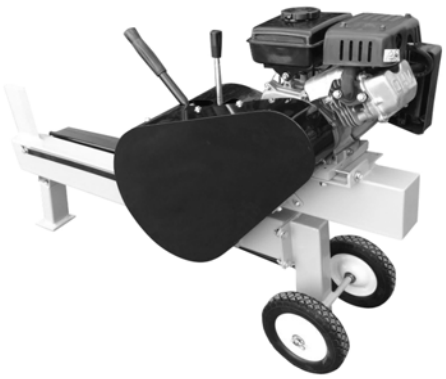
KSPLIT10

GAS POWERED KINETIC

10 TON LOG SPLITTER INSTRUCTION MANUAL



READ ALL INSTRUCTIONS AND WARNINGS BEFORE USING THIS PRODUCT.

This manual provides important information on proper operation & maintenance. Every effort has been made to ensure the accuracy of this manual. These instructions are not meant to cover every possible condition and situation that may occur. **We reserve the right to change this product at any time without prior notice.**

IF THERE IS ANY QUESTION ABOUT A CONDITION BEING SAFE OR UNSAFE,

DO NOT OPERATE THIS PRODUCT!

HAVE QUESTIONS? CONTACT US FIRST BEFORE CONTACTING THE RETAILER.

If you experience a problem, have questions or need parts for this product, call Customer Service at **1-866-460-9436, Monday-Friday, 8 AM - 4 PM Central Time**. A copy of the sales receipt is required.

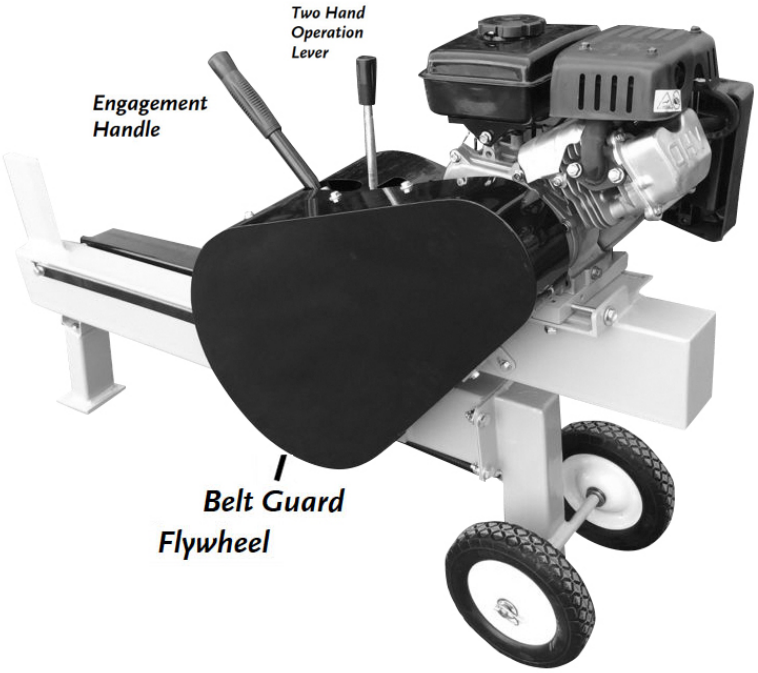
FOR CONSUMER USE ONLY – NOT FOR PROFESSIONAL USE.
KEEP THIS MANUAL, SALES RECEIPT & APPLICABLE WARRANTY FOR FUTURE REFERENCE.

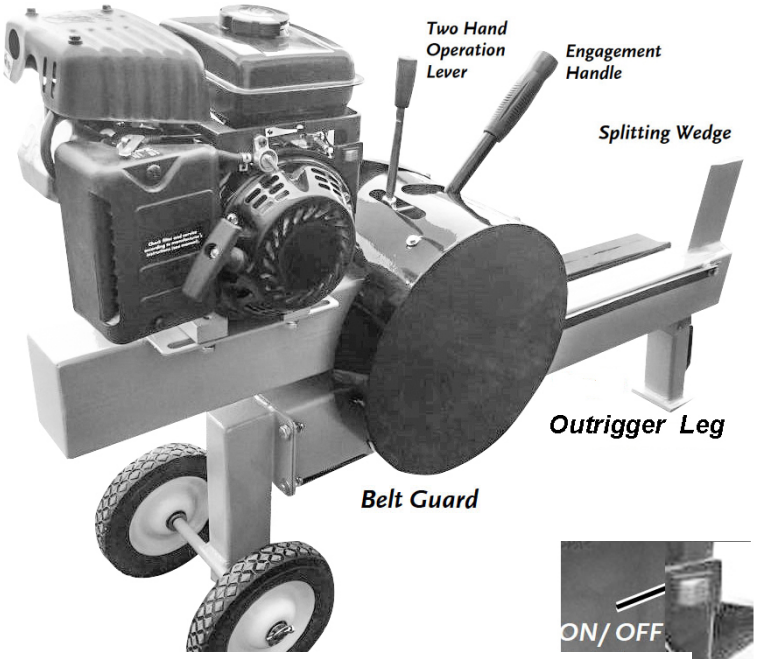
SPECIFICATIONS

- Max. Splitting Force: 10 Ton
- Max. Log Length: 20 inches
- Max. Log Diameter: 13.75 inches
- Max Load Weight: 100 lbs
- Horizontal position only
- 4-Stroke OHV Engine 94cc
- Recoil Start
- 2.7 HP Gasoline Engine
- Low Oil Shutdown
- EPA Approved
- Cycle Time: approx. 2 seconds
- Noise Level: 104dB @ 0% Load
- Oil Capacity: 12 ounces SAE10W-30
- Fuel Capacity: 0.42 gallon
- Fuel Type: Unleaded Gasoline Only 87 rating or higher
- Flywheel: 600 RPM
- Flywheel Weight: 15 lbs
- Spark Plug: E7RTC
- Spark Plug Gap: 0.6 - 0.8mm
- Hitch Pin not available/ This unit is non-towable
- Wheel/Tire Size: 8 x 1.75 inch
- Wedge Height: 7 inches
- Auto-Return
- Air-cooled engine
- High Altitude Use: This log splitter is not recommended for high altitude use above 3,000 feet. This item may not function properly above 3,000 feet because of air flow getting through the mixer.

- Some assembly required. Outrigger Leg and Vee Belt requires assembly.

COMPONENTS





RECOGNIZE SAFETY SYMBOLS, WORDS AND LABELS

What You Need to Know About Safety Instructions

Warning and Important Safety Instructions appearing in this manual are not meant to cover all possible conditions and situations that may occur. Common sense, caution and care must be exercised when operating or cleaning tools and equipment.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER — DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING — WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION — CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

CAUTION — CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

2 YEAR LIMITED EMISSION-RELATED WARRANTY

THIS ENGINE MEETS U.S. EPA EMISSION STANDARDS UNDER 40 CFR 1054.625 .The emission-related limited warranty is valid for two (2) years. Keep the purchase receipt and mail in the product registration card for proof of purchase. Buffalo Corp limits emission-related warranty repairs to authorized service centers for owners located within 100 miles of an authorized service center. For owners located more than 100 miles from an authorized service center, Buffalo Corp will, in its sole discretion, either pay for shipping costs to and from an authorized service center, provide for a service technician to come to the owner to make the warranty repair, or pay for the repair to be made at a local non-authorized service center. The provisions of this paragraph apply only for the contiguous states, excluding the states with high-altitude areas identified in 40 CFR part 1068, Appendix III.

To exercise this warranty, DO NOT RETURN TO RETAILER. Instead, call Customer Service toll free at 1-866-460-9436 (email address info@buffalotools.com) and you will be instructed on where to take the engine for warranty service. Take the log splitter and proof of purchase (your receipt) to the repair facility recommended by the Customer Service Representative. The warranty does not extend to log splitters damaged or affected by fuel contamination, accidents, neglect, misuse, unauthorized alterations, use in an application for which the product was not designed and any other modifications or abuse.

1 YEAR LIMITED WARRANTY (30 Day Limited Warranty for Commercial and Rental Purpose)

Log splitters are warranted to be free from defects in materials and workmanship for a period of 1 YEAR from date of original purchase. Buffalo Corp. is not liable for any indirect, incidental or consequential damages from the sale or use of this product. Any implied warranties are limited to 1 YEAR as stated, or as otherwise stated, in this written limited warranty. Some states do not allow the exclusion or limitation of incidental or consequential damages. Some states do not allow limitation on the length of an implied warranty. Buffalo Corp will repair or replace, at its discretion, any part that is proven to be defective in materials or workmanship under normal use during the 1 YEAR warranty period. Warranty repairs or replacements will be made without charge for parts or labor. Parts replaced during warranty repairs will be considered as part of the original product and will have the same warranty period as the original product. This warranty gives you specific legal rights, and you may have other rights that vary state to state.

Notice Regarding Emissions:

Engines certified to comply with U.S. EPA emission regulations for SORE (Small Off Road Equipment) are certified to operate on regular unleaded gasoline and may include the following emission control systems: Three-Way Catalyst (TWC) (if equipped), and Engine Modifications (EM).

⚠ WARNING

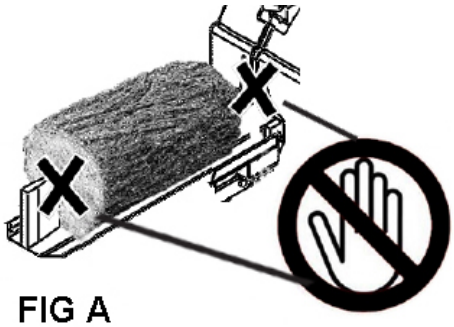


FIG A

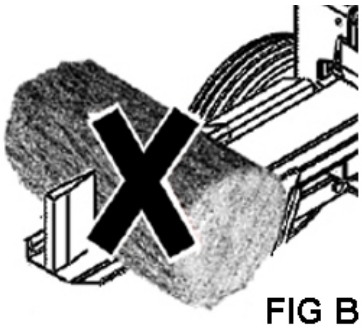


FIG B

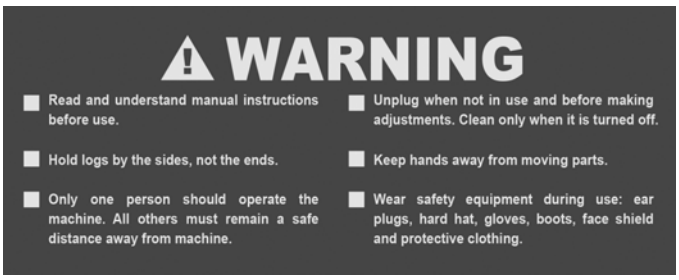
FIG A: NEVER PLACE YOUR HAND IN BETWEEN THE LOG, THE WEDGE AND THE RAM

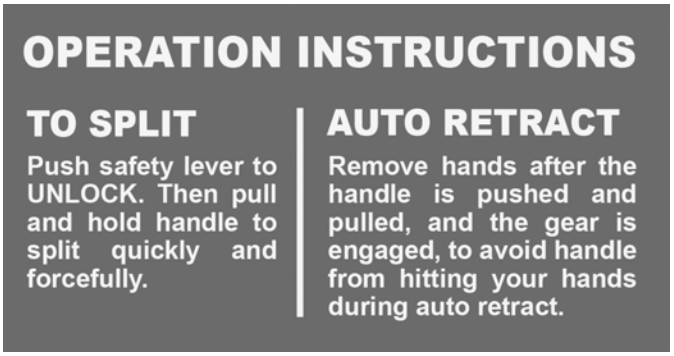
FIG B: NEVER ATTEMPT TO CROSS SPLIT A LOG

⚠ WARNING

This is a high-powered, gasoline fuel powered machine, with moving parts that produce high energy. Operate the machine safely to avoid injury. Unsafe operation can create a number of hazards for you, as well as anyone else in the nearby area.

