KOHLER® COMMAND PRO

Enhance your Performance with Electronic Fuel Injection.

KOHLER EFI air-cooled engines.

KOHLER® engines

KOHLER® EFI Engines – complete performance solutions.

KOHLER Command PRO® ▶
26 HP Horizontal and Vertical
Air-Cooled Engine

◀ KOHLER Command PRO
28 HP Vertical and Horizontal
Air-Cooled Engine

THE ULTIMATE IN FUEL EFFICIENCY.

KOHLER EFI engines (26 and 28 HP) save money by significantly reducing fuel consumption. In consumer tests, EFI engines reduced fuel consumption by 25%-30% compared to carbureted engines. With those numbers, each piece of equipment saves $400-$500 every year. And the engines exceed CARB/EPA and international requirements for exhaust emissions.

MAXIMUM EQUIPMENT UPTIME.

Superior fuel efficiency, peak power and instant throttle response all contribute to jobs getting done faster, and with fewer stops for fuel.

KOHLER EFI SYSTEM BEATS THE COMPETITION.

Only Kohler features a "closed loop" EFI system in which all the components work together. By feeding data to the Electronic Control Unit (ECU) so it can adjust for changes in load, altitude and air cleaner condition, the fuel economy and engine performance are maximized. The only competitive EFI engine in this horsepower range has an "open loop" system so it cannot adjust to changing conditions.

OPEN LOOP SYSTEM

When first started, all EFI engines operate in an "open loop" mode. This means the engine can run only as originally mapped in the ECU. However, unlike the competitor's system which remains "open loop", the EFI system by Kohler converts to "closed loop" upon warm-up.

CLOSED LOOP SYSTEM

Only KOHLER EFI engines include an oxygen sensor which triggers adjustments to the ECU map. The sensor measures oxygen in the exhaust flow. If the oxygen level strays from the ideal air/fuel mixture, it signals the ECU to adjust the amount of fuel injected into the system. The "loop" between air/fuel intake and exhaust output is then closed, providing the critical feedback necessary to achieve optimum fuel economy and performance.

The KOHLER closed loop system offers these advantages over competition:

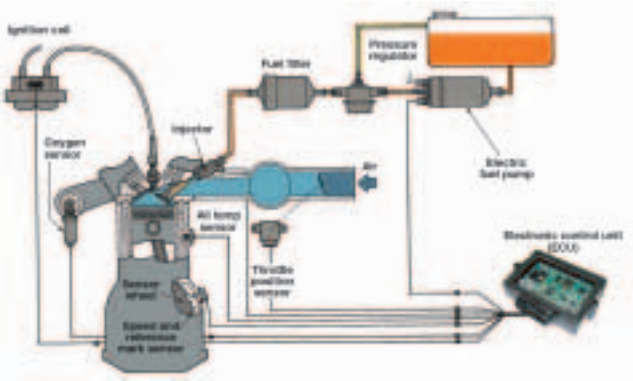
- Better fuel economy
- Better adaptability to altitude changes
- Lower exhaust emissions
- Better adaptability to air cleaner conditions

EFI TECHNOLOGY OFFERS KEY ADVANTAGES OVER CARBURETED ENGINES:

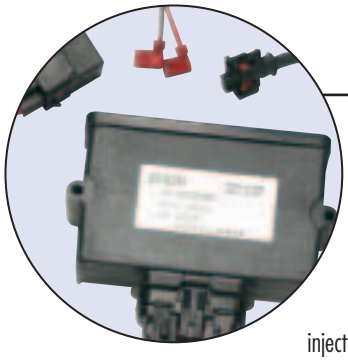
- Easy starts (no choke)
- Powerful acceleration
- Fast throttle response
- Peak power and torque
- Lower fuel consumption
- Excellent cold startability
- Lower exhaust emissions
- Easy diagnostics

The KOHLER EFI system is a complete engine fuel and ignition management design and includes these principal components:

- Fuel pressure regulator
- Twin fuel injectors
- Electronic control unit (ECU)
- External, high-energy ignition coils
- Engine temperature sensor
- Throttle position sensor (TPS)
- Speed sensor
- Oxygen sensor
- On-board system diagnostics



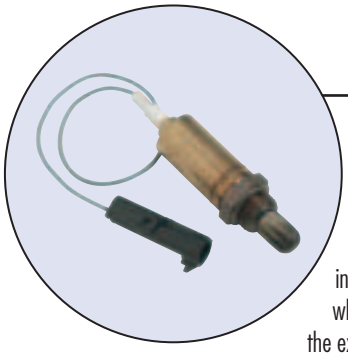
Exceptional system-integrated components from Kohler and Bosch.



