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Angle Grinder



9167G S1M-SH19-100B

9125 S1M-SH11-125B

9115 S1M-SH09-115B



Original instruction

GENERAL SAFETY INSTRUCTIONS

⚠ WARNING Read all instructions. Failure to follow all instructions listed below may result in electric shock, fire and /or serious injury. The term "power tool" in all of the warnings listed below refers to your mains operated power tool.

SAVE THESE INSTRUCTIONS.

- 1) WORK AREA
- a) **Keep work area clean and well lit.** Cluttered and dark areas invite accidents.
- b) Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks which may ignite the dust or fumes.
- c) Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

2) ELECTRICAL SAFETY

- a) Power tool plugs must match the outlet. Never modify the plugs in any way. Do not use any adapter plugs with earthed power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.
- b) Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is earthed or grounded.
- c) **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- d) **Do not abuse the cord. Never use the cord for carrying**, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
- e) When operating a power tool outdoors, use an extension cord suitable for outdoor use. Use of a cord suitable for outdoor use reduces the risk of electric shock.
- f) If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply. Use of an RCD reduces the risk of electric shock.

3) PERSONAL SAFETY

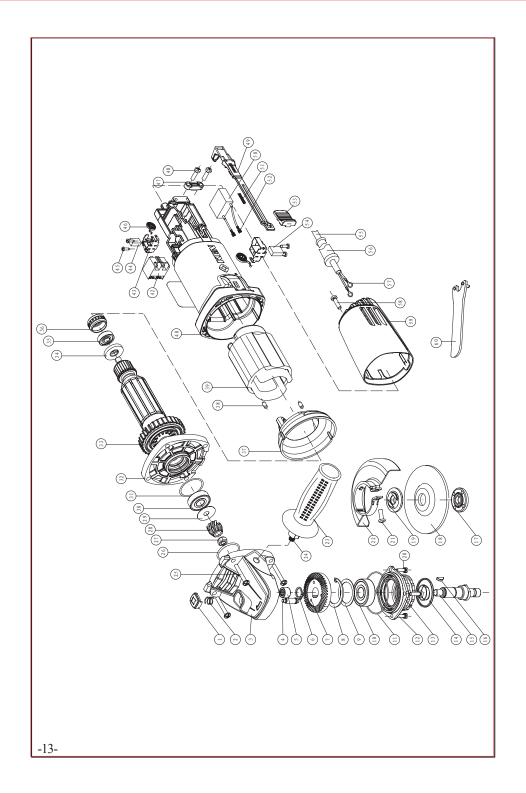
- a) Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power too while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating power tools may result in serious personal injury.
- b) Use safety equipment. Always wear eye protection. Safety equipment such as dust mask, no-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- c) Avoid accidental starting. Ensure the switch is in the off position before plugging in. Carrying power tools with your finger on the switch or plugging in power tools that have the switch on invites accidents. Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool. Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.
- d) Remove any adjusting key or wrench before turning the power tool on. A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- e) **Do not overreach. Keep proper footing and balance at all times**. This enables better control of the power tool in unexpected situations.
- f) Dress properly. Do not wear loose clothing or jeweler. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jeweler or long hair can be caught in moving parts.
- g) If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of these devices can reduce dust related hazards.

A

WARNING

The vibration emission level given in this information sheet has been measured in accordance with a standardised test given in EN 60745 and may be used to compare one tool with another. It may be used for a preliminary assessment of exposure. The declared vibration emission level represents the main applications of the tool. However if the tool is used for different applications, with different accessories or poorly maintained, the vibration emission may differ. This may significantly increase the exposure level over the total working period.

An estimations of the level of exposure to vibration should also take into account the times when the tool is switched off or when it is running but not actually doing the job. This may significantly reduce the exposure level over the total working period. Identify additional safty measures to protect the operator from the operator from the effects of vibration such as:maintain the tool and the accessories.keep the hands warm,organisation of work patterns.



