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DURATECH DTMTSS497

DURATECH 497-Piece Mechanics Tool Set User Manual

Model: DTMTSS497

INTRODUCTION

This manual provides essential information for the safe and effective use, maintenance, and care of your DURATECH 497-Piece Mechanics Tool Set. Please read this manual thoroughly before using the tools to ensure optimal performance and longevity.

PRODUCT OVERVIEW

The DURATECH 497-Piece Mechanics Tool Set is a comprehensive collection designed for various mechanical and automotive repair tasks. It features high-quality, heat-treated chrome steel components for durability and corrosion resistance. The set is organized within a sturdy 3-drawer toolbox for easy identification and storage.

Key Features:

- **High-Quality Material:** Tools are crafted from high-quality steel with a heat-treated chrome finish, ensuring durability and resistance to corrosion.
- **Complete Varieties:** Includes a wide assortment of basic tools, such as 1/4 in., 3/8 in., and 1/2 in. 90-tooth ratchets, various drive sockets, bit sockets, drive extensions, a magnetic handle, spark plugs, and 101 additional tools.
- **Efficient Ratchet:** 90-tooth full polish chrome ratchets feature a slim head design for access to hard-to-reach fasteners and a quick-release button for easy socket removal.
- **Multi-purpose Tools Kit:** The 497-piece set includes stamped markings for quick identification of metric and SAE socket sizes, making it suitable for a wide range of machine repair needs.
- **Storage Toolbox Included:** Comes with a sturdy 3-drawer toolbox with size markings for organization, and robust interiors to keep all tools securely in place.

Components Included:

The set includes a vast array of tools, categorized by drive size and type:

- **1/2-inch Drive Tools:** 90-Tooth quick release ratchet handle, 7 x 12 pt inch sockets (1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8-in.), 9 x 12 pt metric sockets (9, 10, 11, 12, 13, 14, 15, 16, 17-mm), 1 x Spark plug inch socket (5/8-in.), 1 x 3-inch extension bar, 1 x Adapter (1/2 inch F x 3/8 inch M).
- **3/8-inch Drive Tools:** 90-Tooth quick release ratchet handle, 13 x 6 pt inch sockets, 17 x 6 pt metric sockets, 13 x 12 pt inch sockets, 15 x 12 pt metric sockets, 5 x 8 pt inch sockets, 11 x 6 pt inch deep sockets, 8 x 6 pt metric deep sockets, 15 x Bit sockets (Star T27, T30, T40, T45 (2), T47, T50, Hex 1/4 (2), 5/16, 3/8, 5/32, 3/16-in., Hex 4, 5-mm), 4 x External sockets

- (10, 12, 14, 16-mm), 3 x Extension bars (1-1/2, 3, 6-inch), 2 x Adapters (3/8 inch F x 1/4 inch M, 3/8 inch F x 1/2 inch M), 2 x Spark plug inch sockets (5/8, 3/4-in.), 1 x Spark plug metric socket (18mm), 1 x 1/4in. flexible extension bar.
- **1/4-inch Drive Tools:** 11 x 6 pt inch sockets, 12 x 6 pt metric sockets, 10 x 12 pt inch sockets, 10 x 6 pt inch deep sockets, 11 x 6 pt metric deep sockets, 16 x Bit sockets (Star T8 (3), T10 (3), T15, T20, T25, T27, T30 (2), Hex 3/16 (2), 7/32 (2)-in.), 3 x Adapters (1/4 inch F x 3/8 inch M adapter, 1/4 inch drive hex shank socket adapter, 1/4-inch square drive to 1/4-inch hex bit adapter), 1 x Magnetic handle, 1 x Spinner handle.
 - **Other Tools:** 5 x 12 pt inch combination wrenches (5/16, 3/8, 7/16, 1/2, 9/16-in.), 7 x 12 pt metric combination wrenches (11, 12, 13, 14, 15, 16, 17-mm), 175 x Screwdriver bits, 12 x Nut driver bits, 47 x Hex keys, 42 x 4.6 x 200mm Cable ties.



