

# Ferrari 328 Gearbox Oil Change

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Part of regular maintenance schedule every 1-2 years for regular driving. Not a difficult task & only slightly more involved than engine oil change.

*[Car illustrated is 1988.5 328 but series identical & 308 cars very similar]*

## Tools required:

19mm 3/8" drive 6-point socket  
3/8" short extension bar  
10mm & 12mm hex-head sockets (1/2" drive 12mm purchased from Grainger Supply)  
1/2" to 3/8" adaptor socket  
Philips screwdriver  
1/4" 10mm deep socket and nut driver  
Torque wrench  
Wheel lug socket (Photos illustrate Snap-On aluminum-lined 7/8" #AS-281)  
Oil drain pan  
60cc syringe  
Transmission fill funnel (Walmart \$4) with extension 36" [5/8"OD/1/2"ID] tubing (\$1 at hardware store) and two small hose clamps (<\$1)  
Jack & stand  
Wheel blocks  
Towels to protect fender

## Parts required:

Transmission fluid 5 quarts

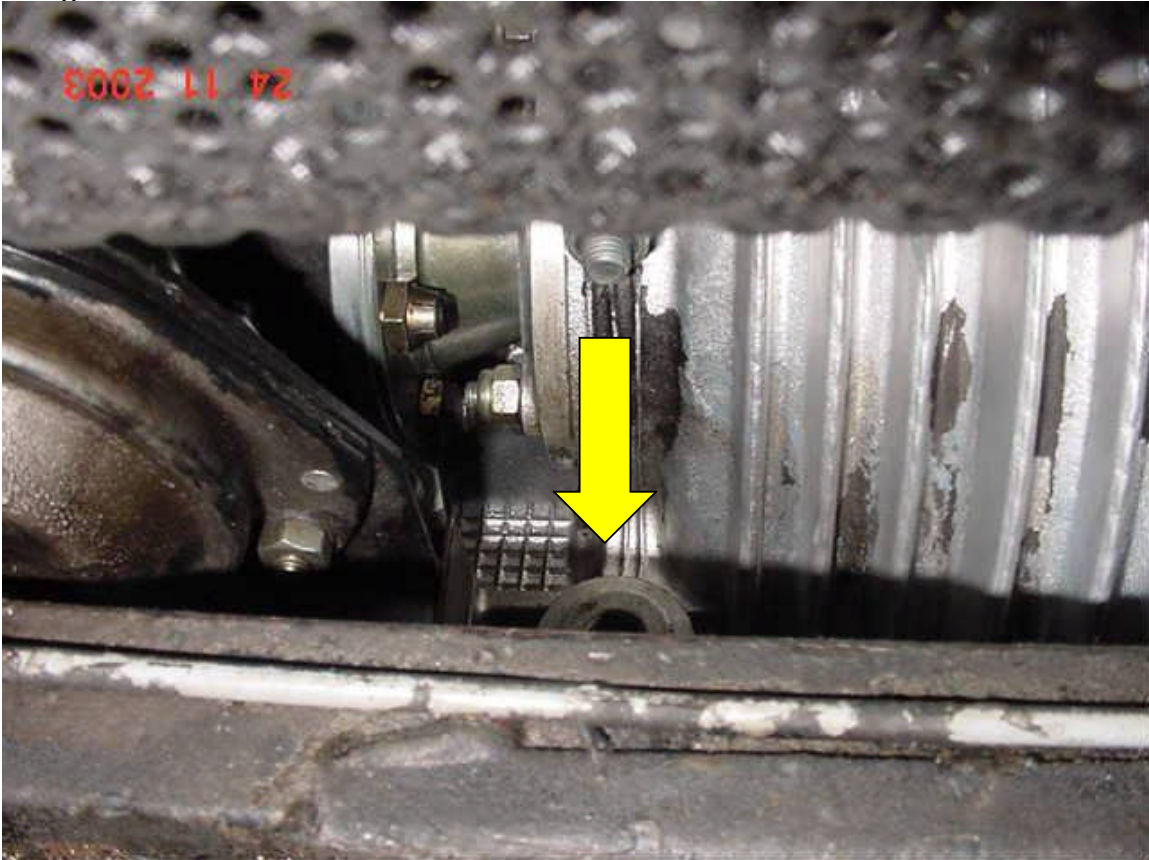
*Owner's manual specifies AGIP 75W-90 SX which has apparently been superseded by SXA 75W-90 without limited slip additive or LSX 75W-90 with additive per AGIP USA (800-632-8777); SXA available in 5-gallon pails & LSX in case of 12 liters (\$56). Opinions vary as to +/- aspects of limited slip additive. Royal Purple & Redline 75W-90 NS also highly regarded.*

Drain plug copper washers x 4; Ferrari #10279650/10263460 or NAPA 704-1364 for \$0.88/each [dimensions are 0.890"ID/1.055"OD].

