

Click to verify



























or technological measures that legally restrict others from doing anything the license permits. You do not have to comply with the license for elements of the material in the public domain or where your use is permitted by an applicable exception or limitation. No warranties are given. The license may not give you all of the permissions necessary for your intended use. For example, other rights such as publicity, privacy, or moral rights may limit how you use the material. When it comes to diesel engines, the Cummins ISX12 stands out as a powerful, reliable, and efficient choice for a variety of applications. Whether you're in the trucking industry, operating vocational vehicles, or managing industrial machinery, the ISX12 engine is designed to meet your performance needs. In this blog post, we'll explore the key features, technical specifications, benefits, and engine rebuilding suggestions for the Cummins ISX12 engine. Why Choose the Cummins ISX12 Engine? The Cummins ISX12 engine is known for its exceptional power, durability, and fuel efficiency. Here are some of the reasons why this engine is a popular choice among professionals: Robust Performance: The ISX12 delivers impressive horsepower and torque, making it ideal for demanding applications. Its advanced design ensures consistent performance even under heavy loads. Fuel Efficiency: With innovative fuel management systems, the ISX12 optimizes fuel consumption, reducing operational costs and minimizing environmental impact. Durability: Built with high-quality materials and precision engineering, the ISX12 is designed to withstand the toughest conditions, ensuring long-lasting performance and reduced downtime. Emissions Compliance: The ISX12 meets stringent emissions standards, featuring advanced technologies that reduce harmful pollutants and ensure compliance with global regulations. Versatility: The ISX12 engine is suitable for a wide range of applications, including trucking, vocational vehicles, and industrial machinery, making it a versatile choice for various industries. Technical Specifications of the Cummins ISX12 Engine Understanding the technical details of the Cummins ISX12 engine can help you appreciate its capabilities and determine if it's the right fit for your needs. Here are the key technical specifications: Engine Configuration: Inline 6-cylinder Displacement: 11.9 liters (726 cubic inches) Bore and Stroke: 130 mm x 150 mm (5.12 in x 5.91 in) Horsepower Range: 310-500 hp (231-373 kW) Peak Torque: Up to 1650 lb-ft (2237 Nm) Fuel System: XPI (Extreme Pressure Injection) common rail Turbocharging: Single Cummins VGT™ Turbocharger Compression Ratio: 17.3:1 Emissions: EPA 2010, Euro 5/EEV compliant Oil System Capacity: 40 quarts (37.9 liters) Dry Weight: 2,650 lbs (1,202 kg) Aftertreatment System: Cummins Particulate Filter, Selective Catalytic Reduction (SCR) Key Features and Benefits Variable Geometry Turbocharger (VGT™): The Cummins VGT™ Turbocharger provides optimal boost across the engine's operating range, enhancing throttle response, fuel efficiency, and reducing emissions. XPI Fuel System: The Extreme Pressure Injection (XPI) fuel system offers precise fuel control for improved combustion efficiency, leading to better fuel economy and lower emissions. Advanced Emission Control Technologies: The ISX12 engine features a Cummins Particulate Filter and Selective Catalytic Reduction (SCR) to reduce particulate matter and nitrogen oxides, ensuring compliance with strict emissions standards. Durable Components: The ISX12 is built with robust materials and components, including a high-strength block and forged steel pistons, ensuring long-term reliability and durability. Integrated Electronics: Advanced electronic controls and diagnostics help monitor and optimize engine performance, providing real-time data for improved efficiency and maintenance planning. Applications of the Cummins ISX12 Engine The versatility of the Cummins ISX12 Engine makes it suitable for a wide range of applications: Trucking: The ISX12 is ideal for both short-haul and long-haul trucking, offering reliable performance, fuel efficiency, and durability for extended journeys. Vocational Vehicles: From dump trucks to concrete mixers, the ISX12 provides the necessary power and durability for vocational vehicles, handling tough jobs with ease. Industrial Machinery: The ISX12 is perfect for various industrial applications, delivering the power and reliability needed for demanding environments. Maintenance and Support To ensure the longevity and optimal performance of your Cummins ISX12 engine, regular maintenance is essential. Cummins provides extensive support and service networks, offering expert assistance and genuine Cummins parts to keep your engine running smoothly. Routine servicing and