

## 6600 Series

Off-Highway Series 6600

### RATINGS

| Model |   | Gross Input Torque<br>N•m (lb-ft) | Gross Input Power<br>kW (hp) | Turbine Torque Net<br>N•m (lb-ft) |
|-------|---|-----------------------------------|------------------------------|-----------------------------------|
| H6620 | Rear Dump Truck, Coal Hauler,<br>Articulated Dump, Hauling Applications | 3390 (2500)                       | 567 (760)                    | 5139 (3790)                       |
| M6620 | General   | 3390 (2500)                       | 567 (760)                    | 5139 (3790)                       |
|       | Oil Field   | 3729 (2750)                       | 671 (900)                    | 5423 (4000)                       |
|       | Crash Truck (ARFF Vehicle)  | 4474 (3300)                       | 764 (1025)                   | 7050 (5200)                       |
|       | Agricultural Tractor  | 2712 (2000)                       | 522 (700)                    | 4528 (3340)                       |
| S6620 | Stationary Applications   | 3390 (2500)                       | 567 (760)                    | 5139 (3790)                       |
|       | Oil Field Equipment   | 3729 (2750)                       | 671 (900)                    | 5423 (4000)                       |

### DRIVETRAIN INTERFACES

|  |                 |
|--|-----------------|
| Acceptable full-load engine governed speed                   | 1900 – 2500 rpm |
| Minimum engine idle speed range (with transmission in Drive) | 550 rpm         |

### MOUNTING

|        |  |
|--------|--|
| Direct | SAE No.1 automatic flywheel housing with flexplate drive. Cradle mount using engine flywheel housing mounting pads and transmission rear cover mounting pads with 0.625-11 inch series bolts |
| Remote | Side pads on transmission rear cover, plus front trunnion mount  |

### TORQUE CONVERTER

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

| Model  | Stall Torque Ratio | Kp-Factor* at Stall |
|--------|--------------------|---------------------|
| TC-580 | 2.89               | 53.4 (62.2)         |
| TC-680 | 2.08               | 46.9 (54.6)         |
| TC-682 | 1.77               | 37.5 (43.7)         |
| TC-683 | 1.85               | 30.1 (35.1)         |

\* Kp-Factor defines torque converter capacity. Kp = the ratio of converter pump speed [rpm] divided by the square root of the pump torque [N•m (lb-ft)]

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

| Range     |           |
|-----------|-----------|
| First     | 4.00 : 1  |
| Second    | 2.68 : 1  |
| Third     | 2.01 : 1  |
| Fourth    | 1.35 : 1  |
| Fifth     | 1.00 : 1  |
| Sixth     | 0.67 : 1  |
| Reverse 1 | -5.15 : 1 |
| Reverse 2 | -3.46 : 1 |

### Ratio Coverage

|         |      |
|---------|------|
| Forward | 5.97 |
|---------|------|

### CONTROL SYSTEM

|             |   |
|-------------|---|
| Description | Automatic electronic, manual electric, manual hydraulic |
|-------------|---|

**OPTIONAL ENGINE-DRIVEN POWER TAKE-OFF PROVISION**

Side mount

|                       |   |                                      |
|-----------------------|---|--------------------------------------|
| Location              | 5 o'clock position, as viewed from rear |                                      |
| PTO drive gear rating | Intermittent                            | 46 tooth drive gear, 149 kW (200 hp) |
|                       | Continuous                              | 46 tooth drive gear, 93 kW (125 hp)  |

Top Mount

|                       |  |                                      |
|-----------------------|--|--------------------------------------|
| Location              | 12 o'clock position, as viewed from rear |                                      |
| PTO drive gear rating | Intermittent                             | 46 tooth drive gear, 149 kW (200 hp) |
|                       | Continuous                               | 46 tooth drive gear, 93 kW (125 hp)  |

**ELECTRONIC SPEEDOMETER PROVISION**

|             |  |
|-------------|--|
| Description | LS-TTL signal, 39 pulses per output shaft revolution |
| Location    | Output signal from transmission TCM                  |

**OUTPUT RETARDER PROVISION (OPTION)**

|          |                       |                 |
|----------|-----------------------|-----------------|
| Type     | Integral, hydraulic   |                 |
| Capacity | Torque                | Power           |
|          | 2034 N•m (1500 lb-ft) | 447 kW (600 hp) |

**SIZE**

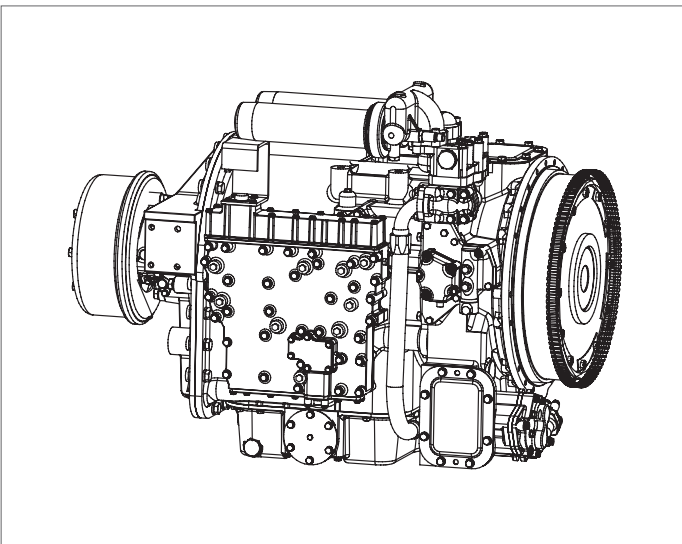
|                                       |                  |                   |
|---------------------------------------|------------------|-------------------|
| Depth (below horizontal centerline)   | 511 mm (20.1 in) |                   |
| Length (direct mount) <sup>2,3</sup>  | Basic            | 1095 mm (43.1 in) |
|                                       | With Retarder    | 1182 mm (46.6 in) |
| Width                                 | 726 mm (28.6 in) | 805 mm (31.7 in)  |
| Basic model                           | Height           | Dry Weight        |
|                                       | 866 mm (34.1 in) | 1025 kg (2260 lb) |
| With direct mount filters             | 982 mm (38.7 in) | 1025 kg (2260 lb) |
| With top engine-driven PTO drive gear |                  | 1039 kg (2290 lb) |
| With park brake (12" x 5")            |                  | 1052 kg (2320 lb) |
| With remote mount                     |                  | 1050 kg (2315 lb) |
| With retarder                         |                  | 1110 kg (2425 lb) |

**OIL SYSTEM**

|                                      |  |  |
|--------------------------------------|--|--|
| Oil type                             | TES 439 (see <a href="http://www.allisontransmission.com">www.allisontransmission.com</a> for approved list) |  |
| Capacity excluding external circuits | 68 litres (18.0 gallons)   |  |
| Main circuit oil filter              |  |  |
| Standard                             | Manifold for full-flow, remote mounted, replaceable element, integral  |  |
| Optional                             | Direct-mount full-flow, replaceable elements (2)   |  |
| Cooler circuit oil filter (optional) | Replaceable element, remote-mounted  |  |

1. PTO ratings apply to both top and side. Combined totals cannot exceed individual ratings. 2. For remote mounting, add 254–279 mm (10–11 in), depending on flange selection. 3. Length is approximate from engine/converter mounting surface to face of typical output flange.

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Information or specifications subject to change without notice or obligation.

