

OPEN ROAD

Sep 15th 2015 at 5:01PM

38

This P-51 Mustang replica flies with a Honda Odyssey engine



Eric Tegler

The legendary WWII P-51 Mustang fighter ranks right up there with hot dogs, baseball, and apple pie. So sought after is the original Mustang that one of the 200 or so airworthy P-51s left will run you at least \$1.5 million. That's why there's a thriving replica market with three-quarter-scale aircraft like this Titan T-51D Mustang. It looks every bit the part until you crack open the cowling and find not a howling Rolls-Royce Merlin V12, but the V6 from the Honda Odyssey minivan.

To be precise, the Titan T-51 uses Honda's J35A6 60-degree SOHC V6. It's one version of the ubiquitous J-series engine, found in the Odyssey minivan as well as the Honda Pilot. Other variations of the Ohio-built powerplant pull duty in the Accord and several Acura models.

But why a Honda V6? Titan Aircraft president John Williams says the company began production of the T-51 with a Rotax 912F four-cylinder boxer engine, but its 100-horsepower output wasn't cutting it for customers. They wanted "more power and more noise." So the search began for a lightweight, easily-packaged V6, leading first to a Suzuki 2.5-hp 160 hp.



"Our guys still wanted more power, so the next choice was either going to be a Chevy V8 or a Honda V6. The Honda is a little bit lighter and from a V6 standpoint, it's a brute. In the Honda Pilot or the Odyssey, it's rated from 240 to 250 horsepower," Williams explains.

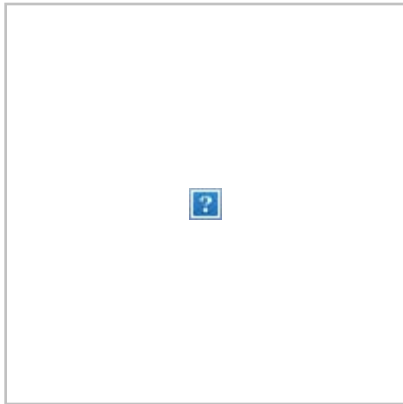
Converting the V6 to an airworthy powerplant requires minor modifications, such as swapping the stock engine control unit (ECU) for an aftermarket one. Car-specific parameters for things like anti-knock sensing and rev limiters simply don't work well in the air. "You don't want your timing retarded when you're trying to clear a tree," Williams chuckles.

With a hotter Acura camshaft and exhaust modifications, the naturally aspirated Honda engine makes about 300 hp in the T-51D, Williams says. The V6 mates to a custom gearbox designed to yield a 2-to-1 reduction for the propeller. Rather than the original Mustang's crankcase oil, the Titan's nose case uses automotive gear oil. And while the engine can obviously use regular unleaded from any gas station, it runs well on the 100-octane low-lead aviation fuel commonly found at airports.

The T-51 is a kit airplane that buyers can build themselves for less than \$100,000. And like most kit manufacturers, Titan offers a builder-assistance program to help with assembly. Titan recently showed off the T-51 at the annual Experimental Aircraft Association (EAA) airshow at Oshkosh, WI. Mixed in with real, full-size warbirds, the three-quarter-scale T-51 drew plenty of attention. But we had to ask, what do people think of a Mustang with a Japanese engine?

"Very few make any comment," Williams claims. "There will be the odd snicker about it, mostly from veterans who served in the Pacific." While that may prove that time heals all wounds, there's no doubt that this is the coolest use of a Honda minivan engine we know of.

Related Video:



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Image Credit: Titan Aircraft

Honda

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BEST ▼

Hedo D

1 Day Ago

I'm surprised Ford Ecoboost 3.5L wasn't used for this craft.

2

Report Reply

Brian

1 Day Ago

@Hedo D

Agreed, you really need forced induction to better cope with altitude changes, although I suspect supercharging is more popular in aircraft than turbo. The Ecoboost would be an amazing aircraft engine. I own a Flex with the 3.5L Ecoboost and that is one of the most incredible engines of any vehicle I've ever owned...and I've owned a lot.

0

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ECScamaro

2 Days Ago

Reliability trumps all when in the air. So, it makes sense to run a Honda engine.

