



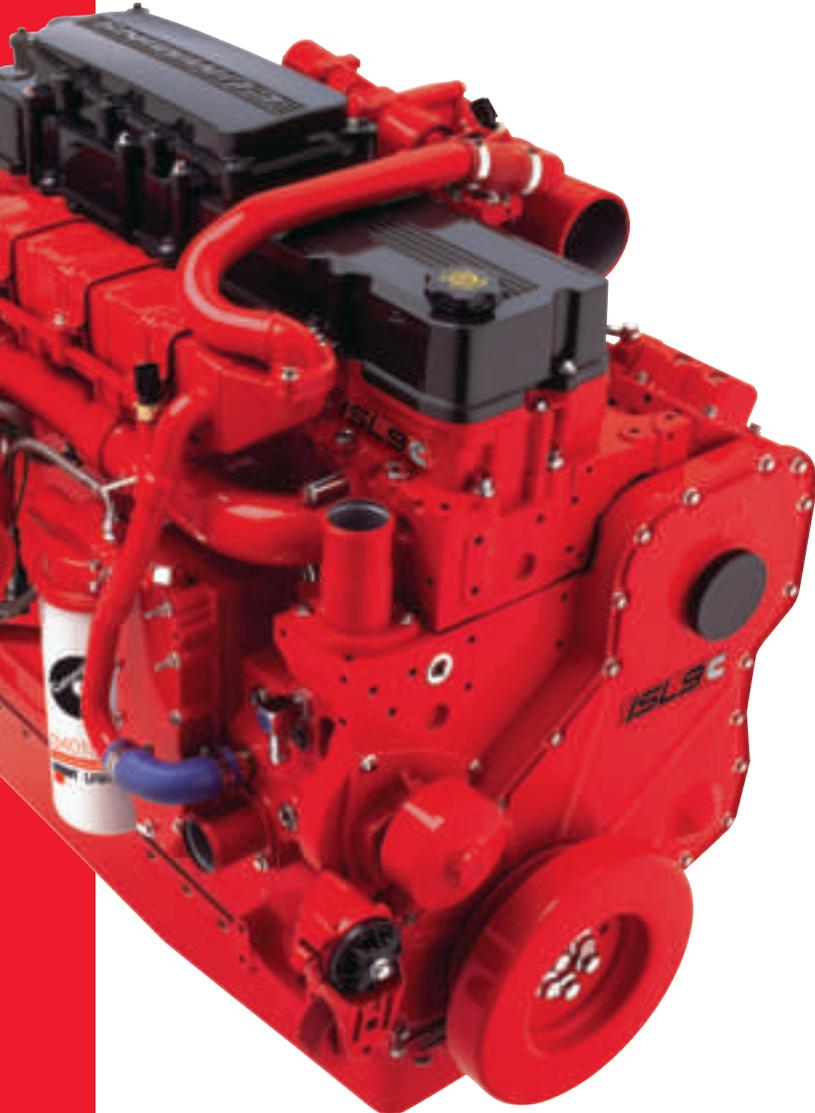
Better Every™ Route.

For Urban Transit Applications.



# Every™ Option. Better.

Whether you are looking for a diesel, alternative fuel or a diesel/electric hybrid to power your city buses, Cummins has you covered. Our entire range of engines is built from proven core technology that's been continuously refined and improved so that these engines deliver better performance, every day and every route. This includes our proprietary VGT™ Turbocharger and an Exhaust Gas Recirculation (EGR) cooler that's been upgraded for enhanced reliability.



All Cummins transit bus engines meet EPA 2010 emissions standards. We've utilized our fully integrated technology to simultaneously improve fuel economy and performance, lowering operating costs as we lower emissions to near-zero levels.

Cummins is the only engine manufacturer to design, develop, manufacture and support nearly every component from the air intake to the exhaust aftertreatment in a totally integrated system. This allows us to optimize critical systems and deliver the right technology in a way that other manufacturers using outside suppliers simply can't match.

Our EPA 2010 diesel engines have added Selective Catalytic Reduction (SCR) to the Cummins Aftertreatment System. This change allowed us to reduce the amount of cooled EGR into the power cylinder, and to recalibrate our diesels so they are more responsive to throttle input with equal or better fuel economy than previous models.

Cummins Westport ISL G natural gas engine is your choice for the newest evolution of alternative fuel engine technology, combining all the advantages of clean-burning natural gas with "no compromise" power and torque for urban transit applications.

Cummins is also a leader in hybrid diesel engines. Diesel/electric buses powered by Cummins ISB and ISL engines have completed millions of miles of reliable service throughout the world, from Beijing during the summer Olympics to the mountains of Yosemite National Park.

There's a reason Cummins has been the #1 choice in U.S. urban transit buses since 1998 – our total commitment to delivering reliable power, backed by service and support that you can depend on in a clean and responsible way. Every day.



### **ISL9. Clearly Better.**

The ISL9 EPA 2010 delivers more of what you need from an urban transit bus engine.