View all WARNING and operating instruction labels on your machine before each use. Below are copies of all the safety and information labels that appear on the equipment. Read and understand them before use to prevent injuries.





IMPORTANT SAFETY INSTRUCTIONS

STOP!

Before using this log splitter and if you have any questions regarding the hazard and safety notices listed in this manual and/or on this log splitter, call 1-866-460-9436, Monday - Friday, 8 AM - 4 PM Central Time.

⚠ DANGER

Carbon Monoxide Gas: When in operation, the exhaust from this log splitter contains poisonous carbon monoxide gas. Carbon monoxide gas is both odorless and colorless AND may be present even if you do not see or smell gas. Breathing this poison gas can lead to headaches, dizziness, drowsiness, loss of consciousness and eventually death.

⚠ WARNING

WARNING: USE THIS LOG SPLITTER ONLY OUTDOORS IN NON-CONFINED AREAS. DO NOT SECURE THE LOG SPLITTER WITH A CHAIN OR ROPE, AS THIS WILL MAKE IT DIFFICULT TO MOVE IN AN EMERGENCY.

• Keep at least several feet of clearance on all sides to allow proper ventilation for this log splitter.

⚠ WARNING

WARNING: CALIFORNIA PROP 65: According to the State of California, engine exhaust and some of its constituents from this generator are know to contain chemicals known to cause cancer, birth defects, or other reproductive harm.

⚠ WARNING

WARNING: CALIFORNIA PROP 65: According to the State of California, this product contains or emits chemicals known to cause cancer, birth defects and other reproductive harm.

⚠WARNING

GASOLINE IS HIGHLY FLAMMABLE AND EXPLOSIVE. YOU COULD BE BURNED OR SERIOUSLY INJURED IF THE GASOLINE IS IGNITED. Before refueling, stop the engine and keep heat, sparks and flame away. Handle fuel only outdoors. Do not fill the fuel tank above the upper limit line. Wipe up spills immediately.

⚠ WARNING

EXHAUST CONTAINS POISONOUS CARBON MONOXIDE GAS THAT CAN BUILD UP TO DANGEROUS LEVELS IN CLOSED AREAS. BREATHING CARBON MONOXIDE CAN CAUSE UNCONSCIOUSNESS OR DEATH. Never run the log splitter in a closed or even partly closed area where people may be present.

⚠ WARNING

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

⚠ WARNING

Always take the following precautions when using this machine:

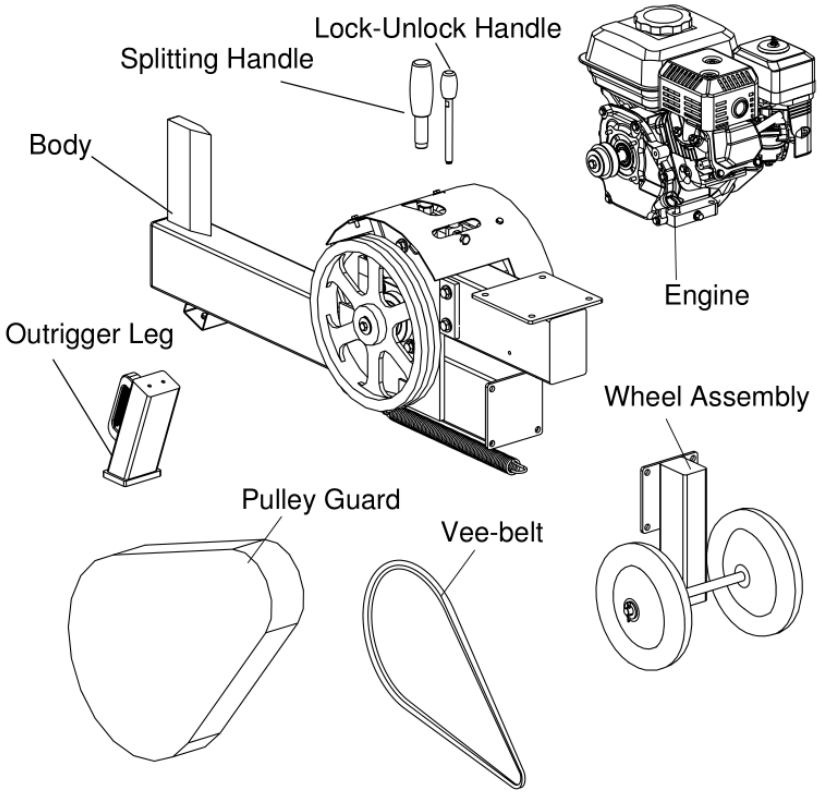
- Allow only one person to operate the Log Splitter at any time.
- The operator or user is responsible for accidents or hazards occurring to other people, their property, and themselves.
- Wear protective goggles or safety glasses with side shields while using the log splitter to protect your eyes from possible thrown debris.
- Avoid wearing loose clothing or jewelry, which can catch on moving parts.
- Wear gloves while using the log splitter. Be sure your gloves fit properly and do not have loose cuffs or drawstrings.
- Wear shoes with non-slip treads when using your log splitter. If you have safety shoes, we recommend wearing them. Do not use the machine while barefoot or wearing open toed sandals.
- Wear long pants while operating the log splitter.
- Keep children, pets and bystanders at least 50 feet away from your work area at all times. Stop the motor when another person or pet approaches. Never allow children to operate the log splitter.
- Store all fuel and oil in containers specifically designed and approved for this purpose and keep away from heat and open flame, and out of the reach of children.
- Replace rubber fuel lines and grommets when worn or damaged and after 5 years of use.
- Fill the gasoline tank outdoors with the engine off and allow the engine to cool completely. Don't handle gasoline if you or anyone nearby is smoking, or if you're near anything that could cause it to ignite or explode. Reinstall the fuel tank cap and fuel container cap securely.
- If you spill gasoline, do not attempt to start the engine. Move the machine away from the area of the spill and avoid creating any source of ignition until the gas vapors have dissipated. Wipe up any spilled fuel to prevent a fire hazard and properly dispose of the waste.
- Allow the engine to cool completely before storing in any enclosure. Never store a machine that has gas in the tank, or a fuel container, near an open flame or spark such as a water heater, space heater, clothes dryer or furnace.
- Never make adjustments or repairs with the engine running. Shut down the engine, disconnect the spark plug wire, keeping it away from the spark plug to prevent accidental starting, wait 5 minutes before making.
- Never tamper with the engine's governor setting. The governor controls the maximum safe operation speed and protects the engine. Over-speeding the engine is dangerous and will cause damage to the engine and to the other moving parts of the machine.
- Keep combustible substances away from the engine when it is hot.
- Never cover the machine while the muffler is still hot.
- Do not operate the engine with the air cleaner or the carburetor air intake cover removed. Removal of such parts could create a fire hazard. Do not use flammable solutions to clean the air filter.
- The muffler and engine become very hot and can cause a severe burn; do not touch.

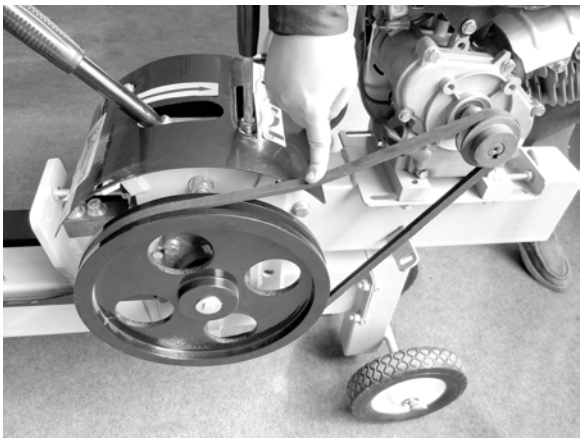
⚠ WARNING

No list of warnings and cautions can be all-inclusive. If situations occur that are not covered by this manual, the operator must apply common sense and operate this log splitter in a safe manner.

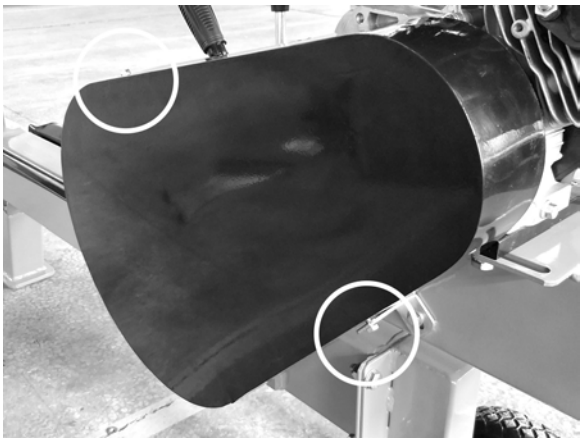
ASSEMBLY DIAGRAM

Some assembly required. Please identify components below. Vee-belt, pulley guard and outrigger leg will require assembly.



