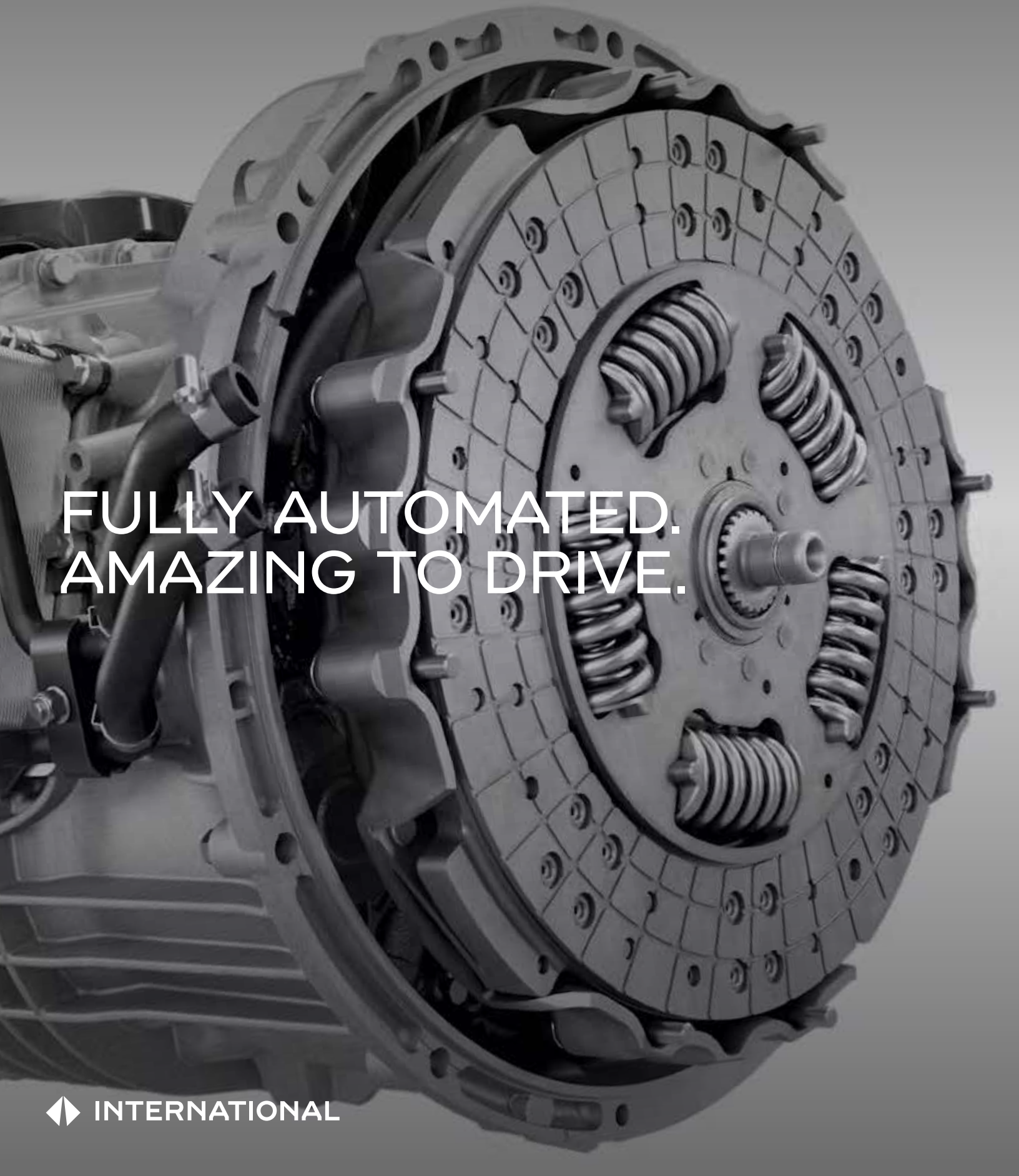
INTERNATIONAL® T14®
TRANSMISSION

PRODUCT BROCHURE

