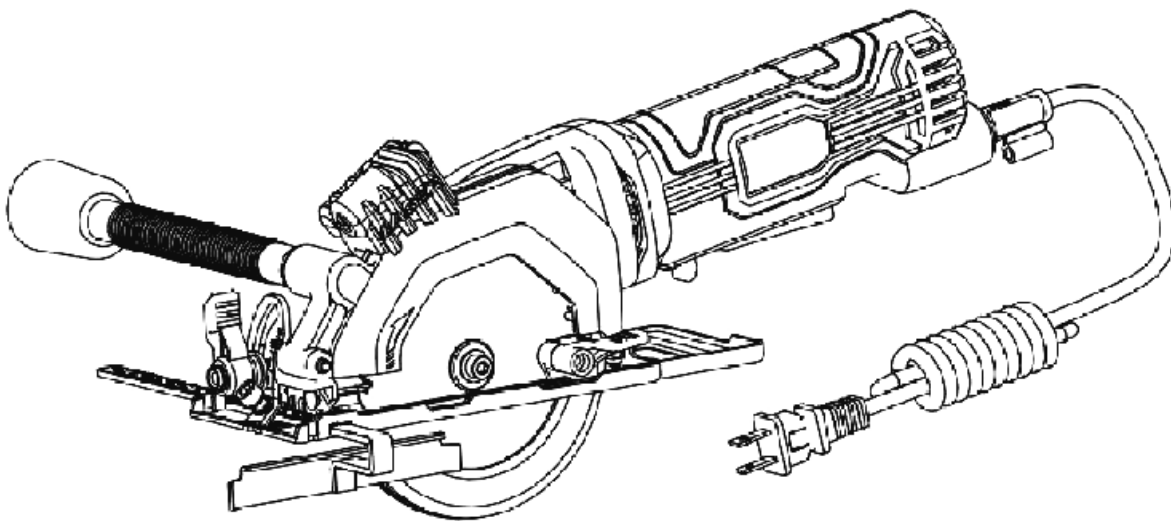


POWERSMART[®]

INSTRUCTION MANUAL

Electric Compact Circular Saw

Model # PS4005



Have product questions or need technical support? Please feel free to contact us!

Website: www.Amerisuninc.com
www.powersmartusa.com

Toll free: 1-800-791-9458 M-F 9-5 EST

Email: support@amerisuninc.com

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TECHNICAL DATA

Electric Compact Circular Saw	Model # PS4005
Motor:	120 V, 60 Hz, 4 Amp
Variable Speed:	0 - 3500 rpm
Blade Diameter:	4-1/2 inch
Arbor Size:	3/8 inch
Cutting Capacity at 90° :	1-11/16 inch
Cutting Capacity at 45° :	1-1/8 inch
Package dimensions (L x W x H):	18.1x4.9 x5.9 inches
Weight:	5.7 lb.

Thank you for purchasing Power Smart products. Please register online at **www. Amerisuninc.com**.

The information will allow us to track your warranty and update on your unit.

Important: Our company does not provide email or personal information to any third party for any reason. For any questions check our website or call customer service at (800)791 9458.

Warning! We strongly recommend that this item not be modified and/or used for any application other than that for which it was designed. If you have any questions relative to its application, do not use the equipment until you have consulted us and we have advised you.

Contact Power Smart at (800)791-9458 M-F 9am-5pm EST

GENERAL SAFETY RULES

Read all safety warnings and all instructions.

Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE.

WORK AREA SAFETY

- Keep work area clean and well lit. Cluttered or dark areas invite accidents.
- 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.
- Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

ELECTRICAL SAFETY

- Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.
- 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.
- Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- 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.
- 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
- If operating a power tool in a damp location is unavoidable, use a ground fault circuit interrupter protected supply.

PERSONAL SAFETY

- Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool 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.
- Use personal protective equipment. Always wear eye protection. Protective equipment such as dust mask, nonskid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- 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 energizing power tools that have the switch on invites accidents.
- 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.



