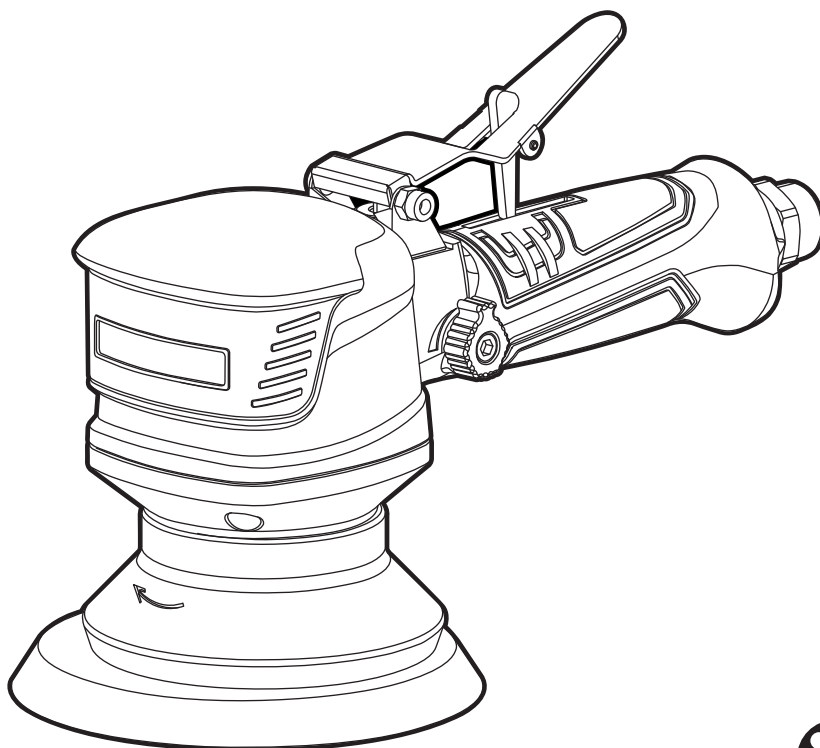


# RYOBI®

## RA-DAS150-B

**DUAL ACTION SANDER  
OPERATOR'S MANUAL  
ORIGINAL INSTRUCTIONS**



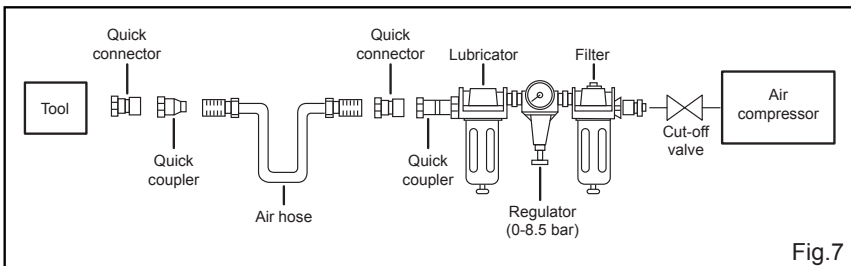
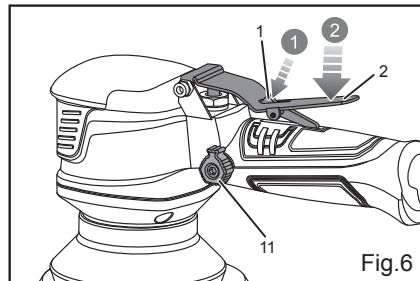
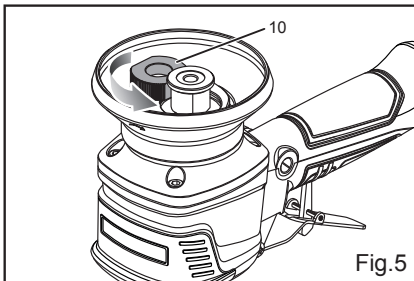
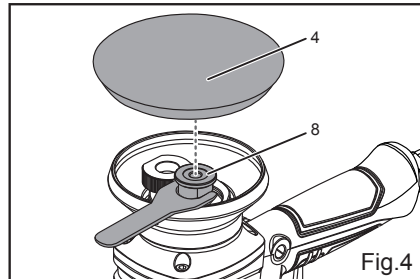
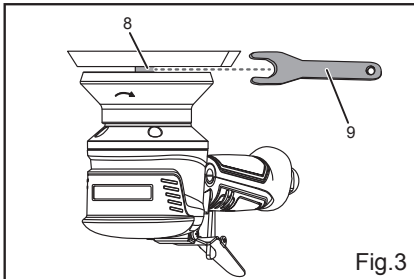
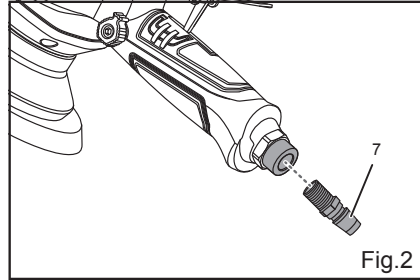
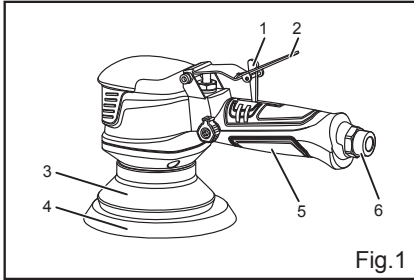
## **Important!**

