



# TRANSMISSION RATINGS — 4000 PRODUCT FAMILY —

## ALLISON ON-HIGHWAY TRANSMISSIONS

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## 1.0 MODELS AND RATINGS

### 1.1 TRANSMISSION MODEL NAMES

The 4000 Product Family is comprised of several individual transmission models. The names of most transmission models consist of two elements, the base model number and the vocational model name or series. For a description, refer to [Transmission Families and Models](#).

### 1.2 NOTES REGARDING INFORMATION IN THIS DOCUMENT

The following common items are applicable to all tables in this document.

1. Values in U.S. units shown in parenthesis ( ) are for reference only. Conversions between metric and U.S. units are not necessarily exactly equivalent.
2. Gross power rating as defined by ISO 1585 or SAE J1995.
3. Turbine Torque limit based on [iSCAAN](#) standard deductions.
4. Refer to [Technical Document \(TD\) 180-2, Vocational Compatibility for Allison On-Highway Transmissions](#), to determine which rating applies to your vocation.
  - For example, a 4000 RDS model used in a front-loader landfill refuse truck uses the refuse rating. That same transmission model used in a concrete mixer in the heavy haul service category will use the heavy equipment transport (HET) rating.

## 2.0 BUS MODELS

### 2.1 B500

Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)	Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
						min rpm	max rpm	min rpm	max rpm
<b>Transit Bus</b>	313 (420)	1763 (1300)	3322 (2450)	n/a n/a	n/a n/a	1700	2300	500 *	800
<b>Intercity Coach</b>	410 (550)	2305 (1700)	3322 (2450)	n/a n/a	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

### 3.0 EVS (Emergency Vehicle Series)

#### 3.1 4000 EVS

Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)		Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
							min rpm	max rpm	min rpm	max rpm
Emergency Vehicles	451 (605)	2508 (1850)		3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
Aircraft Rescue and Fire-Fighting (ARFF) Vehicles	451 (605)	2271 (1675)		3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

#### 3.2 4500 EVS

Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)		Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
							min rpm	max rpm	min rpm	max rpm
Emergency Vehicles, ARFF Vehicles Without Torque Limiting	451 (605)	All Gear Ranges 2400 (1770)		3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
Emergency Vehicles, ARFF Vehicles With Torque Limiting	451 (605)	1st Gear 2400 (1770)	Gears 2-6 2508 (1850)	3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

### 3.3 4700 EVS

Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)	Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
						min rpm	max rpm	min rpm	max rpm
Aircraft Rescue and Fire-Fighting (ARFF) Vehicles	451 (605)	2508 (1850)	3795 (2800)	n/a n/a	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

**NOTE:** 2nd Reverse Feature requires SEM/LRTP, or LRTP Only, to limit turbine torque in deep reverse to 1268 Nm (935 lb-ft). Ref [TD188 \(4th Gen\)](#), [TD191 \(5th Gen\)](#)

### 3.4 4800 EVS

Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)	Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
						min rpm	max rpm	min rpm	max rpm
Aircraft Rescue and Fire-Fighting (ARFF) Vehicles	522 (700)	2644 (1950)	3795 (2800)	n/a n/a	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

**NOTE:** 2nd Reverse Feature requires SEM/LRTP, or LRTP Only, to limit turbine torque in deep reverse to 1268 Nm (935 lb-ft). Ref [TD188 \(4th Gen\)](#), [TD191 \(5th Gen\)](#)

### 3.5 4850 EVS

Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)	Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
						min rpm	max rpm	min rpm	max rpm
Aircraft Rescue and Fire-Fighting (ARFF) Vehicles	574 (770)	2644 (1950)	3795 (2800)	n/a n/a	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

**NOTE:** 2nd Reverse Feature requires SEM/LRTP, or LRTP Only, to limit turbine torque in deep reverse to 1268 Nm (935 lb-ft). Ref [TD188 \(4th Gen\)](#), [TD191 \(5th Gen\)](#)

