

Before using the SitePower™ SP950 Walk-Behind Concrete Power Trowel, please read this manual carefully.

SITEPOWER

OPERATION INSTRUCTION

Walk-Behind Concrete Power Trowel SP950



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1. Foreword

This manual provides information and procedures to safely operate and maintain this SitePower model. For your own safety and protection from injury, carefully read, understand and observe the safety instructions described in this manual.

Keep this manual or a copy of it with the machine. If you lose this manual or need an additional copy, please contact SitePower. This machine is built with user safety in mind; however, it can present hazards if improperly operated and serviced. Follow operating instructions carefully! If you have questions about operating or servicing this equipment, please contact SitePower.

The information contained in this manual was based on machines in production at the time of publication. SitePower reserves the right to change any portion of this information without notice.

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2. Safety Information

This manual contains **DANGER**, **WARNING**, **CAUTION**, and **NOTE** callouts which must be followed to reduce the possibility of personal injury, damage to the equipment, or improper service.



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

2.1 Laws Pertaining to Spark Arresters

Notice: State Health Safety Codes and Public Resources Codes specify that in certain locations spark arresters be used on internal combustion engines that use hydrocarbon fuels. A spark arrester is a device designed to prevent accidental discharge of sparks or flames from the engine exhaust. Spark arresters are qualified and rated by the United States Forest Service for this purpose.

In order to comply with local laws regarding spark arresters, consult the engine distributor or the local Health and Safety Administrator.

2.2 Operating Safely

Familiarity and proper training are required for the safe operation of equipment! Equipment operated improperly or by untrained personnel can be dangerous! Read the operating instructions contained in both this manual and the engine manual and familiarize yourself with the location and proper use of all controls. Inexperienced operators should receive instruction from someone familiar with the equipment before being allowed to operate the machine.



2.2.1 NEVER allow anyone to operate this equipment without proper training. People operating this equipment must be familiar with the risks and hazards associated with it.

2.2.2 NEVER touch the engine or muffler while the engine is on or immediately after it has been turned off. These areas get hot and may cause burns.

2.2.3 NEVER use accessories or attachments that are not recommended by SitePower. Damage to equipment and injury to the user may result.

2.2.4 NEVER operate the machine with the beltguard missing. Exposed drive belt and pulleys create potentially dangerous hazards that can cause serious injuries.

2.2.5 NEVER leave machine running unattended.

2.2.6 ALWAYS be sure operator is familiar with proper safety precautions and operation techniques before using machine.

2.2.7 ALWAYS wear protective clothing appropriate to the job site when operating equipment.

2.2.8 ALWAYS wear hearing protection when operating equipment.

2.2.9 ALWAYS close fuel valve on engines equipped with one when machine is not being operated.

2.2.10 ALWAYS store equipment properly when it is not being used. Equipment should be stored in a clean, dry location out of the reach of children.

2.2.11 ALWAYS operate machine with all safety devices and guards in place and in working order. **DO NOT** modify or disable safety devices. **DO NOT** operate machine if any safety devices or guards are missing or inoperative.

2.2.12 ALWAYS read, understand, and follow procedures in Operator's Manual before attempting to operate equipment.

2.3 Operating Safely while using Internal Combustion Engines

Internal combustion engines present special hazards during operation and fueling. Read and follow warning instructions in the engine owner's manual and safety guidelines, outlined below. Failure to follow warnings and **DANGER** safety guidelines could result in severe injury or death.



- 2.3.1 DO NOT run machine indoors or in an enclosed area, such as a deep trench, unless there is adequate ventilation (exhaust fans or hoses) is provided. Exhaust gas from the engine contains poisonous carbon monoxide gas. Exposure to carbon monoxide can cause loss of consciousness and may lead to death.
- 2.3.2 DO NOT smoke while operating machine.
- 2.3.3 DO NOT smoke when refueling engine.
- 2.3.4 DO NOT refuel hot or running engine.
- 2.3.5 DO NOT refuel engine near open flame.
- 2.3.6 DO NOT spill fuel when refueling engine.
- 2.3.7 DO NOT run engine near open flames.
- 2.3.8 ALWAYS refill fuel tank in well-ventilated area.

