



SR20 BILLET OIL PUMP INSTALLATION

***OIL PUMP IS NOT COMPATIBLE WITH FWD/VE
HARMONIC BALANCERS***

INTRODUCTION

Our SR20 Billet Oil Pumps have been designed for use with most types of Nissan SR20 series engines. These include all RWD engine blocks using factory RWD, Ross Performance Parts RWD or ATI RWD harmonic balancers, Nissan RNN14 GTiR engine blocks using factory or Ross Performance Parts GTiR AWD harmonic balancers. All SR20VE heads, DE hydraulic lifter heads used in RWD applications and GTiR solid lifter heads used in both AWD and RWD applications.

The oil pumps with the black alloy relief valve plug will run approximately 130psi + oil pressure at normal engine operating temperature and above 5500 RPM (will vary with engine combination and clearances etc).

INSTALLATION

Prior to final install, ensure the headgasket and sump rail surfaces of the Billet Oil Pump and engine block evenly match.

If any machining is required to the oil pump's surfaces, we DO NOT recommend disassembling the oil pump for this process. Tightly seal or tape up ALL holes etc before ANY machining. Thoroughly clean housing after machining and before removing any sealing tape etc. To be performed by a qualified machine shop only.

- Secure supplied TDC Mark Pin into the desired location and secure into place with silicone gasket sealant, Loctite or similar product. Refer Fig 1 and 2.***
- Use supplied stainless steel cap head bolts with stainless steel washers to mount oil pump to engine block. The oil pump housing has been designed for this style of bolt.***
- There are 4 different 6mm Titanium bolts (sold separately) available for the oil pick up strainer. The 6mm bolts allow a slight swiveling of the oil pick up strainer for correct centralising to the oil pump.***

Different types available:

- 1. Factory RWD or GTiR oil pick up with std depth sump.***
- 2. Factory RWD or GTiR oil pick up with extended sump requiring 10mm spacer between oil pump and pick up.***
- 3. TAARK billet oil pick up with std depth sump.***
- 4. TAARK billet oil pick up with extended sump requiring 10mm spacer between oil pump and pick up.***

Refer Fig 3 to 6.

Note:

- We recommend positive priming the engine oil system before attempting to start engine. Do not crank over engine to build up oil pressure as this could be detrimental to your engine.***
- Limiting oil supply (oil restrictor) from block to head and oil return upgrades from head to block are strongly recommended in all SR20VE and solid lifter conversion DE heads.***