Definitions: Safety Alert Symbols and Words

- This instruction manual uses the following safety alert symbols and words to alert you to hazardous situations and your risks of personal injury or property damage.
- **DANGER:** Indicates an imminently hazardous situation which if not avoided, will result in death or serious injury.
- **WARNING:** Indicates a potentially hazardous situation which, if not avoided could result in death or serious injury.
- **CAUTION:** Indicates a potentially hazardous situation which if not avoided, may result in minor or moderate injury.
- **NOTICE:** Used without the safety alert symbol indicates potentially hazardous situation which, if not avoided, may result in property damage .tool may result in personal injury.
- Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
- Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.
- If devices are provided for the connection of dust extraction and collection. facilities, ensure these are connected and properly used. Use of dust collection can reduce dust-related hazards.



Specific Safety Rules

- 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.
- Use clamps or another practical way to secure and support the work piece to a stable platform. Holding the work by hand or against your body leaves it unstable and may lead to loss of control.
- Hold saw firmly with both hands for all cutting operations .During cutting operations, the blade may suddenly bind in the work and may cause the saw to kickback towards the operator.
- Keep hands away from cutting area. Never reach underneath the material for any reason. Hold front of saw by grasping the contoured gripping area. Do not insert fingers or thumb into the vicinity of the reciprocating blade and blade clamp. Do not stabilize the saw by gripping the shoe
- Keep blades sharp. Dull blades may cause the saw to swerve or stall under pressure.
- Use extra caution when cutting overhead and pay particular attention to overhead wires, gas or water lines, which may be hidden from view. Anticipate the path of falling branches and debris ahead of time.
- When cutting pipe or conduit ensure that they are free from water, electrical wiring, etc
- Do not touch the work piece or the blade immediately after operating the tool. They can become very hot.



WARNING: ALWAYS use safety glasses. Everyday eyeglasses are NOT safety glasses. Also use face or dust mask if cutting operation is dusty.

- ALWAYS WEAR CERTIFIED SAFETY EQUIPMENT:
- **WARNING:** Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.
- Some examples of these chemicals are: lead from lead-based paints, crystalline silica from bricks and cement and other masonry products, and arsenic and chromium from chemically-treated lumber.
- Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well-ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.
- Avoid prolonged contact with dust from power sanding, sawing, grinding, drilling, and other construction activities. Wear protective clothing and wash exposed areas with soap and water. Allowing dust to get into your mouth, eyes, or lay on the skin may promote absorption of harmful chemicals.



WARNING: Use of this tool can generate and/or disperse dust, which may cause serious and permanent respiratory or other injury

- Always use NIOSH/OSHA approved respiratory protection appropriate for the dust exposure. Direct particles away from face and body.



WARNING: Always wear proper personal hearing protection that During use. Under some conditions and duration Of use, noise from this product may contribute to hearing loss.



WARNING: Do not operate this tool for long periods of time. Vibration caused by the operating action of this tool may cause permanent injury to fingers, hands, and arms.

ELECTRICAL INFORMATION

Guidelines for using extension cords

When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. The following table shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gage. The smaller the gauge number, the heavier the cord.

Volts	Minimum Gage for Cord Sets				
	Total Length of Cord in Feet				
120V	0-25 (0-7,6m)	26-50 (7,6-15,2m)	51-100 (15,2-30,4m)	101-150 (30,4-45,7m)	
Ampere Rating		American Wire Gage			
More Than	Not more Than				
0 -	6	18	16	16	14
6 -	10	18	16	14	12
10 -	12	16	16	14	12
12 -	16	14	12	Not Recommended	



WARNING: Do not expose to rain or use in damp locations.