- 2.3.9 ALWAYS replace fuel tank cap after refueling.
- 2.3.10 Always check fuel lines and fuel tank for leaks and cracks before starting engine. Do not run machine if fuel leaks are present or fuel lines are loose.

2.4 Safety Service

Poorly maintained equipment can become a safety hazard!
In order for the equipment to operate safely and properly over a long period of time, periodic maintenance and occasional repairs are necessary.



- 2.4.1 DO NOT attempt to clean or service the machine while it is running. Rotating parts can cause severe injury.
- 2.4.2 DO NOT crank a flooded engine with the spark plug removed on gasoline-powered engines. Fuel trapped in the cylinder will squirt out the spark plug opening.
- 2.4.3 DO NOT test for spark on gasoline-powered engines, if engine is flooded or the smell of gasoline is present. A stray spark could ignite fumes.
- 2.4.4 DO NOT use gasoline or other types of fuels or flammable solvents to clean parts, especially in enclosed areas. Fumes from fuels and solvents can become explosive.
- 2.4.5 ALWAYS keep area around muffler free of debris such as leaves, paper, cartons, etc. A hot muffler could ignite them, starting a fire.
- 2.4.6 ALWAYS replace worn or damaged components with spare parts designed and recommended by SitePower.
- 2.4.7 ALWAYS disconnect spark plug on machines equipped with gasoline engines, before servicing, to avoid accidental start-up.
- 2.4.8 ALWAYS keep machine clean and labels legible. Replace all missing and hard-to-read labels. Labels provide important operating instructions and warn of dangers and hazards.

3. Technical Data

3.1 Engine Data

		Engine
Engine Make		BRIGGS&STRATTON
Engine Model		BS1062
Rated Power	kW (Hp)	4.1 (5.5)
Engine Speed - full	rpm	3600 ± 100
Engine Speed - idle	rpm	1600 ± 100
Clutch Engagement	rpm	2100
Spark Plug	type	NGK BPR 6ES
Electrode Gap	mm (in)	0.7-0.8 (0.028-0.031)
Air Cleaner	type	Dual Element
Engine Lubrication	oil grade service class	SAE 10W30 SG or SF
Engine Oil Capacity	ml (oz.)	600 (20)
Fuel	type	Regular unleaded gasoline
Fuel Tank Capacity	l (qts.)	3.7 (3.9)
Valve Clearance (cold)	mm (in.)	Inlet: 0.15 (0.006) Outlet: 0.20 (0.008)

3.2 Machine Data

Gear Box Lubrication	type/ml (oz.)	Mobil SHC634 Approx. 1330 (45)
Operating Weight	kg	84
Trowel Diameter	mm	1000
Speed Range	rpm	60-127
Pitch Range	degrees	0 – 15

4. Operation

4.1 Application

This trowel is a modern, high production machine intended for floating and finishing freshly poured concrete slabs. The machine's good balance, adjustable handle, and easily reached controls add to operator comfort and productivity. An automatic Run/Stop Switch, or a combination of an automatic Run/Stop Switch and an Operator Present Lever, provide added operator safety. Finishing rates will depend on operator skill and job conditions.

DO NOT use this machine for any application other than troweling concrete.

4.2 New Machine Set-up

Trowels are shipped from the factory with the handles and blades removed. Follow instructions on Installing Blades and Installing and Adjusting Handles when setting up new machines or when installing new handles and blades.

Note: Steering handles come in two styles: a bicycle style grip or a wing grip. Assembly procedures are identical for both styles.

4.3 Recommended Fuel

The engine requires regular grade unleaded gasoline. Use only fresh, clean gasoline. Gasoline containing water or dirt will damage fuel system. Consult engine owner's manual for complete fuel specifications.

