



CAR BENCH®

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Why Benches Beat Frame Machines Every Day of the Week

Looking for a new pulling system for your shop? Here's why you need a bench – not a frame machine.

Car Bench: BETTER Than Any Frame Machine

Car Bench provides the most accurate, most advanced pulling machines in the industry. The precision of these machines far outstrips the “within tolerance” standards of simple frame machines.

Car Bench pulling machines are not only far more accurate than frame machines, but also offer a greater variety of anchoring systems, each with superior holding power and guaranteed precision. In addition, when you use a Car Bench to repair vehicles, you don't need to invest in a separate measuring system (because your anchoring system *is* your measuring system). Plus, with a Car Bench in your shop, you enjoy superior access to the vehicle, faster total repair time, and the ability to tell your customers exactly why your shop's repairs are superior to those of competing shops: You're using automaker-approved equipment – the same equipment used by automakers to manufacture the vehicles.

Interested? Consider the details below.

Superior Accuracy

Even the best-built frame machines can't match the precision of a Car Bench. Car Bench frames are produced to meet extraordinarily stringent requirements. In fact, all datum faces of the frames and crossbeams are milled, drilled, and threaded to within fifty thousandths of a millimeter. This high level of precision gives you the ability to repair vehicles quickly and properly, returning them to exact factory specifications the first time and enjoying zero re-work.

Unlike the precision-milled surfaces of Car Bench machines, the surfaces of most frame machines are not truly flat. In fact, frame machines usually have several millimeters of fluctuation across their widths and lengths. Did you know that you cannot properly anchor a vehicle on a surface that isn't perfectly level? When a variance of a several millimeters is imposed across the underbody of a vehicle, you introduce significant amounts of twist and sag into the chassis. Because of this, you have no way of knowing if a vehicle anchored on a frame machine remains several millimeters out of factory specifications or if it's perfect. You're just guessing as to accuracy. On a Car Bench, you know.

**Work with
confidence on milled
frames and
crossbeams.**

Superior Anchoring

If you're like most body shop owners, you would say you're in the market for a "pulling machine". While pulling power is certainly important, nearly every frame machine or bench offers you a 10-ton ram in some type of pulling arm that gets the job done. In other words, the pulling part is pretty much universal. What truly distinguishes repair systems from one another is not the pulling arm, but the anchoring system. And when it comes to anchoring, Car Bench is just flat-out superior. Car Bench pulling machines are available with a greater variety of anchoring systems than any frame machine. With a Car Bench in your shop, you can use pinchweld clamps just like on a frame machine; however, you'll also enjoy the ability to use dedicated jigs, universal jigs, and mini jigs.

It's a simple fact: Jigs provide superior holding power and guaranteed precision that you just can't get from a simple set of pinchweld clamps. It's important to understand the advantages of multi-point anchoring (jigs) over four-point anchoring (pinchweld clamps). Multi-point anchoring is better, and here's why: On a typical frame machine, you anchor a vehicle with four pinchweld clamps. Although additional tie-downs can be used, the vehicle is typically anchored only at the four corners of the center torque box, with the rest of the vehicle "floating" for easy repair. You then use a mechanical or electronic measuring system to gauge the position of the vehicle's multiple "floating" control points during the repair process. By setting up the repair in this way, you lose control of the vehicle. You're trying to monitor multiple chassis points that each need to be moved back to the correct location, yet none of them are anchored securely in place after being pulled. This leaves them susceptible to being moved out of position during subsequent pulls. As a result, the many points rarely (if ever) match up exactly to the manufacturer's specifications. You need to pull and re-pull, and you only finish the job when it seems that the vehicle is "close enough" or "within tolerance". Jigs provide far superior accuracy by physically locking the chassis' control points into position and ensuring that they stay in place throughout the entire repair process. By using jigs to hold the vehicle at multiple points, you keep recently straightened sections solidly in place during subsequent pulls. With this method, the chassis is returned exactly to the manufacturer's specifications. So, when you use jigs, you don't guess – you know. (Want another [example](#)?)

Use jigs. You'll enjoy more anchoring options, better holding power, and guaranteed precision.