ELECTRONIC CONTROL UNIT (ECU)

An ECU is the brain of EFI. It includes program maps to monitor all primary sensors, such as speed, throttle position, oil temperature and oxygen levels. When the watertight ECU senses that a throttle response is needed, a precise amount of fuel is injected. During operation, if a system fault does occur, the ECU detects the fault and triggers the on-board diagnostic system which stores the code for analysis.

An all-weather connector locks to the ECU as part of the harness system.

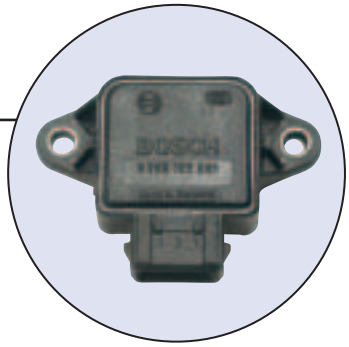


OXYGEN SENSOR

Only Kohler uses an oxygen sensor in its EFI system. This is a critical component in the "closed loop" system that separates Kohler from the competition. The oxygen sensor, installed in the muffler, signals the ECU when oxygen content changes between the exhaust gas and the ambient air. If the oxygen content strays from the ideal air/fuel mixture mapped in the ECU, the ECU then adjusts the fuel injector pulse for more or less fuel. Again, this saves fuel and maximizes power.

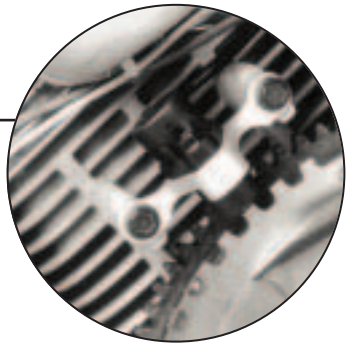
THROTTLE POSITION SENSOR (TPS)

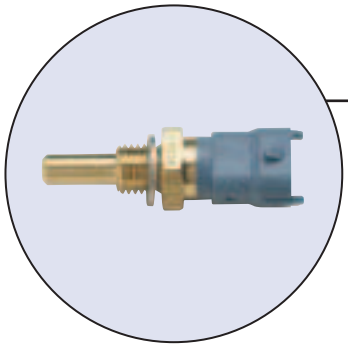
The TPS indicates throttle plate angle to the ECU. When the engine senses varying loads, the ECU uses the TPS, plus other sensors, to save fuel and ensure smooth power.



ENGINE SPEED SENSOR

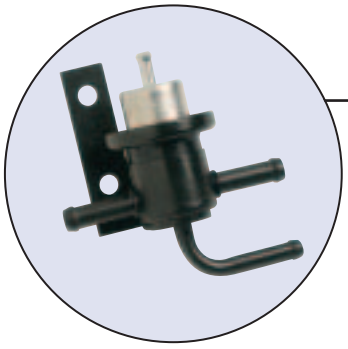
Engine speed is determined by the engine speed sensor. Located beside the flywheel, the passing of ring gear teeth generates voltage pulses. Data is fed to the ECU to provide instant throttle response and precise fuel flow. When power is needed, it's there immediately.





ENGINE TEMPERATURE SENSOR

This sensor helps determine the amount of fuel needed upon start-up. A cold engine requires more fuel than one at, or near, operating temperature. The ECU depends upon this sensor to govern fuel flow and ensure reliable starts.



FUEL PRESSURE REGULATOR

The fuel pressure regulator maintains the required operating system pressure – 39 psi. Anytime fuel pressure exceeds this level, excess pressure is relieved, and any extra fuel is returned to the fuel tank.

Superior diagnostic and service support.

In addition to the items below, Kohler offers an in-depth EFI Troubleshooting CD (TP-2552) from your Kohler source of supply. Training trailers and portable EFI training stands are also available for Central Distributor and OEM assistance. (Contact your Kohler salesperson to arrange for the trailers and training stands.)

A.

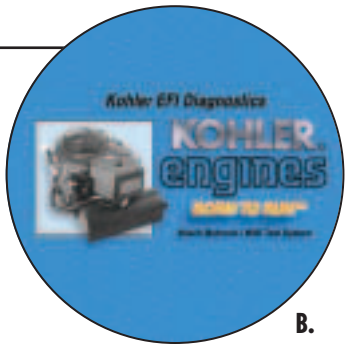
COMPLETE EFI DIAGNOSTIC SYSTEM

A complete diagnostic system (photos A, B, C) for KOHLER® EFI engines has been designed by Kohler and the Robert Bosch Corp. This system includes a 60-page installation guide and user manual, a CD for use on your laptop or desktop PC, and a 9-foot interface cable that mates to the engine's diagnostic plug.

