

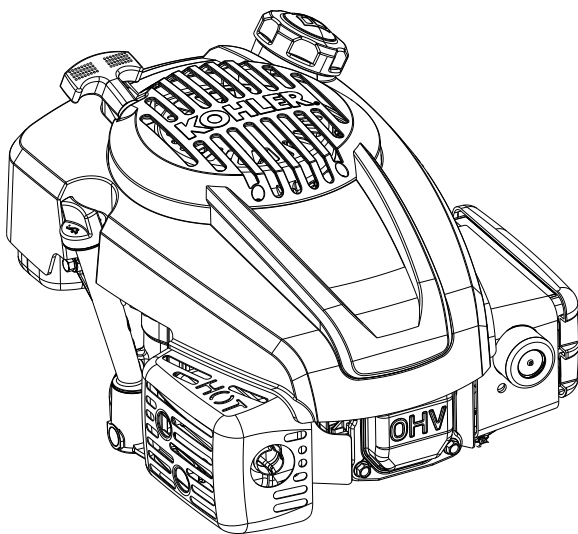
KOHLER Courage® XT

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XT6.5, XT6.75, XT8

Owner's Manual



IMPORTANT: Read all safety precautions and instructions carefully before operating equipment. Refer to operating instruction of equipment that this engine powers.

Ensure engine is stopped and level before performing any maintenance or service.

Warranty coverage as outlined in the warranty card and on KohlerEngines.com. Please review carefully as it provides you specific rights and obligations.

Record engine information to reference when ordering parts or obtaining warranty coverage.

Engine Model _____

Specification _____

Serial Number _____

Purchase Date _____

Safety Precautions

▲ WARNING: A hazard that could result in death, serious injury, or substantial property damage.

▲ CAUTION: A hazard that could result in minor personal injury or property damage.

NOTE: is used to notify people of important installation, operation, or maintenance information.

	▲ WARNING Explosive Fuel can cause fires and severe burns. Do not fill fuel tank while engine is hot or running.
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. Spilled fuel could ignite if it comes in contact with hot parts or sparks from ignition. Never use gasoline as a cleaning agent.	

	▲ WARNING Carbon Monoxide can cause severe nausea, fainting or death. Avoid inhaling exhaust fumes.
Engine exhaust gases contain poisonous carbon monoxide. Carbon monoxide is odorless, colorless, and can cause death if inhaled.	

	▲ WARNING Accidental Starts can cause severe injury or death. Disconnect and ground spark plug lead(s) before servicing.
Before working on engine or equipment, disable engine as follows: 1) Disconnect spark plug lead(s). 2) Disconnect negative (-) battery cable from battery.	

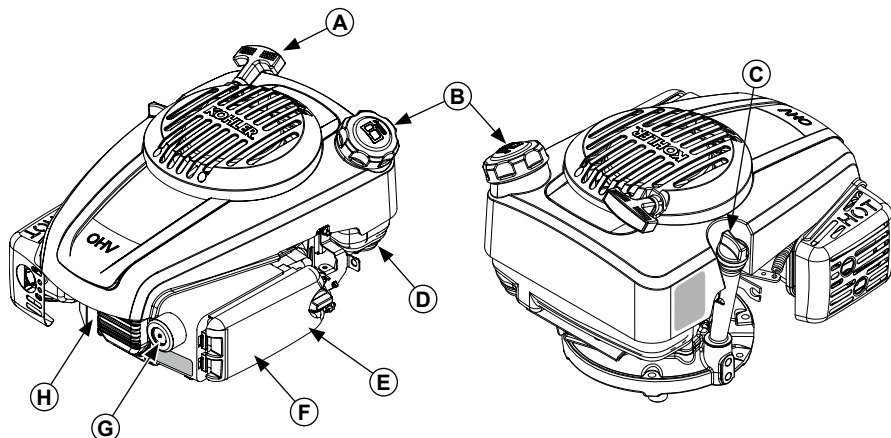
	▲ WARNING Rotating Parts can cause severe injury. Stay away while engine is in operation.
Keep hands, feet, hair, and clothing away from all moving parts to prevent injury. Never operate engine with covers, shrouds, or guards removed.	

	▲ CAUTION Electrical Shock can cause injury. Do not touch wires while engine is running.
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	▲ WARNING Hot Parts can cause severe burns. Do not touch engine while operating or just after stopping.
Never operate engine with heat shields or guards removed.	

California Proposition 65 Warning

Engine exhaust from this product contains chemicals known to State of California to cause cancer, birth defects, or other reproductive harm.



