

## 2003 Mitsubishi Outlander Drive Belt replacement

*(Front wheel drive with 4 cylinder engine)*

Older cars used 3 different belts under the hood; one for the alternator, one for the power steering pump, and one for the air conditioning compressor. Newer cars have just one belt for all three of those so it's critical to replace the belt on a regular schedule. Unless of course, you like walking, in the rain, 200 miles from home, on a dark deserted roadway.

The easiest way to tell if the belt needs replacing is to shine a flashlight onto the belt and look for cracks. If you see any cracks, like in the picture, it's time to replace it.



Replacing the belt takes about 30-40 minutes & you'll just need basic tools:

- Safety goggles (no exceptions!)
- Flat blade screwdriver
- Philips head screwdriver
- ½ inch drive ratchet & extension
- Rag
- Flashlight
- Pencil & paper
- And of course a new belt: I use the Goodyear Gatorback series on all our vehicles because they last long and are quiet.



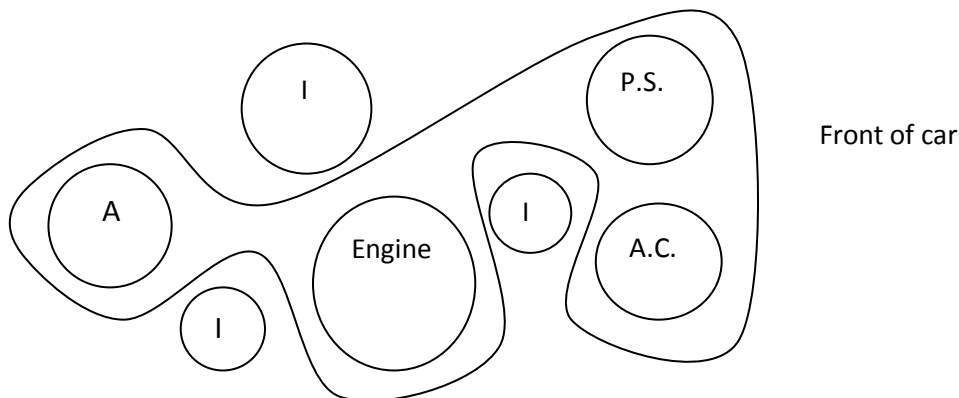
The Mitsu is a front wheel drive vehicle so the engine sits sideways (technical term is transverse). Items that are normally on the front car will be on the passenger side. I can't say that's 100% for all vehicles, but the 1999 Toyota Corolla & 2007 Honda Accord engines are mounted the same direction as the Mitsu.

Looking at the belts, in that narrow dark cavity on the passenger side, will make you wonder how you will ever get in there. Don't worry it's pretty easy, really.

First off, grab that pencil, paper, & flashlight. You want to diagram the path of the belt so you know how to put the new one on. You may think you'll remember, but I have yet to do so. It's just easier to sketch it out.

Here's a basic diagram for the 2003 Outlander with the 2.4 engine: The key to the letters:

A: alternator    I: Idler pulley    P.S: power steering pump    A.C: air conditioning compressor



Okay, now on to the fun stuff. Turn the front tires all the way to the right to provide enough access to work. The Outlander has enough clearance that you don't have to jack it up or remove the tires.

To access the belt, remove the large plastic, lower splash guard on the passenger front side. It is secured under the car as well as inside the wheel well. It is held on by little black clips that have a raised head with slots on the side. Take the flat blade screw driver and gently pop up the center section. Once it's raised, the whole clip will come out. They're plastic so be gentle and put them where you can find them again. You will find one of the clips has a Philip's head to it; remember where that came from.



Once that's off, next remove the splash guard that is directly behind the strut. There are only 2 clips for this one, so it's easy to remove.



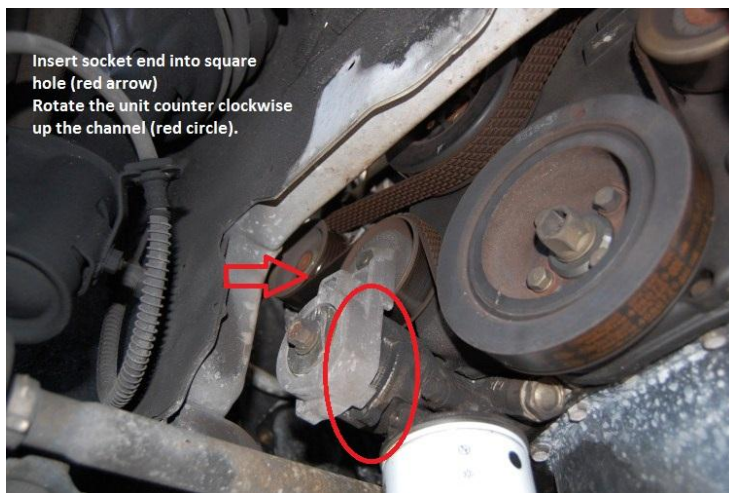
These guards are what you should have removed:



Now that you can see the full belt path, it wouldn't hurt to compare your diagram to confirm it's correct.

To remove the belt, we need to release the tension and that's done by rotating a tensioner. It's silver & located to the left of the main engine pulley and right in front of the oil filter.

On the top left of this assembly is a square hole. Take your ½ inch drive ratchet with extension and place the square end into the square hole. It should fit snugly, but easy to insert & remove. You want to rotate the assembly counter clockwise. When it rotates, it releases the tension on the belt. The tricky part is rotating the ratchet with one hand while removing the belt with the other hand. The ratchet is under pressure here so be careful and don't just let go. To remove the belt, all you have to do is get one side of it off a pulley, any pulley will do. Once you do that, gently release the ratchet. See the enlarged pictures below:



You can remove the belt from below or access it from the top. Now that the belt is out, wash your hands and take a quick break. See, not so hard is it? Installation is reverse of removal, good luck!! Don't you hate when you read that? Me too, so here's the rest of the story☺

You can feed the belt through the top of the engine or work from the bottom, whichever suits you. Although in the end, you'll be under the car for final installation. Loosely fit the belt over and around the pulleys to get it in place. Then starting with the alternator and working toward the front of the car, begin lining the belt up properly on all the pulleys. As you position the belt onto the air conditioner pulley (the lower one on the right, closest to the front of the car), you should end up about 4-5 inches short. That's fine, loosening the tension will allow you to stretch the belt onto the pulley.

Grab your ratchet again and rotate that tensioner all the way counter clockwise to release the tension. This will give you enough slack in the belt to pull it onto the last pulley. Again the hard part is doing this with only two hands.

If you can't get it over the last pulley with the tension released, double check your path. There's a good chance the belt slipped off a pulley or is riding on the edge instead of in the grooves. Once you're sure it's on properly, start the car & watch the belt, from above. There shouldn't be any noises, smoke, or anything unusual. If it does, stop the car and check your belt path again.

With the belt on, it's time to tackle that origami of splash shields again. Install the one closest to the strut first. Then install the lower splash shield, reinserting the black clips. If the ends of the clips are spread so much that you can't get them back in, just squeeze the ends together and then slide them back in the holes. On the passenger side, near the fender, the splash shield has to line up with two other shields at this point. They line up easy enough, just have to look at it for a minute.

Take it for a test drive to confirm everything works and that's it. About 40 minutes and \$37 in parts and you're reliably on the road.