Figure 1: Complete DURATECH 497-Piece Mechanics Tool Set components.

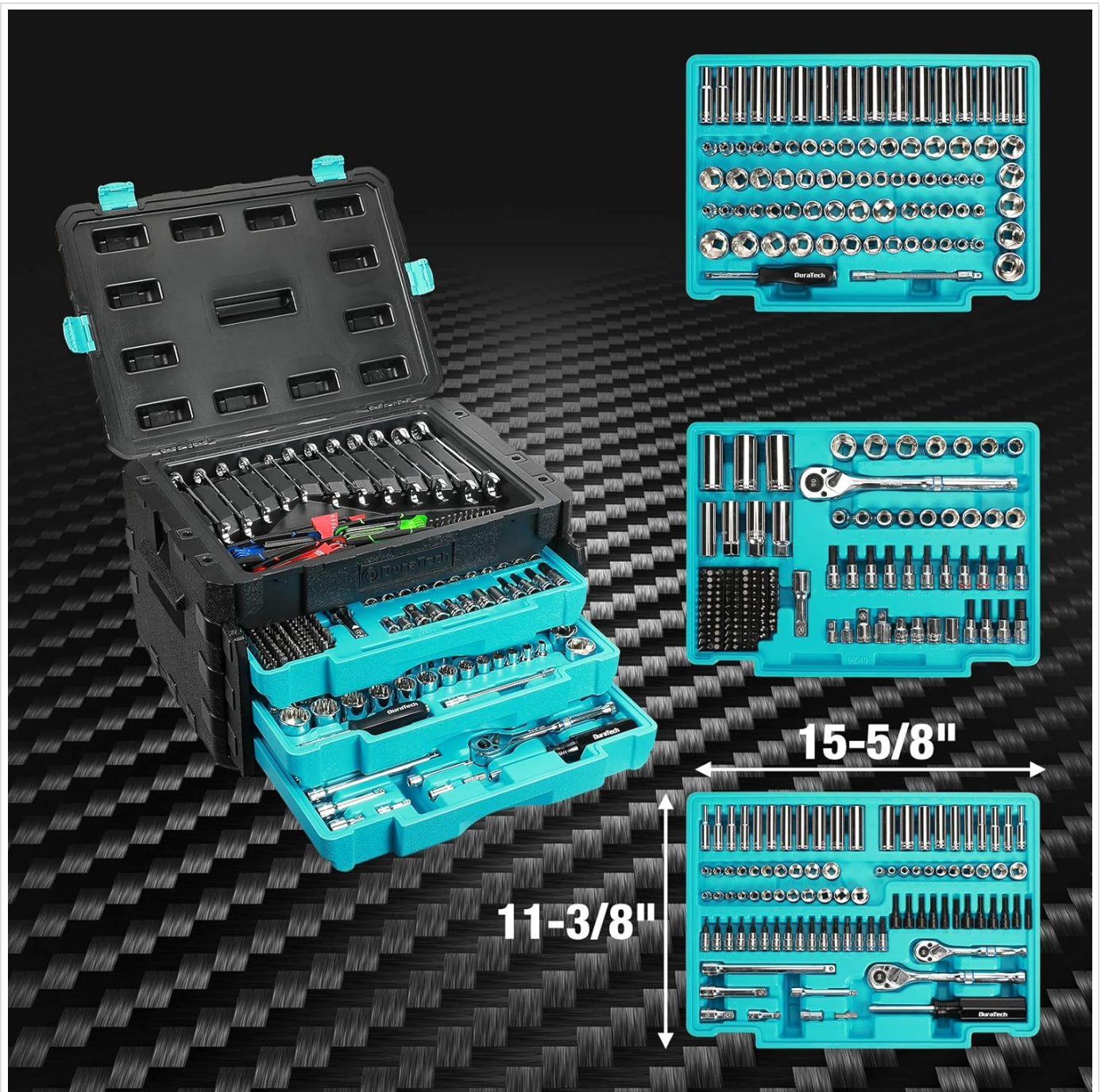


Figure 2: The 3-drawer toolbox with internal trays and approximate dimensions.