proper care can help prevent issues and extend the life of your engine. ISX12 Engine Rebuilding Suggestions Rebuilding your Cummins ISX12 engine can be a cost-effective way to extend its lifespan and maintain optimal performance. Here are some suggestions for a successful engine rebuild: Use Quality Cummins Parts: Always use Quality Cummins Parts for replacements during the rebuild process. This ensures compatibility, reliability, and maintains the engine's original performance standards. HDKits have a wide range of Cummins ISX12 Engine Rebuild Kits and Parts Follow Manufacturer Guidelines: Adhere to Cummins' rebuilding guidelines and procedures. This includes proper torque specifications, clearances, and assembly techniques to ensure a successful rebuild. Inspect Components Thoroughly: Carefully inspect all engine components for wear, damage, and tolerances. Replace any parts that are worn beyond acceptable limits or damaged to prevent future issues. Update to Latest Specifications: Incorporate any updates or improvements that Cummins has introduced since your engine was originally manufactured. This can enhance performance, efficiency, and emissions compliance. Work with Certified Technicians: If you're not experienced in engine rebuilding, consider working with certified Cummins technicians. They have the expertise and tools necessary to perform a high-quality rebuild. Test and Validate: After the rebuild, thoroughly test the engine to ensure it performs correctly. This includes checking for leaks, proper operation, and verifying that all systems are functioning as expected. Conclusion The Cummins ISX12 engine is a powerful, efficient, and reliable choice for a variety of applications. With its advanced technology, robust build, and compliance with emissions standards, the ISX12 delivers exceptional performance and durability. Whether you're in the trucking industry, operating vocational vehicles, or managing industrial machinery, the Cummins ISX12 engine is a trusted solution that meets your needs. For more information on the Cummins ISX12 engine, including detailed specifications and customer reviews, visit our website or contact our team of experts. Invest in the Cummins ISX12 engine today and experience the difference in performance and reliability. If you're considering an engine rebuild, following these suggestions can help ensure a successful and cost-effective process, extending the life of your Cummins ISX12 engine. Power 400-600 HP Torque 1450-2050 LB-FT The Cummins ISX15 engine is a heavy-duty diesel engine that has been a cornerstone in the trucking and commercial vehicle industry since its introduction in the late 1990s. It was designed to meet the increasing demands for power, efficiency, and emissions compliance, particularly with the introduction of stringent EPA regulations. 1998: The ISX series was launched as a successor to the N14 engine, featuring advanced technology and improved performance characteristics. It was engineered to deliver higher torque and horsepower while maintaining fuel efficiency. 2002: The ISX15 became one of the first engines to use the Cummins SmartTorque technology, which optimizes torque delivery for better fuel economy and performance. 2007: With the introduction of the EPA's 2007 emissions regulations, the ISX15 was updated with the Cummins Diesel Particulate Filter (DPF) and Exhaust Gas Recirculation (EGR) systems to reduce emissions significantly. 2010: Further advancements were made with the introduction of the ISX15 with SCR (Selective Catalytic Reduction) technology, leading to improved fuel efficiency and lower emissions. 2017: The ISX15 was updated again to meet the latest EPA regulations, ensuring compliance while enhancing performance and fuel economy. Specifications: Engine Type: Inline 6-cylinder, four-stroke diesel engine Displacement: 15.0 liters Horsepower Range: 400 to 600 hp Torque Range: 1450 to 2050 lb-ft Bore x Stroke: 5.4 in x 6.3 in (137 mm x 160 mm) Fuel System: Common rail fuel injection Emissions Compliance: EPA 2010 and later Weight: Approximately 2,700 lbs (1,225 kg) depending on configuration Applications: Primarily used in heavy-duty trucks, buses, and industrial applications. The Cummins ISX15 engine is renowned for its durability, reliability, and efficiency, making it a popular choice among fleet operators and truck manufacturers. Its combination of power and advanced technology has solidified its place in the heavy-duty engine market. Learn more about the ISX 15 at cummins.com Cummins has built a reputable name for itself over the decades, but how did it get to where it is today? This guide will discuss how Cummins started as a strong partnership that transformed into an impressive engine manufacturing company. Diesel Pro Power will take you through the Cummins ISX series' specs, some of its most