

## HONDA SHADOW VT1100-C3 Single Pin engine Oil Guide Plug Fix

These directions were first written by a guy named Paul that took the time to take pictures and document the whole process. He has since gone MIA, his email address of [pcofranc@yahoo.com](mailto:pcofranc@yahoo.com) doesn't work anymore. But where ever you are, your work is appreciated. All I have done is taken his document and dressed it up for web viewing purposes. The original can still be downloaded at the following link for full pictures.

<http://www.wecandobetter.com/download/HondaOilLeakRepair4-17-2001.zip>

### BACKGROUND

What is the guide plug leak? There is a plug on the lower left side of the engine that can work loose, causing an oil leak. It is located along the pan by the shifter and is a bit larger in diameter than a quarter. Most will first notice this leak when their engine pan will become wet with oil. For some, it will develop into a full blown dripping leak. Honda issued a warning and fix instructions in their September 1999 issue of the Honda Wrench publication. This is a publication that is sent out to dealers and their service shops. While this is not an official recall, some Honda shops have been able to get this problem fixed for no or little charge to the customer, even when the motorcycle is out of warranty. But that varies depending on your dealer and your dealer's regional representative. So before you attempt this yourself, it may be worth your while to complain to your Honda shop and see what happens. The Wrench article also has some information on the related shifter rattle that usually, but not always, accompanies the guide plug leak. Here is a link to a copy of that article, [http://bis.midco.net/92merc/mcycle/tech/guide\\_plug/wrench.jpg](http://bis.midco.net/92merc/mcycle/tech/guide_plug/wrench.jpg) .

### DISCLAIMER

Use these directions at your own risk. The directions are not perfect and are not a substitute for proper experience. There's no shame in going to the dealer even I do sometimes.

Please read the overview. If you decide to do the repair, please read what I have written and look at the pictures. Then **PRINT OUT THE INSTRUCTIONS!** Keep your computer on so you can refer to the pictures. The directions are long. My intention was to share what I learned.

Do this job on a rainy day when you have all day so you don't have to rush.

Since Honda occasionally updates the part numbers with newer numbers, the below part numbers may not be current. But with the descriptions, you should be able to go to [RonAyers.com](http://RonAyers.com) or [Partsfish.com](http://Partsfish.com) and get the most up to date numbers.

## Parts List

1. Gasket, L. 11395-MAH-000, (Left Engine Cover Gasket)
2. Oil Seal 91204-425-003 (Shifter Rod Seal)
3. Gasket 22862-MAH-003, (Clutch Rod Cover Gasket)
4. Gasket 11365-MM8-881, (Starter Cover Gasket)
5. Plug, Left Crankcase 11211-MK7-770, (Guide Plug)
6. Guide Plug O-Ring 91351-MG7-004, (Guide Plug O-Ring)
7. A couple of cans of brake cleaner to clean everything oily.

## OVERVIEW & HISTORY OF THE PROBLEM

Most Honda Shadow 1100's do not have this problem because they use a different style of engine setup cover on the left side. All Honda single pin crank 1100 Shadow motors do have the problem. The years are 1998 thru 2001, and only affect the single pin models. My shadow pictured here has only 8,000 miles on it and the problem started after approximately 5,000 miles. The leak happens mainly when you are driving. And my bike never left a drop on the ground under it. The leak runs towards the back of the bike.



Figure 1

The "Guide Plug" leaks oil around its O-ring. (See Figure 1) The O-ring has nothing wrong with it. What happens is the guide plug has a piece of metal that sticks out so the main lower left side cover will press up against it and keep it in place. Part of the problem is poor and awkward design. If the guide plug rotates enough the small piece of metal will no longer touch the main side cover. Now it is able to move out about 1/16" of an inch. Over time this movement wears out the rubber gasket. And wear is evident on the aluminum parts (See Figure 2). Look at the round hole that the Guide Plug goes in.

You will notice 2 "bands" of wear that disappear as you get past the 3 o'clock position.



Figure 2

If you do the same thing that the factory did, the problem could return in a very short time (1 yr). And each time you will pay for the repair (~ \$200). SOLUTION: I applied gasket cement to the guide plug and I placed a tiny piece of card board on the part where the cover contacts so the cover will press the Guide Plug in with a little more force. The gasket cement will stop the part from rotating back and forth which cause the o-ring to wear and the aluminum engine case.

#### TIME NEEDED TO DO THE REPAIR:

Count at least 3 hours to do the job. Probably with clean up and getting supplies, it'll take around 5 hours. This is a time consuming job and there are many places to make mistakes which will result in leaks after the job is done. It takes a lot of time to clean parts so that they are totally oil free - anything less will leak again. I've been working on motorcycles especially dirt bikes for years and I found this job to be the most time consuming ever for a lower left side cover gasket replacement.