It is essential that you read the instructions in this manual before operating this machine.

Subject to technical modifications.

## DESCRIPTION

- |                     |                |                        |                             |
|---------------------|----------------|------------------------|-----------------------------|
| 1. Trigger lock pin | 4. Sanding pad | 7. Nitto style coupler | 10. Axle adjuster           |
| 2. Trigger          | 5. Handle grip | 8. Drive spindle       | 11. Air regulator adj. knob |
| 3. Protection cover | 6. Air inlet   | 9. Wrench              |                             |



## GENERAL SAFETY RULES

- For multiple hazards, read and understand the safety instructions before installing, operating, repairing, maintaining, changing accessories on, or working near the sander or polisher. Failure to do so can result in serious bodily injury.
- Only qualified and trained operators should install, adjust or use the sander or polisher.
- Do not modify this sander or polisher. Modifications can reduce the effectiveness of safety measures and increase the risks to the operator.
- Do not discard the safety instructions; give them to the operator.
- Do not use a sander or polisher if the tool has been damaged.
- Tools shall be inspected periodically to verify that the ratings and markings required by this part of ISO 11148 are legibly marked on the tool. The employer/user shall contact the manufacturer to obtain replacement marking labels when necessary.

## PROJECTILE HAZARDS

- Be aware that failure of the work piece or accessories or even of the inserted tool itself can generate high-velocity projectiles.
- Always wear impact-resistant eye protection during operation of the sander or polisher. The grade of protection required should be assessed for each use.
- For overhead work, wear a safety helmet.
- The risks to others should also be assessed at this time.
- Ensure that the work piece is securely fixed.

## ENTANGLEMENT HAZARDS

- Choking, scalping and/or lacerations can occur if loose clothing, personal jewelry, neck wear, hair or gloves are not kept away from the tool and its accessories.

## OPERATING HAZARDS

- Use of the tool can expose the operator's hands to hazards, including cuts and abrasions and heat. Wear suitable gloves to protect hands.
- Operators and maintenance personnel shall be physically able to handle the bulk, weight and power of the tool.
- Hold the tool correctly; be ready to counteract normal or sudden movements and have both hands available.
- Maintain a balanced body position and secure footing.
- Release the start-and-stop device in the case of an interruption of the energy supply.
- Use only lubricants recommended by the manufacturer.
- Personal protective safety glasses shall be used; suitable gloves and protective clothing are

recommended.

- Inspect the backing pad before each use. Do not use if cracked or broken or if it has been dropped.
- Avoid direct contact with the moving sanding pad in order to prevent pinching or cutting of hands or other body parts. Wear suitable gloves to protect hands.
- Never run the tool unless abrasive is applied to the work piece.
- There is a risk of electrostatic discharge if used on plastic and other non-conductive materials.
- Potentially explosive atmospheres can be caused by dust and fumes resulting from sanding or grinding. Always use dust extraction or suppression systems which are suitable for the material being processed.