A	Starter Handle	B	Fuel Cap	C	Oil Fill Cap/ Dipstick	D	Fuel Tank
E	Air Cleaner	F	Fuel Shut-Off Valve	G	Primer Bulb	H	Spark Plug

Pre-Start Checklist

1. Check oil level. Add oil if low. Do not overfill.
2. Check fuel level. Add fuel if low. Check fuel system components and lines for leaks.
3. Check and clean cooling areas, air intake areas and external surfaces of engine (particularly after storage).
4. Check that air cleaner components and all shrouds, equipment covers, and guards are in place and securely fastened.
5. Check spark arrestor (if equipped).

Starting

	⚠ WARNING Carbon Monoxide can cause severe nausea, fainting or death. Avoid inhaling exhaust fumes.
Engine exhaust gases contain poisonous carbon monoxide. Carbon monoxide is odorless, colorless, and can cause death if inhaled.	

	⚠ WARNING Rotating Parts can cause severe injury. Stay away while engine is in operation.
Keep hands, feet, hair, and clothing away from all moving parts to prevent injury. Never operate engine with covers, shrouds, or guards removed.	

NOTE: Over priming may make it difficult to start engine. It is usually not necessary to prime a warm engine.

NOTE: Choke position for starting may vary depending upon temperature and other factors. Once engine is running and warm, turn choke to OFF position.

NOTE: Extend starter cord periodically to check its condition. If cord is frayed have it replaced immediately by a Kohler authorized dealer.

1. Turn fuel shut-off valve to ON position (if equipped).
2. Turn engine on/off switch to ON position (if equipped).
3. Start engine as follows:
 - a. Primer Bulb Models: Place finger or thumb on center of primer bulb. Push primer 3 times.

or
 - b. Manual Choke Models:

Cold engine: Place throttle control to FAST position. Pull choke control into CHOKE/ON position.

Warm engine: place throttle control to RUN/FAST position.

or
 - c. Smart-Choke™ Models: this feature automatically adjusts choke on start-up.

4. Retractable Start: Slowly pull starter handle until just past compression-STOP! Return starter handle; firmly pull straight out to avoid excessive rope wear from starter rope guide.

Electric Start: Key switch (refer to operating instructions of equipment that this engine powers).

5. Gradually return choke control to OFF position after engine starts and warms up. Engine/equipment may be operated during warm up period, but it may be necessary to leave choke partially on until engine warms up.

Cold Weather Starting Hints

1. Use proper oil for temperature expected.
2. Disengage all possible external loads.
3. Use fresh winter grade fuel. Winter grade fuel has higher volatility to improve starting.

Stopping

1. If possible, remove load by disengaging all PTO driven attachments.
2. If equipped, move throttle control to slow or idle position; stop engine.
3. If equipped, close fuel shut-off valve.

Angle of Operation

Refer to operating instructions of equipment this engine powers. Do not operate this engine exceeding maximum angle of operation; see specification table. Engine damage could result from insufficient lubrication.

Engine Speed

NOTE: Do not tamper with governor setting to increase maximum engine speed. Overspeed is hazardous and will void warranty.

High Altitude Operation

This engine may require a high altitude carburetor kit to ensure correct engine operation at altitudes above 4000 ft. (1219 meters). To obtain high altitude kit information or to find a Kohler authorized dealer visit KohlerEngines.com or call 1-800-544-2444 (U.S. and Canada).

This engine should be operated in its original configuration below 4000 ft. (1219 meters) as damage may occur if high altitude carburetor kit is installed and operated below 4000 ft. (1219 meters).

Maintenance Instructions

	WARNING	Before working on engine or equipment, disable engine as follows: 1) Disconnect spark plug lead(s). 2) Disconnect negative (–) battery cable from battery.
	Accidental Starts can cause severe injury or death. Disconnect and ground spark plug lead(s) before servicing.	

Normal maintenance, replacement or repair of emission control devices and systems may be performed by any repair establishment or individual; however, warranty repairs must be performed by a Kohler authorized dealer found at KohlerEngines.com or 1-800-544-2444 (U.S. and Canada).

Maintenance Schedule

After first 3-5 Hours

- Change oil.

Every 25 Hours or Annually¹

- Service/replace precleaner.
- Check air cleaner for dirty, loose or damaged parts.

Every 50 Hours or Annually

- Change oil.
- Replace fuel filter (if equipped).

Every 50 Hours or Annually¹

- Replace air cleaner element.

Every 100 Hours or Annually¹

- Replace spark plug and set gap.
- Clean spark arrestor (if equipped).

