

Cutting-edge technology that results in easy-to-use, failure-resistant machines for heavy-duty use.

FX850V-EFI: General Purpose Engine for Lawn Mowers



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The Engine which Earned Unrivaled Support from Lawn Mowing Professionals

The FX850V-EFI is a general purpose engine used for commercial riding mowers marketed mainly in the U.S. In 1957, Kawasaki began manufacturing and selling general purpose engines in Japan, and since then, in order to strengthen its business foundation in this segment, has been expanding the engines' applications into areas such as agriculture, light industry, golf, leisure, and lawn care. Sixty years after the launch of the business, the engines are now manufactured at factories in the U.S. and China*, 90% of which are sold to mower manufacturers in the U.S. through Kawasaki Motors Corp., U.S.A. (KMC).

The market size of riding mowers in the U.S. is huge, with the number of sales reaching almost two million units annually. Kawasaki's general purpose engines enjoy about a 60% market share in engines for the professional segment (customers in the landscape industry mainly offering mowing services), and boasts top-selling status among general users. Such a high level of support for Kawasaki engines is attributable to strong confidence in their quality, performance, and durability, and our vast support network of over 7,200 Kawasaki dealers.

Professional users seek equipment with the least likelihood of downtime, as well as a powerful engine which can maintain optimal blade tip speed regardless of lawn conditions. A malfunctioning mower increases downtime, thereby reducing income. If an engine gets overloaded and blade tip rotation slows when trimming overgrown grass or working on a slope, the mower will fail to produce a sharp cut. If the blade edge is dull, the tip of the grass discolors quickly and is unattractive. However, if a mower's speed and blade rotation are unaffected by changes in load — that is, if the engine's rpm remains stable — the grass will be cut cleanly.

"Trust" is what Kawasaki considers to be the brand's core value for its general purpose engine, because a trustworthy engine is what customers desire.

* General purpose engines are manufactured in the U.S. by Kawasaki Motors Manufacturing Corp. U.S.A. (KMM), and in China by Changzhou Kawasaki and Kwang Yang Engine Co., Ltd. (CK&K).

V-Twin Engine with Impressive Power

The 852 cc engine is V-shaped with a vertical output shaft. Only 516 mm long, 503 mm wide, and 620 mm high, this engine produces up to 29.5 horsepower (gross @ 3600 rpm) despite its compact size. Thanks to this outstanding performance, coupled with an integrated electronic throttle and electronic fuel injection (EFI) technology, a reduction in fuel consumption has been achieved compared to carbureted engines. Because the rpm of the engine is fixed and unaffected by load changes, commercial mower productivity has also improved.

Rotary Chopper Screen Fights the "Enemy"



Kawasaki's Superior Technology

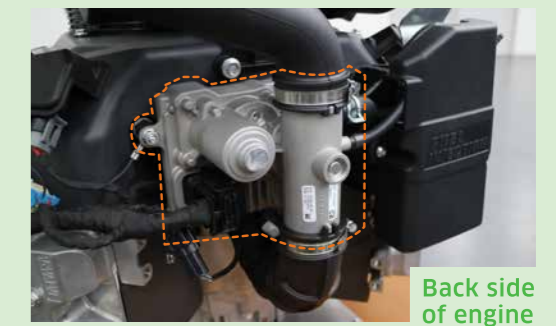
Grass clippings are actually the general-purpose engine's worst enemy, because they fly up into the space between the engine and cover and accumulate there. Because of this accumulation, an air-cooled engine can overheat and therefore malfunction. To prevent this, the FX Series is equipped with a "rotary chopper screen," which is a disc with small holes that rotates above the engine, inside the cover, preventing grass clippings from getting inside the engine.

Cylindrical Air Filter Supports Demanding Engine Drive System

Clean air is a must for an engine to operate without failures, and to that end, this system adopts a heavy-duty cylindrical air filter. An umbrella-like device at the top prevents rain from getting into the filtering system.

