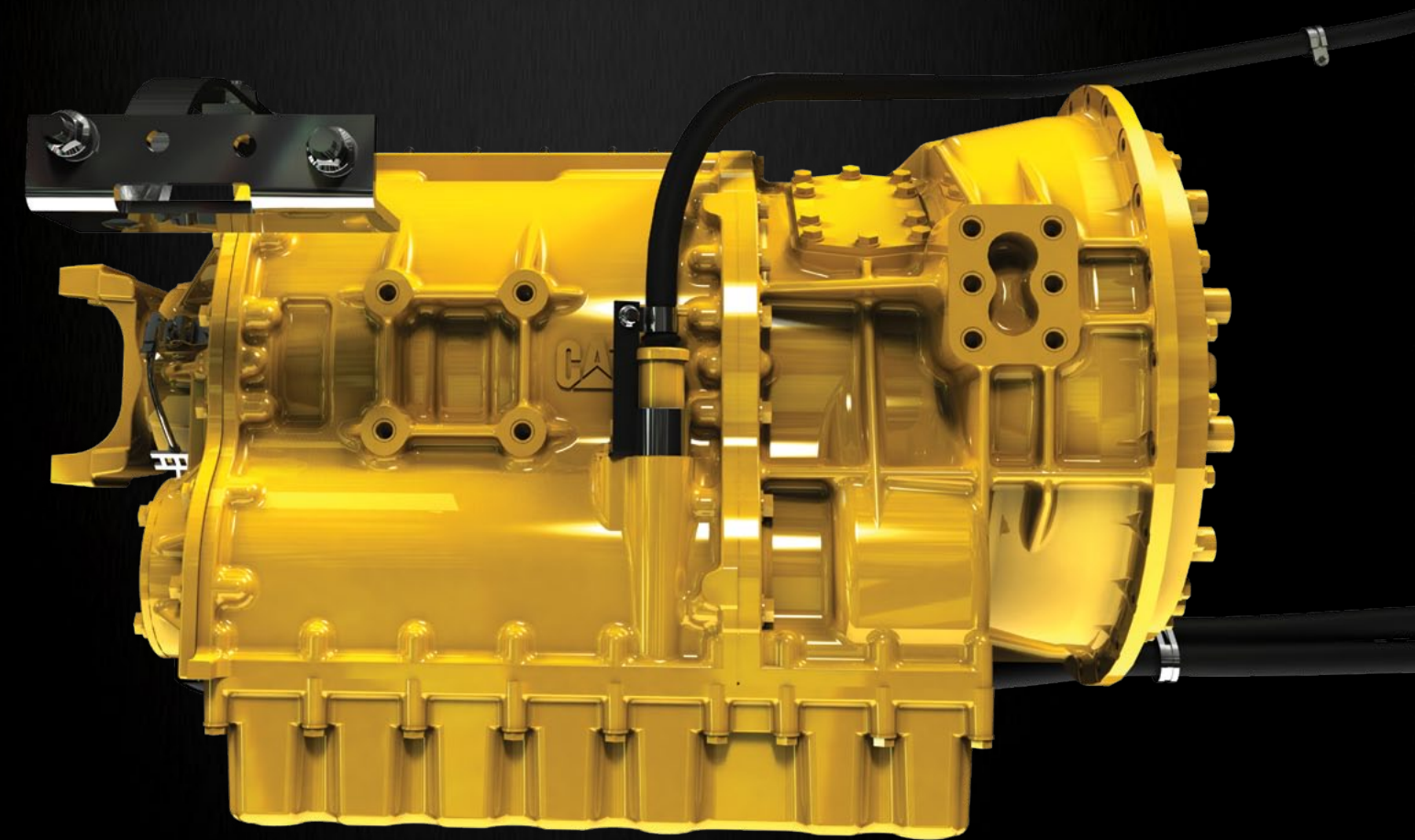


SHIFT INTO WORK MODE.