### 4.0 HS (Highway Series)

#### 4.1 4000 HS

Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)		Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
							min rpm	max rpm	min rpm	max rpm
Highway Without Torque Limiting	433 (580)	All Gear Ranges 2400 (1770)		3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
Highway With Torque Limiting	433 (580)	Gears 1-2 2400 (1770)	Gears 3-6 2508 (1850)	3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

#### 4.2 4500 HS

Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)			Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
								min rpm	max rpm	min rpm	max rpm
Highway Without Torque Limiting	433 (580)	All Gear Ranges 2237 (1650)			3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
Highway With Torque Limiting	433 (580)	1st Gear 2237 (1650)	2nd Gear 2400 (1770)	Gears 3-6 2508 (1850)	3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

**5.0 MH (Motor Home Series)**

**5.1 4000 MH**

Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)	Net Turbine Torque Nm (lb-ft)	GVW		Full Load Engine Governed Speed		Engine Idle Speed in Drive	
				kg (lbs)	kg (lbs)	min rpm	max rpm	min rpm	max rpm
Motor Home	485 (650)	2644 (1950)	3795 (2800)	n/a n/a	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

## 6.0 OFS (Oil Field Series)

### 6.1 4430 OFS

Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)	Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
						min rpm	max rpm	min rpm	max rpm
Oil Field Service	317 (425)	1650 (1217)	3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

### 6.2 4500 OFS

Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)	Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
						min rpm	max rpm	min rpm	max rpm
Oil Field Service and Yard Logger	433 (580)	2237 (1650)	3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously



### 6.3 4700 OFS

Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)	Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
						min rpm	max rpm	min rpm	max rpm
Oil Field Service	451 (605)	2508 (1850)	3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

**NOTE:** 2nd Reverse Feature requires SEM/LRTP, or LRTP Only, to limit turbine torque in deep reverse to 1268 Nm (935 lb-ft). Ref [TD188 \(4th Gen\)](#), [TD191 \(5th Gen\)](#)

### 6.4 4750 OFS

Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)	Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
						min rpm	max rpm	min rpm	max rpm
Oil Field Service	496 (665)	2644 (1950)	4067 (3000)	n/a n/a	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

**NOTE:** 2nd Reverse Feature requires SEM/LRTP, or LRTP Only, to limit turbine torque in deep reverse to 1268 Nm (935 lb-ft). Ref [TD188 \(4th Gen\)](#), [TD191 \(5th Gen\)](#)

## 7.0 ORS (Off-Road Series)

### 7.1 4000 ORS

Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)	Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
						min rpm	max rpm	min rpm	max rpm
Articulated Dump	358 (480)	2203 (1625)	3322 (2450)	68,500 (151,017)	n/a n/a	1700	2300	500 *	800
Rigid Rear Dump	358 (480)	2102 (1550)	3322 (2450)	57,000 (125,663)	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

### 7.2 4200 ORS

Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)	Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
						min rpm	max rpm	min rpm	max rpm
Articulated Dump	358 (480)	2305 (1700)	3322 (2450)	81,000 (178,574)	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

### 7.3 4430 ORS

Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)	Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
						min rpm	max rpm	min rpm	max rpm
Articulated Dump	283 (380)	1675 (1235)	3322 (2450)	68,500 (151,017)	n/a n/a	1700	2300	500 *	800
Rigid Rear Dump	283 (380)	1675 (1235)	3322 (2450)	68,500 (151,017)	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

### 7.4 4500 ORS

Rating Without Torque Limiting	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)	Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
						min rpm	max rpm	min rpm	max rpm
Articulated Dump	358 (480)	All Gear Ranges 2102 (1550)	3322 (2450)	68,500 (151,017)	n/a n/a	1700	2300	500 *	800
Rigid Rear Dump	358 (480)	2102 (1550)	3322 (2450)	68,500 (151,017)	n/a n/a	1700	2300	500 *	800
Rating With Torque Limiting	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)	Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
						min rpm	max rpm	min rpm	max rpm
Articulated Dump	358 (480)	Gears 1-2: 2102 (1550) Gears 3-6: 2203 (1625)	3322 (2450)	68,500 (151,017)	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