Reliability of the ISL9 is enhanced with our proprietary XPI fuel system, designed and manufactured by Cummins with fewer moving parts than competitive units. The XPI fuel system is capable of the highest injection pressures in the industry. Fuel pressure is consistent at every rpm for stronger performance. This fuel system, together with a more robust Electronic Control Module (ECM), enables multiple injection events for cleaner, quieter and more complete combustion.

Maintenance intervals and costs remain virtually the same as in previous years with the only additional item being the replacement of the Diesel Exhaust Fluid (DEF) filter.

ISL9 EPA 2010 ratings range from 280-330 horsepower (209-246 kW) including a hybrid rating, so you can match the ISL9 to any type of transit bus from 29-foot to 60-foot articulated models.



### **ISB6.7. Every Start.**

The Cummins ISB engine platform has been a mainstay of transit bus operations around the globe for years. From China to Europe to the United States, it has a proven record of delivering a low cost of operation with excellent performance and fuel economy.

The ISB6.7 EPA 2010 engine features a High Pressure Common Rail (HPCR) fuel injection system that provides constant pressure at every rpm. This enables multiple injection events per cycle for cleaner, quieter and more complete combustion, so you can expect the ISB6.7 to continue to deliver best-in-class fuel economy. The proprietary VGT™ Turbocharger has been improved as well for strong throttle response and dependability.

The ISB6.7 EPA 2010 uses the same ECM and software programs as every other Cummins diesel engine. This commonality simplifies technician training, performance monitoring and service reliability.

Ratings include our special hybrid diesel/electric engine at 280 hp (209 kW).

## **A Better Approach To Emissions Control.**

Cummins has been – and continues to be – the technology leader every step of the way in the challenge to reduce emissions and greenhouse gases.

We understand the critical nature of having an aftertreatment system fully integrated with engine operations. In 2010 we took our existing Cummins Aftertreatment System with the Cummins Diesel Particulate Filter and added SCR technology. Cummins is a world leader in SCR, successfully using this technology since 2005 in hundreds of thousands of vehicles throughout Europe.

Your bus manufacturer will provide a DEF tank, and an indicator lamp on the instrument panel will indicate when the DEF level is getting low. In a typical urban transit operation, the DEF tank will need to be refilled every third time your bus gets diesel fuel. DEF is already readily available.



## **Diesel/Electric Hybrid Technology.**

At Cummins, we recognize that just talking about climate change and environmental impact isn't enough. We are actively involved with leading-edge hybrid technology that can reduce our dependence on fossil fuels, reduce greenhouse gases and lower noise pollution.

Today, Cummins ISB6.7 and ISL9 engines are being used to generate the power for hybrid diesel/electric transit buses in many urban areas such as New York City and Chicago as well as many environmentally sensitive locations such as United States national parks.

The ISB6.7 and ISL9 are ideally suited for 30- to 40-foot diesel/electric buses, with the ISL9 330 hybrid rating an excellent match for 60-foot articulated buses. Cummins diesel engines have been proven to work efficiently and effectively with a wide range of hybrid drive systems.

## **Every Alternative: Cummins Westport ISL G.**

The 8.9-liter ISL G has met EPA 2010 emissions standards since 2007 using Stoichiometric cooled-Exhaust Gas Recirculation (SEGR) spark-ignited combustion to create a high-performance natural gas engine. Torque at idle and fuel economy are improved versus lean-burn engines by 30% and 5%, respectively.

Cooled EGR, in combination with stoichiometric combustion (the theoretical or ideal combustion process in which fuel and oxygen are completely consumed), creates an oxygen-free exhaust, which allows for the use of Three-Way Catalyst (TWC) aftertreatment. TWCs are effective, simple, passive devices that are packaged as a muffler and are maintenance-free. The ISL G does not require active aftertreatment such as DPFs or SCR.



### **The Natural Alternative.**

The ISL G is rugged and reliable because it shares many components and parts with the Cummins L Series diesels and is built on the same assembly line as Cummins diesels. A wastegated turbocharger with electronic control for precise air handling and full drive-by-wire throttle control provide impressive diesel-like performance.

The ECM provides full monitoring and control of engine sensors, fuel system and ignition system. The ECM provides full interface capability to Cummins INSITE™ and diagnostic service tools. It also provides Original Equipment Manufacturers (OEMs) and end users with the ability to tailor performance of the engine to fit the vehicle mission.

### **Information Products.**

Cummins information products are designed to increase productivity while simplifying engine and fleet management through advanced technology.

### **INSITE. Smart Tool For Smart Managers.**

All Cummins engines – diesel and natural gas – are designed to work with Cummins INSITE software. With Cummins INSITE, you get everything your technicians need to increase the accuracy and speed of troubleshooting and maintenance, guiding your technicians through diagnosis and repair with full-screen displays.

### **QuickServe® Online.**

QuickServe Online sorts through eleven million Cummins engines and a million documents in seconds to find accurate, up-to-the-minute parts-and-service information about a customer's engine. Every fact is instantly available from part numbers, diagrams and supersessions to service bulletins and troubleshooting manuals, operation and maintenance manuals, literature, tools catalogs and more. See [quickservice.cummins.com](http://quickservice.cummins.com) for access information.