Every 100 Hours or Annually²

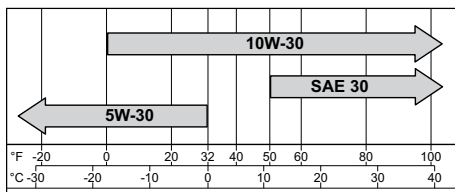
- Check and adjust valve clearance when engine is cold.
- Have combustion chamber decarbonized.

¹ Perform these procedures more frequently under severe, dusty, dirty conditions.

² Have a Kohler authorized dealer perform this service.

Oil Recommendations

We recommend use of Kohler oils for best performance. Other high-quality detergent oils (including synthetic) of API (American Petroleum Institute) service class SJ or higher are acceptable. Select viscosity based on air temperature at time of operation as shown in table below.



Check Oil Level

NOTE: To prevent extensive engine wear or damage, never run engine with oil level below or above operating range indicator on dipstick.

Ensure engine is cool. Clean oil fill cap/dipstick areas of any debris.

1. Remove dipstick; wipe oil off.

- 1/4 turn cap: reinsert dipstick into tube; press completely down and turn 1/4 turn.

or

- Threaded cap: reinsert dipstick into tube; rest cap on tube, do not thread cap onto tube.

2. Remove dipstick; check oil level. Level should be at top of indicator on dipstick.

3. If oil is low on indicator, add oil up to top of indicator mark.

4. Reinstall and secure dipstick.

Change Oil

Change oil while engine is warm.

Dipstick tube:

1. Clean area around oil fill cap/dipstick.
2. Remove oil fill cap/dipstick. Tilt engine on its side with air cleaner facing up. Drain oil into appropriate container.
3. After crankcase is drained completely, tilt engine upright.
4. Fill crankcase with new oil. Level should be at top of indicator on dipstick.
5. Reinstall oil fill cap/dipstick and tighten securely.
6. Dispose of used oil in accordance with local ordinances.

Crankcase plug:

1. Disable engine by disconnecting spark plug.
2. Clean area around oil fill cap/dipstick. Remove oil fill cap/dipstick.
3. Remove crankcase plug on bottom of engine; drain oil into appropriate container.
4. Apply thread sealant around three full threads of drain plug; reinstall drain plug. Torque to 120 in. lb. (13.6 N·m).
5. Fill crankcase with new oil. Level should be at top of indicator on dipstick.
6. Reinstall oil fill cap/dipstick and tighten securely.
7. Dispose of used oil in accordance with local ordinances.

Fuel Recommendations

	⚠ WARNING Explosive Fuel can cause fires and severe burns. Do not fill fuel tank while engine is hot or running.
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. Spilled fuel could ignite if it comes in contact with hot parts or sparks from ignition. Never use gasoline as a cleaning agent.	

NOTE: E15, E20 and E85 are NOT approved and should NOT be used; effects of old, stale or contaminated fuel are not warrantable.

Fuel must meet these requirements:

- Clean, fresh, unleaded gasoline.
- Octane rating of 87 (R+M)/2 or higher.

- Research Octane Number (RON) 90 octane minimum.
- Gasoline up to 10% ethyl alcohol, 90% unleaded is acceptable.
- Methyl Tertiary Butyl Ether (MTBE) and unleaded gasoline blend (max 15% MTBE by volume) are approved.
- Do not add oil to gasoline.
- Do not overfill fuel tank.
- Do not use gasoline older than 30 days.

Add Fuel

	⚠ WARNING Explosive Fuel can cause fires and severe burns. Do not fill fuel tank while engine is hot or running.
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. Spilled fuel could ignite if it comes in contact with hot parts or sparks from ignition. Never use gasoline as a cleaning agent.	

Ensure engine is cool.

1. Clean area around fuel cap.
2. Remove fuel cap. Fill to base of filler neck. Do not overfill fuel tank. Leave room for fuel to expand.
3. Reinstall fuel cap and tighten securely.

Fuel Line

Low permeation fuel line must be installed on carbureted Kohler Co. engines to maintain EPA and CARB regulatory compliance.

Spark Plugs



CAUTION

Electrical Shock can cause injury.
Do not touch wires while engine is running.

Clean out spark plug recess. Remove plug and replace.

1. Check gap using wire feeler gauge. Adjust gap, see specification table for adjustment.
2. Install plug into cylinder head.
3. Torque plug to 20 ft. lb. (27 N·m).

Air Cleaner

NOTE: Operating engine with loose or damaged air cleaner components could cause premature wear and failure. Replace all bent or damaged components.

NOTE: Paper element cannot be blown out with compressed air.

Loosen knob and remove air cleaner cover.