**CAT® CX31 AUTOMATIC TRANSMISSION
FOR CAT VOCATIONAL TRUCKS**





BUILT TO LAST LONGER AND WORK HARDER.

THERE'S NOTHING EASY about the work you do. Your job demands a transmission that can handle all the abuse your challenging work applications and harsh jobsite environments can dish out.

That's why you need to spec your Cat® vocational truck with a transmission that's proven to endure high torque, high-impact loads and frequent direction and gear changes. You need a transmission built to last longer and work harder to increase productivity and reduce your operating costs over the life of your truck.

The Cat CX31 Automatic Transmission is that transmission. It's the ideal choice to give your truck the rugged durability, fuel economy and precise handling you need to tackle even your toughest jobs.

READY TO WORK, ON AND OFF THE ROAD.

EFFICIENT JOB CYCLE TIMING leads to increased productivity and profits. And the CX31 enhances productivity both on the road and at the jobsite, no matter what type of truck your job requires, from dump trucks and concrete mixers to waste carriers and heavy haulers.

ON THE ROAD. Vocational truck drivers can spend a big chunk of the work day on the road hauling material to and from jobsites. The full-power shifts of the CX31 transmission provide quick acceleration and eliminate the need for constant shifting in traffic, which reduces driver fatigue at the end of the day. The improvement in efficiency also helps keep your other equipment and ground crews working, instead of standing idle waiting on a truck.

AT THE JOBSITE. Through the torque converter and optimized shifting strategies, the CX31 enables operators to transfer the engine's power to the ground more smoothly. This seamless match of the truck's load and jobsite's ground conditions enables even less experienced drivers to drive out of gravel pits, bogs and other difficult areas like seasoned professionals. All resulting in easier, safer truck handling on the job to increase productivity.



DESIGNED FOR YOUR WORK.

THE TRANSMISSION is one of the most vital components of your vocational truck. That's why the CX31 is designed to integrate and communicate seamlessly with your truck's other powertrain components. So you're assured of the power, shifting options and ease of operation you want—and need—for peak performance from your truck in your specific vocational application.

» **AUTOMATIC START** with no clutch pedal makes operating the truck easier, so it reduces driveline shock loads and abuse, often the root cause of u-joint, driveshaft and axle shaft failures. This feature will help minimize powertrain repair costs and downtime.

» **POWER TAKE-OFF (PTO) OPTIONS** include two side locations and an exclusive Cat high-output rear PTO. The optional rear PTO can be fitted with a direct drive adapter or clutched adapter, resulting in cleaner installation, easier service access and full-time live power under all operating conditions to enhance performance.

» **ELECTRONIC CONTROL MODULE (ECM)** regulates gear shifts based on driver throttle demand and vehicle speed to optimize engine performance and reduce driveline wear.

» **EXTERNAL FILTER AND VALVES** mean simpler, quicker maintenance.

» **MANUAL "HOLD IN GEAR"** option is available when load and operating conditions require optimum performance and fuel efficiency.

» **HEAVY-DUTY CLUTCHES AND GEAR SETS** enable full-power computer-controlled shifts that occur automatically, so they don't interrupt torque from the engine to the ground, which increases the truck's fuel efficiency and productivity. Automatic shifting also eliminates driveline stress and damage that can occur when an operator manually shifts improperly.

» **HYDRAULIC RETARDER**, packaged between the torque converter and the transmission, offers the option for the additional braking needed in some of your most challenging applications.

» **SIX FORWARD SPEEDS AND ONE REVERSE SPEED** allow engines to deliver horsepower of up to 600 (447 kW) and torque up to 1850 lb-ft (2510 N-m) in heavy-haul applications. So whether climbing a jobsite hill or traveling the highway, the CX31 selects the right gear for peak performance, including increased fuel efficiency.

