

# 4.3 IN. LCD INSPECTION CAMERA

Item Number W50072

## MANUAL



Performance Tool®

Simulated screen image.

### **▲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®

# 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. If any parts are missing, please call customer service at 1-800-426-1262 between 6 a.m. and 5 p.m. Pacific time.

**▲ 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. If you have any questions, or require assistance with damaged or missing parts, please contact our factory customer service department at: 1-800-426-1262.

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. Remove batteries if unit will go unused over 30 days.
- 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.
- Do not use the probe in acid, fire or other corrosive or extremely hot environments.
- Do not operate the Camera in explosive atmospheres, such as in the presence of flammable liquids, gases, or heavy dust.
- Do not allow oil or gas to remain on the camera head. Shut off vehicles during inspections.
- Observe work area conditions. Do not use machines or power tools in damp or wet locations. Don't expose to rain or snow.
- 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.

## IMPORTANT SAFETY INFORMATION

- If condensation occurs in the camera lens, allow it evaporate before using the unit again.
- 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.
- 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 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.
- Do not attempt to modify or repair this tool yourself. Have your 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. Remove batteries 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 Probe 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 changing the battery.

# PARTS LISTING

Product includes:

- Display Unit with
  - 4.3 in. color LCD monitor
  - 35 in. (90mm) Probe
  - IP67 Submersible 11/32 in. (9mm) diameter Camera
- Nylon storage pouch
- Mirror, Hook and Magnet with Accessory Collar
- Neck strap
- 4AA Batteries



## LCD DISPLAY

Light Output Level

Battery Meter

Angle Indicator

Digital Zoom Indicator



Simulated screen image.

## SPECIFICATIONS

Specifications are subject to change without notice.

Screen .....	4.3 in. color LCD monitor
Camera Resolution .....	640 x 480 VGA
Screen Resolution .....	480 x 272 VGA
Image Rotation .....	4 position
Image Sensor .....	1/9 in. VGA CMOS
Light Source .....	4 white LEDs with 5 output levels
Camera Size .....	11/32 in. (9 mm) diameter
Cable .....	35 in. (90 mm)
Power Supply .....	4 x AA 1.5V Alkaline Batteries (included)
Display Unit Operating Temperature .....	32°F to 113°F
Probe Operating Temperature .....	14°F to 176°F
Protection Rating .....	IP67 - Protected against the effect of immersion between 15 cm & 75 cm
Battery Life.....	3 hours
Weight of Unit .....	9.3 oz. (without batteries)

## OPERATION

*This palm scope inspection camera unit comes fully assembled. Before first use, carefully peel off and discard the plastic label over the LCD.*

1. To begin use, carefully uncoil the camera probe assembly coiled around the battery compartment.
2. Once probe is fully extended, align the cable with the opening on the upper right of the backside of the unit.
3. Align and replace the cover inserting the left hand tabs into the housing first.
4. Press down to ensure a good fit, making sure the cable is properly fitted through the opening.
5. Turn unit over, press and hold the power button for 3 seconds to turn on.
6. Point the camera-tipped end of the probe at the target, feed the probe through any holes or bend the probe around objects if necessary.
7. DO NOT forcefully bend, kink, or pull the probe; this will damage it.
8. Use the function buttons as described on page 3 to set light output, screen size, zoom and viewing orientation.
9. Press and hold power button again for 3 seconds to turn off.

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.

**Note:** These accessories are not designed for lifting heavy objects or pulling with force. Always hold the camera probe in your hand while using an accessory. Pulling on the LCD unit will put stress on the cable connection and could cause the unit to malfunction. Use only for small, lightweight objects.

## TROUBLE SHOOTING

<b>Problem:</b>	<b>Solution</b>
No image .....	Check for power. 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.
Picture upside down or backwards.....	Press the rotate image button until desired view is achieved.

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.

## BATTERY INSTALLATION/REPLACEMENT

1. Turn unit over to expose back. Press in the plastic tab on the right middle of the back cover and lift up to open.
2. Use a #0 Philips screwdriver to remove the screw in bottom middle of the battery cover.
3. Remove cover and insert 4AA batteries as shown inside the compartment.
4. Replace screw.



## 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.
- 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.