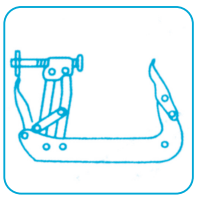
Valve Spring Compressor

The rules and procedures in force where people are at work may require the person responsible for this equipment to carry out a specific risk assessment.



It is important to read this entire leaflet BEFORE using the Valve Spring Compressor

1. The valve spring compressor, although not powered, can cause injury or damage if not used in a careful and controlled way.
2. A valve spring compressor is designed to quickly and easily compress most valve springs to enable the removal and refitting of valves in cylinder heads.
3. If the user has not operated a valve spring compressor before, they must familiarise themselves with how it works and the hazards it presents before starting work.
4. Plan ahead to make sure that all work is carried out safely.
5. At least the following items of personal protective equipment must be used;

   Impact resistant goggles: EN166 – B or BS2092 grade 1;

   Gloves.
6. The valve spring compressor must not be used by minors, or by anyone under the influence of drugs or alcohol.
7. Valve spring compressors are designed for operation by an able bodied adult. Anyone with either temporary or permanent disability must seek expert advice before using them.

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Before Starting Work...

WORK AREA

1. Make sure that the work area is clear and safe and that no-one is near to the operator to distract them.
2. Protect others from any possible danger. Warn others to keep away.
3. If possible, move the work area to a suitable safe place away from others.
4. Make sure that the cylinder head is secure on a bench or clamped in a vice before work is started.

OPERATORS

1. The following items of personal protective equipment are the minimum that should be worn whenever using the valve spring compressor, particular jobs or environments may require a higher level of protection.
2. Impact resistant goggles (EN166 – B or BS2092 grade 1) must be worn when working with this equipment.
3. Wear gloves when handling the cylinder head.
4. Anybody who is working near to the valve spring compressor will also need to wear appropriate personal protective equipment.

VALVE SPRING COMPRESSOR

1. Check the valve spring compressor and any accessories. If anything is found damaged, do not use it – contact the hire company.
2. If the valve spring compressor slips while under tension, it could cause injury or damage. Make sure to locate it on the valve correctly.
3. The valve spring assembly consists of the valve (pushed through the cylinder head) an arrangement of one or two springs located on the cylinder head, a valve spring cap, and two half collets.
4. The collets locate between a shoulder around the top of the valve stem and the tapered hole in the valve spring cap.
5. The assembly is held in place by the springs pushing against the spring cap, which is held fast on the valve stem by the collets.
6. To adjust the compressor to the correct setting, first open the release handle to extend the compressor jaws. Now fit the compressor to the valve to be removed and adjust the screw thread to achieve a close fit.
6. When the valve spring has been adjusted, it will be suitable for all valves on the cylinder head.
7. Check on how the valve spring operates – before starting work, it is important to know how to use the tool properly.

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Using the Valve Spring Compressor

1. Wear protective equipment.
2. Take care not to trap or pinch fingers in the springs of the compressor.
3. To re-assemble the same valves and springs, the user will need to identify them, so they can be fitted in the same position when rebuilding the cylinder head.
4. By closing the release handle while holding the compressor carefully in position on the valve, the springs should be compressed. The compressor will remain locked in the closed position.
5. If the spring cap cannot be depressed, then unstick the spring cap and collets that are stuck together with burnt oil or other deposits.
6. To do this, remove the valve spring compressor and then place a suitable size pocket (probably 15-19mm) over the valve stem so that it rests on the valve spring cap. Tap the end of the socket smartly with a mallet to shock the valve cap free.
7. Now use the valve spring compressor to force the valve spring cap down the valve stem compressing the valve springs. This will release the tension on the collets, which should be carefully removed and put in a safe place.
8. Open the release handle to release the tension on the valve spring compressor until the springs are free from compression. Remove the valve spring cap, the valve springs, and finally the valve. Put each item in a safe place.
9. Replace the valve assembly by using the above procedure in reverse.
10. Always keep the valve spring compressor in line with the valve spring to be compressed. Do not try to compress the spring with the compressor at an angle.
11. Do not use excessive pressure or leverage to try to compress the spring. If the compressor will not operate easily, it may mean your valve spring compressor is not in line with the valve spring.
12. Take care the equipment does not slip off and allow the valve spring or a collet to fly out causing injury or damage.
13. Work must be stopped if anyone approaches the operator.
14. Put the valve spring compressor away in its container when it is no longer being used.
15. If the equipment does not work properly, do no attempt to repair it. Contact the hire company.
16. Please keep this leaflet until all work is complete.

Please keep this leaflet safely as it may be required for future reference

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