Precleaner (if equipped):

1. Remove precleaner.
2. Replace or wash precleaner in warm water with detergent. Rinse and allow to air dry.
3. Reinstall precleaner into cover, aligning hole in precleaner with upper cover knob.

Paper Element:

1. Remove paper element from base and replace.
2. Install element with pleated side out and seat rubber seal onto edges of base.

Foam Element:

1. Remove foam element from base and replace.
2. Install element with foam side out and seat rubber seal onto edges of base.

Reinstall air cleaner cover and secure with knob.

Breather Tube

Ensure both ends of breather tube are properly connected.

Air Cooling



WARNING

Hot Parts can cause severe burns.

Do not touch engine while operating or just after stopping.

Never operate engine with heat shields or guards removed.

Proper cooling is essential. To prevent over heating, clean screens, cooling fins, and other external surfaces of engine. Avoid spraying water at wiring harness or any electrical components. See Maintenance Schedule.

Repairs/Service Parts

We recommend that you use a Kohler authorized dealer for all maintenance, service, and replacement parts for engine. To find a Kohler authorized dealer visit KohlerEngines.com or call 1-800-544-2444 (U.S. and Canada).

Storage

If engine will be out of service for 2 months or more follow procedure below.

1. Add Kohler PRO Series fuel treatment or equivalent to fuel tank. Run engine 2-3 minutes to get stabilized fuel into fuel system (failures due to untreated fuel are not warrantable).
2. Change oil while engine is still warm from operation. Remove spark plug(s) and pour about 1 oz. of engine oil into cylinder(s). Replace spark plug(s) and crank engine slowly to distribute oil.
3. Disconnect negative (-) battery cable.
4. Store engine in a clean, dry place.

Troubleshooting

Do not attempt to service or replace major engine components, or any items that require special timing or adjustment procedures. This work should be performed by a Kohler authorized dealer.

Problem	Possible Cause							
	No Fuel	Improper Fuel	Dirt In Fuel Line	Dirty Debris Screen	Incorrect Oil Level	Engine Overloaded	Dirty Air Cleaner	Faulty Spark Plug
Will Not Start	•	•	•		•	•	•	•
Hard Starting		•	•		•	•	•	•
Stops Suddenly	•		•	•	•	•	•	•
Lacks Power		•	•	•	•	•	•	•
Operates Erratically		•	•	•		•	•	•
Knocks or Pings		•		•		•		•
Skips or Misfires		•	•	•			•	•
Backfires		•	•			•	•	•
Overheats		•	•	•	•	•	•	
High Fuel Consumption						•	•	•

Engine Specifications

Model	Bore	Stroke	Displacement	Oil Capacity (Refill)	Spark Plug Gap	Maximum Angle of Operation (@ full oil level)*
XT6.5	2.56 in. (65 mm)	1.8 in. (45 mm)	9.1 cu. in. (149 cc)	20 oz. (0.60 L)	0.03 in. (0.76 mm)	20°
XT6.75			10.6 cu. in. (173 cc)			
XT8	2.75 in. (70 mm)					

*Exceeding maximum angle of operation may cause engine damage from insufficient lubrication.

Additional specification information can be found in service manual at KohlerEngines.com.

Exhaust Emission Control System for models XT6.5, XT6.75, XT8 is EM for U.S. EPA, California, and Europe.

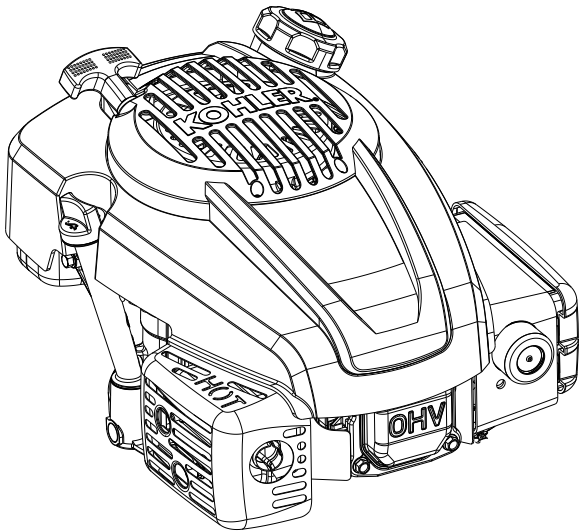
Any and all horsepower (hp) references by Kohler are Certified Power Ratings and per SAE J1940 & J1995 hp standards. Details on Certified Power Ratings can be found at KohlerEngines.com.