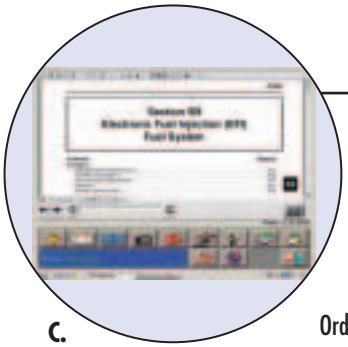
WELCOME SCREEN

As part of the system, a welcome screen first appears on the CD. The system then begins to talk to the engine ECU. The system will

- Detect and show fault codes (if one arises)
- Identify the problem
- Provide flowcharts to troubleshoot the fault
- Assist the technician in the repair procedure



B.



C.

EFI SERVICE MANUAL

The CD-ROM also includes the EFI service manual subsection (shown). The 40-page section includes explanations about EFI, how the engine starts up, its electrical and fuel components, and troubleshooting hints.

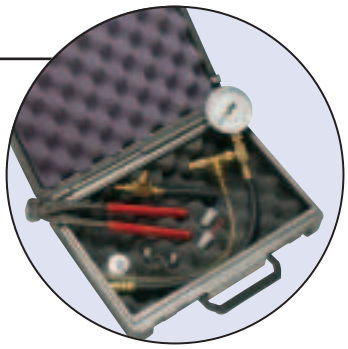
Order the complete EFI diagnostic system (25 761 23-S) from your Kohler supply source.

EFI SERVICE KIT

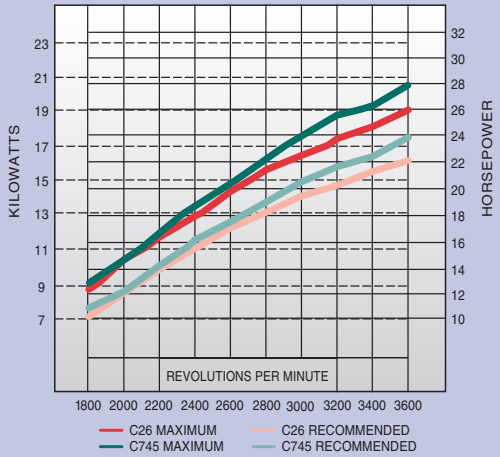
Complete with carrying case, fuel pressure gauge, Oetiker clamp pliers, spare clamps, circuit tester, jumper plugs and a T-valve.

Order the kit (K03217) from SPX Corporation:

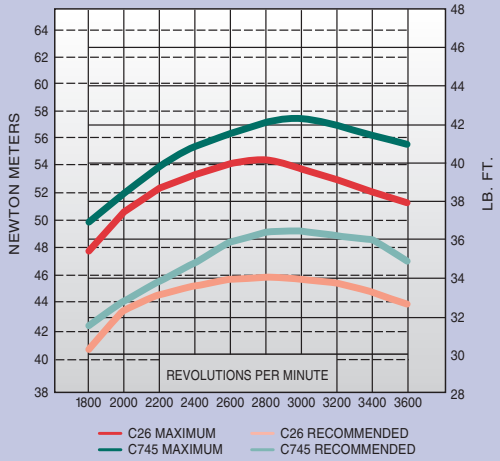
USA & Canada: (800) 533-0492
International: (507) 455-7223



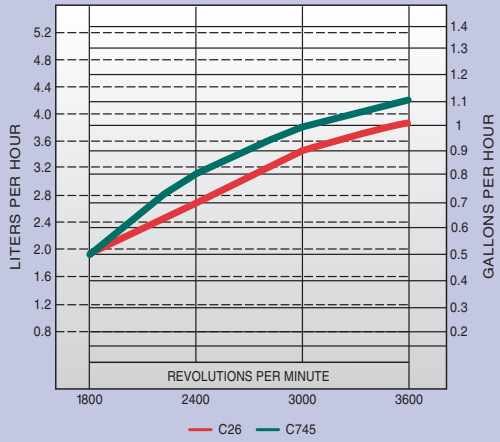
MAXIMUM & RECOMMENDED POWER



MAXIMUM & RECOMMENDED TORQUE



RECOMMENDED FUEL CONSUMPTION AT ½ LOAD



26 and 28 HP

"Our customers make a living with our products, and the reliability of KOHLER EFI engines has given them peace of mind. The KOHLER EFI engine reduces the consumer's expenses. Fuel economy is the biggest benefit. Not to mention that the engine is able to relay what is wrong so it takes care of diagnostic time."

Jeff Haltom, General Manager, Dixie Chopper

"The EFI offers significant performance improvements over non-EFI engines as far as power under load conditions. It recovers quickly and just keeps going. Of course, the obvious benefits we have promoted since we began using the KOHLER 28 HP engine are fuel economy – and all the reasons they are more fuel-efficient – and lower emissions for states like Texas and California where that is a big issue."

