

2.4 IN. LCD INSPECTION CAMERA

Item Number W50045

OWNER'S MANUAL



▲WARNING

It is the owner and/or operators' responsibility to study all WARNINGS, operating, and maintenance instructions contained on the product label and instruction manual prior to operation of this product. The owner/operator shall retain product instructions for future reference.

The owner and/or operator are responsible for maintenance, maintaining all decals or warning labels and while in use, maintaining the unit in good working order. Safety information shall be emphasized and understood prior to usage. The product shall be inspected per the operating instructions.

Protect yourself and others by observing all safety information.

Failure to comply with instructions could result in personal injury and/or property damage!

PT
Performance Tool®

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This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

1 YEAR LIMITED WARRANTY

PERFORMANCE TOOL® extends only the following warranties, and only to original retail purchasers. These warranties give specific legal rights. Except where prohibited by local law, the law of the State of Washington governs all warranties and all exclusions and limitations of warranties and remedies. There may be other rights which vary from state to state.

PERFORMANCE TOOL® warrants the product to be free from defects in materials and workmanship under normal use and service. A defective product may be returned for a free replacement within 90 days from the date of purchase, provided that product is returned to place of purchase immediately after discovery of defect. After 90 days and up to one year from date of purchase, PERFORMANCE TOOL® will replace at no charge any parts which our examination shall disclose to be defective and under warranty.

These warranties exclude blades, bits, punches, dies, bulbs, fuses, hoses, and other consumables which must be replaced under normal use and service. These warranties shall not apply to any product or part which is used for a purpose for which it is not designed, or which has been repaired or altered in any way so as to affect adversely its performance or reliability, nor shall these warranties apply to any product or part which has been subject to misuse, neglect, accident or wear and tear incident to normal use and service.

PERFORMANCE TOOL® does not authorize any other person to make any warranty or to assume any liability in connection with its products.

Except for warranties of title and the limited express warranties set forth above, PERFORMANCE TOOL® makes no express or implied warranties of any kind with respect to its products. In particular, PERFORMANCE TOOL® makes no implied warranty of merchantability and no implied warranty of fitness for any particular purpose, except that for goods purchased primarily for personal, family or household use and not for commercial or business use, PERFORMANCE TOOL® makes an implied warranty of merchantability (and, if otherwise applicable, an implied warranty of fitness for a particular purpose), but only for the particular qualities or characteristics, and for the duration, expressly warranted above. The laws on limitation of implied warranties may differ from state to state, so the above limitations may not apply in all cases.

PERFORMANCE TOOL® shall not be liable for consequential, incidental or special damages resulting from or in any manner related to any product, or to the design, use, or any inability to use the product. The sole and exclusive remedy for a defective product or part shall be the repair, or replacement thereof as provided above. The laws on limitation of remedies or on consequential, incidental or special damages may vary from state to state, so the above limitations may not apply in all cases.

SAFETY GUIDELINES / DEFINITIONS

This instruction manual is intended for your benefit. Please read and follow the safety, installation, maintenance and troubleshooting steps described within to ensure your safety and satisfaction. The contents of this instruction manual are based upon the latest product information available at the time of publication. The manufacturer reserves the right to make product changes at any time without notice.

▲ WARNING: Read and understand this entire instruction manual before attempting to assemble, install, operate or maintain this product. Failure to comply with the instructions may result in serious personal injury and/or property damage!

The following signal words are used to emphasize safety warnings that must be followed when using this product:

▲ DANGER Indicates an imminently hazardous situation that, if not avoided, WILL result in death or serious injury.

▲ CAUTION Indicates a potentially hazardous situation that, if not avoided, MAY result in minor or moderate injury.

▲ WARNING Indicates a potentially hazardous situation that, if not avoided, COULD result in death or serious injury.

▲ NOTICE Indicates important information, which if not followed, MAY cause damage to equipment.

UNPACKING AND INSPECTION

After opening the carton, unpack your new product and related parts & accessories. Please inspect it carefully for any damage that may have occurred during transit. Please check it against the photograph on carton.

▲ WARNING DO NOT operate this product if damaged during shipment, handling or misuse. Do not operate the product until the parts have been replaced or the fault rectified. Failure to do so may result in serious personal injury or property damage. All damaged parts must be repaired or replaced as needed prior to operating this product. Check to see that all nuts, bolts and fittings are secure before putting this product into service.