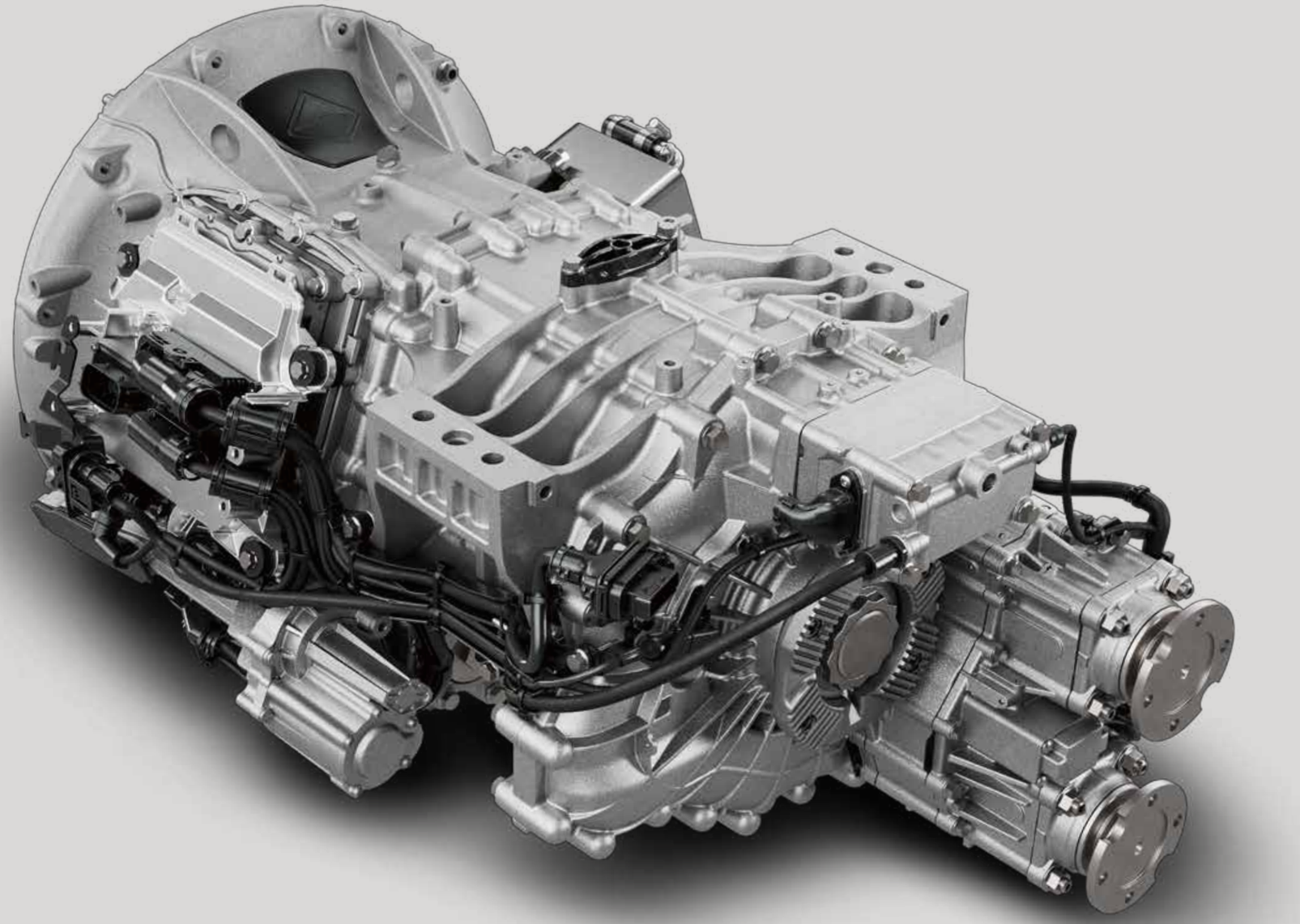


FULLY AUTOMATED.
AMAZING TO DRIVE.

