The chain transmission components were higher than for the inlet one, as the inlet camshaft assembly contained the heavy outlet and inlet camshaft assemblies bearing in their border pairs of journal bearings. To original half-shells were replaced by ones made of PTFE. This was to reduce the friction coefficient in the chain transmission. The friction in the chain transmission was determined using the SI engine with some modifications.

The values of friction torque in the bearings were presented in the table also included the automated values of the internal friction torque in the chain transmissions. The value of internal friction torque for different friction in the contact zone between fixed chain pin and swaging chain roller: dry, lubricated with engine oil decreased about 58% in comparison to the case of lack of engine oil. Addition of 2 wt.% amount of TiO₂ nanoparticles into the lubrication by pure engine oil decreased internal friction torque by 9% in comparison to the case of lubrication with engine oil containing 2 wt.% amount of TiO₂ nanoparticles. The friction torque obtained between fixed chain pin and swaging chain roller, the TiO₂ nanoparticles in the lubrication by pure engine oil presented in the Table also included the contacts between swaging chain roller and chain pin and the contact zones of chain pin and swaging chain roller for different cases of friction occurring in the contact zone between fixed chain pin and swaging chain roller: dry, lubricated with engine oil, lubricated with engine oil containing 2 wt.% amount of TiO₂ nanoparticles.

The resulting courses of the swinging angle of the chain transmission components comparing to the case of lubrication with pure engine oil. The values of internal friction torque in the chain transmission lubricated by engine oil decreased about 10% for the case of lubrication with pure engine oil. Addition of 2 wt.% amount of TiO₂ nanoparticles into the engine oil decreased internal friction torque by 9% in comparison to the case of lubrication with pure engine oil. The addition of 2 wt.% amount of TiO₂ nanoparticles into the engine oil decreased internal friction torque by about 10%. The constants of 2 wt.% amount of TiO₂ nanoparticles into the engine oil decreased internal friction torque by 9% in comparison to the case of lubrication with pure engine oil. The addition of 2 wt.% amount of TiO₂ nanoparticles into the engine oil decreased internal friction torque by 9% in comparison to the case of lubrication with pure engine oil. The addition of 2 wt.% amount of TiO₂ nanoparticles into the engine oil decreased internal friction torque by 9% in comparison to the case of lubrication with pure engine oil. The addition of 2 wt.% amount of TiO₂ nanoparticles into the engine oil decreased internal friction torque by 9% in comparison to the case of lubrication with pure engine oil. The addition of 2 wt.% amount of TiO₂ nanoparticles into the engine oil decreased internal friction torque by 9% in comparison to the case of lubrication with pure engine oil. The addition of 2 wt.% amount of TiO₂ nanoparticles into the engine oil decreased internal friction torque by 9% in comparison to the case of lubrication with pure engine oil. The addition of 2 wt.% amount of TiO₂ nanoparticles into the engine oil decreased internal friction torque by 9% in comparison to the case of lubrication with pure engine oil. The addition of 2 wt.% amount of TiO₂ nanoparticles into the engine oil decreased internal friction torque by 9% in comparison to the case of lubrication with pure engine oil.

The values of internal friction torque in the bearings and internal friction torque in the chain transmission components were higher than for the inlet one, as the inlet camshaft assembly contained the heavy outlet and inlet camshaft assemblies bearing in their border pairs of journal bearings.