#### TOOLS AND SUPPLIES:

Order these four parts from a Honda parts dealer as they should be replaced in order to get a good oil seal again.

1. O-ring gasket for Guide Plug 91351-MG7-004
2. Shifter Oil Seal 91204-425-003
3. Left side case gasket 11395-MAH-000
4. Starter cover gasket 11365-MM8-881

Standard ratchet set: Sockets: 10mm, 8mm, needle nose pliers, 2 pry bars (much better than screw drivers), a 17mm box wrench (for the oil drain plug), oil drain pan, small putty knife, a good quality small razor to remove the old gasket, Brake Cleaner (not engine degreaser - only brake cleaner leave no residue). Plenty of news paper to lay covers on. Bunch of Rags. Water free hand cleaner. 4 quarts of fresh engine oil. A roll paper towels.

TIP: A good flash light and another light that can be put on a stand - Don't do this job in a poorly lit area. Permatex or other RTV Gasket Sealant. Whether strip Adhesive - recommended - it dries in minutes and is super sticky to hold the new gasket exactly in place during installation.

TIP: GASKET REMOVER - (it must contain Methylene Chloride) A tiny can of "Zip Strip" or furniture finish remover is even better - and the furniture stuff usually comes with a brush so there is less mess. This stuff will literally dissolve the gasket so you can wipe it off!!! Don't not get any anywhere else - this is much stronger than brake cleaner and will literally melt rubber hoses, plastic covers etc. But it saves ton's of time cleaning old gasket material off!!!

TIP: KNEE PADS - If you have kneepads for rollerblades – which you probably never use - this is a good time to break them out. Or use an old rug that is folded over to make it thicker. Most of the time doing this job you will be kneeling on cement!

TIP: Eye protection - If you don't wear glasses get a pair of clear safety glasses - you will be spraying a lot of brake cleaner and it is easy for it to bounce off and hit you in the face eyes because the spray cans are under a lot of pressure and are difficult to control - it's either full blast or a drizzle.

## GETTING STARTED

If you have purchased a motorcycle lift, use it. Otherwise, try to position the bike near a car or wall that you can lean it against towards the right (opposite of the way it would lean on the kick stand) This will stop oil from running towards the kick stand and on to the new gasket you will be installing which would result in an oil leak.

Warm up the motorcycle for a few minutes. Then turn off and drain oil.

Remove left running board.

Remove the gear shifter.

Remove the hose by un-clamping it (See Figure 3).



Figure 3

Remove chrome outer "dress up to make it look pretty" cover. It has one nut at the bottom center take that off and then pull / pry on the cover (See Figure 4). Put some gasket cement or Loctite on the threads and screw the nut back on and tighten it up. This is so you can drive the bike with the cover off for a week and be able to detect any leaks.



Figure 4

Remove Clutch Cable - The easy way undo the two bolts that hold the tension assembly (See Figure 5). Screw bolts back in so you don't lose them or forget where they go.



Figure 5

Remove starter gear cover.

Try to keep the bolts in each cover to ease reassembly later. **DON'T FORGET THE "HIDDEN BOLT" under the starter cover!**(See Figure 6) Wrap both with a rag put a cloth to absorb excess oil - **DON'T** spray them with brake cleaner - the ends must have oil on them or you will have a LOT of trouble putting them back in.



Figure 6

Now loosen all other bolts on the main cover. You will probably have to use a pry bar that I placed at the base of the V- in the V-twins and just above the top of the cover. Or hit the cover with a rubber mallet. If the cover doesn't move you probably forgot a bolt or the "hidden bolt".

**WHEN YOU REMOVE THE MAIN COVER THE SENSOR ON THE TOP IS STILL ATTACHED.** The wire can't be un-plugged - unless the seat is removed. Set it on a cardboard box or milk crate etc.

Remove the guide plug. Your guide plug is going to be in the wrong position since it is leaking so rotate it to match the one in my picture. Be careful you must pry from 9 o'clock and 3 o'clock at the same time. It should come off straight and with very little effort. If it gets stuck hit it back in and start again. (See Figures 7 & 8) Clean the part and the hole it goes into with brake cleaner and the surrounding area. Now remove & install the new O-ring.

