

Please read and save these instructions. Read through this owner's manual carefully before using product. Protect yourself and others by observing all safety information, warnings, and cautions. Failure to comply with instructions could result in personal injury and/or damage to product or property. Please retain instructions for future reference.



VIDEO BORESCOPE

FOR CUSTOMER SERVICE

Technical Question?

CALL 1-866-458-2472

customerservice@oem-tools.com

UNPACKING

After unpacking unit, inspect carefully for any damage that may have occurred during transit. Check for loose, missing, or damaged parts. If any damage is observed, a shipping damage claim must be filed with carrier. Do not use the Video Borescope if broken, bent, cracked or damaged parts (including labels) are noted. Any Video Borescope that appears damaged in any way, operates abnormally or is missing parts should be removed from service immediately. If you suspect that the Video Borescope was subjected to a shock load (a load that was dropped suddenly, unexpectedly, etc.) immediately discontinue use until it has been checked by a factory authorized service center.



⚠ WARNING

The following safety information is provided as a guideline to help you operate your Video Borescope under the safest possible conditions. Any tool or piece of equipment can be potentially dangerous to use when safety or safe handling instructions are not known or not followed. The following safety instructions are to provide the user with the information necessary for safe use and operation. Please read and retain these instructions for the continued safe use of your tool. Failure to follow instructions listed below may result in serious injury. In addition, make certain that anyone who uses the equipment understands and follows these safety instructions as well.

Explanation of Safety Signal Words

⚠ 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.

CAUTION: Used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

NOTES: Provide clarity and helpful information.

Thank you very much for choosing an OEMTOOLS® Product!

For future reference, please register your new tool at www.oem-tools.com and complete the owner's record below:

Model: _____ **Purchase Date:** _____

Save the receipt, warranty and these instructions. It is important that you read the entire manual to become familiar with this product before you begin using it. This product is designed for certain applications only. OEMTOOLS® cannot be responsible for issues arising from modification. We strongly recommend this product is not modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, DO NOT use the product until you have first contacted customer service to determine if it can or should be performed on the product.



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IMPORTANT INSTRUCTIONS AND SAFETY RULES

1. Know your tool. Read this manual carefully. Learn the tool's applications and limitations, as well as, potential hazards specific to it.
2. Keep work area clean and well lit. Cluttered or dark work areas invite accidents.
3. Keep children away. All children should be kept away from the work area. Never let a child handle a tool without strict adult supervision.
4. Do not operate this tool if under the influence of alcohol or drugs. Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not attempt to operate.
5. Use safety equipment. Eye protection should be worn at all times when operating this tool. Use ANSI approved safety glasses. Everyday eyeglasses are NOT safety glasses. Dust mask, non-skid safety shoes, hard hat or hearing protection should be used in appropriate conditions.
6. Wear proper apparel. Loose clothing, gloves, neckties, rings, bracelets or other jewelry may present a potential hazard when operating this tool. Keep all apparel clear of the tool.
7. Don't overreach. Keep proper footing and balance at all times when operating this tool.
8. Check for damage. Check your tool regularly. If part of the tool is damaged it should be carefully inspected to make sure that it can perform its intended function correctly. If in doubt, the part should be repaired. Refer all servicing to a qualified technician. Consult your dealer for advice.
9. Keep away from flammables. Do not attempt to operate this tool near flammable materials or combustibles. Failure to comply may cause serious injury or death.
10. Store idle tools out of the reach of children and untrained persons. Tools may be dangerous in the hands of untrained users.
11. Maintain tools with care.
12. Keep tools dry and clean.
13. Properly maintained tools are less likely to bind and are easier to control. Do not use a damaged tool. Tag damaged tools "Do not use" until repaired.
14. Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool's operation.
15. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.
16. Use only accessories that are recommended by the manufacturer for your model. Accessories that may be suitable for one tool may become hazardous when used on another tool.
17. Tool service must be performed only by qualified repair personnel. Service or maintenance performed by unqualified personnel could result in a risk of injury.
18. When servicing a tool, use only identical replacement parts. Use of unauthorized parts or failure to follow maintenance instructions may create a risk of injury.
19. Maintain a safe working environment. Keep the work area well lit. Make sure there is adequate surrounding workspace. Keep the work area free of obstructions, grease, oil, trash, and other debris. Do not use this product in a damp or wet location.
20. Maintain labels and nameplates on this product. These carry important information. If unreadable or missing, contact OEMTOOLS® for a replacement.
21. Before use, read and understand all warnings, safety precautions, and instructions as outlined in the vehicle manufacturer's service manual. It is beyond the scope of this manual to properly describe the correct procedure and test data for each vehicle.
22. Always perform vehicle service in a properly ventilated area. Never run an engine without proper ventilation for its exhaust. Stop work and take necessary steps to improve ventilation in the work area if you develop momentary eye, nose, or throat irritation as this indicates inadequate ventilation.
23. Engine parts that are in motion and unexpected movement of a vehicle can injure or kill. When working near moving engine parts, wear snug fit clothing and keep hands and fingers away from moving parts. Keep hoses and tools clear of moving parts. Always stay clear of moving engine parts. Hoses and tools can be thrown through the air if not kept clear of moving engine parts.
24. The unexpected movement of a vehicle can injure or kill. When working on vehicles always set the parking brake and chock the wheels.