2

Report Reply

methos1999

2 Days Ago

@ECScamaro

Upvoted because you're absolutely right, but at the same time it just seems wrong somehow that a Japanese engine is in a WWII fighter replica. I suppose it could be worse though since the Mustang was mostly deployed in the European theater... it could be a German engine.

What would be really cool would be the Coyote 5.0 V8 from the Ford Mustang in a P-51 Mustang replica.

4

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normc32

2 Days Ago

@ECScamaro

Yeah, because the newer, oil consuming Honda V6 wouldn't work so good in the air.

-5



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Report



Reply

Robert Stack

2 Days Ago

They use these engines for boats as well. Unfortunately they were positioned vertically which caused increased bearing wear. Still a great engine.

1



Report



Reply

Gnostic

1 Day Ago

Neat airframe.

The principle problem is that these engines are not stressed for aviation operations, where 100% power can be called on from takeoff to cruise, to top-of-descent. Auto applications may use full power, but rarely for more than a few to a dozen seconds at a time. The reduction gear and pulses from the propeller mass also cause problems. There are good engineering reasons why aviation and marine engines are overbuilt as they are.

Someone mentioned the Mooney-PFM collaboration that Porsche got involved in. The result was more expensive, heavier, slower, less efficient and the gearboxes cracked and leaked. Porsche bought many of the 45 or so ever built back and installed Lycoming engines to return the airplane to a more normal Mooney 201 like configuration.

Saw one Mustang inspired kit with a Jag V12 at EAA OSH. Looked and sounded fantastic.

1



Report



Reply

compbl

1 Day Ago

Because... VTEC



Report Reply



Mbukukanyau

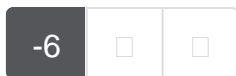
2 Days Ago

There is tons and tons of more powerful, more reliable American motors that could have gone into this plane.

Plus this is one of the worst engines out there

See link

Honda Odyssey Engine problems



Report Reply

paqza

1 Day Ago

@Mbukukanyau

The V6 is bulletproof. The problems have been with Odyssey transmissions.



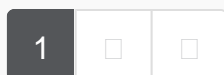
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jtav2002

1 Day Ago

@Mbukukanyau

This is an extremely reliable motor both in automotive and marine applications.



Report Reply

WMB

1 Day Ago

@Mbukukanyau

You mad bro?

1



Report



Reply

SloopJohnB

2 Days Ago

I don't see 6 exhaust pipes coming out either side...how about even three?

OK, now I see those six itty-bitty pipes.

-1



Report



Reply

Serge Berlina

1 Day Ago

@SloopJohnB

That's a screenshot from a game.

0



Report



Reply

Revis Goodworth

1 Day Ago

What an insult putting a rice burner inside a WWII plane.

-6



Report



Reply

Mike Austin

1 Day Ago

@Revis Goodworth

Did you see the line about how the engine is built in Ohio?

0



Report



Reply

Fred Schumacher

1 Day Ago

Odegaard family still builds real Mustangs in Kindred, North Dakota.



Report Reply

Hokiegrad09

1 Day Ago

Does anybody else feel like this is an insult to the p51 and the men who flew it?



Report Reply

Ok

4 Hours Ago

@Hokiegrad09

I'm sure someone does, but that was an awfully long time ago. Do you still hold a grudge against British cars because of the War of 1812 too?



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Report Reply

David

1 Day Ago

Who cares what engine they use. The P-51 lives again, in a diminutive package. I do believe I would give good money to just ride in one of them.



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Avinash Machado

1 Day Ago

At least they did not use a Mitsubishi engine. Mitsubishi fighter planes bombed Pearl Harbor.



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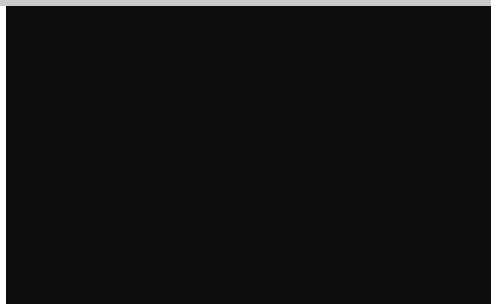
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