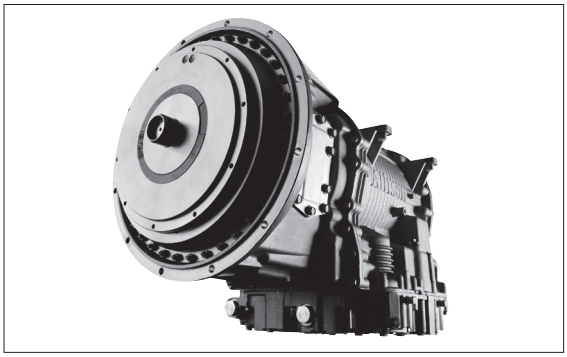
Allison Torqmatic™

T270 (R) specification

For Applications with engines up to 179 kW (240 hp) gross input power and up to 900 N•m gross input torque.



RATINGS

	Gross Input Torque N•m	Gross Input Power[1] kW (hp)	GVW kg	Vocations
City Bus	900	179 (240)	24,000	City Bus
Tour Coach	900	179 (240)	24,000	Tour Coach

(1). Gross Power rating as defined by ISO 1585 or SAE J1995.

DRIVETRAIN INTERFACES

Acceptable full-load engine governed speed	1950 – 2800 rpm
Acceptable engine idle speed range (with transmission in Drive)	500 – 800 rpm
Maximum output shaft speed at 105 km/hr - retarder-equipped models only	3600 rpm

MOUNTING

To Engine	SAE No.2
In Chassis	Rear support available (required for some installations)

TORQUE CONVERTER

Type One stage, three element, polyphase. Includes standard integral damper which is operational in lockup.

Model	Stall Torque Ratio
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

MECHANICAL RATIOS (Gear ratios do not include torque converter multiplication)

Range

First	3.49 : 1
Second	1.86 : 1
Third	1.41 : 1
Fourth	1.00 : 1
Fifth	0.75 : 1
Sixth	0.65 : 1
Reverse	-5.03 : 1

CONTROL SYSTEM

Description Allison 5th Generation Electronic Controls with closed loop adaptive shifts

Shift Sequences [C = Converter mode (lockup clutch disengaged); L = Lockup mode (lockup clutch engaged)]

City Bus	Tour Coach
Standard: 1C–[1L]–2C–2L–3L–4L	Standard: 1C–[1L]–2C–2L–3L–4L–5L
Optional: 1C–[1L]–2C–2L–3L–4L–5L	Optional: 1C–[1L]–2C–2L–3L–4L–5L–6L

TCM must be calibrated for "1L option. Second-gear-start calibrations are not available for all vehicle applications.

Driver-to-Transmission Interface Cab-mounted shift selector, pushbutton or lever with two-digit display (range selected and range attained)

Communication Protocol - Engine/Vehicle Systems Interface SAE J1939, IESCAN, PT-CAN

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PHYSICAL DESCRIPTION

	Installation Length*	Dry Weight	Depth below transmission centerline	
			With Deep Oil Sump (Standard)	With Shallow Oil Sump (Optional)
Basic Model	738 mm	243 kg	274 mm	283 mm
With Retarder	738 mm	279 kg	274 mm	283 mm

*Approximate length from engine housing to output flange (depending on output flange type)

OUTPUT RETARDER PROVISION (OPTION)

Type Integral, hydraulic

	Capacity	
	Torque	Power
Low	1490 N•m	298 kW (400 hp)
Medium	1763 N•m	373 kW (500 hp)

OIL SYSTEM

Allison approved fluids: TES 295 and TES 389	
Capacity, excluding external circuits	
With Deep Oil Sump	27 litres
With Shallow Oil Sump	25 litres
Main circuit oil filter	Replaceable element, integral
Cooler circuit oil filter	Replaceable element, integral
Electronic oil level sensor (OLS)	Standard

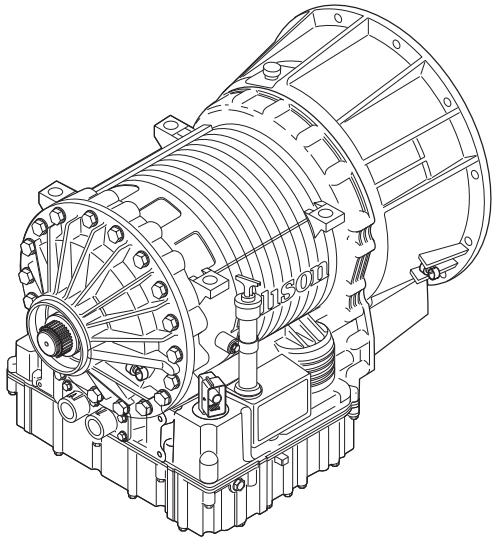
SPEEDOMETER PROVISION

Description Non-zero-crossing square wave
8, 16 or 40 pulses per revolution of transmission output shaft
Location Electronic output from TCM

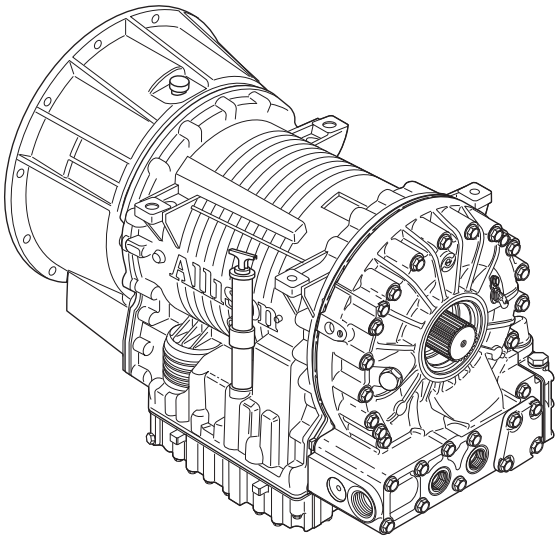
TACHOGRAPH PROVISION

Tone wheel 4 or 6-tooth
Mounting M18 x 1.5 metric thread
Location Transmission rear cover or retarder housing

T270



T270 (R)



Allison Transmission

www.allisontransmission.com