## REPETITIVE MOTIONS HAZARDS

- When using a sander or polisher to perform work-related activities, the operator can experience discomfort in the hands, arms, shoulders, neck or other parts of the body.
- While using a sander or polisher, the operator should adopt a comfortable posture whilst maintaining secure footing and avoiding awkward or off-balance postures. The operator should change posture during extended tasks; this can help avoid discomfort and fatigue.
- If the operator experiences symptoms such as persistent or recurring discomfort, pain, throbbing, aching tingling, numbness, burning sensations or stiffness, these warning signs should not be ignored. The operator should tell the employer and consult a qualified health professional.

## ACCESSORY HAZARDS

- Disconnect the sander or polisher from the energy supply before fitting or changing the inserted tool or accessory.
- Avoid direct contact with the inserted tool during and after use, as it can be hot or sharp.
- Use only sizes and types of accessories and consumables that are recommended by the manufacturer of sanders or polishers; do not use other types or sizes of accessories or consumables.
- Grinding wheels and cutting-off tools shall not be used.
- Check that the maximum operating speed of the inserted tool (flap wheels, abrasive belts, fiber discs, backing pads, etc.), is higher than the rated speed of the sander or polisher.
- Self-fixing sander discs shall be placed concentrically on the supporting pad.

## WORKPLACE HAZARDS

- Slips, trips and falls are major causes of workplace injury. Be aware of slippery surfaces caused by use of the tool and also of trip hazards caused by the air line or hydraulic hose.

- The sander or polisher is not intended for use in potentially explosive atmospheres and is not insulated against contact with electric power.
- Ensure that there are no electrical cables, gas pipes, etc., which can cause a hazard if damaged by use of the tool.

### DUST AND FUME HAZARDS

- Dust and fumes generated when using sanders and polishers can cause ill health (for example cancer, birth defects, asthma and/or dermatitis); risk assessment and implementation of appropriate controls for these hazards are essential.
- Risk assessment should include dust created by the use of the tool and the potential for disturbing existing dust.
- Operate and maintain the sander or polisher as recommended in these instructions, to minimize dust or fume emissions.
- Direct the exhaust so as to minimize disturbance of dust in a dust-filled environment.
- Where dust or fumes are created, the priority shall be to control them at the point of emission.
- All integral features or accessories for the collection, extraction or suppression of airborne dust or fumes should be correctly used and maintained in accordance with the manufacturer's instructions.
- Select, maintain and replace the consumable/inserted tool as recommended in the instruction handbook, to prevent an unnecessary increase in dust or fumes.
- Use respiratory protection in accordance with employer's instructions and as required by occupational health and safety regulations.

### NOISE HAZARDS

- Exposure to high noise levels can cause permanent, disabling hearing loss and other problems, such as tinnitus (ringing, buzzing, whistling or humming in the ears). Therefore, risk assessment and implementation of appropriate controls for these hazards are essential.
- Appropriate controls to reduce the risk can include actions such as damping materials to prevent work pieces from "ringing".
- Use hearing protection in accordance with employer's instructions and as required by occupational health and safety regulations.
- Operate and maintain the sander or polisher as recommended in the instruction handbook, to prevent an unnecessary increase in the noise level.
- Select, maintain and replace the consumable/inserted tool as recommended in the instruction handbook, to prevent an unnecessary increase in noise.
- If the sander or polisher has a silencer, always ensure it is in place and in good working order when the tool is being operated.

### VIBRATION HAZARDS

The information for use shall draw attention to vibration hazards that have not been eliminated by design and construction and remain as residual vibration risks. It shall enable employers to identify the circumstances in which the operator is likely to be at risk from vibration exposure. If the vibration-emission value obtained using ISO 28927-3 does not adequately represent the vibration emission in the intended uses (and foreseeable misuses) of the machine, additional information and/or warnings shall be supplied to enable the risks arising from vibration to be assessed and managed.

- Exposure to vibration can cause disabling damage to the nerves and blood supply of the hands and arms.
- Wear warm clothing when working in cold conditions and keep your hands warm and dry.
- If you experience numbness, tingling, pain or whitening of the skin in your fingers or hands, stop using the sander or polisher, tell your employer and consult a physician.
- Operate and maintain the sander or polisher as recommended in the instruction handbook, to prevent an unnecessary increase in vibration levels.
- Hold the tool with a light but safe grip, taking account of the required hand reaction forces, because the risk from vibration is generally greater when the grip force is higher.