Please have the serial number, model number, and date of purchase available for reference when calling.

IMPORTANT SAFETY INFORMATION

▲ WARNING. READ, UNDERSTAND AND FOLLOW ALL INSTRUCTIONS AND WARNINGS BEFORE OPERATING THIS PRODUCT. FAILURE TO DO SO MAY RESULT IN FIRE, ELECTRICAL SHOCK, PERSONAL INJURY AND/OR PROPERTY DAMAGE AND WILL VOID WARRANTY.

TO PREVENT SERIOUS INJURY AND DEATH:

Always wear eye protection. Wear ANSI-approved safety goggles during use.

Before inspecting walls, shut off the circuit breakers to the whole house.

Before inspecting pipes that may contain an electric charge, have them checked by a qualified electrician.

Before inspecting an engine, turn off the automobile.

- Prevent liquid entry. Although the camera and cable of this item can be submersed the body of the tool cannot be submersed. Do not immerse handle portion of the camera in any liquids, or use in a rainy or otherwise wet environment. The Camera Head and Cable are rated to IP67.
- This unit is not shock resistant. Handle product with care and do not drop or expose to impact.
- Turn off unit when not in use.
- Always use common sense and pay particular attention to all the DANGER, WARNING, CAUTION and NOTICE statements of this manual. The safety instructions provided are not intended to cover all possible conditions and practices that may occur when operating, maintaining and cleaning power tools.
- Observe work area conditions. Do not use machines or power tools in damp or wet locations. Don't expose to rain or snow.
- Do not operate the Camera in explosive atmospheres, such as in the presence of flammable liquids, gases, or heavy dust.
- Keep work area well lit. Do not use electrically powered tools in the presence of flammable gases or liquids. Do not bring combustible materials near the tools. Power tools create sparks, which may ignite the dust or fumes. Do not immerse tool in liquids. Keep work area clean, well ventilated and well lit. Cluttered work areas invite accidents.
- Use personal protective equipment. Wear ANSI approved safety goggles. Protective equipment such as dusk mask, nonskid safety shoes, hard hat, heavy duty work gloves or hearing protection used for appropriate conditions will reduce personal injuries.
- Keep bystanders, children and visitors away while operating this product. Distractions can cause you to lose control.
- This product is not a toy. Do not allow children to play with or near this item. Use as intended only.
- Stay alert. Watch what you are doing, and use common sense when operating this tool. Do not use this product while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating this product may result in serious personal injury. Keep proper footing and balance at all times. Do not reach over or across running machines, hoses, cords, etc.
- 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.

IMPORTANT SAFETY INFORMATION

- Work Safe. Operate tool a safe distance from yourself and others in the work area. Keep proper footing and balance at all times. Do not overreach, especially on ladders. Be certain ladders being used are sturdy, stable, on a firm surface and erected as safe working angles. Do not reach over or across running machines, hoses, cords, etc.
- Inspect tool before every use; do not use if parts are loose or damaged.
- Do not alter this product in any way.
- 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.
- 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. Follow instructions in the Maintenance section of this manual. Use of unauthorized parts or failure to follow Maintenance Instructions may create a risk of shock or injury.
- Maintain labels and nameplates on the tool. These carry important safety information. If unreadable or missing, contact Performance Tool® for a replacement.
- Disconnect the plug from the power source before making any adjustments or changing accessories. Such preventive safety measures reduce the risk of starting the power tool accidentally.
- 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.
- Store idle equipment. When not in use, tools must be stored in a dry location to inhibit rust. Always lock up tools and keep out of reach of children and other untrained persons. Switch off all unused electrical tools when stored. Disconnect battery from unit. Tools are dangerous in the hands of untrained users.
- Properly dispose of batteries once depleted. Do not dispose of in a fire. Check local regulations and follow proper disposal.
- **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 or other masonry products.
 - 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. (California Health & Safety Code § 25249.5, et seq.)

- The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.
- **WARNING:** This product and its packaging contain a chemical known to the State of California to cause cancer, birth defects, or other reproductive harm.