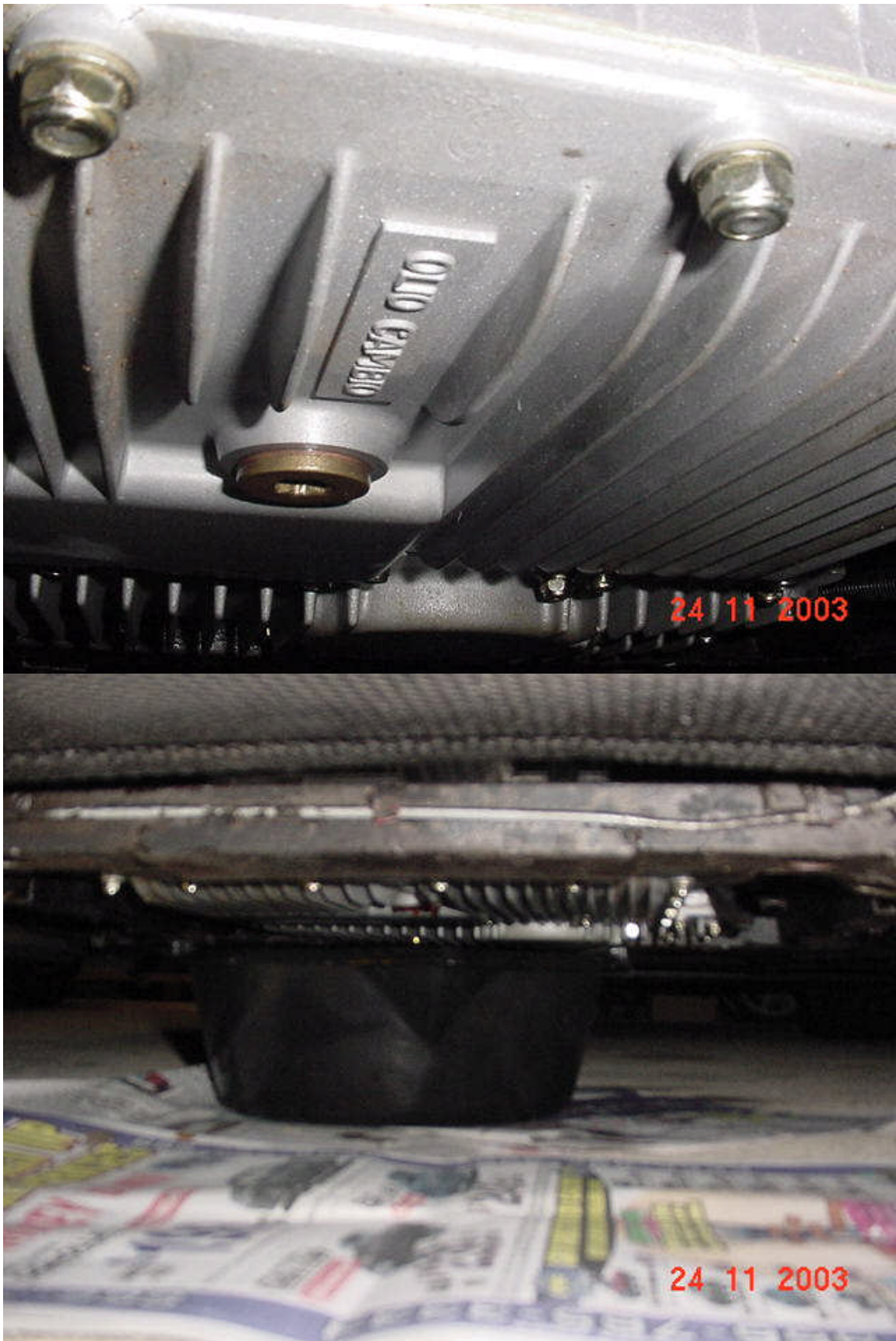
Time required: Approx 1.5 hours, less with repetition. As always, be smart & wear glasses or eye protection working under the car. I also wear disposable plastic gloves.