### ADDITIONAL SAFETY INSTRUCTIONS FOR PNEUMATIC POWER TOOLS

- Air under pressure can cause severe injury.
- Always shut off air supply, drain hose of air pressure and disconnect tool from air supply when not in use, before changing accessories or when making repairs;
- Never direct air at yourself or anyone else.
- Whipping hoses can cause severe injury. Always check for damaged or loose hoses and fittings.
- Whenever universal twist couplings (claw couplings) are used, lock pins shall be installed and whip check safety cables shall be used to safeguard against possible hose-to-tool or hose-to-hose connection failure.
- Do not exceed the maximum air pressure stated on the tool.
- Never carry an air tool by the hose.

### **▲ WARNING**

Grinding wheels and cutting off tools shall not be used.

## SYMBOLS



Safety alert



CE conformity



Please read and understand all instructions before operating the product, follow all warnings and safety instructions.



Please read the instructions carefully before starting the product.



Wear eye protection.



Wear ear protection.



Lubricate with air tool oil daily.

## SPECIFICATIONS

Sanding pad	150 mm (6")
No-load speed	11,200/min
Speed regulation range	2,000~11,000/min
Avg. air consumption	141.5 L/min (5 cfm)
Maximum working pressure	6.3 bar (90 psi)
Air inlet size	6.35 mm (1/4")
Air hose ID	9.52 mm (3/8")
Weight	1.99 kg
A-Weighted sound pressure level	86.7 dB(A), k=3 dB
Sound power level	97.7 dB(A), k=3 dB
Vibration value	5.3 m/s <sup>2</sup>
Uncertainty of measurement	0.033 m/s <sup>2</sup>

Noise emission values are in accordance with EN ISO 4871 and EN ISO 15744.

Vibration emission values are in accordance with EN12096 and EN28662-1.

## APPLICATION

The product provides a patternless finish. The tool is ideal for sanding jobs such as feather edging, metal preparation and blending body. Any other use is forbidden. Other features include: swirl-free finishes from its dual action pad motion, built-in regulator for variable speed control, side exhaust, and airflow adjustment.

The product is mainly used in boat building and maintenance, automobile repair and maintenance, carpentry work, furniture production, non-metallic surface polishing, derusting and other industries' polishing, cleaning.

- Lightweight composite material housing

## RESIDUAL RISKS

Even if you are operating this product in accordance with all the safety requirements, potential risks of injury and damage remain. The following dangers can arise in connection with the structure and design of this product:

1. Health defects resulting from vibration and noise emission if the product is being used over long periods of time or not adequately managed and properly maintained.
2. Injuries and damage to property due to broken cutting attachments or the sudden impact of hidden objects during use.
3. Danger of injury and property damage caused by flying objects.

## AIR SUPPLY AND OPERATION

- Ensure air valve (or trigger) is in the "off" position before connecting to the air supply.
- Connect the product to the air hose.
- Press the trigger to operate the product.
- The air regulator controls the amount of air flow entering the rotor. Turn the air regular adjustment knob to decrease/increase the speed of the product.
- Do not allow the product to free run for an extended period of time as this will shorten its life.
- Disconnect the product from the air supply before changing accessories or making adjustments.
- Required air pressure of 6.3 bar (90 psi), and an air flow according to specifications.
- Do not apply additional force on the product.

## ⚠ WARNING

Ensure the air supply is clean and does not exceed 6.3 bar (90 psi) while operating the product. Too high an air pressure and unclean air will shorten the product's life due to excessive wear, and may be dangerous causing damage and/or personal injury.

## LUBRICATION

An automatic in-line filter-regulator-lubricator is recommended (Fig. 7) as it increases product life and keeps the product in sustained operation. The in-line lubricator should be regularly checked and filled with air tool oil.

Proper adjustment of the in-line lubricator is performed by placing a sheet of paper next to the exhaust ports and holding the throttle open for approximately 30 seconds. The lubricator is properly set when a light stain of oil collects on the paper. Excessive amounts of oil should be avoided.