common issues and featured products. This guide applies to both original units or modern versions of the Cummins ISX Engine. When you know the ins and outs of your engine system, you can better prepare your marine or generator applications to make functional repairs when necessary. Cummins Engine History Clessie Cummins founded Cummins Engines in 1919 and partnered with J. Irwin Miller, a knowledgeable businessman well versed in business practices. By combining Cummins' expertise in diesel technology and Miller's business skills, they expanded the company to what it has become today. Through the decades, the Cummins brand has integrated itself into a multitude of areas within the diesel industry. For example, in 1973, Cummins bought Holset Engineering Co., a company focused on engineering engine parts. Cummins also acquired Onan in 1986, a company that manufactured generator sets. The name was later changed to Cummins Power Systems. In 1989, Cummins began working with Dodge Ram, and the name soon changed to Cummins Emissions Solutions. Cummins is an engineering company that has a hand in multiple critical areas of the market. With growing expertise in engine manufacturing, emissions solutions, gensets and parts engineering, Cummins excels in manufacturing products and solutions for marine engines and generators. Parts Catalog for Cummins ISX Marine Engine Cummins ISX Engine History The initial design of the Cummins ISX engine began in 1998. The original engine in the series was the N14, but over time as stricter Environmental Protection Agency (EPA) laws came into effect, it became an obsolete line of engines. In 2002, the Cummins ISX15, also known as the "Signature" series, started production. It upheld its name because it had an innovative fuel system called the "Interact System." The "IS" in ISX15 stands for "Interact System." Since its launch, the Cummins ISX15 has been the core of Cummins' diesel engine fleet. Not only has it advanced with quicker processing, but it has also increased fuel efficiency since its debut. In 2002, the ISX15 became one of the first diesel engines to incorporate an exhaust gas recirculation (EGR) cooler system. This technology takes the engine's exhaust and recirculates it back to the intake chamber, reducing NOx particles. The ventilated exhaust is then able to lower the combustion chamber temperature. The Cummins ISX then began featuring the selective catalytic reduction (SCR) system in 2006. It injects urea, an active element in diesel exhaust fluid (DEF), into the exhaust. Ammonia in the urea then chemically reacts with the NOx particles and converts them into nitrogen and water inside the catalytic converter. DEF reaches high temperatures in the holding tank, then pumps into the injector and decomposition tube, causing it to react to the NOx in the exhaust. New advancements in emissions technology emerged when Cummins introduced the diesel particulate filter (DPF). This system captures the exhaust produced from the combustion chamber and neutralizes the soot through oxidation. The oxidized ash transforms into dust, then, it's regenerated through the turbo in a process known as regeneration. At one point, the ISX15 had a dual overhead camshaft design. One cam would activate the injectors, and the second initiated the valve train. This dual camshaft design was a complicated injection system that was cam actuated to form injection pressure and deliver fuel. However, it didn't last into subsequent ISX versions after 2010. The Cummins ISX engine underwent a redesign to meet the 2010 EPA standards through developments in emissions technology. The company's advancements focused on a single overhead camshaft instead of a dual solution. They also innovated the common rail fuel system, which eradicated the need for an injector camshaft to generate pressurized fuel. In the common rail fuel system, diesel fuel becomes pressurized via multiple piston pumps. Then, it can be distributed through the tubing to the rail system for storage under extreme pressures—about 35,000 PSI or higher. This version of the ISX15 relies on an engine control module (ECM) to monitor its timing and pressure. The ECM can activate each fuel injector up to five times per combustion cycle, while the single camshaft improvement creates a better fuel economy and reduces emissions to stay parallel with EPA standards. By 2013, the Cummins ISX gained onboard diagnostics to track the engine's emissions. This change increased fuel efficiency compared to previous versions. Each year, Cummins continues to update the ISX15 to meet EPA standards. Cummins ISX Specs A Cummins ISX engine is an Inline-6 diesel with a dual-fuel configuration — meaning it can run on diesel or natural gas — although diesel is the most common. If you're in the market for an ISX15, its Cummins specs log includes: - 400-600 hp - 2,050 lb.