

# Volvo Penta

## Can you explain the differences in the various Volvo stern drives?

"Please unravel the differences in the below stern drives: SX-M SX-A DP/SM DP/SA SX DP-S XDP"

Just a quick bit of history first.

Volvo Penta brought out the sliding cone (clutch drive) back in the late fifties to early sixties.

First came the AQ 100 drive and then the three section drives 200, 250, 270, 280 and early 290s.

These were, for the most part, drives that used an electric motor for the tilt (although there were a few variants with a form of hydraulic lift). They had an upper, an intermediate that had the suspension fork, and a lower unit. The 280 and 290 units were the first units that had dual props versions (the upper and intermediate units were the same but the lower was a counter rotating dual prop)

Then later Volvo Penta added hydraulic rams to the 290s and over time these became SP-A, A1, C, and E (single prop units) or DP-A, DP-B, DP-C, DP-D and DP-E dual prop units (the C, D and E have different intermediate housing suspension forks).

Around 1993 or so Volvo Penta and the OMC formed a joint program. Volvo Penta would supply outdrives

to OMC (along with a number of other parts). These drives were two part drives (upper and lower) with

hydraulic rams. OMC would take the Volvo Penta produced drives and label them Cobra SX or SX Cobras.

Eventually both OMC and Volvo Penta called the drives SX-C. (There were a few variants of the SX-C

and a very short lived SX-S which I have only seen one of). The dual prop version of the SX-C was called

a DP-S which was an odd mix of a drive and was superceeded by the DPS-Ms pretty soon.

The SX-C drive was manufactured from 1995-1997 or so and then OMC and Volvo Penta had a big break

and got angry with each other.

Volvo Penta began to make the SX-M drives (more or less the same as the SX-C drives except with a single

cavitation plate and upgraded gears inside along with some other internal changes).

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The upper unit of the SX-M drive is used for the DPS-M drive which is a dual prop. They continue to manufacture these as new drives although officially they run from 1998 to around 2006 or so.

Then Volvo Penta began to bring out the SX-A and SX-D and DPS-A, DPS-B, DPS-D and OXi (variants of these drives called Ocean Series). These have different transom shields and are a different shape but look similar to the earlier SX-M/DPS-M. The drive shafts change from a spline to a spiral (so need different props or hubs) from B type upward.

The DPH-A and later drives, DPH-B, C, D etc. are larger heavier duty drives that are used mostly with diesel engines (although not entirely). They have external steering cylinders that connect to the drives for steering.

The XDP drive have been discontinued. These drives were from 2007 to 2013 or so. These were composite one piece black drives. They were designed by the U.S.A. engineers and had so many issues that Volvo Penta finally, after much cognitive dissonance, gave up on them. Personally, I think the design was reasonable, but the quality control of manufacturing was hopeless and my mechanics hated working on them. Volvo Penta has a special program that replaces the XDP drives and transom shields with DPS-B (DPS-B OXi) drives and transom shields. The program is a good deal with savings of around \$6,500 but is still an expensive option.

There were a couple of dead branch drives that came and went like the DP-G drive (KAMD300 diesel engine) and the DPX-R drives (higher speed diesel drives for engines) and the DPX-S drives (never seen one). Rarely seen any more with parts hard to get.

Volvo Penta, other than the XDP, is very good on supporting their drives and we can get almost any parts for any of these drives.

Some of the drives can be partially mixed and matched, but most are pretty specific to their family.

Hope this helps.

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