

# KOHLER Engine Model Number: CH25S Spec 68504

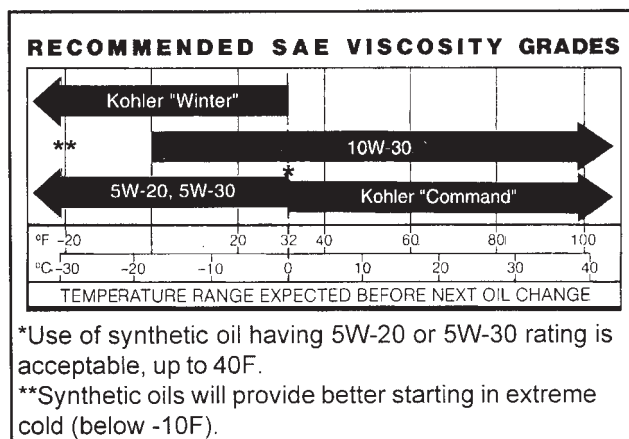
This information has been extracted out of the Kohler engine operators manual No. TP-2474-D For additional information see the complete Kohler Manual.

## Oil Recommendations

Using the proper type and weight of oil in the crankcase is extremely important. So is checking oil daily and changing oil regularly. Failure to use the correct oil, or using dirty oil, causes premature engine wear and failure.

## Oil Type

Use high quality detergent oil of **API (American Petroleum Institute) service class SG or SH**. Select the viscosity based on the air temperature at the time of operation as shown in the following table.



## Check Oil Level

The importance of checking and maintaining the proper oil level in the crankcase cannot be overemphasized. Check oil **BEFORE EACH USE** as follows:

1. Make sure the engine is stopped, level, and is cool so the oil has had time to drain into the sump.
2. To keep dirt, debris, etc., out of the engine, clean the area around the dipstick before removing it.
3. Remove the dipstick; wipe oil off. Reinsert the dipstick into the tube and press all the way down.
4. Remove the dipstick and check the oil level.

The oil level should be up to, but not over, the "F" mark on the dipstick. See Figure 6.

5. If the level is low, add oil of the proper type, up to the "F" mark on the dipstick. (Refer to "Oil Type" on page 4.) Always check the level with the dipstick before adding more oil.

**NOTE:** To prevent extensive engine wear or damage, always maintain the proper oil level in the crankcase. Never operate the engine with the oil level below the "L" mark or over the "F" mark on the dipstick.

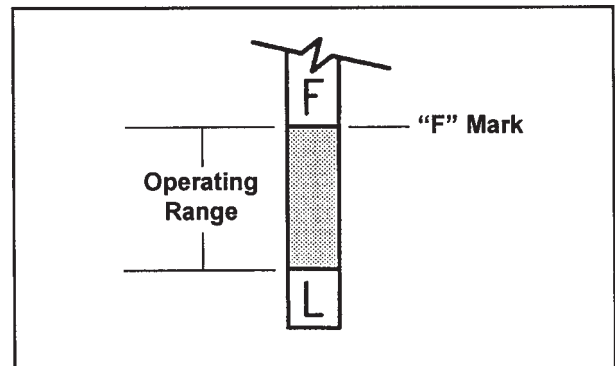


Figure 6. Oil Level Dipstick.

## Change Oil and Oil Filter

### Change Oil

Change oil after every **100 hours** of operation (more frequently under severe conditions). Refill with service class SG or SH oil as specified in the "Viscosity Grades" table (Figure 2) on page 4.

Change the oil while the engine is still warm. The oil will flow freely and carry away more impurities. Make sure the engine is level when filling, checking, and changing the oil.

Change the oil as follows (see Figure 7):

1. To keep dirt, debris, etc., out of the engine, clean the area around the oil fill cap/dipstick before removing it.
2. Remove one of the oil drain plugs, oil fill cap, and dipstick. Be sure to allow ample time for complete drainage.
3. Reinstall the drain plug. Make sure it is tightened to **13.6 N·m (10 ft. lb.)** torque.
4. Fill the crankcase, with new oil of the proper type, to the "F" mark on the dipstick. Refer to "Oil Type" on page 4. Always check the level with the dipstick before adding more oil.
5. Reinstall the oil fill cap and tighten securely. Reinstall dipstick.