7.5 4600 ORS										
Rating Without Torque Limiting	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)		Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
							min rpm	max rpm	min rpm	max rpm
Articulated Dump	358 (480)	All Gear Ranges 2102 (1550)		3322 (2450)	81,000 (178,574)	n/a n/a	1700	2300	500 *	800
Rigid Rear Dump	358 (480)	2102 (1550)		3322 (2450)	81,000 (178,574)	n/a n/a	1700	2300	500 *	800
Rating With Torque Limiting	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)		Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
							min rpm	max rpm	min rpm	max rpm
Articulated Dump	358 (480)	Gears 1-2 2102 (1550)	Gears 3-6 2305 (1700)	3322 (2450)	81,000 (178,574)	n/a n/a	1700	2300	500 *	800
Rigid Rear Dump	358 (480)	2102 (1550)	2305 (1700)	3322 (2450)	81,000 (178,574)	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

7.6 4700 ORS										
Rating Without Torque Limiting	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)		Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
							min rpm	max rpm	min rpm	max rpm
Articulated Dump	373 (500)	All Gear Ranges 2305 (1700)		3322 (2450)	81,000 (178,574)	n/a n/a	1700	2300	500 *	800
Mining/Off-Highway (Hauling rock, ore, gravel, dirt, etc.)	433 (580)	All Gear Ranges 2400 (1770)		3525 (2600)	62,596 (138,000)	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

**NOTE:** 2nd Reverse Feature requires SEMLRTP, or LRTP Only, to limit turbine torque in deep reverse to 1268 Nm (935 lb-ft). Ref [TD191: 2nd Reverse Feature \(5th Gen\)](#)

7.7 4800 ORS										
Rating Without Torque Limiting	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)		Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
							min rpm	max rpm	min rpm	max rpm
Articulated Dump	451 (605)	All Gear Ranges 2508 (1850)		3525 (2600)	96,000 (211,644)	n/a n/a	1700	2300	500 *	800
Rigid Rear Dump	451 (605)	2508 (1850)		3525 (2600)	96,000 (211,644)	n/a n/a	1700	2300	500 *	800
Rating With Torque Limiting	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)		Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
							min rpm	max rpm	min rpm	max rpm
Mining/Off-Highway (Hauling rock, ore, gravel, dirt, etc.)	451 (605)	Gears 1-3 2400 (1770)	Gears 4-7 2508 (1850)	3525 (2600)	62,596 (138,000)	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

**NOTE:** 2nd Reverse Feature requires SEMLRTP, or LRTP Only, to limit turbine torque in deep reverse to 1268 Nm (935 lb-ft). Ref [TD191: 2nd Reverse Feature \(5th Gen\)](#)

## 8.0 RDS (Rugged Duty Series)

### 8.1 4000 RDS

Rating Without Torque Limiting	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)		Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
							min rpm	max rpm	min rpm	max rpm
<b>On/Off-Highway</b>	433 (580)	All Gear Ranges 2400 (1770)		3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
<b>Refuse</b>	373 (500)	2102 (1550)		3322 (2450)	n/a n/a	n/a n/a	1700	2300	500 *	800
<b>Specialty PTO</b>	433 (580)	2400 (1770)		3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
<b>Heavy Equipment Transporter (HET)</b>	451 (605)	2508 (1850)		3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
Rating With Torque Limiting	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)		Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
							min rpm	max rpm	min rpm	max rpm
<b>On/Off-Highway</b>	433 (580)	Gears 1-2 2400 (1770)	Gears 3-6 2508 (1850)	3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

8.2 4500 RDS											
Rating Without Torque Limiting	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)			Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
								min rpm	max rpm	min rpm	max rpm
<b>On/Off-Highway</b>	433 (580)	All Gear Ranges 2237 (1650)			3322 (2450)	n/a n/a	n/a n/a	1700	2300	500 *	800
<b>Refuse</b>	373 (500)	2102 (1550)			3322 (2450)	n/a n/a	n/a n/a	1700	2300	500 *	800
<b>Specialty PTO</b>	433 (580)	2237 (1650)			3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
<b>Heavy Equipment Transporter (HET)</b>	451 (605)	2237 (1650)			3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
Rating With Torque Limiting	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)			Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
<b>On/Off-Highway</b>	433 (580)	1st Gear 2237 (1650)	2nd Gear 2400 (1770)	Gears 3-6 2508 (1850)	3322 (2450)	n/a n/a	n/a n/a	1700	2300	500 *	800
<b>Refuse</b>	Not Applicable										
<b>Specialty PTO</b>	433 (580)	2237 (1650)	2400 (1770)	2400 (1770)	3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
<b>Heavy Equipment Transporter (HET)</b>	451 (605)	2237 (1650)	2508 (1850)	2508 (1850)	3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

