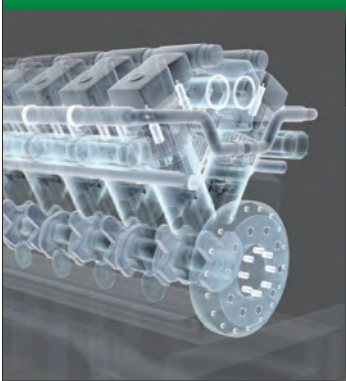


# CASTROL<sup>®</sup> DURATEC<sup>™</sup>

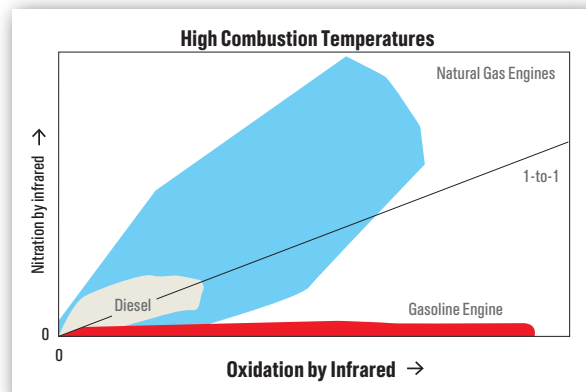
THE NATURAL GAS ENGINE OILS  
PROVEN TO POWER THE FUTURE



**Castrol**  
**HEAVY DUTY**  
LUBRICANTS



**UNLIKE DIESEL AND GASOLINE ENGINE OILS, NATURAL GAS ENGINE OILS MUST ENDURE EXTREMELY HIGH COMBUSTION TEMPERATURES AND ADVERSE OPERATING ENVIRONMENTS.**



Castrol® Duratec™ natural gas engine oils were developed after thousands of hours of field tests and with Castrol's specialized knowledge of natural gas engines. These lubricants are formulated to perform under a wide range of temperatures and surpass natural gas engine oil key performance requirements including valve protection, deposit control, oxidation and nitration control, acid neutralization, and low oil consumption.

## KEY PERFORMANCE REQUIREMENTS

### DEPOSIT CONTROL

Deposits and lacquer build-up can create problems in engine performance and prolonged overhaul time due to excessive deposits. Castrol Duratec's detergency package keeps engine components clean by suspending deposits in the oil throughout the drain cycle.

#### VALVE COVER BEFORE...



Valve cover of an engine running on competitive group 1 oil. Notice the "solidified deposits."

#### VALVE COVER AFTER...



Valve cover from an adjacent engine after 200 hours when switching to Castrol Duratec. Notice the excellent deposit control and cleaning benefits of Castrol Duratec.

### LOW OIL CONSUMPTION

Excessive oil consumption will lead to higher operating costs and carbon lacquering on engine components. Castrol Duratec's stable formulation delivers low oil consumption that leads to less carbon build-up and keeps the engine running clean.

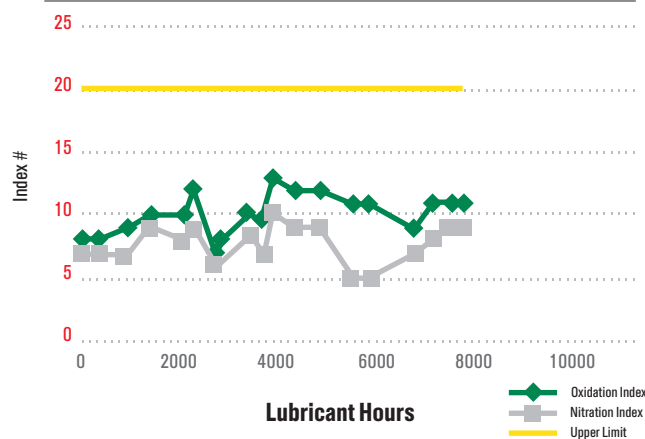
## EXCEPTIONAL OXIDATION AND NITRATIONAL CONTROL

Castrol Duratec delivers enhanced oxidation and nitration resistance from high operating temperatures that will prematurely burn off and thicken other engine oils. Castrol Duratec keeps parts clean by preventing sludging, varnishing, and lacquering that occur with an inferior natural gas engine oil.

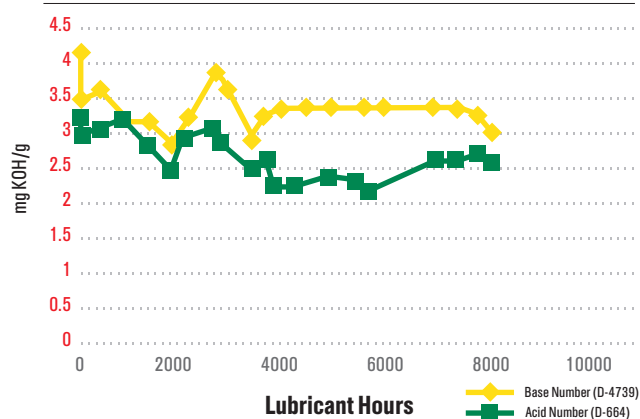
## ACID NEUTRALIZATION

Halogens and hydrogen sulfides (sour gas) along with high combustion temperatures in natural gas create harmful acids that attack metal components and degrade engine oils. Castrol Duratec delivers superior TBN retention technology that neutralizes acids throughout the drain cycle protecting engines from acid formation while keeping engine parts clean.

Oxidation & Nitration (IR) vs. Time



TBN & TAN vs. Time



## PRODUCTS

	DURATEC A (Ashless)	DURATEC L (Low Ash)
Oxidation and Nitration Resistance	✓	✓
TBN Retention	✓	✓
Deposit Control	✓	✓
Usable for Dual Purpose Engines	✓	
Demulsifies Water and Entrapped Air	✓	
Minimal Port Carboning	✓	
Catalyst Compatible	✓	✓
Low Oil Consumption	✓	✓
Sour Gas Combustion		

# DURATEC A, L, 40, 15W-40

FEATURES	ADVANTAGES	BENEFITS
Excellent deposit control	Maintains wear protection by keeping engine surfaces clean	Increase life of engine components, reduces wear, and increases oil life
Outstanding TBN retention	Extends drain intervals and neutralizes harmful acid	Trouble – free operations
Excellent oxidation and nitration Control	Resists thermal degradation due to oxidation and nitration that thickens engine oil	Increase life of engine components and reduces wear

## OEM ENGINE APPLICATIONS

	CATERPILLAR		JENBACHER		DEUTZ	WAUKESHA		COOPER BESSEMER	CLARK	WARTSILLA
	Natural Gas	Biogas or Sour Gas	Natural Gas	Biogas or Sour Gas	Natural Gas	Natural Gas	Cogeneration with Forced Hot Water	Natural Gas	Natural Gas	Natural Gas
DURATEC A								✓	✓	
DURATEC L	✓		✓		✓	✓	✓			✓

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