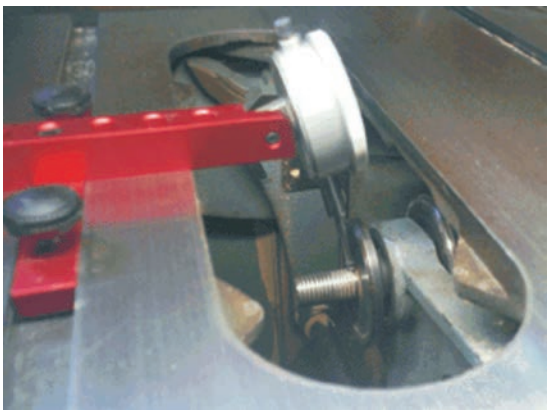
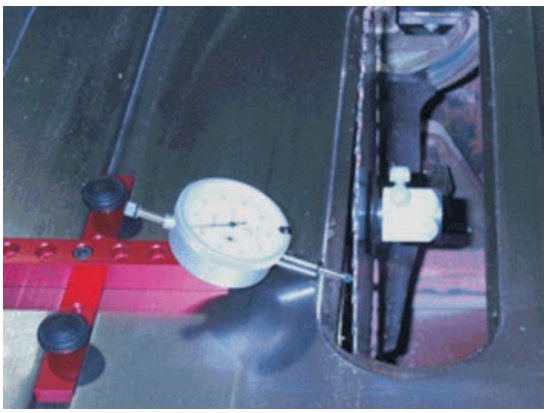
MAINTAINING YOUR TABLE SAW



ARBOR RUN-OUT



BLADE & FLANGE RUN-OUT

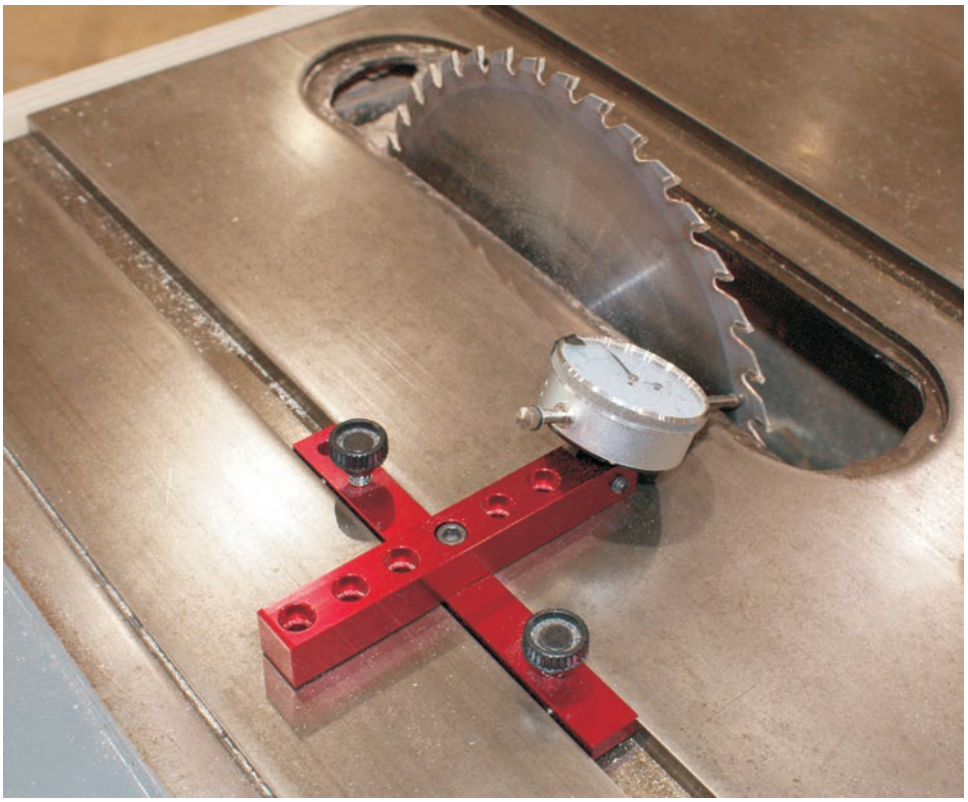
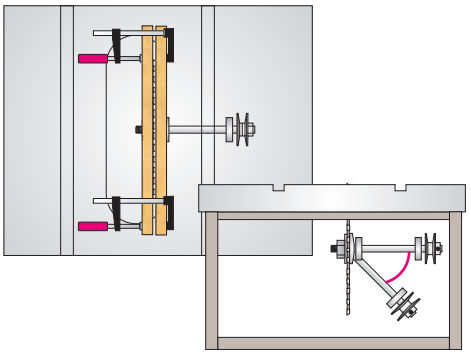
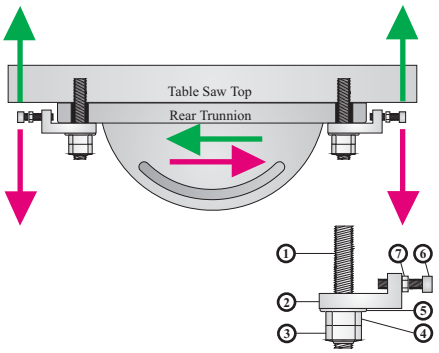


TABLE SAW ALIGNMENT



PULLEY REMOVAL

BELT ASSEMBLY



PALS INSTALLATION

Jerry Cole

If you own a Contractor style saw with the motor hanging out the rear of the saw, the first 6 pages of this manual cover the steps you should consider taking prior to aligning your saw. If you own a Cabinet saw, these pages do not apply.

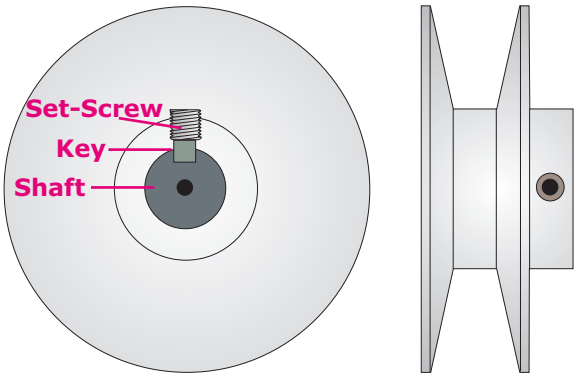
Table of Contents

Note: Video clips of most items listed above are on our website at **www.in-lineindustries.com** in the "Education" area of the site. We also have numerous "Project" oriented video clips that are available for you to watch. These are all linked to "youtube", and if you want to be notified when we post new videos be sure to "Subscribe" to our channel, and you will get an email message notifying you about any additions. We would appreciate your comments (pro or con) about our videos, and please mark the "thumbs up" or "thumbs down" image to let us know how we are doing.