-ft. maximum peak torque - 2,000-2,100 RPM engine speed - 1,000 lb.-ft. clutch engagement torque - Six cylinders - 14 gallons of oil capacity - 15-liter design - 3,093 lbs. system weight - 3.021 lbs. dry weight - 72 lb. aftertreatment Throughout each improved generation, the Cummins ISX15 engine now comes complete with several prominent features that make it one of the most sought-after solution fulfilling engines on the market. Compared to the original N14 series from the late 1990s, the ISX15 now delivers an exceptional line of components that have been engineered and upgraded each year, including: Cooled exhaust gas recirculation: If your Cummins ISX engine was made after 2002, it has an EGR system. Recirculation within the engine lowers the combustion temperatures, which reduces optimized MPG and emissions. Crankcase ventilation system: The Cummins ISX's advanced crankcase ventilation only needs replacement after every third or fourth oil change, allowing for more prolonged operation and more use. Cummins Intebrate™: The Intebrate™ can reach up to 600 braking HP, which helps control the machine and reduce brake wear. Dual overhead camshafts: As noted above, if your ISX15 was manufactured before 2010, it has a dual camshaft system. The first cam creates high-pressure fuel injection for clean power, while the second has a set of lobes to operate the engine brake. The second set of camshafts also moves the intake and exhaust valves. With a high-pressure fuel injection system, a marine engine can produce complete combustion. High-pressure fuel injection system: The high-pressure Cummins ISX fuel pump system forms a clean and complete combustion phase. Integrated electronic controls: Engines produced after 2010 rely on an ECM. The engine's ECM controls the aftertreatment. It also synchronizes interactions between the ABS, transmission, engine brake, cooling fan and other components. Low maintenance: An ISX15 engine can run up to 15,000 miles between oil and filter changes. Mid-stop cylinder liners: Cylinder liners within the ISX15 have a strong design to allow for variations in coolant chemistry. Particulate filter: An ISX engine has a fully integrated particulate filter for uncompromised performance by reducing particulate matter. Single overhead camshaft: Versions of the ISX engine made after 2010 have a single camshaft system with a common rail fuel operation that relies on piston pumps to inject diesel. Variable geometry turbocharger: The turbocharger has a sliding nozzle to boost durability and reliability. Its electric actuation enhances its responses and control for adjustment. The component also delivers a definite increase at any RPM. Cummins has mastered the engineering process by integrating each possible solution into one unit. Common Cummins ISX Issues When you find your ISX engine is experiencing issues, always refer to your manufacturer's manual first. Address any problems immediately to avoid more severe damage. Here are some tips to keep in mind before making engine repairs to your ISX engine: - Check the dual or single overhead cams. - Inspect the spring-loaded cam gear and release the tension before unloading. - Set the idol gear. - Use a puller tool for the front and back seal. - Use heavy-duty cams. - Work with specified parts for ISX engines. Do you have a single or dual cam ISX15? Does it have an EGR system? When it comes to ISX engine issues, some problems may affect your engine depending on the year it was made. It's important to know what version of the marine engine you're operating to understand what troubleshooting and repairs are necessary. For example, ISX engines engineered before 2002 will experience more problems with EGR compared to modern types. In 2008, Cummins began noticing the SCR system experienced failing revolving parts, interfering with the engine's horsepower. Clogged inlets came about in 2010 when recirculation was occurring, also affecting HP. Depending on the version you have, common Cummins ISX engine problems involve the turbocharger, EGR, camshafts and timing wedge. Variable Geometry Turbocharger The turbocharger is one of the most notorious ISX15 failures and can be expensive to fix. While they are ideal for direct throttle response, VGTs often experience a buildup of carbon, soot, rust and other contaminants. You may feel no response from the engine or an extreme retort at low RPMs. The best fix is to clean the exhaust side of the VGT, replace its parts or swap it for a fixed unit. EGR System Another common problem is a leaking EGR valve which can cause black smoke and power loss to your ISX engine. Although it's tricky to diagnose, you can monitor the unit's coolant to see if leaks are present. If you're using more coolant than usual, it can be an indication of a leak. Another sign is if you notice