Application approval required above 550hp 1770 lb-ft

CAT CX31 AUTOMATIC TRANSMISSION

- Speeds: 6 forward/1 reverse
- Engines: Cat CT11; Cat CT13; Cat CT15
- Torque Converter: Cast aluminum design with lock up clutch
- Clutches: Electro-hydraulic fully modulated, oil cooled, multidisc
- Maximum Gross Input Power hp (Kw): 550 (410), or 600 (447) in heavy equipment transport applications
- Maximum Gross Input Torque lb-ft (N-m): 1770 (2400), or 1850 (2510) in heavy equipment transport applications
- Maximum Input Speed: 2500 rpm
- Weight (approx.): 906 lbs. (411 kg)
- Length: 35.3 in. (896 mm)
- Multiple electronic interlock capabilities to control power, speed, gear selection, direction and PTO operations
- Power Take-Off: Two side locations and a Cat exclusive high output rear PTO
- Side PTO capacity lb-ft (N-m): 700 (950), rotation same as engine
- Rear PTO capacity lb-ft (N-m): 800 (1085), rotation opposite of engine times 1.25
- Optional Input Shaft Hydraulic Retarder
- Overall Weight with Retarder Option: 1088 lbs. (494 kg)
- Overall Length with Retarder Option: 39.4 in. (1000 mm)

» **LOCK-UP TORQUE CONVERTER** made of cast aluminum increases startability to get your truck off to a quick start from a dead stop—even when it's hauling a heavy load. The converter also provides the right speed and torque combination for different applications to increase operating efficiency and reduce fuel consumption. And due to seamless integration of the engine and torque converter, with drive throttle input, "roll-back" is essentially eliminated.

» **INTEGRAL SPRING COUPLING** packaged into the torque converter dampens engine dynamics for long-term durability.

» **"ELEVATED DOWNSHIFT"** feature ensures gear selections are automatically made to maximize engine RPM, resulting in increased compression brake performance and safer braking on hills.



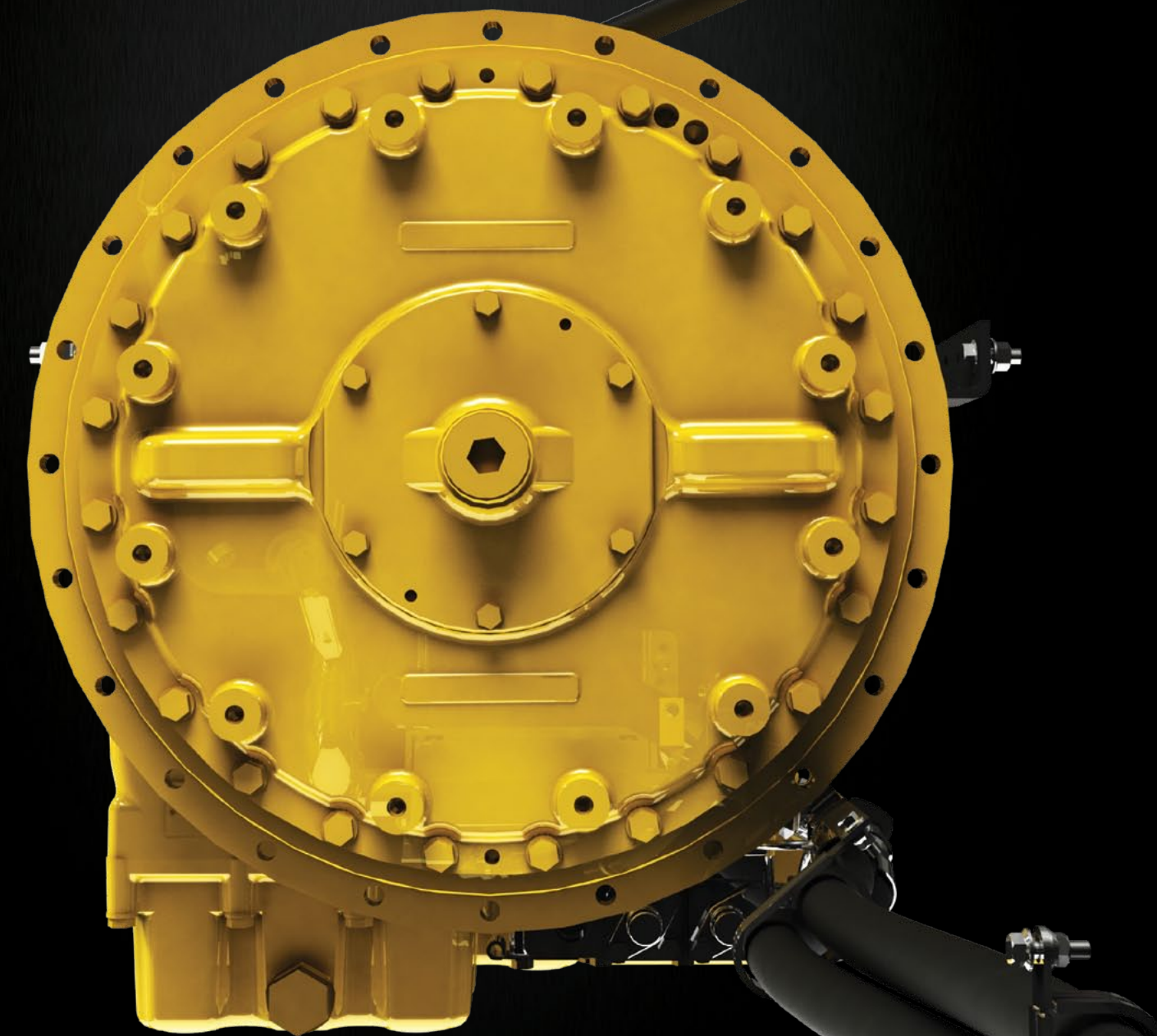
THE CHOICE IS AUTOMATIC.