*Note: Verify you can loosen the fill plugs before removing drain plugs and draining out old oil. Mine had been previously installed seemingly with intent never to remove. I did need to jack the car up initially for socket handle clearance to loosen the main fill plug; also removed wheel & fender inner shield to confirm I could loosen transfer gear fill plug. Once you have changed gearbox oil you personally will have torqued properly.*

Block front wheels. Refilling the primary gearbox is done to the level of the filler plug when on ground & consequently I did not lift the car for the initial fill. Remove filler plug located facing horizontally towards rear on lower gearbox using 12mm hex socket:



Next, put down more newspaper than you ever might require. Remove the drain plug located on gearbox lower pan with 10mm hex socket and drain oil. Normal oil drain pan will suffice as transmission capacity is approximately 4 quarts.





Replace drain plug using new copper sealing washer. *[Old one may be reused, but advisable to heat to re-anneal]*. I could not find a torque value in the factory manuals so I used 20 ft-lbs. Drain plug on left, filler plug on right:



My filling apparatus was composed of a Walmart transmission filler funnel for \$4 and I replaced the short tubing with a 36" length 5/8"OD/1/2" ID from local hardware store for another \$1 to allow to navigate around exhaust manifold from above.



In retrospect, would recommend putting small hose clamps at both ends to keep nipple and funnel from slipping off. Cover fender & rear compartment with protective towels. I zip-tied the funnel to the valve cover strut to stabilize (read: prevent Valdez-esque “escape” while full of oil) & filled the surrounding engine compartment with paper towels.



Remove cap & push the fill nipple slightly into gearbox. Remove lid, rotate funnel to the open position and start filling. Workshop manual lists gearbox capacity at approximately 4 liters; my car required approximately 4.5; about 6 minutes/liter to add in this manner. Stop once oil begins to flow from filler plug (rotate funnel to off position). Replace filler plug with new copper washer & torque to 20 ft-lbs.

Loosen the left rear wheel bolts; I use an aluminum-lined socket with freezer-baggie to avoid marring lug bolts:





Jack on frame rail to lift left rear & place stand underneath (red wooden object in photos).