4) POWER TOOL USE AND CARE

- a) Do not force the power tool. Use the correct power tool for your application. The correct power tool will do the job better and safer at the rate for which it was designed.
- b) Do not use the power tool if the switch does not turn it on and off. Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- c) Disconnect the plug from the power source before making any adjustment, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.
- d) Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained
- e) Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tools operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
- f) Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- g) Use the power tool, accessories and tool bits etc., in accordance with these instructions and in the manner intended for particular type of power tool, taking into account the working conditions and the work to be performed. Use the power tool for operations different from those intended could result in a hazardous situation.
- h) Save all warnings and instructions for future reference.
- i) Recommendation: The tool always be supplied via residual current device with a rated residual current of 30 mA or less.

5) SERVICE

Have your power tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.

IMPORTANT: Hold power tool by insulated gripping surfaces, when performing an operation where the cutting accessory may contact hidden wiring or its own cord. Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.

Dear Customer.

Thank you for buying a KEN power tool. Should you have any questions, vagueness or second thoughts about our products, we recommend you to contact our experts in Sales and Service Departments, who will advise you and help you find the right answers to the set questions. Please contact our local distributors or dealers directly.

SYMBOL

▲ :Safety alert

~ : Altenating Current

n. :No load Speed

V :Volts Hz:Hertz W:Watts **(:** CE Conformity

:Double insulation

:Wear eye protection

:Wear ear protection

Rease read the instructions carefully before stariting the machine.

:Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check wity your Lecal Authority or retailer for recycling advice.

min⁻¹:Revolutions or reciprocations per minute

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SAFETY

Safety Warnings Common for Grinding Operations:

- a) This power tool is intended to function as a grinder tool. Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.
- b) Operations such as sanding, wire brushing, polishing or cutting-off are not recommended to be performed with this power tool. Operations for which the power tool was not designed may create a hazard and cause personal injury.
- c) Do not use accessories which are not specifically designed and recommended by the tool manufacturer. Just because the accessory can be attached to your power tool, it does not assure safe operation.
- d) The rated speed of the accessory must be at least equal to the maximum speed marked on the power tool. Accessories running faster than their rated speed can break and fly apart.
- e) The outside diameter and the thickness of your accessory must be within the capacity rating of your power tool. Incorrectly sized accessories cannot be adequately guarded or controlled.
- f) The arbour size of wheels, flanges, backing pads or any other accessory must properly fit the spindle of the power tool. Accessories with arbour holes that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may cause loss of control.
- g) Do not use a damaged accessory. Before each use inspect the accessory such as abrasive wheels for chips and cracks, backing pad for cracks, tear or excess wear, wire brush for loose or cracked wires. If power tool or accessory is dropped, inspect for damage or install an undamaged accessory. After inspecting and installing an accessory, position yourself and bystanders away from the plane of the rotating accessory and run the power tool at maximum no-load speed for one minute. Damaged accessories will normally break apart during this test time.
- h) Wear personal protective equipment. Depending on application, use face shield, safety goggles or safety glasses. As appropriate, wear dust mask, hearing protectors, gloves and workshop apron capable of stopping small abrasive or workpiece fragments. The eye protection must be capable of stopping flying debris generated by various operations. The dust mask or respirator must be capable of filtrating particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss.
- i) Keep bystanders a safe distance away from work area. Anyone entering the work area must wear personal protective equipment. Fragments of workpiece or of a broken accessory may fly away and cause injury beyond immediate area of operation.
- j) Hold power tool by insulated gripping surfaces only, when performing an operation where the cutting accessory may contact hidden wiring or its own cord. Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and shock the operator.
- k) Position the cord clear of the spinning accessory. If you lose control, the cord may be cut or snagged and your hand or arm may be pulled into the spinning accessory.
- 1) Never lay the power tool down until the accessory has come to a complete stop. The spinning accessory may grab the surface and pull the power tool out of your control.
- m) **Do not run the power tool while carrying it at your side.** Accidental contact with the spinning accessory could snag your clothing, pulling the accessory into your body.
- n) **Regularly clean the power tools air vents.** The motoris fan will draw the dust inside the housing and excessive accumulation of powdered metal may cause electrical hazards.
- o) **Do not operate the power tool near flammable materials.** Sparks could ignite these materials.
- Do not use accessories that require liquid coolants. Using water or other liquid coolants may result
 in electrocution or shock.