KNOWING YOUR ELECTRIC COMPACT CIRCULAR SAW

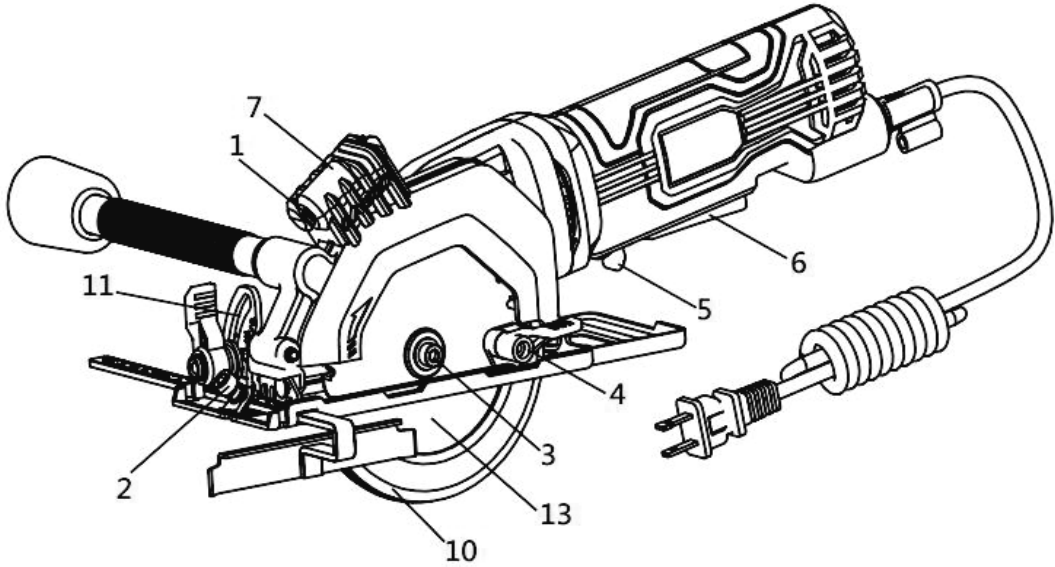


Fig 1

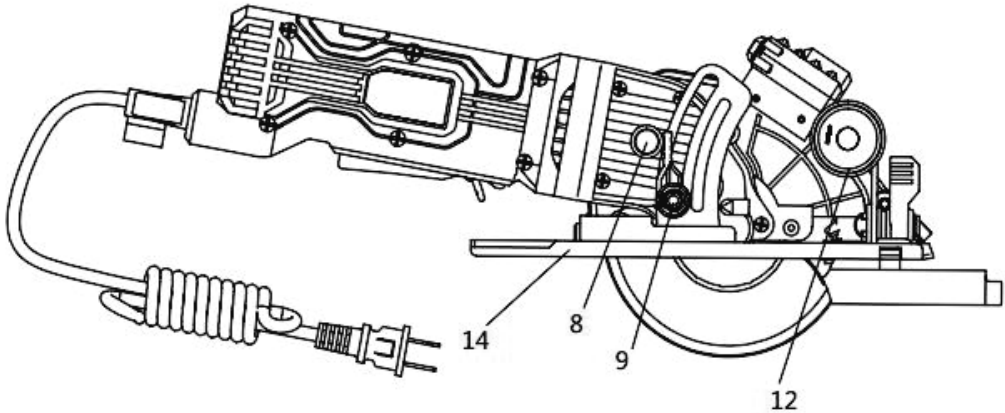


Fig 2

1	laser generator	2	Edge guide locking screw
3	Blade clamp screw	4	Lower guard
5	Unlock button	6	Switch trigger
7	Laser	8	Spindle lock button
9	Depth setting clamp	10	Lower guard
11	Lock lever knob for angle adjustment	12	Dust extraction nozzle
13	Saw blade	14	Baseplate

ASSEMBLY INSTRUCTION

Check for damage to the tool, parts and accessories which may have occurred during transportation. Take some time to read this manual carefully and understand all the content prior to assembly and operation. **CAUTION!** Always ensure that the tool is switched off and unplugged from the mains supply before assembly.

The saw blade is not installed on the machine.