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25. Avoid accidental fire and/or explosion. Do not smoke near engine fuel and battery components.
26. The warnings, precautions, and instructions discussed in this manual cannot cover all possible conditions and situations that may occur. The operator must understand that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.
27. For safety purposes and the prevention of damage to expensive components it is advised that the user have an understanding of basic automotive repair and a working knowledge of automotive systems.
28. We believe the information contained herein to be reliable. However, general technical information is given by us without charge and the user shall employ such information at their own discretion and risk. We assume no responsibility for results or damages incurred from the use of such information in whole or in part. Always refer to specific instructions and technical information supplied by vehicle manufacturer.
29. The manufacturer declines any and all responsibility for damage to vehicles or components if said damage is the result of unskillful handling by the operator or of failure to observe the basic safety rules set forth in the instruction manual.
30. This equipment is intended only for professional use by personnel trained in performing the service functions for which it is has been designed.
31. This equipment is designed for servicing a variety of vehicles in a safe, convenient manner. However, differences in vehicle makes and models may make it impossible to use this equipment as it is intended. Do not attempt to force the use of this equipment on an application for which it is not designed to perform.
32. The procedures documented in this manual are to serve as guidelines for the use of this equipment.
33. In addition to these guidelines, always follow the manufacturer's recommended procedures when servicing each unique vehicle.
34. The use of this equipment is simple and straightforward if you follow the instructions. When operating this equipment, use common sense, and always stop to think before using this tool.

DISPOSAL

At the end of the useful life of the Video Borescope, dispose of the components according to all state, federal and local regulations.

PURPOSE

The OEMTOOLS® Video Borescope is an ideal tool for inspecting difficult-to-reach areas normally hidden from sight. This ergonomic Video Borescope features a 2.4" full color LCD screen, auto focus and viewing capacity as close as 1" with crystal clear output. The multipurpose Video Borescope is suitable for internal inspection of cylinder bores and vehicle compartments/components. Ideal for the inspection of engines, machinery, buildings and infrastructure.

