

BALANCER UNIT [SKYACTIV-D 2.2]

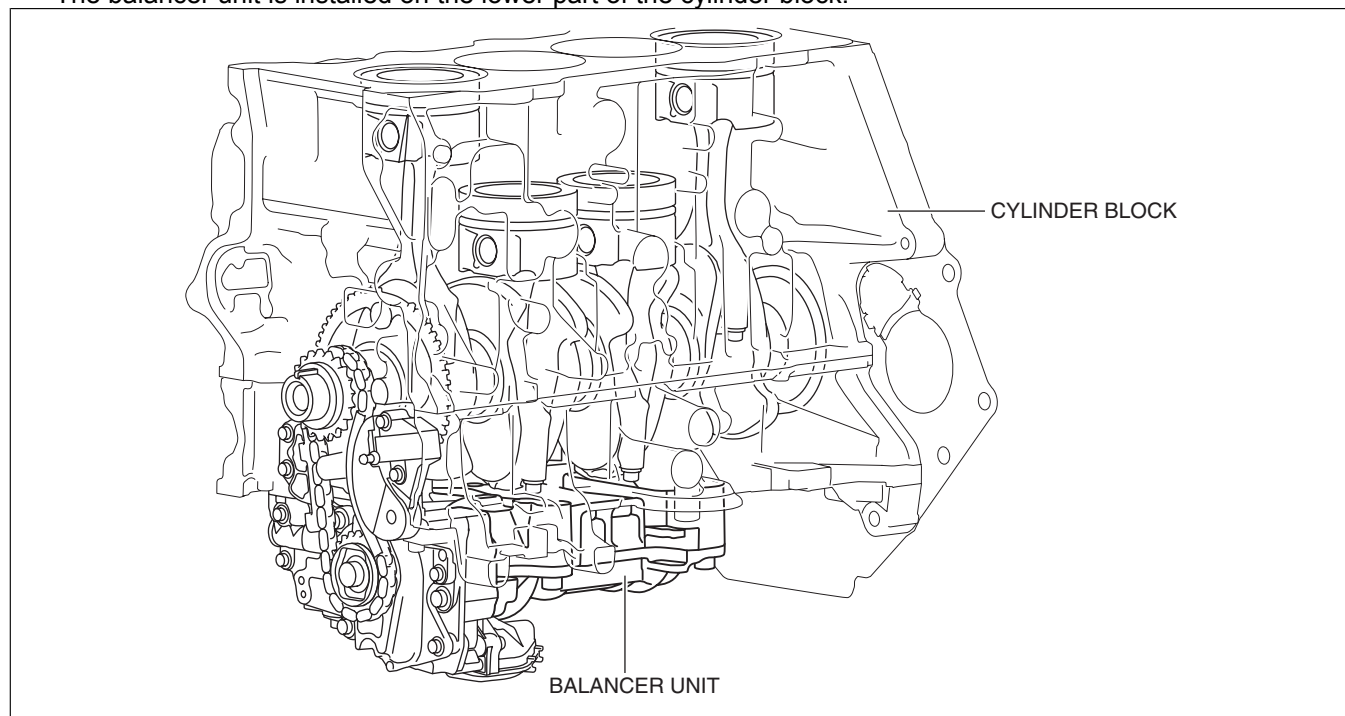
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Purpose, Function

- The balancer unit eliminates the secondary inertia force occurring in the in-line 4-cylinder engine which reduces engine vibration. As a result, booming noise (low frequency noise which causes the feeling of ear compression) is suppressed and a high-level quietness has been realized.

