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Contributing editor Phil Sasso answers the following questions:

- What are independent shops doing now without the tool?
- Why do you think more technicians don't/won't do reflashing?

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# Reflashing: fast-forward to 2018

Forward-thinking technicians are preparing for reprogramming

**C**urrently, few if any of your customers probably do “reflashing,” that is reprogramming OEM PCMs (powertrain control modules). Now, fast forward to 2018: Right To Repair has been fully realized and every shop in the U.S. is reflashing hundreds of PCMs a month...

Yeah right! And you'll have a robot doing your domestic chores for you, too!

In three years, I don't expect every independent shop in America to suddenly be doing huge volumes of reflashing. But there likely will be a number of forward-thinking shops on your route who will have added it to their list of services. To get there from here, they'll need the right equipment, and a bit of education and encouragement. If you want a piece of that pie, you'll need to learn a little about the tools they'll need and the complexities of the process.

**Q.** Don't customers just need some “super special” scan tool and a little training?

**A.** If only life was so easy. A shop needs three pieces of hardware to do reflashing: a Windows laptop, an SAE J2534 compliant pass-thru device and a special battery charger/maintainer.

**LAPTOP:** Most dealers don't sell laptops. I wouldn't suggest you start. The headaches are too big and the margins are too small.

You might work out a referral program with a local computer shop. In either case, have a J2534 laptop spec sheet covering the minimum required configuration (RAM, HD, processing speed, etc.). OEM reflashing won't work with Android, Linux/Unix or Mac OS/iOS, only with Windows 7 or 8, currently.

**PASS-THRU DEVICE:** Your flag or WD likely will carry one or two models of a J2534 device. Keep spec sheets on each that you can print or email. The interface is a simple-looking box with a USB connector on one end and an OBD-II connector on the other. It does just what the name implies: passes data from the laptop to the vehicle's modules. But that's not as easy as it sounds. There's a wide array of different protocol, voltages and speeds to coordinate, says Brandon Montney, senior sales and marketing specialist with DG Technologies (dgtech.com). The same box that allows reflashing also may allow dealer-level diagnostics capabilities. But that all depends on the OEM. More on that, later.

**CHARGER:** Not just any charger will do. These specialized chargers “provide a steady supply of power at a specific voltage and current,” says Jim O'Hara of Clore Automotive. “This keeps the vehicle's electrical system stable.” A sudden drop in system voltage can derail a reprogramming job because many modules need to draw power during the programming process. The customer service rep at your flag or

WD will know exactly what you need. The cheap charger they have won't do. Be prepared for your customer to have sticker shock (no pun intended). This is a pricey purchase. Ask ahead so you know the exact makes, models and pricing.

All totaled, the pass-thru device and charger could cost your customer \$2,000 to \$3,000.

**Q.** That doesn't sound so bad. What's the big deal?

**A.** Getting the hardware is the easy part. Using it is the challenging part.

Although OEMs are required to allow independent technicians to reprogram PCMs, they don't have to make it easy. To reprogram an existing PCM or program a new one, first requires that a technician registers online with each OEM, says John Anello of Auto Tech On Wheels, a mobile diagnostics/reflashing service.

There's no central source of all OEM configuration files. So, the technician needs to register for each automaker on a special OEM website. Each form is different and contains unique but equally intimidating terms and conditions. To do every make available in the U.S., you'd need to register for 37 different OEMs, according to the National Automotive Service Task Force (NASTF) website. The list is slightly shorter if you don't expect to reflash Aston Martin, Bentley, Ferrari, Maserati,



More and more repair shops will be doing reflashing as time goes on, so it will be vital to know what tools technicians will need to get the job done.

or the like. Links to reprogramming websites are available on NASTF's site: [www.nastf.org/i4a/pages/index.cfm?pageid=3639](http://www.nastf.org/i4a/pages/index.cfm?pageid=3639). Many J2534 device manufacturers include these links in their software, too.

**Q. So what's it cost to buy the OEM software?**

**A.** You aren't buying software. You're subscribing to a service much like you do Spotify, Netflix or Hulu. Once your time is up, your access is gone. And much like these entertainment services, the actual file never resides on your laptop, it is "streamed" through to the vehicle. This allows the OEM complete control. (The benefit to the technician is he knows he is always updating to the latest configuration files.)

Each OEM can charge whatever they feel is a "reasonable" fee for use of their data. Technicians can register for subscriptions with wildly diverse pricing.

For example, Honda and Acura subscriptions are free, but they only allow access to ECM/TCM updates. On the other end of the spectrum, Volvo charges up to \$7,357.50 per year (more than six times the average annual OEM fee) but gives access to all modules, according to the Drew Technologies

website. Some automakers offer daily/weekly/annual subscriptions. Some only offer annual options. Still others only offer "per flash" subscriptions. Nothing is consistent. And that's all subject to change without notice. (Think I'm over complicating it? Look at this chart: [drewtech.com/technician/support/oemapps.html](http://drewtech.com/technician/support/oemapps.html))

So in addition to the hardware costs, an "all makes" shop could end-up spending more than \$26,000 per year in annual subscriptions just based on the annual subscription fees on the Drew Tech website. Obviously most shops won't need every subscription, and they can sign up on an "as needed" basis. But as you see, hardware is the cheapest part of reprogramming services.

And because some OEM software doesn't play nice together you may need one laptop with a partitioned drive, or as few as three and as many as seven separate laptops to do all vehicle models according to David Bartman, Drew Technologies' support supervisor. Although, he says, you can run the "Big Three" U.S. automakers (Chrysler, Ford and GM) and Toyota on one PC with no special drive formatting.

Confused? Don't worry! You aren't expected to be a reflashing hardware expert, just keep the manufacturer's tech support hotlines handy for pre-sale questions.

**Q. Can an independent shop be profitable after spending all this time and money?**

**A.** A smart technician or shop owner/manager can be profitable.

As I mentioned earlier, the same box that allows reflashing can allow dealer-level diagnostic capabilities. But this is only if the OEM offers that service (as a separate subscription from the reflashing subscription). Currently some do and others, like Ford, don't. If more automakers come online, independent technicians will be able to do diagnostics they couldn't before.

For a shop to be profitable with all these hardware costs and subscription fees, on top of charging for labor time, the shop will need to charge a "software" fee to cover their subscription costs, say Anello. He charges the shops that he services this fee.

If your customer is one of the few in his area doing reflashing, he will be able serve customers that his competitors can't. And he also can offer to farm out his services to other area shops who aren't providing reflashing services.

**Q. I think I'll go ahead and wait until 2018. What's the big hurry for, anyway?**

**A.** The top level technicians who will want to do reprogramming will want to jump in before the others crowd the field. By keeping ahead of the curve, they can become an expert right away. And if you think reflashing sounds a bit complicated, it's a cakewalk compared to immobilization. I'll save that topic for a time when I have nothing else to do for a month but interview experts and learn what it takes to become a Vehicle Security Professional. I'll ask my domestic robot to put that on my calendar. **PD**