

Holden Astra 2004-2009 Workshop Manual

Crankshaft and Pistons

Crank mechanism is made more rigid without increasing weight.



Fig. 1.18. Crankshaft and Pistons:
1 - Mainshaft, 2 - piston, 3 - connecting rod, 4 - Crankshaft

In connection with higher power and using a special form of pistons used oil jet nozzles for cooling the pistons. They are located on the engine block and are aimed at the underside of the piston. The crankshaft has a more rigid structure, without increasing weight. It also uses floating piston pins.

Cooling of the piston

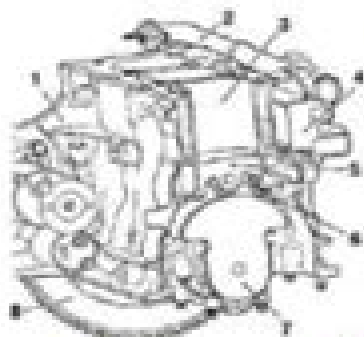


Fig. 1.19. Cooling of the piston: 1 - the engine block, 2 - pipe cooling system, 3 - cylinder walls, 4 - oil cooler, 5 - piston, 6 - oil spray atomizer, 7 - crankshaft

To new pistons (Fig. 1.20) gasoline engine Z 18 XEP, which must cope with thermal loads, increased due to increased power output, the block is equipped with piston cooling.

Rear crankshaft oil seal

At petrol engine Z 18 XEP mounted on the rear crankshaft oil seal crankshaft.



Fig. 1.21. Rear crankshaft oil seal with the sensor: 1 - rear crankshaft oil seal, 2 - encoder, 3 - Crankshaft, 4 - crankshaft sensor, 5 - connecting cable to plug the wiring harness of the crankshaft sensor

2.3. Removing and installing the power unit

General and safety by disconnecting power unit

If it was decided to lift the engine, it is necessary to undertake certain



Fig. 1.22. General view of the engine Z 18 XEP

It is necessary to determine the place where the work will be done. Undoubtedly, the best place is to have a workshop. It is important to have a work platform, as well as a place to store the car. If no workshop, then you will need a flat smooth concrete or asphalt playground.

Clearing the engine compartment and the engine before removing the tool will provide clean and continuous operating condition.

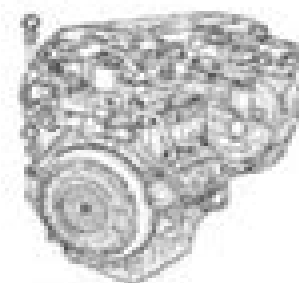


Fig. 1.23. General view of the engine Z 18 XEP

Also need the lift or jacks. Make sure that these devices have a margin of capacity and are able to raise the engine with all the mounted units. Safety measures play a crucial role, since the rise of the motor car - a potentially dangerous operation.

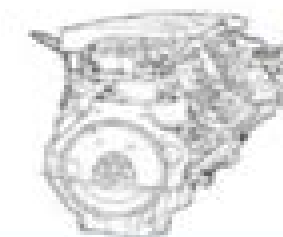


Fig. 1.24. General view of the engine Z 18 XEP



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Z. Furqon, S.T., Drs. Joko Pramono



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Subject Guide to Books in Print, 2001

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