### 8.3 4700 RDS

Rating Without Torque Limiting	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)		Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
							min rpm	max rpm	min rpm	max rpm
<b>On/Off-Highway</b>	433 (580)	All Gear Ranges 2400 (1770)		3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
<b>Refuse</b>	373 (500)	2102 (1550)		3322 (2450)	n/a n/a	n/a n/a	1700	2300	500 *	800
<b>Heavy Equipment Transporter (HET)</b>	451 (605)	2508 (1850)		3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
Rating With Torque Limiting	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)		Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
<b>On/Off-Highway</b>	433 (580)	Gears 1-3 2400 (1770)	Gears 4-7 2508 (1850)	3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

**NOTE:** 2nd Reverse Feature requires SEM/LRTP, or LRTP Only, to limit turbine torque in deep reverse to 1268 Nm (935 lb-ft). Ref [TD188 \(4th Gen\)](#), [TD191 \(5th Gen\)](#)

## 9.0 SP (Specialty Series)

### 9.1 4000 SP

Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)		Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
							min rpm	max rpm	min rpm	max rpm
Specialty / Military	485 (650)	2644 (1950)		3795 (2800)	n/a n/a	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

### 9.2 4430 SP

Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)		Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
							min rpm	max rpm	min rpm	max rpm
Specialty / Military	283 (380)	1600 (1180)		3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

### 9.3 4500 SP

Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)		Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
							min rpm	max rpm	min rpm	max rpm
Specialty / Military Without Torque Limiting	451 (605)	All Gear Ranges 2400 (1770)		3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
Specialty / Military With Torque Limiting	451 (605)	1st Gear 2400 (1770)	Gears 2-6 2508 (1850)	3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

9.4 4700 SP									
Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)	Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
						min rpm	max rpm	min rpm	max rpm
Specialty / Military	451 (605)	2508 (1850)	4067 (3000)	n/a n/a	n/a n/a	1700	2300	500 *	800
* 600 rpm if dual PTOs are used simultaneously									

9.5 4800 SP									
Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)	Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
						min rpm	max rpm	min rpm	max rpm
Specialty / Military	597 (800)	2644 (1950)	4067 (3000)	n/a n/a	n/a n/a	1700	2300	500 *	800
* 600 rpm if dual PTOs are used simultaneously									



## 10.0 T (Torqmatic Series)

### 10.1 T425

Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)	Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
						min rpm	max rpm	min rpm	max rpm
Transit Bus	283 (380)	1650 (1217)	3322 (2450)	29,000 (63,935)	n/a n/a	1700	2300	500 *	800
Intercity Coach	283 (380)	1750 (1291)	3322 (2450)	27,000 (59,525)	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

### 10.2 T450

Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)	Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
						min rpm	max rpm	min rpm	max rpm
Transit Bus	298 (400)	1750 (1291)	3322 (2450)	29,000 (63,935)	n/a n/a	1700	2300	500 *	800
Intercity Coach	373 (500)	2100 (1549)	3322 (2450)	27,000 (59,525)	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

### 10.3 T525

Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)	Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
						min rpm	max rpm	min rpm	max rpm
Intercity Coach	410 (550)	2600 (1918)	3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

## 11.0 TRV (Truck-Based Recreational Vehicle Series)

### 11.1 4000 TRV

Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)	Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
						min rpm	max rpm	min rpm	max rpm
Truck-Based Recreational Vehicle	451 (605)	2508 (1850)	3795 (2800)	23,587 (52,000)	32,659 (72,000)	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

