



Sustainable Efficient Technology



EFFICIENT PRODUCTIVITY

INGENIOUS SOLUTIONS  
FOR MORE EFFICIENT FARMING



# Respecting our environment

New Holland has already introduced industry leading technology for Tier 4A compliance, including the acclaimed ECOBlue™ selective catalytic reduction (SCR) technology. This proven solution has enabled farmers and contractors to significantly improve their productivity and to reduce their fuel bills. Today you can choose from 36 tractors and 19 harvesting products! The Tier 4B solution is the natural progression of this technology.

## OUR ENVIRONMENTAL PROMISE

But is all this really necessary? The simple answer is yes. It's not just a legal requirement, New Holland are fully committed to offering farmers intelligent solutions to make agriculture more efficient, cleaner and more sustainable to ensure that land remains fertile for future generations.

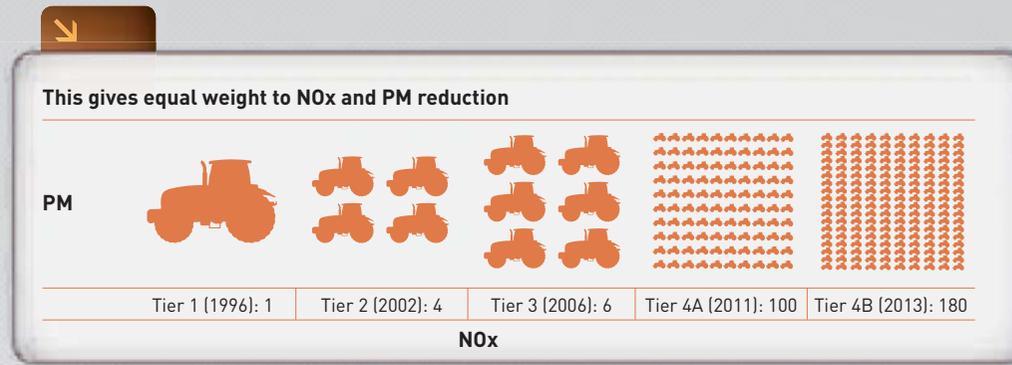
## NEW HOLLAND: THE CLEAN ENERGY LEADER

New Holland was the first manufacturer to offer 100% biodiesel compatibility. Since 2006 they have been pioneering the use of this renewable, environmentally friendly fuel and today, almost every product in the New Holland range is biodiesel compatible. Furthermore, New Holland is committed to achieving B7, 7% biodiesel compatibility at Tier 4B. But it doesn't stop here...

## TOMORROW WILL BRING TRUE ENERGY INDEPENDENCE

New Holland Agriculture is dedicated to respecting the environment, and is already developing concepts that go well beyond anything already laid down by future emissions regulations. In fact, they are imagining a zero emissions future, a world in which you will be able to meet all of your own energy needs. The prototype, fully working methane tractor is the first step on the road to energy independent farming. This machine is the forerunner of the methane/hydrogen hybrid tractor, and will pave the way for the eventual widespread introduction of the NH<sup>2</sup>™ hydrogen tractor. This machine runs on pure hydrogen, produced by you, the farmer, on your future 'Energy Independent Farm'. The NH<sup>2</sup>™ tractor itself produces virtually zero emissions, just a little water. New Holland always looks beyond the horizon to deliver you tomorrow's solutions today.





**180 TIMES BETTER OFF THAN OVER FIFTEEN YEARS AGO**

New Holland has reduced emissions 180 times over the last fifteen years to improve the lives of farmers and their families. In real terms, this means you can run your Tier 4B compliant machine for 180 days, six months in fact, and produce the same amount of emissions as a Tier 1 machine would have in just one day.

**THE EMISSIONS REDUCTION STORY**

1996 saw the introduction of the first Tier 1 emissions standards, and since then Nitrogen Oxides (NOx) and Particulate Matter (PM) have been reduced by 95%. These toxic substances are produced during combustion and can harm the environment and human health.

**NOx:** nitrogen monoxide and nitrogen dioxide are produced by combustion when the engine is at its hottest, at working temperatures above 1,500°C. These gases are two of the main causes of acid rain and the shrinking ozone layer.

**PM:** particulate matter is mainly made up of tiny carbon particles and other poisonous substances which are created when not all of the fuel is burnt during combustion, generally when the engine is cooler, when it is working at temperatures below 1,500°C.

**POWERED BY FPT INDUSTRIAL**

New Holland are not going it alone when it comes to Tier 4B technology, they can draw on the experience of their sister company and in-house development specialist, FPT Industrial.

**Pioneers:** Fiat invented Common Rail technology in the 1980s. They were the very first to introduce it on agricultural machines. Pioneering. Always.

**Cleaner:** For the fourth consecutive year, CNH Industrial has topped the Dow Jones Sustainability World and Europe indexes for the Industrial Engineering sector. Cleaner. Everywhere.