Blade Installation (Fig. 4, 5, 6)

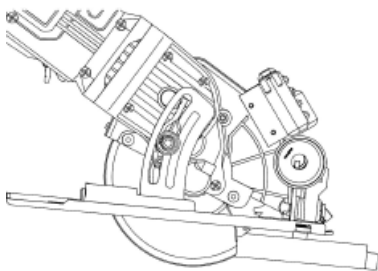


Fig. 4

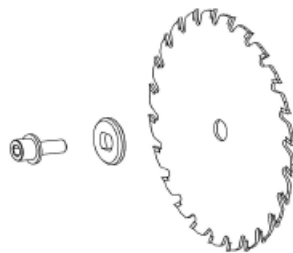


Fig. 5

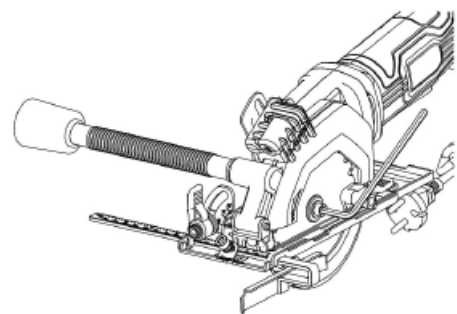


Fig. 6



Warning: Always be sure that the tool is switched off and unplugged before assembly.

Place the saw on its side of a flat surface.

1. Unplug you saw.
2. Remove the blade clamp screw (3), the washer and the outer flange.
3. Lift the lower guard (10) by using the lower guard lever (4).
4. Clean the saw blade flanges and then mount the saw blade onto the spindle, which is against the inner flange.
5. The arrow on the saw blade must match the arrow showing direction of rotation on the guard.

6. Reinstall the outer flange, washer and tighten the blade clamp screw (3) by turning it counterclockwise with the wrench provided.
7. Make sure the saw blade (13) can turn freely by turning the blade by hand when release the spindle lock button. Make sure counterclockwise is locking saw blade.

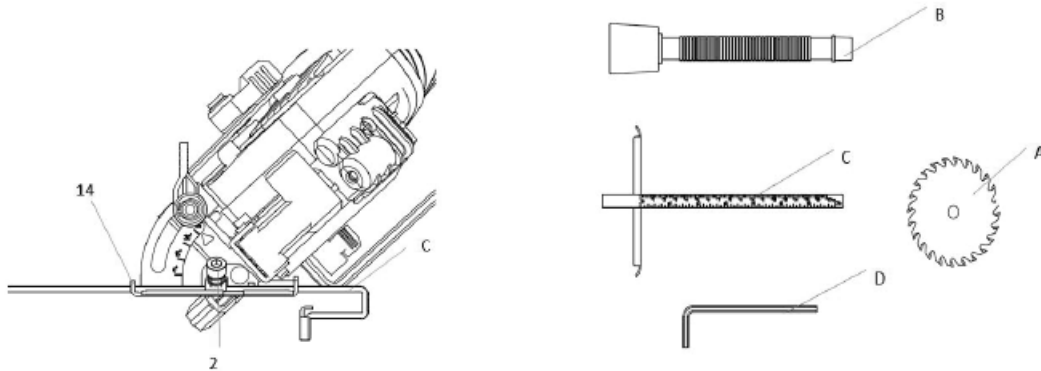


Fig. 7

Bevel Angle Adjustment (Fig 7)

1. Loosen the edge guide locking screw (2).
2. Slide the edge guide (C) through the slots in the base plate (14) to the desired width.
3. Tighten the edge guide locking screw (2) to secure it in the position.
4. Ensure that the edge guide (C) rests against the wood along its entire length to give a consistent parallel cut.



WARNING: Incorrect positioning of the blade can permanently damage the tool.

Dust extraction (Fig. 8)

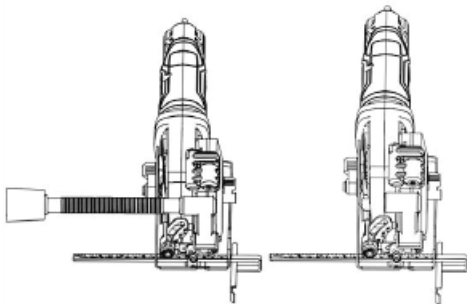


Fig. 8

The circular saw is a powerful tool capable of producing a large amount of dust. As the tool has a fully enclosed blade, forced dust extraction is particularly efficient. Forced dust extraction should be used for all but small trimming jobs.