4.4 Installing Blades

There are four types of blades available for the trowels. Float pans are large "pizza pan" style blades, which hook on over finish or combination blades and are available for the 30" and 36" machines only. Float blades are available for all machines and clip on over finish or combination blades. Both are used in the earliest stages of work, and are not pitched.

Finish blades, which are supplied with the machine, are used in the final stages of working, and are progressively pitched to burnish the concrete.

Combination blades can be used throughout the concrete working process. They are used in place of float blades or pans and finish blades.

Note: *Trowel blades must NOT be interchanged, i.e., do NOT put larger diameter blades on a smaller diameter trowel.*

4.4.1 New machines are supplied with finish blades as standard equipment. Finish blades are flat on both edges and can be installed in either direction.

When installing combination blades, orient blades as shown **(a)**. This positions the raised edges of the blade correctly for the clockwise rotation of the machine.

4.4.2 Secure blades to trowel arms with 1½" screws **(b)**. Dip threads of screws in grease prior to installation. This will prevent concrete from cementing the screws in place and will make removal of the blades easier later on.

4.4.3 Plug the remaining threaded holes in the blade brace with plastic plugs **(c)** to prevent them from filling with concrete. Do not lift the trowel overhead with a float pan attached, as the pan could fall off and strike personnel working in the vicinity.

4.5 Installing and Adjusting Handles

On new machines the pipe handle comes assembled with the pitch control (Twist or *Pro-Shift*®) **(j)** and stop switch **(n)**.

To install the pipe handle assembly:

4.5.1 Pull the pitch control cable **(d)** from bottom end of the tube and remove the nuts from the cable.

4.5.2 Thread the cable through the handle base **(a)** and over the pulley **(c)** as shown.

4.5.3 Attach the pipe handle to the handle base with two M8x16 screws **(b)**. Secure the screws using Loctite 243 or an equivalent medium-strength thread-locking compound. Torque the screws to 22 Nm (16 ft.lbs.).

4.5.4 Push the *Pro-Shift*® handle all the way forward (away from the operator) OR turn the twist pitch control handle counterclockwise as far as possible. Connect the cable to the fork **(e)** as shown and adjust the cable nuts **(f)** so the cable is snug and the trowel blades lay flat (0° pitch).

Steering Handle:

4.5.1 Install the steering handle **(g)** to the machine as shown. Secure the shoulder bolt **(k)** using Loctite 243, or equivalent.