PRODUCT SPECIFICATIONS

Display:	2.4" TFT LCD 320 x 240 Pixels
Interface:	AV Out
Imager Head Diameter:	9 mm
Imager Head Cable Length:	1 Meter
Frame Rate:	-30 FPS
Field of View (FOV):	57 Degree
Depth of Field (DOF):	3 cm - 7 cm
Light Source:	4 Adjustable LED
Power Supply:	4 AA Battery
Image Sensor:	1/6" VGA Sensor
Resolution (Dynamic/Static):	640 (H) x 480 (V)
Waterproof Rating:	IP 67
TV Out:	NTSC and PAL
Useful Tools:	Magnet, Mirror and Hook



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Figure	Description	Use
1	LCD Screen	
2	Power Button	Use to turn on/off the Video Borescope. Press and hold 3 seconds to start
3	LEFT/ Dimming Button	Use to decrease LED brightness
4	RIGHT/ Brightening Button	Use to increase LED brightness
5	Picture Rotation	Use to rotate the real-time image

NOTE

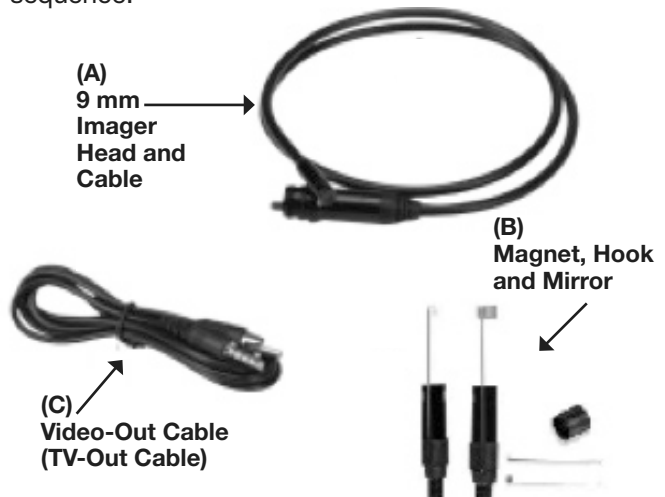
Not all components of the Video Borescope are replacement items, but are illustrated as a convenient reference for location and position in the assembly sequence.



Figure	Description	Quantity
A	9 mm Imager Head and Cable	1
B	Magnet, Hook and Mirror	1
C	Video-Out Cable (TV-Out Cable)	1
D	Carrying Case (Not Shown)	1
E	Manual (Not Shown)	1

NOTE

Not all components of the Video Borescope are replacement items, but are illustrated as a convenient reference for location and position in the assembly sequence.



⚠ WARNING

Always wear safety glasses and gloves.

OPERATING INSTRUCTIONS

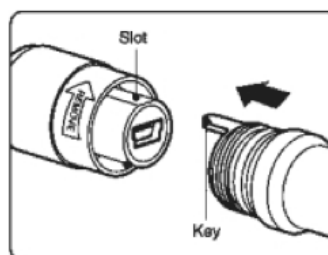
- Never insert probe into a space known or suspected to contain live electric wiring.
- The Video Borescope is intended for industrial applications only. DO NOT use it for personal or medical use in any way.
- Never insert an attached probe into any flammable gas or liquid including in any storage container or fuel tank designed to store flammable gas or liquid.
- DO NOT** disassemble the instrument. Doing so creates a potentially fatal electrical hazard (and voids the warranty as well).
- DO NOT** expose the tool to rain or wet conditions. Water entering the tool will increase the risk of electric shock.

- Keep cord away from heat, oil, sharp edges or moving parts.

⚠ WARNING

SETUP AND CONNECTION

To use the Video Borescope, the imager head and cable must be connected to the display unit. To connect the cable of the display unit, align the key and slot, slide them together, and finger-tighten the knurled knob to hold the connection firmly in place.





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ACCESSORIES INSTALLATION

The three accessories include magnet, hook and mirror. All are attached to the imager head in the same manner. Hold the accessory and the imager head and slip the end of the accessory over the tip of the imager head.

Video-Out (TV-out) Cable Connection

Insert the video-out cable into the video-out port of the Video Borescope and the other end of the cable into the video-in port of a TV, the LCD screen will output a high quality real-time image.

Basic Operation

IMPORTANT: Always wear safety eye protection to protect your eyes against dirt and other objects. Follow operation instructions to reduce the risk of injury from electric shock, entanglement and other causes.