INTERNATIONAL

A clean sheet of paper and decades of experience. That's what the engineering team started with when they began work on the International® S13® Integrated Powertrain. The result is an engine, transmission and aftertreatment system designed to work as one that's simple, easy to service and delivers stellar performance with superior operating economy* for on-highway trucks like the RH™ Series and LT® Series, as well as vocational trucks like the HV™ Series and HX® Series.

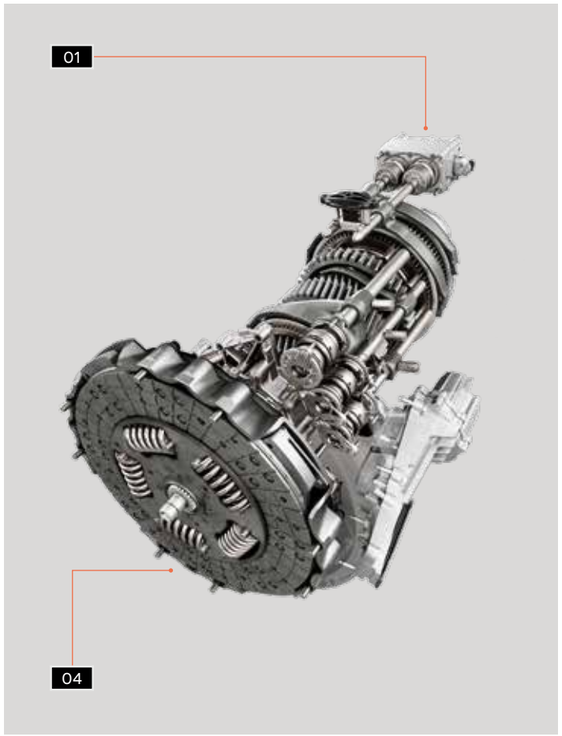
DESIGNED AS ONE.



RIGHT GEAR. RIGHT TIME.
Any engine, no matter how well designed, is only as good as the transmission it's mated to. Delivering the power to the road in a smooth, synchronized manner is no small feat when you consider the torque delivered by a 13L engine. Because they were developed in unison, the engine and transmission of the S13 Integrated Powertrain are designed to work in concert. The result is a smooth-shifting automated manual transmission with 14 speeds, including two crawler gears and an overdrive.

