

Camshaft Locking Set User Manual



Read Carefully Before Use
Keep for Future Reference

Safety Information

Warning!

- The instructions provided herein are only for general information. ALWAYS perform all repairs in full compliance with your vehicle's service manual. After any repair, test your engine and vehicle in your workshop and at low speed before returning to normal use. Failure to do so may result in serious property damage and severe personal injury.
- **DO NOT** allow children or those unfamiliar with this product and its compatible engines to use it. Do not use while under the influence of alcohol, drugs, or any medication that negatively affects your judgment or reflexes. Keep children and bystanders away during use.
- Keep your work site clean and well lit. Cluttered and dark work areas invite accidents.
- For best results, keep the kit clean and dry. Remove any fluid, oil, or grease before and after work, particularly from the handle and fittings.
- **ALWAYS** use personal protective equipment (PPE) suitable to your task. Always wear ANSI-approved eye and hand protection while using this product. Nonslip footwear is also highly recommended. Other equipment such as ear, head, and body protection may also be necessary depending on your work and other equipment.
- Dress properly for automotive servicing. Do not wear loose clothing or jewelry and keep hair, clothing, gloves, hoses, and tools away from any moving parts during use.
- **ALWAYS** know and understand the specific safety warnings and instructions for your vehicle before using this kit. Use the correct fluids, pressures, adapters, etc. for your vehicle. Make sure the parking brake is activated before beginning any work. Use with jack and jack stands able to fully support the necessary weight. Never touch any heated surface with exposed skin.
- Do not overreach. Keep proper footing and balance at all times.
- **DO NOT** use excessive pressure with this product and do not force it or its attachments.
- Maintain this product. Check for misalignment, binding, wear, or other damage before use. If any damage is detected, repair or replace the problematic components before further use. In a large shop, mark such tools **DO NOT USE** until they have been repaired. Only replace components with identical parts.

Specifications

Material	AISI 1045 Steel	
Dimensions	20.8×60.5×10.6 cm	8.2×23.8×4 in.
Weight	4 lb.	1.8 kg

Package List



No.	Name	Qty.
A	Center Screw	1
B	Lock Nut	1
C	Spindle	1
D	Puller Hook	1
E	M12×1.75 Bolt Adapter	1
F	Rear Axle Puller	1
G	Dent Puller Adapter	1
H	2-Jaw Puller Adapter	1
I	Slide Hammer	1
J	3-Jaw Puller Adapter	1
K	Deep Axle Puller	1
L	Cross Bar	1
M	Jaws	3
N	Screw	1
O	M8×1.25 Bolts and Nuts	3
P	Carrying Case	1

Assembly

1. Attach the plain end of the slide hammer (I) onto the spindle (C).
2. Screw the lock nut (D) onto the threaded end of the spindle, with the hollow side facing first. This nut acts as a stopper for the forward movement of the slide hammer.
3. Insert the cross bar (L) into the eyelet at the end of the spindle.

Operation

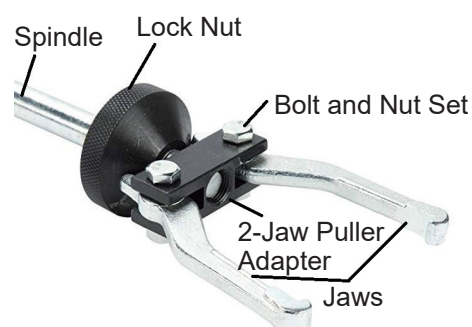
Hub, Axle, or Drum Pulling

1. Park your vehicle on level ground, activate its parking brake, and turn off the engine. Allow your vehicle to cool if it has become hot through recent use.
2. Jack up the vehicle. For best results, secure a raised vehicle with one or more jack stands or other appropriate supporting equipment.
3. Remove the wheel, tire, and any nuts, bolts, or accessories (such as brake calipers) that may obstruct the removal of the hub, axle, or drum according to your vehicle's service manual.
4. Attach the rear axle puller (F) to the axle by bolting it onto two axle bolts. If the hub has five bolts, match it to three axle bolts. Tighten the lug nuts.
5. Insert the spindle into the hub of the rear axle puller, threading it until the non-threaded end emerges from the hub. Turn the lock nut forward, ensuring it seats against the rear axle puller hub, and hand tighten it.
6. Apply force to push the slide hammer towards the workpiece, and then forcefully pull it back towards the end of the crossbar. Repeat and adjust the force as necessary.

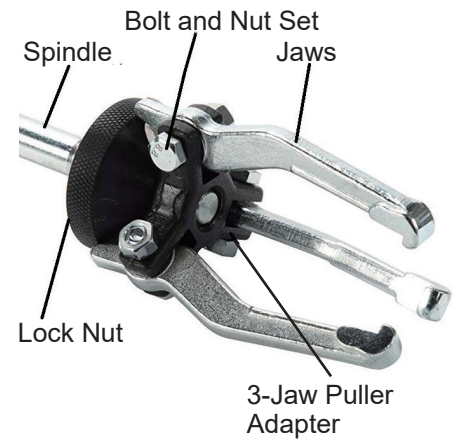


External Grip Jaw Puller

1. Attach the jaws (M) to the appropriate jaw puller adapter (H or J) using bolts and nuts. Thread the adapter onto the spindle until the non-threaded end of the spindle protrudes from the adapter.
2. Clamp the jaws securely onto the object to be pulled. Rotate the lock nut clockwise against the end of the jaws to close them, causing the claws to exert inward pressure on the workpiece. Tighten the bolts and nuts firmly.



