

Ferrari 328 Distributor Shaft Seal Replacement

Carl Rose

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After removing my distributor caps to clean the terminals & rotors, I found oil inside the forward bank (5-8) cap. Apparently this is not an uncommon problem, typically due to improper installation of the circular seal. My car had recently (6mo/280mi) undergone a 30k service with replacement of this particular seal due to leakage. This particular job is not difficult, just requires patience and some creative contortion.

[Example car is late-88 328 but 328 series is identical. Oil seal was updated in mid-1987]

Time: 1-1.5 hours

Tools required:

8mm deep & 10mm short/deep 6-pt sockets ¼" drive

7 & 8mm combination wrenches

Vise & wood blocks to press seal

32mm ½" drive socket

1 1/16" ½" drive Craftsman socket

Dremel with wire brush attachment

Bench wire wheel

Inspection mirror

Towels to cover car

Fluorescent droplight

Parts required:

Distributor shaft seal #132453 (\$26)

Distributor flange mounting gasket #117261 (\$4.50)

Distributor cap cork gasket #119409 (\$2.50)

Silicone sealant

First, protect the car by covering with soft thick towels and taping in place. Begin by sliding back the distributor rubber boot cover:



The cap is held in place by three 8mm hex bolts spaced at 120° intervals. The upper two are easy to access, whereas the lower (under the exiting spark plug wire bundle) is far more challenging. I was able to loosen the upper two with an 8mm deep socket, but found an 8mm box end wrench oriented towards the firewall best for the lower. Push the boot away; this lower bolt is removed primarily by “feel”. Fortunately once loosened each easily spun out with fingers (they will not fall out of cap). If yours do not, consider running a tap through the mounting flange (and die over screws) to make reassembly easier.



My cork cap gasket had disintegrated & was removed in pieces (new one in picture). Note the orientation of the rotor – you’ll need to reinstall as same. Rotor is held on by three 7mm screws; design doesn’t permit a socket to be used. I found a 7mm open-end wrench (part of the Craftsman metric “ignition wrenches” set) fit best. Each screw has a small washer underneath so be careful when removing. I brushed the rotor on my bench wire wheel and used a Dremel wire wheel attachment to clean the internal distributor cap posts.



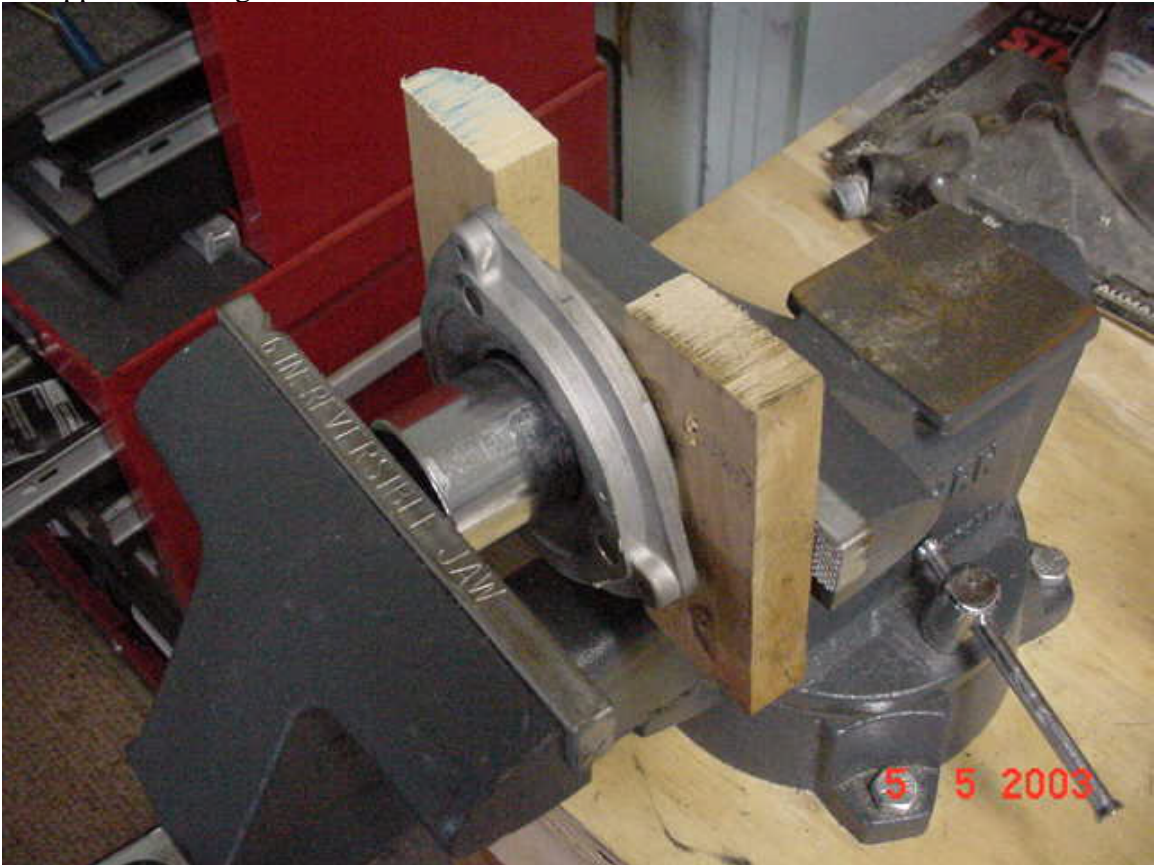
Oil was leaking into the distributor cap and a small amount had collected in the lower aspect of the distributor flange. The flange is held in place by two nylon-locking nuts on studs (2 & 6 o'clock) and one bolt (10 o'clock). Remove with short 10mm socket. Bolt had two washers underneath – solid & wave – and each nut had a small solid washer. Be careful not to drop these – I gently coaxed them off the stud with small flat screwdriver. At this point I tapped the flange with the back of my hand and it came free.



Etiology of oil leak was immediately obvious – seal had been damaged installing on shaft (at 3 o'clock in photo):



Press the old seal out in the vise using a 32mm 1/2" drive socket and two pieces of wood to support the flange:



Lubricate the outer perimeter of the new seal with WD-40 and press it squarely into flange:



The flange mounting gasket peeled off the valve cover without leaving much residue behind. I cleaned this area and mounting face of flange then wiped with alcohol.



I lubricated the inner rim of the seal with oil and wiped oil and a smear of white lithium on the distributor shaft. I then found a 1 1/16 1/2" Craftsman drive socket most closely approximated the shaft diameter; using this as a "guide arbor" during installation helps keep flange perpendicular to shaft and stretches the circular spring inside the seal, making it less likely to pop free (I understand there is a specific Ferrari tool just for this particular

seal installation but to date have not been able to locate an illustration or specific part #):



Coat both sides of the mounting flange gasket with a very thin coat of clear silicon then install. Note the gasket is asymmetric – the two larger holes fit over the studs while the smaller is for the bolt. Take care not to dislodge either of the two smooth “collars” on the

studs; they slide off and can be lost in the depths of the engine compartment.



Install the distributor flange, centering the socket on the shaft (didn't have third hand to take a picture of this!). The flange should go down straight. Install the nylon nuts and bolt and tighten gently in sequence. Inspect the circumference of the seal to ensure it hasn't

been distorted (use inspection mirror for lower portion).



Remainder is reverse of disassembly. Fit a new distributor cap cork gasket. Inside of rubber boot can be lubricated with Armor-All if difficult to slide on. Run/drive the car and remove the cap in a few weeks to confirm leak repaired.