

How To: Rebuild An Import Jack (Japan/Taiwan/China)

This tutorial will cover one version of these import jacks. Your jack might be different in color, different fasteners; however, your jack will share the same hydraulic system along with location of key components for your 2 to 3 ton floor jack.

This tutorial will not include Quick Lift Jacks as they are very different. Quick-Lift jacks use a different valve system.

When you have questions, send a picture. E-mail us and we will assist you:
support@hrcnow.com



Typical import jack rear view.



Typical import jack top view.

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Typical import jack bottom view.



Start by removing the handle assembly. This particular jack requires a 15/16" socket to remove the handle assembly.

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Once both handle bolts are removed, you can remove the handle assembly and the torsion handle return spring.

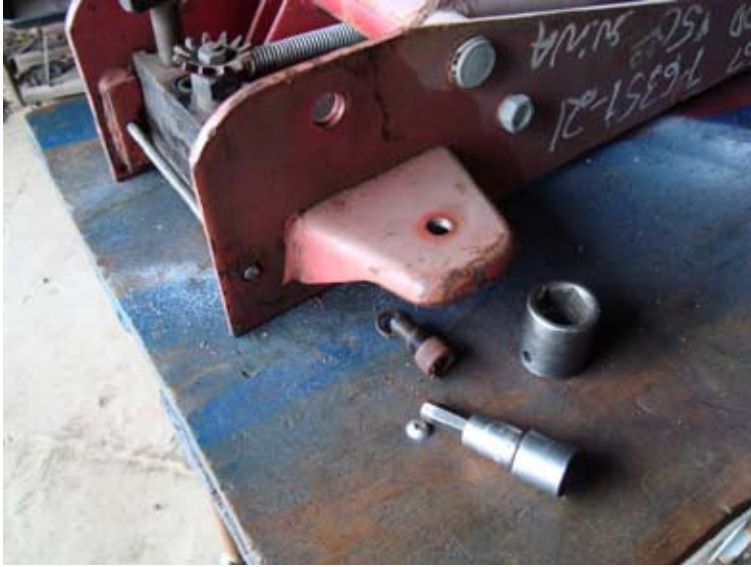


On some jacks, you will have two torsion handle return springs, one spring on each side. This model only has one.



Handle assembly gone rear view.

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Next, you will remove the lower bolts (these bolts are what keep the hydraulic power unit securely connected). Our bolts are socket cap screws 3/8" Allen head. While you are here, you will notice the silver bar at the rear of the jack. This is just a stiffening brace, held on by nuts that protrude through the frame. This silver bar needs to come out.



Once you remove all bolts, you can pick up on the rear of the frame and slide/rotate it forward. This will expose the hydraulic power unit and the next step.

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Side view with the hydraulic power unit exposed.



Using a Pry Bar or Screwdriver, slip the return spring off. On some jacks, there will be two of these springs. Our jack has only one return spring.



Hydraulic power unit connection to floor jack frame by cotter pin.

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Using a cotter pin remover tool or side cutters, pull/remove the pin. This will allow you to separate the hydraulic power unit from the floor jack frame.



We are now ready to head over to the vise.



Once secured in the vise, you can pull the pump straight out. There will be no seals on it as they are inside jack.

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Pump piston



Pump hole with seals inside.



Release valve. Our particular style uses a flat recessed seat that uses a steel ball as the release valve. There are different models and yours might have a needle valve instead of this one. If that is the case, there will not be a small ball as indicated by the next picture. Remove the ball and keep it separate.

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Release valve hole with ball still inside.



The next step is to take the working/check valve apart. This particular model uses an Allen head. Most valves use a standard screwdriver head.



After removing the socket cap screw, you will need a small pen magnet to remove the inner workings. This particular model uses 2 balls, the biggest ball on top and the smaller ball in the bottom seat. (Keep these balls separate from other parts). There will also be other styles in different models, etc. Some will use spacers in between the balls and even springs can be found, etc. Regardless, keep track of how things come apart, and in which order and you should be able to replace them in the correct order. (take pictures if needed – recommended for first timers)

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The next valve, to the right of the release, is your overload valve. Many times the only thing wrong with a jack is the overload valve had backed itself off and would not let the jack lift the appropriate tonnage.

So, with that in mind, first take the dust cover off. Sometimes the dust cover will have a warning sticker, "DO NOT ADJUST". There is a standard screwdriver socket inside the valve. Use a small screwdriver so that you do not ruin the threads.

*****IMPORTANT***** Count the rotations it takes to tighten the inside set screw completely down. On this particular jack, it took 6 rotations. That is too many.

If your jack was working fine except for leaking, write down how many rotations it took and, upon reinstallation, set it back to factory settings. If you do not remember how many rotations or fail to heed this warning 2 full turns back from full set is a good starting point.

The overload is very important and is designed to keep you from overloading the jack and possibly rupturing a seal. This is why it is important that you follow the tonnage guidelines and do NOT crank this down all the way. There is NO way to set this properly without having a test station.

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This is the workings of a typical overload. You will have a small ball that sits in the seat, an upper seat with a tip to sit inside the heavy spring, then a top piece with the tip going down inside the spring and then a set screw that tightens down on top of the flat.

Sometimes these are tricky to reinstall so here is a hint: insert the small ball verifying that it is in the seat. Use wheel bearing grease or a heavy grease, dab a little on the tip, insert into the spring and do the same for the top piece then drop as 1 piece down in the valve.

Sometimes the first piece gets in sideways and then when you crank the set screw down it damages things. Take your time and visually check what you are doing.



Next you will need a pipe wrench or the appropriate socket to remove the tank nut. Keep a pan handy to catch the oil.

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Once you unthread the tank nut, the pressure will be released from the reservoir and you will be able to take it apart.



And here we are at Paydirt. We are finally at the ram cup where we can now verify which version we have. This particular version is the O-ring sitting inside a retainer ("L" cup shell). This is the most common found in 95% of your newer jacks. The O-ring version is not the best designed sealing surface, but it is cheap.

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Verify that there is no internal damage. The jack was full of oil so there was no rust or pitting. Looks good.



Your cylinder might look like this with a slit in the top of the cylinder. This slit is designed to relieve pressure so the jack will not over extend.



Okay, now that we have the jack apart, let's get working on removing the seals. First, remove the O-rings on the pump. Using a small pick, dig the O-rings out being careful not to damage the backups, as they can probably be re-used. This particular jack has 2 O-ring grooves machined inside, some only have 1. If you have 2, the order of the O-ring/backup is, O-ring on the bottom in each groove. Backup on top of the O-ring with the beveled side down. Lost? Keep following.

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O-ring on the bottom with the back up above.



It is hard to determine by these pictures, but this is a backup. It is not broken. It is split to allow easier installation. A backup has a flat side and a beveled side to allow the O-ring to sit inside and keep it properly shaped under pressure. All back ups are not the same, many different styles. Split, solid, different materials.



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This picture shows everything that came out of the pump side.



The next seal is the tank nut seal. Using a pick, remove this and set aside.

Have a hydraulic jack question?
Send picture(s) and email to: support@hrcnow.com.

Need a seal kit?
Check our website at www.HCRCnow.com.