

M-12 The Chonda Revolution *By Bob V.*

LIKE SO MANY OF US, Lou Kelley is a builder, having built a ¾ scale Piper Cub and other interesting projects.

About a decade ago, Lou built an M1 reproduction, based on some dimensions Milton Vogt had gotten from the M1 repro chassis on display in Bruce Weiner's Microcar Museum. Lou recruited kids from his church and made a project of it (see *King Midget Motoring*, Spring, 2006). He used a five hp engine from an old lawn edger, plus all sorts of stuff salvaged from his scrap bin. Total bill of materials: \$411.83. That cost increased when he replaced the engine with a Subaru Robin, six hp electric start, for a couple of hundred bucks.

Wait a minute— isn't that a remarkable price for a brand new six hp engine? And it's a sweet engine, too. After the M1 plans became available, Scott Olene built an M1 repro with a 6.5 hp Honda engine; also sweet running, but way more money. Then Jim Berg and others built M1 repros using similar engines, imported from China. It was from Jim that I first heard the term "Chonda," a pasteup of Chinese and Honda.

The Chinese have cheap labor and no compunction against a bit of copying here and there. Honda is the world's largest builder of engines and lots of their components come from China. Chinese makers of Honda and other small engine parts simply "reverse engineered," aka "copied" popular Honda engines, hopefully those whose patents had expired. Well maybe not in all cases, but so far I've heard of no lawsuits.

My guess is, Lou's Robin engine was an early example of a Chonda, but these days, the best known is the Predator from Harbor Freight.



That little 6.5 hp engine is featured everywhere in their ads and flyers, generally at the discounted price of \$99. Pull start, but still ... such a deal! Jim Berg has used several of them and found them entirely satisfactory. They're popular in the Kart world and are being hotrodded for racing, with some success. Though the parts are typically interchangeable with comparable Honda engines, some say the quality is not. No surprise there.

With those little Chondas spreading across the land under many different names, it didn't take long for larger Chondas to appear. Jim Owen found a basket case Model 2 in Texas and before he could buy it, Frank Bird, a non-member from California snagged it. In restoring the car, Frank dropped in a Harbor Freight Predator 420 cc Chonda, rated at about 13 hp, with a Comet 40

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transmission.

It's commonly on sale for \$260. I have that car now and it outruns its brakes! It's a smooth revving engine, the transmission helps and the weight of the car is just over 600 pounds. A nice combination.

Gert Gelhaar got one and converted his electric M3 back to gas, calling it a big improvement. He cautions it's important to turn off the gas after use, lest gas run back into the crankcase. According to the Harbor Freight website, the purpose of that shut-off is primarily for transit.

Sterling Kelley put one in a Model 3 and was unhappy with the vibration. Well, one lung engines do that and these engines, being very light and with a slanted rather than upright piston, may be worse than the old Wisconsin and Kohlers.

In building the Club Special, we started with the little 6.5 from Harbor Freight and Lee was amazed how well it performed. It's a nice revving little engine with a smooth variable transmission and the car weighed only 412 pounds. Top speed was about 35 mph and it handled hills surprisingly well, so what's not to like?

Maybe the pull start? Actually, it started easily, didn't stall and Lee planned a convenient starter handle, but how to keep the battery charged? We planned to install a trickle charger to keep the battery charged for use of the horn, turn signals and the like. It seems headlights are little used on King Midgets.

But then Lee found a Powerland Chonda, essentially the same engine as the 6.5 hp Predator with electric start for only \$130, so we switched. No change in performance. Another nice engine. We planned to make that the standard engine with the 13 hp Predator as an option, and designed so either would fit.

Well shucks, after a bit of road testing, Lee discovered Powerland offers a Chonda equivalent to the bigger Predator for \$160, so we switched again. That's the engine in the car when Roxanne Hicklin drove it, with Lee following taking photos, driving his Vespa 400. Later, she said, "If I'd known he wanted to take pictures, I wouldn't have run off and left him. That little thing will GO!"

At the Jam, Lee drove the Club Special up the High Street Hill at about 18 or 19 mph. No problem. He suggested I try it. Well, I'd not yet driven the car and thought this might not be the ideal place to try it out—but of course, I couldn't resist. I putted along at the end of the line and when my turn came, waited to be sure everyone ahead of me had cleared the hill. Good thing!

I floored the accelerator at the bottom, but backed off at 20 mph, fearing that light front end would become uncontrollable! I continued at 20 mph all the way up, front wheels bouncing off the ground at the bumps. What a ride!

And go it does! We left it geared the same as with the smaller engine so it tops out at about 41 mph. Plenty fast for a car that weighs just 450 pounds, but Lee is thinking it might be nicer to drive if geared taller. It has plenty of power.

I'd driven up that hill just once before with my 12 hp Kohler M3, which made the climb with no problem, but let me attest, driving the Club Special was a whole different experience! It has just one more horsepower, but only 60 percent of the weight, combined with a slick TAV transmission that makes the best use of the smooth revving engine. Wow!