FOR WALLS:

For inspecting the inside walls, be sure to shut off the circuit breaker to the whole house before using the Video Borescope.

FOR PIPES:

If you suspect a metal pipe could contain an electric charge, have a qualified electrician to check the pipe before using.

FOR AUTOMOBILES:

Be sure the automobile is not running during inspection. Metal and liquid under the hood may be hot. Don't get oil or gas on the imager head.

Set up the Video Borescope and work area according to these procedures to reduce the risk of injury from electric shock, entanglement, and other causes and prevent Video Borescope damage.

1. Check work area for:

- a. Sufficient lighting.
- b. **DO NOT** work in area until flammable sources have been identified and corrected. The Video Borescope is not explosion proof and can cause sparks.
- c. **DO NOT** use the Video Borescope while standing in water.

2. Check the area and determine if the Video Borescope is the correct Video Borescope for the job.

- a. Check the access points to the area.
- b. Check if there is any electric power supplied to the area to be inspected.
- c. Check if the any liquids will be occurred during the inspection. The Image head and cable were waterproof to a depth of 10'. Greater depths may

cause leakage into the imager head and cable and cause electric shock or damage the Video Borescope. The display unit is not waterproof and should not be exposed to wet conditions.

- d. Check if any chemicals are present, especially in the case of drains. Chemicals may damage the Video Borescope.
- e. Check the temperature of the area. The working temperature of the Video Borescope is between 32°F and 113°F.
- f. Check if any moving parts are present in the area.

3. Make sure the Video Borescope has been properly inspected.

4. Install the correct accessories for use in the appropriate application.

NOTE: When in operation, the cable can be bent into a certain shape. **(DO NOT kink the cable)** This may help you operate the cable in confined areas.

1. Hold the Video Borescope with LCD screen facing you and press Power button to turn it on. Wait for two seconds, the first screen – a splash screen is booting up, and then the live screen will display.
2. Press LEFT and RIGHT arrow buttons to decrease or increase screen backlighting. You will see a brightness indicator bar as you adjust LED light intensity.
3. Press Picture Rotation button to rotate the real-time image.
4. Use the supplied accessories as required.
5. Connect the supplied video-out (TV-out) cable to the video-out port of the Video Borescope and the other end of the cable to the video-in port of a TV to view a high quality real-time image.

Operating Precautions

1. Use the Video Borescope only as directed. Do not operate the Video Borescope unless the user's manual has been read thoroughly and proper training has been completed.
2. The display unit is not waterproof. The imager head and cable are waterproof, but not acid-proof or fireproof. Avoid submerging the imager head and cable into corrosive, oily places and be sure to keep the imager head and cable away from high temperature objects.
3. **DO NOT** immerse the Video Borescope and display unit in water.
4. **DO NOT** use excessive force to insert or withdraw the imager head and cable. This may result in damage to the Video Borescope or inspection area.



