



KOHLER® ENGINES *In Action*

WINTER 2009 VOL. 11 NO. 1

Upcoming Kohler and Lombardini Trade Shows

KOHLER TRADE SHOWS

OCTOBER 6-8

GIE-EXPO SHOW
Louisville, KY (US)

LOMBARDINI TRADE SHOWS

APRIL 20-25

INTERMAT (Construction)
Paris, France (EUR)

MAY 12-14

SED (Construction)
Corby, England (EUR)

JUNE 21-23

DEMOPARK (Grounds Care)
Frankfurt, Germany (EUR)

SEPTEMBER 8-10

IOG SALTEX (Grounds Care)
Royal Windsor, England (EUR)

SEPTEMBER 11-13

EXPOGREEN SHOW
Bologna, Italy (EUR)

OCTOBER 28-31

SAIE (Construction)
Bologna, Italy (EUR)

NOVEMBER 2-7

BATIMAT (Construction)
Paris, France (EUR)

NOVEMBER 10-14

AGRITECHNICA (Agriculture)
Hanover, Germany (EUR)



Kohler Exhibits at Successful Bauma China Trade Show

KOHLER ENGINES UNVEILS NEW PRODUCTS

The Kohler Global Power Group had quite a presence at the fourth semi-annual Bauma China, held in Shanghai in November. Kohler Engines and Kohler Power Systems-Asia Pacific shared an exhibit space, promoting its depth of experience and product line to an impressive 113,000 visitors worldwide who attended the show. Kohler introduced the new line of Kohler-branded diesel engines, the small horizontal Courage® and Command PRO® gasoline engines, and the new flex-fuel EFI line.

"Both the KOHLER diesel and the small industrial engines are very critical for the Chinese market, so this show was a perfect opportunity to showcase these products, especially along with Power Systems," said Manny Rumao, international product manager. "We were able to portray Kohler as major supplier to this industry, and our presence helps build confidence in customers trying to succeed in a depressed economy,

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The booth for Kohler Global Power Group at the recent Bauma China trade show highlighted the new line of KOHLER-branded diesel engines, the small horizontal Courage and Command PRO gasoline engines, and the new flex-fuel EFI line.



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BAUMA CHINA TRADE SHOW

when most other engine suppliers are cutting costs and not participating in such shows.”

With a 40 percent increase both in visitors over the 2006 show and in the amount of exhibit space occupied by 1,600 exhibitors from 123 countries, Bauma China set a series of best-ever results in its history for visitor numbers, exhibition space and exhibitor participation. The five largest contingents of international visitors to this international trade fair for construction machinery, building material machines, construction vehicles and equipment were from India, Russia, Japan, Korea and Brazil, in that order. ■

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Walker Manufacturing and Kohler Engines Celebrate Milestone

A SPECIAL PARTNERSHIP

When the 100,000th mower came off the line last summer at Walker Manufacturing, Kohler Engines joined its long-standing partner to celebrate the milestone. The “Walker Family Reunion 2” held in August at Walker’s headquarters in Fort Collins, Co., brought together 2,200 partners, distributors and end users from all over the world.

As the major sponsor for the weekend, Kohler hosted a highly anticipated Wisconsin-style Brat Fry, a special concert by country stars Aaron Tippin and Pam Tillis, and a brilliant fireworks display. Multiple Kohler Rental units provided more than 410 kW of power for the event, including a 180 kW unit for the main stage.

Walker was founded in 1953 by Max Walker, who began production on a miniature caterpillar powered by a 4 hp KOHLER engine. Now a world-renowned



precision front-cut mower manufacturer, the thriving family business is operated by President Bob Walker and Lead Engineer Dean Walker.

It was also more than 50 years ago that the strong partnership between Kohler and Walker began. The first Walker mower ever produced was powered by a Kohler engine. Today, approximately 70 percent of Walker mowers are powered by KOHLER Command and Aegis twin engines.

“The relationship between Kohler and Walker is really a special one,” said Steve Stenz, Kohler area manager. “Walker is also a family-owned company and, like Kohler, they take great pride in the quality of their products.”

Stenz personally has a long history working with Walker. He first became acquainted with the company while working in the service department.

