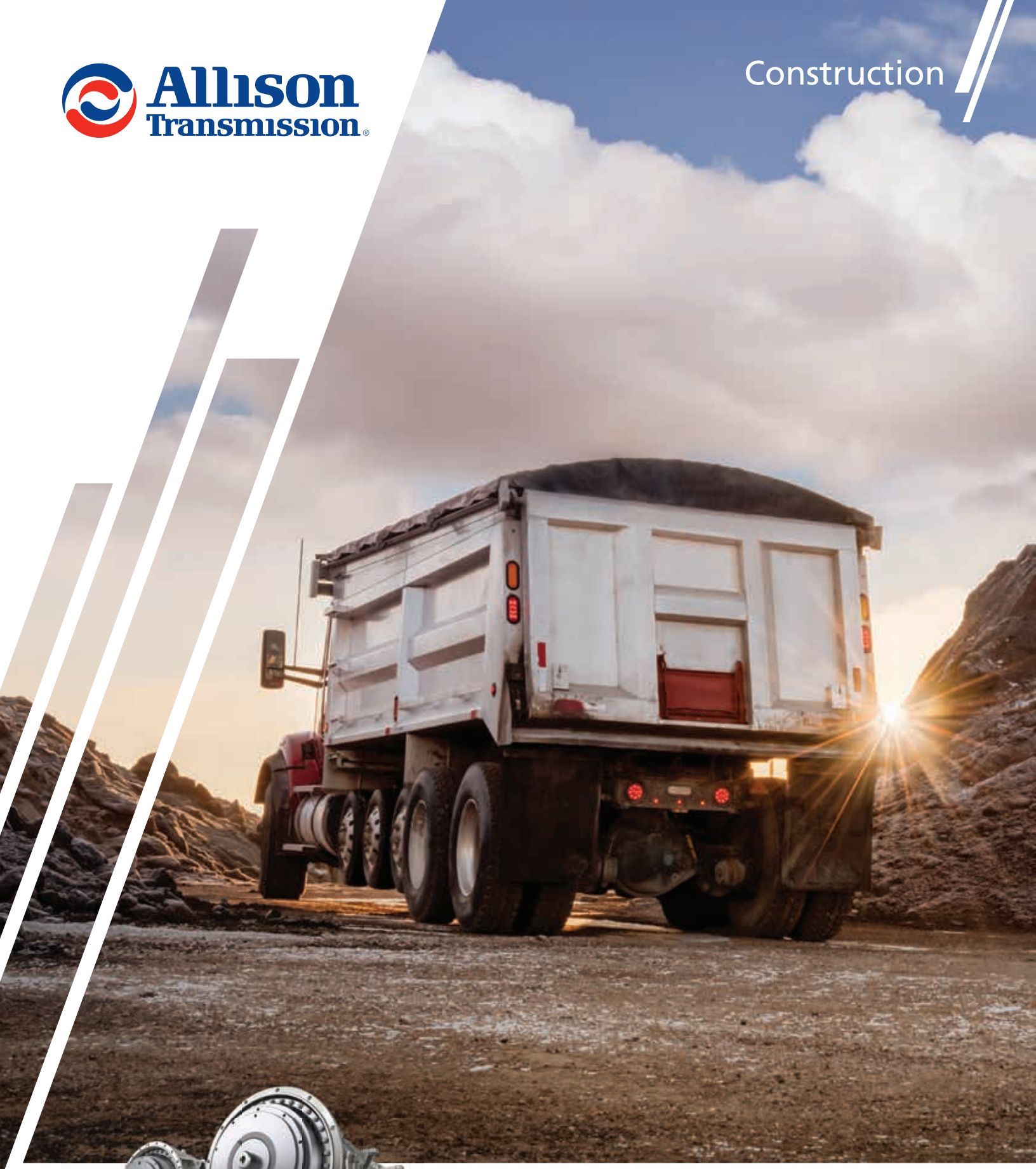
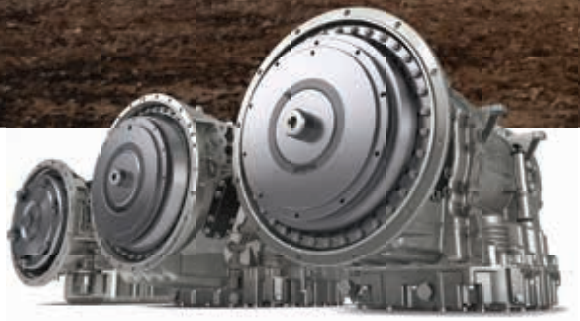
Allison Transmission®

Construction





Built to Work

Technology that Powers Through

There is nothing easy about the job you do, and customers always expect more. It's good to know an Allison Automatic is ready to get you on- and off-site no matter where the road leads. When you need to finish the job, Allison helps you do it confidently.

