



Mick Corse put an industrial 180 cu. in. Deutz air-cooled engine in this home-built motorcycle. Top speed is 108 mph.

## Diesel-Powered Motorcycle Really Turns Heads

By Jim Ruen, Contributing Editor

Mick Corse says his diesel-powered motorcycle is twice as heavy as the biggest Harley and has twice the cubic inches.

"It gets better fuel mileage than a Harley, too," says Corse. "As I told a Harley guy, when his motor is on its fourth or fifth rebuild, I'll still be waiting for my first."

To build the Deutz diesel-powered cycle, he used frame parts from a Boss Hog - a V-8 powered motorcycle made in Dyersburg, Tennessee. The drive is a Gilmore cogged belt. He bought the industrial 180 cu. in. Deutz air-cooled engine from a local Deutz dealership.

"I knew the Boss Hoss parts would support the weight of the Deutz engine," he explains. "I didn't need a transmission to multiply torque as the Deutz had more torque at idle than a Harley does at full speed."

What he did need was a centrifugal clutch that could be modified. An initial quote was for \$3,400 for a clutch that couldn't be modified. An Internet search located a BLM centrifugal clutch for \$1,100 in Canada.

He mounted the clutch to the back of the engine. "My top speed is about 105 to 108 mph at 3,000 rpm's," says Corse. "The bad thing about diesels is the low span between 900 and 3,000 rpm's. I had to adjust the clutch so I could go slow through school areas."

Corse built or modified all other components and cowlings for his Deutz-powered machine. Once completed, it had a German motor, American brakes, Canadian clutch and a front end made in North Carolina.

He enjoys pulling in to a gathering of big



Corse bought the front end, swing arm and axle, rear tire and rim, shocks and brakes from Boss Hoss.

bikes and walking away for a while. "It's fun to come back to see who is looking at it," he says.

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The motorcycle is complete with a German engine, American brakes, Canadian clutch and a front end made in North Carolina.



"It's a fun toy to ride," says Kerry McLean about his "Rocket Roadster." A friction drive wheel powers the big outer wheel.

## One-Wheel Motorcycle Looks Crazy, Runs Great

"Like flying a plane," is how Kerry McLean, Walled Lake, Michigan describes riding his motorized "monowheel," which has been his passion for the past 30 years. He says it's the funnest ride out there.

"When you accelerate, you ride up the front of the wheel and when you brake you roll up the back," says McLean about the back and forth rocking motion. "Steering is just a matter of leaning into the curve."

The Rocket Roadster weighs in at 720 lbs. and consists of a 72-in. wheel powered by a 225 hp Olds V-8. The Roadster is capable of speeds in excess of 100 mph though McLean hasn't driven it much past 50.

A smaller production model has a 50-in. wheel powered by a 50 hp, water-cooled, 2-cylinder snowmobile engine. It can be ordered for \$8,900, including riding lessons. He has driven it at up to 37 mph.

Regardless of size, the operating principle is the same - wheels within wheels.

"The wheels are actually big gyroscopes and have to be in perfect condition," explains McLean. "If the wheel doesn't run true, you are in for real trouble."

In the past three decades, he has built 14 monowheels and sold six. He compares riding one to sitting on the inside race of a ball bearing with the outside race going around you. The inside chassis ring is operated from the outside ring by rollers. Everything - engine, brakes, seat, etc. - mounts on the inside chassis.

"Think of the rollers as the bearings between two ball bearing races," explains McLean.

A friction drive wheel attached to the inner chassis ring runs against the outer tire ring. It transfers power from the engine through a centrifugal clutch to the outer wheel.

The driver sits astride the engine. Feet ride on a set of pegs mounted at the bottom of the engine, while a set of pegs atop the engine serve as stationary handlebars, throttle and braking control.

McLean licenses his 50-in. model as mopeds and the Roadster as a car, but he doesn't sell them as transportation. "They're fun toys," he says. "Everyone loves to look at them."

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Driver sits astride the engine. Feet ride on a set of pegs mounted on bottom of engine, while a set of pegs atop the engine serves as handlebars.



Rig is powered by a 50 hp, water-cooled, 2-cyl. snowmobile engine.