4.5.2 Position the throttle lever **(h)** on the handle and fasten it in place.

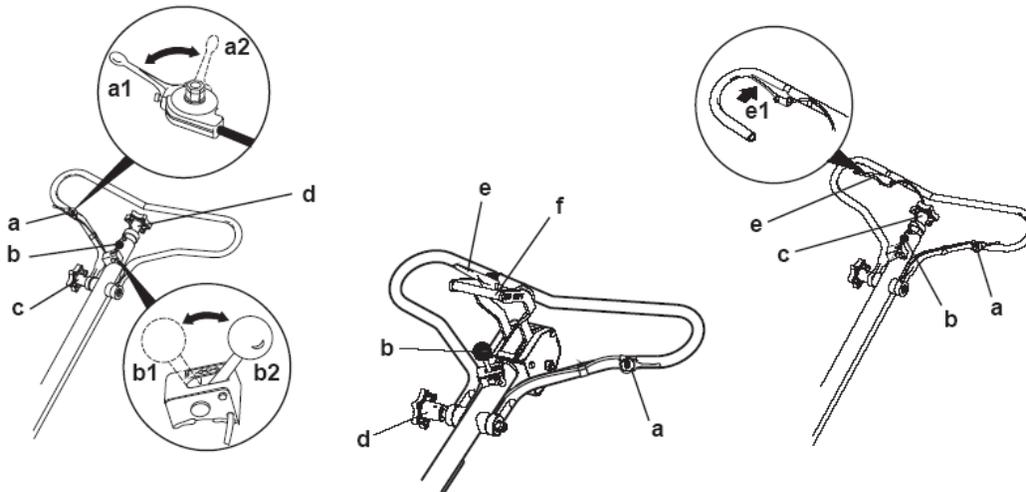
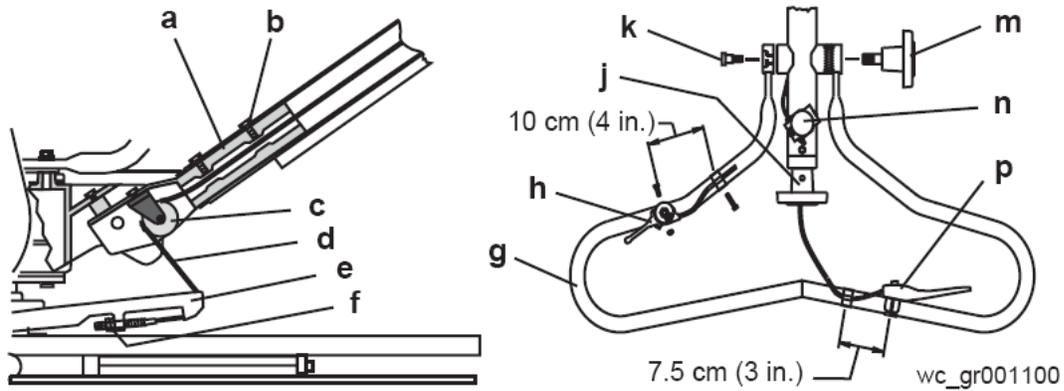
4.5.3 On machines equipped with an operator present lever, mount the lever **(p)** as shown. When installing, be sure that the tabs on the lever dig through the paint and into the metal of the handle. This will insure a good electrical ground. Test the function of the

lever prior to using the trowel by starting the trowel and then disengaging the lever— the trowel should stop promptly. See *To Start*.

4.5.4 Position the handle by loosening the knob (**m**) and adjusting the handle up or down to suit the operator. Tighten the knob to secure the handle in position.

wc_gr001100 7.5 cm (3 in.)
10 cm (4 in.)

a



4.6 Controls

Ref.	Description	Ref.	Description
a	Throttle lever	d	Handle adjustment
b	Run/Stop switch	e	Operator present lever
c	Twist pitch control	f	Pro-Shift® pitch control

4.7 Run/Stop Switch

The Run/Stop Switch (**b**) is located on the pipe handle. When the switch is placed in the “I” (run) position (**b1**), the engine may be started and the trowel operated. When the switch is placed in the “O” (stop) position (**b2**), the engine will not run and the trowel stops.

To prevent uncontrolled spinning of the trowel, the Run/Stop Switch is also designed to automatically close under certain conditions and shut off the engine. For example, if the operator loses his/her grip on the trowel, the centrifugal force created by the spinning machine will pull the switch to the “O” position, stopping the trowel.

4.8 Before Starting

4.8.1 Read and understand safety and operating instructions at beginning of this manual.

4.8.2 Check:

- Oil level in engine.
- Fuel level.
- Condition of air cleaner.
- Tightness of external fasteners.
- Condition of fuel lines.

4.9 To Start

4.9.1 Open fuel valve by moving lever to the right (**g1**).

4.9.2 If engine is cold, move choke lever to closed position (**i1**). If engine is hot, set choke to open position (**i2**).

4.9.3 Turn engine switch to “ON” (**h1**).

4.9.4 Place the Run/Stop Switch in the “I” (run) position (**b1**).

4.9.5 Move the throttle lever to the idle position **(a1)**.

Note: *The operator present lever must be fully engaged to start and run trowel. If the lever is not engaged, engine will not run.*

4.9.6 Engage the operator present lever **(e)**, if so equipped, stand to the side of the machine and pull the starter rope **(j)**.

Do not place foot on the ring guard when starting the engine, as severe injury can occur if foot slips through the ring guard as the blades start to spin.