The engineering in every Allison fully automatic transmission allows you to get more out of your fleet, your time and your efforts. When people are counting on you to get the job done, count on Allison.

"There's nothing better

than an Allison Transmission torque converter. Maneuvering in inner cities and difficult terrain is much easier."

Jörg Haasner, Wiesbauer GmbH

Never Standing Still

Good enough never is. That's why Allison Transmission works with you to provide a propulsion solution that meets the unique needs of your job. From tailored shift-points through our proprietary FuelSense® 2.0 software to custom designs for construction applications, the power of Allison helps you get the job done.

More Time on Site

Our torque converter eliminates power loss during shifting, giving your vehicle constant acceleration which leads to a more efficient workday.

Allison Automatics
Accelerate Faster for

14%

Higher Average Speed Than a Manual or AMT

Positioned to Succeed

For more than 100 years, we have been working to make your job easier, developing products that get you closer to where you want to be—both on the job site and in your business plan. With unmatched uptime, you'll be ready when needed. And once you're on the site, a fully automatic Allison transmission will keep you moving in the right direction.

Optimized driver operation and comfort

PTO provides integrated one-touch power for accessories

Precise maneuverability including control and positioning on steep grades

Deep reverse for smooth descents

*Deep reverse only available in 4700 RDS

More Uptime. More Upside.

Less mechanical parts and stress on the drivetrain means Allison Automatics spend less time in the shop and more time on the job.

- Allison's patented torque converter puts less strain on the drivetrain
- Uniform power to the wheels translates into longer tire life
- No mechanical clutches mean less wear and tear
- Normal maintenance requires only periodic fluid and filter changes
- Torque converter lock up on downgrades reduces brake usage

When you specify Allison, you're getting a transmission that works for you, your fleet and the bottom line.

The Power of Allison

Allison fully automatic transmissions are built to perform in the toughest conditions. They feature our Continuous Power Technology™, which provides more power to the wheels than other transmission technologies, letting you handle anything your worksite throws at you.