Further safety instructions for all operations

Kickback and Related Warnings

Kickback is a sudden reaction to a pinched or snagged rotating wheel, backing pad, brush or any other accessory. Pinching or snagging causes rapid stalling of the rotating accessory which in turn causes the uncontrolled power tool to be forced in the direction opposite of the accessory's rotation at the point of the binding.

PARTS LIST							
No.	Code	Name	Remark	No.	Code	Name	Remark
44	431064	Brush					
45	221001	Screw	ST3×10				
46	153002	Spiral spring					
47	318006	Cord clamp					
48	222001	Screw	ST4×14				
49	322008	Switch level					
50	443006	Capacitor					
51	152011	Spring					
52	436038	Terminal block					
53	323013B	Switch button					
54	431065	Bush					
55	411002	Power cord					
56	332006	Cord sleeve					
57	436004	Terminal block	ф4				
58	221009	Screw	ST4×16				
59	315049	Back cap					
	623007B	Wrench	9167G				
60	623001		9125				
	623001		9115				
61	712119	Side handle asm					

PARTS LIST							
No.	Code	Name	Remark	No.	Code	Name	Remark
1	317020	Locking button		19	139035	Inner flange	9115
2	151005	Spring		20	241001	Spring washer	
3	162107	Gear box		21	230002	Screw	M5×20
4	145013	Locking pin			112047B		9167G
5	212007	Needle bearing		22	112057B	Wheel guard	9125
6	252004	Retainer	12		112122		9115
	137007B		9167G	23	627003	Side handle	
7	137019	Big Gear	9125	24	234015	Bolt	M8×35
	137019		9115	25	221025	Screw	ST5×30
8	251005	Retainer	32	26	337032	Square rubber ring	
9	243005	Washer		27	263010	Nut	M6
10	211125	Bearing	6201-DDU		137034		9167G
11	333020	O Ring		28	137041	Small gear	9125
12	231018	Screw	M4×12		137041		9115
13	161053	Gear cover		29	114107	Washer	
14	115023	Dust protector		30	211096	Bearing	6000VV
15	133027		9167G	31	333002	O ring	
	133099	Spindle	9125	32	163051	Middle plate	
	133099		9115	33	442174	Armature	
16	276001	Key		34	319051	Plastic plate	
	139036		9167G	35	211095	Bearing	607-2RS
17	139034	Out flange	9125	36	331028	Bearing sleeve	
	139034		9115	37	321079	Retainer	
18	611002		9167G	38	334001	rubber pin	
	611009	Gringding wheel	9125	39	441173	Stator	
	611056		9115	40	313150	Motor housing	
19	139031	Innor flance	9167G	42	445011	Switch	
	139035	Inner flange	9125	43	434018	Brush holder	

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For example, if an abrasive wheel is snagged or pinched by the workpiece, the edge of the wheel that is entering into the pinch point can dig into the surface of the material causing the wheel to climb out or kick out. The wheel may either jump toward or away from the operator, depending on direction of the wheels movement at the point of pinching. Abrasive wheels may also break under these conditions. Kickback is the result of power tool misuse and/or incorrect operating procedures or conditions and can

Rickback is the result of power fool misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below.

- a) Maintain a firm grip on the power tool and position your body and arm to allow you to resist kickback forces. Always use auxiliary handle, if provided, for maximum control over kickback or torque reaction during start-up. The operator can control torque reactions or kickback forces, if proper precautions are taken.
- b) Never place your hand near the rotating accessory. Accessory may kickback over your hand.
- c) Do not position your body in the area where power tool will move if kickback occurs. Kickback will propel the tool in direction opposite to the wheelis movement at the point of snagging.
- d) Use special care when working corners, sharp edges etc. Avoid bouncing and snagging the accessory. Corners, sharp edges or bouncing have a tendency to snag the rotating accessory and cause loss of control or kickback.
- e) Do not attach a saw chain woodcarving blade or toothed saw blade. Such blades create frequent kickback and loss of control.

