

# YF (R-1234YF) REFRIGERANT IS HERE TO STAY

DON'T GET LEFT BEHIND

YF refrigerant has been used in a majority of vehicles in the U.S. since 2014, when the following manufacturers transitioned to YF systems: GM including Chevrolet and Buick, Ford, Toyota, Honda, Fiat, Chrysler, Jeep, Subaru, Dodge, Ford, Jaguar, Land Rover, Ram, Cadillac, Audi, Mercedes, Porsche, Volkswagen and KIA. As of 2016, all vehicles are now manufactured with YF refrigerant.

MAC Directive 2006 required a phase-in period during 2011-2017 for vehicle refrigerants to have a GWP (Global Warming Potential) less than 150. For comparison:

R134a has GWP = 1300

R1234YF has GWP < 1

With non-ozone-depleting properties and GWP at virtually zero, YF is clearly the superior choice over R134a. It appears we finally have a vehicle refrigerant HERE TO STAY for the foreseeable future!

Now, and in coming years, the traditional aftermarket is expected to experience a spike in service demand for vehicles with YF refrigerant as cars come off warranty and reach an age when A/C service is required. It is critical for automotive service shops to have a plan to service these vehicles or be left behind.

The good news is there is no steep learning curve to service YF for already qualified technicians. The same safe service practices used to service R-134a systems can be applied to YF systems. However, R-134a tools and equipment are not compatible with YF vehicles. SAE standards dictate that the charge port fittings be different and unique for different refrigerants so as to avoid cross-contamination. YF ports are each a millimeter in diameter larger than the R134a ports, and service hoses have left-handed threads. Always refer to the underhood sticker for proper refrigerant and oil types

as well as system capacity. In addition, R-134a cannot be used to “top off” a vehicle that already contains YF. Vehicle A/C systems are optimized and calibrated with a specific refrigerant. Filling a system with a refrigerant different from the original can lead to sub-optimal cooling performance, as well as potential incompatibilities with the materials, as the refrigerant/oil combination is optimized around the material system selected. Replacing a low-GWP refrigerant with a higher-GWP alternative is considered by the EPA to be tampering with an emissions control device and is in violation of the Clean Air Act.



With an estimated 70 million cars using YF on the road today, dealer service centers and collision repair shops have seen the majority of YF repairs. YF is available in 10 pound cylinders, 25 pound cylinders, and 12 ounce cans. Section 609 certification is required to purchase a 10 or 25 pound cylinder, but not for the 12 ounce can. Either way, service requires the proper YF tools and equipment such as a YF gauge and charge hose set, refrigerant identifier, and recovery / recycle equipment. Be sure to have the right new tools for the job.

Four Seasons® offers both YF components and service items needed for shops repairing ALL of today's vehicles.

For more information visit [www.4s.com](http://www.4s.com)

## DID YOU KNOW?

There are many myths regarding the safety and flammability of YF. YF refrigerant will burn, but it takes a lot of heat to ignite it and it burns slowly. Almost every other fluid under the hood will light more easily and burn hotter than R1234yf. The Society of Automotive Engineers (SAE) has determined the same safe service practices used to service R-134a systems can be applied to YF systems.

- Source Chemours®

