



1000 Series

RATINGS

| Model ⁽¹⁾ | | Input Torque Gross N•m (lb-ft) | Input Power Gross ⁽²⁾ Kw (hp) | Turbine Torque Net ⁽³⁾ N•m (lb-ft) | GVW kg (lbs) | GCW kg (lbs) |
|----------------------|--|--|---|--|-----------------|-----------------|
| 1000 | General | 780 (575) | 224 (300) | 1152 (850) | 9000 (19,850) | 11,800 (26,001) |
| | Refuse, On-Highway, | 746 (550) | 224 (300) | 1152 (850) | 7500 (16,540) | 7500 (16,540) |
| | Transit Bus, Shuttle Bus, Coach, Non-North America School Bus | 610 (450) | 149 (200) | 1017 (750) | 7500 (16,540) | 7500 (16,540) |
| 1000 MH | Motorhome | 746 (550) | 224 (300) | 1152 (850) | 10,000 (22,000) | 11,800 (26,001) |
| 1000 SP | Specialty Vehicles | CONTACT YOUR ALLISON REPRESENTATIVE FOR DETAILS | | | | |

(1). Models including vocational designations (ie: ORS, OFS, SP, MH) are for global markets. All other models within this document are targeted for non North American markets only.
 (2). Gross Power rating as defined by ISO 1585 or SAE J1995. (3). Turbine Torque limit based on iSCAAN standard deductions.

DRIVETRAIN INTERFACES

| | |
|---|------------------|
| Acceptable full-load engine governed speed | 2200 – 3800* rpm |
| Acceptable engine idle speed range (with transmission in Drive) | 500 – 820 rpm |
| Maximum output shaft speed at 105 km/hr (65 mi/hr) | 5000 rpm |

* Engines with full load governed speed greater than 3800 rpm require Application Engineering review

MOUNTING

To Engine SAE No.3, SAE No.2

TORQUE CONVERTER

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

| Model | Stall Torque Ratio |
|--------|--------------------|
| TC-210 | 2.05 |
| TC-211 | 1.91 |
| TC-221 | 1.73 |
| TC-222 | 1.58 |

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

| Range | |
|---------|-----------|
| First | 3.10 : 1 |
| Second | 1.81 : 1 |
| Third | 1.41 : 1 |
| Fourth | 1.00 : 1 |
| Fifth | 0.71 : 1 |
| Sixth | 0.61 : 1 |
| Reverse | -4.49 : 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

Driver-to-Transmission Interface

Cab-mounted shift selector

Communication Protocol - Engine/Vehicle Systems Interface

SAE J1939, SAE J1587, ISO 9141, IESCAN

PHYSICAL DESCRIPTION

| | Installation Length* | Dry Weight | Depth below transmission centerline | |
|----------|----------------------|------------------|-------------------------------------|-------------------------------|
| | | | With Shallow Oil Sump (Standard) | With Deep Oil Sump (Optional) |
| SAE No.3 | 729 mm (28.7 in) | 150 kg (330 lbs) | 272 mm (10.72 in) | 285 mm (11.22 in) |
| SAE No.2 | 739 mm (29.1 in) | 150 kg (330 lbs) | 272 mm (10.72 in) | 285 mm (11.22 in) |

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

TURBINE-DRIVEN POWER TAKE-OFF PROVISION

| | |
|--|--|
| PTO drive | Torque converter turbine-driven spur gear |
| PTO mounting pads | Six-bolt, 3 o'clock and 9 o'clock positions (as viewed from rear) |
| PTO drive gear rating (continuous operation) | Using one PTO: 339 N•m (250 lb-ft) Total using two PTO's: 271 N•m (200 lb-ft) |
| PTO drive gear ratio | 1.00 x turbine speed |
| PTO drive gear | 64 tooth |

PARK PAWL*

*Excluding refuse vocation

OIL SYSTEM

Allison approved fluids: TES 295 and TES 389

Capacity, excluding external circuits

| | |
|-------------------------|-----------------------|
| With Deep Oil Pan | 14 litres (15 quarts) |
| With Shallow Oil Pan | 12 litres (13 quarts) |
| Spin on canister filter | 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 | 6-tooth |
| Mounting | M18 x 1.5 metric thread |
| Location | Transmission rear cover |

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