1. Push the dust extraction, B on to the dust extraction nozzle (12).
2. Connect a vacuum device approved for the extraction of sawdust and splinters to the dust extraction hose (B).

OPERATION INSTRUCTION

Switching on and off

Note: Before engaging the on/off switch, check the saw blade to see if it is fitted properly and runs smoothly, and the blade clamp screw is well tightened.

- Connect the plug to the power supply.
- To start the tool, depress the unlock button (5) and press the switch trigger (6).
- Release the trigger (6) to turn the tool off.

Depth adjustment

- Loosen the cutting depth setting clamp (9) by lifting the lock lever.
- Hold the base plate (14) flat against the body of the work piece and lift the body of the saw until the blade is at the right depth.
- Tighten the depth locking lever.

Angle adjustment

- Loosen the lock lever knob for angle adjustment (11).
- Adjust the base plate (14) to the desired angle between 0° to 45°.
- Tighten the lock lever knob for angle adjustment (11).

Note: for best cutting results, always ensure that saw blade protrudes no more than 3 mm below the bottom surface of the workpiece.

General cut

- Mark a cutting line on the workpiece.
- Rest the front part of the shoe flat on the workpiece surface with the blade not making any contact with the workpiece.
- Switch on the tool and allow it to reach its full speed.
- Align the saw blade with the cutting line on the workpiece, gently push the saw forward.

Never force the saw but maintain a light and continuous pressure when completing the cut. Switch off the tool only after the tool is completely away from the workpiece. When the cutting is interrupted, resume the cut by allowing the blade to reach full speed and then reentering the cut slowly.

- When cutting across the grain, the fibers of the wood will have a tendency to lift and tear, moving the saw slowly to minimize this effect.

Note: there are two notches on the front edge of the shoe as an aid for alignment. When making a 45° bevel cut, just align the left notch marked with 45° with the cutting line on the workpiece. For a straight 90° cut, align the right notch marked with 0° with the cutting line on the workpiece. For precise cutting, always make a trial cut before carrying out operation.

Pocket cutting

- Disconnect the plug from the power supply before making any adjustments. Set the depth adjustment based on the thickness of the line drawing for the cut. raise the lower guard by using the lift lever.
- With the blade barely above the material to be cut, start the saw and allow the blade to come to full speed. Gradually lower the blade unto the material to be cut using the front end of the shoe as a pivot point. When the blade starts cutting, release the lower guard. When the shoe is resting flat on the surface being cut, proceed cutting in a forward direction to the end of the cut. Allow the blade to come to a full stop before removing it from the cut. Never pull the saw backward since the blade will climb out of the cut and kickback will occur. Turn the saw around and finish the cut in a normal manner, sawing forward. Use a jigsaw or a hand saw to finish the cut in the corners, if required.

Cutting large sheets

- Large sheet or boards require support to prevent bends or sags. If you attempt to cut without levelling and properly supporting the work piece, the blade will tend to bind, causing kickback.
- Support the panel or board close to the cut. Be sure to set the blade adjustment so that you can cut through the material without cutting into the table or workbench.

Suggestion: use two by fours to support the board or panel to be cut. If the piece is too large for the workbench, use the floor with the two-by fours supporting the wood.

Laser line generator



WARNING: Do not stare directly at the laser beam, do not deliberately aim the beam at personnel and ensure that it is not directed towards the eye of a person for longer than 0.25s.



When you make the line of the cut on the work piece, the laser line generator can help you get better alignment.

The laser generator switch is located at the front of the safety lock button for the mechanical plunge stop. Turn on: Press the laser generator switch to “I” position, the laser generator (1) works.

Turn off: Press the switch to “O” position.

1. Make sure line of the cut is on the work piece.
2. Adjust the depth of cut as required.
3. Plug in the machine and start the motor.
4. When the blade is at its maximum speed (approximately 5 seconds), place the saw on the work-piece.
5. Switch on the laser generator from the laser aperture using the laser generator switch.
6. Align the beam with the mark on the work-piece and slowly push the saw forward using both hands, keeping the red-light beam on the mark.
7. Switch off the laser beam after completion of the cut.