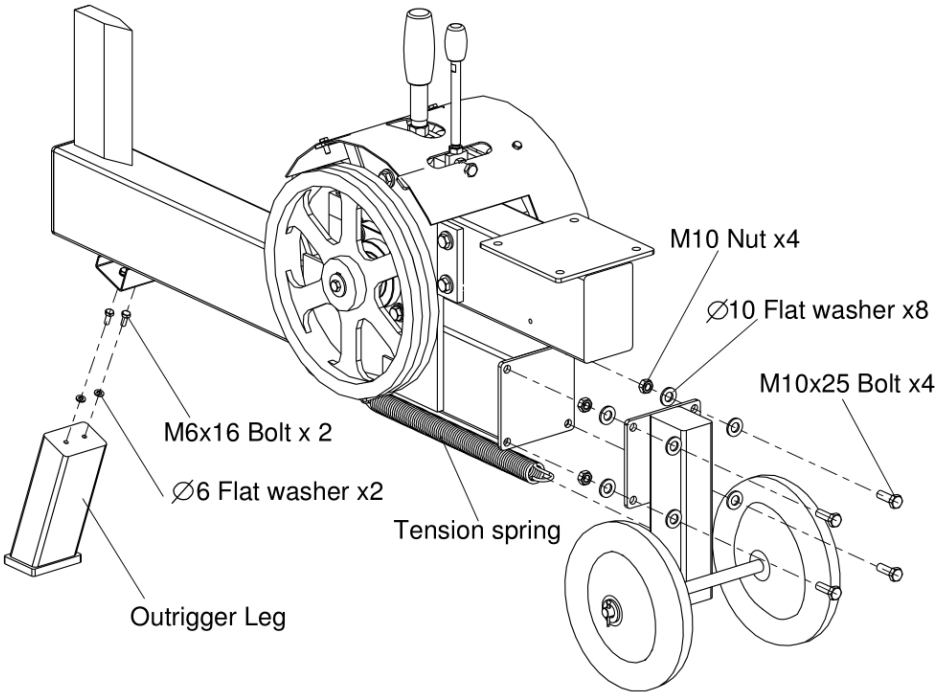


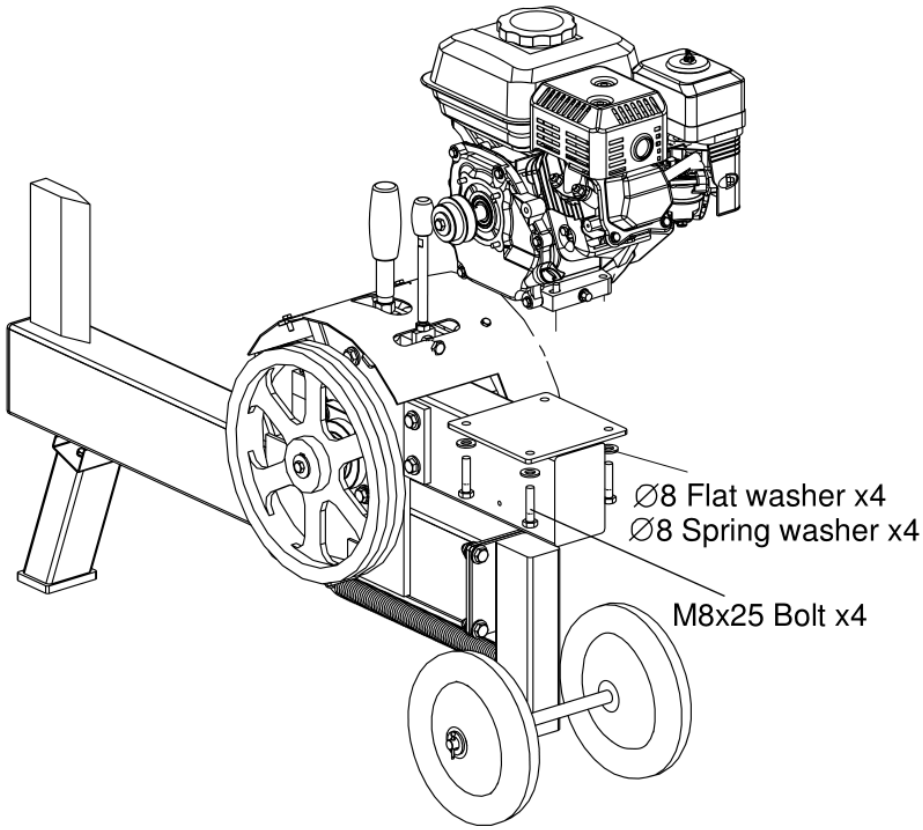
When installing belt, make sure it can be pressed down 0.75 – 1.25 inches (2~3 cm) when assembled.



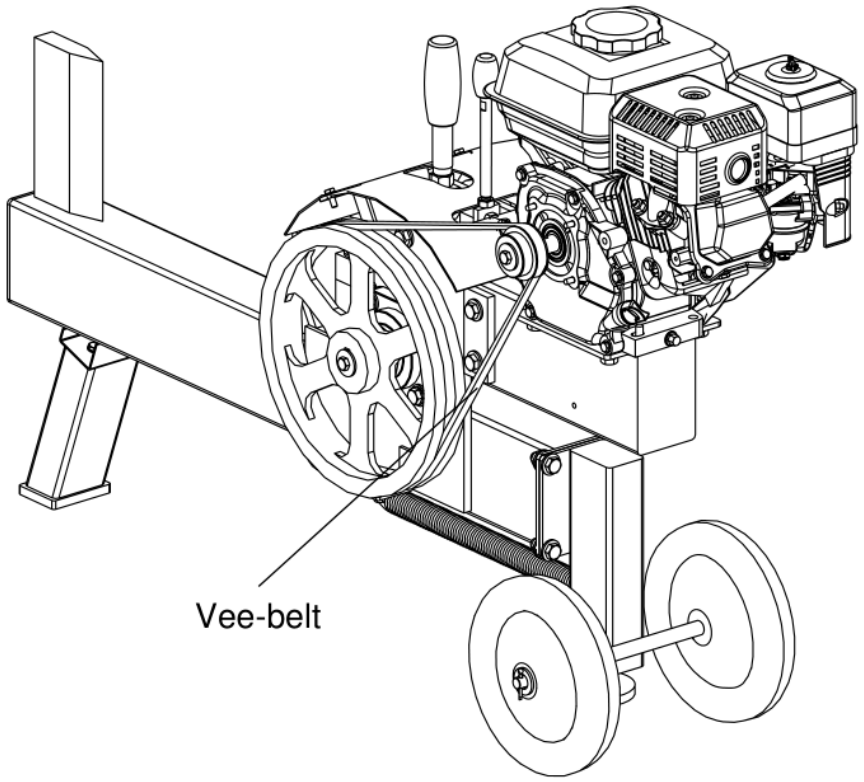
Place the Pulley Guard over the belt, then attach the two bolts securely.

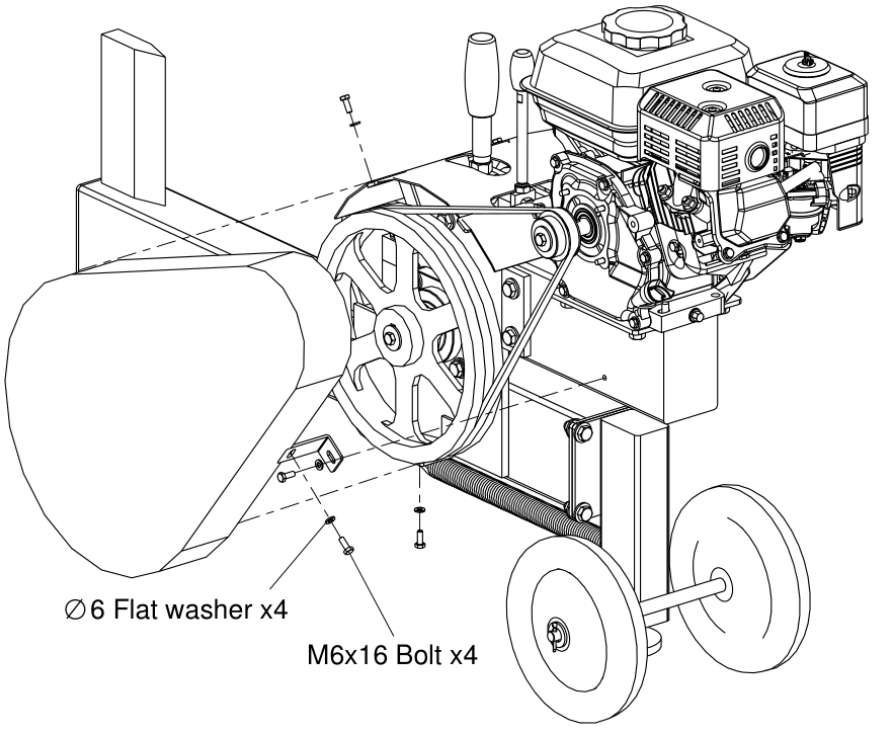
ASSEMBLY COMPONENTS





ASSEMBLY COMPONENTS





PREPARING THE LOG SPLITTER FOR USE

CAUTION

STOP!

The following section describes the required steps for preparing this log splitter for the first use. Failure to correctly perform these steps can damage this log splitter and/or shorten its life. If still unsure about how to perform any of these steps after reading this section, call 1-866-460-9436 Monday - Friday, 8 AM - 4 PM Central Time for customer service.

Step 1 - Add Oil

THIS LOG SPLITTER REQUIRES AT LEAST 12 OUNCES OF OIL (SAE10W-30) TO RUN.

ADD OIL UNTIL IT IS ALMOST OVERFLOWING. THE LOW-OIL SENSOR IS VERY SENSITIVE AND THE ENGINE WILL NOT RUN IF THE OIL IS LOW. START WITH 12 OUNCES, THEN ADD MORE UNTIL ALMOST OVERFLOWING.

TROUBLESHOOTING: IF THE LOG SPLITTER WILL NOT START, DOUBLE CHECK THAT THE OIL LEVEL IS COMPLETELY FULL AND ALMOST OVERFLOWING.

This log splitter requires engine oil to function. Engine oil is a major factor affecting engine performance and service life. When new from the package, **this log splitter contains no oil in the engine crankcase**. Add oil before operating this log splitter for the first time. When replenishing oil for subsequent use of this log splitter, always determine that this log splitter has the correct quantity of oil. To add oil to the engine crankcase:

1. Confirm that this log splitter is on a level surface.
2. Unscrew the oil filler/dipstick cap from the engine as illustrated in Figure 1 below. (NOTE: There are two locations to add oil (see Figure 1). You can choose to use either one.)
3. Using a funnel, add high detergent motor oil to fill the engine crankcase to the correct quantity. SAE10W-30 oil is recommended for general use. When the engine crankcase is full and almost overflowing, the oil level should reach the lower lip of the oil filling opening as shown in Figure 2.
4. Replace the oil filler/dipstick cap and close the oil access panel.
5. (Figure 3 indicates the location to drain oil, if necessary)

Figure 1 – Unscrew Either Dipstick Caps

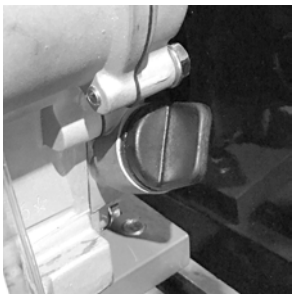


Figure 2 - Add Oil

Figure 3 - Drain Oil (when necessary)

Step 2 - Add Gasoline

⚠ WARNING

Gasoline and gasoline fumes are highly flammable and explosive. Handling fuel can result in serious injury or burns.

• Do not fill the fuel tank near a heat, sparks or an open flame. Keep gasoline away from appliance pilot lights, barbecues, electric appliances, power tools, etc.

• Do not overfill the fuel tank. Always check for fuel spills and immediately wipe them up. Spilled fuel is a fire hazard and causes environmental damage.

To add gasoline:

To ensure that this log splitter runs smoothly, use only FRESH, UNLEADED GASOLINE WITH AN OCTANE RATING OF 87 OR HIGHER. Unleaded gasoline produces fewer engine and spark plug deposits and extends the life of the exhaust system.

1. Confirm that this log splitter is on a level surface.
2. Unscrew fuel tank cap and set aside. (NOTE: The fuel tank cap may be tight and difficult to unscrew.)
3. Slowly add fresh, unleaded gasoline (with an octane rating 87 or higher) to the fuel tank. Be careful not to fill the fuel tank above the upper limit line. NOTE: Because gasoline can expand, do not fill the fuel tank to the very top.
4. Securely tighten the fuel tank cap and immediately wipe up any spilled gasoline with a dry cloth.

Fuel Tank Capacity (gallons)	0.42
Fuel Type	Fresh, Unleaded Gasoline Octane Rating 87 or Higher

IMPORTANT:

• Use only UNLEADED gasoline with an octane rating of 87 or higher.

• Never use a mixture of oil and gasoline.

• Never use old and/or contaminated gasoline.