If you want to see what our business is all about, click on "Dubby Customer Projects" as your first choice to watch. That clip say more about our customers than I can ever put into words.

Jerry Cole

Contractor Saw Pulley Removal & Installation



Replacing the standard pulleys and belt with machined steel pulleys and a "link belt" will make quite a difference in the performance of contractor style saws, on which the motor weight is used to determine the tension on the belt.

The following technique describes the steps you need to take to remove the pulleys on what I consider a "standard" contractor saw, where a set screw is loosened to allow you to remove the pulleys.

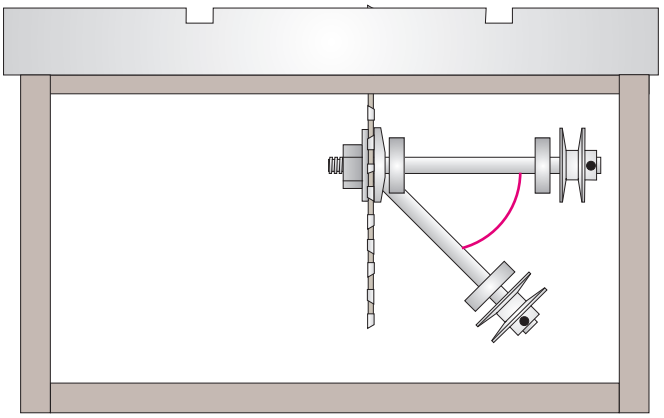
NOTE: On the Delta contractor saw (post 1988) and the DeWALT 746, the arbor pulley requires some special steps for removal, and will be covered later in this article.

The original pulleys can sometimes be hard to remove. I'd recommend that you spray the shafts of both the motor and the arbor with a penetrating oil before you try to remove the pulleys.

If a pulley sticks as you remove it, you need to be careful as to how you approach the problem. If you pound on the pulley with a hammer, you risk damaging the arbor and/or motor bearings and shafts..

The tool to the left is called a "gear puller", the easiest way to remove a stuck pulley without damaging the arbor and motor. They are fairly inexpensive, and if you can't borrow one, are a bargain compared to buying a motor.

The fingers of the gear puller are positioned on the back side of the pulley, and the center bolt is pointed to fit into the "dimple" in the end of the shaft. As you tighten the bolt the puller removes the pulley with no strain on the motor or arbor bearings.



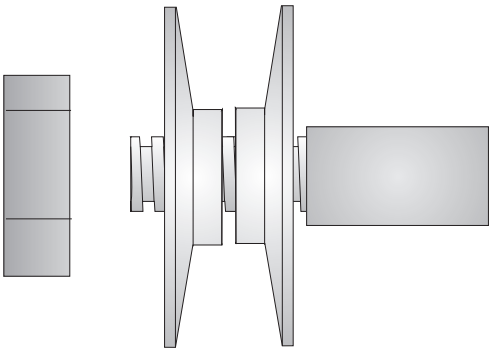
There is normally very little clearance between the pulley and the cabinet of the saw when the blade is square to the top of the saw.

As shown in the drawing to the left, tilting the blade to 45° will give you easier access to the pulley, and room to get the gear puller onto the pulley.

Once the pulley is removed, spray penetrating oil on the shafts and clean the shaft(s) with a "Scotch-Brite" type of pad to remove any rust, contamination, or burrs.

When installing the pulleys, be sure to install the 2 1/4" O. D. pulley on the arbor, and the 2 1/2" O. D. pulley on the motor. This will give you a 3,833 RPM blade speed (with a 3,450 RPM motor), which is the best "overall" speed we have found. The saw will have ample power for ripping and cross-cutting hardwoods, and a fast enough blade speed to give excellent cuts when cross-cutting plywood and other laminated sheet stock.

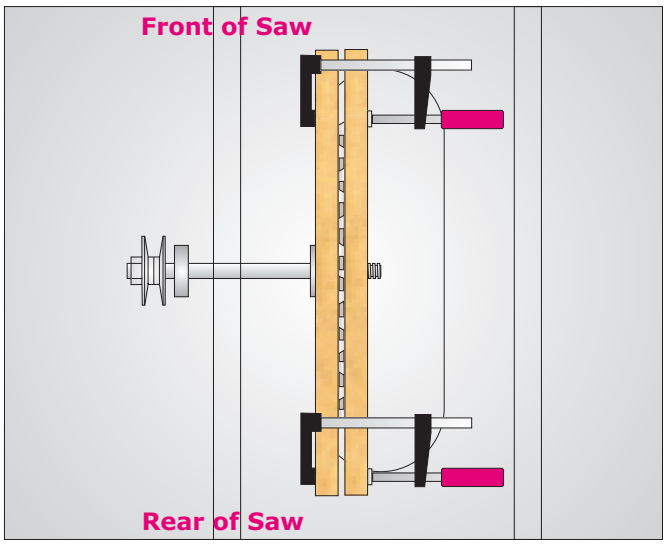
Replacing The Delta (Post 1988) & DeWALT 746 Arbor Pulley



Where most contractor saws use “slip-on” pulleys, Delta contractors and the DeWALT 746 hybrid take a different approach, as the arbor shaft is threaded on both ends. The arbor shaft is a larger diameter than most contractor saw arbors, and is reduced in diameter to accept a 5/8” bore blade and pulley. The face of the shaft on the pulley end where the reduction in size takes place serves as a “stop” where the inside face of the pulley will make contact.

The standard pulley is a 2 piece pulley, and the”key” is cast into each half of the pulley.