Allison Transmission Rugged Duty Series™

Ratings

Model	Vocation	Ratio	Park Pawl	Max Input Power[2]	Max Input Torque[2]	Max Input Torque w/SEM Torque Limiting[2,3]	Max Turbine Torque[4]	Max GVW	Max GCW
				hp (kW)	lb-ft (N•m)	lb-ft (N•m)	lb-ft (N•m)	lbs (kg)	lbs (kg)
1000 RDS[1]	On-/Off-Highway	Close Ratio	Yes	340[5,8] (254)[5,8]	575 (780)	660[5,8] (895)[5,8]	950[5] (1288)[5]	19,500 (8845)	26,000 (11,800)
1350 RDS[1]	On-/Off-Highway	Close Ratio	Yes	340[5,8] (254)[5,8]	575 (780)	660[5,8] (895)[5,8]	950[5] (1288)[5]	19,500 (8845)	30,000 (13,600)
2100 RDS[1]	On-/Off-Highway	Close Ratio	No	340[5,8] (254)[5,8]	575 (780)	660[5,8] (895)[5,8]	950[5] (1288)[5]	26,000 (11,800)	26,000 (11,800)
2200 RDS[1]	On-/Off-Highway	Close Ratio	Yes	340[5,8] (254)[5,8]	575 (780)	660[5,8] (895)[5,8]	950[5] (1288)[5]	26,000 (11,800)	26,000 (11,800)
2300 RDS[6]	On-/Off-Highway	Close Ratio	No	365[5] (272)[5]	N/A	510[5] (691)[5]	950[5] (1288)[5]	33,000 (15,000)	33,000 (15,000)
2350 RDS[1,8]	On-/Off-Highway	Close Ratio	Yes	340[5] (254)[5]	575 (780)	660[5] (895)[5]	950[5] (1288)[5]	30,000 (13,600)	30,000 (13,600)
2500 RDS[1]	On-/Off-Highway	Wide Ratio	No	340[4] (254)[4]	575 (780)	660[4] (895)[4]	950 (1288)	33,000 (15,000)	33,000 (15,000)
2550 RDS[1,8]	On-/Off-Highway	Wide Ratio	Yes	340[5] (254)[5]	575 (780)	660[5] (895)[5]	950[5] (1288)[5]	30,000 (13,600)	30,000 (13,600)
3000 RDS									
	On-/Off-Highway	Close Ratio	N/A	370 (276)	1100 (1491)	1250[7,8] (1695)[7,8]	1600 (2169)	80,000 (36,288)	80,000 (36,288)
	Mixer	Close Ratio	N/A	370 (276)	1100 (1491)	1250[7,8] (1695)[7,8]	1600 (2169)	62,000 (28,123)	—
	Volumetric Mixer	Close Ratio	N/A	370 (276)	1100 (1491)	1250[7,8] (1695)[7,8]	1600 (2169)	80,000 (36,288)	80,000 (36,288)
	Specialty PTO/HET	Close Ratio	N/A	370 (276)	1250[8] (1695)[8]	N/A	1700 (2305)	—	—
3500 RDS									
	On-/Off-Highway	Wide Ratio	N/A	330 (246)	860 (1166)	1050[9] (1424)[9]	1450[5] (1966)[5]	80,000 (36,288)	80,000 (36,288)
	Mixer	Wide Ratio	N/A	330 (246)	860 (1166)	N/A	1420 (1925)	60,000 (27,216)	—
	Volumetric Mixer	Wide Ratio	N/A	330 (246)	860 (1166)	1050[9] (1424)[9]	1450[5] (1966)[5]	80,000 (36,288)	80,000 (36,288)
	Specialty PTO	Wide Ratio	N/A	330 (246)	950 (1288)	1050[9] (1424)[9]	1450 (1966)	—	—
	HET	Wide Ratio	N/A	330 (246)	985 (1335)	1050[9] (1424)[9]	1450 (1966)	—	—
4000 RDS									
	On-/Off-Highway	Close Ratio	N/A	580[12] (433)[12]	1770 (2400)	1850[11] (2508)[11]	2600 (3525)	—	—
	Specialty PTO	Close Ratio	N/A	580 (433)	1770 (2400)	N/A	2600 (3525)	—	—
	HET	Close Ratio	N/A	605 (451)	1850 (2508)	N/A	2600 (3525)	—	—
4500 RDS									
	On-/Off-Highway	Wide Ratio	N/A	580[12] (433)[12]	1650 (2237)	1850[11] (2508)[11]	2450 (3322)	—	—
	Specialty PTO	Wide Ratio	N/A	580[12] (433)[12]	1650 (2237)	1770[9] (2400)[9]	2600 (3525)	—	—
	HET	Wide Ratio	N/A	605[12] (451)[12]	1650 (2237)	1850[9] (2508)[9]	2600 (3525)	—	—
4700 RDS									
	On-/Off-Highway	Widest Ratio	N/A	580[12] (433)[12]	1770 (2400)	1850[10] (2508)[10]	2600 (3525)	—	—
	HET	Widest Ratio	N/A	605 (451)	1850 (2508)	N/A	2600 (3525)	—	—

1 Available with xFE. 2 Gross ratings as defined by ISO 1585 or SAE J1995. 3 SEM = engine controls with Shift Energy Management. 4 Turbine torque limit based on iSCAAN standard deductions.
5 SEM and torque limiting are required to obtain this rating. 6 Only available in limited spark-ignited engine applications with full load governed speeds greater than 3800 rpm.
7 Requires Allison Transmission engine-transmission combination approval. Only available in gears three through six. 8 Check with your OEM to ensure offerings. 9 Available in gears two through six.
10 Only available in gears four through seven. 11 Only available in gears three through six. 12 With and without torque limiting.

Notes

Standard Power Take-Off Continuous Operation

Base Model	Mounting Pad Positions Viewed from Rear	Drive Gear Rating with one PTO	Drive Gear Rating with two PTOs	Drive
		lb-ft (N•m)	lb-ft (N•m)	
Side/Side - 1000/1350/2000/B 210/B 220	3 and 9 o'clock	250(339)	200[3] (271)[2]	Turbine
Side/Side - 3000[1]/B 300[1]/B 400[1]/B 3400 xFE[1]	4 and 8 o'clock	485(660)	685[3,4](930)[3,4]	Engine
Top/Side - 3000	1 and 8 o'clock	485(660)	685[3,4](930)[3,4]	Engine
3700	1 and 8 o'clock	485(660)	—	Engine
4000[1]/B 500[1]	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.