ELECTRICAL SAFETY

1. Before inspecting walls, shut off the circuit breakers to the whole house.
2. Before inspecting pipes that may contain an electric charge, have them checked by a qualified electrician.
3. Before inspecting an engine, turn off the automobile.
4. Do not use the Camera while standing in water.
5. Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators.
6. Do not expose the Display Unit to rain or wet conditions. Water entering the Display Unit will increase the risk of electric shock.
7. Do not place the Camera Head and Cable into any place that may contain a live electric charge or moving parts, which increases the risk of electric shock.
8. Make sure your hands are dry before operating the Camera or charging the battery.

PARTS LISTING



CONTROLS, COMPONENTS & ACCESSORIES



- 1. LCD screen
- 2. Power button (hold for 3 seconds to turn on)
- 3. Increase light output button
- 4. Decrease light output button
- 5. Rotate image button
- 6. Battery meter
- 7. Light output level
- 8. Cable Connector

SPECIFICATIONS

Specifications are subject to change without notice.

Screen	2.4 in. color LCD monitor
Camera Resolution	480 x 640 VGA
Image Rotation	4 position
Image Sensor	1/6 in. VGA CMOS
Light Source	4 white LEDs with 6 output levels
Camera Size	11/32 in. (9 mm) diameter
Cable	40 in. (100 mm)
Output	TV/video to RCA cable
Battery Type	4 x AA 1.5V Alkaline (included)
Display Unit Operating Temperature	32°F to 113°F
Imager Head and Cable Operating Temperature	14°F to 176°F
Protection Rating	IP67 - Protected against the effect of immersion between 15 cm & 1 m

ASSEMBLY

The LCD monitor in this camera unit is fixed to the body.

To assemble unit:

1. Pull back the locking collar on the receiving end of the display unit.
2. Align metal tab on threaded end of camera cable with the slot in the collar.
3. Hand tighten the collar onto the cable until secure.

The accessories included with this unit can be used to retrieve small parts, or provide better viewing into inaccessible areas. These can be attached to the camera head using the accessory collar as follows:

1. Slide the desired accessory through the accessory collar and align with the notch inside.
2. Position the hook on the end of the accessory behind the camera head.
3. Slide the accessory collar over the camera head with the accessory in place, until tightened.

Video Output:

The video cable included with this camera can display a live feed to any standard RCA video input jack on a TV, monitor or other compatible device. Use the included video cable to connect the inspection camera to your viewing device and operate the camera normally.

TROUBLE SHOOTING

Problem:	Solution
No image	Check for LED indicator light. If not on, hold the power button down for at least 3 seconds until light comes on.
No image	Check for proper installation of batteries. Replace batteries with a fresh set if necessary.
No image	Check for any obstructions on lens of camera. If in low light, try different light levels.
No image	Check for proper installation of the camera cable to body of the unit.
Picture upside down	Press the center rotate image button until desired view is achieved.
No video playback	Check connection between video output jack and video cord.
No video playback	Ensure RCA cable is inserted into proper video input jack.

Battery installation/replacement

1. Slide cover off bottom of unit and remove battery carrier.
2. Remove batteries from battery carrier (if installed).
3. Install new batteries, negative side of each battery to the spring in each slot.
4. Reinsert battery carrier and replace slide cover.

NOTE: *carrier must be inserted properly to operate. It can only be inserted in one orientation, but be sure the side with exposed contacts is inserted first. A tab on the end of the carrier should be visible when installed properly.*

MAINTENANCE AND STORAGE

- Make sure the screws are properly tightened to be able to work safely. Use only original accessories and original spare parts.
- If the device is not used, it should be stored in a dry place, away from children.
- In case of excessive sparking at the motor, have the condition of motor brushes checked by skilled personnel.
- If the cable is damaged, replace it with another one which has the same characteristics. Entrust this operation to a qualified technician or a repair shop.
- All defects should be repaired by a service workshop authorized by the manufacturer.

ENVIRONMENT PROTECTION

- Do not dispose of electrically powered products with household wastes. They should be utilized in proper plants.
- Obtain information on wastes utilization from your seller or local authorities.
- Used up electric and electronic equipment contains substances active in natural environment.
- Unrecycled equipment constitutes a potential risk for environment and human health.