**NOTE:** To prevent extensive engine wear or damage, always maintain the proper oil level in the crankcase. Never operate the engine with the oil level below the "L" mark or over the "F" mark on the dipstick.

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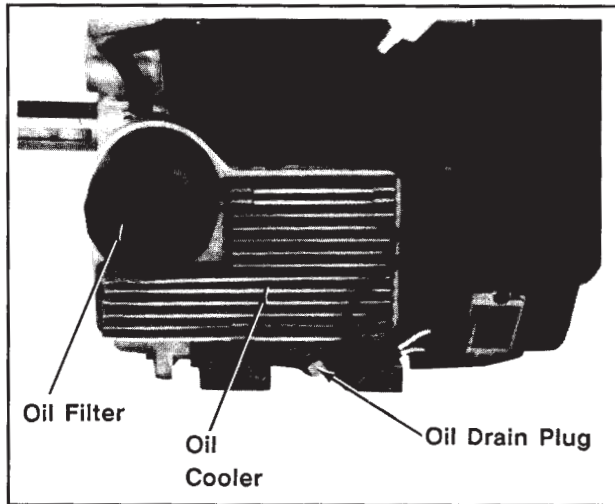


Figure 7. Oil Drain Plugs, Oil Filter, and Oil Cooler (on CH25).

## Change Oil Filter

Replace the oil filter **at least every other oil change (every 200 hours of operation)**. Always use a genuine Kohler oil filter, Part No. 12 050 01.

Replace the oil filter as follows:

1. Drain the oil from the engine crankcase.
2. Allow the oil filter to drain.
3. Before removing the oil filter, clean the area around the oil filter to keep dirt and debris out of the engine. Remove the old filter. Wipe off the surface where the oil filter mounts.
4. Place a new replacement filter in a shallow pan with the open end up. Pour new oil, of the proper type, in through the threaded center hole. Stop pouring when the oil reaches the bottom of the threads. Allow a minute or two for the oil to be absorbed by the filter material.
5. Put a drop of oil on your fingertip and wipe it on the rubber gasket.
6. Install the replacement oil filter to the filter adapter or oil cooler. Turn the oil filter clockwise until the rubber gasket contacts the filter adapter or oil cooler, then tighten the filter an additional **1/2 turn**.
7. Reinstall the drain plug. Make sure it is tightened to **13.6 N·m (10 ft. lb.)** torque.
8. Fill the crankcase with new oil of the proper type to the "F" mark on the dipstick. Add 0.24 L (1/2 pint) of oil for the filter capacity.

## Fuel Recommendations

### **⚠ WARNING: Explosive Fuel!**

Gasoline is extremely flammable and its vapors can explode if ignited. Store gasoline only in approved containers, in well ventilated, unoccupied buildings, away from sparks or flames. Do not fill the fuel tank while the engine is hot or running, since spilled fuel could ignite if it comes in contact with hot parts or sparks from ignition. Do not start the engine near spilled fuel. Never use gasoline as a cleaning agent.

## General Recommendations

Purchase gasoline in small quantities and store in clean, approved containers. A container with a capacity of 2 gallons or less with a pouring spout is recommended. Such a container is easier to handle and helps eliminate spillage during refueling.

Do not use gasoline left over from the previous season, to minimize gum deposits in your fuel system and to insure easy starting.

Do not add oil to the gasoline.

Do not overfill the fuel tank. Leave room for the fuel to expand.

## Fuel Type

For best results use only clean, fresh, **unleaded** gasoline with a pump sticker octane rating of 87 or higher. In countries using the Research method, it should be 90 octane minimum.

Unleaded gasoline is recommended as it leaves less combustion chamber deposits. Leaded gasoline may be used in areas where unleaded is not available and exhaust emissions are not regulated. Be aware however, that the cylinder heads may require more frequent service.

## Gasoline/Alcohol blends

Gasohol (up to 10% ethyl alcohol, 90% unleaded gasoline by volume) is approved as a fuel for Kohler engines. Other gasoline/alcohol blends are not approved.