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5. **DO NOT** use the imager head and cable to move items, clear pathways or clogged areas.
6. **DO NOT** eat or smoke while operating the Video Borescope. Use hot, soapy water to wash hands and other body parts exposed to drain contents after using the Video Borescope to inspect drains and other areas that may contain chemicals or bacteria, which will help prevent contamination with toxic or infectious material.
7. When the inspection is completed, carefully withdraw the imager head and cable from the inspection area, and take out the 4 AA dry batteries.
8. Maintain the Video Borescope with care. A properly maintained Video Borescope is less likely to cause injury.
9. **DO NOT** drop the Video Borescope. If the Video Borescope is dropped accidentally, check for damage and any other condition that may affect its operation.
10. Dry your hands before operating the Video Borescope.
11. Use appropriate personal protective equipment while handling and using the Video Borescope. Appropriate personal protective equipment always includes safety glasses and gloves, and may include latex or rubber gloves, face shields, goggles, protective clothing, respirators and steel toed footwear.
12. Protect against excessive heat. Keep the Video Borescope away from heat sources such as radiators, stoves or others that produce heat. Do not use the Video Borescope near moving machinery or areas where the temperature will exceed 113°F.
13. Store the Video Borescope and all cables in a locked area out of the reach of children and people unfamiliar with Video Borescope.
4. Inspect the full length of the cable for cracks or damage. A damaged cable could allow water to enter the Video Borescope and increase the risk of electric shock.
5. Make sure the connections between the display unit and imager head and cable are tight. All connections must be properly assembled for the cable to be waterproof.
6. Check if the warning label is present, firmly attached and readable. Do not operate the Video Borescope without the caution label.
7. Turn on the power and make sure the splash screen and then the live screen are displayed.
8. If the Video Borescope does not work properly after being turned on, please have the Video Borescope checked by a qualified technician. Any Video Borescope that cannot be controlled with the power button is dangerous and must be repaired.
9. Always store the Video Borescope in a well-protected area where it will not be exposed to inclement weather, corrosive vapors, abrasive dust, or any other harmful elements.
10. When maintaining, use only identical replacement parts. Use of unauthorized parts or failure to follow maintenance instructions may create a risk of electric shock or injury.
11. **DO NOT** use acetone to clean the Video Borescope. Instead, use an alcohol swab. Avoid rubbing too hard on the LCD screen. After using, wipe the display unit clean gently with a dry cloth.
12. **DO NOT** disassemble the tool beyond what is shown in the manual. Doing so will void your warranty.

MAINTENANCE

1. Make sure the power is OFF.
2. Clean any oil, grease or dirt from the Video Borescope, especially on the buttons and ports. This helps prevent the Video Borescope from slipping from your hands.
3. Inspect the imager head lens for condensation. To avoid damaging the Video Borescope, do not use the Video Borescope if condensation forms inside the imager head. Let the water evaporate before using again.