• Avoid getting dirt and/or water in the fuel tank.

• Gasoline can age in the fuel tank and make it difficult to start this log splitter. Never store this log splitter for extended time with gasoline in the fuel tank.

STARTING THE LOG SPLITTER

Before starting the log splitter, confirm that all steps in the section titled, “Preparing the Log Splitter for Use,” of this manual have been completed.

If unsure about how to perform any of these steps, call 1-866-460-9436, Monday - Friday, 8 AM - 4 PM Central Time for customer service.

To start this log splitter:

1. Be certain gasoline and oil have been added. Turn the fuel valve to the “on” position. Figure 4A
2. Move the choke lever to the “Closed/Choke” position. Figure 4B.
3. Set the engine switch to the “on” position Figure 4C.
4. Slowly pull on the recoil starter handle, shown in Figure 4D, until a slight resistance is felt. Then pull briskly to start the engine. Gently return the cord into the log splitter to avoid damage to the starter or housing. Never allow the cord to snap back.
5. If the engine fails to start, repeat step 4. After repeated attempts to start the engine, consult the troubleshooting guide before attempting again.
6. Once the engine has started, GRADUALLY move the choke lever to the “Open/Run” position until the engine levels off. Then let the engine run approximately 5 minutes BEFORE adding appliances or tools. Adjust the speed using the Throttle Figure 4E.

Fuel Cock

The fuel cock is located between the fuel tank and carburetor. When the fuel cock is in the ON position, fuel is allowed to flow from the fuel tank to the carburetor. Be sure to return the fuel cock to the OFF position after stopping the engine.

Choke Rod

The choke is used to provide an enriched fuel mixture when starting a cold engine. It can be opened and closed by operating the choke rod manually. Pull the rod out toward CLOSED to enrich the mixture for cold starting.

Figure 4A Fuel Valve

Figure 4B Closed / Choke

Figure 4C Engine Switch

Figure 4D The Recoil Start

Figure 4E Throttle

STOPPING THE LOG SPLITTER

1. Turn the Fuel Valve to the “OFF” position.
2. Set the Engine Power Switch to the “OFF” position.

⚠WARNING

Allow this log splitter to cool down before touching areas that become hot during operation.

⚠CAUTION

Allowing gasoline to sit in this log splitter fuel tank for extended time without use can increase the difficulty in starting in the future. Never store this log splitter for extended time with gasoline in the fuel tank.

OPERATION INSTRUCTIONS

⚠ CAUTION

The diameter listed is indicative of the maximum suggested size. A small log can be difficult to split when it contains knots or a particularly tough fiber. However, it may not be difficult to split logs with regular fibers even if its diameter exceeds the maximum indicated above.

- **Max. Log Length: 20 inches**
- **Max. Log Diameter: 13.75 inches**
- Never attempt to split wood across the grain. The Log Splitter was not designed for cross-grain splitting. Doing so could damage the Log Splitter and may cause personal injury.
- Make sure both ends of the log you are splitting are cut as square as possible. This will prevent the log from sliding out of position while under pressure.

THE KINETIC LOG SPLITTER OPERATES DIFFERENTLY THAN A HYDRAULIC SPLITTER. OPERATE THE MACHINE PROPERLY OR RISK DAMAGE TO THE MACHINE. ALWAYS FOLLOW THESE NOTICES:

- The Engagement Handle should be engaged in rapid movement in order for the Rack and Pinion to engage and disengage fully without damage.
- Do not stop the Engagement Handle in any location between the fully forward or fully backward positions.
- Do not hold the Handle in the forward position when the Ram stops moving forward. Always pull the Engagement Handle RAPIDLY to the back (Auto-Retract) position as soon as the Log is split or when the Ram is at the end of the stroke or when the Ram stops moving forward due to a tough log.

1. Place the log on the Log Splitter. Grasp the log on the sides near the middle of the block. Center the log, side-to-side, on the rail of the Log Splitter, making sure that one end is against the Splitting Wedge.
2. The engagement Handle must be held fully in the Split Position against the hard stop when splitting. Failure to do so may result in kickback of the Handle.
3. Move the Operation Handle from Lock to Unlock, then the other hand Rapidly moves the Engagement handle
4. **IMMEDIATELY AFTER** the log is split, actuate and hold the Engagement Handle to the Auto-Retract position to allow the Ram to return. If the Ram stops before the end of the stroke while splitting a tough log, quickly actuate the Engagement Handle back to the Auto-Retract position.

Splitting Tough Logs

If the Ram stops before the end of the stroke while splitting a tough log, quickly actuate the Engagement Handle back to the Auto-Retract position. Let the Ram return and allow the flywheels to gain momentum for another full power split.

MAINTENANCE CHECKLIST

PROCEDURE	Before each use	Every 5 hours	Every 25 hours	Every 100 hours
Check engine oil level	Δ			
Check general equipment	Δ			
Grease surface of slide rail	Δ			
Check belts	Δ			
Grease Rack and pinion	Δ			
Clean engine exterior and cooling		Δ		
Change engine oil	First time 5 hours		Δ	
Replace air filter			Δ	
Replace spark plug				Δ

Before performing any maintenance procedure or inspection, stop the engine, wait five minutes to allow all parts to cool. Disconnect the spark plug wire, keeping it away from the spark plug.

Cleaning the Log Splitter

Always try to use this log splitter in a cool dry place. If this log splitter becomes dirty, the exterior can be cleaned with a damp cloth, soft brush, vacuum and/or pressurized air.

Never clean this log splitter with a bucket of water and/or a hose as water can get inside and cause a short circuit or corrosion.

Never use gasoline to clean parts of this log splitter.

Checking the Oil Level

It is important to check the oil level in the engine crankcase before each use to ensure that there is a sufficient quantity.

To check the oil level:

1. Verify that this log splitter is shut down and on a level surface.
2. Unscrew the oil filler/dipstick cap from the engine.
3. With a dry cloth, wipe the oil off of the dipstick that is located on the inside of the cap.
4. Insert the dipstick as if replacing the cap and then remove again. There should be oil on the dipstick. If there is no oil on the dipstick, or oil is visible only at the very end of the dipstick, add oil until the engine crankcase is filled.
5. Confirm that the oil filler/dipstick cap is properly in place when finished verifying the oil level.

Changing/Adding Oil

The oil level in this log splitter should be checked before each use. If oil level is low, add oil until the level is sufficient to operate. (See Figure 2.) The oil should be changed after the first 20 hours of operation. Subsequently, the oil should be changed every 6 months, or for every 100 hours of use, or when the oil has become contaminated with water and/or dirt.

To drain the oil from this log splitter:

1. Place a bucket underneath this log splitter to catch oil as it drains.
2. Unscrew the oil drain plug located on the crankcase using 10 mm hex wrench. (See Figure 3.)
3. Allow all the oil to drain from this log splitter.
4. Replace the oil drain plug and tighten using 10 mm hex wrench. (See Figure 3.)

NOTE: Never dispose of used motor oil in the trash, down a drain or on the ground. Put oil in a sealed container and contact your local recycling center or auto garage to arrange oil disposal.

Air Filter Maintenance

Routine maintenance of the air filter helps maintain proper airflow to the carburetor. Occasionally verify that the air filter is free of excessive dirt. The air filter will require frequent cleaning when operating this log splitter in extremely dusty areas.

1. To clean the air filter, remove the foam filter element from the log splitter and wash it in warm water and household dish detergent. Thoroughly rinse and dry. Pour a small amount of motor oil onto the filter, ring out ALL excess oil, and reinstall the foam filter element in the log splitter.
2. Unscrew the bolts, or unsnap the clips at the top and bottom of the air filter cover, located below the choke lever, to access foam filter element.

Spark Plug Maintenance

The spark plug is essential for proper engine operation. The spark plug should be intact, free of deposits, and properly gapped. A bad or incorrectly installed spark plug can cause engine damage. To inspect the spark plug:

1. Remove the spark plug by pulling on the spark plug cap.
2. Unscrew the spark plug from this log splitter by using the included spark plug wrench.
3. Visually inspect the spark plug. If it is cracked and/or chipped, discard and install a new spark plug. Using a E7RTC spark plug, such as NGK BP6HS, is recommended.
4. Measure the spark plug electrode gap with a gauge. The gap should be 0.024-0.031in (0.6-0.8mm). (See Figure 9.)
5. If re-using the spark plug, use a wire brush to clean dirt from around the spark plug base and then re-gap the plug.
6. Screw the spark plug back into place on this log splitter by using the included spark plug wrench.
7. Replace the spark plug cap.

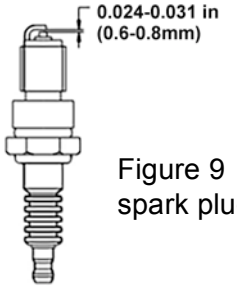


Figure 9 - Measuring the spark plug gap

To store this log splitter for extended time, drain the gasoline from the carburetor AND fuel tank.

To drain gasoline from this log splitter:

1. Turn the fuel valve to the “off” position and let the engine run until it stops.
2. Remove the fuel filter cup.
3. Empty the fuel filter cup of any fuel.
4. Place a receptacle underneath this log splitter to catch gasoline as it drains.
5. Turn the fuel valve to the “on” position and allow all gasoline to drain.
6. Turn the fuel valve to the “off” position.
7. Replace the fuel filter cup.
8. Store the drained gasoline in a suitable place.

To store this log splitter for extended time, the fuel needs to be drained from the carburetor.

To drain the gasoline from the carburetor turn the fuel valve to the “off” position while the engine is running. The log splitter will shut down when all the gasoline in the carburetor has been used.