Note: *If the engine oil is low, the engine will not start. If engine does not start, check the oil level and add oil as needed.*

4.9.7 Open choke as engine warms **(i2)**.

4.9.8 Open throttle **(a2)** to operate trowel. Adjust blade RPM with throttle speed to suit conditions.

4.10 To Stop

4.10.1 Reduce engine RPM to idle by moving the throttle lever to slow position **(a1)**.

4.10.2 Place the Run/Stop Switch to the “O” (stop) position **(b2)** or release operator present lever **(e)**.

4.10.3 Turn engine switch to “OFF” **(h2)**.

4.10.4 Close fuel valve by moving lever to the left **(g2)**.

4.11 Operation

Choose correct blade type and attach blades to trowel arms. Do not mix float or finish blades with combination blades.

Note: *When operating on soft concrete, do not let trowel stand in one spot too long. Always lift trowel from slab when operation is complete.*

Note: *“Left” and “Right” references are made from the operator's position.*

4.11.1 Adjust handle height to suit operator. See *Installing and Adjusting Handles*.

4.11.2 Start engine and engage blades by increasing engine speed. Set speed with throttle control on handle bar to appropriate speed for job conditions.

4.11.3 To move trowel forward twist handle clockwise **(a)**.

4.11.4 To move backward twist handle counterclockwise **(b)**.

4.11.5 To move to the left lift up slightly on the handle **(c)**.

4.11.6 To move to the right press down slightly on the handle **(d)**.

4.11.7 Clean trowel after each use to remove concrete splatter.

Personnel other than the trowel operator should not be allowed in the work area, as severe injury can occur from contact with operating trowel blades.

It is recommended that each set of work passes be at 90° to the previous set of work passes. This will help prevent the creation of valleys in the slab surface. For example, in the illustration, the second set of work passes **(2)** is 90° to the first set of work passes **(1)**.

5. Maintenance

5.1 Periodic Maintenance Schedule

The chart below lists basic engine maintenance. Refer to engine manufacturer's Operation Manual for additional information on engine maintenance.

	Daily before starting	After first 20 hrs.	Every 2 weeks or 50 hrs.	Every month or 100 hrs.	Every year or 300 hrs.
Check fuel level.	•				
Check engine oil level.	•				
Inspect fuel lines.	•				
Inspect air filter. Replace as needed.	•				
Check and tighten external hardware.	•				
Check and adjust drive belt.		•	•		
Clean air cleaner elements.			•		
Inspect shockmounts for damage.			•		
Change engine oil.		•		•	
Clean engine cooling fins.				•	
Clean sediment cup / fuel filter.				•	
Check and clean spark plug.				•	
Check and adjust valve clearance.					•
Change exciter oil.					•

5.2 Cleaning Plate

Clean plate after use to remove dirt, stones, and mud caught under the engine console. If plate is being used in a dusty area, check engine cylinder cooling fins for heavy dirt accumulation. Keep engine cylinder fins clean to prevent engine from overheating.

5.3 Drive Belt (Fig. 3)

On new machines or after installing a new belt, check belt tension after first 20 hours of operation. Check and adjust belt every 50 hours thereafter.

To change the belt:

5.3.1 Remove the beltguard and remove the four hex nuts (a) holding pulley halves (b) together. Remove outer pulley half and remove belt.

5.3.2 Install new belt on pulley and secure pulley halves together with hex nuts. Adjust tension on belt by adding or removing spacers (c) between pulley halves. The fewer spacers used between pulley halves, the tighter the belt will be. Three spacers with new belts should provide the correct tension. Belt deflection should be 6-10 mm (1/4-3/8"), checked half way between the clutch pulley and the exciter pulley (d). Place unused spacers on outside of pulley.

5.4 Exciter Lubrication (Figure 4)

The exciter assembly is a self-contained, sealed unit. The bearings are lubricated using automatic transmission fluid (see Technical Data for type). Change fluid once every year or 300 hours of operation. When changing fluid, replace O-ring (a).