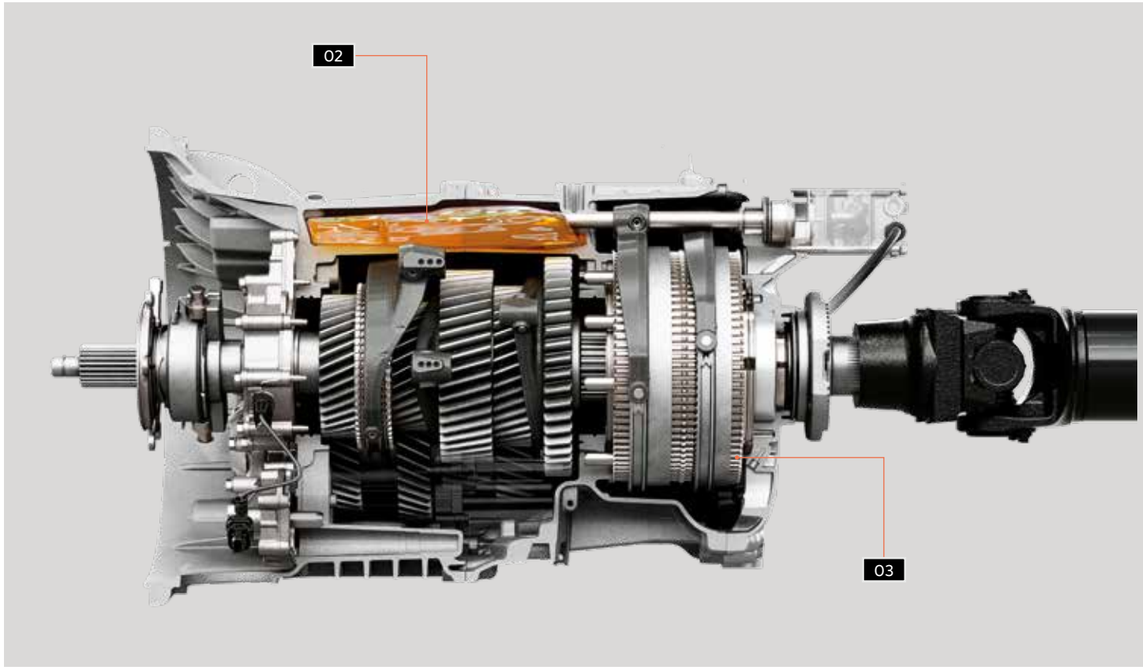
ASSEMBLED IN ALABAMA.
The International S13 Integrated Powertrain is assembled at the state-of-the-art International Powertrain plant in Huntsville, Alabama. The high precision assembly line utilizes advanced error-proofing and in-process quality audit stations to help ensure the highest-quality engines and transmissions possible.

* The International LT with S13 Integrated Powertrain was tested head-to-head using TMC Type IV testing methodology against competitive on-highway aero models with comparable specifications: Freightliner Cascadia AeroX DD15, Kenworth T680 MX13, Volvo VNL760 D13. Testing proved the International LT with S13 Integrated Powertrain to be at least 5% more fuel efficient than these models. The International LT with the S13 Integrated Powertrain often uses more DEF per gallon of fuel compared to competitors on-highway aerodynamic models, but the savings in the more expensive diesel fuel generate significantly lower operating costs.



T14 AUTOMATED MANUAL TRANSMISSION
PARTS AND FEATURES

01	Shift actuators	Shift actuator packaging was designed specifically for automated functionality (rather than adapted from a manual), allowing for more compact gearbox housing
02	Variable oil level upper reservoir	Oil is pumped to the reservoir under lower loads to reduce parasitic losses, allowing for the continuous lubrication of gears by the oil sprayers
03	Planetary gears	The planetary gear set not only provides low range gears, but also provides reverse gear eliminating a dedicated reverse gear set in the transmission, to deliver a shorter, light-weight package
04	Electric clutch actuator	The electronically controlled clutch actuator (ECA) helps the T14 deliver fast and smooth shifts - perfect for those short left-hand traffic lights. And since it does not consume air, the driver never needs to stop to let air recharge during complicated maneuvers





EVERYTHING A DRIVER (AND FLEET MANAGER) WANTS.

The T14 features some of the most advanced technological innovations ever seen in a transmission. The T14 uses a combination of traditional helical gears along with a set of planetary gears, allowing for a wide set of ratios in an incredibly compact and lightweight package. Driver feedback is overwhelmingly positive, praising the T14 for its smooth, quick shifting and ease of operation. A key feature that helps deliver fast and smooth shifts is the electronically controlled clutch actuator (ECA). Since it does not consume air during complicated maneuvers – such as backing into a tight loading dock – the driver never needs to stop to let air recharge.

Further enhancing the drive performance of the T14 is the availability of a suite of electronic features, including Precision Maneuvering Mode, predictive cruise control, Eco-Coast, downhill speed control, and Vehicle Speed Limit Override (VSLO) for seamless operation. On the highway, a wide gear ratio means optimal efficiency on flatlands with the performance drivers crave on hilly terrain. And when descending, drivers can rely on the compression release brake to deliver strong, secure braking power of up to 470 HP (at sea level) for quiet and effective braking.