SAFER OPERATION. With the CX31 shifting automatically, there's no need for drivers to take their hands off the wheel to grab the shifter or move their foot to engage the clutch. There's also no need to worry about choosing the proper gear or releasing a clutch at the precise moment to keep from stalling the engine or spinning the tires. So drivers can keep their undivided attention on their surroundings, which helps keep them and everyone else on the jobsite safer.

BETTER RECRUITING AND RETENTION. Selecting an automatic transmission can help you expand your driver candidate pool, because it's easier to find qualified drivers that can handle a truck that does the shifting for them.

Many seasoned drivers actually prefer a truck with automatic shifting because it's simpler and easier to operate. When the work day is over, they're less fatigued because they haven't had to shift and work the clutch all day. So choosing the CX31 can help you attract drivers—and retain them.

SHORTER TRAINING TIME. The simplicity of operating a truck with a CX31 transmission also means it takes less time to train drivers. Automatic shifting allows them to focus on, and master, other driving skills to get them ready to take over the job—sooner and safer.



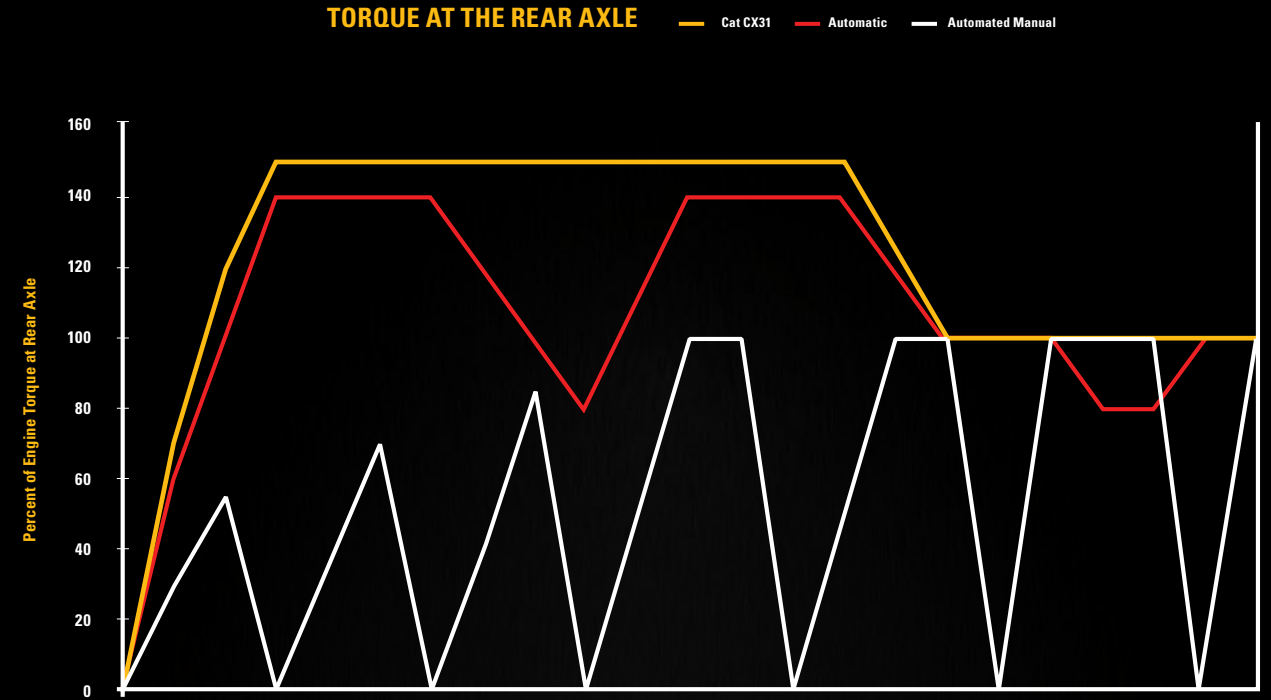
PERFORMANCE MATCHED TO WORK TOGETHER.

WHEN YOU SPEC THE CX31 as the transmission with your Cat CT Series Engines, you are selecting engine-to-transmission integration that optimizes your truck's entire driveline system. This performance match results in faster, smoother and more consistent shift quality.

With the CX31 and a CT Engine working together, you're also lowering your operating costs. Because the combination means increased powertrain durability, improved performance and greater operating efficiency.

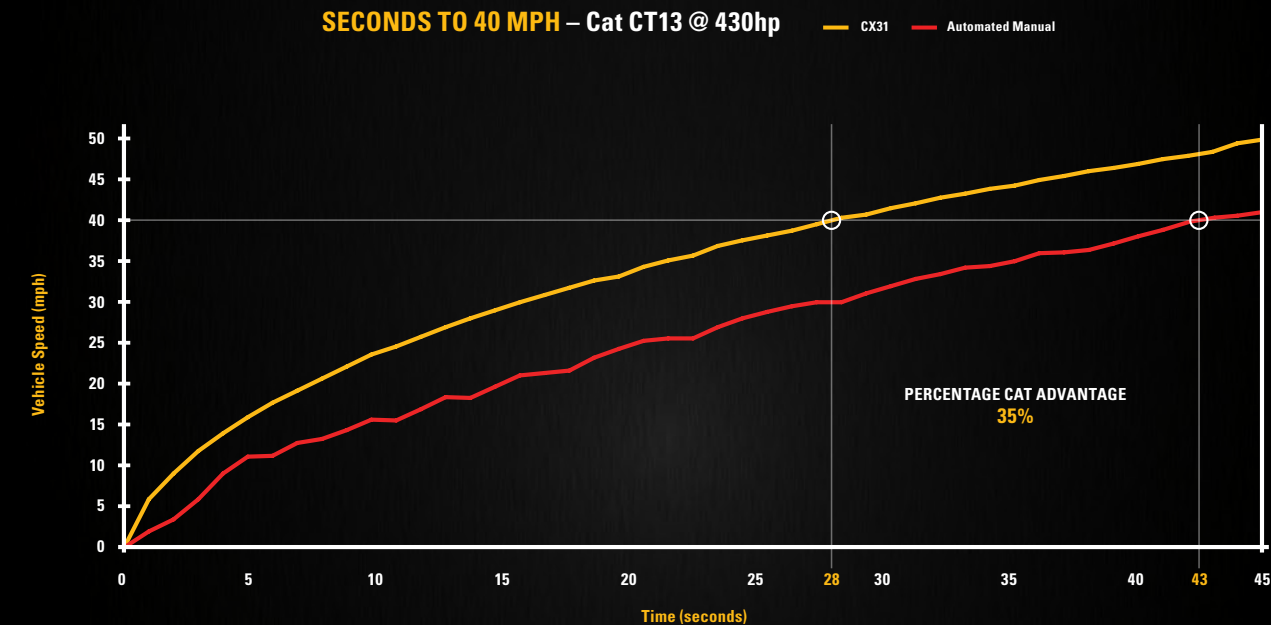
Overall, the sophisticated communication that takes place between the CX31 and a CT Engine serves as the foundation for many performance-related benefits. That includes increased fuel economy and the industry's highest powertrain power-to-weight ratio.