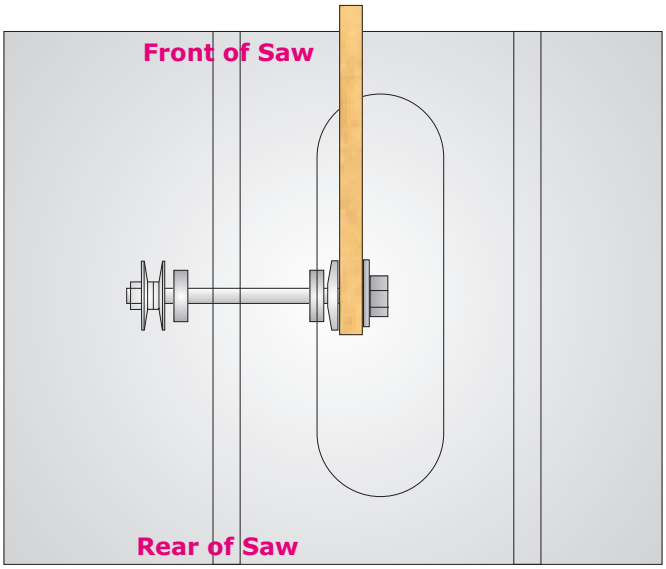
The arbor shaft is designed so that both nuts are tightened in as the blade rotates, so the nuts can’t loosen as the saw is used. As a result, you can’t put a wrench on both nuts to loosen the nut that secures the pulley, as both nuts are loosened in the same direction. You need to find a way to stabilize the arbor before removing the pulley nut.



One method you may want to try is shown in the drawing to the left. Make 2 pieces of pine about 3” wide, and longer than the throat opening on the saw. The blade should be square to the saw top. Install an old blade on the saw, and tighten to normal pressure. Raise the blade to the height of the pieces, and firmly clamp the saw blade between the wood strips..

Go to the rear of the saw, and place a wrench on the nut. Make sure the end of the wrench you will pull on is hanging downward, and give the wrench a quick “tug” toward the rear of the saw to break the nut loose.

Install the 1 piece pulley on the arbor, and install the key provided. Install the nut onto the arbor. When you tighten the pulley nut, you should hang the wrench on the nut, and push toward the front of the saw to tighten.



If the technique above doesn’t work, the method shown in the drawing to the left should. Bore a 5/8” hole through one piece of pine. Remove the saw blade, and moisten the area around the hole in the pine with water. Place the piece on the arbor, and install the blade washer and nut. Tighten the nut as you normally would for using a blade. Rotate the piece to make contact with front of the throat opening.

Use the same technique to loosen the nut as described above.

If using this method, when you install the new pulley, rotate the piece of wood toward the rear of the saw, making contact with the rear of the throat opening This will act as your “stop” as you tighten the pulley nut.

MEASURING AND ASSEMBLING THE ACCU-LINK™ BELT

The **ACCU-LINK** Belt is a great way to remove vibration from many tools; drill presses, jointers, bandsaws, and of course Contractor Style Table Saws, where motor weight determines the belt tension. On Contractor Saws, optimum performance is obtained by replacing the belt, and also replacing the "stock" pulleys with Machined Steel Pulleys. The first step is to match the length of the ACCU-LINK to the original belt. Lay the original black belt on a flat surface. Lay the ACCU-LINK belt over the old belt,

With the tabs out, and the belt upside down, twist one tab 90°, parallel

Pull the end of the link over the tab.

Rotate the belt end with the tab 90°.

Pull the belt end with the tab through two links to separate the

Hold the belt ends together with the tabs pointing outward.

Place the end tab through 2 links at once.

Flex the belt further and insert the 2nd tab through the end link by

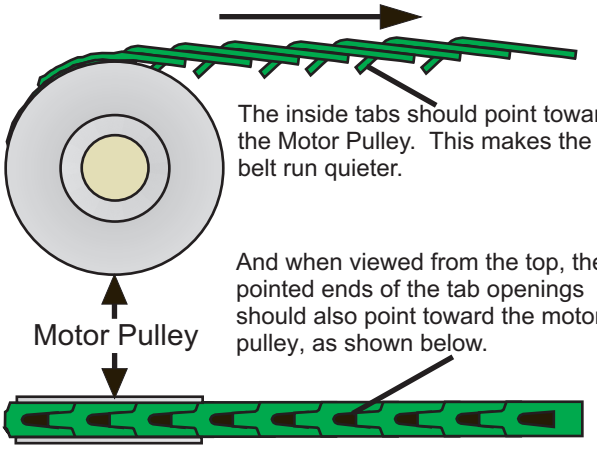
Insure the tab returns to position across the belt. Reverse the belt so the

Compare the size of the ACCU-LINK belt to the old belt by laying one over the other. Adjust the length of

INSTALLATION OF THE ACCU-LINK BELT

When Installed on the Saw:

Direction of Rotation

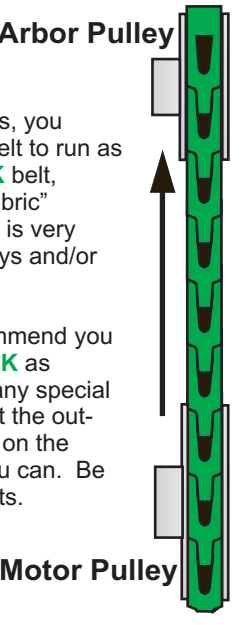


The inside tabs should point toward the Motor Pulley. This makes the belt run quieter.

And when viewed from the top, the pointed ends of the tab openings should also point toward the motor pulley, as shown below.

One characteristic of all link belts it that they "ride high" on the pulleys. I have tried to show this in the Illustrations.

Align the Pulleys



After installing the belt onto the pulleys, you should align the pulleys to allow the belt to run as straight as possible. The **ACCU-LINK** belt, (because of there is no "continuous fabric" running through the length of the belt) is very forgiving on the alignment of the pulleys and/or shafts.

For absolute top performance, I recommend you align the pulleys to get the **ACCU-LINK** as straight as possible. You don't need any special tools to make the adjustment. Look at the outside of the belt, and move the pulleys on the shafts to get the belt as straight as you can. Be sure to tighten the pulleys on the shafts.

Aligning a contractor saw (with the motor hanging out the rear) can be very frustrating when done as described in most operator's manuals. We call our solution to this problem PALS (Precision Alignment & Locking System).

PALS are designed for most saws where the motor hangs out the rear. Installing them on "hybrid" saws may prove difficult, as access to the rear housing (trunnion) may be very limited. PALS are available in 3 models, which will fit most saws with 5/16", 3/8", or 8MM bolts that hold the rear trunnion in position.

Hopefully, the following information will allow you to understand how the PALS are installed on the saw, and how they are used to help simplify aligning the contractor saw.

Belt-drive contractor saws have 2 trunnions, front and rear. These housings are used to support the mechanism that is used to support the blade of the saw. They vary from one brand saw to another, but all of them perform the functions of allowing us to raise, lower, and tilt the blade.

