	1.91
	TC-221	1.73
	TC-222	1.58
2000 PTS		
	TC-210	2.05
	TC-211	1.91
	TC-221	1.73
	TC-222	1.58
3000 PTS		
	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

PHYSICAL DESCRIPTION

BASE MODEL	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 PTS				
- SAE No. 3 mounting	28.01 (711.4)	11.22 (284.9)	10.71 (272.0)	330 (150)
- SAE No. 2 mounting	28.39 (721.1)	11.22 (284.9)	10.71 (272.0)	330 (150)
2000 PTS				
- SAE No. 3 mounting	28.01 (711.4)	11.22 (284.9)	-	330 (150)
- SAE No. 2 mounting	28.39 (721.1)	11.22 (284.9)	-	330 (150)
3000 PTS				
- Basic model	28.29 (718.6)	12.90 (327.8)	-	535 (243)
- With retarder only	28.29 (718.6)	12.90 (327.8)	-	615 (279)

¹ Length measured from flywheel housing to end of output shaft. ² Depth measured below transmission centerline.

OIL SYSTEM

BASE MODEL	CAPACITY ¹ quarts (liters)	MAIN CIRCUIT FILTER	LUBE CIRCUIT FILTER	ELECTRONIC OIL LEVEL SENSOR (OLS)
1000 PTS				
		Spin-On Canister	-	-
- Deep Oil Pan	14.8 ² (14.0) ²			
- Shallow Oil Pan	12.7 ² (12.0) ²			
2000 PTS				
		Spin-On Canister	-	-
- Deep Oil Pan	14.8 ² (14.0) ²			
3000 PTS				
		Integral	Integral	Standard
- Deep Oil Sump	29 ² (27) ²			

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

¹ Transmission only. Does not include cooler, hoses or fittings. ² Amount of oil necessary to fill a dry transmission.

POWER TAKEOFF PROVISION

Not Available on Pupil Transport/Shuttle Series



Ask for an Allison. See your dealer for a complete listing of vehicles featuring Allison fully automatic transmissions, or contact your Allison representative. For the representative close to you, visit www.allisontransmission.com.