## Gasoline/Ether blends

Methyl Tertiary Butyl Ether (MTBE) and unleaded gasoline blends (up to a maximum of 15% MTBE by volume) are approved as a fuel for Kohler engine. Other gasoline/ether blends are not approved.

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## Maintenance Schedule

These required maintenance procedures should be performed at the frequency stated in the table. They should also be included as part of any seasonal tune-up.

Frequency	Maintenance Required
Daily or Before Starting Engine	<ul style="list-style-type: none"> <li>• Fill fuel tank.</li> <li>• Check oil level.</li> <li>• Check air cleaner for dirty<sup>1</sup>, loose, or damaged parts.</li> <li>• Check air intake and cooling areas, clean as necessary<sup>1</sup>.</li> </ul>
Every 25 Hours	<ul style="list-style-type: none"> <li>• Service precleaner element<sup>1</sup>.</li> </ul>
Every 100 Hours	<ul style="list-style-type: none"> <li>• Replace air cleaner element<sup>1</sup>.</li> <li>• Change oil. (More frequently under severe conditions.)</li> <li>• Remove cooling shrouds and clean cooling areas<sup>1,3</sup>.</li> <li>• Check oil cooler fins, clean as necessary (if equipped).</li> </ul>
Every 200 Hours	<ul style="list-style-type: none"> <li>• Check spark plug condition and gap.</li> <li>• Change oil filter.</li> </ul>
Annually or Every 500 Hours	<ul style="list-style-type: none"> <li>• Have UTE bendix starter drive serviced<sup>2</sup>.</li> <li>• Have solenoid shift starter disassembled and cleaned<sup>2</sup>.</li> </ul>

<sup>1</sup>Perform these maintenance procedures more frequently under extremely dusty, dirty conditions.

<sup>2</sup>Have a Kohler Engine Service Dealer perform this service.

<sup>3</sup>Cleanout Kit 24 755 90 allows cooling areas to be cleaned without removing shrouds.

## Service Precleaner and Air Cleaner Element

This engine is equipped with a replaceable, high density paper air cleaner element. Some engines are also equipped with an oiled, foam precleaner which surrounds the paper element. See Figures 8 and 9.

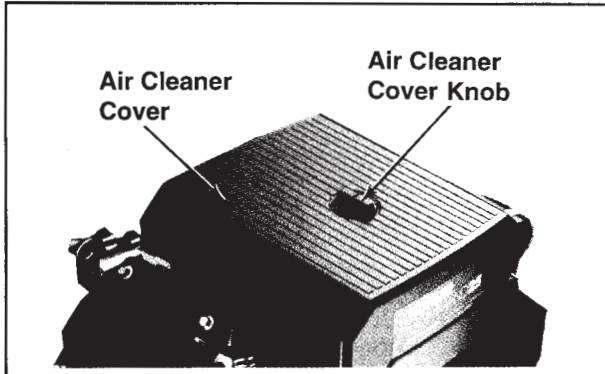


Figure 8. Air Cleaner Housing Components.

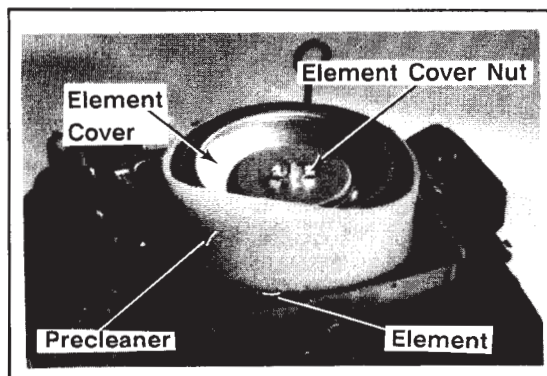


Figure 9. Air Cleaner System Components.

Check the air cleaner **daily or before starting the engine**. Check for a buildup of dirt and debris around the air cleaner system. Keep this area clean. Also check for loose or damaged components. Replace all bent or damaged air cleaner components.

NOTE: Operating the engine with loose or damaged air cleaner components could allow unfiltered air into the engine causing premature wear and failure.