If it becomes necessary to store the product for an extended period of time (overnight, weekend, etc.), it should receive a generous amount of lubrication at that time. The product should be run for approximately 30 seconds to ensure oil has been evenly distributed throughout the product. The product should be stored in a clean and dry environment.

- It is most important that the product be properly lubricated by keeping the air line lubricator filled and correctly adjusted. Without proper lubrication the product will not work properly and parts will wear prematurely.
- Use correct lubricant in the air line lubricator. The lubricator should be of low air flow or changing air flow type, and should be kept filled to the correct level. Use only recommended lubricants, specially made for pneumatic applications. Substitutes may harm the rubber compounds in the product's O-rings and other rubber parts.

### IMPORTANT!

See Figure 7.

If a filter/regulator/lubricator is not installed on the air system, air operated tools should be lubricated at least once a day or after 2 hours of work with 2 - 6 drops of oil, depending on the work environment, directly through the male fitting in the tool housing.

## LOADING AND OPERATION

### WARNING

Drain the air tank daily. Water in the air line will damage the tool.

- Air tools should not be used in a potentially explosive environment.
- Only polishing and sanding inserted tools as recommended by the manufacturer of the product are used.
- Clean the air inlet filter weekly.
- Line pressure should be increased to compensate for

unusually long air hoses (over 8 metres). The minimum hose diameter should be 6.35 mm (1/4") I.D. and the fittings must have the same inside dimensions.

- Keep hose away from heat, oil and sharp edges. Check hose for wear, and make sure that all connections are secure.
- Use the tool only for its intended purpose.

## MAINTENANCE

- Keep the product safe by regular maintenance.
- Check that the maximum operating speed of the accessories is higher than the rated speed of the tool.
- Personal protective safety glasses shall be used; gloves and protective clothing are recommended.
- Personal protection and dust collection device shall be chosen with regard to the material being worked upon.
- Release the start and stop device in case of energy supply failure.
- No spare parts are to be used when these affect the health and safety of operators.
- Always keep your air tool clean and lubricated. Daily lubrication is essential to avoid internal corrosion and possible failure.
- Lubricate the tool daily with a few drops of air tool oil dripped into the air inlet.
- Maintenance shall be performed weekly.
- Drain the air tank daily. Water in the air line will damage the product.
- If the product cannot be used anymore, make sure to dispose of it so as not to impose hazards on people and the environment.
- Air tool white oil is recommended for lubrication.
- Only lubricants recommended by the manufacturer should be used.
- Loss of power or erratic action may be due to the following:
  - Excessive drain on the air line. Moisture or restriction in the air pipe. Incorrect size or type of hose connectors. To remedy check the air supply.
  - Grit or gum deposits in the tool may also reduce performance. If your model has an air strainer (located in the area of the air inlet), remove the strainer and clean it.
- When not in use, disconnect from air supply, clean tool and store in a safe, dry, childproof location. If the tool cannot be used anymore, make sure to dispose of it so as not to impose hazards to people and the environment.
- Check the speed after each service in relevant cases.

## TROUBLESHOOTING

### WARNING

If any of the following symptoms appears during operation, stop using the tool immediately, or serious personal injury could result. Only qualified persons or an authorised service centre can perform repairs or replacement of the tool.

Disconnect tool from the air supply before attempting repair or adjustment. When replacing O-rings or cylinder, lubricate with air tool oil before assembly.

**PROBLEM: Tool runs at normal speed but fails under load.**

#### POSSIBLE CAUSES

- Motor parts are worn.
- Cam clutch is worn or sticking due to lack of lubricant.

#### REMEDIES

- Lubricate clutch housing.
- Check for excess clutch oil. Clutch cases need only be half full. Overfilling can cause drag on high speed clutch parts, i.e. a typical oiled/lubricated tool requires 14.20 ml (1/2 ounce) of oil.

#### Grease lubrication

**NOTE:** Heat usually indicates insufficient grease in chamber. Severe operating conditions may require more frequent lubrication.

**PROBLEM: Tool runs slowly. Air flows slightly from exhaust.**

#### POSSIBLE CAUSES

- Motor parts are jammed with dirt particles.
- Air regulator is in closed position.
- Air flow is blocked by dirt.

