



Vintage Air's Frontrunner Offers Great Looks With More Room

COMPACT COOL

Story and Photos by Grant Peterson

This just in: size does matter after all—and smaller is better! Well, maybe not for everything, but when it comes to things cluttering your engine compartment, small and compact is good. Air conditioning generally takes up a fair amount of space under the dash and under the hood and Vintage Air knows this as well as anyone. A couple of years back, with great success we might add, the company introduced its Frontrunner complete serpentine conversion system that

reduces all the engine mounted accessories to a tight-knit cluster that mounts only to the engine block via a custom billet CNC-machined timing cover. This doesn't clutter up the front of the cylinder heads, allowing them to be removed easily, should you need to, without disturbing the front dress.

The Frontrunner is driven by a serpentine belt to help simplify the system and uses an OE spring-loaded tensioner for hassle-free use and adjustment. To help stay in the confines of the engine block's footprint,

Vintage Air's new and exclusive TiteFit compact compressor package fits in a spot that's not much bigger than the alternator! Precision machined then hard-coated, the Frontrunner's aluminum pulleys reduce weight, but wear like steel. Plus the pulley sizes are engineered and matched for optimum component speeds, which reduces failure and maintenance.

The Frontrunner was only available for the small-block Chevy engines at first, but for all of us Blue Oval fans, it's been available to order for your small-block Ford in your classic Mustang, Ford, or Ford-powered street rod or kit car for a while now.

Early Ford trucks don't always have, and in fact rarely do they have, much room under their shallow dashboards for extra stuff like stereos and A/C units. Many older factory or dealer-installed A/C units typically hung well below the bottom of the dash, just like the more recognizable Mustang underdash systems. But it was all in the name of comfort, right? Now we can have both! Vintage Air has had great success with its Gen II unit and now has it in a mini version as well, which would work perfectly in the mid-'60s F-100, like the one that we're working on here that has a 351 Windsor in it.

Set aside a Saturday with your classic Ford, Mustang, or truck and you could have air conditioning in it in and a killer serpentine belt drive that leaves plenty of underhood real estate in no time thanks to Vintage Air!



Here's most of what you need to outfit your small-block Ford with Vintage Air's Frontrunner serpentine system. We're installing PN 174103-SFA, which retails for \$2,275. The kit includes a Delphi-Saginaw compact power steering pump, a Stewart high-performance aluminum water pump, a Sanden SD7 A/C compressor, ARP hardware, polished brackets, and a 140-amp alternator.



This is what makes up the Vintage Air Mini Gen-II A/C unit. We have the evaporator, condenser, dryer, vents, a bag of fittings, heater control valve, and the hoses. This can be ordered under the 66005 Series from \$410-\$485 depending upon options.



Let's look at installing the Fronrunner first. If you're putting the Fronrunner on an engine that's already in your vehicle you'll need to take all the original accessories off, drain the oil, and then pull the damper off with the appropriate puller so it doesn't get damaged. If you are using an aftermarket damper, a pulley spacer might be required, so check with Vintage Air.



Before you get too far into it, sort through the stainless hardware that comes with the Fronrunner and measure each bolt to make sure it goes in the right hole as listed in the directions and always use anti-seize on stainless threads! Due to block differences it may be necessary to cut/grind a thread or two off of some bolts.



Remove the front cover and clean the gasket surface on the engine block. The instructions state to drop the oil pan, but anyone who has ever done a cam swap in a Ford will tell you that's not necessary, but you do need to remove the front four oil pan bolts, as they pass into the bottom of the timing cover.



Being careful with the gasket, the Fronrunner CNC timing cover/truss is set in place and secured with the proper hardware from the kit.



Using a little bit of gasket sealer, set the new gasket for the Fronrunner's impressive CNC-machined front cover/main truss and get ready to put it on the engine.



Once you have a few bolts in the main truss to hold it on the engine you can install the Stewart hi-flow water pump. Don't forget a light coating of adhesive to hold the water pump gasket in place during the installation.



7 Since the dipstick goes in the stock Ford front cover and not in the Fronrunner you'll need to source a new location for your oil reading. If you are installing the Fronrunner on a crate engine it most likely is a late-model casting that will allow you to fit a dipstick in the driver side rear of the block, otherwise you'll have to swap to an aftermarket oil pan with a dipstick provision right in the pan, like this Milodon that has a bung in it to mount the company's braided stainless dipstick assembly.



10 The condenser went quite nicely smack-dab in the middle of the US Radiator, which looks the best.



8 The rest of the accessories go on pretty easily following the detailed Vintage Air Instructions and wind up in this order. It sure is nice not having anything to bolt to the heads and intake! The Delphi-Saginaw power steering pump snuck right in there under the polished TiteFit line and compact compressor, slick.



11 The Mini Gen-II unit fit quite nice up under the dash of this '60 F-100 and even looked like there might be some space left for a glovebox! This is also mounted using universal metal mounting straps so you can put it where you see fit.



9 Next, the Mini Gen-II A/C system needed to be fit and installed. First, we mounted the condenser to the new triple-flow radiator that fits in the stock spot from US Radiator, which came complete with an optional electric fan and a trick aluminum shroud! Vintage Air supplies these easy to engineer brackets that can be cut to fit just about anything.



12 The bulkhead that the hoses pass through to get from the inside of the cab to the engine compartment needs to be mounted on the firewall in a spot that's easy to access with nothing interfering on either side.



The bulkhead is an upgrade part, available under PN 386600-MBA for \$65.

◀ Make sure to tighten all the nuts on the backside of the bulkhead.



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Now it was time to start routing the hoses from the Gen-II to the inside of the bulkhead. The two capped-copper tubes to the left are what go into the heater core and get heater hoses put on them.



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The TiteFit compact compressor lives up to its name with the fitting for the hoses coming out of the lower passenger side of the Frontrunner when the compressor is mounted on the upper driver side of things. Being that all the rest of the plumbing for the Vintage Air system is on the passenger side, this makes things quite simple!



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With the new US Radiator/condenser combo back in the truck, the dryer needed to be mounted, preferably in a spot that would be easy to route hoses to and away from major engine heat. This one was mounted to the core support behind the grille. Whenever you cut a hose to length, mark a straight line on the fittings on both side to "clock" them so they stay in the right place when the fittings get crimped for good. If you don't have the right tool to crimp them, call around to A/C supply stores or a good mechanic shop and pay them to do it.



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With things nearing the end, here's a better shot of the big electric fan and the aluminum shroud on the US Radiator.

SOURCES

MILODON INC.
(805) 577-5950
www.milodon.com

US RADIATOR
(323) 826-0965
www.usradiator.com

VINTAGE AIR INC.
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You may have to use a hole saw to make a spot for the hoses to pass from in front of the core support back into the engine compartment, just try and make the routing as clean and simple as possible and you should be fine and make sure to de-burr any holes that you do cut out. Better yet, find some large grommets to protect the hose as it passes through.



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The Vintage Air controls are rather compact and can often be retrofitted right into the dash or a custom console. The Gen-II's central vent and control assembly easily fits at the base of the truck's dash in our case. All that's left is to wire it up according to the included directions.



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The last thing you want to do is forget to route all the ductwork! Connect the defrost ducts to the underside of the dash and the original defroster openings and then mount the driver and passenger vents at each end of the dash. Vintage Air has what you need for your classic Ford or Mustang, so give the company a call or check out its website for more options on vents, knobs, and more. **MMF**