Socket Sets / Drive Bits

3/8" sockets		
6 pt inch sockets	13PC	1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16, 1-in.
6 pt metric sockets	17PC	6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22-mm
12 pt inch sockets	13PC	1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16, 1-in.
12 pt metric sockets	15PC	6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 21-mm
8 pt inch sockets	5PC	1/4, 5/16, 3/8, 7/16, 1/2-in.
6 pt inch deep sockets	11PC	3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16, 1-in.
6 pt metric deep sockets	8PC	12, 13, 14, 15, 16, 17, 18, 19-mm
Spark plug inch sockets	2PC	5/8, 3/4-in.
Spark plug metric sockets	1PC	18mm
Bit sockets	15PC	Star T27, T30, T40, T45 (2), T47, T50 Hex 1/4 (2), 5/16, 3/8, 5/32, 3/16-in. 4, 5-mm

Figure 3: Detailed list of 3/8-inch drive sockets and bit sockets.



Socket Sets / Drive Bits

1/4" sockets		
6 pt inch sockets	11PC	5/32, 3/16, 7/32, 1/4, 9/32, 5/16, 11/32, 3/8, 7/16, 1/2, 9/16-in.
6 pt metric sockets	12PC	4, 5, 5.5, 6, 7, 8, 9, 10, 11, 12, 13, 14-mm
12 pt inch sockets	10PC	3/16, 7/32, 1/4, 9/32, 5/16, 11/32, 3/8, 7/16, 1/2, 9/16-in.
6 pt inch deep sockets	10PC	3/16, 7/32, 1/4, 9/32, 5/16, 11/32, 3/8, 7/16, 1/2, 9/16-in.
6 pt metric deep sockets	11PC	4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14-mm
Bit sockets	16PC	Star T8(3), T10(3), T15, T20, T25, T27, T30(2) Hex 3/16, 3/16, 7/32, 7/32-in.
1/2" sockets		
12 pt inch sockets(SAE)	7PC	1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8-in.
12 pt inch sockets(metric)	9PC	9, 10, 11, 12, 13, 14, 15, 16, 17-mm
Spark plug inch sockets	1PC	3 inch
Adapter	1PC	1/2 inch F × 3/8 inch M

Figure 4: Detailed list of 1/4-inch and 1/2-inch drive sockets.

Metric Combination Wrenches



Figure 5: Examples of metric combination wrenches.

Inch Combination Wrenches

5/16" 5/16 DuraTech 5/16 **5/16"**

3/8" 3/8 DuraTech 3/8 **3/8"**

7/16" 7/16 DuraTech 7/16 **7/16"**

1/2" 1/2 DuraTech 1/2 **1/2"**

9/16" 9/16 DuraTech 9/16 **9/16"**

Figure 6: Examples of inch combination wrenches.