KOHLER Courage® XT

ZH

XT6.5, XT6.75, XT8

用户手册



重要提示： 设备操作前请阅读所有安全预防措施和说明。请参阅安装该发动机设备的操作说明。

执行任何保养或检修前请确保发动机已停机并平坦放置。

保修范围在保修卡及 **KohlerEngines.com** 中扼要说明，具体规定了您的权利和义务，请仔细阅读。

请记录发动机信息，并在订购零件或获取保修范围时参考。

发动机型号	_____
规格	_____
系列号	_____
购买日期	_____

安全预防措施

▲ 警告： 可能导致死亡、严重人身伤害或重大财产损失的危险。

▲ 告诫： 可能导致轻微人身伤害或财产损失的危险。

注意： 用于告知人们非常重要的发动机安装、操作或保养相关信息。

	▲ 警告 易爆炸的燃油可能引起火灾和严重灼伤。 在发动机处于高温或运转时，切勿往燃油箱内加油。
汽油很容易燃烧，且它的蒸气被点燃的时候易爆炸。存储的汽油只能装在符合要求的容器内，并位于通风良好、无人居住的建筑物内，远离火花或火焰。溢出的燃油在接触到热的零件或点火花的时候容易被点燃。不能使用汽油作为清洗剂。	

	▲ 警告 一氧化碳可能导致严重呕吐、昏厥甚至死亡。 避免吸入排放的尾气。
发动机排放的尾气含有有毒的一氧化碳。一氧化碳是无味、无色的气体，且吸入过多时会导致死亡。	

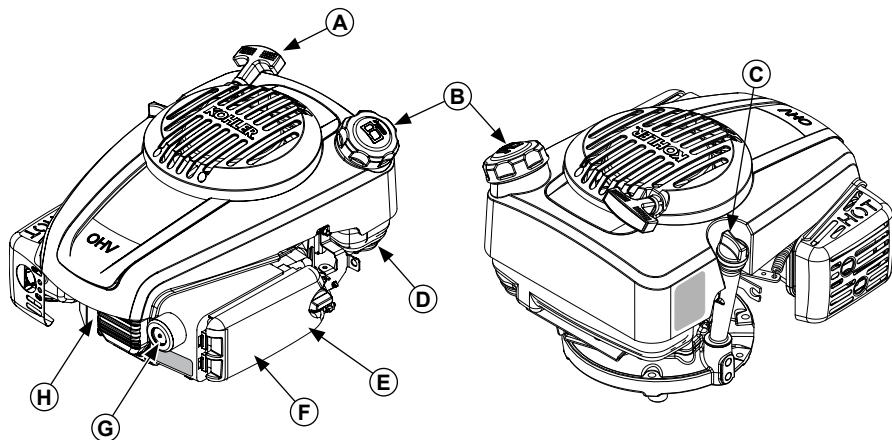
	▲ 警告 意外启动可能造成严重人身伤害甚至死亡。 在维护前请断开火花塞导线并将其接地。
在发动机或设备上工作之前，请按以下说明停止发动机：1)断开火花塞导线。2) 断开电池的负极 (-) 电池线。	

	▲ 警告 旋转零件可能引起严重人身伤害。 切记远离运转中的发动机。
手、足、头发和衣物必须远离正在转动的零件以防人身伤害。在外盖、保护罩或防护装置拆走的时候，不要运行发动机。	

	▲ 告诫 触电可能导致严重人身伤害。 在发动机运转期间不得触摸电线。
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	▲ 警告 高温零件可能引起严重灼伤。 切勿在运转期间或停机后立即触摸发动机。
在发动机防热罩或隔热板拆走后，切记不能运行发动机。	

加利福尼亚州 65 号提案警告
根据加利福尼亚州提案，这种发动机的尾气排放包含可能导致癌症、出生缺陷或其他生育损害的化学物质。



A	起动机手柄	B	燃油加油盖	C	润滑油加油盖/ 机油尺	D	燃油箱
E	空气滤清器	F	燃油切断阀	G	起动加浓泵	H	火花塞

起动前检查

1. 检查润滑油液位。如果液位低，需加油。但不要过度加油。
2. 检查燃油液位。如液位较低，则应加注燃油。检查燃油系统部件及管道是否有泄漏。
3. 检查并清洁冷却部位、空气进气部位和发动机外部（尤其是存放后）。
4. 检查空气滤清器零部件和所有保护罩、设备遮盖和保护装置是否都安装到位，且安全紧固。
5. 检查阻火器（如配备）。