MAINTENANCE

Warning: Do not at any time let brake fluids, gasoline, petroleum-based products, penetrating oils, etc., come in contact with plastic parts. Chemicals can damage, weaken or destroy plastic which may result in serious personal injury.

Regular cleaning is required for the safe operation of the tool, as an excessive buildup of dust will prevent the tool from operating correctly.

The dust extraction hose (B) may block and require cleaning occasionally, especially if damp wood is being cut.

1. Unplug from mains supply.
2. Clean thoroughly with a small soft brush, like a paint brush.
3. Keep the cooling vents on the motor housing clean and unobstructed at all times.
4. Never use any caustic agents or solvents to clean the plastic parts.

Blade

- Always use a sharp blade.
- If the tool does not cut as well as expected or if it overheats (temperature cut out may trip) the most common cause is a blunt blade.
- It is difficult to see or feel if the blade is blunt. When in doubt use a new blade.
- Blades are consumable items.
- Beware when changing blade as they can become hot during use. Allow the blade to cool before replacing it.

Carbon brush

For safety reasons, the machine automatically switches off if the carbon brushes are so worn out that they no longer have contact with the motor. In that case, the carbon brushes must be replaced by a pair similar carbon brush available through the after-sales service organization or qualified professional person.

If they are 6 mm or less then they must both be replaced. Fit new carbon brushes and replace the brush housing.

CAUTION: The brushes must always be replaced in pairs.

CAUTION: Always disconnect the machine from the power supply before removing any electrical covers.

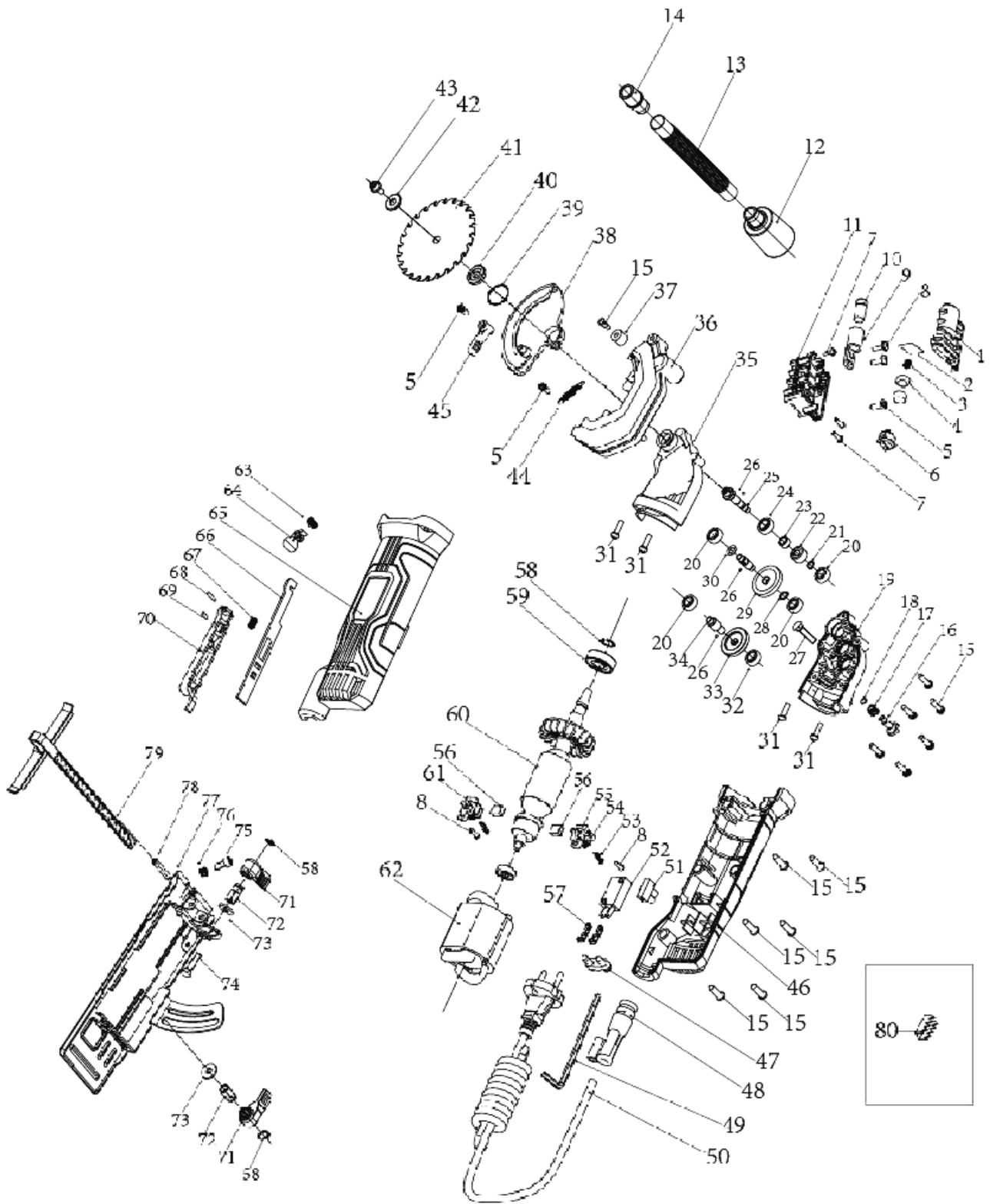
Changing the button batteries for Laser generator