The front trunnion is well hidden inside the cabinet of the saw, but the rear trunnion is normally easily accessed through the opening at the rear of the cabinet. For this reason, you only need to install PALS on the rear trunnion. As you perform an alignment, both trunnions may be out of adjustment. I would recommend you first try to align the saw as we describe in Table Saw Test 3. When making the tests, if you can't get the PALS to bring the saw into alignment, you should consider 2 things:

1. The simplest thing to do would be to loosen the front trunnion. You would need some extensions on a rachet to loosen it, and give it a "tap" in the proper direction. Be sure to monitor the dial indicator as you do this, and make sure the trunnion doesn't "drift" out of alignment when you re-tighten the trunnion bolts. If you get it fairly close, the PALS should bring the saw into alignment.

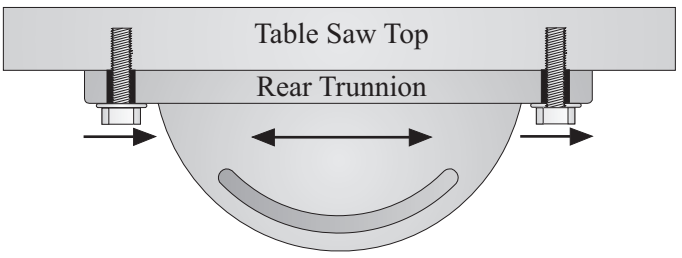
2. The most difficult procedure on the next technique would be to remove the motor, and place the saw upside-down on a flat surface. You would want to have a few pieces of scrap wood to support the "mechanics" of the saw and remove the rear trunnion from the saw. You would want to "open-up" the width of the holes that the trunnion bolts pass through (I wouldn't suggest more than 1/16" on each side of the hole), and also "de-burr" the inside edges of the holes to make sure the trunnion doesn't drag as you try to move it.

It may take effort on your part doing both of the 2 procedures above, but your efforts will be rewarded by a saw that is in proper alignment.

The rear trunnion on the saw has either 2 or 3 holes in it where the bolts that hold the trunnion to the bottom of the saw top pass through. (See drawing top-right).

These holes are slightly elongated side-to-side to allow us too have a small amount of movement as we try to get the saw aligned.

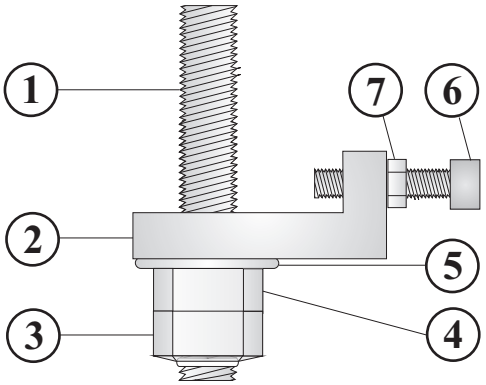
During a "standard" alignment, one problem we have is as we tighten the bolts the trunnion can move erratically, which makes alignment very difficult. Typically, this movement is caused by the threads on the bolt rubbing on the sides of the holes, and can be in either direction, depending where contact takes place.



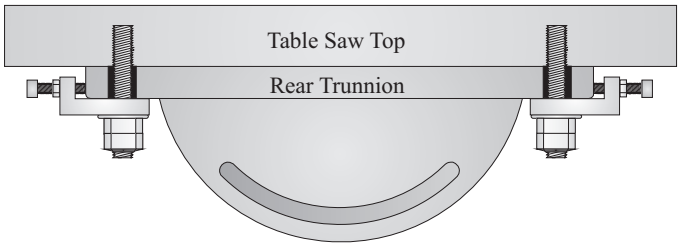
The PALS kit contains all of the parts you need to easily perform an alignment on the contractor saw. We provide a pair of studs (and two pairs of nuts) to replace the original bolts. Since the studs never turn as we tighten the nuts, almost all movement is eliminated. A pair of "micro-adjusting" assemblies are included, which allow you to easily make adjustments of the trunnion.

Part #	Item	Qty.
1	Threaded Stud	2
2	"L" Bracket	2
3	Nylon Insert Lock Nut	2
4	Hex Nut	2
5	Flat Washer	2
6	Micro-Adjusting Screw	2
7	Locking Nut	2

A Hex key (Allen wrench) is also included. This will be used for making adjustments of the PALS kit.



When properly installed, the PALS "micro-adjusting" screws will make contact with the trunnion ends, as shown in the drawing to the right.

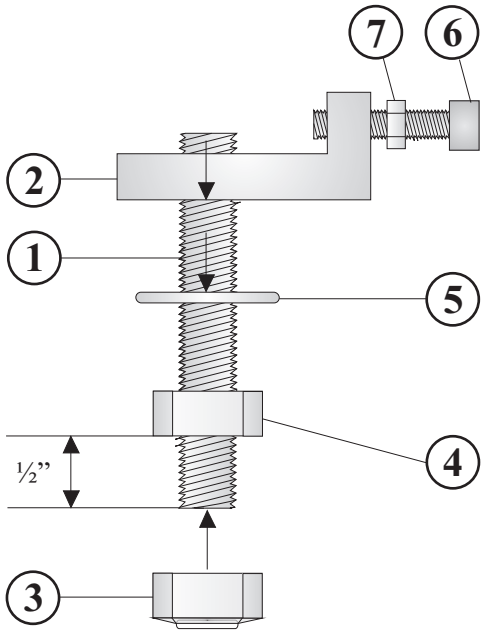


Be sure to have some "semi-permanent" thread locking compound on hand to apply to the studs when you install the PALS. It will keep the studs from turning as you tighten the nuts on the PALS.

INSTALLING THE PALS ON THE CONTRACTOR SAW

To insure you have the proper PALS kit for your saw, *remove only1 bolt* from the rear trunnion of the saw. Remove the staples that hold the clear plastic cover on the PALS package, and slide the information card out of the cover. Open the clear plastic bag that contains the PALS hardware, and thread one of the hex nuts in the PALS kit onto the bolt to confirm the threads match. If the nut threads on easily, you have the correct kit. If you can't thread the nut onto the bolt, you have the wrong kit for you saw.

Step 1. Thread one of the hex nuts (**4**) onto each of the studs. They should be approximately1/2" from the end of the studs.



Step 2. Wrap a piece of cloth around the stud to protect the threads from damage. Using pliers to hold the stud, thread one of the Nylon insert lock nuts (**3**) onto each stud until about 1/16" of the stud is visible below the lock nut.

