



**INTERNATIONAL®
S13 INTEGRATED
POWERTRAIN**



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INTEGRATED POWERTRAIN**
International® HX® Series





IT ALL COMES TOGETHER

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. And this wasn't just any team. This was a dream team of engineers located literally all over the world. Thanks to a 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 the S13 Engine, T14 Transmission, Dual Stage Aftertreatment system and nine PTO options — which, combined, make up the S13 Integrated Powertrain. A powertrain that delivers stellar performance, is easy to service and is at home on the toughest jobsites.

HIGH-PRESSURE FUEL SYSTEM

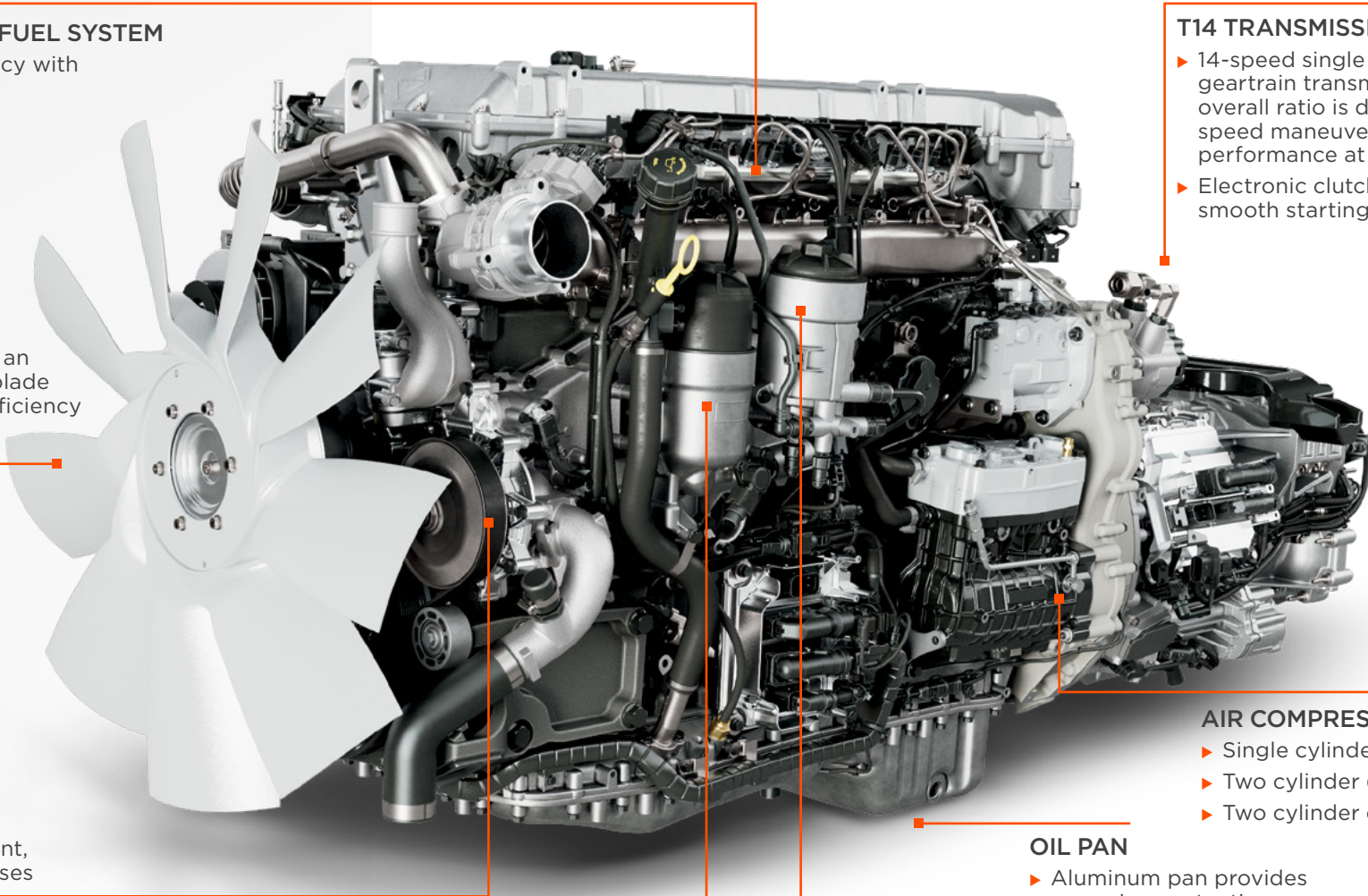
- ▶ Improved efficiency with less parasitic loss
- ▶ 1800 bar