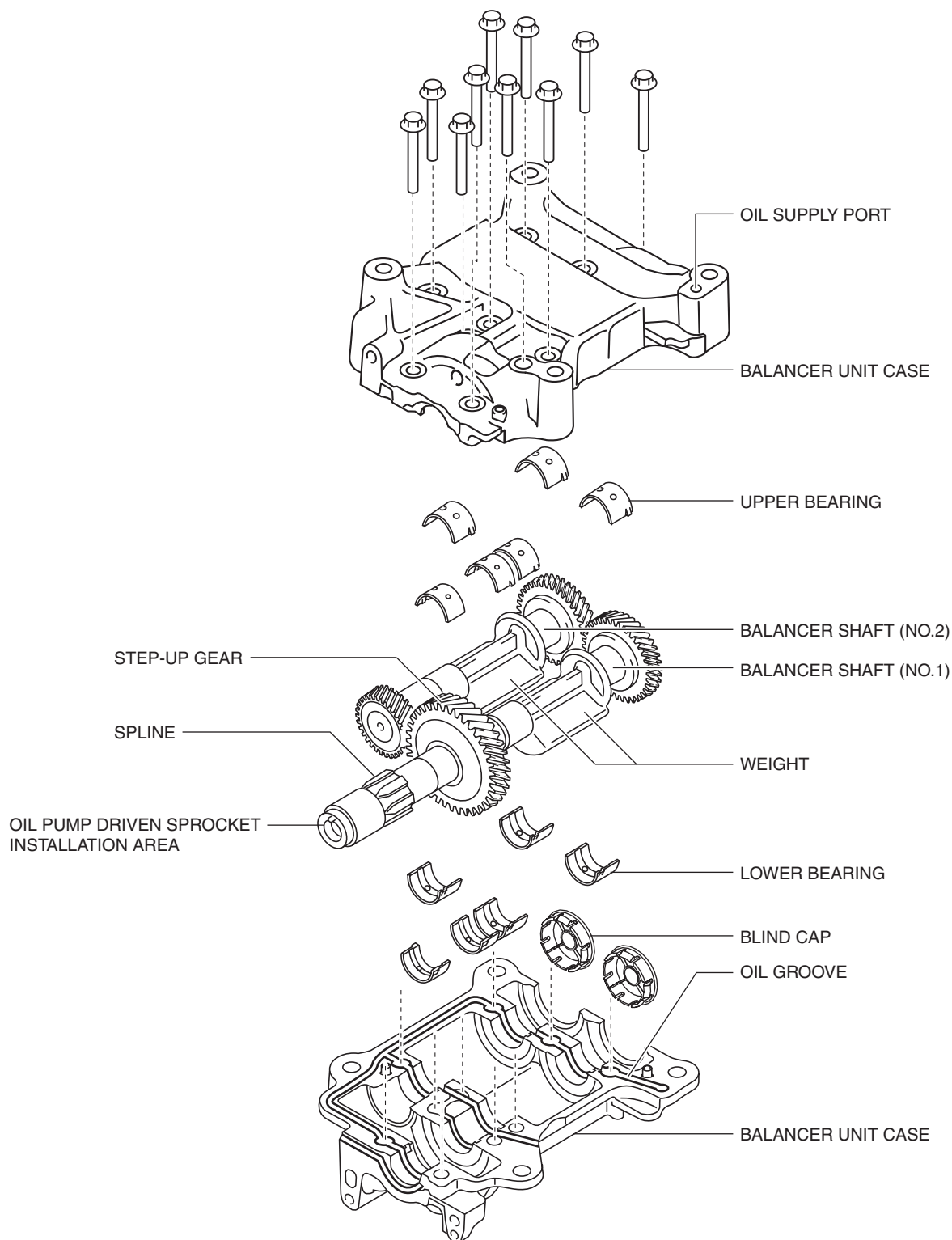
Construction

- The balancer unit is installed on the lower part of the cylinder block.



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- The balancer unit consists of two balancer shafts with weights (No.1 and No.2), step-up gear and the balancer unit case.
- Agitation resistance has been reduced by covering the balancer shafts and gears with the balancer unit case.



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Operation

- The balancer shaft rotates by receiving the crankshaft rotation force via the oil pump driven sprocket.
- The balancer shaft rotation speed is twice the rotation speed of the crankshaft. As a result, the balancer shaft can generate inertia force (eliminates secondary inertia force) in the opposite direction in response to the occurrence of secondary inertia force.