



DCR SRT-4 OIL SYSTEM INSTALLATION

DCR Windage Tray— The DCR Windage Tray removes the balance shaft (Note- Windage Tray does NOT bolt into balance shaft bolt holes). You will need to use a ¼-20" set screw to plug the oil feed, cut the chain with bolt cutters and remove the balance shaft. Due to removing the balance shaft you will need to make sure that you have 6 ½ quarts of oil. The dipstick will read at low level but this is sufficient. When installing the windage tray be sure to check that the tapered corners of tray face to the rear of engine for oil pan clearance. Note that there are 4 unique holes in the tray that must be aligned with the bolts for proper installation.

DCR Windage Tray Main Bolts M11x1.5 (qty 10) (For bedplate to block)—**Torque to 55ft/lbs.**

DCR Windage Tray Main Studs M11x1.5/ 7/16-20 (qty. 10)—**Torque to 8ft/lbs into block. Torque 7/16-20 Nuts to 55ft/lbs. with oil or moly lube.**

DCR Windage Tray Nuts (For stock non-strapped bedplate)—**Torque ¼-20 Nuts to 130in/lbs.**

DCR Windage Tray Nuts (For DCR Strap Kits)—**Torque 3/8-16 Nuts to 25ft/lbs.**

DCR Windage Tray Bolts (For DCR Strap Kits with DCR Studs)—**Torque 7/16-20 Bolts to 30ft/lbs.**

Removing the balance shaft doesn't harm the vehicle. The balance shaft was put in the car to lower vibrations and in time could be the part that could ruin your engine, due to failure. You will notice a little more vibration at 2300 rpm, but if you are building a performance car this will not affect you.



DCR Performance Oil Pump— The Performance Coated Oil Pump is to be torque to 20ft/lbs. For optimal performance it is Darrell Cox highly recommended that you use the DCR Pickup Tube and DCR Big Filter Kit.

DCR Big Filter Kit— In the DCR Big Filter Kit, you will be removing the oil cooler and be putting in a larger K&N filter with additional oil adapter gaskets. Please use the (2) gaskets provided and your stock gasket as well. You should have a total of three gaskets in use. Torque the oil filter adapter bolts to 105in/lbs. Use the 3/8" NPT plug to block off the cooler line at the block. Use a 3/8" bolt and clamp to block off the 2nd oil cooler line at the block. The DCR Pickup tube needs to be used with OE O-ring. Torque the bolts to 200in/lbs.

DCR Adapter Bolts- **Torque to 105in/lbs.**

DCR Pickup Tube- **Torque to 200in/lbs.**

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SRT-4 OIL SYSTEM TECH

There are 4 issues with the stock pump when a SRT-4 is being modified above 300-350HP. Otherwise, the OEM pump will work sufficiently for the vehicle below 300HP. It is important to realize that our oil pump is DCR approved at 1300HP. Our racing SRT4 has used the same oil pump all season and it is treated the same as oil pump you are receiving.

1. The stock oil pump pick up tube is too small in diameter and has too many bends. This causes the pump to not hold the oil capacity needed. The DCR pick up tube has one smooth radius bend and is larger than stock in diameter. Therefore allowing the capacity needed at higher horsepower.
2. As horsepower is increased, the pump gear has to withstand high volume and high pressure. In this case, the stock pump gear with added pressure and volume increases temperature and then expands to make the gears lock up. To avoid this issue, the DCR pump gear is DCR coated in which stops the gears from binding up under pressure. The DCR coating also helps reduce the temperature so the oil will flow better from the gears not expanding.
3. The stock pump gear is tight on clearance within the pump. Therefore, the stock pump does not lubricate the gears efficiently under high pressure and high temperature. The DCR pump gears are notched to increase lubrication within the gears as well as under high demand. The gears are also signature coated.
4. The stock oil filter is too small to handle the needed oil capacity. The DCR oil pump installation kit is highly recommended to increase the capacity of oil for maximum performance with your DCR Oil Pump.

DCR Oil Pump:

The oil pump is under high demand and cannot withstand excessive harmonics. The factory dampener reduces the harmful harmonics down to a level in which the crank and oil pump can withstand. The powdered metal can hold its own with the factory harmonic dampener.

The signature coated gears are not coated with cryo. The factory metal is powdered and cryo treating would make it brittle.

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