

Small Engines

Servicing Air Cleaners on Small Engines

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Type of Air Cleaners

There are three types of air cleaners used on small gasoline engines. Oil-bath type is probably most common on older engines. The oiled-filter or foam type may be more common today. Dry filter types are used on some small engines and certainly are universally used on automobile engines.

Oil-Bath Type

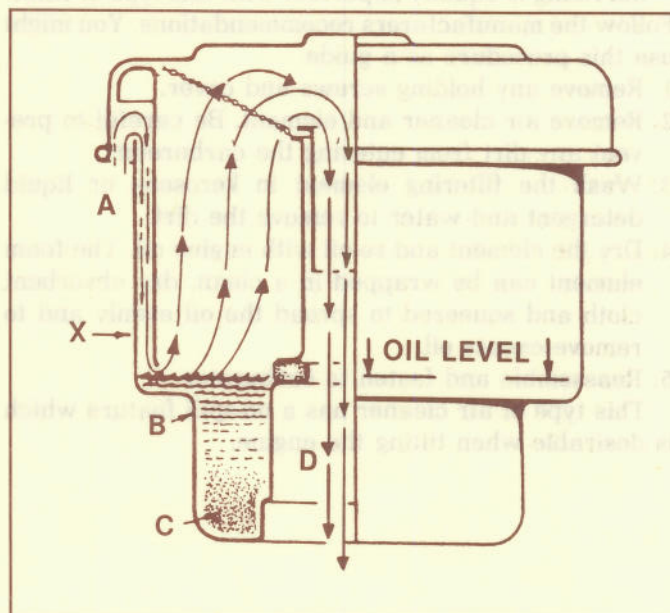
Unfiltered air entering the cleaner impacts the surface of the oil in a small cup at the bottom of the cleaner. Some of the dust and dirt is deposited here.

Oil is picked up by the air and deposited on the filtering element. Oil-coated dirt particles lodge in the filtering element. Excessive oil and dirt drain back into the cup. The clean air flows out of the filter into the engine.

When using the engine under dusty conditions, air cleaners should be checked frequently. It should be cleaned at least every 25 hours of operation or more often if necessary.

In servicing this air cleaner, check your owner's manual and follow the recommendations.

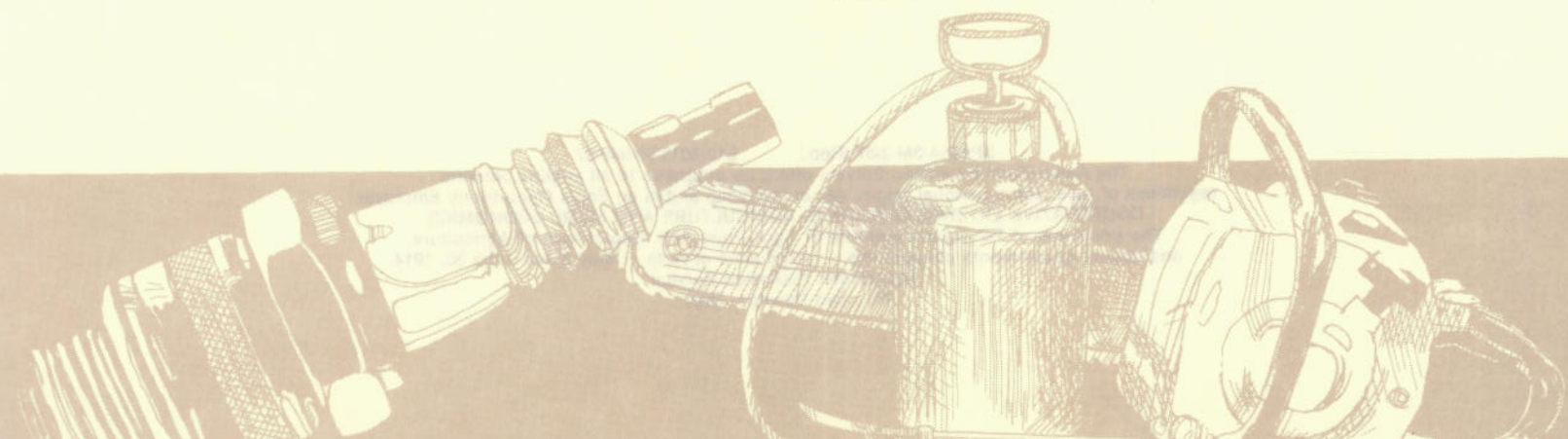
1. Disassemble the cleaner.
2. Throw away the dirty oil.
3. Clean cup, filter and other parts with petroleum solvent.
4. Refill the cup with oil of the same grade used in the crankcase to the "oil level" mark.
5. Reassemble the cleaner, being sure the gaskets are in place and everything is tight.