white residue from the burnt coolant. EGR system issues are more common in older versions of ISX engines. Camshaft The rocker arms within your ISX engine may be damaging the camshafts, which causes an improper amount of oil to pass. When the rockers hit the camshaft lobes, it flattens them. This deprivation causes your marine or generator application to experience performance issues. You can replace both the camshaft and rockers to deter the problem. Swapping rocker arms for new ones is vital. Otherwise, they will flatten the new camshaft as well. Timing Wedge Problems with a timing wedge often happen after you repair or overhaul the camshaft. Wedges have a tendency to wear, which inadvertently alters the camshaft timing, therefore, wrecking the engine's balance. Fuel injection that occurs at the wrong time can affect the entire system, if it's too late, it can create soot, contaminating the oil. Over time, a buildup of contamination can form in the oil filter, resulting in a drop in oil pressure. Avoid the timing wedge issue easily by simply changing the oil filter. The problem seems to be a common issue with the ISX engine, so you may need to rely on professionals to take over. Certain ISX engines experience more problems than others, but each issue has a set of simple troubleshooting procedures. One of the best ways to eliminate problems with your Cummins ISX engine is to conduct preventative and regular maintenance according to your manufacturer's manual. Why the Cummins ISX15 Engine May Be Ideal for You The Cummins ISX trumps other engine solutions by living up to EPA emission standards and having an advanced fuel economy. Whether you're a yacht or a workboat owner, the ISX15 may be the ideal provision for you. Several of the ISX15 engine's featured products include: Cylinder head with valves: When a cylinder head is remanufactured to advanced conditions, it will function like new. The new internal components are tested for air decay and are also wet tested. It has chased threads, and mechanics weld any cracks to avoid leaks. Inframe engine rebuild kit: The rebuild kit includes new parts. The pistons are made from heat-treated steel and have a modern closed-s skirt design. With induction-hardened cylinder liners, it delivers improved wear resistance. The rod bearings are made from bi-metal for better strength, durability and fitment. Fuel injector: A remanufactured ISX fuel injector has new parts ranging from the spill valve, shim and NOP spring to screws and the actuator assembly. Cummins injectors also include new external O-rings and filters. Inframe engine rebuild kit with re-ring and fewer pistons: The ISX15 has an inframe rebuild option for when your pistons are in good shape. It has oil control rings made with precise tangential tension for ideal control, and the gaskets are made with premium materials. Valve camshaft: If your ISX engine has worn camshafts, they can reduce horsepower and affect the valve timing. The valve camshaft involves precise remanufacturing. ISX15 variable speed propulsion engines are perfect for recreational and government marine applications. Cummins strives to upgrade and improve each component in their ISX engine series to deliver superior dependability and performance. The marine engine has an exceptional fuel economy compared to other big-bore engines and outstanding braking features. Cummins continues to expand the ISX15 series' components, even into 2020, where their latest version already meets 2021 greenhouse gas regulations and fuel economy standards. The ISX engine also has unmatched fuel economy, emissions, performance and cooling systems: Fuel economy: The ISX15 has efficient water and fuel pumps which deliver more usable horsepower to your operations. Cummins ISX fuel and water pumps use technology to generate optimized combustions and fewer regenerations of the aftertreatment system. The ISX15 undergoes better fuel economy advancements with each new version. Emissions: Current ISX engines meet EPA standards along with DOT regulations because of onboard diagnostics that look at optimal emission performances. Performance: The ISX15 has a massive range of horsepower, depending on which version suits your application. With a max 2,050 lb.-ft. of peak torque, the engine's SmartTorque adds 200 lb.