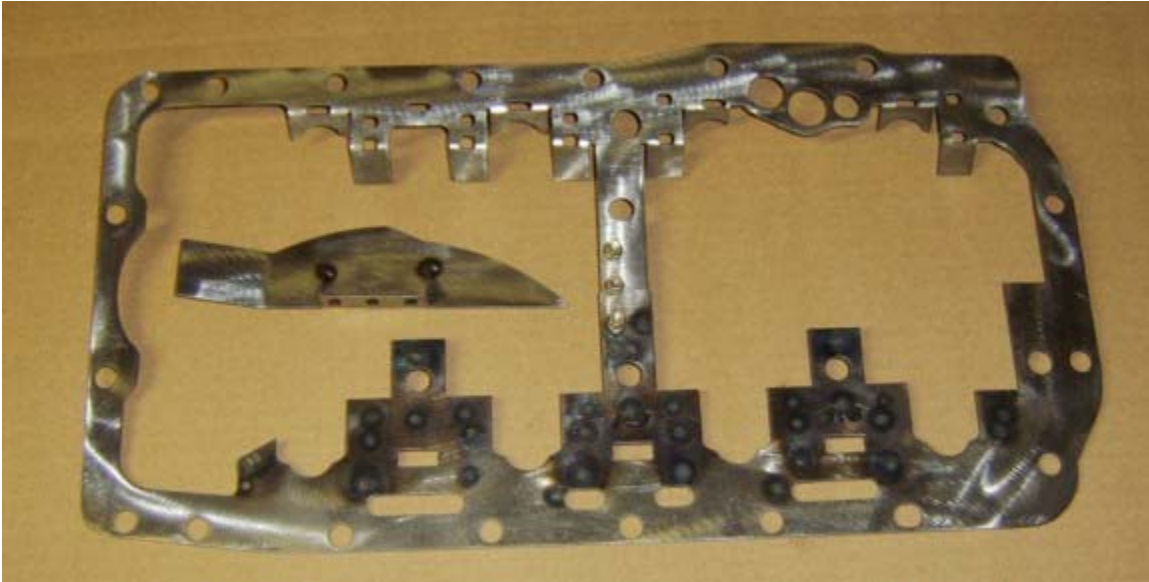
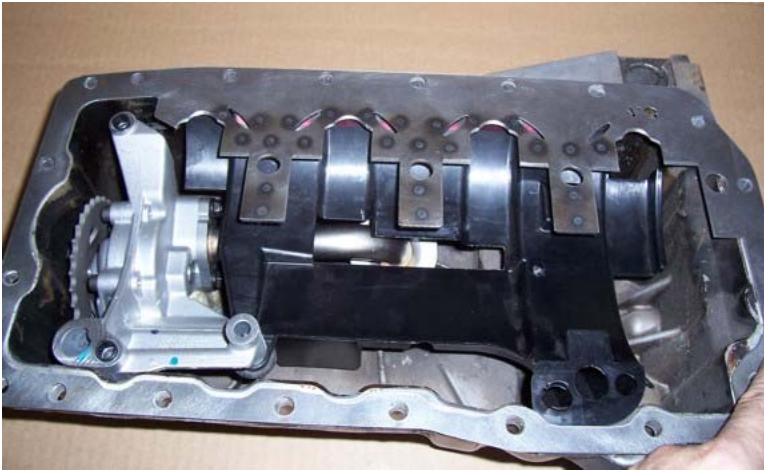
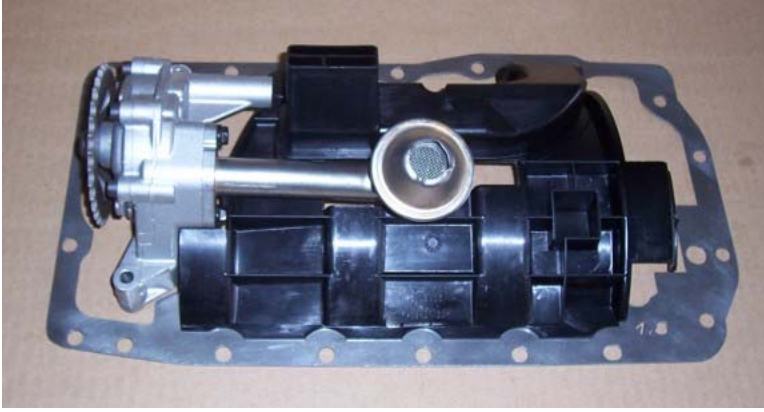


Crank Scraper Installation on VW/Audi 06A style block (3 pages)



- **DO NOT USE THE STARTER MOTOR WHEN TRIAL FITTING THE SCRAPER!**
- Drain oil from pan and remove pan from the engine block.
- Remove stock plastic windage tray
- Thoroughly clean the oil pan gasket surfaces on both the block and the pan.
- Remove the spark plugs. This will make rotating the engine during trial fitting easier.
- Check to see that the thrust clearance or endplay on the crank is within specs. If this is not the case, you will need to install fresh thrust bearings. When fitting the scraper as described below always remember to push the crank to both extremes and check for proper clearance through full rotations of the engine.
- Trial fit the scraper by picking mounting holes around the block and bolting it gently into place with oil pan bolts.
- There should not be any interference with the crank, rods, main bearing cap bolts, oil pump or dip-stick (or timing reluctor ring gear if used) but you may have to gently shift the scraper around the slightly loose mounting bolts to achieve this.
- **REPEAT: DO NOT USE THE STARTER MOTOR WHEN TRIAL FITTING THE SCRAPER!**
- Slowly and gently rotate the crank through a full 360 degrees. While you are doing this, carefully watch with a small light to see that all the rotating parts maintain at least a 1 mm (.040") clearance with the scraper on all sides.
- If, despite your careful shifting of the scraper, there are still parts that come into contact or are too close then you will need to file or grind that area of the scraper until the proper clearance is achieved. Be careful not to bend the sheet steel when doing this and remember to clean off any metal shavings.
- You may want to mark this final position of the scraper relative to the block with a scribe or marker.
- The following pictures illustrate how the scraper sits relative to the pan, pump and windage tray:



- For the best results, it is suggested that you make a series of small slots/holes in the plastic windage tray. This will allow scavenged oil a quick pathway out of the tray and into the pan. Do not make the holes too large as that will unduly weaken the tray:



- Remove the scraper and apply silicone RTV gasket material to the pan rail and the scraper surface that sits on it. Carefully re-install the scraper in the same position as before. Gently install all the oil pan bolts. Double-check that there is no interference during full rotations of the engine. Let the silicone setup and hold the scraper in place.
- Carefully remove all the oil pan mounting bolts.
- Apply silicone gasket material to the oil pan mounting surface and the area of the scraper that the oil pan flange sits on. Install the plastic windage tray over the scraper. Carefully mount the oil pan. Do not disturb the alignment of the scraper.
- Once again, rotate the crank to ensure nothing is contacting the scraper. Let the silicone gasket material setup.
- **Because the scraper is 1mm thick it may create the need to adjust the mounting holes that link it with the transmission.** Carefully trial fit the assembly, and if needed, relieve the bottom of the UNTHREADED holes (usually in the transmission flange). **Do not try to force the bolts in and tighten them** – this would create a powerful force that might crack either the pan, or the flange, or both.



- Fill the pan to the proper level with oil and re-install the spark plugs. Start engine normally.