⚠ CAUTION

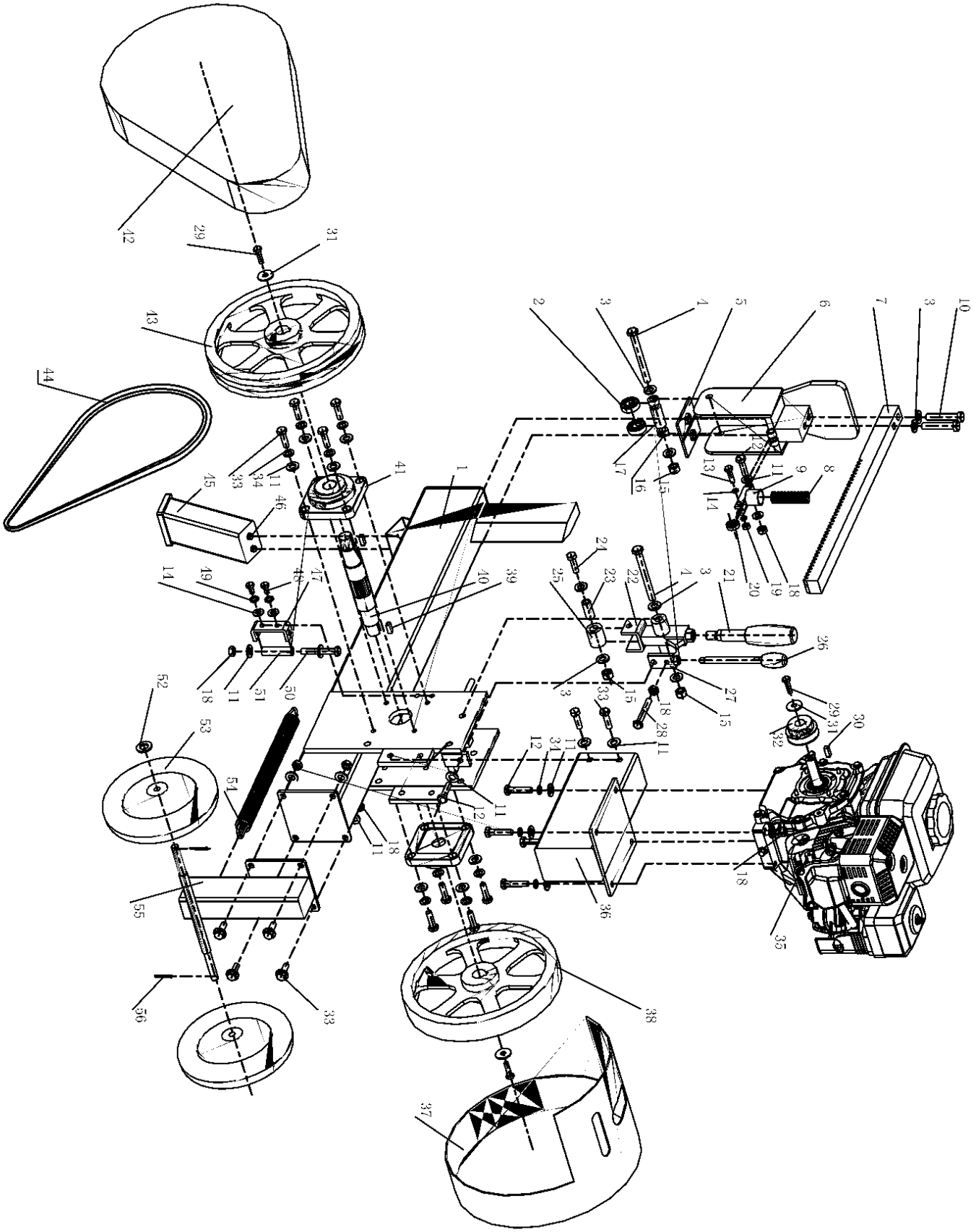
Do not store gasoline for more than 3 months.

TROUBLESHOOTING

IMPORTANT: If trouble persists, **call our customer help line at 1-866-460-9436, Monday - Friday, 8 AM - 4 PM Central Time.**

SYMPTOM	POSSIBLE CAUSE
The engine won't start.	⇒ Is the ignition switch in the "ON" position? ⇒ Is the fuel shut-off valve on? ⇒ Are you using fresh, clean gas? If the gas is old, change it. Use a fuel stabilizer if you keep gas longer than 30 days. ⇒ Is the spark plug clean? If the spark plug is dirty or cracked, change it. If it's oily, leave it out, hold a rag over the plug hole and pull the recoil cord several times to blow out any oil in the cylinder, then wipe off the plug and reinsert it.
The engine lacks power or is not running smoothly.	⇒ Check that the Throttle Lever is in the "Run" position. ⇒ Is the air filter clean? If it's dirty, change it following the procedure in the engine manufacturer's owner's manual. ⇒ Is the spark plug clean? If it's fouled or cracked, change it. If it's oily, leave it out, hold a rag over the plug hole and pull your recoil cord several times to blow out any oil in the cylinder, then wipe off the plug and reinsert it. ⇒ Are you using fresh, clean unleaded gas? If it's old, change it. Use a fuel stabilizer if you keep gas longer than 30 days. ⇒ Does your engine have the right amount of clean oil? If it's dirty, change it following the procedure in the engine manufacturer's owner's manual. ⇒ Check the oil level and adjust as needed.
Engine smokes. (Please refer to the engine user manual for engine-specific procedures.)	⇒ Check the oil level and adjust as needed. ⇒ Check the air filter and clean or replace if needed. ⇒ You may be using the wrong oil—too light for the temperature. Refer to your Engine Owner's Manual for detailed information. ⇒ Clean the cooling fins if they're dirty.
Rack catching on tail tube (at end of stroke). Rack returning very slow or not going all the way back.	⇒ Adjust carriage hold downs (slide guides). ⇒ Check for wood chips or debris between ram bushing plate and beam. ⇒ Check rack lift bearing for alignment or damage. ⇒ Return spring is unhooked or damaged. Reconnect or replace as needed. ⇒ Machine wedge end too low. Must be almost level or wedge end slightly higher.
Operator Lever Snapping out of gear or not staying in gear.	⇒ Lever not all the way forward when rack comes under full load. Push lever quicker and more forcefully into the full forward position. ⇒ Ram has been overloaded at lower part of face. Check rack gear for straightness.
Rack slamming back too fast.	⇒ Wedge end of machine too high. Must be almost level with ram end or just slightly higher. ⇒ Springs not operating properly. Fix or replace as needed.
Machine does not seem to have full splitting power.	⇒ The belts may be too loose and slipping. Adjust or replace belts as needed.
Operator Lever not engaging rack with pinion gear.	⇒ Clean wood chips or other debris from under rack. ⇒ Clean accumulated dirt from frame where carriage assembly rests against rubber bumpers.

PARTS DIAGRAM



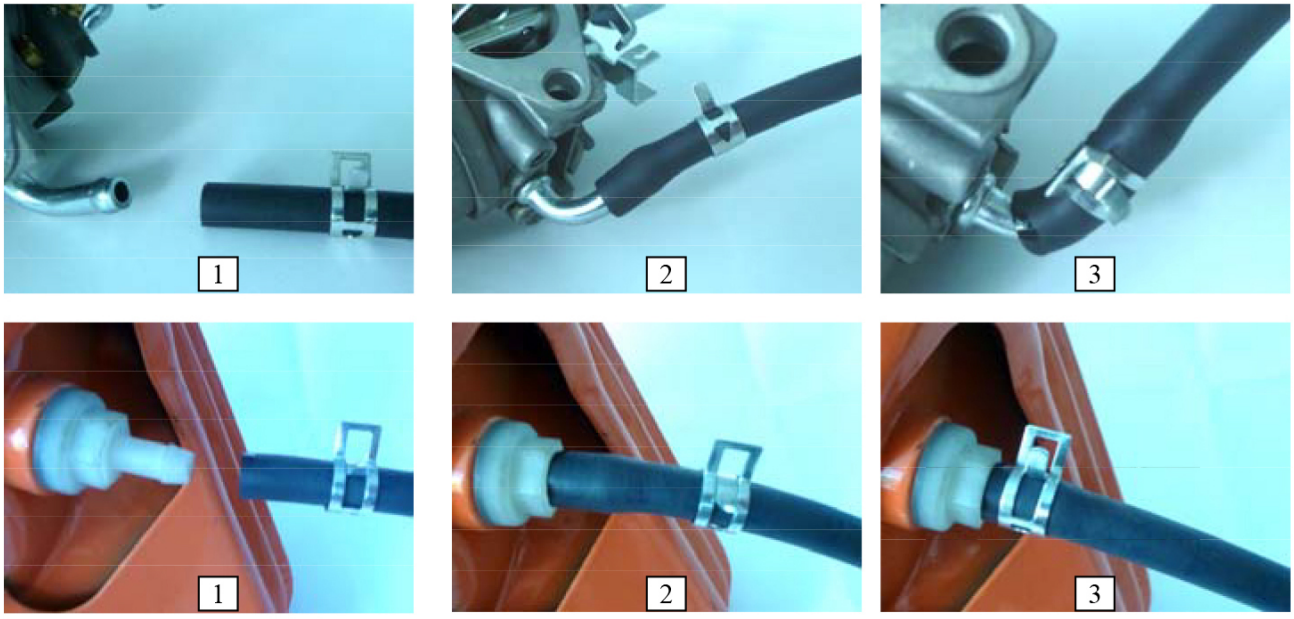
PARTS LIST

No.	Description	Qty		No.	Description	Qty
1	Body	1		29	Hex bolt M8x30	3
2	Bearing 6201	2		30	Key 6x6	1
3	Flat Washer φ12	8		31	Flat washerφ8	3
4	Hex Bolt M12x115	2		32	Engine pulley	1
5	Nylon slider	1		33	Hex bolt M10x30	16
6	Pusher	1		34	Spring washer φ10	12
7	Rack	1		35	Engine	1
8	Spring	1		36	Engine support	1
9	Restoration device	1		37	Flywheel guard	1
10	Hex Bolt M12x45	2		38	Flywheel	1
11	Flat Washer φ10	36		39	Key 8x7	2
12	Hex Bolt M10x45	6		40	Pinion driver	1
13	Hex Bolt M8x35	1		41	Bearing housing	2
14	Flat Washer φ8	6		42	Pulley guard	1
15	Screw M12	3		43	Flywheel for belt	1
16	Short Bushing	2		44	V belt	1
17	Long Busher	1		45	Outrigger leg	1
18	Screw M10	12		46	Hex bolt M6x16	1
19	Screw M8	1		47	Side roller fitting	2
20	Bearing 628	1		48	Hex bolt M8x15	4
21	Splitting handle	1		49	Spring washerφ8	4
22	Press device	1		50	Hex bolt M10x90	2
23	Sleeve	1		51	Side roller	2
24	Hex Bolt M12x65	1		52	Flat washer φ12	2
25	Roller	1		53	Wheel	2
26	Lock-Unlock handle	1		54	Tension spring	1
27	Lock-Unlock device	1		55	Wheel bracket	1
28	Hex Bolt M10x80	1		56	Cotter pinφ3.2	2

Engine type	4-stroke,overhead cam single cylinder
Displacement(cm^3)	94
Bore×Stroke（mm）	56×38
Max. output(kw/r/min)	2.0/3600
Max. torque (N.m/r/min)	4.8/3000
Fuel consumption(g/kw.h)	450
Cooling system	Forced air
Ignition system	TCI
Intake valve clearance (mm)(cold engine)	0.10±0.02(0.004±0.001 inch)
Exhaust valve clearance(mm)(cold engine)	0.15±0.02(0.006±0.001 inch)

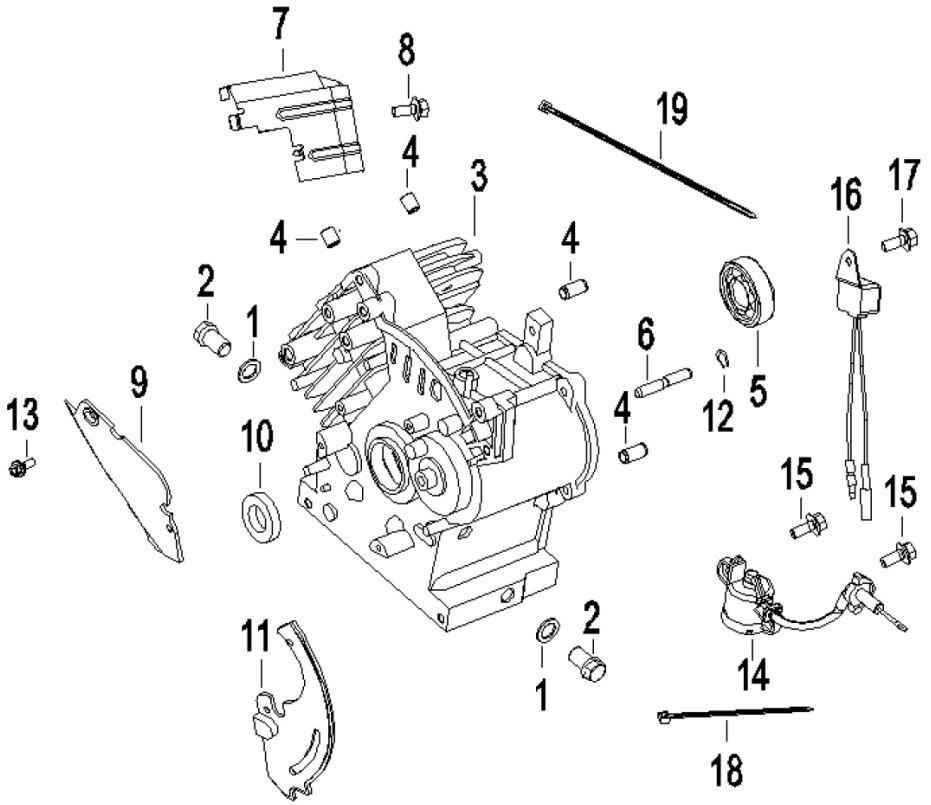
■ Fuel line installation instruction

1.Connect clamp to the fuel hose;
2.Slide fuel hose onto connection until it touches the bottom;
3.Then secure with clamp.