Step 3. Thread the hex nut toward the lock nut, and lightly tighten them together.

Step 4. Slip the flat washer (**5**)onto the stud, against the top of the hex nut.

Step 5. Install one lock nut (**7**) onto each "micro adjusting" screw (**6**). The nut should be about centered on the threads of the screw.

Step 6. Thread one of the "micro adjusting" screws (**6**) into each of the "L" brackets (**2**) so about 1/16" of the threads show inside the bracket.

Step 7. Slip the "L" bracket onto the stud, making contact with the top of the flat washer.

When I installed the "prototype" PALS on my contractor saws, I wanted to make sure that I did everything I could to make the procedure as easy as possible. Since the movement of the original bolts contributed to the trunnion moving, I wanted to insure that the studs couldn't turn as I tightened the nuts on the PALS.

I doubt that you would ever see a case where you need to remove the studs from the saw, but to insure that you can (if you need to), I strongly recommend that you use a "semi-permanent" thread locking compound. I used blue "loc-tite" when I installed the studs.

I strongly recommend that you only apply 2 or 3 drops to the threads toward the end of the stud that will be threaded into the table saw top. More material on the stud will only make it more difficult to remove the stud, if necessary.

Step 8. Apply thread locking compound to 1 stud, and thread the stud into the saw top. Make sure the "L" bracket is positioned so the "micro adjusting" screw is toward the outside of the trunnion. "Finger tighten" the stud. *Don't over-tighten the stud*. That could cause the threads in the "L" to strip out as you try to make your adjustments.

Step 9. Remove the original bolt from the other side of the trunnion, and repeat **Step 8**.

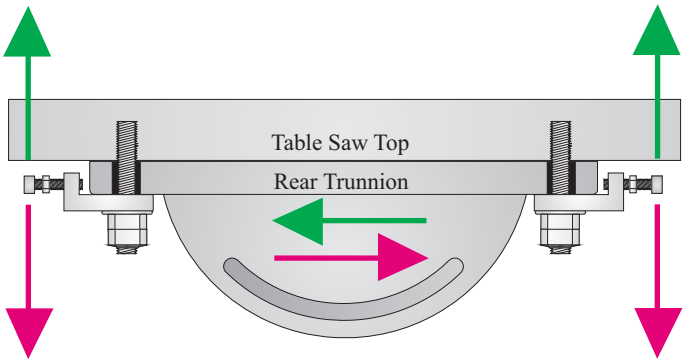
I like to give the thread locking compound the time to "set" before I start aligning a saw, and usually give it 15-20 minutes before I make any adjustments. You can, however, start checking the alignment of the saw. If you would like any guidance as to how the alignment should be done, go to our website: **www.in-lineindustries.com** to see videos and articles on table saw alignment.

One thing that you need to remember is which way the "micro adjusting" screws need to be turned to make the correct adjustment on the saw.

As you stand at the rear of the saw:

Pulling upward on the Allen wrench will move the trunnion to your left.

Pulling downward on the Allen wrench will move the trunnion to your right.



I'd recommend that you go to our website and download and print Table Saw Tests 1-3. I'd also recommend that you watch the video clips on these tests prior to performing the alignment on your saw.

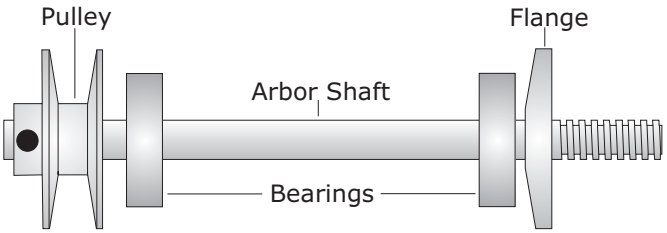
A-LINE-IT Set-up on a left-tilt saw

The table saw is the most important machine in the shop, as it is used to cut the pieces we need for our projects. It can be one of the most frustrating (and dangerous) tools you will ever use, or a very efficient machine that will turn out perfectly cut pieces, depending on it's condition.

In the following pages, you will find the information you need to determine the condition of your saw, and the steps you need to take to make it perform as well as possible. If you would like additional information about these tests, you can find video clips on most of them on our website at **www.in-lineindustries.com**.

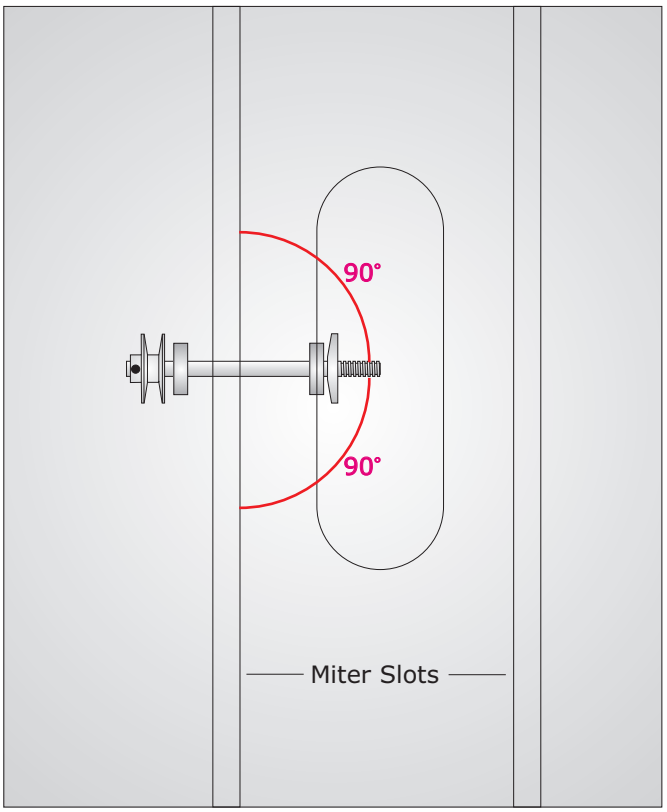
Since some of you may be very new to your saw, I want to start with some very basic information you should know before you begin making the tests on your table saw.

The arbor assembly is the most important part of the saw, as it is where the blade is mounted. If there is a problem such as bent shaft, bad bearing, or a damaged or distorted flange, there is little chance that the saw can cut well. For these reasons, we show the tests for these problems before table saw alignment. It's better to know the arbor is in good condition before aligning the saw rather than find it has problems after doing an alignment.