**Proven:** FPT Industrial have been working on their SCR technology since 1995, and during the last eight years, they have already produced over 450,000 SCR engines for the agricultural, construction and haulage industries. What's more, the HI-eSCR engines have already clocked up millions of miles. Reliability. Confirmed.



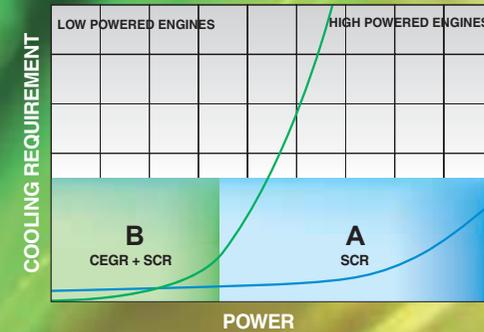
# Tailored solutions for enhanced productivity

## A CONSISTENTLY PRODUCTIVE APPROACH

New Holland established a clear roadmap for final Tier 4B compliance back in 2010 to ensure a coherent and consistent strategy. In line with this policy, the two solutions approach, based on their respective benefits, has been in place since 2010 and will be applied for final Tier 4B compliance. High Efficiency Selective Catalytic Reduction (HI-eSCR) will be used on products delivering more than 120hp(CV), and light Cooled Exhaust Gas Recirculation (CEGR) together with a compact SCR system has been developed for lower powered machines. So why two solutions? New Holland Agriculture is committed to integrating the best available engine technology, to reduce your operating costs and increase your productivity. This means choosing tailor made solutions for each and every individual machine.

## OPTIMAL FUEL CONSUMPTION. REDUCED OPERATING COSTS.

FPT Industrial is the only company which has completely eliminated Diesel Particulate Filters (DPF) from all of its engines with outputs of over 75hp(CV). Furthermore, every agricultural machine which develops more than 120hp(CV) is also CEGR free! What does that mean in practice? Well, it means that only FPT Industrial engines offer the benefits of optimised fuel consumption and reduced operating costs across this vast power range.



CEGR requires a cooling package to cool the hot exhaust gas prior to it being recirculated. Higher powered, larger capacity engines produce higher volumes of hot gas, which result in the need for a very large cooling package.

**Section A.** This made ECOBlue™ HI-eSCR system the natural choice for machines over 90kW [120hp(CV)]. Why? It reduces the cooling requirement as well as guaranteeing power output.

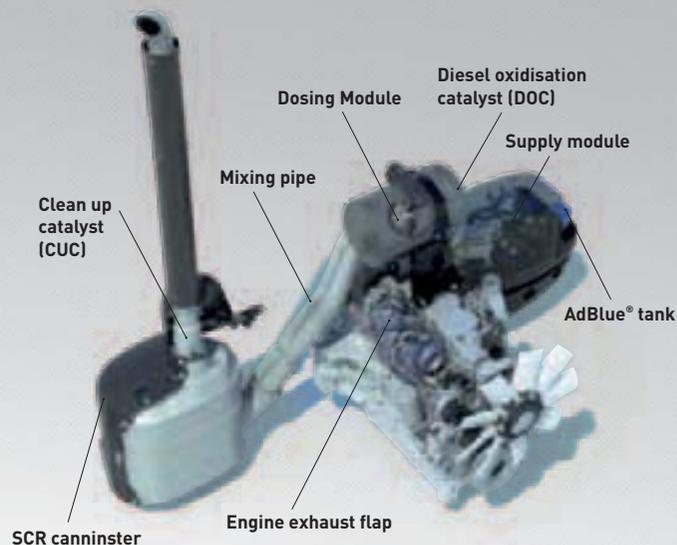
**Section B.** For smaller tractors operating at lower horsepower with lower heat rejection, and therefore lower cooling demands, light CEGR with a compact SCR system is the right solution.



# ECOBBlue™ HI-eSCR system: patented efficient and high performance solution for high powered machines

## YOUR GUIDE TO THE ECOBLUE™ HI-eSCR SYSTEM

Developed by New Holland's sister company FPT Industrial, both the engines and the after treatment system have been tailored to comply with New Holland customer specific requirements, thus creating the ECOBlue™ HI-eSCR, High Efficiency Selective Catalytic Reduction, solution which uses a catalyst to treat the NOx contained in the exhaust gas, transforming it into harmless water and nitrogen. To achieve this, it uses an after treatment system that adds Diesel Exhaust Fluid / AdBlue®, a water and urea mix, which is colourless and non-toxic, in the exhaust stream. The solution provided by FPT Industrial is the most efficient in the industry, and is protected by seven different patents, to guarantee you the most efficient operation. The entire system is managed by the Engine Control Unit, which controls the Dosing Module and the Supply Module. This uses sensors contained within the closed loop system to monitor the exhaust gases, and it uses this information to calculate the precise amount of AdBlue® that needs to be added to the mixture.



The key additional components of FPT Industrial's ECOBlue™ HI-eSCR system are:

**Patented closed loop system.** Using additional sensors located at the exhaust outlet of the engine, precise levels of NOx are recorded for exact AdBlue® dosing. This enables the neutralisation of even more NOx, without excessive AdBlue® consumption.

