



# SAVVY

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## Oil control ring solvent flush

### Solvent mixture

*In a clean 5 gallon bucket, combine:*

- 1 gallon Varsol (mineral spirits)\*
- 1 gallon Xylene (dimethylbenzene)\*
- 2 quarts Aeroshell W100

*\*Available at paint stores.*

### Procedure

1. Remove oil drain plug or quick drain valve. (NOTE: Solvents may soften the O-ring or seal if drained through a quick drain valve.) Drain all engine oil and remove oil filter.
2. Place a 5 gallon bucket to catch solvent mixture that will come out of the oil drain boss.
3. Remove the top spark plugs from all cylinders.
4. Choose the first cylinder to flush.
5. Turn propeller in normal direction of rotation until piston passes Bottom Dead Center (BDC) and begins rising into the compression stroke. VERY IMPORTANT: Make sure the piston is positioned to the compression stroke and NOT the exhaust stroke! Do NOT allow the flammable solvent mixture to be expelled through the exhaust valve into the exhaust system.
6. Pour 1 pint of solvent mixture into top spark hole of the cylinder.
7. Replace the top spark plug in the solvent-filled cylinder and tighten lightly.
8. Turn propeller in the normal direction of rotation until you feel the hydraulic lock.
9. Slowly continue turning the propeller using strong steady force in order to squeeze the solvent mixture past the piston rings and through the oil feed holes in the oil control ring groove.

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10. If you can hear the solvent mixture squirting freely into the crankcase, the oil control ring is clear. If the propeller is difficult to turn and you cannot hear the solvent mixture squirting into the crankcase, repeat steps 5 through 9 with additional solvent. You may need to repeat this 3 to 4 times to clear sludge buildup. YOU WILL BE ABLE TO HEAR AND FEEL WHEN THE RING IS CLEAR.
11. **IMPORTANT: Do NOT rotate the prop more than about 20 degrees past Top Dead Center (TDC) in order to avoid opening the exhaust valve and allowing the flammable solvent mixture to get into the exhaust system!**
12. Once you are satisfied that the ring is clear, remove top spark plug and turn the propeller to approximately TDC, then back it off by about 15 to 20 degrees.
13. Remove bottom spark plug while holding a rag to catch any remaining solvent mixture that drains from the bottom spark plug boss.
14. Rock the propeller back and forth several times about 10 to 20 degrees each side of TDC to expel remaining solvent mixture from the cylinder. NOTE: Rocking the propeller back and forth around TDC with the spark plugs out will empty the cylinder and minimize mess.
15. Repeat steps 5 through 14 for the remaining cylinders to be flushed.
16. **IMPORTANT: Ensure that there is no residual solvent mixture in the exhaust system.** This will not occur if the above procedure is followed accurately and carefully. **NOTE: If solvent is permitted to get into the exhaust system, it may be necessary to open up the exhaust system to remove it prior to engine start.**
17. Reinstall all spark plugs and torque as specified in the maintenance manual.
18. Replace the oil drain plug or quick drain valve and safety.
19. Install a new oil filter.
20. Service the sump with engine oil.

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