5.4.1 Remove beltguard, belt, and hose from water tank.

5.4.2 Remove four screws (b) securing console assembly to baseplate and lift console assembly from baseplate.

5.4.3 Remove end cover (c) from bearing exciter assembly. Outer bearing race will remain with cover.

5.4.4 Tip baseplate up and drain fluid from exciter assembly. Dispose of used fluid in an appropriate manner. Contact local recycling center.

5.4.5 Add 150 ml (5 ounces) of automatic transmission fluid to exciter housing and fasten end cover to exciter. Do not overfill exciter or bearings may overheat.

5.4.6 Assemble console assembly to baseplate and install belt, belt guard, and hose to water tank.

5.5 SparkPlug (Figure 5)

Clean or replace spark plug as needed to ensure proper operation. Refer to the engine owner's manual.

The muffler becomes very hot during operation and remains hot for a while after stopping the engine. Do not touch the muffler while it is hot.

Note: Refer to the Technical Data for the recommended spark plug type and the electrode gap setting.

5.5.1 Remove spark plug and inspect it.

5.5.2 Replace plug if the insulator is cracked or chipped.

5.5.3 Clean spark plug electrodes with a wire brush.

5.5.4 Set the electrode gap (a).

5.5.5 Tighten spark plug securely.

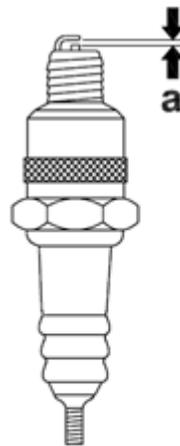


Figure 5

CAUTION: A loose spark plug can become very hot and may cause engine damage.

5.6 Engine Oil (Figure 6)

5.6.1 Drain oil while the engine is still warm.

5.6.2 Remove the oil fill plug (a) and drain plug (b) to drain oil.

Note: *In the interests of environmental protection, place a plastic sheet and a container under the machine to collect any liquid which drains off. Dispose of this liquid in accordance with environmental protection legislation.*

5.6.3 all drain plug.

5.6.4 Fill the engine crankcase through the oil filler opening (b), to the upper mark on the dipstick (c). Do not thread in the dipstick to check the level. See Technical Data for oil quantity and type.

5.6.5 When the crankcase is full, reinstall the dipstick.

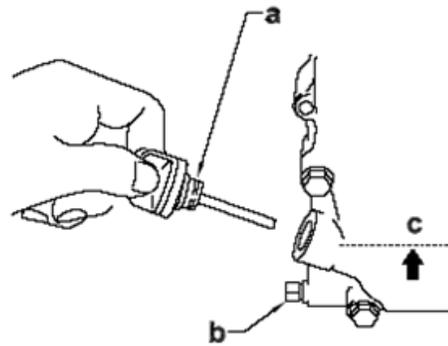


Figure 6

5.6 Air Cleaner (Figure 7)

CAUTION: NEVER use gasoline or other types of low flash point solvents for cleaning the air cleaner. A fire or explosion could result.



CAUTION: NEVER run engine without air cleaner. Severe engine

The engine is equipped with a dual element air cleaner. Under normal operating conditions, elements should be cleaned once every week. Under severe, dry and dusty conditions, the elements should be maintained daily. Replace an element when saturated with dirt that cannot be removed.

5.7.1 Remove the air cleaner cover (a). Remove both elements and inspect them for holes or tears. Replace damaged elements.

5.7.2 Wash the foam element (b) in a solution of mild detergent and warm water. Rinse it thoroughly in clean water. Allow the element to dry thoroughly.

5.7.3 Tap the paper element (c) lightly to remove excess dirt or blow compressed air through the filter from the inside out. Replace the paper element if it appears heavily soiled.