### Service Precleaner

If so equipped, wash and reoil the precleaner every **25 hours** of operation (more often under extremely dusty or dirty conditions).

1. Unhook the latches located on either side of the air cleaner cover or loosen the cover retaining knob and remove the cover.
2. Remove the precleaner from the paper element.
3. Wash the precleaner in warm water with detergent. Rinse the precleaner thoroughly until all traces of detergent are eliminated. Squeeze out excess water (do not wring). Allow the precleaner to air dry.
4. Saturate the precleaner with new engine oil. Squeeze out all excess oil.
5. Reinstall the precleaner over the paper element.
6. Reinstall the air cleaner cover. Secure cover with the two latches or the cover retaining knob.

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- When precleaner replacement is necessary order genuine Kohler parts.

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## Service Paper Element

Every **100 hours** of operation (more often under extremely dusty or dirty conditions) replace the paper element.

- Loosen the cover retaining knob and remove the cover.
- Remove the element cover nut, element cover, and paper element with precleaner.
- Remove the precleaner (if so equipped) from the paper element.
- Do not wash the paper element or **use pressurized air**, as this will damage the element. Replace a dirty, bent, or damaged element with a genuine Kohler element. Handle new elements carefully; do not use if the sealing surfaces are bent or damaged.
- When servicing the air cleaner, check the air cleaner base. Make sure it is secured and not bent or damaged. Also check the element cover for damage or improper fit. Replace all damaged air cleaner components.

**NOTE:** If any loose dirt or debris fell on the air cleaner base when the element was removed, carefully remove it and wipe the base clean. Be careful that none of it drops into the intake throat. Check the condition of the rubber seal on the air cleaner stud. If the conditions is questionable in any way, replace it with the new seal packaged with the replacement element.

- Reinstall the paper element, precleaner, element cover, element cover nut, and air cleaner cover. Secure cover with the cover retaining knob.
- When element replacement is necessary order genuine Kohler parts.

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## Check Spark Plugs

Every **200 hours** of operation, remove the spark plugs, check condition, and reset the gap or replace with new plugs as necessary. The standard spark plug is a Champion® RC12YC (Kohler Part No. 12 132 02). A high-performance spark plug, Champion® Premium Gold 2071 (used on Pro Series engines, Kohler Part No. 12 132 06) is also available. Equivalent alternate brand plugs can also be used.

- Before removing the spark plug, clean the area around the base of the plug to keep dirt and debris out of the engine.
- Remove the plug and check its condition. Replace the plug if worn or reuse is questionable.

**NOTE:** Do not clean the spark plug in a machine using abrasive grit. Some grit could remain in the spark plug and enter the engine causing extensive wear and damage.

- Check the gap using a wire feeler gauge. Adjust the gap to **.76 mm (0.030 in.)** by carefully bending the ground electrode. See Figure 10.
- Reinstall the spark plug into the cylinder head. Torque the spark plug to **24.4/29.8 N·m (18/22 ft. lb.)**.

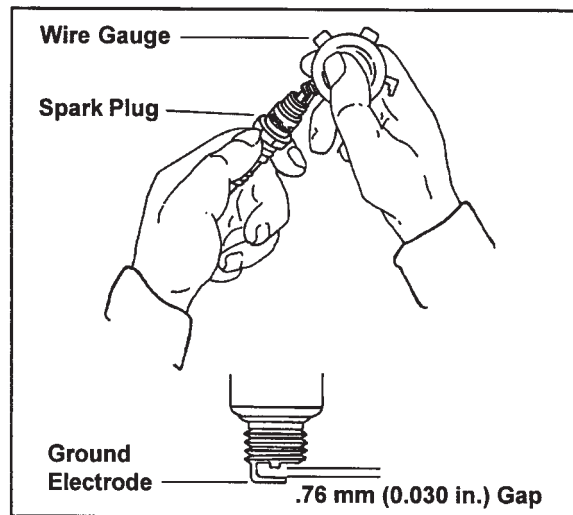


Figure 10. Servicing Spark Plug.

## Fuel Filter

Some engines are equipped with an in-line fuel filter. Periodically inspect the filter and replace when dirty. Use a genuine Kohler filter.