9-BLADE FAN

- ▶ Converted from an 11-blade to a 9-blade for additional efficiency improvement

WATER PUMP

- ▶ Low displacement, low parasitic losses



T14 TRANSMISSION

- ▶ 14-speed single countershaft geartrain transmission with a 26.7 overall ratio is designed for slow speed maneuverability as well as performance at highway speeds
- ▶ Electronic clutch actuator for smooth starting and fast shifting

AIR COMPRESSORS

- ▶ Single cylinder (iron)
- ▶ Two cylinder (aluminum)
- ▶ Two cylinder clutched (aluminum)

OIL PAN

- ▶ Aluminum pan provides corrosion protection

OIL FILTER

FUEL FILTER

- ▶ Offered with industry leading systems

DUAL STAGE AFTERTREATMENT

- ▶ Compact design for more frame rail mounting space
- ▶ No active DPF regen
- ▶ No diesel oxidation catalyst

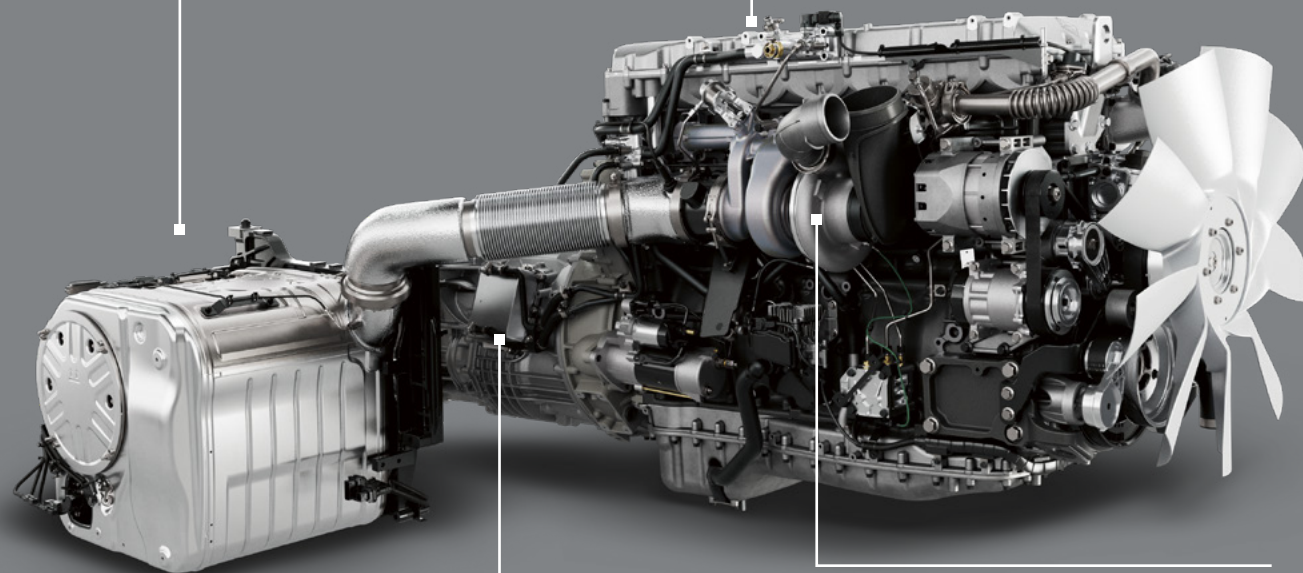


ELIMINATION OF EGR COOLER

- ▶ Improved reliability

ALUMINUM VALVE COVER

- ▶ Rugged and lightweight

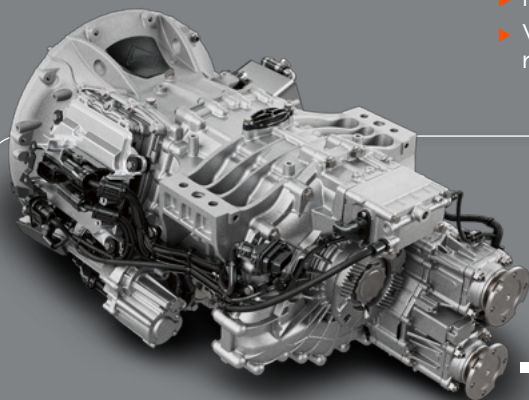


FIXED GEOMETRY TURBO

- ▶ More reliable and efficient design

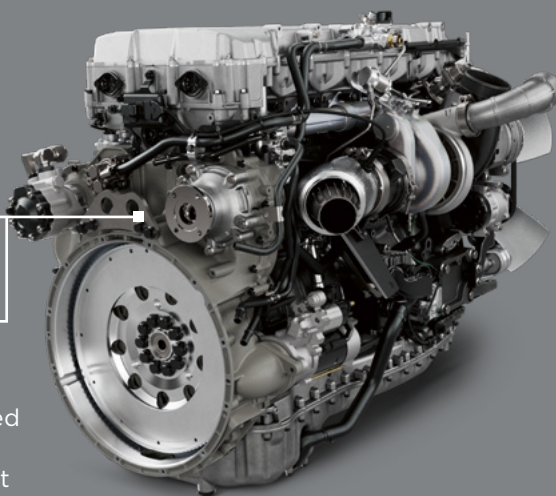
STANDARD INTEGRAL HEAT EXCHANGER AND OIL SYSTEM

- ▶ No horsepower or torque restrictions
- ▶ Variable oil system with dry sump in high range allows for reduced parasitic loss



FACTORY INSTALLED PTOs AVAILABLE

