

# **Alfa Romeo 147**

## **Gearbox oil change guide**



# Alfa Romeo 147

## Gearbox oil change guide

This guide will help you to change the gearbox oil on Alfa Romeo 147. Photos used in this guide are from TS version, but JTD should be similar as well as other Alfas (156, GT,...)

### Quick guide (for advanced alfisti):

1. Get new gearbox oil.
2. Go for a drive to heat up the oil (10km or more).
3. Lift the car and unscrew the filler plug (M22 screw, 12mm hex key).
4. Unscrew the drain plug (M22 screw, 12mm hex key) and drain the oil to a container (2 litres minimum capacity).
5. Lower the car to stand flat or lift just the right side of the car so that all oil can be drained.
6. Clean the drain plug from the iron particles (the plug is magnetic to catch them up).
7. Screw in the drain plug.
8. Fill in new gearbox oil till the oil level reaches the bottom of filler plug (about 2 litres).
9. Screw in the filler plug and go for a drive.
10. Check for leaks to be sure.

### Step by step guide:

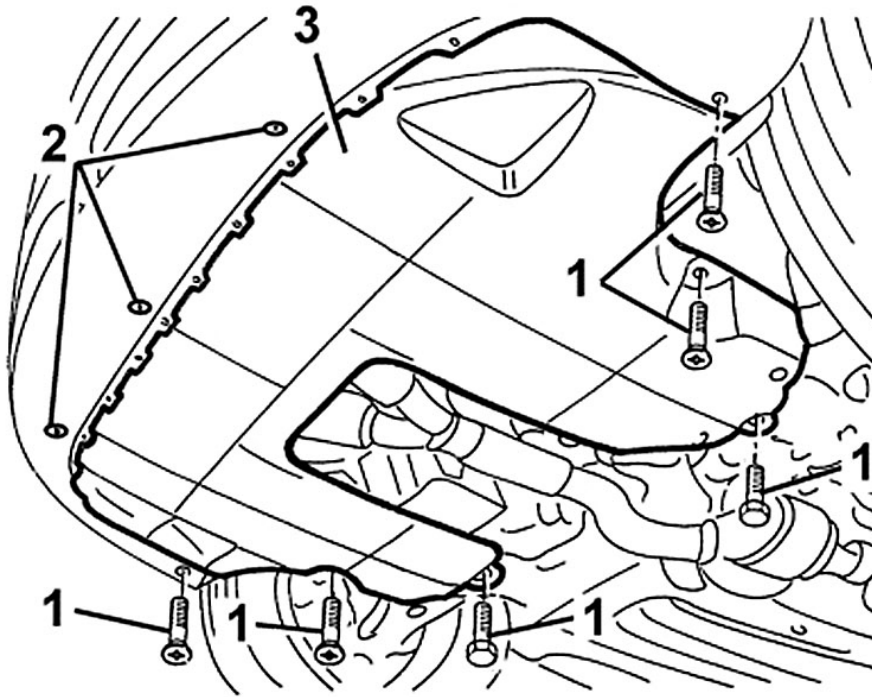
**Note:** As the drain and filler plugs can be seized, you might prefer to try to release them when the engine is still cold. If you see you can turn them and you are able to remove them only than go for a drive to heat up the oil. It is much easier to work on seized screw under the car when the engine is cold as trying to release it when it is hot. On the other hand, when the metal is hot you might need little less force to release the screw, so it is up to you. I took the first option.

### Gearbox oil to use:

Alfa Romeo recommends using TUTELA CAR ZC75 SYNTH gearbox oil. This one is 75W-80, API GL5 oil type (rated 75W-90 in the older documents). You can use other brand as well provided it is the same spec (especially API GL5 rating). I used **Mobil** Mobilube 1 SHC 75W-90, GL5.



1.
  - Raise the vehicle.
  - If you can't raise the vehicle completely, secure the car against movement (pull handbrake, cog the rear wheels) and lift the front left wheel with a jack. (preferably lift both sides if you have 2 hydraulic jacks)
  - Remove the bolts fixing under engine protection if (you have one) and remove the protection.



2.

- Locate the gearbox oil filler and drain plugs. Filler plug is located on the front part of the gearbox, few cm to the left from some gearbox sensor. You can see two wires coming out of it. Drain plug is more difficult to get to; it is located on the side of the gearbox, close to the front left wheel, hiding just at the bottom of the gearbox side behind front lower arm. There is not much space to get to it.



Drain plug  
(pictures were taken after the oil change, that's why the gearbox is dirty of oil)



Filler plug

- Check if you can unscrew the plugs. You will need 12mm hex key to do this. The plugs might be really seized. In my case the filler plug was quite easy to remove, but the drain plug was a problem. First, it is located very inconveniently to be access with tools, I had to cut 1-2 cm from my hex key to be able to reach it. Than I spent about 30 min trying to release it using WD40, slight hammering to release it by vibrations and at the end a lot of force applied on the longest lever I could make. I had to combine bits from my toolbox to make the HEX key as long as possible to apply adequate force.



3. When you are sure you will be able to release the bolts, lower the car and go for a drive. You should do about 10 km to properly warm up the gearbox oil and mix it well. Than go back to the garage, and lift the car again.
4.
  - Unscrew the oil filler plug
  - Put a container under the drain plug (at least 2 litres)
  - Unscrew the drain plug. Use gloves so that the oil doesn't scald your hands.





- Use a container as wide as possible, as the oil will not flow out in a single stream, in my case it flew just on the suspension arm opposite the drain plug and splatted in all directions making quite a mess under the car. It might be a good idea to put some paper under the car so that you don't have a mark on the pavement or in your garage.