International engineers also made sure the S13 Integrated Powertrain was “future-proof.” This means as new software is developed, every S13 Integrated Powertrain can be kept up to date for years to come thanks to Over-The-Air (OTA) software updates.

GIVING THE DRIVER FULL CONTROL.

The International LT® Series and RH™ Series offer several shift modes for ultimate driver control.

- **Economy** — Predictive shifting with fuel efficiency focus (LT Series and RH Series)
- **Performance** — Perfect balance
- **Performance+** — Shifting at peak power with focus on performance

Precision Maneuvering Mode
Gives the driver more control of the vehicle at low speeds for specific movements, such as reversing into a loading dock, connecting to a trailer or navigating a crowded construction site. Torque value for pedal input is reduced. This mode allows the clutch to slip more easily for slow and smooth performance.

Eco-Coast
Disengages the driveline when traveling downhill, using the momentum of the vehicle to save fuel.

Creep Mode
This mode allows the vehicle to automatically start moving and continue at low speeds when the brake pedal is released while the transmission is in gear. This mode is useful in high traffic and other events where constant vehicle movement is necessary without the use of the accelerator pedal.

Downhill Speed Control
This mode utilizes cruise control and the engine brake to safely descend grades at a set speed.

ALWAYS UP TO THE TASK.

Both the International HV Series and HX Series can be found hard at work from coast-to-coast hauling, paving, plowing and much more. Engineered to endure, the S13 Integrated Powertrain featuring the T14 transmission is ready for just about anything. Its 14 gears feature a low ratio 20.81:1 first gear for excellent startability and low-speed performance. It's also available with up to six reverse speeds for high-speed applications like highway paving and railroad vehicles.

MORE PROFIT PER TRIP

Work trucks often make dozens of trips a day. Reducing that number means less money is spent on fuel and the S13 Integrated Powertrain can help in several ways:

1. The S13 Integrated Powertrain is the lightest weight 13L powertrain (engine, transmission, and aftertreatment) in North America, allowing customers to carry more payload on every trip.

2. The S13 Integrated Powertrain delivers exceptional fuel economy – even in work trucks – meaning more miles can be driven between fill-ups.

3. While we encourage customers to reduce idle time, we know that many vocational applications require stationary operation. The S13 consumes significantly less fuel at idle, further enhancing the overall fuel economy* of this integrated powertrain.

More payload per trip, combined with more miles driven per gallon of fuel, equals more profit per trip.

VOCATIONAL FEATURES

Paver Assist**
Shift from neutral to drive without pressing the brake—ideal for uninterrupted asphalt paver operation.

Split Shaft Mode**
Allows the truck's driveshaft to power auxiliary equipment.

Rock Free
This attribute allows the driver to rock the vehicle forward and back when stuck in mud or snow.

Hill Start Aid
Holds the truck in position while the driver releases the brake pedal to engage the accelerator.

Auto-Neutral
Transmission automatically shifts to neutral when parking brake is applied or if the truck is shut off.

Manual Mode
Holds current gear until a shift is requested by the driver.

*The International LT with S13 Integrated Powertrain was tested head-to-head using TMC Type IV testing methodology against competitive on-highway aero models with comparable specifications: Freightliner Cascadia AeroX DD15, Kenworth T680 MX13, Volvo VNL760 D13. Testing proved the International LT with S13 Integrated Powertrain to be at least 5% more fuel efficient than these models. The International LT with the S13 Integrated Powertrain often uses more DEF per gallon of fuel compared to competitors on-highway aerodynamic models, but the savings in the more expensive diesel fuel generate significantly lower operating costs.
**Requires feature code.



STAY AHEAD OF THE CURVE. LITERALLY.

Predictive Cruise Control (PCC) is an advanced cruise control system that uses map-based horizon data, along with RADAR and camera inputs, to anticipate road characteristics such as slopes and curves to automatically modulate vehicle speed, gear selection, and torque delivery to maximize fuel efficiency and minimize brake wear.