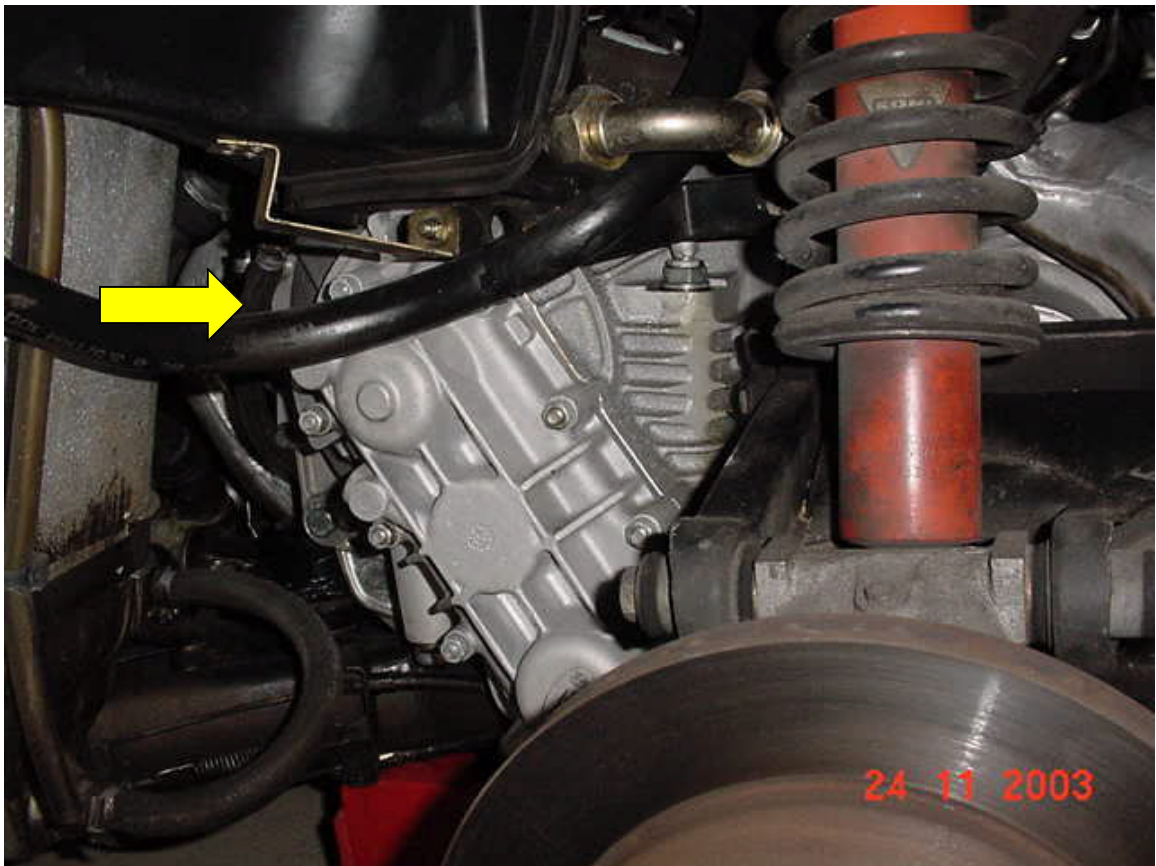


Remove wheel and fender well liner (three 10mm hex & four Philips screws) and maneuver liner out:



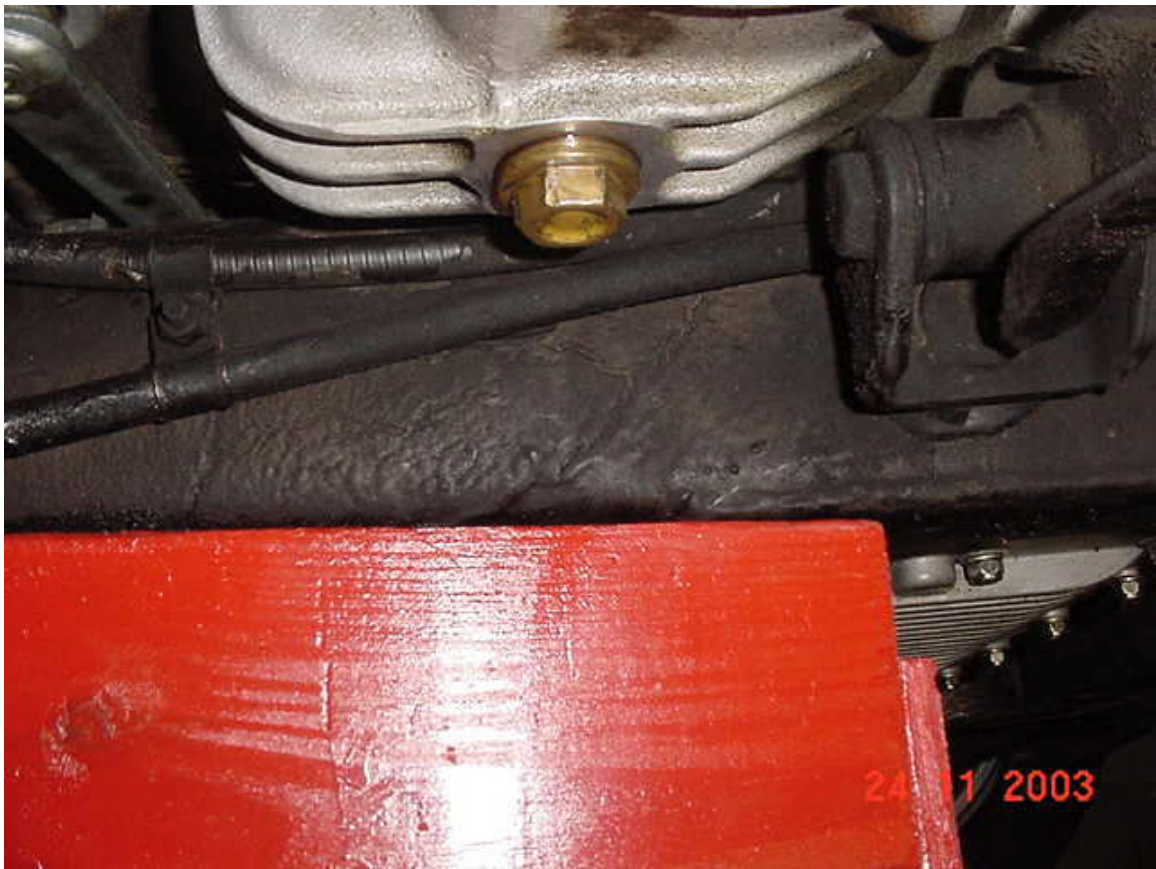


Remove transfer gear filler plug (faces firewall at top corner of casting) with 12mm hex socket:



Place drain pan under drain plug and remove with 19mm socket. Drain old oil; factory specifies approximately 4oz (100grams) but I measured amount drained to be approximately 10oz [cannot explain discrepancy but 30K performed last year by dealer]:





Replace lower plug with new copper washer and torque to 20 ft-lbs:

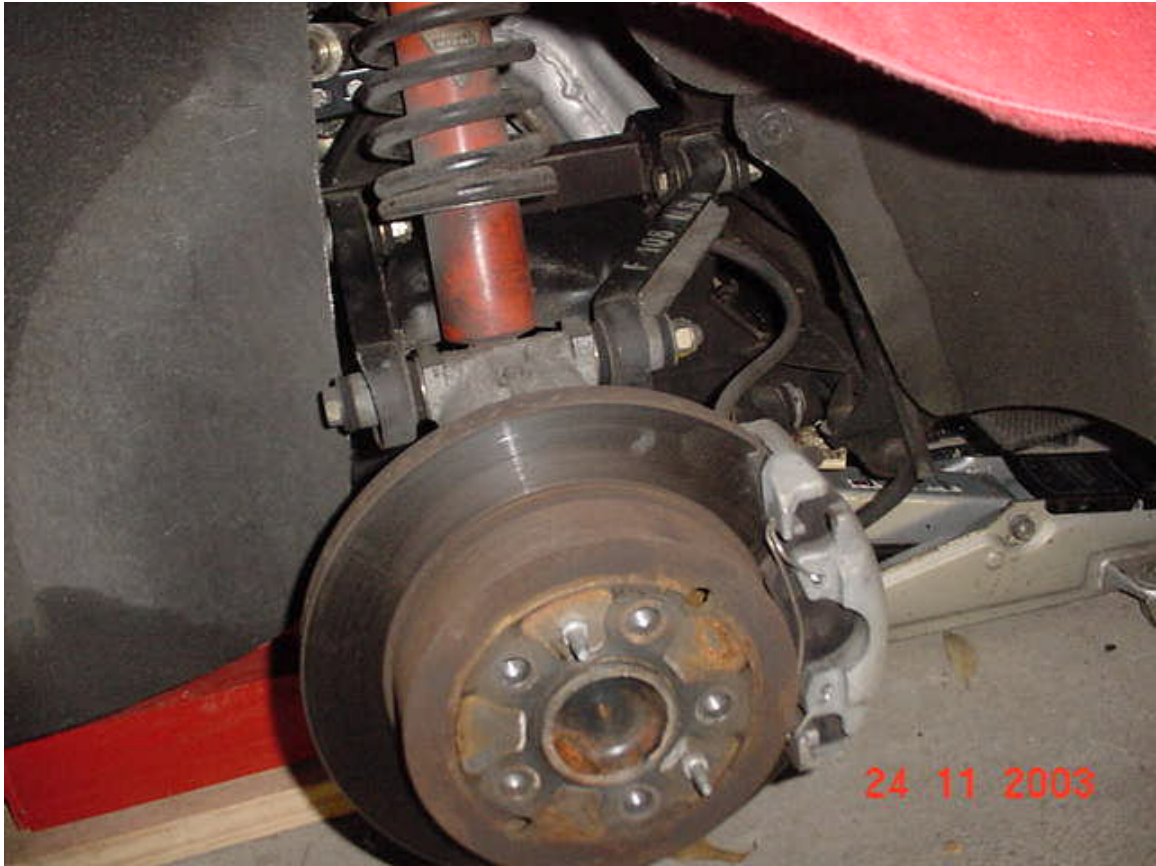


Using 60cc syringe, add 4oz [*although I added amount drained*] of oil through filler. Replace filler plug; insufficient clearance to use my torque wrench so I tightened to “snug”. Drain plug on left, filler plug on right:



Remainder is reverse of disassembly: replace fender well liner & wheel:





Lower car and torque wheel bolts to 72ft-lbs:



Start car & inspect for leaks. Congratulations...until next year!