Features + Advantages

Transmission Mounted PTOs used with an Allison Transmission can:
- Always be connected to the engine due to the torque converter and power shift technology. Split Shaft PTOs also provide this benefit.
- Use hydraulic pressure to engage a hot-shift clutch
- Allow for constant PTO speed at varying low vehicle speed operation due to the torque converter
- Be used in all gears for mobile operation

PTO Delete Option
Available on 3000, 3500, 4000 and 4500 RDS.

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.*

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 you when a specific maintenance function is required.

2nd Reverse
Allison 2nd Reverse in the 4700 RDS 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.

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 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.

*OLS is not available for 4700 RDS with retarder

Physical Description

Base Model	Vocation	Length[1]	Depth[2] w/Deep Oil Pan/Sump	Depth[2] w/Shallow Oil Pan/Sump	Dry Weight
		in (mm)	in (mm)	in (mm)	lbs (kg)
1000/2000[3]					
SAE No. 3 mounting	RDS	28.01 (711.4)	11.22 (285.1)	10.71 (272.0)	323 (146.5)
SAE No. 2 mounting	RDS	28.39 (721.1)	11.22 (285.1)	10.71 (272.0)	323 (146.5)
3000					
Basic model	RDS[4]	28.30 (718.7)	12.90 (327.7)	11.14 (283.0)	535 (243)
With PTO only	RDS[4]	32.50 (825.4)	12.90 (327.7)	11.14 (283.0)	575 (261)
With retarder only	RDS[4]	28.29 (718.5)	12.90 (327.7)	11.14 (283.0)	615 (279)
With PTO + retarder	RDS[4]	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					
Basic model	RDS[5]	30.54 (775.8)	14.75 (374.7)	13.29 (337.6)	831 (377)
With PTO only	RDS[5]	33.41 (848.8)	14.75 (374.7)	13.29 (337.6)	893 (405)
With retarder only	RDS[5]	30.54 (775.8)	14.75 (374.7)	13.29 (337.6)	906 (411)
With PTO + retarder	RDS[5]	33.41 (848.8)	14.75 (374.7)	13.29 (337.6)	968 (439)
4700/4800					
Basic model	RDS	40.61 (1031.5)	14.89 (378.2)	—	1087 (493)
With PTO only	RDS	43.49 (1104.5)	14.89 (378.2)	—	1149 (521)
With retarder only	RDS	40.61 (1031.5)	14.89 (378.2)	—	1162 (527)
With PTO + retarder	RDS	43.49 (1104.5)	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.

Gear Ratios Torque Converter Multiplication Not Included

Model	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Reverse	2nd Reverse
1000/1350/2100 2200/2300/2350[1]	3.10:1	1.81:1	1.41:1	1.00:1	0.71:1	0.61:1[2]	—	-4.49:1	—
2500/2550[1]	3.51:1	1.90:1	1.44:1	1.00:1	0.74:1	0.64:1[2]	—	-5.09:1	—
3000	3.49:1	1.86:1	1.41:1	1.00:1	0.75:1	0.65:1	—	-5.03:1	—
3500	4.59:1	2.25:1	1.54:1	1.00:1	0.75:1	0.65:1	—	-5.00:1	—
4000	3.51:1	1.91:1	1.43:1	1.00:1	0.74:1	0.64:1	—	-4.80:1	—
4500	4.70:1	2.21:1	1.53:1	1.00:1	0.76:1	0.67:1	—	-5.55:1	—
4700	7.63:1[2]	3.51:1	1.91:1	1.43:1	1.00:1	0.74:1	0.64:1	-4.80:1	-17.12:1[3]

1 Check with your OEM to ensure offerings. 2 Manually selected first gear. 3 SEM/LRTP or LRTP only is required.

"Having tools like the Allison transmission and **knowing it's reliable** is key to our success. Our drivers know it. Everybody knows it."

Kevin Drenth | Chicago Dispatch Manager
Ozinga RMC, Inc.

A World of Support

From our headquarters in Indianapolis, Indiana, USA, to our manufacturing plants in Hungary and India, to approximately 1,500 Allison Authorized Distributors and Dealers around the globe, you are never far from the products, training, service and support you demand.

Our support starts from the moment an Allison transmission is specified. We work with you to ensure that the model and ratings fit your engine to create a tailored package of powerful performance and reliable efficiency. When you need parts or service, you can count on global access to factory-trained specialists and Allison Genuine Parts™.

Our Promise

Provide the most reliable and valued propulsion solutions in the world to enable our customers to work more efficiently.

- Trusted by more than 300 OEMs worldwide
- A strong history of innovation with more than 1,000 patents
- Improved fuel economy with FuelSense® 2.0 with DynActive® Shifting technology
- Over seven million fully automatic transmissions delivered

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