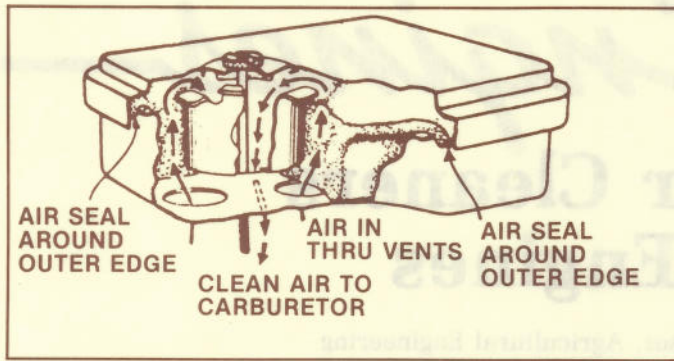


There is the possibility of oil spilling from this type air cleaner, if the engine is tipped. The air cleaner should be removed prior to checking especially where the engine is applied to equipment such as lawn mowers that have to be tipped for a safety check.

Oiled-Filter Type

This filter consists of filtering material such as aluminum foil mesh, or a sponge-like plastic material called polyurethane. Either material is coated with oil before being installed. The dust or dirt in unfiltered air becomes trapped in the element.





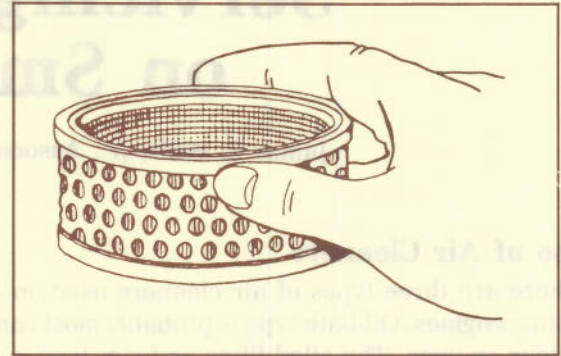
Servicing is equally important with this type of filter. Follow the manufacturers recommendations. You might use this procedure as a guide.

1. Remove any holding screws and cover.
2. Remove air cleaner and element. Be careful to prevent any dirt from entering the carburetor.
3. Wash the filtering element in kerosene or liquid detergent and water to remove the dirt.
4. Dry the element and re-oil with engine oil. The foam element can be wrapped in a clean, dry absorbent cloth and squeezed to spread the oil evenly and to remove excess oil.
5. Reassemble and fasten to carburetor.

This type of air cleaner has a no-spill feature which is desirable when tilting the engine.

Dry Filter Type

A dry-type air cleaner is not often used on small engines. It has a porous filtering element usually made of paper. The element has minute openings that keep all except extremely small particles from passing through.



Dry-Type Air Cleaner

Servicing the dry-type filter is relatively easy. It should also be checked regularly. Follow the manufacturer's recommendations.

1. Remove the element.
2. Inspect and tap free of dust particles.
3. If a paper element, do not wash or use compressed air and if still dirty after tapping, replace with a new element. Handle the paper element with care.
4. If the filter element is moss or fiber, you can use compressed air directing it from inside out. Wash it with soap and water.
5. Clean the cover and case and reassemble the unit.

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