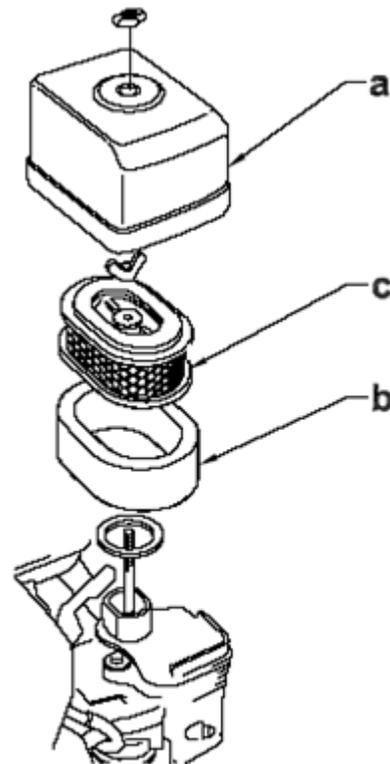


Figure 7

5.8 Cleaning Sediment Cup (Figure 8)

- 5.8.1 Turn fuel valve off.
- 5.8.2 Remove sediment cup (a) and O-ring (b).
- 5.8.3 Wash both thoroughly in a nonflammable solvent. Dry and reinstall them.
- 5.8.4 Turn fuel valve on and check for leaks.

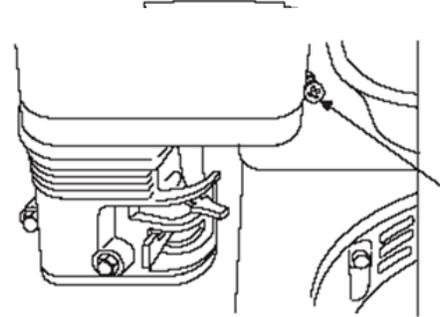
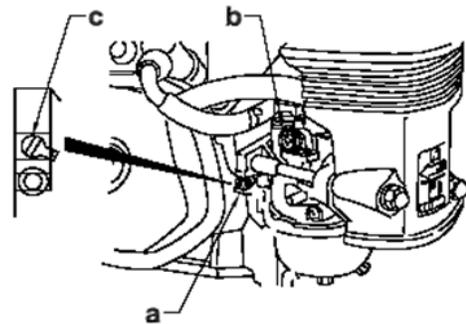


Figure 8

5.8 Carburetor Adjustment (Figure 9)

- 5.9.1 Start the engine and allow it to warm up to operating temperature.
- 5.9.2 Set the pilot screw (a) 2 turns out. See Note.
- 5.9.3 With the engine idling, turn the pilot screw (a) in or out to the setting that produces the highest rpm.
- 5.9.4 After the pilot screw is adjusted, turn the throttle stop screw (b) to obtain the standard idle speed. See Technical Data.



Note: On some engines, the pilot screw is fitted with a limiter cap (c) to prevent excessive enrichment of the air-fuel mixture in order to comply with emission regulations. The mixture is set at the factory and no adjustment should be necessary. Do not attempt to remove the limiter cap. The limiter cap cannot be removed without breaking the pilot screw.

5.10 Storage

If plate is being stored for more than 30 days:

5.10.1 Remove loose stones and dirt from plate.

5.10.2 Clean engine cylinder cooling fins.

5.10.3 Clean or replace air filter.

5.10.4 Change exciter oil.

5.11 Lifting the Machine

See Technical Data for the weight of the machine.

To lift machine manually:

5.11.1 Stop the engine.

5.11.2 Obtain help from a partner and plan the lift.

5.11.3 Grasp the machine by its cage (a) and lifting slot (b).

5.11.4 Lift the machine as shown.

5.11.5 Change engine oil and follow procedures described in engine manual for engine storage.

5.11.6 Cover plate and engine and store in a clean, dry area

5.12 Transporting the Machine

To avoid burns or fire hazards, let engine cool before transporting machine or storing indoors.

5.12.1 Turn fuel valve to the off position and keep the engine level to prevent fuel from spilling.

5.12.2 Tie down machine on vehicle to prevent machine from sliding or tipping over. Tie machine to vehicle at points shown on