### **Genuine Cummins New And ReCon® Parts.**

We stock parts for 100,000 individual part numbers at our Memphis Distribution Center, including both new (Genuine Cummins) and remanufactured (ReCon) parts. Our centralized distribution network assures next-day delivery almost everywhere in North America on parts orders received by midnight EST. Genuine Cummins Parts are of the highest quality and backed by the best parts warranty in the industry. And we are so confident in the reliability of Genuine Cummins ReCon parts that every one comes with a full Cummins warranty.

### **Training Every Technician.**

Performing your own engine service? Make sure your technicians have the latest training on all the latest technology. Cummins distributors offer local training using the same diagnostic procedures and repair techniques that are taught by our factory personnel.

### **Warranties That Cover Every Part, Every Mile.**

All Cummins and Cummins Westport transit engines come with a standard 2-year/unlimited-mileage warranty with full parts and labor on warrantable failures.\* This includes travel or towing when a bus is disabled or when further operation would cause additional damage. Major components are covered up to 3 years or 300,000 miles (482,804 km), whichever occurs first, on Cummins ISL9 and ISL G transit bus engines.

For additional peace of mind, Cummins and Cummins Westport offer a variety of extended coverage plans to meet every transit operation's needs. Check with your local Cummins distributor for details.

\*Warrantable failures are those due to defects in materials or Cummins workmanship.

### **Every Question. Answered.**

- Service Network – Cummins engines are backed by nearly 3,500 authorized Cummins parts or service outlets in North America.
- Cummins Customer Support Center – Call the Cummins specialists for information and service locations at our 1-800-DIESELS™ (1-800-343-7357) Cummins Customer Support Center.
- [cumminsengines.com](http://cumminsengines.com) – Access product literature and additional information. Register all of your Cummins engines quickly and easily on the web site to ensure quality parts and service for your engine. Sign up for our *Bus News* electronic newsletter.



# Urban Transit Bus Engine Ratings And Maintenance Intervals.

## ISL9 Ratings

Engine Model	Advertised hp (kW)	Peak Torque lb-ft (N•m) @ rpm	Governed Speed
ISL9 330	330 (246)	1100 (1491) @ 1400	2200 RPM
ISL9 280	280 (209)	900 (1220) @ 1300	2200 RPM
ISL9 Hybrid	Up to 330 (246)	Up to 1100 (1491) @ 1400	2200 RPM

## ISB6.7 Rating

ISB6.7 Hybrid	280 (209)	660 (895) @ 1600	2600 RPM
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## ISL G Ratings

ISL G 320	320 (239)	1000 (1356) @ 1300	2200 RPM
ISL G 300	300 (224)	860 (1166) @ 1300	2200 RPM
ISL G 280	280 (209)	900 (1220) @ 1300	2200 RPM
ISL G 250	250 (186)	730 (990) @ 1300	2200 RPM

Cummins is a pioneer in product improvement. Thus specifications may change without notice. Illustrations may include optional equipment.

## ISL9 Maintenance Intervals

Maintenance Item	Hours	Months
Oil and Filter*	500	6
Primary Fuel Filter**	500	6
Secondary Fuel Filter	500	12
Coolant Filter	None***	None***
Overhead Adjustment	5,000	48
Standard Coolant Change****	2,000	24
Coalescing Filter	2,000	
DEF Filter	6,500	
Particulate Filter Cleaning	6,500	

## ISB6.7 Maintenance Intervals

Maintenance Item	Hours	Months
Oil and Filter*	500	6
Primary Fuel Filter**	500	6
Secondary Fuel Filter	500	6
Overhead Adjustment	5,000	48
Standard Coolant Change****	2,000	24
Coalescing Filter	2,500	
DEF Filter	6,500	
Particulate Filter Cleaning	6,500	

## ISL G Maintenance Intervals

Maintenance Item	Miles/Kilometers	Hours	Months
Oil and Filter	7,500 MI 12,000 KM	500	6
Fuel Filter	15,000 MI 24,000 KM	1,000	12
Coolant Filter	7,500 MI 12,000 KM	500	6
Spark Plugs	22,500 MI 36,000 KM	1,500	18
Coolant Change	30,000 MI 48,000 KM	2,000	24
Valve Adjustment	30,000 MI 48,000 KM	2,000	24

\*Assuming normal duty cycle.

\*\*OEM-supplied; intervals may vary.

\*\*\*If engine is equipped with an optional coolant filter, it will need to be replaced at the same intervals as the oil filter. Regardless if the engine is or is not equipped with a coolant filter, SCA/DCA additive levels must be checked according to the interval listed in the Owners Manual.

\*\*\*\*Extended coolant drain/flush/fill intervals may be followed when certain requirements are met. For more information on these requirements, refer to the Cummins Coolant Requirements and Maintenance Service, Bulletin 3666132.

See Owners Manual for complete details.



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