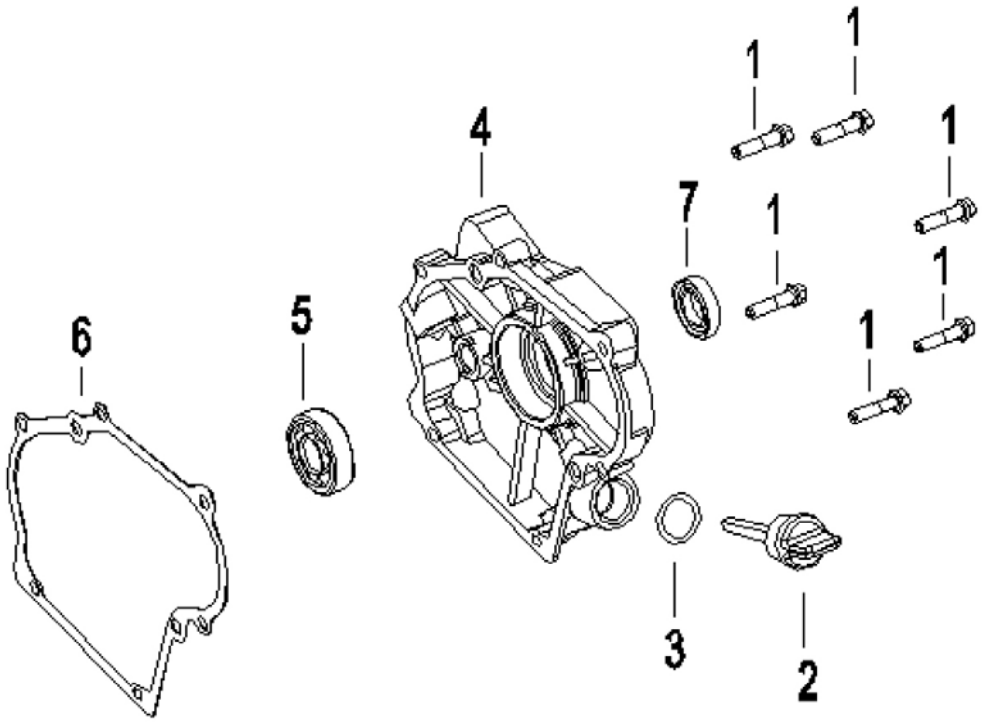
CRANKCASE ASSY

NO	PARTS NO.	CODE	DESCRIPTION	QTY
1	QJ166QDK.01-07B	31070124001001	Spacer, Drain plug	2
2	QJ166QDK.01-06	31060124001000	Drain plug	2
3	JF156FFH.01.02	21020118001000	Crankcase assy	1
4	JF152FFH.01-08	31080116001000	Guide dowel	4
5	GB/T276-13｜6203	B12016020300	Bearing	1
6	QJ168QDJ.05-04	35040121001000	Pin	1
7	JF152FFH.01-09	31090116001000	Clipboard	1
8	GB/T16674.1-04｜M6*12｜	B01330601265	Bolt	1
9	ZJ151FEH.01-01	31020115001000	Plate 1 driversion	1
10	JF152FFH.01.01	21030116001000	Washer, Seal	1
11	ZJ151FEH.01-02	31030115001000	Plate 2 driversion	1
12	QJ166QDK.01-02	31020124001000	Snap spring	1
13	GB/T16674.1-04｜M6*10｜	B01330601065	Bolt	1
14	JF152FFH.01.03	21040116001000	Oil Level Sensor	1
15	GB/T16674.1-04｜M6*16｜	B01330601665	Bolt	2
16	QJ182QDP.01.05	21060127002000	Electionic Switch	1
17	GB/T16674.1-04｜M6*12｜	B01330601265	Bolt	1
18	SC802A	K80202112700	Cable Ties	1
19	1E38QCA-5.9.3-17	38050113001000	Cable Ties	1



CRANKCASE COVER ASSY

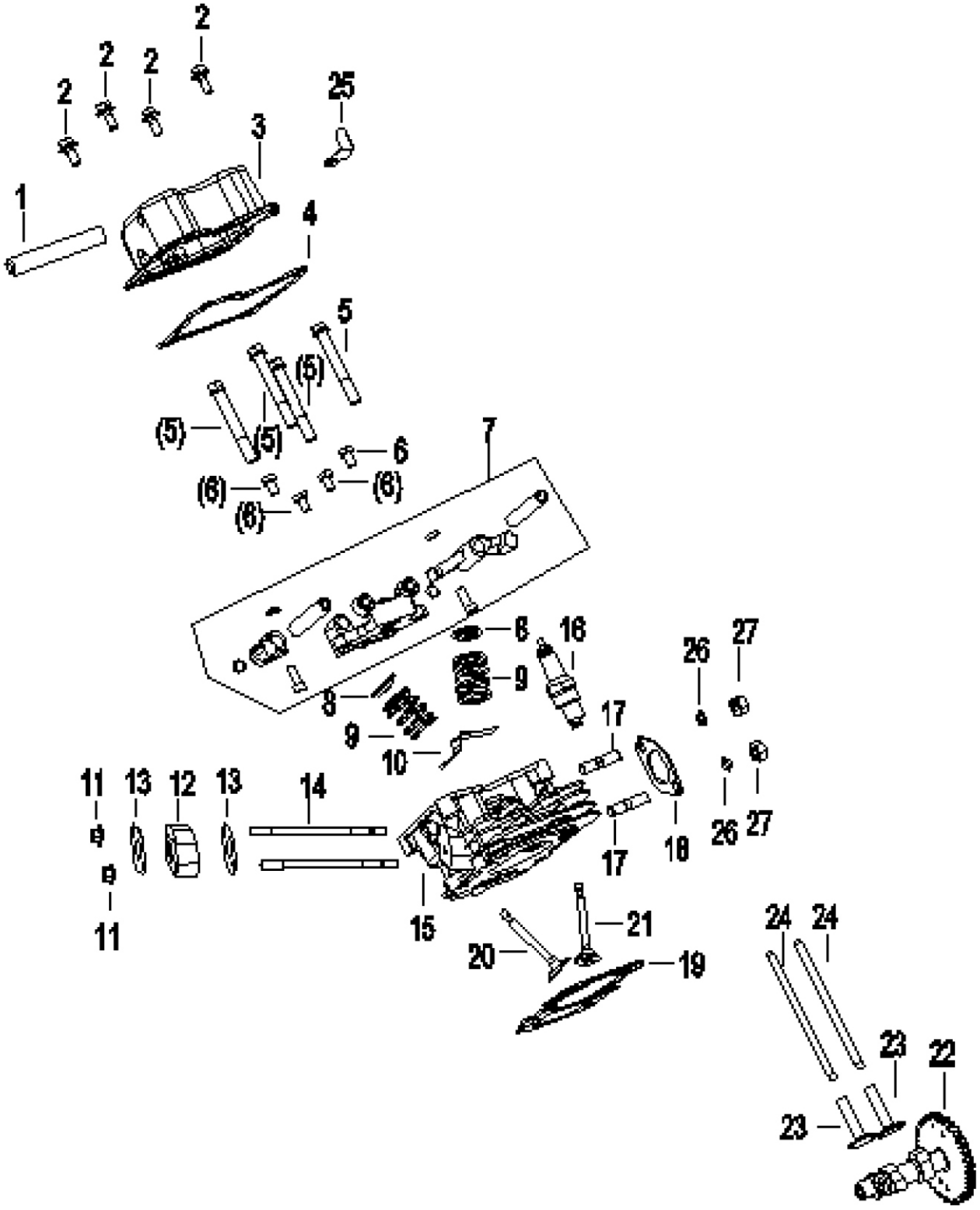
NO	PARTS NO.	CODE	DESCRIPTION	QTY
1	GB5789-86 | M6*25 |	B01310602565	Bolt	6
2	JF152FFH.01-03	31030116001000	Dipstick	1
3	JF152FFH.01-12	31170116001000	Seal Spacer	1
4	ZJ151FEH.01-03	31010115001000	Cover, Crankcase	1
5	GB/T276-13 | 6303	B12016030300	Bearing	1
6	JF152FFH.01-02	31020116001000	Gasket, Crankcase	1
7	JF152FFH.01.01	21030116001000	Washer, Seal	1