Unplug the saw from power mains.

WARNING: Failure to unplug your tool could result in accidental starting causing possible serious personal injury.

1. Open the battery cover located on the top of the motor by using a screwdriver.
2. Take out the old button batteries from battery holder and replace with new button batteries. Dispose of old batteries properly.
3. Close the battery cover.

EXPLODED VIEW



PARTS LIST

Item	Stock#	Description	Qty
1	PS4005-001	laser cover	1
2	PS4005-002	spring holder	1
3	PS4005-003	tower type spring	1
4	PS4005-004	button cell	2
5	PS4005-005	ST4.2x12 Cross head screw	3
6	PS4005-006	rocket switch	1
7	PS4005-007	cross head screw ST2.9*10	3
8	PS4005-008	cross head self-tapping screw	4
9	PS4005-009	laser holder	1
10	PS4005-010	laser head	1
11	PS4005-011	laser plate	1
12	PS4005-012	dust pipe connector C	1
13	PS4005-013	corrugated pipe	1
14	PS4005-014	dust pipe connector D	1
15	PS4005-015	cross head self-tapping screw ST4.2X16	13
16	PS4005-016	lock cap assembly	1
17	PS4005-017	spring for lock pin	1
18	PS4005-018	snap spring	1
19	PS4005-019	right gear box cover	1
20	PS4005-020	bearing 607-2Z	4
21	PS4005-021	circlip for shaft 8	1
22	PS4005-022	pinion	1
23	PS4005-023	distance sleeve	1
24	PS4005-024	bearing 699-2Z	1
25	PS4005-025	output shaft	1
26	PS4005-026	steel ball	3
27	PS4005-027	step bolt M6*26	1
28	PS4005-028	circlip for shaft 9	1
29	PS4005-029	big gear	1
30	PS4005-030	flat washer 13*7.1*0.5	1
31	PS4005-031	cross head screw 4.2*20	4
32	PS4005-032	bearing 698-2Z	1
33	PS4005-033	spiral bevel gear	1
34	PS4005-034	first gear shaft	1
35	PS4005-035	gear box	1
36	PS4005-036	upper guard	1
37	PS4005-037	rubber stop	1
38	PS4005-038	lower guard	1
39	PS4005-039	circlip	1
40	PS4005-040	inner flange	1