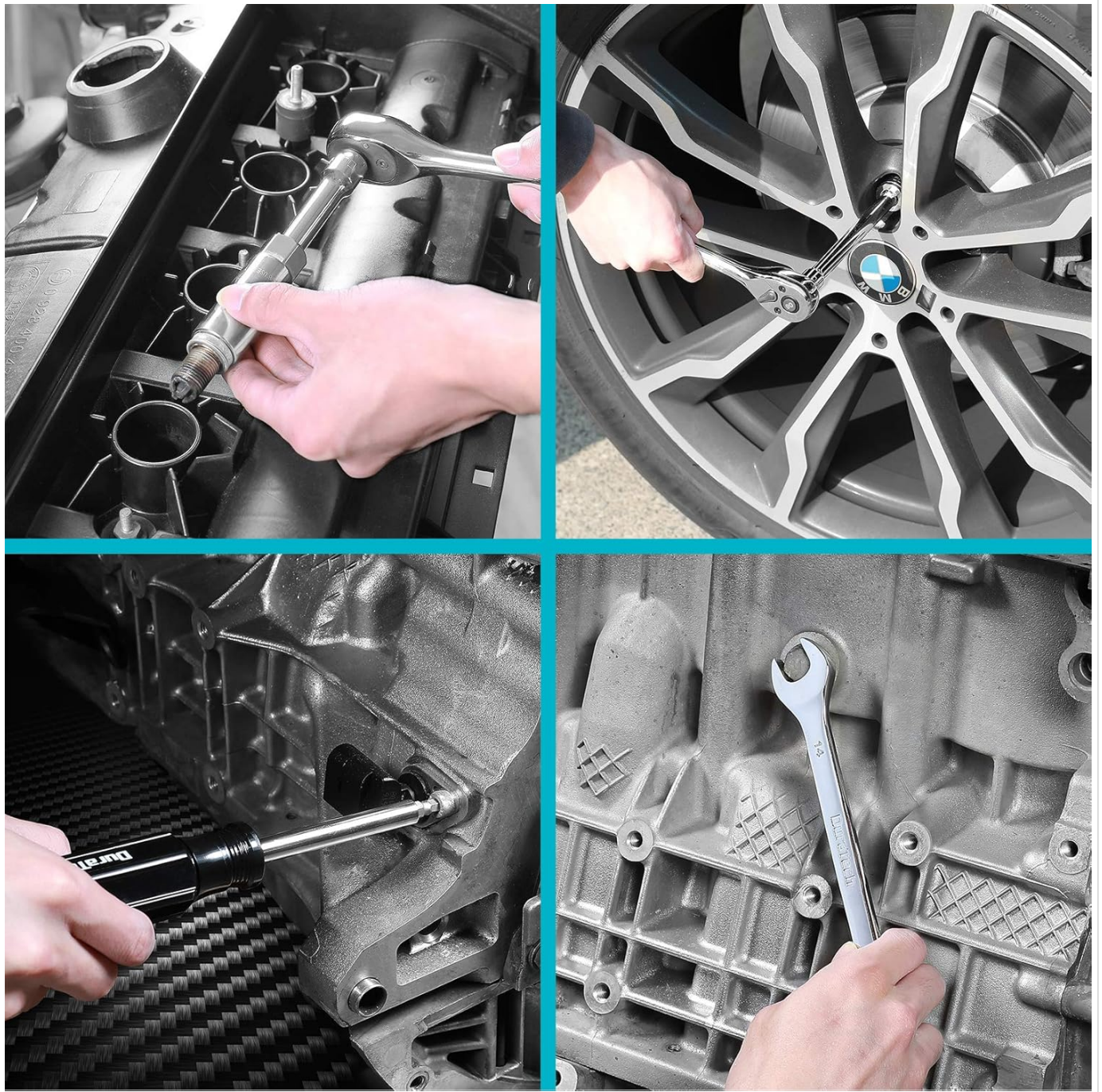


Figure 7: Examples of tool applications.