As the alignment procedure is performed, we will show how to do the most accurate procedure to make the test. The technique allows you to determine if the arbor shaft on the saw is square to the miter slots on the saw, which is mandatory if you want the blade to be perfectly parallel to the slots.

One thing that this technique eliminates is the need to buy some sort of "reference plate" to mount on the saw during the test. All you need is a saw blade and a felt tip marker. A dot is placed on the blade near one of the teeth (as shown in the drawing below and is used as a reference as the readings are taken near the front and rear of the blade rotation. Even if the blade used is bent, since the same point is used "front and rear" as the test is made, the readings taken will be accurate.



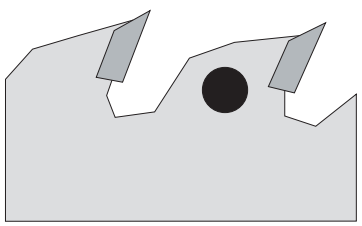
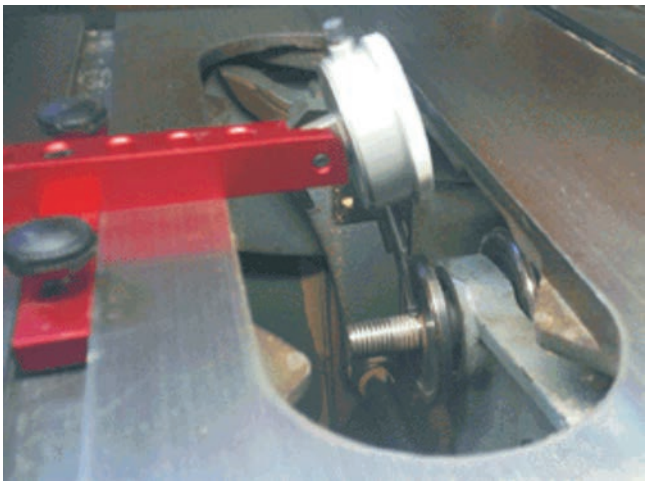


Table Saw Test # 1 — Checking Arbor Run-out and Bearing Play



For your saw to operate properly, the "business end" of the saw must be in good mechanical condition. This means that the arbor shaft should be straight, and the arbor shaft bearings must be in good condition.

One thing that should be emphasized is that this is a very preliminary test, and can be done with either of the A-Line-It kits.

I also want to emphasize that if your readings aren't perfect on this test, don't panic and set your saw out near the street with a "For Sale" sign on it...we have more detailed tests that will explain how we can determine what is happening *near the saw blade teeth* due to the condition of the arbor.

Thoroughly clean the arbor shaft to insure there are no burrs or contamination that can cause improper readings as you make the following tests.

The following procedure will allow you to determine the straightness of the arbor shaft. The reading is taken on the smooth surface (behind the threads) where the bore of the saw blade is positioned.

Step 1. With the A-LINE-IT positioned on the guide slot as shown in the photo above, the dial indicator should be pivoted (and locked) in a position that places the tip of the indicator over the smooth area on the arbor that is between the threads for the blade nut and the arbor flange.

Step 2. Elevate the arbor shaft to make the pointer on the dial indicator to move at least 1 revolution (clockwise).

Step 3. Slide the A-LINE-IT back and forth to position the tip of the indicator at "top-dead-center" on the arbor shaft. (This is the point at which the pointer on the indicator goes ""clockwise" to a high reading, and then starts to go "counter-clockwise".

Step 4. Either clamp (or hold) the A-LINE-IT at this position, and "zero" the pointer on the indicator by either rotating the face of the dial or changing the elevation on the arbor.

Step 5. Slowly rotate the arbor by turning the belt(s) on the saw. You will see any run-out in the arbor shaft. If you see more than .001" - .002" (one to two thousandths of an inch), there is either some dirt or contamination on the shaft, or you may need to do more detailed tests (**Table Saw Test 2**) to determine if there is a problem with the arbor shaft. I'd recommend you re-inspect the shaft to make sure there is no contamination, and re-test the arbor.

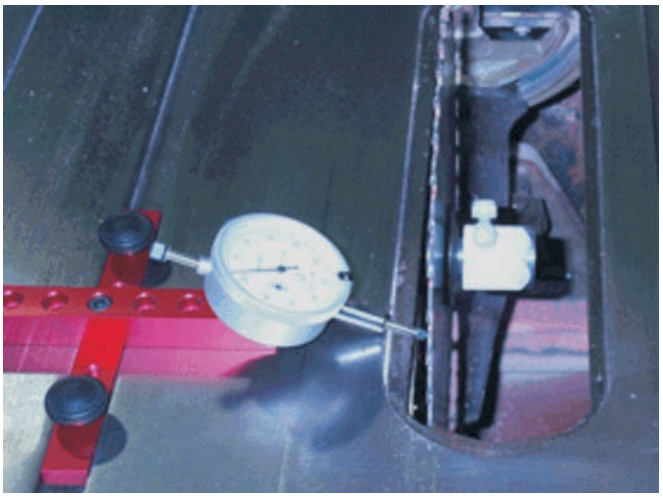
The following procedure will allow you to determine the condition of the arbor bearings. The reading is taken on the smooth surface (behind the threads) on the arbor shaft where the sw blade is positioned.

Step 1. Position and secure the A-LINE-IT as explained in **Step 1** through **Step 4** above.

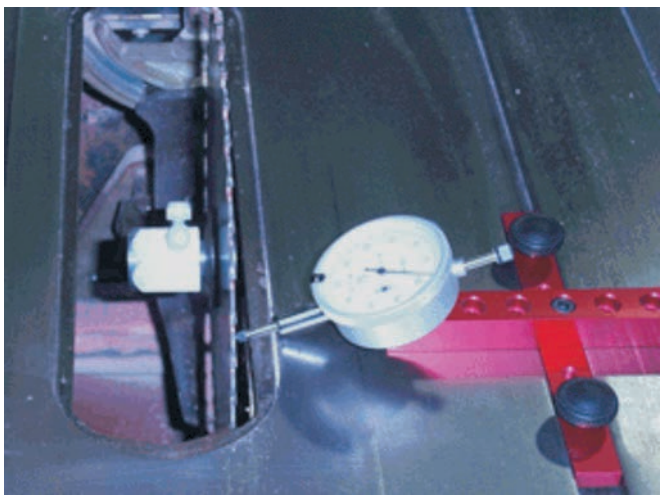
Step 2. Hold the threads of your arbor, and *lightly* try to move it (back-and-forth and up-and-down) while watching the pointer on the dial indicator. You should see no movement of the pointer (but you more than likely will, because we normally apply more pressure than necessary).