To commemorate their 100,000th mower, Walker created a special limited edition mower equipped with a one-of-a-kind KOHLER 28 hp EFI Command PRO engine signed by Herbert V. Kohler. The mower is proudly displayed in the lobby of Walker Manufacturing headquarters. Following the popularity of the model, Kohler built 320 replica special edition 28 hp EFI Command PRO engines for a limited run of mowers. The models have already sold out in pre-sale.

“Walker is a great partner and we’re happy Kohler could share in their success as part of their extended family,” said Stenz. “We look forward to many more years of partnership between these two outstanding brands.” ■



Kohler Introduces Industry's First Flex-Fuel EFI Engine

AND BRINGS EFI TO ALL COMMAND PRO AND AEGIS TWINS AS STANDARD OFFERING

Fuel efficient, cleaner burning engines will soon be the standard—not an option—on all KOHLER Command PRO® and Aegis® twin-cylinder engines. Kohler will begin rolling out the new EFI engines with the Command PRO 25, 27 and 29 hp models this summer. Over the next two years, Kohler will convert its entire Command PRO air-cooled and Aegis liquid-cooled engines with both the EFI and flex-fuel technologies.

Kohler partnered with Delphi—a leading global supplier of mobile electronics and transportation systems—to design this new flex-fuel EFI system with patent-pending technology that will offer significant fuel savings, improved performance and reduced emissions.

KOHLER flex-fuel EFI models will be available on 26 twin-cylinder models ranging from 19-41 hp, and will operate efficiently and without excessive wear on the engine when E-85 or any other ethanol-fuel mix is used. An additional benefit of the new KOHLER flex-fuel EFI engines is instant load response. The KOHLER exclusive EFI system allows the engine to respond with peak KOHLER performance even in changing altitudes and load requirements, which in turn, operates at top efficiency.

Kohler also designed this new line of engines within the same footprint as its current Command PRO and Aegis models, so that OEMs can easily drop in the newest KOHLER engine without altering the end equipment design to accommodate the engine.

This is accommodated by Kohler's exclusive self-contained EFI design, which features only one fuel line rather than an additional return fuel line with a special harness. The fuel module, electronic control unit and sensors are also all engine-mounted.



KOHLER® Command PRO
Flex-Fuel EFI engine
Horizontal Shaft (29 hp)



KOHLER® Command PRO
Flex-Fuel EFI engine
Vertical Shaft (29 hp)

Depending on the application, end users can realize a 17% to 28% fuel efficiency savings. And, Kohler will be within the EPA phase 3/CARB Tier 3 levels immediately, with extremely low levels of HC and NOx being produced. If the engines are run on E-85, those emissions levels are reduced even further compared to operating with gasoline.

Also true to Kohler Engines, the “closed-loop” system will continue to be a standard feature on these new engines.

Kohler was the first small-engine manufacturer to introduce EFI with closed loop on its engines in the mid 1990s, featuring the EFI system as an option and just a few select air- and liquid-cooled models, which carried a higher price tag over its carbureted models. Since then, Kohler has found a way to take the EFI technology—long used in the automotive industry—and integrate it among multiple horsepower levels at an extremely competitive price. ■

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Kohler's New Line of Small Horizontal Engines

POWERING CONSUMER,
INDUSTRIAL/COMMERCIAL APPLICATIONS



KOHLER® Command PRO
Small Horizontal engine (7 hp)

Horsepower	Command PRO Model Number
7.0 hp	CH270
9.5 hp	CH395
14.0 hp	CH440



KOHLER® Courage
Small Horizontal engine (6.5 HP)

Horsepower	Courage Model Number
6.5 hp	SH265
9.0 hp	SH390
13.0 hp	SH430

Kohler continues to advance its leadership position in the small commercial engine market with its new line of horizontal-shaft Command PRO® and Courage® engines.

The new line of small Command PRO engines brings a higher horsepower offering to the marketplace with 7, 9.5 and 14 hp models, and offers superior technological features, including “Quad-Clean”™—a four-stage, heavy-duty cyclonic air filter that comes standard on these models at no extra cost.

The new engines target a range of commercial and industrial applications, including rental outdoor equipment, small concrete mixers, pumps, chipper/shredders, walk-behind trowels, ground pounders, concrete cutting saws, portable generators and air compressors. With the same footprint as competitors’ engines and Command PRO CS, the Command PRO engine can be used as direct replacement with no need to re-work existing equipment upon replacement.