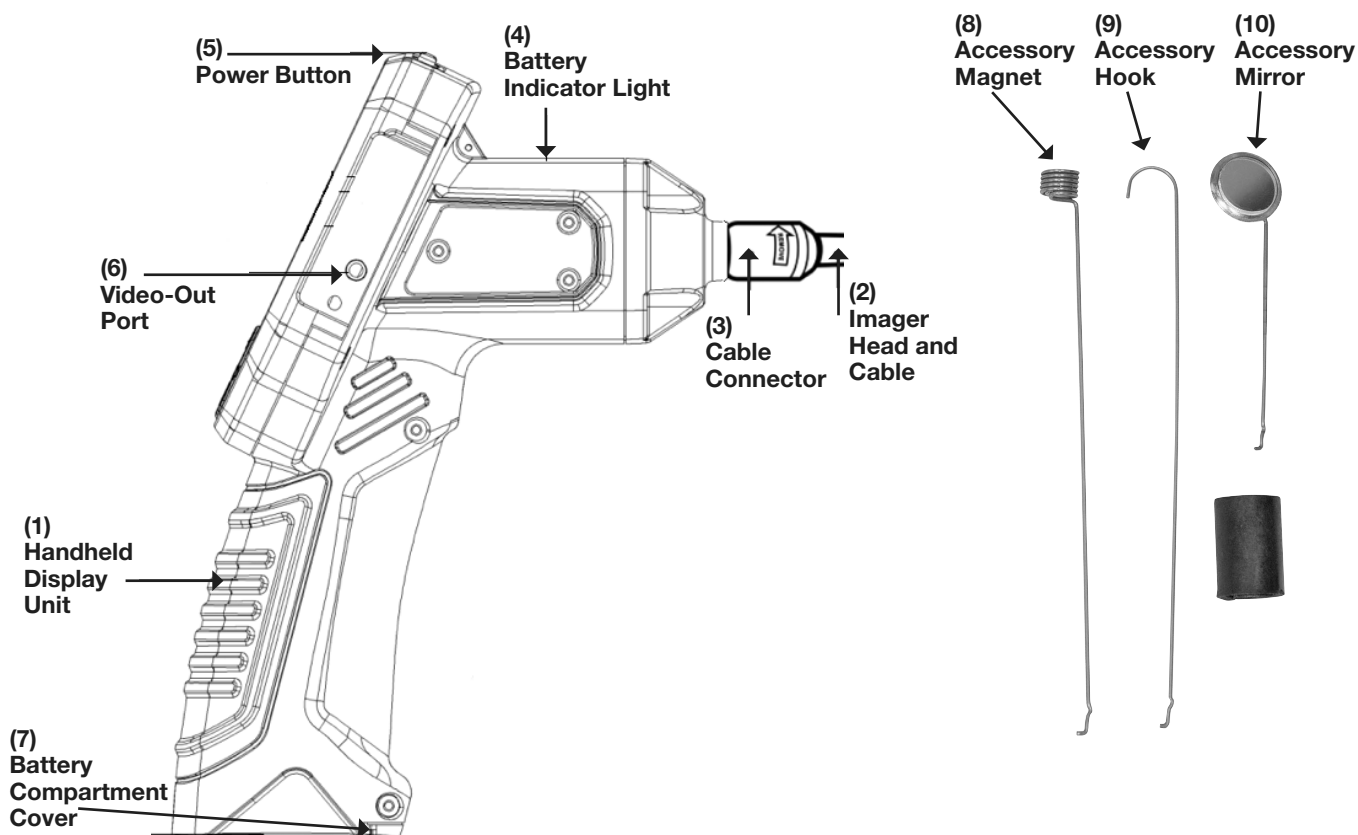


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Figure	Description	Use
1	Handheld Display Unit	Comfortable pistol grip design
2	Imager Head and Cable	Connects to the Video Borescope while in use to view images
3	Cable Connector	Connects the handheld display unit to the Imager Head and Cable
4	Battery Indicator Light	Turns red when battery needs to be replaced
5	Power Button	Turns the Video Borescope on/off
6	Video-Out Port	Connects the Video Borescope to a TV with the supplied Video-Out Cable to view the real-time image
7	Battery Compartment Cover	Protects batteries from dust and debris
8	Accessory Magnet	Picks up small metal objects such as dropped rings or screws on the floor
9	Accessory Hook	Unclogs obstacles and picks up wires in the pipes or confined areas
10	Accessory Mirror	Use to look around corners

NOTE

Not all components of the Video Borescope are replacement items, but are illustrated as a convenient reference for location and position in the assembly sequence.





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OEMTOOLS® ONE YEAR WARRANTY

If for up to one year from the date of purchase of this OEMTOOLS® product you find any defect in material or workmanship, through normal usage, return it to the place of purchase, or to OEMTOOLS® for repair or replacement at our discretion. In order to obtain this service, send your tool and proof of purchase, transportation pre-paid, to OEMTOOLS® Q.A. Dept, 3580 E. Raines Road #3, Memphis, TN 38118. We will not be responsible for lost or damaged goods during transportation; please insure your package. If our inspection verifies the defect, we will either repair or replace the product at our election, or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

OEMTOOLS® does not provide warranty for products labeled other than OEM® or OEMTOOLS®. OEMTOOLS® will not provide any warranty for products subjected to abnormal use. Abnormal use includes, but is not limited to, abuse, accident, alteration, neglect, and unauthorized or unreasonable use or repairs. This warranty does not cover bits, blades, files, batteries, or calibration. We recommend that you maintain your tools and sharpen or replace blades, bits, files, and batteries as necessary. OEMTOOLS® reserves the right to make any changes in construction or design at any time without any obligation in incorporating such changes to tools or equipment previously sold.

OEMTOOLS® makes every effort to ensure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of one year from the date of purchase. This warranty does not apply to damage due directly or indirectly to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear or to lack of maintenance.

We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

Don't forget to register your new OEMTOOLS® product at www.oem-tools.com.

CONTACT US

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