NOTE: **Table Saw Test 2** will illustrate how you can determine the condition of the arbor, and show the effect it has at the teeth of the blade.

Table Saw Test #2 Checking Arbor Flange and Saw Blade Run-Out



A-LINE-IT Set-up on a left-tilt saw



A-LINE-IT Set-up on a right-tilt saw

If you have ever watched a saw blade "wobble" to a stop and wondered what is wrong with your saw, this test will help you understand what is causing the problem.

The "Spring and Nut" assembly required is included with the "Deluxe" kit, and can be added as an accessory to the "Standard" A-Line-It. The purpose of this assembly is to bias the saw blade securely against the arbor flange, but allow us to independently rotate either the blade or arbor.

To give you a brief overview of the purpose of these tests:

If we rotate the blade, but not the arbor, the deflection of the pointer on the indicator shows the run-out of the blade.

If we rotate the arbor, but not the blade, the deflection of the pointer on the indicator shows the run-out (near the teeth) that is caused by the run-out in the arbor flange.

When making this test, I would recommend that you use the miter groove on your saw that is closest to the saw blade, as shown in the photos to the left.

In the top-left photo, you can see that the A-Line-It "Smart Bar" is installed in the left miter groove.

In the bottom-left photo, you can see that the A-Line-It "Smart Bar" is installed in the right miter groove.

By doing the tests in this manner, you should have room to get your hand near the arbor without interfering with the dial indicator.

Thoroughly clean the arbor flange and saw blade to insure there are no burrs or contamination on them that can cause improper readings as you make the following tests. Assemble the A-Line-It components as described below.

Step 1. Install the 2 nylon locking screws into the nut, making sure they do not extend into the center hole in the knob.

Step 2. Install the spring into the large countersunk hole in the knob.

Step 3. Place a blade on the arbor, and install the blade washer. *Do not install the factory arbor nut.*

Step 4. Place the spring and nut assembly onto the arbor shaft, and press the nut toward the blade to compress the spring. Tighten the 2 locking screws to hold the spring and nut on the arbor shaft. When done properly, the spring should keep the blade firmly biased against the flange of the arbor.

Step 5. Elevate the blade to its highest point, and then lower it about 1/8" to 1/4".

Step 6. Assemble the A-Line-It as shown in the appropriate photo above, and position it in the miter groove on the saw. Rotate the indicator tip downward, withoout making contact with the table saw top.

Step 7. Zero the dial indicator. To check to insure the blade is firmly biased against the flange, push the blade away from the flange, and release it. If the dial indicator consistently returns to "zero", the spring and nut are properly installed. If the reading " drifts" when the blade is released, more tension should be placed on the spring.

The following procedure will allow you to test run-out produced by the arbor flange.

Step 1. Place a small strip of wood (I'd use something about 1/8" thick by 3/4" wide, and 10" or so long) directly in front of the saw blade. The long dimension should be parallel to the blade.

Step 2. Slide the piece toward the blade, placing one end of the strip into one of the gullets (notches between the teeth) on the blade.

Step 3. Position the A-Line-It so the tip of the indicator is close (not on) to one of the teeth on the blade.

Step 4. Grasp the spring and nut assembly with one hand, and hold the strip of wood with your other hand. Rotate the arbor shaft in the normal direction of blade rotation. A tooth on the blade should catch on the strip, stopping blade rotation.

Step 5. Zero the dial indicator.

Step 6. While holding the strip, slowly rotate the arbor of the saw. The dial indicator will show you how much run-out there is near the outer edge of the blade that is caused by run-out in the arbor flange.

Though I have never been able to get "factory specs" on this subject, I wouldn't be greatly concerned as long as the amount of run-out didn't exceed .005" (five thousandthe of an inch).

The following procedure will allow you to test run-out in your saw blades.

Step 1. Slide the A-Line-It to a position that places the tip of the indicator just inside the gullets on the blade. (It should be in a position that allows you to rotate the blade without the indicator tip getting into one of the gullets as you rotate the blade.

Step 2. Grasp the spring and nut assembly, and hold it with one hand.

Step 3. Use your other hand to slowly rotate the blade. (Be sure to take your hand off the blade frequently to insure you are getting accurate readings. The indicator will show you the amount of run-out in your blade.

NOTE: A high quality blade will typically show run-out of less than .003" (three thousandths of an inch), while many lower quality blades can have run-out in excess of .010" (ten thousandths of an inch). Excessive run-out in a blade will result in saw marks on the pieces you cut, which need much more sanding to smooth the surface of the cut. If you want to get the best possible cuts from your saw, a high quality blade is essential.

One of the benefits of making the above tests is that when the tests are done, you will be able to identify the "high spot" and "low spot" of the run-out on both the arbor flange and the saw blade. If you mark the "high spot" on one, and the "low spot" on the other, you can install the blade on the arbor while indexing these 2 points together. This allows you to minimize the total amount of run-out near the teeth of the blade.

As mentioned in "Understanding Our Objectives", when we perform an alignment on the table saw, we want to set the arbor shaft perfectly square to the miter slots. The easiest way to accomplish this is to use the saw blade as our "reference plate", with a dot near the outside of the blade acting as the same point for measurement at the front and rear of blade rotation. I like to do my alignment using the left slot, as that is the one I normally use for most of my miter and cross-cut work. Therefore, I would place the mark on the left side of the blade.

NOTE: The procedure below is for cabinet saws with 4 bolts (one at each corner of the cabinet) holding the top in position, and contractor saws. If you have a cabinet saw with 3 bolts (1 centered rear bolt and 2 front bolts) like the Powermatic 66, you should set the zero at the rear of blade rotation, and slide the indicator and rotate the blade toward the front to determine the alignment of the saw. On these saws, the rear bolt will act as a pivot when adjusting the top of the saw. Using this technique will help make alignment of the saw much faster and easier.

Step 1. Configure the A-Line-It as shown in the photo to the left, in the miter slot of your choice. Note that the tip pf the indicator is pointing downward. This is done to increase the distance point-to-point as we rotate the blade front-to-rear. This makes the error in our alignment more obvious.

When you tighten the indicator on the mounting bar, make sure the plunger will not rub on the edge of the opening in the table saw top. This can cause the plunger to "drag", making alignment more difficult.

Step 2. Rotate the saw blade to position the tip on the indicator to mark on the blade. Loosen the locking knob on the dial indicator, and rotate the dial so the pointer on the indicator is aligned with the "0" mark on the scale.