THINKING MILES AHEAD.

Predictive cruise control anticipates road gradients to optimize engine output, helping to reduce fuel costs and driver fatigue.

PCC INCLUDES THE FOLLOWING FEATURES:

Speed Decrease
- Activated before downhill slopes to reduce speed without using brakes.
- Minimizes energy loss from braking.
- Must strike a balance between fuel efficiency and drivability/traffic flow, so deceleration is limited.
- Saves fuel by allowing vehicle to stay below the minimum threshold speed to leverage gravity on long slopes.

Speed Increase
- Prepares the vehicle for an uphill slope by accelerating beforehand.
- Helps maintain momentum and drivability, especially with a fully loaded vehicle.
- Ensures the vehicle stays in direct drive (high-efficiency gear) longer.

Eco-Coast
- Opens the clutch to disengage the powertrain while coasting.
- Reduces driveline and engine friction losses.
- Uses fuel to idle, so it only activates if it can avoid unnecessary brake use or reacceleration.

Pulse and Glide (PNG)
- Combines brief accelerations (pulses) with Eco-Coast (glides).
- Effective on flat terrain, where continuous coasting is not sustainable.
- Exploits optimal fuel map zones during both the pulse and glide phases.

Downhill Speed Control Momentum Gain (Hill Roll Out)
- Temporarily releases auxiliary brakes at the end of a descent.
- Allows a brief overshoot in speed, followed by Eco-Coast, to extend coasting without fuel injection.
- Focused on minimizing brake usage and maintaining energy momentum.

Controlled Retardation into Slope
- Uses predictive braking ahead of steep downhill sections.
- Engine brake is activated early (at a lower speed) to supplement braking needs.
- Helps maximize engine braking performance for heavily loaded vehicles.

Cruise at Low Engine RPM (Part Load Gear Selection)
- Selects the most efficient gear to allow cruising at low RPMs.
- Relies on map data, engine load, vehicle weight, road speed and topography to ensure sufficient torque without downshifting unnecessarily.

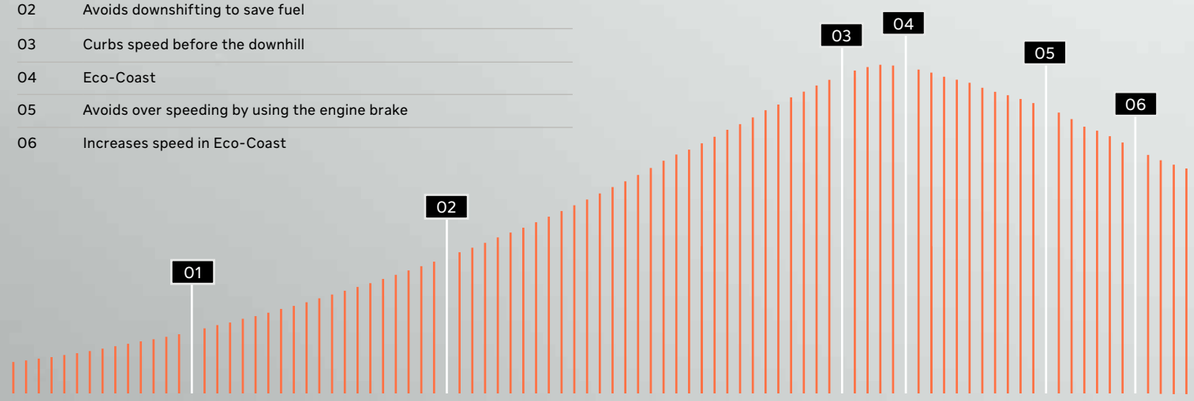
Predictive Shift Scheduling
- Integrates horizon data into gear shift strategy.
- Considers topography during speed changes, motoring, and braking to determine optimal gear changes for efficiency and performance.