启动

	 警告
	一氧化碳可能导致严重呕吐、昏厥甚至死亡。 避免吸入排放的尾气。
发动机排放的尾气含有有毒的一氧化碳。一氧化碳是无味、无色的气体，且吸入过多时会导致死亡。	

	 警告
	旋转零件可能引起严重人身伤害。 切记远离运转中的发动机。
手、足、头发和衣物必须远离正在转动的零件以防人身伤害。在外盖、保护罩或防护装置拆走的时候，不要运行发动机。	

注意： 加浓泵按多了会导致发动机启动困难。通常不需要按加浓泵启动热发动机。

注意： 启动时的阻风门位置可能会不同，具体取决于温度和其他因素。一旦发动机运行并且发热，将阻风门旋转到 **OFF**（关闭）位置。

注意： 应定期展开启动拉绳以检查其状况。如果启动拉绳出现磨损，立即联系 Kohler 授权代理商进行更换。

1. 将燃油切断阀旋转到 **ON**（开启）位置（如配备）。

2. 将 **on/off**（开启/关闭）开关旋转到 **ON**（开启）位置（如配备）。

3. 按照以下说明启动发动机：

a. 启动加浓泵型号：将手指或拇指放在启动加浓泵的中央。按 3 次加浓泵。

或

b. 手动阻风门型号：

冷发动机：将油门控制移动到 **FAST**（快速）位置。将阻风门控制拉到 **CHOKE/ON**（阻风门/开启）位置。

热发动机：将油门控制放在 **RUN/FAST**（运行/快速）位置。

或

c. **Smart-Choke™** 型号：此功能可以在启动时自动调节阻风门。

4. 反冲启动：慢慢拉动启动器手柄，直至刚好拉过压缩位置 - 停止！拉回启动器手柄；沿平直方向平稳地拉动手柄以避免对启动拉绳器上的拉绳造成过度磨损。

电启动：钥匙开关（请参阅安装该发动机设备的操作说明）。

5. 在发动机启动并预热后，逐渐将油门控制推到“**OFF**（关闭）”位置。在预热期间发动机/设备可以工作，但可能需要部分开启阻风门，直到发动机完成预热。

冷天气启动说明

1. 请根据气温来使用合适的润滑油。

2. 脱开所有可能的外部负荷。

3. 请使用新鲜的冬季等级燃油。冬季等级燃油有更高的挥发性，可以改善启动。

停止

1. 如果可能，脱开所有 PTO 驱动附件，以移除负荷。

2. 将油门控制（如配备）移动到慢速或怠速位置；停止发动机。

3. 关闭燃油切断阀（如配备）。

工作角度

请参阅安装该发动机设备的操作说明。运行发动机时不得超出最大工作角度；请参阅规格表。发动机可能会由于润滑不足而损坏。

发动机转速

注意： 不要随意改变调速器设置，以增加发动机最大转速。超速是很危险的，且不属于保修范围。

高海拔工作

为确保发动机在海拔 4000 ft (1219 m) 以上正常运行，该发动机可能需要一套高海拔化油器套件。要获得高海拔套件信息或查找 Kohler 授权代理商，请访问 KohlerEngines.com 或拨打 1-800-544-2444（美国和加拿大）。

该发动机在低于 4000 ft (1219 m) 时应采用原始配置运行。如果安装了高海拔化油器套件并低于 4000 ft (1219 m) 运行，发动机可能会发生损坏。

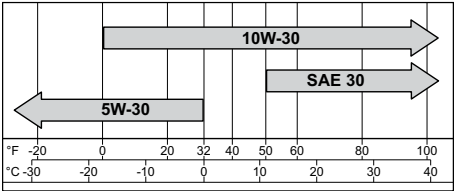
	 警告	在发动机或设备上工作之前，请按以下说明停止发动机： 1) 断开火花塞导线。 2) 断开电池的负极 (-) 电池线。
	意外起动可能造成严重人身伤害甚至死亡。 在维护前请断开火花塞导线并将其接地。	

发动机排放控制设备/系统的正常保养、更换或维修工作，可以由任何发动机维修公司或个人来进行。但保修期维修必须由 **Kohler** 授权代理商执行。请访问 **KohlerEngines.com** 或拨打电话 **1-800-544-2444**（美国和加拿大）获取授权代理商信息。

保养安排
首次 3-5 小时后
● 更换润滑油。
每 25 小时或每年 ¹
● 检修/更换粗滤器。 ● 检查空气滤清器是否脏污、零件松动或损坏。
每 50 小时或每年
● 更换润滑油。 ● 更换燃油过滤器（如配备）。
每 50 小时或每年 ¹
● 更换空气滤清器滤芯。
每 100 小时或每年 ¹
● 更换火花塞和调节间隙。 ● 清洁阻火器（如配备）。
每 100 小时或每年 ²
● 发动机冷却后，检查并调节阀门间隙。 ● 清洁燃烧室。
¹ 在灰尘、脏污严重的情况下，必须提高定期保养的频率。
² 请联系 Kohler 授权代理商来执行此维护。