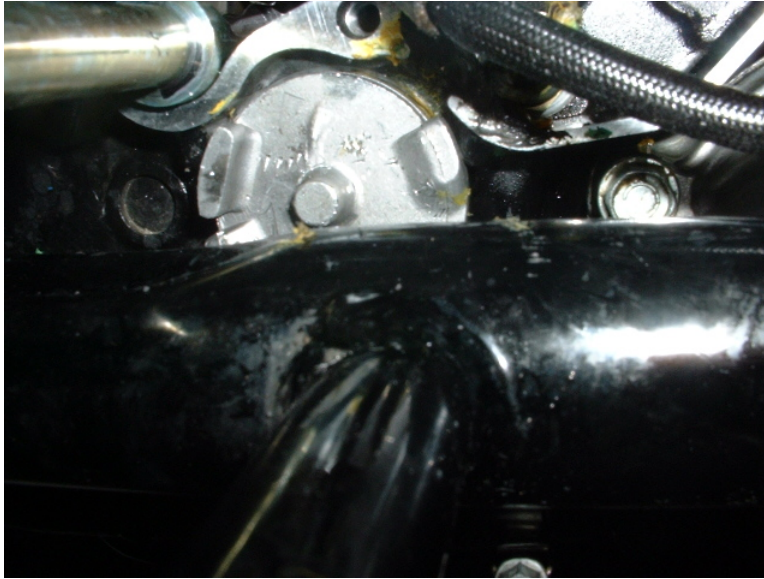


Figure 7



Figure 8

Clean old gasket material off all covers. First timers or inexperienced often ask - "Do I really have to remove all the old gasket material completely?" YES, or it will leak! Don't take the chance of doing this job twice!!!

Clean all surfaces multiple times with brake cleaner and a CLEAN dry paper towel. And you must clean the lower oil pressure sensor thoroughly - but don't apply any gasket cement yet. Everything should be so clean you could eat off it. Avoid getting excessive amounts of brake cleaner in the engine.



Remove the shifter shaft seal. (See Figure 9) Carefully use a screw driver or pliers to pop it out. Be sure to coat the inside seal with grease or a little bit of oil if you have no grease. But don't get oil or grease on the outside of the new seal. Then install the new one. Easy method is to take a socket that is the same size or slightly bigger and use that to "drive" the new seal into place.



Figure 9

**WARNING: THE FOLLOWING IS THE MOST CRITICAL PART OF THIS JOB**

**DO A DRY RUN.** Put a small amount of oil on the new o-ring on the guide plug. **YOU MUST DO THIS** or the part will **NOT** go into place and is easily damaged. Rotate the guide plug so the two pry points are at 9 and 3 o'clock. (See Figure 10) Now put the main cover on and put a few bolts in and tighten up. Be sure the guide plug is in correctly and being pushed in properly - which means flush against the engine. There should be no gap or space between the two parts.



Figure 10

Remove the cover and look at the gear shaft. You will most likely notice a small amount of oil has leaked over where the gasket would have been. This would have resulted in a leak. Repeatedly spray and clean under where the shifter shaft goes into the motor and press down on the shifter shaft to squeeze out oil. (See Figure 11)



Figure 11

Now if you are confident proceed, you will need to work quickly. Put on some of the whether strip adhesive or other tacky cement along the entire bottom on the engine side and a tiny amount on other parts.

Press down one last time on the shifter shaft to squeeze oil out and clean with a little brake cleaner the gasket area below it. Take the guide plug and put a very small thin bead of the slow drying regular gasket sealer. Using too much sealer, or letting it dry, may cause the close-fitting guide plug to not fit in once the cover is put in place.

Insert the guide plug. Be sure it is positioned exactly like in the picture. There must be a very small amt of oil on the o-ring so it will slide in to place.

Coat the rubber oil pressure sensor (the one on the bottom) with the tacky sealer, put it place after the guide plug. Put the new gasket on. Put the cover on all the way and tighten up. As you put the long bolts in coat each one of them with sealer. Tighten everything up quickly especially the bottom near the shifter shaft.

Now you can relax the really critical rush part is over. Any mistakes beyond this point will not require taking the main cover off again or the guide plug.

Install the Starter Gears and Cover and Gasket. Don't forget the "hidden bolt" before you put the cover on. Note there will be one extra hole that no bolt is able to fit into. You must oil both shaft ends of the two gears so they will assemble smoothly. Place the two gears in the engine. Do NOT put the gears on the cover. Now put the gasket and cover on. You will need to gently hit the cover on to start it with you fist. (Figures 12 & 13)



Figure 12



Figure 13

Watch your bolt lengths this part it is easy to put the wrong length in the wrong hole. Don't forget the 2 wire hold-downs that each go under one bolt. Coat all bolts with a small amount of sealer.

Next, again remove the clutch tension assembly to hook up the clutch cable and then tighten bolts back up.

Reinstall the hose in front of the main cover.

Double check the torque on all bolts several times by going around with the wrench and applying pressure. Any missed bolts could cause a leak.

Add engine oil, ~ 3.7 qt without filter change and ~ 4 with filter change. Tip: Use the dip stick as the final guide - don't just pour in 3.7 quarts. The bike must be straight up - not on kick stand. And dip stick is NOT screwed in when checking the level. I leave the oil a little low on the dipstick then run the bike let it set then check it again.

**TIP:** Leave off the Chrome dress-up cover off to check for leaks for at least a week - you should carefully clean the underside of the motor to make it easy to discover new leaks.