## 12.0 WBD (Wide Body Dump Series)

### 12.1 4430 WBD

Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)	Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
						min rpm	max rpm	min rpm	max rpm
Wide Body Dump	283 (380)	1675 (1235)	3322 (2450)	68,500 (151,017)	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

### 12.2 4500 WBD

Rating Without Torque Limiting	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)	Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive		
						min rpm	max rpm	min rpm	max rpm	
Wide Body Dump	358 (480)	All Gear Ranges 2102 (1550)	3322 (2450)	68,500 (151,017)	n/a n/a	1700	2300	500 *	800	
Rating With Torque Limiting	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)	Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive		
Wide Body Dump	358 (480)	Gears 1-2 2102 (1550)	Gears 3-6 2203 (1625)	3322 (2450)	68,500 (151,017)	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

### 12.3 4600 WBD

Rating Without Torque Limiting	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)	Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive		
						min rpm	max rpm	min rpm	max rpm	
Wide Body Dump	358 (480)	All Gear Ranges 2102 (1550)	3322 (2450)	81,000 (178,574)	n/a n/a	1700	2300	500 *	800	
Rating With Torque Limiting	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)	Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive		
Wide Body Dump	358 (480)	Gears 1-2 2102 (1550)	Gears 3-6 2305 (1700)	3322 (2450)	81,000 (178,574)	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

12.4 4800 WBD									
Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)	Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
						min rpm	max rpm	min rpm	max rpm
Wide Body Dump	451 (605)	All Gear Ranges 2508 (1850)	3525 (2600)	96,000 (211,644)	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously  
**NOTE:** 2nd Reverse Feature requires SEM/LRTP, or LRTP Only, to limit turbine torque in deep reverse to 1268 Nm (935 lb-ft). Ref *TD191: 2nd Reverse Feature (5th Gen)*

### 13.0 4000 International Series

#### 13.1 4000 Model

Rating Without Torque Limiting	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)		Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
							min rpm	max rpm	min rpm	max rpm
<b>General</b>	421 (565)	All Gear Ranges 2400 (1770)		3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
<b>Fire Truck, Emergency</b>	447 (600)	2508 (1850)		3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
<b>Aircraft Rescue and Fire-Fighting Vehicle</b>	447 (600)	2508 (1850)		3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
<b>Heavy Equipment Transporter (HET)</b>	447 (600)	2508 (1850)		3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
<b>Refuse Vehicle</b>	373 (500)	2102 (1550)		3322 (2450)	n/a n/a	n/a n/a	1700	2300	500 *	800
<b>Ag Spreader, Sprayer, Blower, Feedlot Truck</b>	421 (565)	2400 (1770)		3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
Rating With Torque Limiting	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)		Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
<b>General</b>	421 (565)	Gears 1-2 2400 (1770)	Gears 3-6 2508 (1850)	3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
<b>Refuse Vehicle</b>	373 (500)	2300 (1696)	2300 (1696)	3322 (2450)	n/a n/a	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

**NOTE:** If equipped with the ground-driven steering pump provision, the maximum N/v ratio is 28.57 rpm/kph (46.00 rpm/mph)

<b>13.2 4430 Model</b>									
Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)	Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
						min rpm	max rpm	min rpm	max rpm
General	283 (380)	1560 (1150)	3322 (2450)	n/a n/a	n/a n/a	1700	2300	500 *	800
Highway	283 (380)	1560 (1150)	3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
Fire Truck, Emergency	283 (380)	1560 (1150)	3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
Aircraft Rescue and Fire-Fighting Vehicle	283 (380)	1560 (1150)	3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
Heavy Equipment Transporter (HET)	283 (380)	1560 (1150)	3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
Refuse Vehicle	283 (380)	1560 (1150)	3322 (2450)	n/a n/a	n/a n/a	1700	2300	500 *	800
Ag Spreader, Sprayer, Blower, Feedlot Truck	283 (380)	1560 (1150)	3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

