



Engine Leak-Down Tester

Operating Instructions:

1. Warm the motor up to normal operating temperature.
2. Remove all spark plugs. Put transmission in neutral. Block wheels.
3. Remove the rocker arms of the cylinder to be checked.

Important note: TURN THE CRANKSHAFT SO THAT THE PISTON IS AT BOTTOM DEAD CENTER. If you do not, the motor will suddenly turn over when you connect the air, possibly causing serious injury to you or someone else working on the motor.

4. Screw the hose into the spark plug hole of the cylinder to be tested. Be sure that it is tight enough to completely seal. Leakage here will give you a false reading - lower than true leakdown.
5. Connect the hose to the tester and to your air supply. Ideally it should be between 110 and 125 psi. (175 psi. MAX) and be clean and moisture free.
6. Adjust the regulator until the left gauge reads 100 psi. (See Note A below if you air supply cannot maintain 100 psi. on the left gauge.)
7. At this point the right gauge will display the leakdown as a %. For example 92 psi. on the right = 92% leakdown or 8% leakage (100 - 92 = 8). See the chart below for leakage %. If you get an extremely low leakdown % and the motor seems to be running well check for a blockage in the precision restriction between the gauges.
8. It is best to lower the regulator setting before disconnecting either airline to avoid rapid pressure changes to the gauges.

NOTE A: If your air supply cannot maintain 100 psi. on the left gauge you may use a lower pressure. Use the chart below or divide the right gauge by the left gauge pressure for the %.

% leakage	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%
100 psi on left gauge	99	98	97	96	95	94	93	92	91	90	89	88	87	86	85
85 psi	84	83	82	81	81	80	79	78	77	76	76	75	74	73	72
70 psi	69	69	68	67	66	66	65	64	64	63	62	61	61	60	59

Talk to your engine builder about what leakdown % should be expected on new and used motors. Most leakage is past the rings which, when worn, can't seal the compression properly and costs you power. Once you have established a maximum leakage before rebuild, test your motor often to keep it running its best.

Don't drop this unit or your readings could be affected. Store it in a clean dry place.



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