CYLINDER HEAD & VALVE MECHANISM ASSY

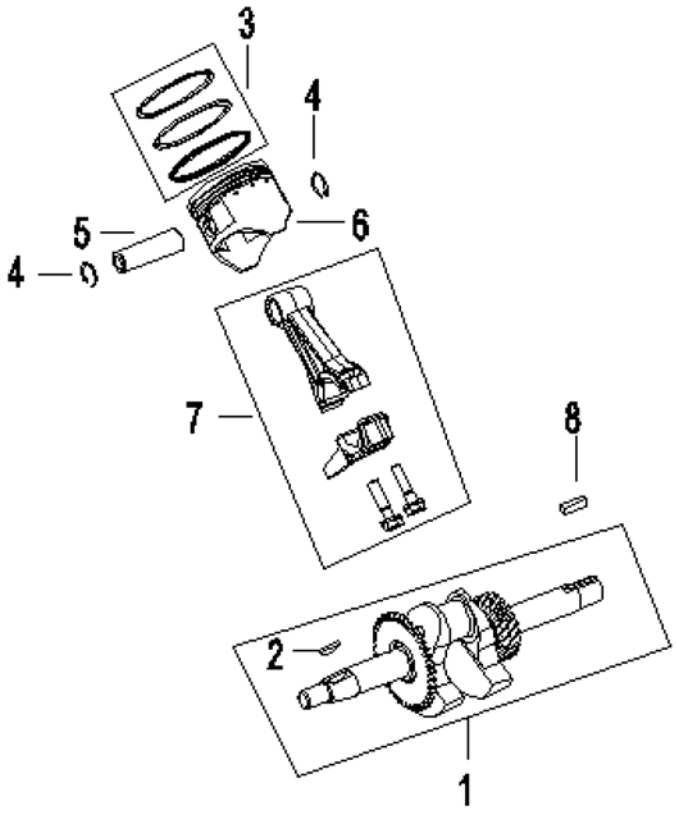
NO	PARTS NO.	CODE	DESCRIPTION	QTY
1	QJ168QDJ.07-01	37100121001000	Colloid pipe	1
2	GB/T16674.1-04｜M6*12｜	B01330601265	Bolt	4
3	JF152FFH.02.02	22030116001000	Cylinder head cover	1
4	JF152FFH.02-03	32030116001000	Gasket, Cylinder head cover	1
5	GB/T16674.1-04｜M8*55｜	B01330805565	Bolt	4
6	GB/T16674.1-04｜M6*16｜	B01330601665	Bolt	4
7	JF152FFH.03.01	23020116001000	Rocker bracket assy	1
8	JF152FFH.03-05	33050116001000	Upper retainer, Door spring	2
9	JF152FFH.03-04	33040116001000	Spring, valve	2
10	JF152FFH.03-06	33060116001000	Retainer intake door spring	1
11	GB6177.1-2000｜M6｜	B04280600025	Nut	2
12	JF152FFH.02-05	32050116001000	Spacer, Heat insulating	1
13	JF152FFH.02-04	32040116001000	Gasket, inlet pipe	2
14	JF152FFH.02-06	32060116001000	Bolt, Intake pipe	2
15	JF156FFH.02.01	22020118001000	Cylinder head	1
16	JF152FFH.02.03	22050116001000	Spark plug	1
17	QJ168QDJ.02-07	32070121001000	Bolt, Exhaust pipe	2
18	JF152FFH.02-09	32070116001000	Gasket, Exhaust pipe	1
19	JF156FFH.02-02	32010118001000	Gasket, Cylinder head	1
20	JF156FFH.03-02	33010118001000	Valve, Intake	1
21	JF156FFH.03-03	33020118001000	Valve, Exhaust	1
22	JF152FFH.03.02	23060116001000	Camshaft	1
23	JF152FFH.03-01	33010116001000	Stud, Connecting	2
24	JF152FFH.03.03	23070116001000	Rod, connecting	2
25	JF152FFH.02-10	32080116001000	plate,head cover	1
26	GB93-87｜Φ8｜	B07000008045	Spring Washer	2
27	GB6177.1-2000｜M8｜	B04280800025	Nut	2

CYLINDER HEAD & VALVE MECHANISM ASSY



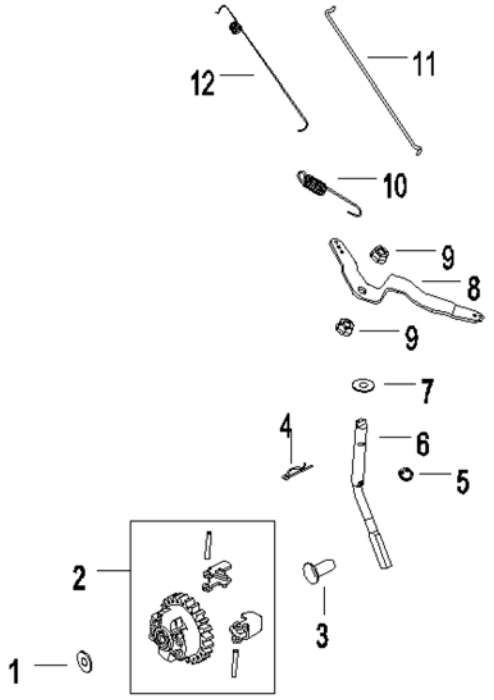
CRANKSHAFT & PISTON & CONNECTING ROD ASSY

NO	PARTS NO.	CODE	DESCRIPTION	QTY
1	JF156FFH.04.01	24030118001000	Crankshaft	1
2	JF152FFH.04-01	34010116001000	key	1
3	JF156FFH.05.01B	24040118001001	Piston ring assy	1
4	JF152FFH.05-05	34100116001000	Circlip, Pistion pin	2
5	JF154FFH.05-04	34060117001000	Pin, Piston	1
6	JF156FFH.05-01B	34020118001001	Piston	1
7	JF152FFH.05.02	24050116001000	Connecting rod assy	1
8	PW16A.00-01	30011501001000	key	1



CENTRIFUGAL ADJUSTMENT (GOVERNOR)

NO	PARTS NO.	CODE	DESCRIPTION	QTY
1	QJ168QDJ.05-09	35090121001000	Spacer 2	1
2	JF156FFH.06.01B	25020118001001	Adjustment, Centrifugal	1
3	QJ182QDP.06-06	35060127002000	Cover, Push rod	1
4	QJ182QDP.06-02	35020127002000	Circlip	1
5	GB896-86 | Φ6 |	B08100000611	Block circle	1
6	JF152FFH.06-02	35020116001000	Fork	1
7	QJ182FPH-6.02-02	35130127002000	Spacer II	1
8	JF152FFH.06-01	35010116001000	Governor pivot bracket	1
9	GB6177.1-2000 | M6 |	B04280600025	Nut	2
10	JF156FFH.06-01	35030118001000	Spring 1, Tension	1
11	JF152FFH.06-04	35040116001000	Rod, Tension	1
12	JF152FFH.06-05	35050116001000	Spring 2, Tension	1



IGINITION SYSTEM

NO	PARTS NO.	CODE	DESCRIPTION	QTY
1	JF152FFH.07.01	28020116001000	Flying wheel	1
2	JF152FFH.08-02	36020116001000	Fan wheel	1
3	ZJ151FEH.04-01	36010115001000	Starter canister	1
4	JF152FFH.04-03	34030116001000	Nut, Clamp	1
5	JF152FFH.07.02	28030116001000	Ignition coil	1
6	JF152FFH.07.02-01	28050116001000	Flameout Wire	1
7	GB/T16674.1-04 | M6*20 |	B01330602065	Bolt	2

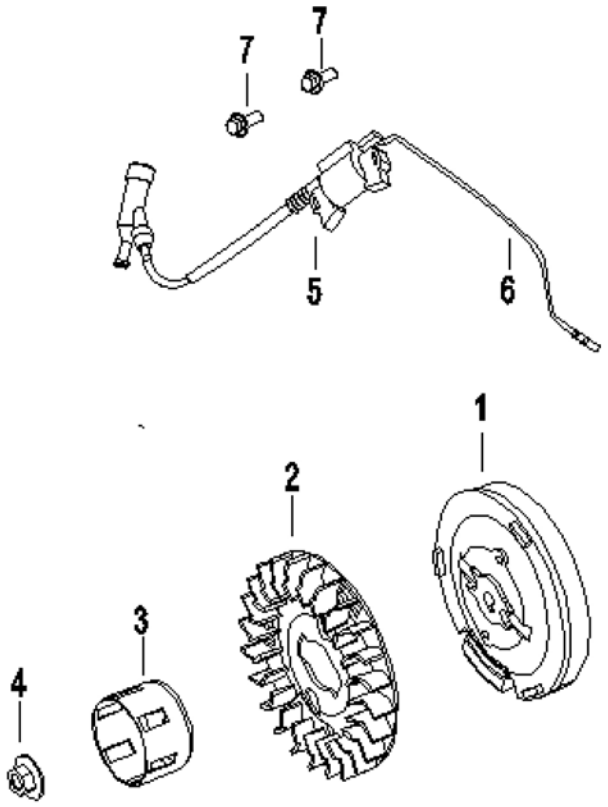
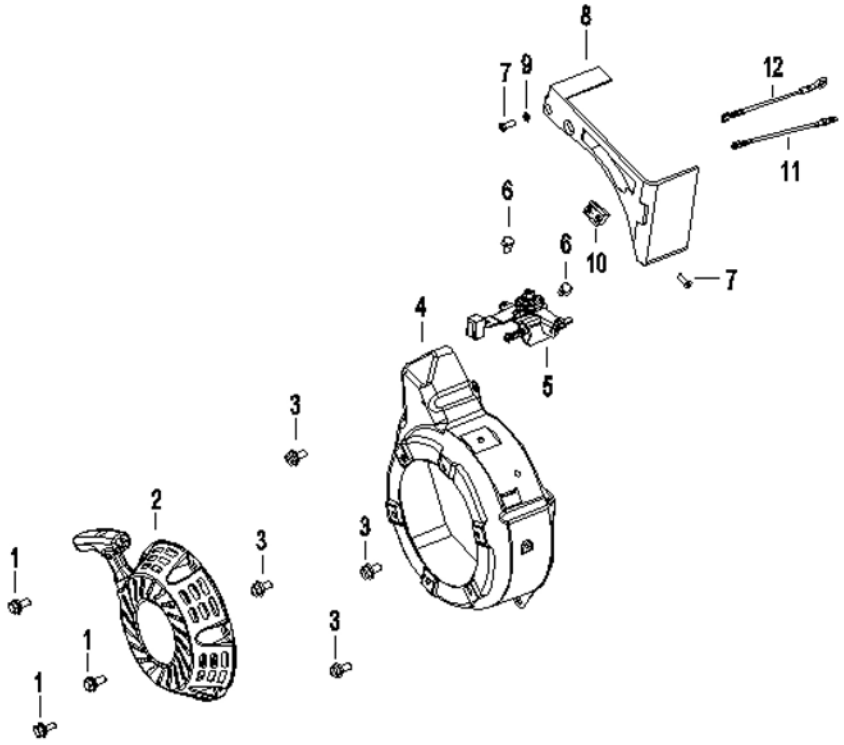


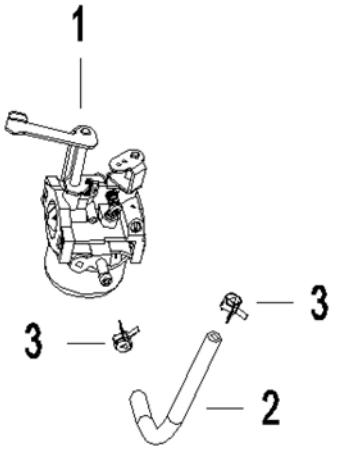
PLATE VENTILATION HOOD COMPONENTS

NO	PARTS NO.	CODE	DESCRIPTION	QTY
1	GB/T16674.1-04 | M6*8 |	B01330600865	Bolt	3
2	JF152FFH.08.01	26020116001090	Starter Assembly	1
3	GB/T16674.1-04 | M6*12 |	B01330601265	Bolt	4
4	JF152FFH.08-03	36030116001090	Engine side cover	1
5	JF152FFH.08.02	26040116001090	speed adjustment base assy	1
6	GB5789-86 | M6*10 |	B01310601065	Bolt	2
7	GB845-85 | ST4.2*9.5 |	B05004209EC1	Screw	2
8	JF152FFH.08.03	26060116001000	Throttle panel	1
9	GB/T95-02 | ф4 |	B07010004041	Washer	1
10	1E38QCA-8.9.2-3	36060115001000	Switch ASSY, ignition	1
11	JF152FFH.08.03-03	26080116001000	Flameout wire	1
12	JF152FFH.08.03-02	26070116001000	Grounded wire assy	1