<b>13.3 4440 Model</b>									
Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)	Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
						min rpm	max rpm	min rpm	max rpm
General	317 (425)	1776 (1310)	3322 (2450)	n/a n/a	n/a n/a	1700	2300	500 *	800
Highway	317 (425)	1776 (1310)	3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
Fire Truck, Emergency	317 (425)	1776 (1310)	3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
Aircraft Rescue and Fire-Fighting Vehicle	317 (425)	1776 (1310)	3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
Heavy Equipment Transporter (HET)	317 (425)	1776 (1310)	3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
Refuse Vehicle	317 (425)	1776 (1310)	3322 (2450)	n/a n/a	n/a n/a	1700	2300	500 *	800
Ag Spreader, Sprayer, Blower, Feedlot Truck	317 (425)	1776 (1310)	3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

### 13.4 4500 Model

Rating Without Torque Limiting	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)			Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
		All Gear Ranges						min rpm	max rpm	min rpm	max rpm
<b>General</b>	421 (565)	2237 (1650)			3322 (2450)	n/a n/a	n/a n/a	1700	2300	500 *	800
<b>Highway</b>	421 (565)	2237 (1650)			3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
<b>Fire Truck, Emergency</b>	447 (600)	2400 (1770)			3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
<b>Aircraft Rescue and Fire-Fighting Vehicle</b>	447 (600)	2400 (1770)			3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
<b>Heavy Equipment Transporter (HET)</b>	447 (600)	2237 (1650)			3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
<b>Refuse Vehicle</b>	373 (500)	2102 (1550)			3322 (2450)	n/a n/a	n/a n/a	1700	2300	500 *	800
<b>Ag Spreader, Sprayer, Blower, Feedlot Truck</b>	421 (565)	2237 (1650)			3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously

**NOTE:** If equipped with the ground-driven steering pump provision, the maximum N/V ratio is 28.57 rpm/kph (46.00 rpm/mph)

### 13.4 4500 Model (continued)

Rating With Torque Limiting	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)			Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed		Engine Idle Speed in Drive	
		1st Gear	2nd Gear	Gears 3-6				min rpm	max rpm	min rpm	max rpm
<b>General</b>	421 (565)	2237 (1650)	2400 (1770)	2508 (1850)	3322 (2450)	n/a n/a	n/a n/a	1700	2300	500 *	800
<b>Highway</b>	421 (565)	2237 (1650)	2400 (1770)	2508 (1850)	3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
<b>Fire Truck, Emergency</b>	447 (600)	2400 (1770)	2508 (1850)	2508 (1850)	3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
<b>Aircraft Rescue and Fire-Fighting Vehicle</b>	447 (600)	2400 (1770)	2508 (1850)	2508 (1850)	3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
<b>Heavy Equipment Transporter (HET)</b>	447 (600)	2237 (1650)	2508 (1850)	2508 (1850)	3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
<b>Refuse Vehicle</b>	373 (500)	2102 (1550)	2102 (1550)	2300 (1696)	3322 (2450)	n/a n/a	n/a n/a	1700	2300	500 *	800
<b>Ag Spreader, Sprayer, Blower, Feedlot Truck</b>	421 (565)	2237 (1650)	2400 (1770)	2400 (1770)	3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800

**NOTE:** If equipped with the ground-driven steering pump provision, the maximum N/V ratio is 28.57 rpm/kph (46.00 rpm/mph)

13.5 4700 Model										
Rating Without Torque Limiting	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)		Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed min rpm max rpm		Engine Idle Speed in Drive min rpm max rpm	
General	421 (565)	All Gear Ranges 2400 (1770)		3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
Aircraft Rescue and Fire-Fighting Vehicle	447 (600)	2508 (1850)		3795 (2800)	n/a n/a	n/a n/a	1700	2300	500 *	800
Heavy Equipment Transporter (HET)	447 (600)	2508 (1850)		3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800
Refuse Vehicle	373 (500)	2102 (1550)		3322 (2450)	n/a n/a	n/a n/a	1700	2300	500 *	800
Rating With Torque Limiting	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)		Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed min rpm max rpm		Engine Idle Speed in Drive min rpm max rpm	
General	421 (565)	Gears 1-3 2400 (1770)	Gears 4-7 2508 (1850)	3525 (2600)	n/a n/a	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously  
**NOTE:** 2nd Reverse Feature requires SEM/LRTP, or LRTP Only, to limit turbine torque in deep reverse to 1268 Nm (935 lb-ft). Ref [JD188 \(4th Gen\)](#), [JD191 \(5th Gen\)](#)

