by Bill Brockway

Reciprocating Saw Update

A hands-on comparison of the latest models and features

I was once working with a demolition crew in New York City. Every day at noon, we'd leave our dusty job site and walk a few blocks to have lunch in a small park called Father Demo Square. I don't know much about the priest in question, but we adopted him as our patron saint; his insignia, we decided, was a pair of crossed reciprocating saws on a background of construction debris.

Certainly no tool is more identified with a specific subtrade than the reciprocating saw is with demolition. Long the realm of the Milwaukee Sawzall, reciprocating saws are now made by many other toolmakers. This article explains the features of a recip saw, and introduces a few new models. If you're in the market for a saw, this will help you sort out what features are available and how well they work.

The Variables of Variable Speed

Most of the saws boast "variable speed" control, but there are several types of variable-speed systems. One uses a dial that sets the speed at which a saw will run. When you pull the trigger, you're either at zero or you're at the speed set on the dial. I call this type an "on/off switch."

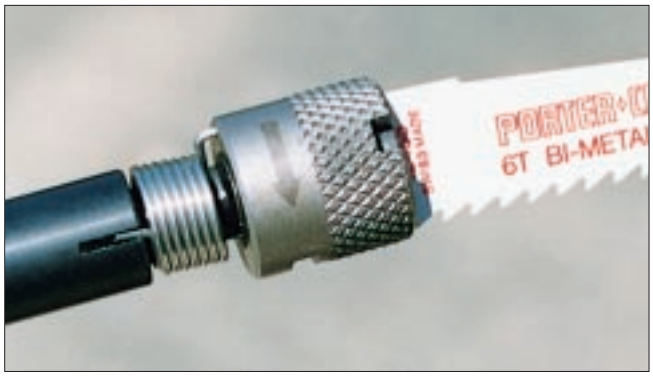
Another type sets a top speed with a similar dial, then allows you to increase the speed to the dial setting, depending on how hard you pull the trigger. This I call "adjustable variable speed."

A third type, which I call "true variable speed," simply varies the speed according to how hard you squeeze the trigger — you've got the entire speed range available at all times. Any of the three types may have a trigger lock, but it usually only engages when the trigger is fully depressed.

I prefer the second type of control — adjustable variable speed — because it allows me to set a slow top speed when I'm cutting metal. That way, I don't have to worry about overheating the blade by sawing too fast.

Where's My !@#/!* Hex Wrench?

Most saws use a hex wrench to operate the blade clamp and adjust the shoe, but it's hard to keep track of the wrench. If it's not lost completely, it's usually down at the other end of the cord, permanently fixed in whatever contraption the manufacturer dreams up as a holder. Once you get it in hand, you have to use it still attached to its tether, which wraps itself around the wrench, making it even harder to turn.



Porter-Cable's new 737 Tiger Saw has the first keyless blade clamp on a recip saw (left). A twist of the knurled cylinder in the direction of the arrow opens up the slot, enabling you to slip a blade in or out. Other manufacturers have tried to make the hex wrench more accessible: Both Milwaukee's Super Sawzall and AEG's SSPE 800 (right) have a storage slot on the boot of the tool.

Luckily, a few manufacturers have found better ways to store the wrench. Makita makes a holder that stays put near the tool end of the cord and is easy to operate with one hand. Both AEG's SSPE 800 and Milwaukee's Super Sawzall have a storage slot on the boot of the tool. It's just a few inches from the blade clamp, right where you need it. I've used these saws a lot, and I've never had one of these "on board" hex wrenches vibrate loose. Porter-Cable's and Bosch's blade clamp designs earn top honors by doing away with the hex wrench entirely.

Unique Features

The distinguishing feature of a recip saw is a "wobble" mechanism that converts the motor's circular rotation into the back-and-forth motion of the blade. Here are some other characteristics to look for:

Orbital cutting. Some saws have an arm above the blade shaft that pushes on it intermittently to produce an orbital cutting action. When you switch on the orbital action, the blade moves not only back and forth, but up and down a little bit, too. It dives down into the wood on the back stroke (the normal cutting stroke), so it takes a bigger bite out of the piece. This makes the saw a very aggressive cutter. It almost feels like it's "pulling" itself through the cut and you're just along for the ride. Some people don't like this out-of-control feeling and prefer a slower cutter so they can make good finish cuts.

