S13® INTEGRATED POWERTRAIN LT® SERIES AND RH™ SERIES





SUPERIOR OPERATING ECONOMY. STELLAR PERFORMANCE. SIMPLE, EASY-TO-SERVICE DESIGN.

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. Thanks to this spirit of collaboration between partner companies, the team was able to shift what's possible and rethink, redesign and reinvent what an integrated powertrain can be.

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.



IT ALL COMES TOGETHER



NO ONE THOUGHT IT WAS POSSIBLE. EXCEPT US. Finding incremental fuel economy gains has kept diesel engineers busy for decades. And recently, most believed the diesel engine had already reached its limit in terms of efficiency. We didn't. If anything, we took it as a challenge. After all, not only does better fuel economy mean less CO2 into the atmosphere, it's also better for businesses thanks to reduced operating costs and ultimately, greater profit.



The International S13 Integrated Powertrain can achieve up to a 15% gain in fuel economy^{*} over the popular first-generation International[®] A26. This is one reason why we consider the International S13 Integrated Powertrain the most advanced system of its kind.



* Comparing the fuel economy of the 2017 GHG International® A26 engine in a 2017 International® LT® Series truck with aero package to the fuel economy of the new International® S13 Integrated Powertrain in a 2024 International® LT® Series truck with the LT aero package and chassis enablers. Actual customer results may vary due to various factors, including but not limited to, truck specifications, weight of the vehicle, predictive features, environmental conditions, etc.

PARTS AND SPECIFICATIONS

01	Water Pump	Low displacement, Low parasitic losses
02	Oil Filter	Cartridge style
03	High-Pressure Fuel System	1800 Bar
04	T14 Transmission	14-speed single countershaft geartrain transmission with wide ratio spread for efficiencies on flatlands and performance on hilly terrains
05	6- or 9-Blade Fan	For addtional efficiency
06	Fuel Filter	
07	Oil Pan	Aluminum pan provides corrosion protection
08	Air Compressors	 Single cylinder (iron) Two cylinder (aluminum) Two cylinder clutched (aluminum)
09	Dual Stage After-Treatment	 Compact design for more frame rail mounting space No active DPF regen needed
10	No Cooled EGR	EGR cooler not required with this advanced engine design
11	Aluminum Valve Cover	Rugged and lightweight
12	Fixed Geometry Turbo	More reliable and efficient design

S13 INTEGRATED

Engine type	Diesel, 4-Cycle
Configuration	Inline 6-Cylinder
Displacement	12.74L (777 cu. in.)
Bore & Stroke	5.12 in. x 6.30 in. (126 mm & 166 mm)
Compression Ratio	23:1
Aspiration	Fixed Geometry Turbocharger
Combustion System	1800 bar Common Rail
Engine Lubrication	47.5 quarts (45L)
Total Engine Weight	2,284 lbs. (1,036 kg)
Valves	4 Valves per Cylinder, Dual Overhead Camshaft
B10 Design life	1,200,000 mi (1,931,000 km)

INDUSTRY-LEADING ENGINE WARRANTY

Base Engine	24 months; unlimited miles, unlimited hours*
Base Major Component	60 months; 500,000 miles
Base Towing	24 months; unlimited miles, unlimited hours**
Optional Engine	Up to 72 months, 600,000 miles
Optional Major Component	Up to 84 months, 700,000 miles

Fire & rescue applications: 60 months/100,000 miles/unlimited hours
 **Towing for vehicles with engine failures

S13 INTEGRATED POWER CURVES

HP @ 1800 RPM	Torque [lb-ft] @ 900 RPM	Governed speed [RPM]
400	1450	2000
400	1850	2000
430	1550	2000
450	1750	2000
470	1750	2000
515	1850	2000

T14 TRANSMISSION

Lightweight, efficiently packaged and robustly designed

14-speed including 2 crawler gears

Single countershaft transmission designed for simplicity and reliability

T14 GEAR RATIOS AVAILABLE

Gear	Ratio	Step	Gear	Ratio	Step
R2	12.60		7	4.55	29%
R1	16.23		8	3.53	28%
1	20.81	29%	9	2.77	29%
2	16.16	29%	10	2.15	29%
3	12.57	29%	11	1.66	29%
4	9.76	29%	12	1.29	29%
5	7.56	29%	13	1.00	28%
6	5.87	29%	14	0.78	-

TRANSMISSION BASE WARRANTY (INCLUDES TOWING)

Transmission	5 years, 750,000 miles (1,200,000 km)
Clutch	3 years, 350,000 miles (563,000 km)

DUAL STAGE AFTERTREATMENT

With Dual Stage Aftertreatment, and significantly improved emission control, the combustion can be optimized further for improved performance and fuel efficiency.

Two DEF Injectors

· Dual Stage catalysts with upstream and midstream DEF dosing.

No driver interaction required - The system manages the regeneration during operation

DPF filter does not need to be cleaned/replaced until 650,000 miles @ >8.2 mpg

Robust, compact aftertreatment allows less heat loss and helps significantly in improving the fuel economy and packaging

DUAL STAGE AFTERTREATMENT BASE WARRANTY

2 years, unlimited miles, unlimited hours





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. TAD22003 09/2024 °2024 International Motors, LLC. All rights reserved. All marks are trademarks of their respective owners.