- ▶ Single and dual transmission PTOs available with a variety of common interfaces, installed directly at the factory
- ▶ REPTO and FEPTO options available without horsepower restrictions



READY TO WORK: ON THE ROAD OR AT THE JOBSITE

The International® S13 Integrated Powertrain was designed with hard work in mind. The S13 delivers performance through its robust lightweight design, optimized gearing, and no active regens leading to more payloads delivered on the jobsite.

- Outstanding payload capacity
- Simple design, easy serviceability
- Exceptional fuel economy
- Nine PTO options including a dual option

Plus, thanks to the seamless integration of OnCommand® Connection Advanced Remote Diagnostics, the visibility into the health, location and performance of your assets has never been more accessible.

S13 SPECIFICATIONS

Technical Specifications

| | |
|---------------------------|---|
| Engine Type | Diesel, 4-Cycle |
| Configuration | Inline 6-Cylinder |
| Displacement | 12.74L (777 cu. in.) |
| Bore & Stroke | 5.12 in. & 6.30 in. (130 mm & 160 mm) |
| Compression Ratio | 23:1 |
| Aspiration | Fixed Geometry Turbocharger |
| Combustion System | 1800 bar Common Rail |
| Engine Lubrication | 47.5 Quarts (45L) |
| Total Engine Weight (Dry) | 2,284 lbs. (1,036 kg) |
| Valves | 4 Valves per Cylinder, Dual Overhead Cam |
| B10 Design Life | 1,200,000 miles (1,931,000 km) |

