

Orion Motor Tech RD06

Orion Motor Tech OMT 5-in-1 Front End Service Tool Kit Instruction Manual

Model: RD06 | Item Model Number: 8542039067

1. INTRODUCTION

This manual provides essential instructions for the safe and effective use, maintenance, and troubleshooting of your Orion Motor Tech OMT 5-in-1 Front End Service Tool Kit. This kit is designed for the removal of ball joints, tie rod ends, and pitman arms in various domestic and import vehicles. Please read this manual thoroughly before operating the tools.

2. SAFETY INFORMATION

Always prioritize safety when working with automotive tools. Failure to follow safety precautions can result in serious injury or damage to the vehicle.

- Wear appropriate personal protective equipment (PPE), including safety glasses, gloves, and sturdy footwear.
- Ensure the vehicle is securely supported on jack stands before beginning any work. Do not rely solely on a jack.
- Use the correct tool for the job. Do not modify tools or use them for purposes other than their intended design.
- Inspect tools for damage before each use. Do not use damaged tools.
- Keep work area clean and well-lit.
- Keep children and bystanders away from the work area.
- Apply penetrating oil to rusted or seized components before attempting removal.
- When separating tapered joints, leave the nut loosely threaded onto the stud to prevent the component from suddenly dropping or flying off.

3. KIT CONTENTS

Your Orion Motor Tech OMT 5-in-1 Front End Service Tool Kit includes the following components, neatly organized in a durable ABS case:

- 1x Ball Joint Separator
- 1x Tie Rod and Ball Joint Remover
- 1x Conical Pitman Arm Puller
- 1x Pitman Arm and Tie Rod End Puller
- 1x Pitman Arm Puller
- 1x Storage Case (Red Case Silver Puller)



Image: The complete 5-piece front end service tool kit, including a table detailing the jaw spread and throat depth for each tool.

Tool Dimensions Overview

Part	Jaw Spread	Throat Depth
Pitman Arm/Tie Rod End Puller	1-1/8"	2-1/8"
Pitman Arm Puller	1-11/32"	2-1/2"
Conical Pitman Arm Puller	3/4"	1-3/4"
Ball Joint Separator	7/8"	2-1/4"
Tie Rod and Ball Joint Remover	2-1/2"	3-1/4"

4. SETUP

Before using the tools, ensure you have identified the correct tool for the specific component you intend to remove. The tools are designed for specific applications as detailed below.



Image: The Orion Motor Tech 5-in-1 Front End Service Tool Kit stored in its red, custom-molded ABS case.

Familiarize yourself with each tool's function and adjustability. The forcing screws on each puller should be clean and lightly lubricated to ensure smooth operation and prevent galling.

5. OPERATING INSTRUCTIONS

These tools are designed to safely separate tapered joints without damaging the rubber boots or other components, unlike traditional hammering methods.

5.1. Ball Joint Separator

Use this tool to separate ball joints from the suspension system. Position the jaws of the separator around the ball joint stud and the component it's attached to. Tighten the forcing screw until the joint separates. Remember to leave the nut loosely attached to the stud during this process.

5-PIECE FRONT END SERVICE TOOL KIT



This Tool Set Includes

Part	Pitman Arm/Tie Rod End Puller	Pitman Arm Puller	Conical Pitman Arm Puller	Ball Joint Separator	Tie Rod and Ball Joint Remover
Jaw Spread	1-1/8"	1-11/32"	3/4"	7/8"	2-1/2"
Throat Depth	2-1/8"	2-1/2"	1-3/4"	2-1/4"	3-1/4"

Image: A Ball Joint Separator being used to remove a ball joint from a vehicle's suspension assembly.

5.2. Tie Rod and Ball Joint Remover

This tool is effective for removing both tie rod ends and certain ball joints. Its design allows for quick and efficient separation. Place the tool's jaws over the tie rod end or ball joint, ensuring a secure grip, then turn the forcing screw to apply pressure and release the joint.



BALL JOINT SEPARATOR

Easily Remove Ball Joints from the Suspension Systems without Damaging Parts

TIE ROD AND BALL JOINT REMOVER

Makes the Removal of Tie Rods and Ball Joints Quick and Efficient



PITMAN ARM PULLER

Efficient Pitman Arm Removal for Most Cars and Light Trucks with Minimal Effort

Image: A Tie Rod and Ball Joint Remover positioned to separate a component on a vehicle's steering linkage.

5.3. Pitman Arm Puller

Designed for efficient removal of pitman arms from steering gearboxes. Secure the puller's arms around the pitman arm, ensuring the forcing screw is aligned with the shaft. Gradually tighten the forcing screw to exert pressure and remove the arm.