润滑油使用建议

我们推荐使用 **Kohler** 润滑油，以获得最佳性能。其他满足 **API**（美国石油组织）服务等级 **SJ** 或更高等级的高质量去污润滑油也可以使用。如下表所示，根据发动机使用时的大气温度选择合适粘度的润滑油。



- 检查润滑油液位**
- 注意：为防止发动机出现过度磨损或损坏，润滑油液位低于或超出机油尺指示的工作范围时切勿运行发动机。
- 确保发动机处于冷却状态。清除润滑油加油盖/机油尺区域的所有杂物。
- 取出机油尺，擦干净润滑油。
 - 1/4 旋转盖：**重新将机油尺插入机油尺管；完全下压后旋转 1/4 圈。
或
 - 旋入式加油盖：**重新将机油尺插入机油尺管；把加油盖放在机油尺管上，不要旋到机油尺管上。
 - 取出机油尺；检查润滑油液位。液位应该在机油尺指示的顶端。
 - 若润滑油指示的液位较低，则要添加润滑油到指示顶部的标志位置。
 - 重新安装并固定机油尺。

更换润滑油

发动机处于较热状态时更换润滑油。

机油尺管：

1. 清洁润滑油加油盖/机油尺周围区域。
2. 取下润滑油加油盖/机油尺。倾斜发动机，使空气滤清器一侧朝上。将润滑油排放到适当的容器内。
3. 当曲轴箱内的润滑油排完后，将发动机恢复为正常放置。
4. 将新润滑油注入曲轴箱。液位应该在机油尺指示的顶端。
5. 重新安装润滑油加油盖/机油尺，并将其旋紧。
6. 根据当地规定处理废机油。

曲轴箱放油塞：

1. 断开火花塞连接，使发动机停机。
2. 清洁润滑油加油盖/机油尺周围区域。取下润滑油加油盖/机油尺。
3. 从发动机底部拆下曲轴箱放油塞，并将润滑油排放到适当的容器内。
4. 在放油塞的三个全螺纹上涂上螺纹密封胶；重新安装放油塞。紧固扭矩为 120 in. lb. (13.6 N·m)。
5. 将新润滑油注入曲轴箱。液位应该在机油尺指示的顶端。
6. 重新安装润滑油加油盖/机油尺，并将其旋紧。
7. 根据当地规定处理废机油。

燃油使用建议

	警告 易爆炸的燃油可能引起火灾和严重灼伤。 在发动机处于高温或运转时，切勿往燃油箱内加油。
汽油很容易燃烧，且它的蒸气被点燃的时候易爆炸。存储的汽油只能装在符合要求的容器内，并位于通风良好、无人居住的建筑物内，远离火花或火焰。溢出的燃油在接触到热的零件或点火火花的时候容易被点燃。不能使用汽油作为清洗剂。	

注意：E15、E20 和 E85 未获批准，不得使用；使用旧的、过期或污染机油导致的后果不在保修范围内。

燃油必须符合下列要求：

- 干净、新鲜的无铅汽油。
- 87 (R+M)/2 或以上泵辛烷值等级的汽油。
- 研究法辛烷值 (RON) 最低为 90 号辛烷的汽油。
- 由最高 10% 乙醇和 90% 无铅汽油混合的汽油也可使用。
- 甲基叔丁醚 (MTBE) 和无铅的汽油混合（按体积 MTBE 最高可达 15%）已获准使用。
- 不能往汽油里加润滑油。
- 不能过度往燃油箱里加油。
- 不能使用 30 天以上的汽油。

添加燃油

	警告 易爆炸的燃油可能引起火灾和严重灼伤。 在发动机处于高温或运转时，切勿往燃油箱内加油。
汽油很容易燃烧，且它的蒸气被点燃的时候易爆炸。存储的汽油只能装在符合要求的容器内，并位于通风良好、无人居住的建筑物内，远离火花或火焰。溢出的燃油在接触到热的零件或点火火花的时候容易被点燃。不能使用汽油作为清洗剂。	