-ft. of extra torque when needed. You can tailor the unit's performance to your specific needs. Cooling system: The cooling system underwent a size reduction without losing power to increase aerodynamics. It also reduces losses seen in the alternator's performance and other water pumps. A smaller cooling solution creates an open room, forming cooled air around the engine. Cummins also continues to improve the combustion chamber to result in fewer active regenerations of the aftertreatment. The ISX15 has advanced components and featured products to support your marine and generator applications. Diesel Pro Power Has What You Need Diesel Pro Power has a vast inventory of ISX marine engine components, including freshwater parts and Cummins ISX cables when you experience problems with your system. With more than 15,000 satisfied customers, we provide 24-hour worldwide shipping through our easy-to-use website. Our specialists deliver complete solutions for your specific applications and needs by working with you one-on-one. Browse our ISX Cummins engine parts or reach out to our customer care team by calling 1-877-597-1353. We deliver solutions with precision to your specific demands. Please follow and like us: Brand New Cummins ISX Engine: Check out the power and trust of a brand new Cummins ISX engine. Exceptional Performance: This engine offers strong horsepower and good torque ratings. It helps you achieve the best performance for tough jobs.Enhanced Fuel Efficiency: The ISX engine has smart technologies. These save fuel and cut down your costs.Industry-Leading Warranty: You can feel secure with the great warranty protection from Cummins.Nationwide Availability: You can buy this engine anywhere in the country. It is easy for customers to get.Expert Support: Our skilled team is here to help you. They can answer your questions and provide technical support when you need it. The Cummins ISX engine is well-known as a strong player in the diesel engine market. Now, you can own a brand new Cummins ISX engine. Whether you need a replacement engine or want to power a new fleet vehicle, this sale offers a great chance to get a high-quality engine. It is known for its great performance, efficiency, and durability.Discover the Brand New Cummins ISX Engine on Sale We are excited to tell you about a special sale on the new Cummins ISX engine. This strong and fuel-saving engine is built to offer great performance and dependability. It is a perfect fit for big trucks and other tough uses.This sale is a great chance for fleet owners, truck drivers, and anyone looking for a high-quality engine at a fantastic price. Don't miss this chance to improve your vehicle or equipment with the top-tier Cummins ISX engine.Key Features and Advantages of the Cummins ISX Engine The Cummins ISX engine is well-known for its great features and benefits. This makes it a top pick for heavy-duty engines. Here are some reasons why the Cummins ISX is special:High Horsepower and Torque: The ISX engine provides impressive horsepower and torque. This gives you the power and efficiency for tough tasks. There are many HP and torque options to pick from, so you can choose what fits your needs best.Advanced Fuel Efficiency: Cummins uses new technologies in the ISX engine to improve fuel use. Its smart electronic controls and better combustion help you save money on fuel.Exceptional Durability: The ISX engine is made with strong parts and tested under tough conditions. It lasts longer and keeps your machines running. This means less downtime and more productivity for your business.Understanding the Specifications: What Makes Cummins ISX Stand OutTo fully appreciate what sets the Cummins ISX engine apart, let's take a closer look at its impressive specifications. These specifications highlight the engine's power, efficiency, and advanced design.SpecificationCummins ISXHorsepowerUp to 600 HPTorqueUp to 2,050 lb-ftEngine Displacement15 LitersEmissions TechnologyEPA CompliantWhen inquiring about the Cummins ISX engine, it's essential to have your CPL (Critical Parts List) or Serial Number readily available. By providing this information, we can accurately identify the specific engine configuration that aligns with your requirements.ConclusionIn conclusion, the new Cummins ISX engine comes with great features and benefits. These features help improve fuel efficiency and performance. Its impressive specifications make it a dependable choice for many uses. If you need a strong and efficient engine, looking into the Cummins ISX range is a good idea. To learn more about this advanced engine technology and the warranty options they have, check out our frequently asked questions section. Make a smart choice and boost your vehicle's performance with the Cummins ISX engine.Frequently Asked QuestionsHow does the Cummins ISX engine improve fuel efficiency?The Cummins ISX diesel engine uses new technology. It has better fuel injection and improved combustion. There is also a system to recover wasted heat. These features work together to get the best mileage. They help cut down fuel use without losing power or torque.What warranty options are available for the Cummins ISX engine?This Cummins ISX engine listing has an 180-day warranty. If you want more details about the warranty, shipping policies, service agreements, or extra coverage options, feel free to contact our team.