Safety Warnings Specific for Grinding and Abrasive Cutting-Off Operations:

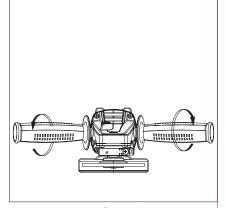
- a) Use only wheel types that are recommended for your power tool and the specific guard designed for the selected wheel. Wheels for which the power tool was not designed cannot be adequately guarded and are unsafe.
- b) The guard must be securely attached to the power tool and positioned for maximum safety, so the least amount of wheel is exposed towards the operator. The guard helps to protect operator from broken wheel fragments and accidental contact with wheel.
- c) Wheels must be used only for recommended applications. For example: do not grind with the side of cut-off wheel. Abrasive cut-off wheels are intended for peripheral grinding, side forces applied to these wheels may cause them to shatter.
- d) Always use undamaged wheel flanges that are of correct size and shape for your selected wheel. Proper wheel flanges support the wheel thus reducing the possibility of wheel breakage. Flanges for cut-off wheels may be different from grinding wheel flanges.
- e) Do not use worn down wheels from larger power tools. Wheel intended for larger power tool is not suitable for the higher speed of a smaller tool and may burst.

OPERATION

♦ Observe correct mains voltage: The voltage of the power source must agree with the voltage specified on the nameplate of the machine.

♦Subsidiary Handle

Please use subsidiary handle in order to do work safely and conveniently. Subsidiary handle can be assembled on the three positions of the tool body (Picture One).



picture 1

◆Protective Shield of the Emery Wheel

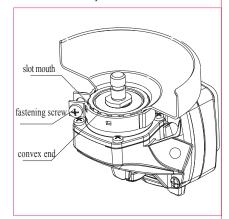
Please aim the convex end of the emery wheel shield to the slot mouth of the front cover, and then rotate the shield body to 180 degree (Picture Two).



picture 2

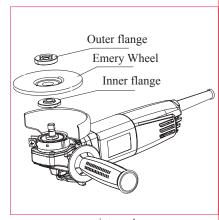
Tighten the fastening screw (Picture Three)

Make sure aimed the convex end of the emery wheel shield to the slot mouth of the front cover before tighting the screw.



picture 3

◆ Assemble or Disassemble the Emery Wheel Equip the inner flange on the output axis, and then equip the emery wheel on the inner flange, screw the outer flange the output axis (Picture Four).



picture 4

■ WASTE DISPOSAL AND ENVIRONMENT PROTECTION

The machine, accessories and packing should be sorted for environmental-friendly recycling. Only for EC countries:

◆ Do not dispose of power tools into household waste!

According the European Guideline 2002/96/EC for Waste Electrical and Electronic Equipment and its implementation into national right, power tools that are no longer usable must be collected separately and disposed of in an environmentally correct manner.

TECHNICAL DATA

TECHNICALDAIA						
Туре	9167G S1M-SH19-100B	9125 SIM-SH11-125B	9115 SIM-SH09-115B			
Size of Emery Wheel	100×5×16mm	125×6×22.2mm	115×6×22.2mm			
Maximum Using Circumference Speed of the Emery Wheel	80m/s					
Current Source	220-240V~ 50/60Hz					
Rated Input Power	860W					
Rated speed	11000/min	10000/min	11000/min			
Weight	1.7kg					
Standard Spare Parts	Special wrench 1 Safety Guard 1PC		ng Handbook 1PC ndle 1PC			

♦Replace the Electric Brush

The tool has set the electric brush limited position equipment especially, please replace the electric brush if there's big sparks or the rotation stops during the running. Please use screwdriver to screw the lid of the electric brush and take out the wearing electric brush and install the new ones, and please use hands to try and confirm it can slide freely in the slot, and then install and screw the lid of the electric brush. Please replace two brushes at the same time, and use the specified "KEN" brand electric brush.

