

# PORSCHE 928 ENGINE MOTOR MOUNT UPGRADE 1979 EURO

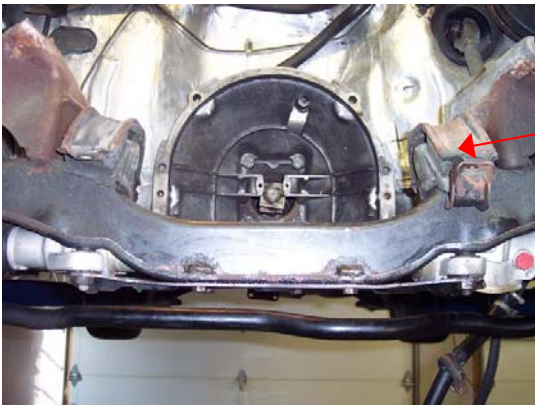
(JP Rodkey, Edited February, 2005)

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## BACKGROUND

My 1979 Porsche 928 has provided many years and miles of service. It was purchased used and needed an overhaul. One of my first projects was rebuilding the engine, which had been overheated for an extended period of time and was leaking fluids due to age, heat, and poor maintenance.

928 engines are bolted onto an engine carrier (crossmember) and buffered by two motor mounts. Until sometime in 1983, the mounts were solid and engine vibration was minimized using two small dampers (shock absorbers) bolted onto the engine case and linking to the carrier. The design was changed to a hydraulic mount on either side of the engine and the shocks were eliminated.



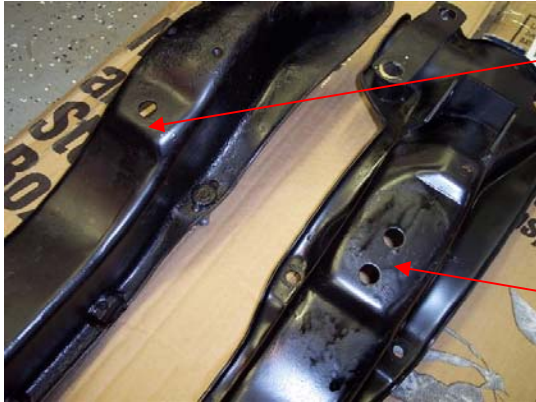
Original style solid motor mount.

Over time, the hydraulic mounts typically collapse and reduce their ability to absorb normal vibration and stress. In later cars, this collapse usually results in vibration that can be felt at idle. If everything is working properly, the engine should show no vibration and there should be virtually no sensation to the driver at idle. Replacing hydraulic motor mounts has become a common procedure and maintenance inspection item for 928 owners.

Older mounts become weaker due to age and stress, and often can't survive the added bruising when an engine is pulled from the car. When I decided to repower my 1979, I decided to 'upgrade' to the newer hydraulic mounts since it provides excellent cushioning, eliminates the shocks, and replacement mounts are relatively inexpensive.

## PROCEDURE

After surveying the parts, it is possible to convert an early solid motor mount style to the later hydraulic mounts. There is a change in design which requires a crossmember from a car that used hydraulic mounts (generally 1983 and up).



Step on older crossmember preventing hydraulic mount installation.

Later crossmember mounting pad and holes.

There is a step on the older crossmembers that makes it impossible to bolt the hydraulic mounts into place. Also, a later crossmember has the hole for the mount bolt and a hole for the anti-rotation pin on the mount. This helps to torque the mount properly when assembled and prevents vibration and movement during use. In addition to the new crossmember, you'll also need the exhaust heat shields that go with it, and all the mounting bolts, nuts, and washers.

Note: This will raise the engine about an inch, and you must watch that it doesn't damage the air hoses at the air bypass valve under the engine brace.

### To Remove:

1. Remove the reinforcement plate that clamps the steering rack inside the crossmember.
2. Remove the power steering line clamp on the driver side inner fender wall so that the rack can be moved. NOTE: even better would be to remove the lines from the rack, but it's messy and is not absolutely required.
3. Remove the nut (10mm) from under the crossmember, driver side, that holds the starter wiring harness clamp.
4. Remove both bolts/nuts from the steering joint at the intermediate shaft and steering rack and push the joint up so that the rack is disconnected.
5. Remove the four bolts that clamp the stabilizer bar to the body and swing the bar down to gain room.
6. Pull down on the steering rack and let it rest suspended.
7. Support the engine with a jack or stand (if you're lucky enough to have access to a lift) at the oil pan toward the front of the engine. Some people debate about doing this, but it's referenced in the work shop manual (WSM).

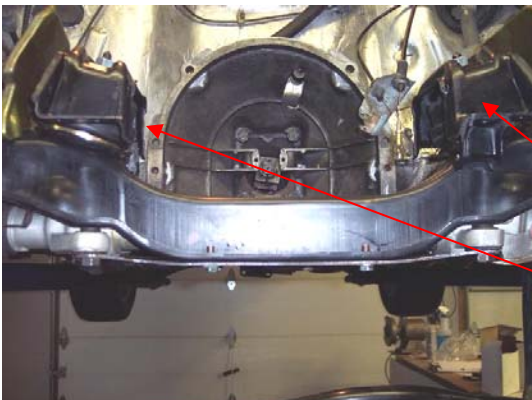
8. Remove the bolts (two per mount) clamping the engine to the mounts, and remove the vibration shocks.
9. Loosen the bolts at the front of the lower control arms, remove the bolt and nut for the strut bracket (connects the crossmember to the shock tower), then remove the bolts holding the crossmember in place (three each side) and remove the crossmember.

#### To Install

1. Prepare the new crossmember by installing the hardware and mounts and heat shields.
2. Position in place and loosely install six crossmember mounting bolts and the two shock tower bracket bolts/nuts. Install (but don't torque) the bolts through the engine mount bracket into the engine block. Once all the bolts are in place, torque them except the two bolts holding the lower control arm to the crossmember – leave a couple turns loose.
3. Remove the engine support jack/stand.
4. Reinstall the steering rack and support plate.
5. Lower the car to the ground so that the suspension settles. Tighten the remaining control arm bolts to 120 Nm (88 ft lbs).



Some Anchor 2698 mounts have a locating pin at the top and bottom. The top one must be removed before installation.



New mounts installed.