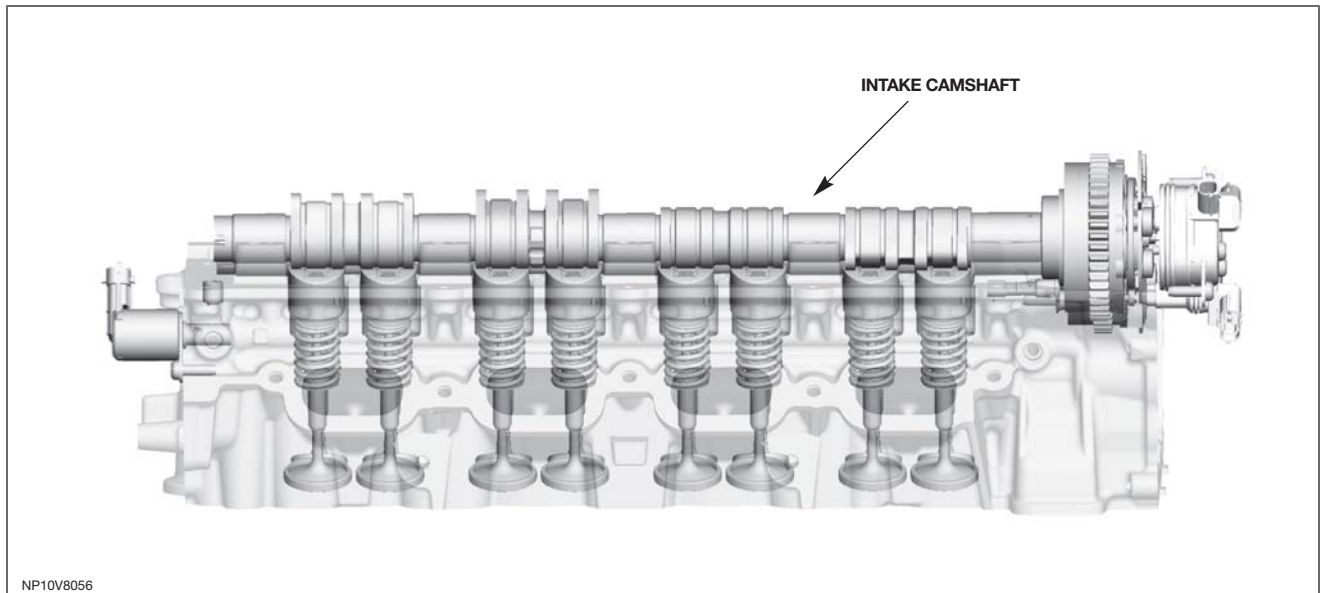


## CAMSHAFT PROFILE SWITCHING

### Overview

The Camshaft Profile Switching (CPS) system for the NA engine features two completely different intake camshaft profiles machined onto the same camshaft. The engine management system determines which camshaft profile to use, depending on the engine's running conditions and driver's torque demands. One profile is ideal for low-speed/low-load driving; the other, which gives higher valve lift, is better for higher speeds and loads. A two-piece hydraulic tappet arrangement alters the camshaft profiles.



The intake camshaft features three lobes per valve with two different profiles, one centrally located for low valve lifting height and two outer lobes for high valve lift. These are used by the CPS system to adjust the lift of the intake valves from 5.5mm to 10.53mm. Profile switching depends on the instantaneous engine running conditions and the driver's torque demands. The exhaust camshaft is a conventional design featuring a single lobe per valve, giving a set 9.36mm valve lifting height.