- Lower the car to stand flat so that the most of the oil can flow out. You can eventually lift front right wheel only to drain it completely.
5. Now you can clean the drain plug of the metal particles. The drain plug is magnetic, so that it catches all metal particles in gearbox oil, results of gearbox wear.



before

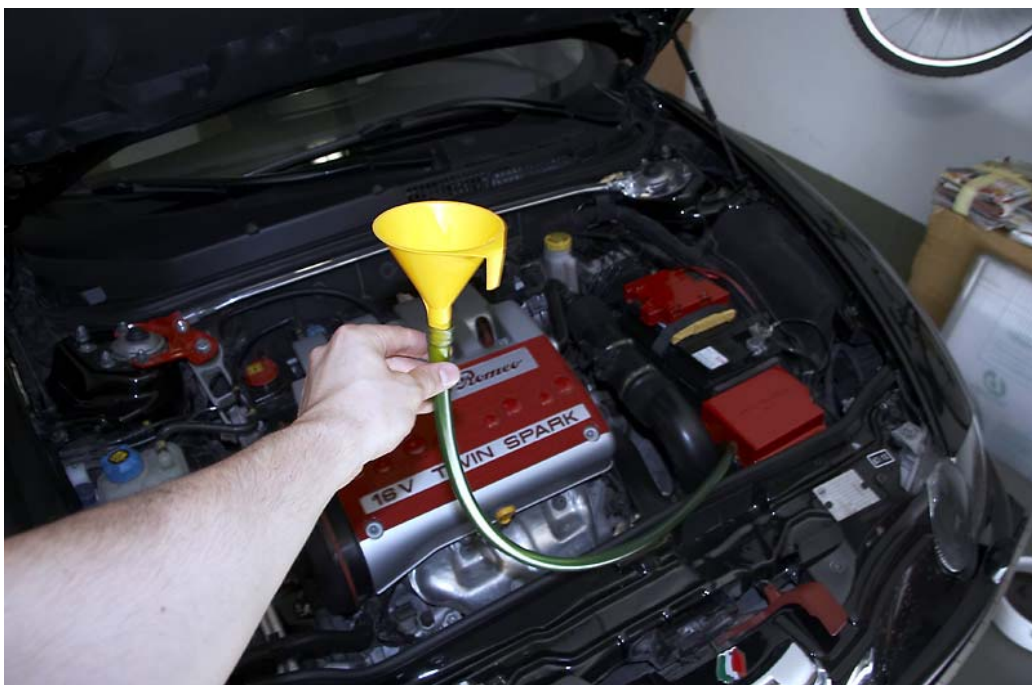
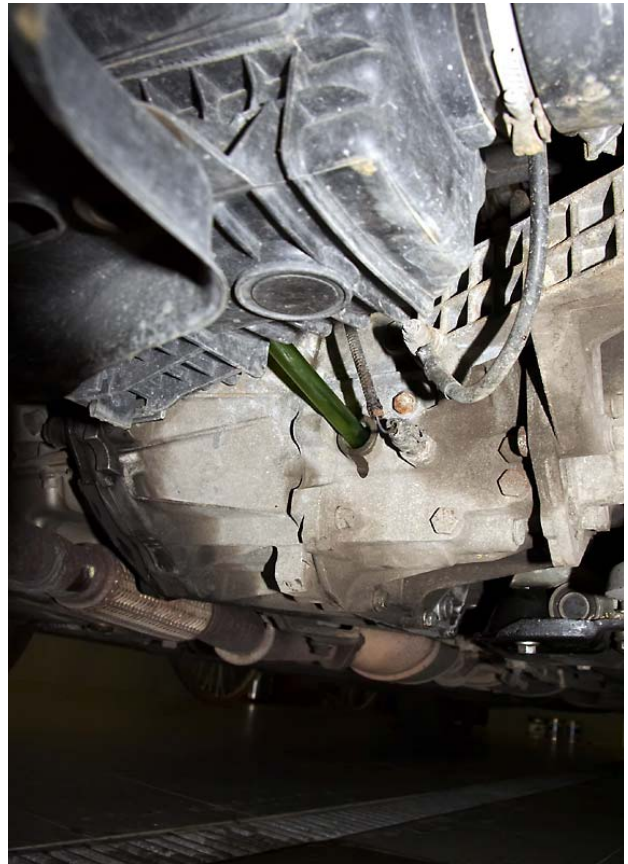


after

6. Screw in the drain plug. There really is not enough space to use a torque wrench so I made it tight just according to my judgment.

7.

- Fill the gearbox with new oil.
- The filler hole is not exactly conveniently located to be accessed with an oil bottle in your hand so I decided to use a hose I pushed few cm into the gearbox and held the other side above the engine with a funnel attached to it.
- Lower the car from the jack so that it stands flat and start pouring the oil to the gearbox. It might take some time if you use a thin hose, as the gearbox oil is thicker than engine oil.
- According to spec, the gearbox has a capacity 2,01 liter. However, you will never drain it completely empty. When you are finishing the second litre pour slowly as the oil will probably start to flow out. I managed to put about 1,8 – 1,9 litre in when it started to flow out.
- Keep the car flat on ground for a minute so that the oil can flow out and level stabilizes on the bottom of the filler screw



8. Lift the car again, tighten the filler plug and lower the car to the ground.

9. Take the car for a short spin and then check for leaks. Job done.

Disclaimer:

*This guide describes how I did the job. It may not be complete or something might be not described detailed enough. Follow this guide at your own risk. Please only attempt this if you feel you are competent. I'm not responsible for any damage you might cause. Always use common sense not excessive force. Don't blame me or this guide if you break something. It was your choice to try this.*

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