UNIVERSAL COMPATIBILITY

Fits Most Cars and Light Trucks

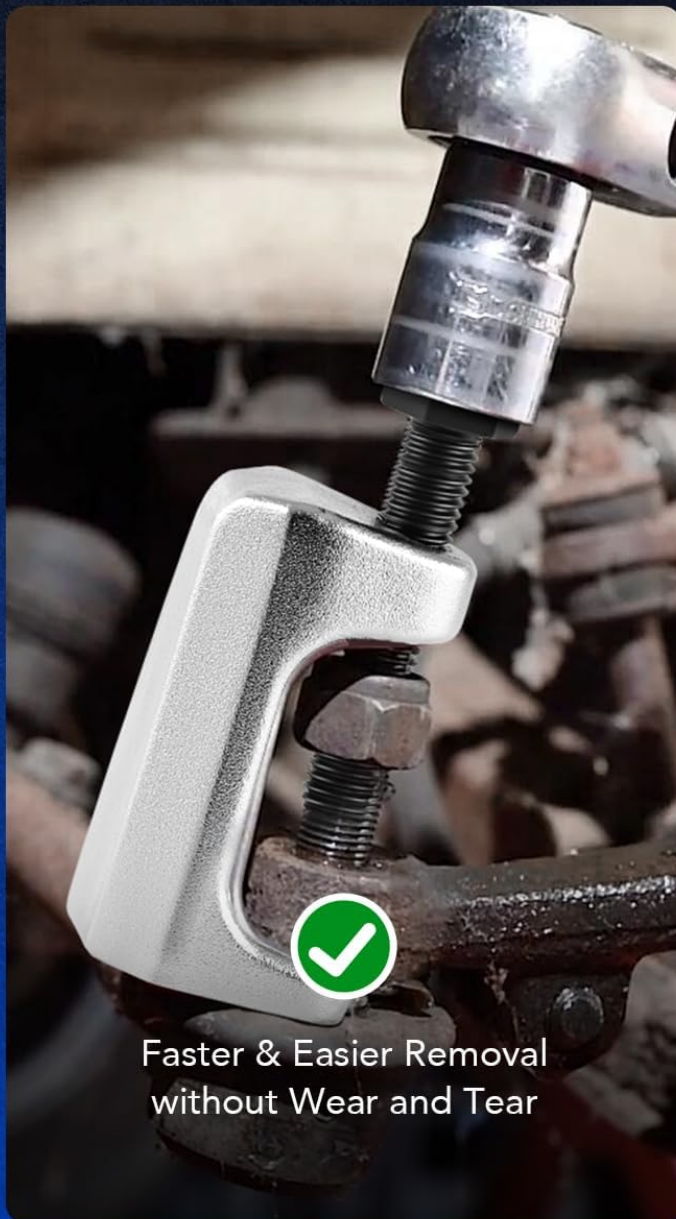


Image: A Pitman Arm Puller engaged with a pitman arm, ready for removal from the steering box.

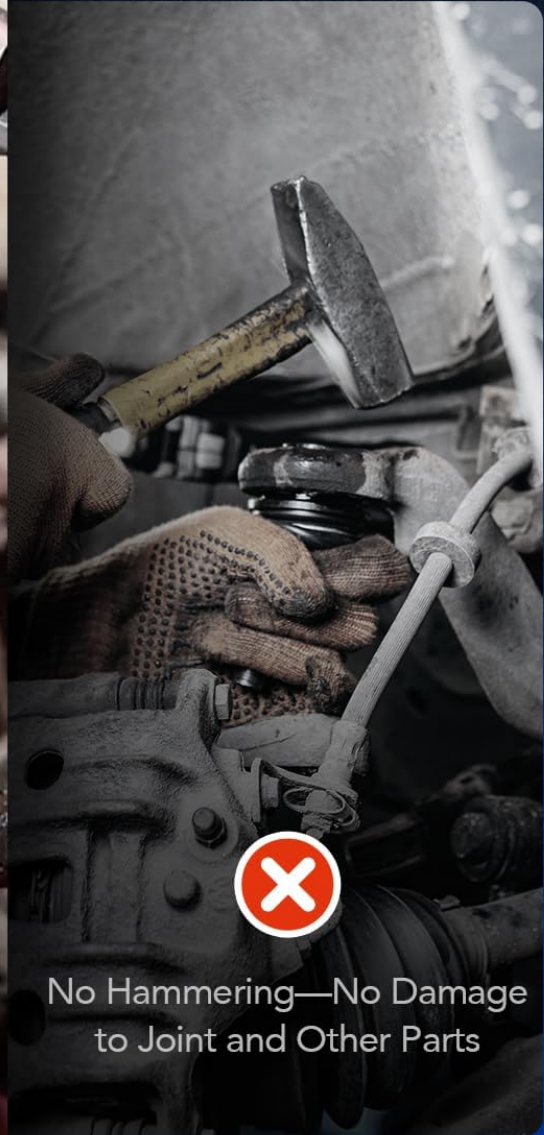
5.4. Conical Pitman Arm Puller

This puller features a conical design, suitable for specific pitman arm configurations. Its operation is similar to the standard pitman arm puller, focusing on applying direct, even pressure for removal.

