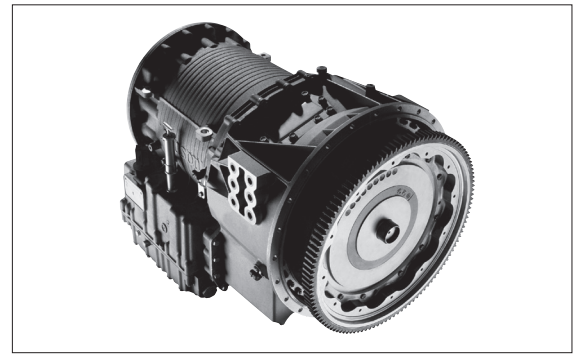




4000/4200 Series



International Series 4000/4200

RATINGS

Model ⁽¹⁾		Gross Input Torque ⁽²⁾ N•m	Gross Input Power ⁽²⁾ kW (hp)	Gross Input Torque ⁽²⁾⁽³⁾ N•m	Gross Input Power ⁽²⁾⁽³⁾ kW (hp)	GWW kg	GCW kg
4000	General	2400	421 (565)	2508 ⁽⁴⁾	421 (565)	n/a	n/a
	Fire Truck, Emergency, ARFF Heavy Equipment Transporter	2508	447 (600)	n/a	n/a	n/a	n/a
	Refuse Vehicles	2102	373 (500)	n/a	n/a	n/a	n/a
	Ag Spreader, Sprayer, Blower, Feedlot Truck	2400	421 (565)	n/a	n/a	n/a	n/a
4000 MH	MH Motorhome	2644	485 (650)	n/a	n/a	n/a	n/a
4000 ORS	Articulated Dump	2203	358 (480)	n/a	n/a	68,500	n/a
	Rigid Dump	2102	358 (480)	n/a	n/a	57,000	n/a
4000 SP	Specialty / Military	2644	485 (650)	n/a	n/a	n/a	n/a
4200 ORS	Articulated Dump	2305	358 (480)	n/a	n/a	81,000	n/a

(1). Models including vocational designations (ie: ORS, OFS, SP, MH) are for global markets. All other models within this document are targeted for outside North American markets only.
 (2). Gross ratings as defined by ISO 1585 or SAE J1995. (3). Shift Energy Management (SEM) engine controls and torque limiting are required to obtain this rating. (4). Only available in gears three through six.

DRIVETRAIN INTERFACES

Acceptable full-load engine governed speed	1700 – 2300 rpm
Acceptable engine idle speed range (with transmission in Drive)	500 – 800 rpm

MOUNTING

To Engine	SAE No.1
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-521	2.42
TC-531	2.34
TC-541	1.90
TC-551	1.79
TC-561	1.58

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

Range	
First	3.51 : 1
Second	1.91 : 1
Third	1.43 : 1
Fourth	1.00 : 1
Fifth	0.74 : 1
Sixth	0.64 : 1
Reverse	-4.80 : 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)] Option 1: 1C-[1L]-2C-2L-3L-4L Option 2: 1C-[1L]-2C-2L-3L-4L-5L Option 3: 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

PHYSICAL DESCRIPTION

	Length*	Dry Weight	Depth below transmission centerline
Basic Model	793 mm	377 kg	375 mm
With PTO Drive Provision	866 mm	405 kg	375 mm
With Retarder	793 mm	411 kg	375 mm
With PTO Drive Provision and Retarder	866 mm	439 kg	375 mm

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

ENGINE-DRIVEN POWER TAKE-OFF PROVISION

PTO drive	Engine-driven helical gear	
PTO mounting pads	Ten-bolt, 1 o'clock and 8 o'clock positions (as viewed from rear)	
PTO drive gear ratio	1 o'clock position	1.00 x engine speed
	8 o'clock position	1.00 x engine speed
PTO drive gear rating (continuous operation)	Using one PTO:	930 N•m
	Total using two PTO's:	1595 N•m
PTO Drive Gear	97 tooth	

OUTPUT RETARDER PROVISION (OPTION)

Type	Integral, hydraulic		
	Capacity		Power
	Torque		
Low	1763 N•m		373 kW (500 hp)
Medium	2170 N•m		447 kW (600 hp)
High	2710 N•m		447 kW (600 hp)

OIL SYSTEM

Allison approved fluids: TES 295 and TES 389	
Capacity including PTO, excluding external circuits	
With Deep Oil Sump	45 litres
With Shallow Oil Sump	38 litres
Main circuit oil filter	Replaceable element, integral
Cooler circuit oil filter	Replaceable element, integral
Electronic oil level sensor (OLS)	Standard

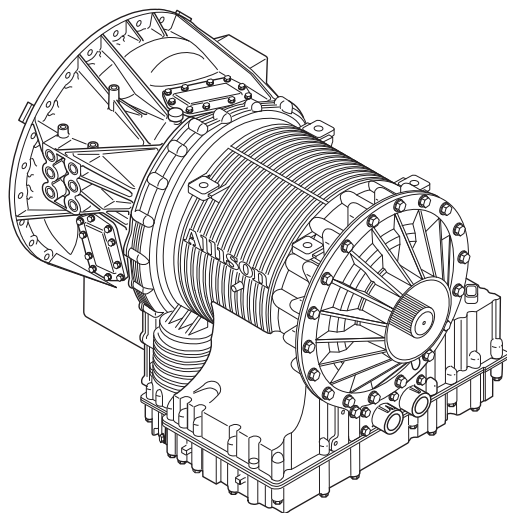
SPEEDOMETER PROVISION

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

4000/4200 Series
With PTO and Shallow Oil Sump



4000/4200 Series
With PTO and Retarder