INSTALLATION

Fig 1: TDC indicator location for FWD

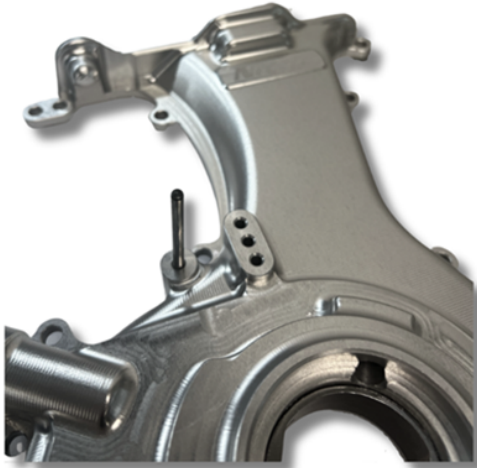


Fig 2: TDC indicator location for RWD



Fig 3: Std Pick Up



Fig 4: TAARK Billet Pick Up



Comparison between std length Titanium Bolts and extended Pick Up Bolts

Fig 5: Std Pick Up



Fig 6: TAARK Billet Pick Up

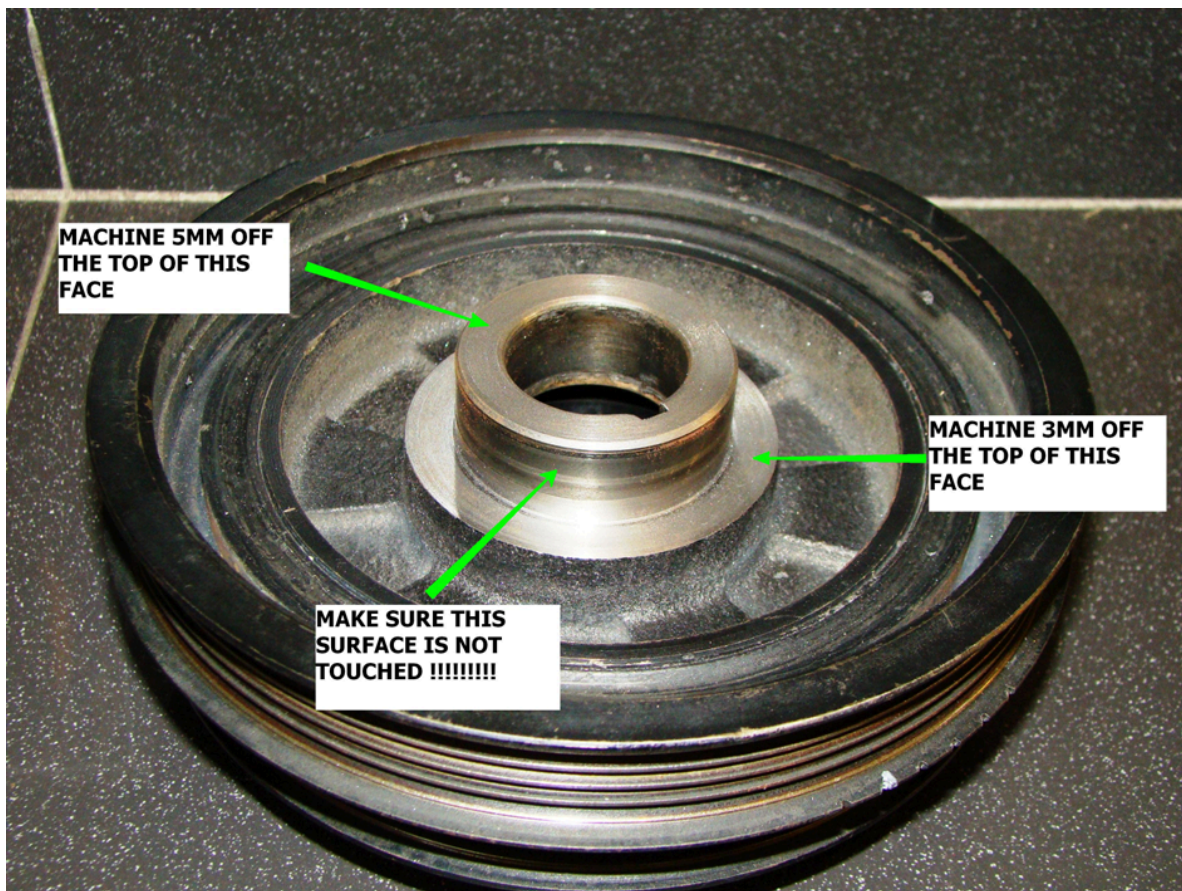


INSTALLATION

Requirements:

Nissan Part No: 15041- 54C00 oil pump drive collar is required for installation of this oil pump.

If using the oil pump with a RWD Factory balancer, follow the machining procedure below.



Fastener Tensions:

- Stainless Cap Head Mounting Bolts: 12Nm.
- Titanium Bolts (6mm): 10Nm.
- Backing Plate Bolts: 10Nm.
- Alloy Relief Valve Plug: 20Nm.

INSTALLATION

Technical Data:

- Haltech logging screenshot of a typical Nissan SR20DET engine build with a hydraulic lifter head using our SR20 Billet Oil Pump. (Courtesy of Birrong Automotive).
- Nitto SR20 Billet Oil Pumps with black alloy relief valve plugs will typically run over 130+ PSI oil pressure at normal engine operating temperature using 15W50 engine oil @ 5500 RPM and above (will vary with engine combination and clearances).