TORQUE AT THE REAR AXLE



TAKE OFF AND DRIVE. The CX31 automatically delivers the take-off power you need and then seamlessly delivers a steady state of power to get you where you're going. With no peaks and valleys in torque, you achieve improved fuel economy and optimal performance.

SECONDS TO 40 MPH – Cat CT13 @ 430hp



GET THERE FASTER. With the CX31, you'll achieve faster acceleration and reduced drive time to job sites. It's also more productive with full power shifts and gain several seconds per mile that add up to major productivity increases over time.

SAVINGS THAT WORK FOR YOUR BOTTOM LINE.

SAVE ON REPAIRS, INCREASE TRUCK UPTIME. Your investment in the CX31 pays big dividends over the life of your truck. First, you'll save money by avoiding costly repairs associated with other transmission options, including clutch replacement, axle shaft failure, driveline repairs and tire and brake wear. And when you factor in the increased uptime you'll achieve by not having your truck in the shop for repairs, the payback on your CX31 upfront investment typically occurs within two years.

MOVE MORE TONS PER GALLON. Because it's an automatic, the CX31 improves fuel efficiency through ideal speed and torque combinations. The CX31 transmission also narrows the gap between your best and worst fuel mileage drivers, so you move more tons per gallon and raise your fleet miles-per-gallon average. In general, the more varied the speed of the application, and the more starts and stops during the day, the greater your fuel savings with the CX31. And with the uncertainty of fuel costs, there's a good chance your savings will only continue to increase.

SUPPORT THAT WORKS FOR YOU.

THE CX31 IS BACKED EXCLUSIVELY by the unmatched support of the North American Cat Dealer network, with more than 400 service locations and 2,300 service bays across the United States and Canada. Cat Dealers know the CX31 inside and out because they've been supporting it since 2004 for a wide variety of on-highway applications.

So you can count on your Cat Dealer for quality service, fast parts availability, unrivaled warranty coverage and more for your CX31.

- » **DIAGNOSTIC TOOLS** are the same as those used for the engine, so your Cat Dealer can service the entire truck at one facility—saving you time
- » **24/7 ONLINE PARTS ORDERING**, combined with unmatched parts availability and timely delivery, means you'll be up and running in no time
- » **UNRIVALED WARRANTY AND EXTENDED SERVICE COVERAGE (ESC)** is matched to your Cat Engine and delivers all the protection you need in one comprehensive package

PUT THE CX31 TO WORK TODAY.

THE CX31 IS BUILT FOR HARD WORK and long life to reduce your truck's operating costs. And with the faster, smoother and more consistent shift quality you'll experience with the CX31, it is the ideal transmission for taking on the demands and challenges you face on the job.

So make the CX31 your automatic choice for your Cat vocational truck and put its rugged durability, precise handling and fuel savings to work for you.

CAT

FOR MORE INFORMATION

**VISIT DRIVECAT.COM OR TALK TO YOUR CAT DEALER TODAY
TO LEARN MORE ABOUT THE CAT CX31.**