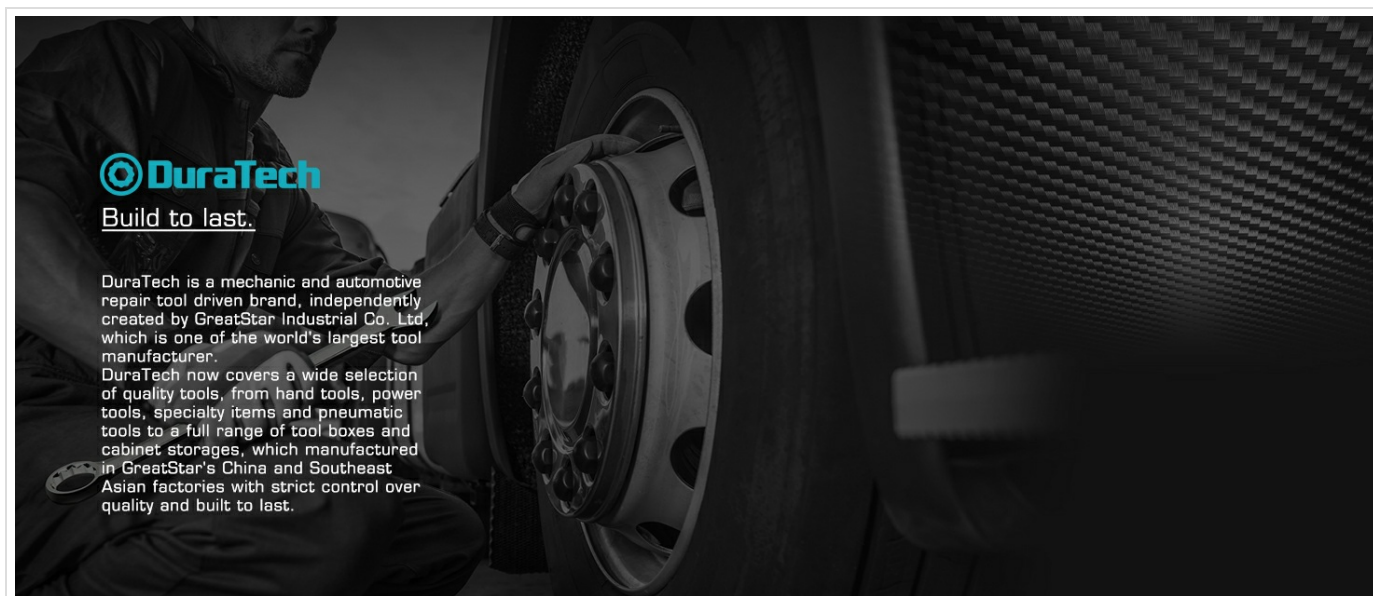


Figure 8: DURATECH brand philosophy.

SETUP

Your DURATECH 497-Piece Mechanics Tool Set comes pre-organized in a durable 3-drawer toolbox. No assembly is required for the tools themselves. Upon receiving the set:

1. **Unpack:** Carefully remove the toolbox from its packaging.
2. **Inspect:** Open the toolbox and inspect all tools for any signs of damage during transit. Verify that all listed components are present.
3. **Familiarize:** Take a moment to familiarize yourself with the layout of the tools within the drawers. The stamped markings on the case and tools will help in quick identification of sizes.
4. **Storage:** Store the toolbox in a dry, secure location away from extreme temperatures and moisture to prevent corrosion and damage.

OPERATING INSTRUCTIONS

This tool set is designed for a wide range of mechanical tasks. Always select the correct tool for the job to ensure safety and prevent damage to the tool or workpiece.

General Tool Usage Guidelines:

- **Safety First:** Always wear appropriate personal protective equipment (PPE), such as safety glasses and gloves, when working with tools.
- **Right Tool for the Job:** Use the correct size and type of socket, wrench, or bit for the fastener. Using an incorrect size can strip the fastener or damage the tool.
- **Secure Grip:** Ensure a firm and secure grip on all tools to prevent slipping and injury.
- **Avoid Over-tightening:** Do not over-tighten fasteners, as this can lead to damage. Refer to manufacturer specifications for torque requirements where applicable.
- **Clean Work Area:** Keep your work area clean and well-lit to prevent accidents.

Using Ratchets and Sockets:

1. **Select Socket:** Choose the correct SAE or Metric socket size to fit the fastener snugly.
2. **Attach to Ratchet:** Press the quick-release button on the ratchet head, insert the socket onto the square drive, and release the button to secure.

- 3. **Direction:** Use the directional switch on the ratchet head to select tightening (clockwise) or loosening (counter-clockwise).
- 4. **Apply Force:** Apply steady, controlled force to turn the fastener. Avoid sudden jerks.
- 5. **Extensions:** Use extension bars for reaching fasteners in confined spaces.

Using Combination Wrenches:

- Select the appropriate size wrench (open-end or box-end) for the fastener.
- Ensure the wrench is fully seated on the fastener to prevent slipping.
- Apply force in a manner that pulls the wrench towards you, rather than pushing, to reduce the risk of injury if it slips.

Using Screwdriver Bits and Magnetic Handle:

- Select the correct screwdriver bit (Phillips, Flathead, Torx, Hex, etc.) for the screw head.
- Insert the bit into the magnetic handle. The magnetic feature helps hold the bit and screw in place.
- Apply downward pressure while turning to prevent cam-out and damage to the screw head.

