



## 3700 Series

### RATINGS

		Input Torque Gross N•m (lb-ft)	Input Power Gross <sup>1</sup> Kw (hp)	Turbine Torque Net <sup>2</sup> N•m (lb-ft)	GVW kg (lbs)	GCW kg (lbs)
3700	General	990 (730)	205 (275)	1830 (1350)	n/a	n/a
	Fire Truck, Emergency	1254 (925)	239 (320)	1996 (1450)	n/a	n/a
3700 SP	Specialty	1186 (875)	224 (300)	1996 (1450)	n/a	n/a
	Military Support and Tactical	1186 (875)	246 (330)	1996 (1450)	n/a	n/a
	Military Combat	1186 (875)	246 (330)	1996 (1450)	n/a	n/a

1. Gross Power rating as defined by ISO 1585 or SAE J1995. 2. Turbine Torque limit based on iSCAAN standard deductions.

### DRIVETRAIN INTERFACES

Acceptable full-load engine governed speed	2000 – 2800 rpm
Acceptable engine idle speed range (with transmission in Drive)	500 – 820 rpm
Maximum output shaft speed at 105 km/hr (65 mi/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	6.93 : 1
Second	4.18 : 1
Third	2.24 : 1
Fourth	1.69 : 1
Fifth	1.20 : 1
Sixth	0.90 : 1
Seventh	0.78 : 1
Reverse	-6.03 : 1

### CONTROL SYSTEM

**Description** Allison 4th 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. First gear requires pre-selection.

**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, SAE J1587, ISO 9141, IESCAN

## PHYSICAL DESCRIPTION

	Length*	Dry weight
Basic Model	791.3 mm (31.7 in)	530 kg (1170 lbs)
With PTO Drive Provision	791.3 mm (31.7 in)	557 kg (1230 lbs)
With Retarder	791.3 mm (31.7 in)	563 kg (1242 lbs)
With PTO Drive Provision and Retarder	791.3 mm (31.7 in)	590 kg (1302 lbs)

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

## ENGINE-DRIVEN POWER TAKE-OFF PROVISION

Mounting pad positions viewed from rear	Drive gear rating with one PTO N•m (lb-ft)	Drive gear rating with two PTOs N•m (lb-ft)	PTO Drive Gear	Drive
4 o'clock and 8 o'clock (Standard)	660 (485)	930 (685)	68 tooth	Engine
1 o'clock and 8 o'clock (Optional)	660 (485)	930 (685)	83 tooth	Engine
Fire and Emergency	910 (670)	930 (685) <sup>1</sup>		

<sup>1</sup> Intermittent rating to 1068 N•m

## OUTPUT RETARDER PROVISION (OPTION)

Type	Capacity		Integral, hydraulic
	Torque	Power	
Level 3	2710 N•m (2000 lb-ft)	447 kW (600 hp)	
Level 2	1760 N•m (1300 lb-ft)	373 kW (500 hp)	
Level 1	1490 N•m (1100 lb-ft)	298 kW (400 hp)	

## OIL SYSTEM

Oil type	Transynd™, DEXRON®-III
Capacity, excluding external circuits	
With Deep Oil Sump	37 litres (39 quarts)
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 9 or 18 pulses per revolution of transmission output shaft
Location	Electronic output from TCM

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