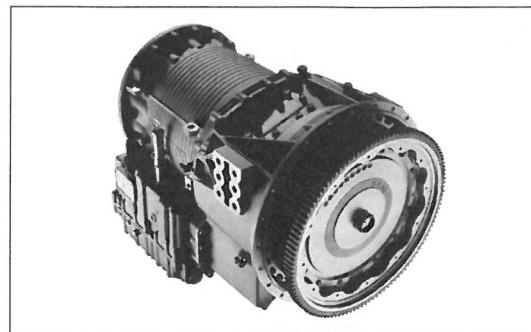




## T425 (R) specification

For Applications with engines up to 283 kW (380 hp) gross input power and up to 1750 N•m gross input torque.



### RATINGS

|            | Gross Input Torque<br>N•m | Gross Input Power <sup>(1)</sup><br>kW (hp) | GVW<br>kg | Vocations  |
|------------|---------------------------|---|-----------|------------|
| City Bus   | 1650                      | 283 (380)                                   | 29,000    | City Bus   |
| Tour Coach | 1750                      | 283 (380)                                   | 27,000    | Tour Coach |

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

### 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

|                                     |  |
|-------------------------------------|--|
| <b>Description</b>                  | Allison 5th Generation Electronic Controls with closed loop adaptive shifts              |
| <b>Shift Sequences</b>              | [C = Converter mode (lockup clutch disengaged); L = Lockup mode (lockup clutch engaged)] |
| City Bus                            | Tour Coach   |
| Standard: 1C-[1L]-2C-2L-3L-4L-5L    | Standard: 1C-[1L]-2C-2L-3L-4L-5L   |
| Optional: 1C-[1L]-2C-2L-3L-4L-5L-6L | Optional: 1C-[1L]-2C-2L-3L-4L-5L-6L  |
| Optional: 1C-[1L]-2C-2L-3L-4L       | Optional: 1C-[1L]-2C-2L-3L-4L  |

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**

|               | Installation Length* | Dry Weight | Depth below transmission centerline |
|---------------|----------------------|------------|-------------------------------------|
| Basic Model   | 795 mm               | 377 kg     | 338 mm                              |
| With Retarder | 795 mm               | 411 kg     | 338 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    | 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**

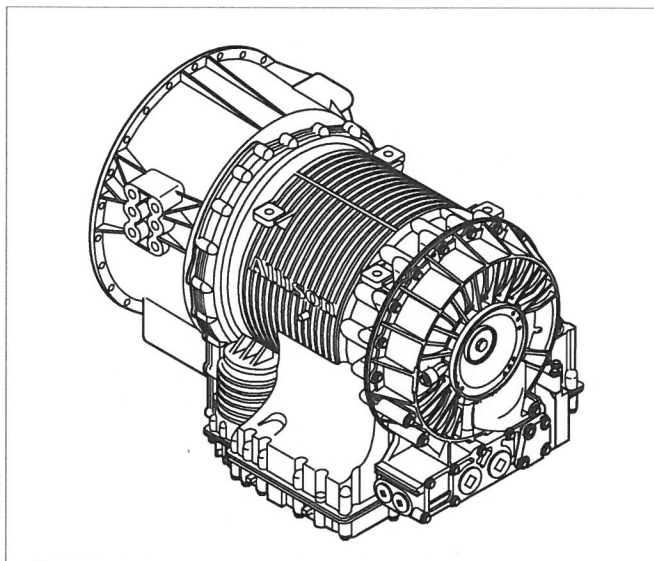
|  |                               |
|--|-------------------------------|
| Allison approved fluids: TES 295 and TES 389   |                               |
| Capacity, w/o PTO, excluding external circuits | 38 litres                     |
| Main circuit oil filter                        | Replaceable 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 |

**T425****Contact Information:**

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