Predictive Torque Management
- Limits engine torque based on predicted road conditions.
- Uses “invert boost” to reduce torque output when full power is unnecessary.
- Maintains speed within operating range more efficiently.

Customer Programmability
- PCC includes TCM (Transmission Control Module) programming options.
- Users can configure custom parameters to tailor the behavior to vehicle specs and operator preferences.

PREDICTIVE CRUISE CONTROL (PCC)

01	Accelerates to improve hill-climbing capacity
02	Avoids downshifting to save fuel
03	Curbs speed before the downhill
04	Eco-Coast
05	Avoids over speeding by using the engine brake
06	Increases speed in Eco-Coast





READY TO WORK ON DAY ONE.

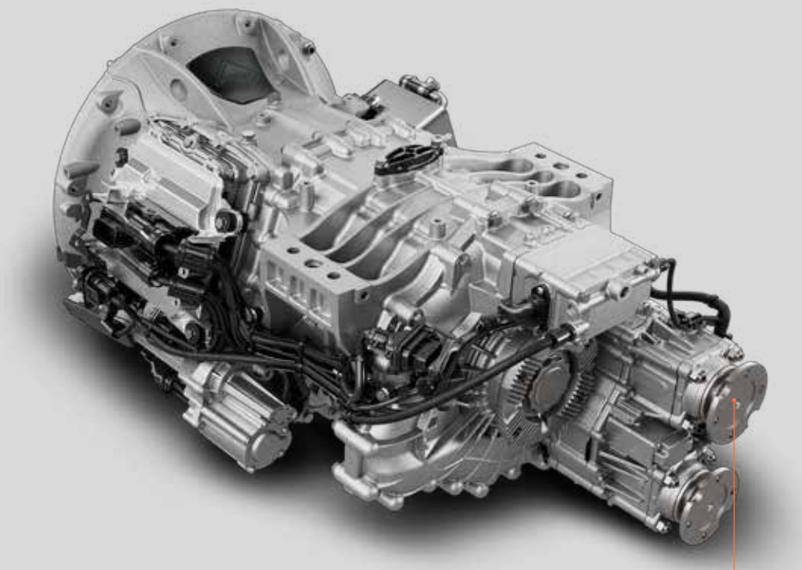


OPTIMIZED FOR YOUR APPLICATION

- Direct drive optimized for 13th gear for selected cruise speed
- Overdrive optimized (HV™ Series and HX® Series) for 14th gear for selected cruise speed

Gear	Ratio	Step
1	20.81	29%
2	16.16	29%
3	12.57	29%
4	9.76	29%
5	7.56	29%
6	5.87	29%
7	4.55	29%
8	3.53	29%
9	2.77	29%
10	2.15	29%
11	1.66	29%
12	1.29	29%
13	1.00	29%
14	0.78	-
R6*	4.59	-
R5*	5.91	-
R4*	7.61	-
R3*	9.81	-
R2	12.60	-
R1	16.23	-

*Optional



FACTORY-INSTALLED PTO

Single and dual-transmission PTOs (with warranties that match the transmission) are available to order with a variety of common interfaces installed at the factory. This allows customers to select the correct PTO for their application with the peace of mind that comes with factory fit. REPTO and FEPTO options available without horsepower restrictions.



ORDER CODES AND SPECIFICATIONS

FEATURE CODE	DESCRIPTION
0013HAA	T14 1450 lb. ft. (Direct Drive Optimized)
0013HAB	T14 1550 lb. ft. (Direct Drive Optimized)
0013HAC	T14 1750 lb. ft. (Direct Drive Optimized)
0013HAD	T14 1850 lb. ft. (Direct Drive Optimized)
0013HAE	T14 1450 lb. ft. (Over-Drive Optimized)
0013HAG	T14 1550 lb. ft. (Over-Drive Optimized)
0013HAH	T14 1750 lb. ft. (Over-Drive Optimized)
0013HAJ	T14 1850 lb. ft. (Over-Drive Optimized)



Key Benefits:
- Greater uptime through proactive service planning
- $0 deductible, 100% parts and labor, no claims max
- Nationwide support across all International locations
- Available with no finance costs

To help ensure that each visit is as seamless and unintrusive as possible, our team leverages data analytics to preschedule an open bay and give you an estimated completion time. By putting your needs at the center of every service visit, International Service Contracts deliver both uptime and peace of mind.