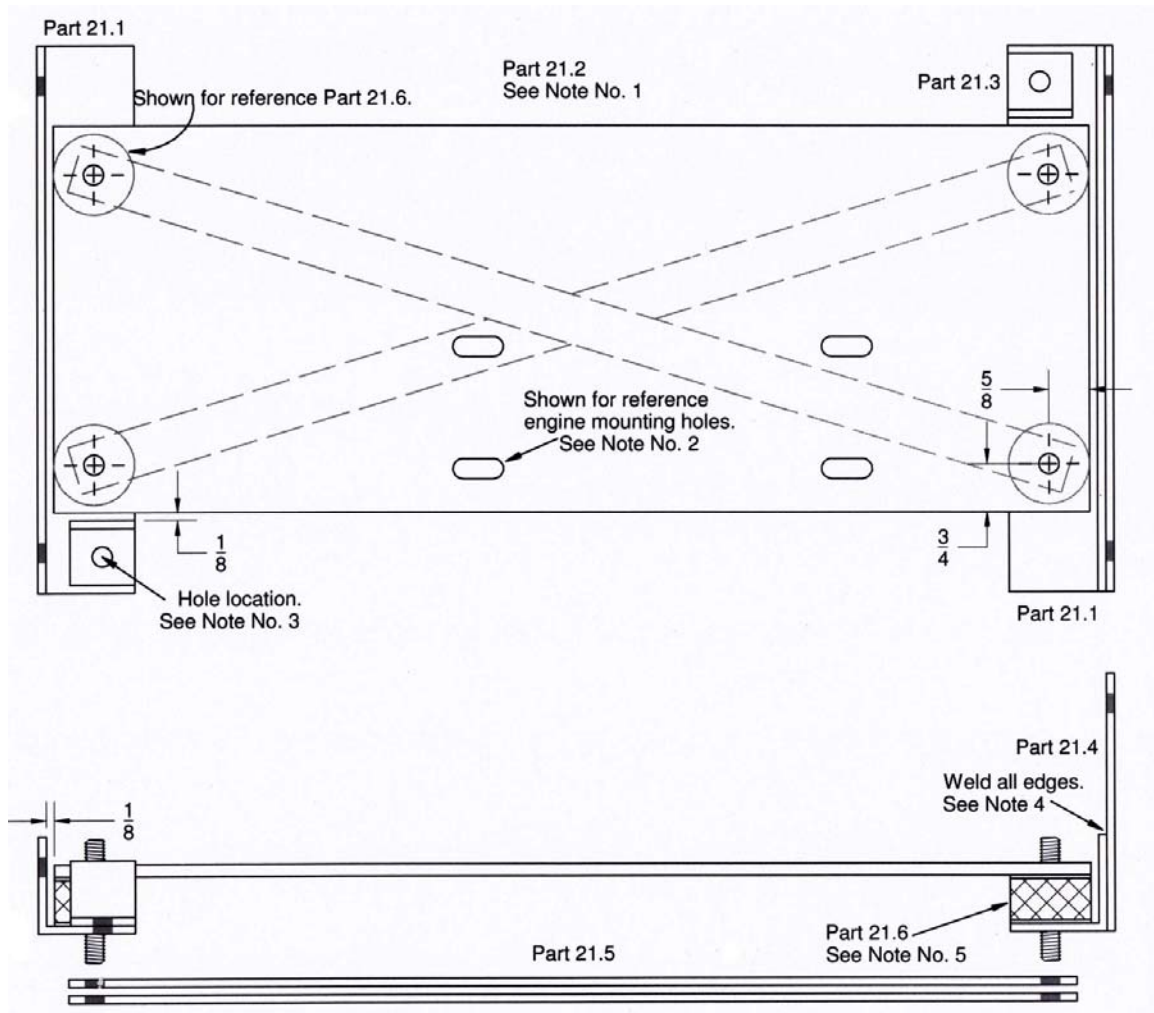
"Smooth revving" needs a bit of explanation. All three of the Chondas we tried revved great, but vibrated more than Lee found desirable. This is a problem that had been pointed out by Sterling Kelley. I'd thought it no big deal, being used to one-lung power, but Lee decided the excess vibration in our very light car was just too much.

He solved the problem by installing four motor mounts we got from McMaster Carr

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(#9376K49) for less than ten bucks. He had to add stops on the plate to keep it from torquing too much under hard acceleration and knocking off the chain.



Here's a shrunken version of Randy's CAD drawing from the Club Special plans, showing the mounting plate. Adapting it for use in a Model 1, 2 or 3 should be no big trick.

Those contemplating an engine switch in King Midgets will probably find either the Predator or Powerland 13 horse engine a good choice. I can attest that the 6.5 hp Subaru Robin in my M1 reproduction has plenty of zip. The bigger engines in a Model 2 or 3 will allow you to keep up with the rest of the crowd and their Vanguard engines for a fraction the cost. There are a number of brands such as Lifan, LTC and Subaru.

But (sigh) many long for even more power.

Good news on that front. Harbor Freight is now selling a 670 cc 22 hp V-twin for about \$700. Double the power and only 106 pounds, this promises to be the engine of choice for those who just can't resist. Lee has seen one conversion and it seems to be satisfactory. We're looking forward to learning more about how they perform.

But keep your original Wisconsin or Kohler and clutches on the shelf in good repair. The day will likely come when your King Midget will be more valuable in original condition than with all the bells, whistles and money you might spend on "updating" your historic car. \square