Never use an orbital setting when you're cutting metal — you'll just ruin the teeth and waste the blade.

Blade clamps. Apart from the new Porter-Cable and the Bosch, all of these tools rely on pressure from a screw to hold the blade tightly in place — that's the theory anyway. In the real world, the vibration and general abuse these tools take eventually loosens up the screw. This can be dangerous — a blade can go flying if it's not clamped in properly.

I used to think that the only protection against this problem was to check the screw frequently, but a remodeler I know found a better solution. He replaced the screw on his recip saw's blade clamp with a slightly longer one that has a lock washer. He also uses a large T-handled hex wrench to tighten and loosen it. The extra leverage of the larger hex wrench makes it possible to get the screw much tighter. Of course, you have to find someplace to store that bigger wrench, but it's easier to just stick it in your toolbelt than to try to use the manufacturer's holder. (T-handle wrenches are available from Eklind Tool Co., 2255 W. Logan Blvd., Chicago, IL 60647; 312/276-1140.)

To flip or not to flip. One guy I worked with freaked out the first time I reversed the blade in his Milwaukee Sawzall (I put it in the blade clamp with the teeth pointing up). He thought I'd broken something. But actually, most recip saw owner's manuals describe the technique and recommend it for "flush" cutting. By turning the blade upside-down, you put the plane of the teeth closer to the edge of the tool housing, so you can get a flatter angle when cutting in a tight spot — cutting a plate out of a framed doorway, for example.

Adjustable shoe. At the base of the blade, a protective shoe keeps the material you're cutting from banging into the blade clamp. This shoe is adjustable on most models, allowing you to set it very high and do your cutting with the teeth in the middle of the blade. Then you can slide the shoe back down, expose fresh teeth, and cut again. With the right-length blade, the shoe can also be used as a depth stop — to keep you from cutting too deeply into a wall, for instance.

Cutting Test

To get some kind of basis for comparing the power of these saws, I put each one through an identical cutting test and timed it. The test sample was a pair of 2x12s glued up with a piece of 3/4-inch AC plywood and a piece of 1/4-inch Masonite between. I used maximum orbit on those saws that had an orbit adjustment. I gave each saw an identical, fresh blade, made the cut three times, and averaged the results. For down-

The easiest shoe adjustments are made with a lever like the one on this Makita JR3020. Simply swing it 90 degrees, set the shoe in a new position, and swing the lever back. Milwaukee's Super Sawzall has a similar lever.

AEG SSPE 800

Bosch 1634VSK

DeWalt DW306K

Hitachi CR12V

ward pressure, I hung a gallon of water (8.345 pounds) around the nose of each tool. I held each saw level and used only enough force to keep the trigger depressed and the shoe pressed against the work.

Don't get too hung up on these numbers, though. Cutting speed is only one feature, and if the saw vibrates like crazy or weighs a ton, you can't use it all day anyway. Some finish cuts can be made only with a recip saw, so you may want one that's easier to finesse through a difficult cut even if it means sacrificing speed.

The Basic Recip Saw

In my comments below, you can assume (unless stated otherwise) that a saw has these general features:

- a metal case with room for the saw with a 6-inch blade still attached
- a 7- to 9-foot cord
- an adjustable protective shoe
- a blade clamp that accommodates flipping the blade over
- a rubber boot over the front gear housing
- hex wrench storage on the cord

All these saws use recip saw blades with a 1/2-inch shank, sometimes referred to as a 1/2-inch tang.

AEG SSPE 800

The SSPE 800 is a well-designed, not-too-heavy saw (7 lb. 10 oz.) with an 8-amp motor. With the orbital action switched on, it's an aggressive cutter. The hex wrench for the blade clamp stores in a little clip on the housing of the tool right where you need it. The shoe adjusts to two different cutting heights and the stroke length is 1 3/16 inches. This saw has an on/off variable-speed control: A dial sets the top speed in a range from 500 to 2,500 strokes per minute (spm). AEG's saw completed the cutting test in 63 seconds. The housing is all plastic, which makes it a little slippery when you're wearing gloves. Vibration is about average. List price is $299.