Item	Stock#	Description	Qty
41	PS4005-041	saw blade	1
42	PS4005-042	outer flange	1
43	PS4005-043	saw blade forcing screw M6*14	1
44	PS4005-044	spring	1
45	PS4005-045	lower guard lever	1
46	PS4005-046	right housing	1
47	PS4005-047	cord clamp	1
48	PS4005-048	cord holder	1
49	PS4005-049	hex key	1
50	PS4005-050	power cord	1
51	PS4005-051	wire connector	1
52	PS4005-052	switch	1
53	PS4005-053	2.8 socket terminal	2
54	PS4005-054	coil spring	1
55	PS4005-055	left carbon brush holder	1
56	PS4005-056	carbon brush	2
57	PS4005-057	4.8 socket terminal	2
58	PS4005-058	circlip for shaft 10	3
59	PS4005-059	bearing 6000-2Z	1
60	PS4005-060	armature 120V	1
61	PS4005-061	right carton brush holder	1
62	PS4005-062	stator 120V	1
63	PS4005-063	torsion spring for lock off button	1
64	PS4005-064	lock off button	1
65	PS4005-065	left housing	1
66	PS4005-066	push rod	1
67	PS4005-067	switch push block spring	1
68	PS4005-068	round pin	1
69	PS4005-069	round pin for lock off button	1
70	PS4005-070	switch push block	1
71	PS4005-071	depth adjust lever	2
72	PS4005-072	lock rod	2
73	PS4005-073	big washer	2
74	PS4005-074	step bolt M6*26	1
75	PS4005-075	hex round cap screw M6X12	1
76	PS4005-076	spring for guide fixed screw	1
77	PS4005-077	baseplate assembly	1
78	PS4005-078	spring column pin D6X35	1
79	PS4005-079	edge guide	1
80	PS4005-080	H buckle	1

TWO (2) YEARS LIMITED WARRANTY

Power Smart® is committed to building tools that are dependable for years. Our warranties are consistent with our commitment and dedication to quality.

TWO (2) YEARS LIMITED WARRANTY OF POWER SMART PRODUCTS FOR HOME USE.

Power Smart ("Seller") warrants to the original purchaser only, that all Power Smart consumer power tools will be free from defects in material or workmanship for a period of two (2) years from date of purchase. Ninety (90) days for all Power Smart Products, if the tool is used for professional or commercial use.

SELLER'S SOLE OBLIGATION AND YOUR EXCLUSIVE REMEDY under this Two (2) Years Limited Warranty and, to the extent permitted by law, any warranty or condition implied by law, shall be the repair or replacement of parts, without charge, which are defective in material or workmanship and which have not been misused, carelessly handled, or misrepaired by persons other than Seller or Authorized Service Center. To make a claim under this Limited Warranty, you must return the entire power tool product; transportation prepaid, to Power Smart Include a legible copy of the original receipt, which lists the date of purchase (month and year) and the name of the company purchased from.

THIS LIMITED WARRANTY DOES NOT APPLY TO ANY ACCESSORY ITEMS INCLUDED WITH THE TOOL SUCH AS CIRCULAR SAW BLADES OTHER RELATED ITEMS OR TO ANY REPLACEMENT PARTS LISTED UNDER MAINTENANCE.

ANY IMPLIED WARRANTIES SHALL BE LIMITED IN DURATION TO TWO (2) YEARS FROM DATE OF PURCHASE. SOME STATES IN THE U.S. AND SOME CANADIAN PROVINCES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

IN NO EVENT SHALL SELLER BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING BUT NOT LIMITED TO LIABILITY FOR LOSS OF PROFITS) ARISING FROM THE SALE OR USE OF THIS PRODUCT. SOME STATES IN THE U.S. AND SOME CANADIAN PROVINCES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE IN THE U.S., PROVINCE TO PROVINCE IN CANADA AND FROM COUNTRY TO COUNTRY.

For questions / comments, technical assistance or repair parts –
Please call toll free at: 1-800-791-9458 (M-F 9am – 5pm EST)
Email: support@amerisuninc.com

SAVE YOUR RECEIPTS. THIS WARRANTY IS VOID WITHOUT THEM.