DAMAGE-FREE OPERATION



Faster & Easier Removal
without Wear and Tear



No Hammering—No Damage
to Joint and Other Parts

Image: A Conical Pitman Arm Puller applied to a vehicle component, demonstrating its use.

5.5. Pitman Arm and Tie Rod End Puller (Universal)

This versatile tool can be used for both pitman arms and tie rod ends, offering broad compatibility. Its design allows for precise jaw movement and controlled separation.

BUILT TO ENDURE

Made with Forged Alloy Steel
to Handle Even the Toughest
Auto Repair Jobs




Heavy-Duty
Construction


High
Strength


Corrosion
Resistance

Image: A universal puller tool being used to separate a joint, highlighting the damage-free operation compared to hammering.

General Usage Tips:

- Always ensure the tool is properly seated and aligned before applying force.
- Tighten the forcing screw gradually and evenly. Avoid sudden, excessive force.
- For extremely stubborn joints, apply penetrating oil and allow it to soak before attempting removal.
- Do not use impact tools (e.g., impact wrenches) with these pullers unless explicitly stated in the tool's specific instructions, as this can damage the tool or component.

Instructional Video:

Video: Official Orion Motor Tech demonstration of the 5-in-1 Ball Joint Separator and Tie Rod End Remover Tool Kit in use.

6. MAINTENANCE

Proper maintenance will extend the life of your tools and ensure their reliable performance.

- **Cleaning:** After each use, clean all tools thoroughly to remove dirt, grease, and debris. Use a wire brush for stubborn grime and a clean cloth.
- **Lubrication:** Lightly lubricate the forcing screws and moving parts with general-purpose grease or oil to prevent rust and ensure smooth operation.
- **Storage:** Store the tools in their original custom-molded ABS case. This protects them from damage, corrosion, and keeps them organized. Store in a dry environment.
- **Inspection:** Regularly inspect tools for signs of wear, cracks, bends, or other damage. Replace any damaged components or tools immediately.

7. TROUBLESHOOTING

If you encounter difficulties while using the tool kit, consider the following common issues and solutions:

- **Joint Not Separating:**
 - Ensure the tool is correctly positioned and securely gripping the component.
 - Apply more penetrating oil to the joint and allow it to soak for an extended period.
 - Gradually increase pressure on the forcing screw. Avoid sudden, jerky movements.
 - Verify that the tool's capacity matches the size of the joint being worked on.
- **Tool Damage (e.g., bent screw, broken jaw):**
 - This can occur from excessive force, improper use (e.g., using impact tools), or attempting to remove extremely seized components beyond the tool's design limits.
 - Discontinue use of the damaged tool immediately.
 - Refer to the Warranty Information section for details on replacements or repairs.
- **Difficulty with Specific Vehicle Models:**
 - While the kit offers universal compatibility, some vehicle designs may require specialized tools or techniques. Consult a vehicle-specific repair manual if standard methods are ineffective.

8. SPECIFICATIONS

Attribute	Value
Manufacturer	Orion Motor Tech
Brand	Orion Motor Tech
Model	RD06 (Ball Joint Separator Kit)
Item Weight	10.54 pounds
Product Dimensions	15.35 x 3.15 x 12.2 inches
Item Model Number	8542039067
Manufacturer Part Number	PAP0006RD GWCA

Attribute	Value
Material	Hardened Alloy Steel
Case Material	ABS Plastic

9. WARRANTY INFORMATION

Orion Motor Tech provides a **1-year warranty** for this product in the US. This warranty covers defects in materials and workmanship under normal use. It does not cover damage resulting from misuse, abuse, modification, or improper maintenance.

If a tool component becomes damaged during normal operation within the warranty period, please contact Orion Motor Tech customer support for assistance. In some cases, a replacement kit may be provided.

10. CUSTOMER SUPPORT

For technical assistance, warranty claims, or inquiries regarding your Orion Motor Tech OMT 5-in-1 Front End Service Tool Kit, please contact Orion Motor Tech customer support through their official website or the retailer where the product was purchased.

When contacting support, please have your product model number (RD06) and item model number (8542039067) available for faster service.