Bosch 1634VSK

The Bosch saw is so new that there wasn't a prototype available in time for me to test it for this article. I did speak to the product manager, Gary Compton, and found out what features will be offered on the new saw.

The 1634 is powered by a 10.5-amp motor and has a 1 1/4-inch stroke. It weighs in at 9 lb. 12 oz. and features switchable orbital cutting action and a counterbalanced vibration dampening system. The speed is variable over two ranges: 0 to 1,900 and 0 to 2,700. Both the shoe adjustment and the blade clamp operate without hex wrenches. A button under the boot frees up the shoe, and the blade clamp is similar to the Clic blade system that Bosch uses on its jigsaws: A lever operates a cam to hold the blade against a plate.

The 1634 should be on the store shelves by the time this article prints. List price will be around $350.

DeWalt DW306K

This saw is one of my favorites. It's lightweight, powerful, and feels like a race car when you rev it up. It has an

8-amp motor, weighs just 7 lb. 9 oz., has user-replaceable brushes, and a 1 3/16-inch stroke. One nice feature of this tool is that the forward grip tapers down small enough that you can wrap your fingers all the way around. This gives you great control over the direction of the cut. The DW306K has a fixed shoe. It has adjustable variable-speed control, with a speed range from 0 to 2,400 spm. Vibration is not bad — you can still read the fine print on the label even with the tool going full throttle. The DW306K completed my cutting test in 113 seconds. It lists for $291.

Hitachi CR12V

Hitachi's saw weighs in at 7 lb. 15 oz. One minor irritation with this saw is that the blade clamp is recessed; the only way to get at the thing is by sticking the hex wrench through a small window on the side of the housing. However, the shoe adjustment screws are under a small flap of the rubber boot and are much easier to adjust. The saw has user-accessible brushes on its 6.5-amp motor — a nice feature that means a simple brush change doesn't require a trip to the service center. Stroke length is 1 3/16 inch; speed range is from 800 to 2,500 spm, controlled by an on/off switch. This saw completed the cutting test in 93 seconds. This model has no orbital action, although its sister, the CR10V, does. However, the CR10V has a slightly smaller stroke and lower overall speeds. The CR12V lists for $271, the CR10V for $305.

Makita JR3020

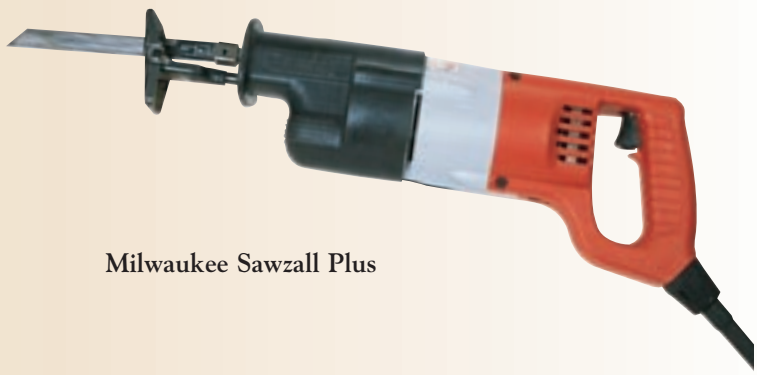
This brand-new redesign of the JR3000 model has a 10.7-amp motor — the biggest in our sample — and weighs 9 lb. 3 oz. The stroke length is 1 3/16 inches and the speed control is by an adjustable variable-speed trigger, with speed range from 0 to 2,500 spm. This saw has a trigger lock that engages only at the top speed. The shoe adjustment is a pivoting handle just below the nose of the tool. Both this handle and the orbital action selector (with three levels of orbit to choose from) are easy to operate with gloves on. The case is molded plastic. After using the saw, I questioned the way the two sections of the housing seemed to move independently. Product manager Charles Shaefer explained that this is part of the vibration dampening system. Large rubber grommets inside the tool isolate your hand from the blade shaft mechanism. The JR3020 completed the cutting test in 31 seconds. This saw is so new that the list price hadn't been set when we went to press, but it should be around $275.