#### REMEDIES

- Check air inlet filter for blockage.
- Pour air tool lubricating oil into air inlet as per instructions.
- Operate tool in short bursts quickly reversing rotation back and forth where applicable.
- Repeat above as needed.

**PROBLEM: Tool will not run. Air flows freely from exhaust.**

#### POSSIBLE CAUSE

One or more motor vanes are stuck due to material build up.

#### REMEDIES

- Pour air tool lubricating oil into air inlet.
- Operate tool in short bursts of forward and/or reverse rotation where applicable.
- Tap motor housing gently with a plastic mallet.
- Disconnect the air supply. Free the motor by rotating drive shank manually where applicable.
- If the product remains jammed, return to the service centre.

**PROBLEM: Tool will not shut off.**

#### POSSIBLE CAUSE

'O' rings throttle valve is dislodged from seat inlet valve.

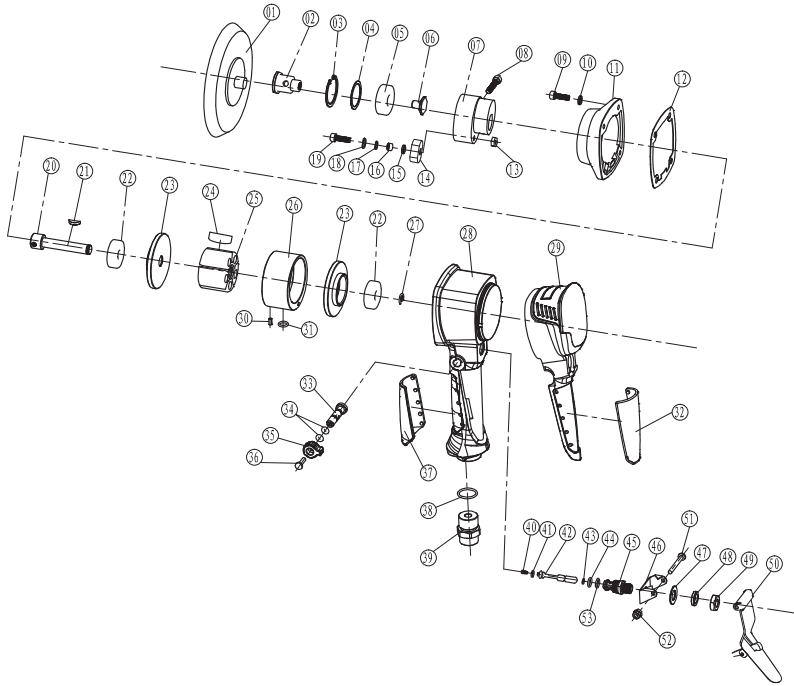
#### REMEDY

Replace the 'O' ring.

**NOTE:** Repairs should be carried out by a qualified person.



## PARTS LIST



No.	Description	No.	Description	No.	Description	No.	Description
01	Sanding pad	15	Washer 6	29	Housing grip	43	O-ring 3.5 x 1.5
02	Drive spindle	16	Copper cushion	30	Bolt 3 x 7	44	O-ring 8 x 1.5
03	Retainer ring 32	17	Wave washer	31	O-ring 7.5 x 1.8	45	Valve seat
04	Wave washer	18	Washer	32	Handing cover	46	Bracket
05	Bearing 6201	19	Screw M6 x 35	33	Air volume regulator	47	Washer
06	Nut	20	Shaft	34	O-ring 18.0 x 1.8	48	Washer
07	Orbital shaft	21	Semicircle key 3 x 5x13	35	Nut	49	Hex nut M10
08	Screw M5 x 25	22	Bearing 6200ZZ	36	Screw M4 x 8	50	Trigger
09	Screw M5 x 15	23	Cylinder cap	37	Handing cover	51	Screw M4 x 35
10	Washer 5	24	Rotor Blade	38	O-ring 18.0 x 1.8	52	Hex nut M4
11	Motor housing	25	Rotor	39	Air inlet plug	53	O-ring 11.2 x 1.6
12	Gasket	26	Cylinder	40	Spring		
13	Hex Nut M6	27	Retainer ring 8	41	O-ring 4.0 x 2		
14	Nut	28	Gun body	42	Valve stem		







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