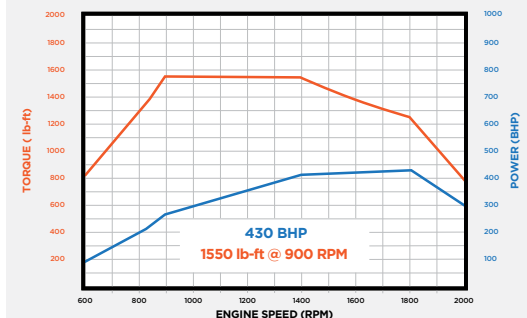
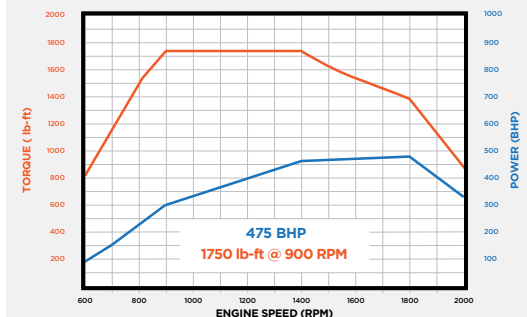
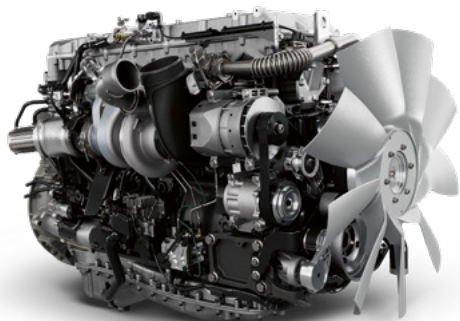
Industry-Leading Engine Warranty

| | |
|--------------------------|--|
| Base Engine | 2 years; unlimited miles, unlimited hours* |
| Base Major Component | 5 years; 500,000 miles |
| Base Towing | 2 years; unlimited miles, unlimited hours** |
| Optional Engine | Up to 6 years, 600,000 miles |
| Optional Major Component | Up to 7 years, 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 |
| 430 | 1550 | 2000 |
| 450 | 1750 | 2000 |
| 475 | 1750 | 2000 |
| 515 | 1850 | 2000 |



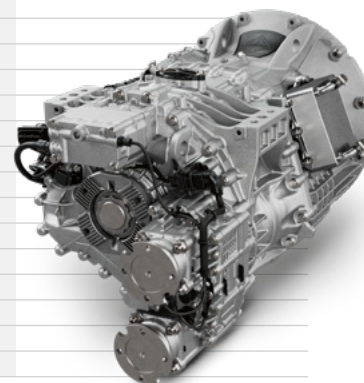
T14 BENEFITS

Transmission Key Benefits

- 14 speed including 2 crawler gears
- Lightweight, efficiently packaged and robustly designed
- Single countershaft design for simplicity and reliability
- Vocational specific drive modes including paver, off-road and split shaft

T14 Gear Ratios Available

| Gear | Ratio | % Step | R Gear | Ratio |
|------|-------|--------|--------|-------|
| 1 | 20.81 | 29% | R6 | 4.59 |
| 2 | 16.16 | 29% | R5 | 5.91 |
| 3 | 12.57 | 29% | R4 | 7.61 |
| 4 | 9.76 | 29% | R3 | 9.81 |
| 5 | 7.56 | 29% | R2 | 12.60 |
| 6 | 5.87 | 29% | R1 | 16.23 |
| 7 | 4.55 | 29% | | |
| 8 | 3.53 | 28% | | |
| 9 | 2.77 | 29% | | |
| 10 | 2.15 | 29% | | |
| 11 | 1.66 | 29% | | |
| 12 | 1.29 | 29% | | |
| 13 | 1.00 | 28% | | |
| 14 | 0.78 | - | | |



Transmission, Clutch and Transmission Mounted PTO Base Warranty (includes Towing)

- Less than 52K Rear Axle Rating 3 years; unlimited miles
- Greater than 52K Rear Axles Rating 2 years; unlimited miles

A/T BENEFITS

Dual Stage Aftertreatment Key Benefits

The advanced Dual Stage Aftertreatment system allows the powertrain to focus on what it does best: delivering power - when and where you need it.

- DPF service intervals extended due to less soot being produced by the engine
- No diesel oxidation catalyst, no fuel dosing
- Easy access to DPF for easy serviceability

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. © 2023 NAVISTAR Inc. 11/2023 TAD23001 All rights reserved. All marks are trademarks of their respective owners.