**Engine exhaust flap** ensures the engine always operates at its optimum temperature, and it delivers efficient NOx conversion upon start up.

**Diesel Oxidisation Catalyst** oxidises the exhaust gas, guaranteeing the optimal mix between Nitrogen Oxide (NO) and Nitrogen Dioxide (NO<sub>2</sub>), increasing the conversion efficiency in the SCR catalyst.

**Patented mixing pipe with an optimised fluid dynamic design.** Delivering optimal exhaust gas and AdBlue® mixing for the highest NOx conversion rates (over 95%) and the best use of the catalyst's surfaces, to ensure the most efficient use of AdBlue®.

**Clean up catalyst** removes excess NH<sub>3</sub> (Amonia).

# Consistent performance. Efficient simplicity.



## CONSISTENCY: UNCHANGED OPERATION

New Holland developed a coherent emissions road map when Tier 4A was introduced, and its Tier 4B strategy follows it exactly. Operation will remain unchanged for high horsepower products, and a combination of light CEGR and a little SCR will be used for low powered products. This ensures that all products benefit from the productivity advantages of ECOBlue™ SCR technology.

To date FPT Industrial have produced numerous engines for haulage applications, which benefit from HI-eSCR technology, and they have already enjoyed millions of kilometres of reliable and efficient operation.



## PERFORMANCE: IMPROVING FARMING PRODUCTIVITY

All high powered Tier 4B compliant products will maintain the performance of their ECOBlue™ SCR Tier 4A counterparts. How? They continue to breathe combustion friendly clean fresh air.

You will continue to benefit from exceptional levels of power, torque and torque back-up to make your operation one of the most efficient around. When this is combined with engine power management, which provides you with additional power, but only when it is needed, you'll keep going no matter how tough the going. For a lightning fast response when additional load is placed on your machine, some of the best transient response figures in the industry will keep you in the productivity fast lane, no matter what the conditions or the application.



| Cursor Engine       |             | T8.420 Tier 4A | T8.435 Tier 4B | Improvement |
|---------------------|-------------|----------------|----------------|-------------|
| Max. EPM horsepower | [kW/hp(CV)] | 308/419        | 320/435        | + 4%        |
| Rated horsepower    | [kW/hp(CV)] | 270/367        | 279/379        | + 3%        |
| Max. torque         | [Nm]        | 1808           | 1853           | + 2%        |
| EPM Band            | [hp(CV)]    | 52             | 56             | + 8%        |



### **SIMPLICITY: TYPICALLY NEW HOLLAND**

The best solutions are always the simplest. The ECOBlue™ HI-eSCR system alone is used for products developing above 120hp(CV). One solution. Simple. All products have been designed for simple, reliable operation. Keeping you in your fields for longer. Simple. Fill up your AdBlue® tank at the same time as your fuel tank and away you go. Simple. Absolutely no change in operation for high horsepower products. Simple. Lower power products now benefit from the productivity boosting ECOBlue™ SCR technology. Simple. Tier 4B. Simplicity it self.



### **EFFICIENCY: THE REALITY**

Efficiency matters in modern farming. After all, an efficient operation means a profitable operation. Products equipped with the ECOBlue™ HI-eSCR system will deliver fluid consumption (diesel plus AdBlue®) which is the same or better than the Tier 4A equivalent machine. Moreover, products will enjoy reduced operating costs over their entire lifecycle including long 600 hour engine service intervals.

# Your guide to Diesel exhaust fluid / AdBlue®



## AdBlue®

### WILL I BE ABLE TO FIND ADBLUE® EASILY?

The answer is yes! It will be available on your doorstep, through CNH Industrial Parts & Service; just contact your local dealer for more information. If that wasn't enough, AdBlue® can even be delivered direct to your farm for absolute convenience.

### WHAT DOES ADBLUE® MEAN FOR ME?

It means you'll have a more efficient machine with virtually no effort on your part. How? The AdBlue® system offers the ultimate in easy operation: you can fill up with AdBlue® at the same time as diesel as the tanks are right next to each other.

### WHAT DOES ADBLUE® MEAN FOR MY MACHINE?

Adding AdBlue® is contained within the separate after treatment system, which means power generation remains at the impressive levels you've come to expect of New Holland.

### SAVING FUEL, REDUCES YOUR CARBON FOOTPRINT

Emissions released from burning diesel are a significant contributor to farms' overall carbon footprints. The ECOBlue™ HI-e SCR system technology for Tier 4B compliance reduces NOx emissions and fuel consumption by up to 10% when compared with Tier 3 models, bringing about a substantial cut in you farm's carbon emissions. Visit [www.carbonid.newholland.com](http://www.carbonid.newholland.com) to find out just how much carbon you could save!



[www.newholland.com/uk](http://www.newholland.com/uk) - tel: 0800 015 0105  
[www.thecleanenergyleader.com](http://www.thecleanenergyleader.com)

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