Milwaukee Super Sawzall

The Super Sawzall lived up to its name. It's big (9 lb. 8 oz.) and beefy (9.6 amps), but the antivibration mechanism (a counterweight that moves in opposition to the blade shaft) makes for smooth operation. The stroke is the longest among our sample, at 1 1/4 inches. The blade wrench stores on the tool just a few inches from the blade clamp, and the shoe adjustment is a pivoting lever on the nose of the tool. The speed control is the adjustable variable type, with a speed range from 0 to 2,800 spm. The Super Sawzall completed the cutting test in 63 seconds. It lists for $330.

Makita JR3020

Milwaukee Super Sawzall



Milwaukee Sawzall Plus

Porter-Cable 737 Tiger Saw

Skil HD4740

Milwaukee Sawzall Plus

Milwaukee brought out the Sawzall Plus after the Super Sawzall as kind of a middle-of-the-road version. It's not as full of features as the Super, but it's far advanced beyond the original Sawzall. This saw has probably the best access to the blade clamp of any of these models. The shaft comes out of the body of the tool and is all alone except for the adjustable shoe just below it. This makes blade changing easy and quick. The Sawzall Plus weighs just 8 lb. 1 oz. and sports a 6.5-amp motor. It has adjustable variable-speed control, with a speed range from 0 to 2,800 spm, and a 1-inch stroke. It completed the cutting test in 135 seconds. The Sawzall Plus lists for $285.

Porter-Cable 737 Tiger Saw

Changing blades is a cinch with the brand-new Porter-Cable 737: You just grab the knurled cylinder at the end of the shaft, rotate it a half turn, and slide the blade in or out. Release the knob and a spring swings it back and locks the blade in place. Don't throw the hex wrench away, though: You'll need it to adjust the shoe. The 737 has a 9.6-amp motor and weighs 8 lb. 12 oz., which puts it in the same class as the Super Sawzall. It has a one-position orbital-action switch, with trigger-controlled variable speed from 0 to 2,600 spm. The saw lacks a lock-on button for the trigger and a way to set a lower top speed, but I had no trouble keeping this saw at a consistent low cutting speed when I wanted to. The 737 completed the cutting test in 63 seconds. It lists for $290.

Skil HD4740

The HD4740 was the lightest saw in our sample at 7 lb. 1 oz. Blade changing was not difficult, and the shoe adjusts by loosening two set screws. The 5-amp motor is variable from 0 to 2,400 spm via the trigger. The stroke is 1 inch long. It completed the cutting test in 123 seconds. The HD4740 comes standard without a case; including the case, the saw lists for $314.

Making the Choice

The Makita JR3020, the Milwaukee Super Sawzall, and the Porter-Cable 737 Tiger Saw are in a class of their own. If you give a saw hard use, and one of these has the features you want, you can't go wrong with it. In what I see as a middle range of dependability, features, and price, the DeWalt, Hitachi, and Milwaukee's Sawzall Plus are all professional tools that can take the abuse of real job sites. I see the AEG and Skil tools as more suited to the occasional user, but still on the professional level. These tools get the job done, but you may have to put up with a little more vibration and the job might take a little longer. Whichever saw you choose to go after, you'll do well to get hold of one and try it out before buying.

Another consideration is service. The saw will probably break down eventually. Will you have to ship it somewhere for repair and do without for a few weeks, or can you get it repaired locally? If you rely heavily on the tool, quick repair can make the few extra bucks you pay for a saw with a local service center well worth it. ■

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Sources of Supply

AEG/Chicago Pneumatics Tool Co.
2220 Bleecker St.
Utica, NY 13501
800/243-0870

Makita USA
14930 Northam St.
LaMirada, CA 90638
714/522-8088

Porter-Cable Professional Power Tools
4825 Hwy. 45 North
Jackson, TN 38302
800/321-9443

DeWalt Industrial Tool Corp.
P.O. Box 158
Hampstead, MD 21074
800/433-9258

Milwaukee Electric Tool Corp.
13135 W. Lisbon Rd.
Brookfield, WI 53005
414/781-3600

S-B Power Tool Co. (Skil & Bosch)
4300 W. Peterson Ave.
Chicago, IL 60646
312/286-7330

Hitachi Power Tools
3950 Steve Reynolds Blvd.
Norcross, GA 30093
800/706-7337

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