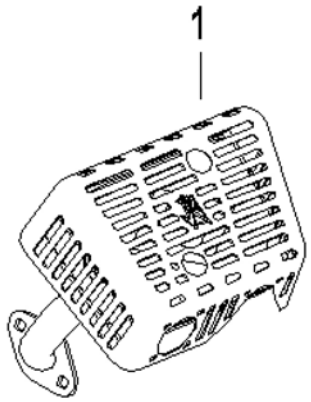
CARBURETOR

NO	PARTS NO.	CODE	DESCRIPTION	QTY
1	JF156FFH.09.01	27120118001000	Carburetor	1
2	37520121001001	37520121001001	Hose, fuel	0.1m
3	JF168FJH-15.05-08	37200121001000	Fuel pipe cup	2



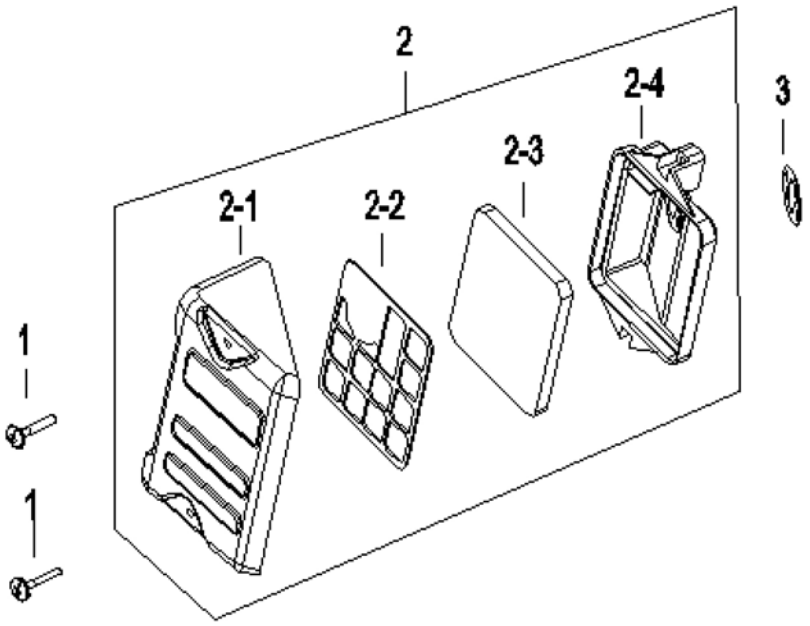
MUFFLER

NO	PARTS NO.	CODE	DESCRIPTION	QTY
1	JF156FFH.11C	27030118001002	Muffler	1



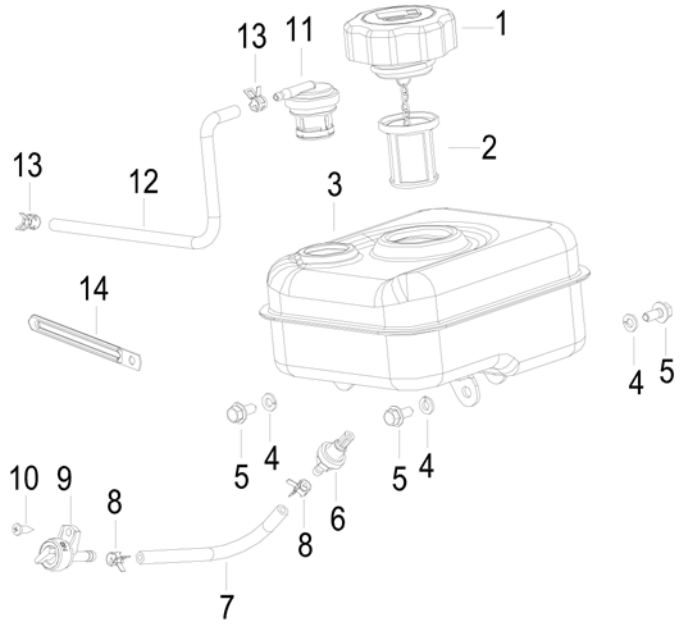
AIR FILTER ASSY

NO	PARTS NO.	CODE	DESCRIPTION	QTY
1	ZJ151FEH.06-02	37020115001000	Bolt, M5×32	2
2	JF156FFH.10.00B	27060118001001	Air Filter Ass'y	1
2-1	JF156FFH.10-01	37030118001000	Cover, air cleaner	1
2-2	JF156FFH.10.02	27080118001000	Air cleaner element	1
2-3	JF156FFH.10-02	37040118001000	Sustain board	1
2-4	JF156FFH.10.01	27070118001000	Below shell	1
3	JF152FFH.10-1	37010116001000	Air cleaner gasket	1



GAS TANK ASSY

NO	PARTS NO.	CODE	DESCRIPTION	QTY
1	JF168FJH-16.10.02	27140121001002	Fuel tank cap	1
2	QJ168QDJ.10.02.01	37250121001000	Filter cup	1
3	JF156FFH.12.01.01	27100118001000	Fuel tank	1
4	GB/T93-1987	B07000006045	Spring washer	3
5	GB/T5789-86	B01310601465	Bolt, M6×14	3
6	QJ168QDJ.10.01	27180121001000	Filter net	1
7	37520121001001	37520121001001	Hose, fuel	0.13m
8	JF168FJH-15.05-08	37200121001000	Fuel pipe clip	2
9	JF152FFH.12.04	27150116001000	Fuel switch assembly	1
10	GB/T845-1985	B050042013C1	Screw	1
11	JF168FJH-16.13.02	27280121001000	Oil spill valve	1
12	37530121001000	37530121001000	Hose, fuel	0.018kg
13	JF168FJH.10.03-03	38040121002000	Fuel pipe clip	2
14	QJ182QDP.01-09	31060127002000	Wire clamp	1



EMISSION CONTROL SYSTEM WARRANTY

Buffalo Corporation

Your Warranty Rights and Obligations:

The California Air Resources Board, U.S. EPA and Buffalo Corp are pleased to explain the Emission Control System Warranty on your new 2017 model year outdoor power equipment engine.

California

In California, new spark-ignited small off-road equipment engines must be designed, built and equipped to meet the State's stringent anti-smog standards.

Other States, U.S. Territories

In other areas of the United States, your engine must be designed, built and equipped to meet the U.S. EPA emission standards for spark-ignited engines at or below 19 kilowatts.

All of the United States

Buffalo Corp must warrant the emission control system on your power equipment engine for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your power equipment engine. Where a warrantable condition exists, Buffalo Corp will repair your power equipment engine at no cost to you including diagnosis, parts and labor.

Your emission control system may include parts such as: carburetors or fuel injection system, ignition system, catalytic converters, fuel tanks, valves, filters, clamps, connectors, and other associated components. Also, included may be hoses, belts, connectors, sensors, and other emission-related assemblies.

Manufacturer's Warranty Coverage:

The emission control system is warranted for two years. If any emissions-related part on your engine is defective, the part will be repaired or replaced by Buffalo Corp.

Owner's Warranty Responsibility

As the power equipment engine owner, you are responsible for the performance of the required maintenance listed in your owner's manual. Buffalo Corp recommends that you retain all receipts covering maintenance on your power equipment engine, but Buffalo Corp cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

As the power equipment engine owner, you should however be aware that Buffalo Corp may deny your warranty coverage if your power equipment engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

You are responsible for presenting your power equipment engine to distribution center or service center authorized by Buffalo Corp as soon as the problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days. If you have any questions regarding your warranty rights and responsibilities, you should contact Buffalo Corp customer service representative at 1-866-460-9436 or email info@buffalotools.com.

DEFECTS Warranty Coverage:

Adopted by the Air Resources Board, Buffalo Corp warrants to the ultimate purchaser and each subsequent purchaser that the small off-road engine (SORE) (1) has been designed, built and equipped so as to conform with all applicable regulation; and (2) is free from defects in materials and workmanship that cause the failure of a warranted part to conform with those regulations as may be applicable to the terms and conditions stated below.

(a) The warranty period begins on the date the engines is delivered to an ultimate purchaser or first placed into service. The warranty period is two years.

(b) Subject to certain conditions and exclusions as stated below, the warranty on emissions related parts is as follows:

(1) Any warranted part that is not scheduled for replacement as required maintenance in your Owner's Manual is warranted for the warranty period stated above. If the part fails during the period of warranty coverage, the part will be repaired or replace by Buffalo Corp according to Subsection (4) below. Any such part repaired or replaced under warranty will be warranted for the remainder of the period.

(2) Any warranty part that is scheduled only for regular inspection in your Owner's Manual is warranted for warranty period stated above. Any such part repaired or replaced under warranty will be warranted for the remaining warranty period.

(3) Any warranted part that is scheduled for replacement as required maintenance in your Owner's Manual is warranted for the period of time before the first scheduled replacement date for that part. If the part fails before the first scheduled replacement, the part will be repaired or replaced by Buffalo Corp. according to the Subject (4) below. Any such part repaired or replaced under warranty will be warranted for the remainder of the period prior to the first scheduled replacement point for the part.

(4) Repair or replacement of any warranted part under the warranty provisions herein must be performed at a warranty station at no charge to the owner.

(5) Notwithstanding the provisions herein, warranty services or repair will be provided at all of our distribution centers that are franchised to service the subject engines.

(6) The engine owner must not be charged for diagnostic labor that leads to the determination that a warranted part is in fact defective, provided that such diagnostic work is performed at a warranty station.

(7) Buffalo Corp. is liable for damages to other engine components proximately caused by a failure under warranty of any warranted part.

(8) Throughout the engine warranty period stated above, Buffalo Corp. will maintain a supply of warranted parts sufficient to meet the expected demand for such parts.

(9) Any replacement part may be used in the performance of any warranty maintenance or repairs and must be provided without charge to the owner. Such use will not reduce the warranty obligations of Buffalo Corp.

(10) Add-on or modified parts that are not exempted by the Air Resources Board may not be used. The use of any non-exempted add-on or modified parts by the ultimate purchaser will be grounds for disallowing a warranty claims. Buffalo Corp will not be liable to warrant failures of warranted parts caused by the use of a non-exempted add-on or modifed part.

(11) The manufacturer issuing the warranty shall provide any documents that describe that manufacturer's warranty procedures or policies within five working days of request by the Air Resources Board.

EMISSION WARRANTY PARTS LIST

(1) Fuel Metering System:

(a) Gasoline carburetor assembly and its internal components (b) Carburetor gaskets

(c) Fuel line (d) Clamps (e) Fuel tank

(f) Fuel line fittings (g) pressure regulator (if equipped)

(h) Mixer assembly and its internal components (if equipped)

(2) Air induction system including:

(a) Intake pipe/manifold (b) Air cleaner

(3) Ignition system including:

(a) Spark plug (b) Ignition coil

(4) Catalytic muffler assembly including:

(a) Muffler gasket (b) Exhaust manifold (c) Catalytic converter（if available）

(5) Crankcase breather assembly including

(a) Breather connection tube

(6) Fuel tank evaporative emissions control system including:

(a) Purge valves (b) Carbon canister (c) canister Mounting Brackets

(d) Fuel Cap (e) Fuel Tank

(7) Miscellaneous items used in above systems including:

(a) Switches (b) hoses, belts connectors, and assemblies

(8) Air injection system

(a) Pulse valve

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