INTERNATIONAL SERVICE CONTRACTS.

Staying on top of regular maintenance is the best way to make sure your equipment is ready when you are. International Service Contracts are designed to help protect your investment for years down the road with coverage tailored to the specific needs of your business.

Make the move to the S13 Integrated Powertrain seamless with International® Service Contracts—designed to reduce complexity and keep your operation running efficiently from day one.

A comprehensive solution that includes:
- Planned Maintenance
- Extended Service Contracts
- Wear Item Replacement

You can streamline your service model while minimizing:
- Technician training requirements
- Parts inventory complexity
- Specialized service tools

The result? A smoother transition, reduced operational burden, and more time focused on what matters most—maximizing uptime and performance.

TRANSMISSION SERVICE INTERVALS

Service Action	Application	≤5.5 MPG	5.5 - 7.5 MPG	≥7.5 MPG
Transmission Fluid Change (T14)*	Long Haul	240,000 mi.	520,000 mi.	600,000 mi.
	Short Haul	200,000 mi.	325,000 mi.	450,000 mi.
	Severe Duty	160,000 mi.	260,000 mi.	300,000 mi.
Replace Axle Lubrication and Filter	500,000 miles On Highway application 250,000 miles Off-Highway application			

*Transmission fluid to be changed every 5 years if mileage not met

S13 INTEGRATED WARRANTY

COMPONENT	LT®/RH® SERIES	HX®/HV™ SERIES
S13 Engine	24 mo./unlimited	24 mo./unlimited
Aftertreatment	24 mo./unlimited	24 mo./unlimited
T14 Transmission	60 mo./750k miles	Axle Ratings <52k: 36 mo./unlimited Axle Ratings ≥52k: 24 mo./unlimited
Clutch	36 mo./350k miles	Axle Ratings <52k: 36 mo./unlimited Axle Ratings ≥52k: 24 mo./unlimited
International PTO & Adaptors (Pre-DTU Install)	Matches Transmission	Matches Transmission



We understand making money means keeping your vehicles on the road.

That's why uptime is so important to us. Dependable equipment spec'd for your needs or requirements is just the beginning. We also focus on fuel economy, planned maintenance, and optimized service intervals to make sure the low cost of ownership of our vehicles helps keep you in the black.

Always One Step Ahead
Remote vehicle health monitoring helps enable proactive, rather than reactive, maintenance and service planning.

Predictive Parts Stocking
Dealer parts inventory management uses AI and telematics data to predict stocking needs. This ensures the best parts are on dealer shelves to support customers.

Parts You Need Where And When You Need Them
Our partnership with Love's Truck Care & Speedco adds 400+ additional locations for quick, conveniently located access to light mechanical and select warranty work.

Loves speedco TRUCK CARE

International® Dealer Locations **700**

Love's Truck Care & Speedco Locations **400**

Total Service Locations **1,100**

Find out more at
international.com

2701 International Drive
Lisle, IL 60532 USA



Note: The information and conclusions contained herein are believed to be correct at time of publication, but do not necessarily apply to similar vehicles with different specifications or with production dates after the production of this publication. Vehicles with different specifications or later dates of production may yield different results. Vehicle specifications are subject to change without notice. TAD25006 07/2026 ®2026 International Motors, LLC (d/b/a International Motors USA LLC in Illinois and Ohio). All rights reserved. All marks are trademarks of their respective owners.