



On-Highway Transmission (Preliminary)

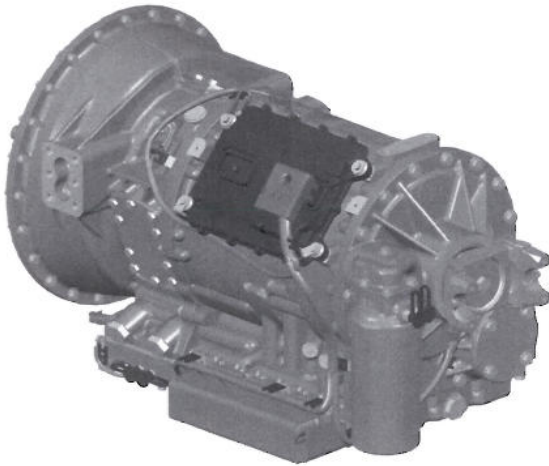
CX31

305-500 hp (227-373 kW) @ 2100 rpm

Truck Rating

SPECIFICATIONS

Max. Gross Input Power — hp (kW) ..	500 (373)
Max. Gross Input Torque —	
lb-ft (N•m)	1650 (2237)
Max. Turbine Torque — lb-ft (N•m) ..	2600 (3525)
Rated Input Speed — rpm	2100
Minimum Input Speed — rpm	600
Maximum Input Speed — rpm	2500
Weight, Dry (approx) — lb (kg)	
Without retarder	960 (435)
With retarder	1160 (526)
Gears	
Forward/Reverse	6F/1R
Planetary Gear Ratios	
1F	4.40
2F	2.33
3F	1.53
4F	1.00
5F	0.72
6F	0.61
1R	-3.97
Overall	7.21



STANDARD EQUIPMENT

- Cartridge oil filter (remote mountable)
- Electronic Control Module (ECM)
- Electronic data link, SAE J1939, SAE J1587
- Electrical system 12V
- Integral torque converter
- Oil level sensor
- Side PTO mounting (1 o'clock, 8 o'clock)
- SAE No. 1 bell housing

CAT® ENGINES FOR OPTIMIZED POWERTRAIN

- C11
- C13
- C15

ACCESSORY EQUIPMENT

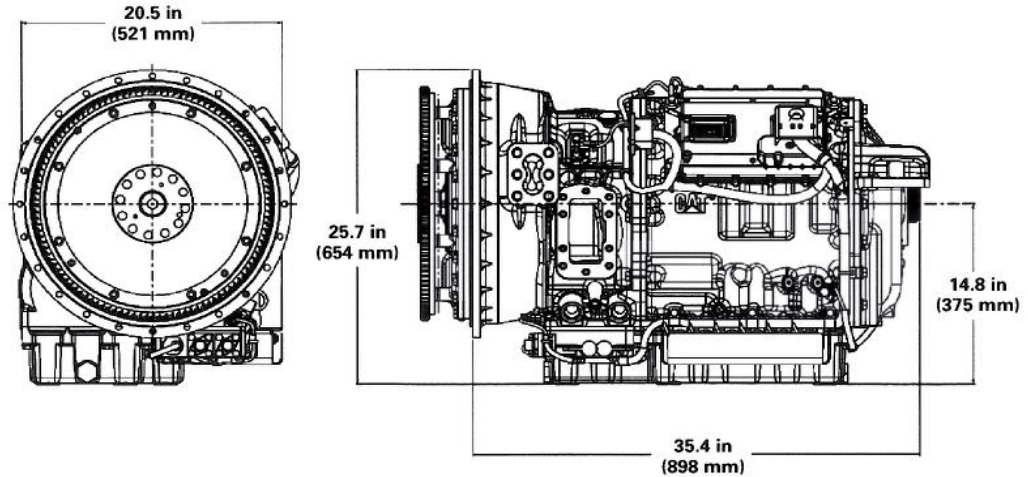
- Hydraulic retarder
- Rear PTO driveshaft
- Shallow sump
- Spin-on oil filter (remote mountable)

ELECTRONIC FEATURES

- SAE J1939 communications with vehicle systems, including:
 - Engines
 - OEM dashboards
 - Antilock braking systems
 - Traction control systems
 - Caterpillar® ET service tool
- Electronic drivers and switch inputs
 - PTO operation
 - Starter interlock
 - Backup alarm
 - Range and speed indication
- Shifter Interface
 - Pushbutton
 - Shift handle
- Caterpillar Messenger Display
 - Transmission and engine status display
 - Transmission and engine diagnostic display
 - Reprogramming of selected engine and transmission customer parameters
- Customer Parameter Programming
 - PTO functions
 - Range selection inhibits
 - Special vehicle operation modes
 - Retarder operation modes

DIMENSIONS

Standard Sump



Dimensions	Length in (mm)	Height in (mm)	Depth in (mm)	Width in (mm)
Standard Sump	35.4 (898)	25.7 (654)	14.8 (375)	20.5 (521)
Shallow Sump	35.4 (898)	24.2 (614)	13.2 (335)	20.5 (521)

CLUTCHES

Clutches — electro-hydraulic fully modulated, oil cooled, multidisc
 Clutch modulation control — Cat® Electronic Clutch Pressure Control (ECPC)

INSTALLATION CONNECTIONS

2 oil cooler lines (in/out)
 2 electrical connectors

OIL SYSTEM

Dexron IIIH ATF
 Max sump oil temperatures
 Continuous — 195°F (90°C)
 Intermittent — 250°F (120°C)
 Hydraulic fill capacity (does not include coolers, lines) —
 Standard Sump: 12 gal (45 L)
 Shallow Sump: 10 gal (38 L)

MOUNTINGS

Input connection (flywheel) — SAE #1 dry flywheel housing with flexplate converter drive
 Output connection (yoke) — 1710, 1760, 1810, SPL 170, SPL 250, 8.5C, 9C

PTO PROVISIONS (continuous operation, engine driven)

Side — 1 drive, 685 lb-ft (929 N•m); 2 drives (combined), 1175 lb-ft (1593 N•m)
 Rear — 800 lb-ft (1085 N•m)

ROTATION

Input rotation — SAE J824 standard
 Output rotation — forward, same as input reverse, opposite of input

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