确保发动机处于冷却状态。

1. 清洁燃油盖四周的区域。
2. 拆下燃油盖。加注燃油至加油口底部。不能过度往燃油箱里加油。必须留下燃油膨胀的空间。
3. 重新安装燃油盖，并将其旋紧。

燃油管

Kohler 公司化油式发动机上必须安装低渗透燃油管，以符合美国环保署和 CARB 的监管规定。

火花塞



告诫

触电可能导致严重人身伤害。
在发动机运转期间不得触摸电线。

清洁火花塞凹槽。拆下火花塞并更换。

1. 使用塞尺检查火花塞间隙。调整间隙，请参阅规格表实施调整。
2. 将火花塞安装在气缸盖内。
3. 火花塞的紧固扭矩为 **20 ft. lb. (27 N·m)**。

空气滤清器

注意： 如果空气滤清器零部件出现松动或损坏，则运行发动机可能引起过早磨损和故障。更换所有弯曲或损坏的零部件。

注意： 纸质滤芯不能用压缩空气吹出。

松开空气滤清器罩固定旋钮并拆下外罩。

粗滤器（如配备）：

1. 拆下粗滤器。
2. 更换粗滤器，或在温水中使用清洗剂清洗粗滤器。冲洗并风干。
3. 重新将粗滤器安装到空气滤清器罩内，将粗滤器安装孔与空气滤清器罩上部的旋钮对齐。

纸质滤芯：

1. 从底座拆下纸质滤芯并更换。
2. 安装滤芯，使褶皱侧朝外，并将橡胶密封圈放在底座边缘上。

泡沫滤芯：

1. 从底座拆下泡沫滤芯并更换。
2. 安装滤芯，使泡沫侧朝外，并将橡胶密封圈放在底座边缘上。

重新安装空气滤清器外罩，并旋紧旋钮。

呼吸器管

确保呼吸器管的两端正确连接。

ZH

空气冷却



警告

高温零件可能引起严重灼伤。

切勿在运转期间或停机后立即触摸发动机。

在发动机防热罩或隔热板拆走后，切记不能运行发动机。

正确的冷却非常重要。为防止过热，应清洁滤网、散热片及发动机外部。避免将水喷洒在线束或任何电子零部件上。请参见保养安排。

零件维修/检修

我们建议您联系 **Kohler** 授权代理商实施所有发动机零件的保养、维修和更换。要查找 **Kohler** 授权代理商，请访问 **KohlerEngines.com** 或拨打 **1-800-544-2444**（美国和加拿大）。

存放

如果超过两个月不使用发动机，请按照以下程序。

1. 在燃油箱内添加 **Kohler PRO** 系列燃油处理剂或替代产品。运行发动机 **2-3** 分钟，以使加入稳定剂的燃油进入燃油系统内（使用未经处理燃油造成的故障不在保修范围内）。
2. 在发动机停机后处于较热状态时更换润滑油。拆下火花塞并在气缸内倒入大约 **1** 盎司的发动机润滑油。更换火花塞并缓慢带动发动机，使润滑油均匀分布。
3. 断开负极 (-) 电池线。
4. 将发动机存放在清洁、干燥的地方。

故障排除

切勿尝试维修或更换关键的发动机零部件，或任何需要特殊正时或调节程序的部件。请联系 Kohler 授权代理商来检修这些故障。

问题	可能原因							
	没有燃油	燃油不合适	燃油管脏污	滤网有碎屑或脏污	润滑油液位不正确	发动机载荷过高	空气滤清器脏污	火花塞故障
不能起动	●	●	●		●	●	●	●
起动困难		●	●		●	●	●	●
突然停机	●		●	●	●	●	●	●
动力不足		●	●	●	●	●	●	●
运行不稳		●	●	●		●	●	●
敲缸或有异响		●		●		●		●
不着火或不点火		●	●	●			●	●
逆火		●	●			●	●	●
过热		●	●	●	●	●	●	
燃油消耗高						●	●	●

发动机规格						
型号	缸径	冲程	排量	润滑油容量 (重新加注)	火花塞间隙	最大工作角度 (润滑油满 液位时)*
XT6.5	2.56 in. (65 mm)	1.8 in. (45 mm)	9.1 cu. in. (149 cc)	20 oz. (0.60 L)	0.03 in. (0.76 mm)	20°
XT6.75			10.6 cu. in. (173 cc)			
XT8	2.75 in. (70 mm)					

*超出最大工作角度可能引起润滑不足，从而导致发动机损坏。

其他规格信息请参见 KohlerEngines.com 内的服务手册。

XT6.5、XT6.75、和 XT8 型号的尾气排放控制系统为 EM（美国环保署、加利福尼亚州和欧洲）。

Kohler 提及的任何和所有马力（hp）均为根据 SAE J1940 & J1995 hp 标准经认证的额定功率。有关经认证的额定功率详细信息请访问 KohlerEngines.com。