The Command PRO’s patented Quad-Clean technology is a KOHLER innovation and the industry’s first four-stage air-cleaning system. The innovative design makes the Command PRO engines ideal for harsh weather and work conditions. Quad-Clean technology keeps the engine free from debris, ultimately minimizing maintenance and cleaning efforts. In addition, the air cleaner doubles as a warm air intake system for optimal operation in colder conditions. With one turn of the air cleaner on the Command PRO, the engine is able to recycle the heat from the muffler, all within

15 seconds and without requiring any tools or kits to buy.

“Our intent with these new small-horizontal engines is to offer higher horsepower in a compact engine and include certain features as standard on this line, providing significant competitive advantages to the OEMs who choose KOHLER engines to power their equipment,” said Cam Litt, manager – marketing for Kohler Engines.

The 7 hp model is available for order now, while the remaining models will be available by the third quarter of 2009.

The new KOHLER Courage® horizontal-shaft small engines will be the first consumer engine to include several features—such as a dual element air cleaner—found typically only in a professional-grade engine, in its three models: 6.5, 9.0 and 13 hp. The 6.5 hp model is available for order now, while the remaining models will be available by the second quarter of 2009.

“Kohler continues to raise the bar in the industry with the innovative design of these small engines,” said Litt. “The new KOHLER Courage small engines offer reliable power and superior features at a competitive price—the end user really gets what they need.”

The new engines target a range of consumer applications including tillers, edgers, portable generators, pressure washers, trimmers, leaf blowers, and other outdoor power equipment. ■

Smart-Choke™ Technology Now Available on Walk-Behind Mower Engines from Kohler

ADDITIONAL COURAGE® XTR-7 MODEL
ALSO FEATURES ELECTRIC START



KOHLER® Courage XT-6
with Smart-Choke feature

With Smart-Choke,
the carburetor
automatically adjusts
the fuel needed to
start the engine and
eliminates a step for
the user.

The next generation of the KOHLER Courage XT-Series gasoline engines for the push-mower turf market will provide new features to significantly enhance the end-user experience.

KOHLER's patented Smart-Choke technology is a new option now available on the Courage XT-6 and XT-7 models. A third engine, the Courage XTR-7, is based on the XT-7 design, and will include a premium, turn-key electric starter as an option.

Smart-Choke requires no priming and eliminates the risk of flooding the engine with gas. The user simply pulls the recoil on the Courage XT-6 and XT-7 models—or simply turns the electric start key on the XTR-7 model—to start the engine. With Smart-Choke, the carburetor automatically adjusts the fuel needed to start the engine and eliminates a step for the user.

The Courage walk-behind XT-series models were introduced in 2007 and were engineered with high performance and ease of use in mind. The overhead valve design provides for efficient combustion and strong performance, with minimal fuel consumption and emissions. To enhance the engine life, Kohler uses a commercial-grade, cast-iron cylinder bore—standard on both models. A forged (not cast) crankshaft is also part of the new KOHLER walk-behind engines, providing superior tensile strength and performance, especially for heavy loads and rough mowing conditions. Finally, an exclusive Kohler feature, the wide-diameter gas tank opening, makes refueling easier and reduces the risk of gas spill-over.

Additional engine details include:

- Air-cooled, gasoline engines
- Four-cycle, single-cylinder engines
- Vertical shaft
- Courage XT-6 model:
 - 5.9 ft lbs net peak torque @2,400 rpm
 - 3.5 net horsepower at 3600 RPM
 - 2.6 kW
- Courage XT-7 model:
 - 7.0 ft lbs net peak torque @2,400 rpm
 - 4.5 net horsepower at 3600 RPM
 - 3.5 kW
- Courage XTR-7 model:
 - 7.0 ft lbs net peak torque @2,400 rpm
 - 4.5 net horsepower at 3600 RPM
 - 3.5 kW (w/electric start option)

The Courage XT-6, XT-7 and XTR-7 models are certified for both EPA and CARB emissions standards, and meet or exceed Society of Automotive Engineers Small Engine Test Code J1940 horsepower requirements. ■

KOHLER ENGINES IN ACTION is published by Kohler Engines for its dealers, distributors and OEMs.
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