3. Adjust the position of the slide hammer, ensuring it is near the workpiece.
4. Apply forward force with the slide hammer, pushing it towards the workpiece.
5. Forcefully pull the slide hammer back towards the end of the crossbar, exerting a pulling action on the jaws and the workpiece.
6. Repeat the forward push and forceful pull of the slide hammer, adjusting the force as needed, until the desired pulling action is achieved.

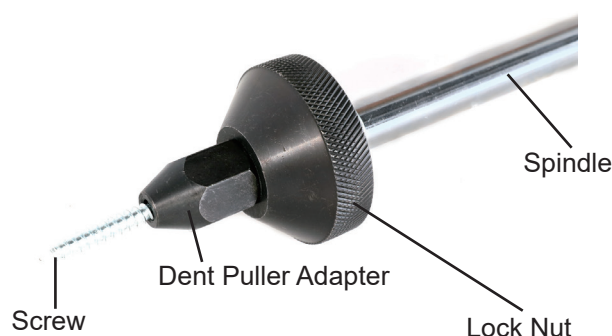


Internal Grip Jaw Puller

1. Thread the lock nut onto the spindle of the internal grip jaw puller, ensuring that the conical side is facing outward.
2. Attach the jaws to the jaw puller adapter using bolts and nuts. Thread the adapter onto the spindle until the non-threaded end of the spindle is visible outside the adapter.
3. Loosen the lock nut to allow the jaws to be attached to the workpiece. Then, turn the lock nut forward to expand the claws and firmly grip the workpiece. Make sure to tighten the fasteners securely.
4. Position the slide hammer near the workpiece. Push the slide hammer towards the workpiece, applying force. Afterward, forcefully pull it back towards the crossbar end. Repeat this action as necessary, adjusting the force according to your requirements.

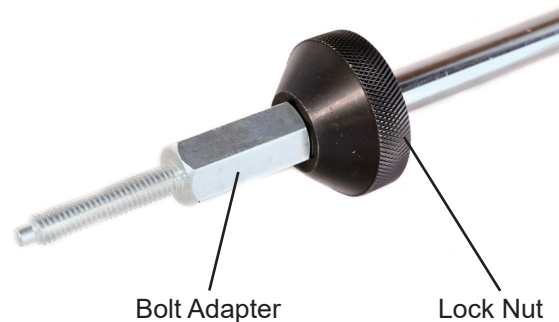
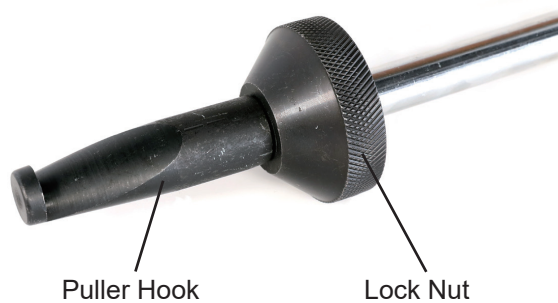
Dent Pulling

1. Drill a $\frac{1}{8}$ " hole into the center of the dent.
2. Insert the screw (N) through the dent puller adapter (G) and thread it into the drilled hole using a Phillips screwdriver (not included).
3. Attach the spindle to the dent puller adapter and hand tighten the lock nut against the adapter.
4. Position the slide hammer near the workpiece and apply forward force by pushing it towards the dent. Forcefully pull the slide hammer back towards the crossbar end. Repeat this motion as needed, adjusting the force to effectively repair the dent.



Hook & Thread Pulling

1. Identify the specific lip area where you will insert the puller hook (B).
2. Thread the puller hook securely onto the end of the spindle.
3. Carefully position the puller hook tip onto the edge of the object's lip that requires pulling.
4. Apply forward force by pushing the slide hammer towards the object.
5. Gently pull the slide hammer towards the handle crossbar.
6. Repeat Steps 4 and 5 until the object has been successfully pulled out.
7. For larger cross sections, thicker sheet metal, or concentrated deep dents, use the bolt adapter (E) for improved performance.
8. Follow Steps 1 to 6, adjusting as necessary, until the threaded object has been successfully pulled out.



Maintenance

- Clean the tools with a soft damp cloth using a mild detergent or solution after use. Do not rinse them or use abrasive cleaners or caustic chemicals.
- For best results, lubricate the tool with high-quality anticorrosive oil between uses.
- Check the parts of the tool periodically for any wear or damage. Repair or replace any problematic parts before further use.
- If the tools will not be used for an extended period of time, clean and lubricate them and store them in a cool dry place inaccessible to children.

Contact Us

Thank you for choosing our products! If you have any questions or comments, contact us at support@orionmotortech.com and we'll resolve your issue ASAP!

For a .pdf copy of the latest version of these instructions, use the appropriate app on your smartphone to scan the QR code to the right.