Kawasaki's Superior Technology

e-Gov and EFI Achieve Clean-Cut Mowing



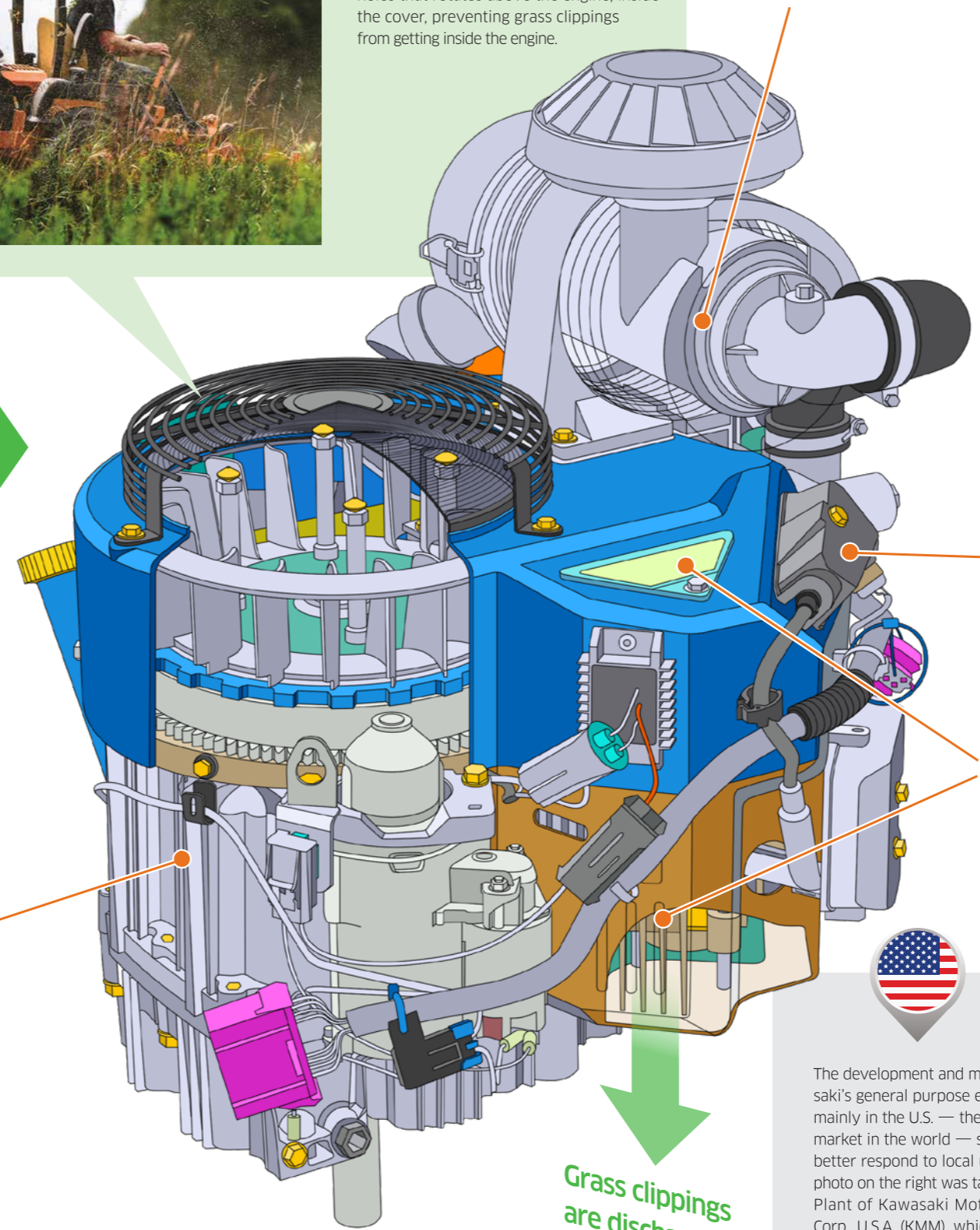
An electronic throttle which has been integrated into the engine control unit (ECU) and an electronic fuel injection (EFI) system are both key to achieving clean-cut mowing. The ECU uses sensors to collect information on temperature, intake pressure, throttle position, etc., enabling the integrated electronic throttle to automatically open/close the throttle-plate according to the engine's rpm and load. In addition, the EFI works with the control system of the electronic throttle to inject fuel in a highly precise manner to maximize output and fuel efficiency. As a result, the engine's rpm remains unchanged and good operational efficiency is maintained even if the load fluctuates. The ECU-integrated electronic throttle is a proprietary design by Kawasaki that provides robust failure resistance and an outstanding competitive edge in the market in terms of response speed and reliability.

External Ignition Achieves Greater Engine Cooling Efficiency

An ignition-coil is an electronic device that produces a spark to start in-cylinder combustion. In the case of the FX850V-EFI, however, it is placed outside the engine cover, because such a configuration creates the least obstruction to the air flow, resulting in increased cooling efficiency of the engine. This improved structure also contributes to preventing accumulation of grass clippings around the engine.

Marketing with Emphases on Ease of Maintenance and Kawasaki's Brand Power

Grass clippings can pass through the space between the engine and the cover and be discharged from below. For ease of maintenance, the mower has two triangular inspection plates bearing the Kawasaki logo, one on either side of the cover, which can be easily removed to inspect for any grass clippings which may get stuck around the engine. For mower manufacturers, the Kawasaki logo indicates to customers the superiority of their products.



Grass clippings are discharged.



A "Made in America" Product

The development and manufacture of Kawasaki's general purpose engines is conducted mainly in the U.S. — the largest lawn mower market in the world — so that Kawasaki can better respond to local users' feedback. The photo on the right was taken at the Maryville Plant of Kawasaki Motors Manufacturing Corp., U.S.A. (KMM), which manufactures the engines. Keeping a lawn beautiful is every user's dream, and the Kawasaki brand ensures that the dream will come true.