■PRACTICAL TIPS

- ◆ Please use the cymbal shape emery wheel which linear velocity is higher than the speed stipulated on the name plate of the body, and use correct grinding and cutting face to do the processing. Don't use the upside face and side face of the emery wheel.
- ♦ The using emery wheel must be in complete and perfect working condition, it has no disruption sound if beat it slightly with wooden mallet, the reserving period of the emery wheel shall not over one year, it only can be used after making tests of turn and hardness if the period has passed one year.
- ◆ Don't insert the electric source plug into the socket when assemble or disassemble the emery wheel. The maximum circumference speed of all the emery wheels shall not less than 4800m/min.
- ◆ Prohibit doing grinding and cutting work on the condition that the protective shield has been dismantled. When putting away the tool, please do switch off the current source and wait for the emery wheel completely stops.

MAINTENANCE AND CARE

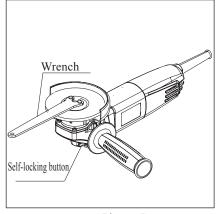
- Unplug the tool from the socket before performing any works on the tool!
- Tool requires no special maintenance, but after some time you must control the parts that are submitted to wear-and-tear under normal operating conditions. This includes the control and replacement of carbon brushes and grease in reducing gear housing. Take the tool to an authorized service centre.
- Keep the tool and supply cord clean. Keep ventilation slots clean and open. Wipe the surface of the tool with a soft cloth!
- It is not allowed to use household cleaning agents that contain petrol, trichloroethylene, ammonia and chlorides. These substances corrode and damage plastic parts of the tool.
- Excessive sparking generally indicates the presence of dirt in the motor or abnormal wear on the carbons.
- In case of electric or mechanical failure, send the tool to a KEN authorized service centre for repair.

SERVICING AND REPAIRS

If servicing is required, contact one of our listed service centers. It is not allowed and dangerous to perform any individual work on the tool.

- Have the tool repaired by authorized persons.
- Any repairs of the tool in unauthorized service centers is performed at own responsibility.
- ◆ The owner of the tool is responsible for all works on the tool that were not performed in authorized service center, and therefore he losses the claim for guarantee.

◆ Press the self-locking button, use the special wrench to screw the upper pressure plate tightly (Picture Five).



Picture 5

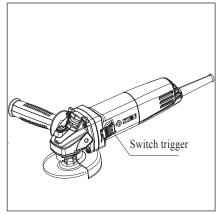
♦ Switching on/off

Press or release the on/off switch.

The on/off switch can be locked on with the locking button.

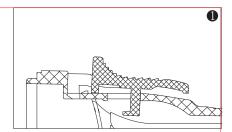
Press the locking button with thumb, release on/off switch.

To release, briefly press and release the on/off switch (Picture Six).

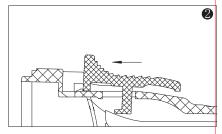


Picture 6

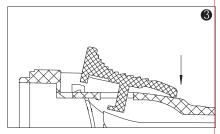
1.Switch replacement



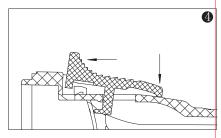
2. Push the switch buttion ahead



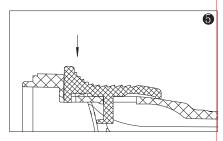
3. Press the tail of the switch buttion



4.At the same time, push the switch buttion ahead

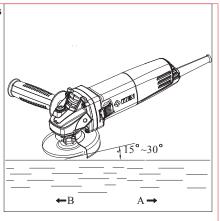


5.Press the foreside of the buttion and lock it



◆ Effective and Safe Grinding and Cutting Methods

- Please use the correct part of the emery wheel, otherwise it is easy to be damaged.
- The users can get satisfied effects if the users give 1/2 strength compared with the own weight of the tool. Over strength is easy to make the tool engine and emery wheel damaged because of overload.
- Generally speaking, please keep the grinding and cutting part of the emery wheel and disc in the scope of 15 to 30 degree with the surface of processing object (Picture Seven).
- When you use new emery wheel, please don't move the tool toward B direction, otherwise, the processing object is easy to cut-off. When the margin angle of the emery wheel turns round, the tool can be moved towards two directions of A and B (Picture Seven).



picture 7