13.6 4800 Model										
Rating	Gross Input Power kW (hp)	Gross Input Torque Nm (lb-ft)		Net Turbine Torque Nm (lb-ft)	GVW kg (lbs)	GCW kg (lbs)	Full Load Engine Governed Speed min rpm max rpm		Engine Idle Speed in Drive min rpm max rpm	
Aircraft Rescue and Fire-Fighting Vehicle	522 (700)	2644 (1950)		3795 (2800)	n/a n/a	n/a n/a	1700	2300	500 *	800

\* 600 rpm if dual PTOs are used simultaneously  
**NOTE:** 2nd Reverse Feature requires SEM/LRTP, or LRTP Only, to limit turbine torque in deep reverse to 1268 Nm (935 lb-ft). Ref [JD188 \(4th Gen\)](#), [JD191 \(5th Gen\)](#)



## LIST OF REFERENCED DOCUMENTS

- [iSCAAN](#), Allison's vehicle performance calculation program
- [Transmission Families and Models](#)

### Technical Documents (TD's)

- [TD-180-2, Vocational Compatibility for Allison On-Highway Transmissions](#)
- [TD-188, Application and Installation Requirements for the 2nd Reverse Feature with 4th Gen Controls](#)
- [TD-191, Application and Installation Requirements for the 2nd Reverse Feature with 5th Gen Controls](#)

## **REVISION HISTORY**

### **October 19, 2021**

- In 12.0, add Wide Body Dump ratings for 4340 WBD, 4500 WBD, 4600 WBD, and 4800 WBD

### **May 5, 2021**

- In 12.1, add Refuse ratings to International 4000 Model
- In 12.4, add Refuse ratings to International 4500 Model

### **October 9, 2019**

- Increased power rating of 4000 HS, On/Off Highway and Specialty PTO RDS vocations, to 433 kW (580 hp), previously was 421 kW (565 hp)
- Increased power rating of 4500 HS, OFS, On/Off Highway and Specialty PTO RDS vocations, to 433 kW (580 hp), previously was 421 kW (565 hp)
- Increased power rating of 4700 ORS and On/Off Highway RDS vocations, to 433 kW (580 hp), previously was 421 kW (565 hp)
- Corrected power rating of 4000, 4500, and 4700 International Series in the Fire, HET, and ARFF vocations, to 447 kW (600 hp), previously was 451 kW (605 hp)

### **September 3, 2019**

- Increased power rating of 4000 EVS, RDS, TRV, and International to 451 kW (605 hp), previously was 447 kW (600 hp)
- Increased power rating of 4500 EVS, RDS, and International to 451 kW (605 hp), previously was 447 kW (600 hp)
- Increased power rating of 4700 EVS, RDS, ORS, OFS, and International to 451 kW (605 hp), previously was 447 kW (600 hp)

### **January 29, 2019**

- Revised 4800 ORS ratings without Torque Limiting - 2508 Nm (1850 lb•ft) for all gears for Articulated Dump and Rigid Rear Dump. Mining / Off-Highway (hauling rock, ore, gravel, dirt, etc.) ratings remain the same with Torque Limiting required.

### **April 10, 2017**

- Revised T525 Gross Input Torque to 2600 Nm (1918 lbft), was 2550 Nm (1881 lbft)
- In 1.1, removed redundant model name tables, refer to Transmission Families and Models
- In 1.2, added example of referencing TD180-2 in order to determine the proper rating.

### **October 4, 2016**

- Increased power rating of 4500 SP to 451 kW (605 hp), previously was 447 kW (600 hp)
- Increased power rating of 4700 SP to 451 kW (605 hp), previously was 447 kW (600 hp)
- Increased power rating of 4800 ORS to 451 kW (605 hp), previously was 447 kW (600 hp)

### **July 20,2015**

- Revised Tables 7.6 and 7.7 to add Mining/Off-Highway ratings to the 4700 ORS and 4800 ORS.