Because jigs are more accurate than four-point holding systems, jigs are what automakers use to build their vehicles. Likewise, jigs are what automakers approve for the repair of their vehicles. It just makes sense: When you want to control the fabrication or repair of a part, you use a jig. It's the only way to ensure complete accuracy. On a complex part like a unitized chassis, holding at only four points does not ensure that each chassis section is correctly restored to its original position. When you use a jig system, however, you'll fix vehicles the way automakers build them, and you'll enjoy less re-work because you'll complete repairs correctly the first time.

No Measuring System Required

When you use a Car Bench pulling machine to repair vehicles, you don't need to spend thousands more for a separate measuring system. That's because your Car Bench anchoring system *is* your measuring system. Using Car Bench jigs, you work outward from the center torque box section, realigning each section of the chassis and locking it securely in place with one or more jigs. This process is repeated until the entire chassis is jugged to the exact factory specifications. As you bolt each jig to the chassis, you're verifying that each control point is perfectly in place. After each chassis section has been pulled to alignment and bolted to the jigs, it is perfectly positioned to OEM requirements and needs no additional measuring equipment.

When you use jigs, no additional measuring equipment is required because your anchoring system *is* your measuring system.

Better Access To The Vehicle

Car Bench pulling machines provide better access to the vehicle than frame machines. The greater accessibility enabled by Car Bench comes from two significant advantages. First, Car Bench pulling machines feature powerful scissor lifts that let you enjoy comfortable, ergonomic working positions. When you need access to the underside of the vehicle, simply raise the lift and walk under the vehicle. With the car up in the air, you'll enjoy a more comfortable working position and plenty of light to see what you're doing. (It sure beats crawling or kneeling on the floor beneath a frame machine.)

In addition to their greater versatility in height, Car Bench machines also feature drive-on-breakaway treadways. These lightweight treadway sections are easily removed to give you direct access to the vehicle from both sides. This makes it easier to examine the vehicle's damaged areas, set up anchoring, and work closely around the vehicle. If you're accustomed to working with frame machines, welcome to a whole new level of comfort and ease of repair.

Shorter Repair Time

Car Bench pulling machines reduce your total repair time. Although setup of a multi-point anchoring system requires more time than a four-point anchoring system, it guarantees precision and eliminates the need for re-pulling, thereby speeding your repair time. Because the reduced pulling time more than compensates for the slightly longer setup time, the total repair time is less. With Car Bench, your technicians will perform higher quality repairs more quickly than ever before.

Automaker Approvals

Car Bench repair systems are approved for use by more automakers than any other repair system. One reason for this is the unparalleled precision of Car Bench. In fact, Car Bench produces such versatile and accurate equipment that many automakers have decided to purchase Car Bench systems for their own prototyping and production work. That's right, numerous vehicle manufacturers actually build their vehicles on the same jigs that you'll be using for repair. There is no higher mark of approval than that. It places Car Bench alone at the top – above all other bench manufacturers around the world. (You can forget frame machines when it comes to automaker approvals.)

When you invest in a Car Bench, you'll own equipment that's not only automaker-approved, but also automaker-owned. Since there's not a frame machine in the world that can match that, your new Car Bench equipment will set you apart from your competitors with a unique ability to attract customers. Customers love to learn that their vehicle is being repaired on the same equipment the automakers use for manufacturing. It inspires their confidence in the expertise and quality of your shop.

**Learn about
[Protoline](#) -
prototyping and
production jigs and
benches for
automakers.**

Car Bench: The Right Choice

To repair vehicles quickly and accurately to pre-accident condition, there is simply nothing better than a Car Bench. Car Bench machines are milled to ensure accuracy, and they offer more anchoring options, greater holding power, and guaranteed precision. You can't get that from a frame machine. Plus, when you own a Car Bench, you don't need to spend thousands more for a mechanical or electronic measuring system. Moreover, you'll enjoy better access to the vehicle, make faster repairs, and impress customers with your shop's use of automaker-approved equipment. The many advantages offered exclusively by Car Bench explain why you need a bench, not a frame machine. You need a repair system that differentiates your shop and enables you to generate new revenue streams. You need a Car Bench.

Questions?

Do you have a comment, question, or opinion that you'd like to share? Please complete our [online form](#) and let us know.

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