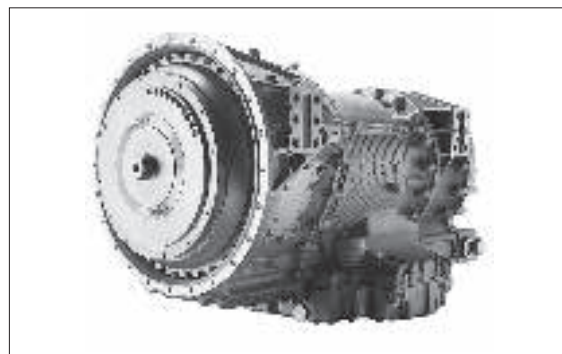




4700/4800 Series



International Series 4700/4800

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)	GVW kg	GCW kg
4700	General, Construction	2400	421 (565)	2508 ⁽⁴⁾	421 (565)	n/a	n/a
	Airport Rescue and Fire-Fighting (ARFF) Vehicles, 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
4700 OFS	Oil Field Series	2508	447 (600)	n/a	n/a	n/a	n/a
4700 ORS	Articulated Dump	2305	358 (480)	n/a	n/a	81,000	n/a
4700 SP	Specialty / Military	2508	447 (600)	n/a	n/a	n/a	n/a
4750 OFS	Oil Field Service	2644	496 (665)	n/a	n/a	n/a	n/a
4800	Airport Rescue and Fire-Fighting (ARFF) Vehicle	2644	522 (700)	n/a	n/a	n/a	n/a
4800 ORS	Articulated Dump	2400	421 (565)	2508 ⁽⁴⁾	421 (565)	96,000	n/a
4800 SP	Specialty / Military	2644	597 (800)	n/a	n/a	n/a	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 Power rating 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 the gears four through seven.

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	7.63 : 1
Second	3.51 : 1
Third	1.91 : 1
Fourth	1.43 : 1
Fifth	1.00 : 1
Sixth	0.74 : 1
Seventh	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-5L

Option 2: 1C-[1L]-2C-2L-3L-4L-5L-6L

Option 3: 1C-[1L]-2C-2L-3L-4L-5L-6L-7L

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	1049 mm	493 kg	375 mm
With PTO Drive Provision	1122 mm	521 kg	375 mm
With Retarder	1049 mm	527 kg	375 mm
With PTO Drive Provision and Retarder	1122 mm	555 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	
	Torque	Capacity Power
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 excluding external circuits	
With PTO	51 litres
Without PTO	48 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

4700/4800 Series

With Retarder, PTO and Deep oil sump