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Video 1: An overview of the DURATECH 497PC Mechanics Tool Kit, showcasing its manufacturing process and various components. This video provides a visual demonstration of the quality and variety of tools included in the set.

MAINTENANCE

Proper maintenance will extend the life of your DURATECH tool set and ensure its continued performance.

- **Cleaning:** After each use, wipe down tools with a clean, dry cloth to remove dirt, grease, and moisture. For stubborn grime, a mild degreaser can be used, followed by thorough drying.
- **Lubrication:** Periodically apply a light coat of machine oil or rust preventative spray to moving parts of ratchets and other mechanisms to ensure smooth operation and prevent corrosion.
- **Storage:** Always return tools to their designated slots in the toolbox. This prevents loss, keeps them organized, and protects them from damage. Store the toolbox in a dry environment.
- **Inspection:** Regularly inspect tools for wear, damage, or corrosion. Replace any damaged tools immediately to ensure safety and effectiveness.

TROUBLESHOOTING

Most issues with hand tools can be resolved with proper care and usage. Here are some common scenarios:

Problem	Possible Cause	Solution
Ratchets slipping or not engaging.	Internal mechanism is dirty, worn, or lacks lubrication.	Clean the ratchet mechanism and apply a light lubricant. If wear is significant, replacement may be necessary.
Sockets or wrenches stripping fasteners.	Incorrect size used, tool not fully seated, or excessive force applied.	Ensure correct size tool is used and fully seated. Apply steady, controlled force. Replace worn fasteners.
Tools showing rust or corrosion.	Exposure to moisture or improper storage.	Clean off rust with a wire brush or rust remover, then apply rust preventative. Store tools in a dry environment.
Screwdriver bits wearing down quickly.	Using incorrect bit type, insufficient downward pressure, or low-quality screws.	Ensure correct bit type and size. Apply firm downward pressure. Consider using higher quality screws.


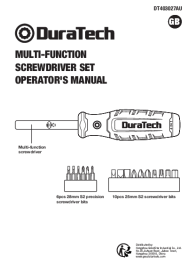
SPECIFICATIONS

Attribute	Detail
Brand	DURATECH
Model Number	DTMTSS497
Item Weight	45.1 pounds (20.5 Kilograms)
Product Dimensions	14.37 x 19.88 x 13.19 inches
Material	Alloy Steel, Plastic
Color	Chrome
Finish Type	Heat-treated Chrome
Head Style	Fixed Ratchet
Operation Mode	Mechanical
UPC	820909678304

WARRANTY AND SUPPORT

DURATECH stands behind the quality of its products. For specific warranty information regarding your 497-Piece Mechanics Tool Set, please refer to the warranty card included with your purchase or visit the official DURATECH website. For technical support, replacement parts, or any inquiries, please contact DURATECH customer service through their official channels. You can also visit the [DURATECH Store on Amazon](#) for more product information and support resources.

Related Documents - DTMTSS497

	<p>DuraTech DT701104AU 41-Piece Bike Servicing Tool Kit</p> <p>Comprehensive 41-piece bicycle repair tool kit from DuraTech (model DT701104AU) for essential bike maintenance and servicing, including specialized tools for various components and cleaning/maintenance guidelines.</p>
	<p>DuraTech DT403027AU Multi-Function Screwdriver Set Operator's Manual</p> <p>Operator's manual for the DuraTech DT403027AU multi-function screwdriver set, detailing how to use it as a T-handle or precision screwdriver. Includes 6 precision bits and 10 standard bits.</p>



[Duratech HS40 Heat Pump Manual](#)

Comprehensive manual for the Duratech HS40 heat pump, covering installation, operation, safety, and maintenance for innovative pool products.



[Duratech PL-REM-200 LINK Driver Manual](#)

This manual provides technical specifications, installation instructions, pairing procedures, functions, and troubleshooting for the Duratech PL-REM-200 LINK Driver.