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› Orion Motor Tech 5-in-1 Ball Joint Separator, Pitman Arm Puller, Tie Rod End Tool Set (BS06) Instruction Manual

Orion Motor Tech 0006-BS

Orion Motor Tech 5-in-1 Front End Service Tool Set (Model BS06)

Instruction Manual

1. PRODUCT OVERVIEW

The Orion Motor Tech 5-in-1 Front End Service Tool Set (Model BS06) is designed for efficient and damage-free removal of ball joints, tie rod ends, and pitman arms from a wide range of domestic and imported vehicles. This comprehensive kit provides the necessary tools for various front end suspension service tasks, ensuring durability and ease of use.



Image: The complete Orion Motor Tech 5-in-1 Front End Service Tool Set, including the carrying case and all five tools.

2. COMPONENTS INCLUDED

This kit includes five adjustable tools crafted from hardened alloy steel for strength and durability, along with a custom-molded ABS storage case.

- **Ball Joint Separator:** For separating ball joints from suspension systems without damage.
- **Tie Rod and Ball Joint Remover:** Facilitates quick and efficient removal of tie rods and ball joints.
- **Conical Pitman Arm Puller:** Designed for compact and intermediate cars, securely fits pitman arms.
- **Pitman Arm and Tie Rod End Puller:** Versatile tool for various removal tasks.
- **Pitman Arm Puller:** Efficient removal for most cars and light trucks.

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: Detailed view of the five tools with their specific dimensions for jaw spread and throat depth.

3. SAFETY INFORMATION

- Always wear appropriate personal protective equipment (PPE) suitable for the task, including safety glasses, gloves, and sturdy footwear.
- Ensure the vehicle is in a stationary state, engine cooled, and properly supported before beginning any operation.
- Do not use these tools if under the influence of alcohol, drugs, or any medication that negatively affects your judgment or reflexes.
- Keep your work area clean, well-lit, and free from clutter.

- Do not apply excessive force. Avoid hammering directly on the tool unless specifically instructed, as it may cause damage to the tool, vehicle, or personal injury.
- Ensure there is enough space around the ball joint for using the tool without damaging nearby components.

4. OPERATING INSTRUCTIONS

This section provides general guidance for using the tools. Always refer to your vehicle's service manual for specific procedures.

4.1. Ball Joint Separation

1. Identify the ball joint you intend to separate. Ball joints are typically located in the front suspension of the vehicle, connecting the control arm to the steering knuckle.
2. Loosen but do not remove the nut securing the ball joint.
3. Position the Ball Joint Separator tool so its jaws straddle the ball joint stud and the steering knuckle or control arm. Ensure the tool is properly centered.
4. Tighten the tool's screw to apply pressure. Continue tightening until the ball joint separates from its mounting point.
5. Once separated, remove the tool and the nut, then detach the component.



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: Visual demonstration of the Ball Joint Separator, Tie Rod and Ball Joint Remover, and Pitman Arm Puller in action.

4.2. Tie Rod End Removal

1. Identify the tie rod end you wish to remove.
2. Loosen but do not fully remove the nut securing the tie rod end.
3. Place the Tie Rod and Ball Joint Remover tool around the tie rod end, ensuring a secure grip.
4. Tighten the tool's screw until the tie rod end separates.
5. Remove the tool and the nut, then detach the tie rod end.

4.3. Pitman Arm Pulling

1. Identify the pitman arm to be removed.
2. Loosen but do not fully remove the nut securing the pitman arm.
3. Select the appropriate Pitman Arm Puller (Conical or standard) for the application.
4. Position the puller jaws around the pitman arm, ensuring a firm and even grip.
5. Tighten the puller's screw to apply steady pressure until the pitman arm is released.
6. Remove the tool and the nut, then detach the pitman arm.

4.4. General Usage Tips

- Always ensure the tool is properly aligned and seated before applying force.
- For stubborn components, apply penetrating oil and allow it to soak before attempting removal.
- Use moderate, steady force. Excessive force can damage components or the tool.

Your browser does not support the video tag.

Video: Demonstration of the Ball Joint Separator, Pitman Arm Puller, and Tie Rod End Tool Set in use.

Your browser does not support the video tag.

Video: Another demonstration of the Ball Joint Separator, Pitman Arm Puller, and Tie Rod End Tool Set in action.

5. MAINTENANCE

- Clean the tools with a soft cloth damp with water or a mild cleaning solution after each use. Avoid abrasive cleaners or caustic chemicals.
- For best results, lubricate the tool's threaded components with high-quality anti-corrosion grease periodically.
- Check the tools periodically for any wear or damage. Replace or repair damaged parts before further use.
- Store the tools in their custom-molded ABS case in a cool, dry location away from direct sunlight and moisture.

6. TROUBLESHOOTING

If the tools are not performing as expected, ensure they are correctly assembled and applied to the component. Verify that the component is not seized beyond the tool's capacity. For extremely stubborn components, additional penetrating oil and patience may be required. If issues persist, contact customer support.

7. SPECIFICATIONS

The tools in this kit are constructed from hardened alloy steel for durability and resistance to corrosion.

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"

Part	Jaw Spread	Throat Depth
Ball Joint Separator	7/8"	2-1/4"
Tie Rod and Ball Joint Remover	2-1/2"	3-1/4"

Item Weight: 10.52 pounds

Package Dimensions: 12.95 x 11.3 x 3.46 inches

Model Number: 0006-BS

8. WARRANTY AND SUPPORT

Orion Motor Tech stands behind the quality of its tools. If any issues arise with your tool set, please do not hesitate to contact Orion Motor Tech customer support. We are committed to ensuring you receive the best quality products and service.

For assistance, please visit the [Orion Motor Tech Store](#) or contact their customer service directly.