Step 3. Slide the indicator toward the rear of the saw as you rotate the blade toward the rear of the saw, as shown in the photo to the left. Align the tip of the indicator on the dot on the blade, and note the reading shown.

I would repeat this procedure 2-3 times to insure that the readings are consistent.

The dial indicator reading is going to tell you 2 things:

1. The difference in the measurement at the rear from the "0" at the front. Each mark on the dial is one-thousandth (.001") of an inch.

2. Whether the blade is closer (or farther) at the rear to the miter slot than it is at the front. If the reading went above "0" it is closer, and below "0" it is further from the slot.

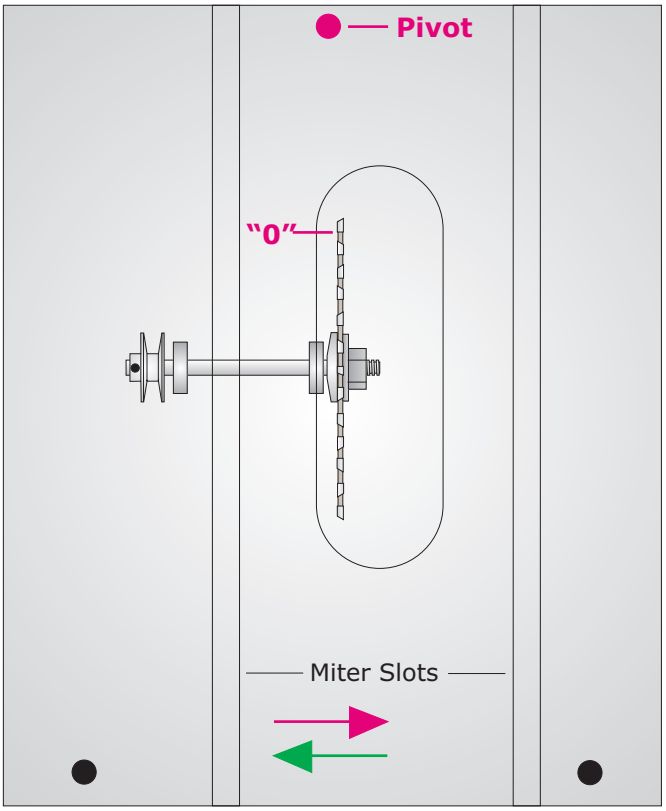
The type of saw you own will dictate how you make adjustments to the machine. On cabinet saws, the top of the saw is moved to adjust the alignment, as the "mechanics" of the saw are mounted to the cabinet. On contractor saws and most hybrid saws, the "mechanics" normally are mounted to the bottom of the table saw top, and the alignment is accomplished by loosening the rear trunnion bolts and moving the rear trunnion to get the saw aligned.

Regardless of which type of saw you own, aligning it can be fairly easy, providing you understand what's going on as you try to make adjustments. A good saw alignment can make a tremendous difference in the way the saw performs, and is worth spending the time to do. Hopefully, you will find the following information helpful as you align your saw.

Note: Since the blade is between the mouning points of the mechanics of the saw, the "0" reference point will also move slightly as you make adjustments. For this reason, be sure to "re-check" the "0" after making adjustments, and re-set the "0" if needed. It may take a few attempts to get the saw aligned properly, but is worth the effort.

I expect a lot from my table saws, and like to have them as close to perfect as possible. Though it can be difficult to get "specs" from manufacturers, I know that one manufacturer of a very high quality saw says that .010" (ten thousandths of an inch or 1/100 of an inch) is acceptable. I wouldn't argue with those specifications, but personally like to see my saws have the blade between "0" and .003" (three thousandths) parallel to the miter grooves.

"3 Bolt" Cabinet Saw

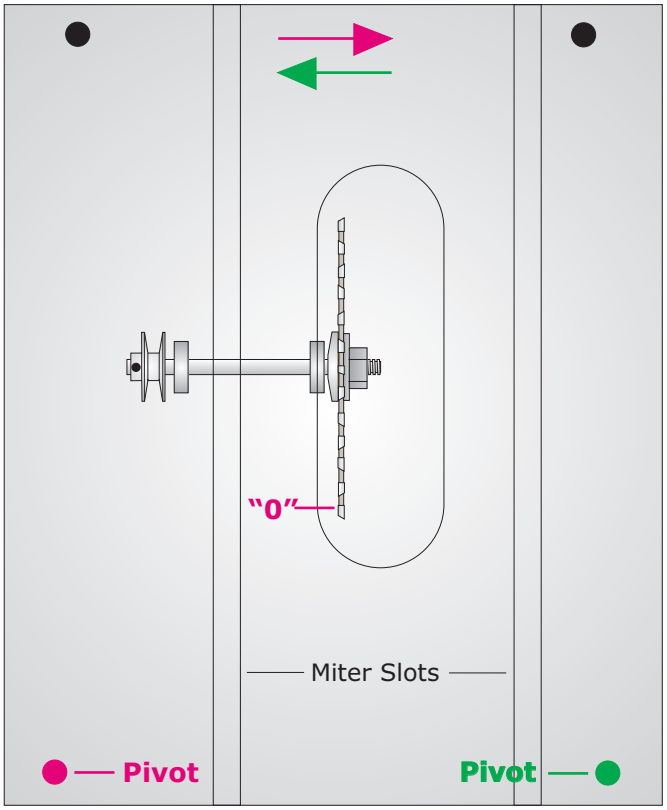


On these saws, the rear bolt is the "pivot point".

If the reading at the front of the blade is under "0", ***move the front of the saw to the right.***

If the reading at the front of the blade is over "0", ***move the front of the saw to the left.***

"4 Bolt" Cabinet Saw



If the reading at the rear of the blade is under "0", ***move the rear of the saw to the right.*** **The front-left bolt should be tight, and be the "pivot point".**

If the reading at the rear of the blade is over "0", ***move the rear of the saw to the left.*** **The front-right bolt should be tight, and be the "pivot point".**

Contractor Saw Alignment

The contractor saw can be one of the most frustrating machines to align, if you try to do it according to the factory manual. Trying to "fine tune" a machine using a piece of wood and a hammer is difficult, and you may end up with a saw that is in worse condition when you are done than it was before you tried to align it.

Though I don't intend to use this manual as a "sales tool", I suggest you read the section on "Contractor Saw PALS" before you attempt to align a contractor saw.