Rick Curlett of Exmark

KOHLER EFI

Why the professionals are choosing KOHLER® EFI engines.

"It's really a no-brainer: You get more power, less downtime and more hours. We didn't buy EFI engines for their fuel efficiency or the lower emissions, but if the power is there and we're saving gasoline at the same time, why not?"

Mike Devore, Executive Director at Atlanta-based Ed Castro Landscaping

Mike Devore, Executive Director
Atlanta-based Ed Castro Landscaping

MODEL SPECIFICATIONS

ENGINE TYPE:	Four-cycle, V-twin cylinder, air-cooled, horizontal and vertical shaft, electronic fuel injection (EFI), gasoline, full-pressure lubrication with oil filter, aluminum head and crankcase with cast iron cylinder liners.			
MODEL:	**CH26**	**CV26**	**CH745**	**CV745**
POWER* @ 3600 RPM hp (kW) Maximum	26 (19.4)	26 (19.4)	28 (20.9)	28 (20.9)
Recommended	22.1 (16.5)	22.1 (16.5)	23.8 (17.2)	23.8 (17.2)
COOLING	Air	Air	Air	Air
CRANKSHAFT ORIENTATION	Horizontal	Vertical	Horizontal	Vertical
DISPLACEMENT cu.in. (cc)	44 (725)	44 (725)	44 (725)	44 (725)
BORE in. (mm)	3.3 (83)	3.3 (83)	3.3 (83)	3.3 (83)
STROKE in. (mm)	2.6 (67)	2.6 (67)	2.6 (67)	2.6 (67)
PEAK TORQUE @ Maximum lbs. ft. (Nm)	40 (54.2)	40 (54.2)	42.3 (57.4)	42.3 (57.4)
@rpm	2800	2800	3000	3000
COMPRESSION RATIO	9:1	9:1	9:1	9:1
DRY WEIGHT lbs. (kg)	94 (43)	94 (43)	94 (43)	94 (43)
OIL CAPACITY WITH FILTER U.S. qts. (L)	2.1 (2)	2.1 (2)	2.1 (2)	2.1 (2)
MOUNTING DIMENSIONS in. (mm) Front to Back	3.5 (89)	10 (254) DBC	3.5 (89)	10 (254) DBC
Side to Side	7.3 (184.2)	10 (254) DBC	7.3 (184.2)	10 (254) DBC
OVERALL DIMENSIONS in. (mm) Length / Width / Height (With air cleaner)	(See **a** below)	(See **b** below)	(See **a** below)	(See **b** below)
a = CH† flat air cleaner:	Length 13.8 (351)		Width 17.7 (451)	Height 19 (483)
heavy-duty air cleaner:	Length 13.8 (351)		Width 17.7 (451)	Height 26.5 (672)
b = CV†† commercial air cleaner:	Length 21.2 (538)		Width 17.7 (451)	Height 14.3 (363)
heavy-duty air cleaner:	Length 19 (483)		Width 17.7 (451)	Height 22.5 (572)

* Horsepower ratings are in accordance with SAE J1940. Actual engine horsepower is lower and affected by, but not limited to, accessories (air cleaner, exhaust, charging, cooling, etc.), application, engine speed and ambient operating conditions (temperature, humidity and altitude). For more information, contact Kohler Co. Engines Engineering Department. Kohler reserves the right to change product specifications, designs and equipment without notice and without incurring obligation.

† CH: Length is grass screen to PTO mounting face. Width is oil filter side to starter side. Height is mounting feet to top of air cleaner.

†† CV: Lengthis blower housing to air cleaner cover. Width is oil filter side to starter side. Height is mounting feet to top of air cleaner.

Features

- Overhead valve design
- Hydraulic valve lifters
- Full-pressure lubrication with filter
- Electronic ignition
- 20-amp charging, regulated
- 12-volt solenoid-shift electric starter
- Large air filter
- Oil Sentry™
- Hardened crankshaft journals
- PTO thrust bearing (CH)
- PTO side load bearing (CV)

Options

- Variety of crankshafts
- Flywheel PTOs (CH)
- 15- or 25-amp charging, regulated
- Muffler guard
- Exhaust deflectors/spark arrestors
- Metal, chopper-type grass screen
- High oil temperature cutout switch

Certification #US97/0977

FOR MORE INFORMATION, CONTACT YOUR KOHLER SOURCE OF SUPPLY OR CALL TOLL FREE IN THE U.S. AND CANADA **1-800-544-2444.**

KOHLER CO., KOHLER, WISCONSIN 53044 TEL 920-457-4441 FAX 920-459-1570

KohlerEngines.com

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