



FC6A210/250

Transmission

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

Shift Selector

- 6 button, dual display
- Lever, dual display

Cat Messenger Display compatibility

- 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
- Engine retarder operation modes

SPECIFICATIONS

	210	250
Max. Gross Input Power-kW(hp)		
■ City Transit Bus	331(443)	410(550)
■ Tour Bus	360(483)	447(600)
■ School Bus	360(483)	447(600)
■ Motor Homes	380(510)	466(625)
■ Port Tractor	294(394)	373(500)
■ Road Truck	331(443)	410(550)
■ Mining Truck	331(443)	410(550)
■ Heavy-Duty Vehicle	360(483)	447(600)
■ Refuse Truck/Concrete Mixer	294(394)	373(500)
■ Emergency Vehicle/ Fire Truck	360(483)	447(600)
■ Special Vehicle	360(483)	447(600)
Max. Gross Input Torque - N·m (lb-ft)		
■ City Transit Bus	2000(1476)	2400(1770)
■ Tour Bus	2100(1550)	2510(1850)
■ School Bus	2100(1550)	2510(1850)
■ Motor Homes	2176(1605)	2576(1900)
■ Port Tractor	1937(1430)	2237(1650)
■ Road Truck	2000(1476)	2400(1770)
■ Mining Truck	2000(1476)	2400(1770)
■ Heavy-Duty Vehicle	2100(1550)	2510(1850)
■ Refuse Truck/Concrete Mixer	1937(1430)	2237(1650)
■ Emergency Vehicle/ Fire Truck	2100(1550)	2510(1850)
■ Special Vehicle	2100(1550)	2510(1850)

Rated Input Speed - rpm	2100
Minimum Input Speed - rpm	600
Maximum Input Speed - rpm	2500

TORQUE CONVERTER

Model	TC42833	TC42731	TC42531
Stall Torque Ratios	1.9	2.3	2.6

STANDARD EQUIPMENT

- Electronic Control Unit (ECU)
- Electronic data link, SAE J1939, SAE J1587
- Electrical system 12V, 24V
- Integral torque converter
- Oil filler tube/dipstick location right
- Oil level sensor
- SAE No.1 bell housing

ACCESSORY EQUIPMENT

- Cat® Messenger Display
- Oil filter options: transmission or remote mounted cartridge available

GEARS

Forward/Reverse	6F/1R
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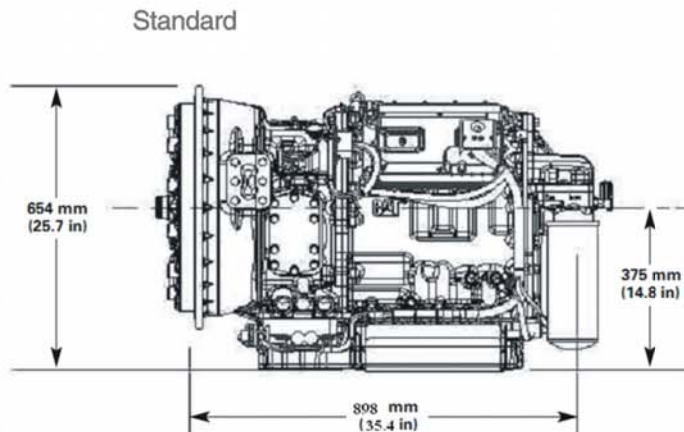
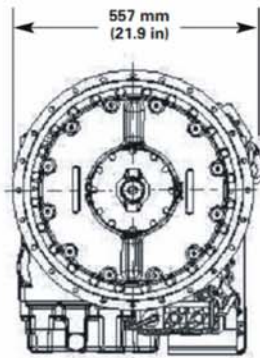
PLANETARY GEAR RATIOS

1F	2F	3F	4F	5F	6F	1R	Overall
4.40	2.33	1.53	1.00	0.72	0.61	-3.97	7.21

FC6A210/250 TRANSMISSION



DIMENSION & WEIGHT



CLUTCHES

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

INSTALLATION CONNECTIONS

- 2 cooler lines (in/out) front
- 2 electrical connectors

OIL FLUIDS

Fluids

- Shell-Fast II ATF special for XI'an FC AT for extended intervals
- Dexron[®] IIIH ATF

Max sump oil temperatures

- Continuous: 200°F (93°C)
- Intermittent: 250°F (121°C)

Refill volume (excludes lines and cooler)

- Standard Sump: 25 L (6.5 gal)
- Retarder Sump: 27 L (7.0 gal)

TRANSMISSION ROTATION

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

Dimension & Weight	Length*	Depth**	Weight***
Standard(With Side PTO Interface)	898mm(35.4in)	375mm(14.8in)	411kg(906lbs)
With Side&Rear PTO Interface	898mm(35.4in)	375mm(14.8in)	415kg(915lbs)
With Side PTO Interface and Retarder	1002mm(39.4in)	397mm(15.6in)	494kg(1088lbs)
With Side&Rear PTO Interface and Retarder	1002mm(39.4in)	397mm(15.6in)	498kg(1097lbs)

*from the flywheel housing rear interface to the output shaft end face.

**from the transmission centerline to the bottom.

***Dry (approx), does not include ECU, output yoke, or adaptation hardware.

MOUNTINGS

- Input connection - SAE No.1 dry flywheel housing with flexplate converter drive
- Output connection (yoke) - ISO 8667 T180

INTEGRAL INPUT RETARDER - CAPACITY (OPTION)

Type	Torque	Power
Class3	1700N · m(1255 lb-ft)	423kW(567 hp)
Class2	1345N · m(993 lb-ft)	338kW(453 hp)
Class1	1150N · m(849 lb-ft)	275kW(369 hp)

PTO INTERFACE (REAR. OPTION)

Mounting Positions	Max Continuous Torque	Rotation	Ratio (x Engine Speed)
1 or 8 O' clock Side PTO	950N · m(700 lb-ft)	Same as transmission input	1
Rear PTO	1085N · m(800 lb-ft)	Opposite of transmission input	1.25
Multiple PTO Total	1627N · m(1200 lb-ft)	-	-

OPTIONS

- Integral input retarder
- Rear PTO interface