

Owner's Manual & Safety Instructions

Save This Manual Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

17d

PITTSBURGH **AUTOMOTIVE**

63705

Inner Tie Rod Removal Set



Visit our website at: <http://www.harborfreight.com>
Email our technical support at: productsupport@harborfreight.com

When unpacking, make sure that the product is intact and undamaged. If any parts are missing or broken, please call 1-888-866-5797 as soon as possible.

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No portion of this manual or any artwork contained herein may be reproduced in any shape or form without the express written consent of Harbor Freight Tools. Diagrams within this manual may not be drawn proportionally. Due to continuing improvements, actual product may differ slightly from the product described herein. Tools required for assembly and service may not be included.

⚠ WARNING

**Read this material before using this product.
Failure to do so can result in serious injury.
SAVE THIS MANUAL.**

Specifications

Applications	For use with rack and pinion assemblies on front wheel drive vehicles. Not for use with "Saginaw" type rack and pinion assemblies. For hand use only. Not for use with power tools (impact wrenches, etc.)
Crowfoot Wrench Sizes	S.A.E. 1-3/16", 1-1/4", 1-7/16" Metric: 14mm, 17mm, 33.6mm

Important Safety Information

1. Keep work area clean and well lit. Cluttered or dark areas invite accidents.
2. Keep children and bystanders away while using this product. Distractions can cause you to lose control.
3. Stay alert, watch what you are doing and use common sense when using this product. Do not use this product while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while using this product may result in serious personal injury.
4. Use safety equipment. Always wear eye protection. Safety equipment such as non-skid safety shoes, hard hat, or heavy-duty work gloves used for appropriate conditions will reduce personal injuries.
5. Do not overreach. Keep proper footing and balance at all times. This enables better control of this product in unexpected situations.
6. Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.
3. Do not force this product. Use the correct product for your application. The correct product will do the job better and safer at the rate for which it was designed.
4. Store this product out of the reach of children and do not allow people unfamiliar with the product or these instructions to operate the product. This product could be dangerous in the hands of untrained users.
5. Maintain this product. Check for misalignment or binding of parts, breakage of parts and any other condition that may affect the product's operation. If damaged, have this product repaired before use. Many accidents are caused by poorly maintained equipment.
6. Use this product in accordance with these instructions and in the manner intended for this particular type of product, taking into account the working conditions and the work to be performed. Use of this product for operations different from those intended could result in a hazardous situation.
7. Maintain labels and nameplates on the Inner Tie Rod Tool. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
8. Wear ANSI-approved safety goggles and heavy-duty work gloves when using this product.
9. Prior to servicing a vehicle, **turn off the vehicle's engine** and refer to the vehicle manufacturer's service and repair manual for instructions on how to safely secure the vehicle in place with jacks, stands, etc.
10. The warnings, precautions, and instructions discussed in this instruction

manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

8. Re-install boot. If necessary, use hose clamps to secure both ends of boot.
9. Thread outer tie rod on specific number of turns. Install outer tie rod back into steering knuckle. **NOTE:** Have an alignment shop set the toe (and check the other angles).

Operating Instructions



Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this document including all text under subheadings therein before set up or use of this product.

1. **NOTE:** Applications and operating procedures can differ depending on the make and model of vehicle. A generalized description of procedures is as follows:
2. To replace inner tie rod, remove the wheel from the vehicle.
3. Loosen jam nut on outer tie rod. Then remove outer tie rod from the steering knuckle.
4. Turn outer tie rod counterclockwise, making sure to count turns so that outer is installed at same distance as it was.
5. Remove tie rod boot.
6. Slide inner tie rod tool over inner tie rod and wrench it off.
7. Use Main Socket (1) to install new inner tie rod. **NOTE:** If new inner tie rod has small allen bolt, tighten bolt after tightening inner tie rod to rack. Also, it is recommended to apply small amount of a thread locking product (sold separately) on inner tie rod to rack threads.

Maintenance and Servicing

1. **Before each use**, inspect general condition of tool. Check for misalignment or binding of moving parts, cracked or broken parts, and any other condition that may affect its safe operation. **Do not use damaged equipment.**
2. **After use**, clean external surfaces. Then dry and lubricate all moving parts. Do not use solvents.
3. **When storing**, keep Inner Tie Rod and its accessories in its Carrying Case and store in a clean, dry, safe location.
4. **CAUTION!** All maintenance, service, and repairs not mentioned in this manual must only be performed by a qualified service technician.

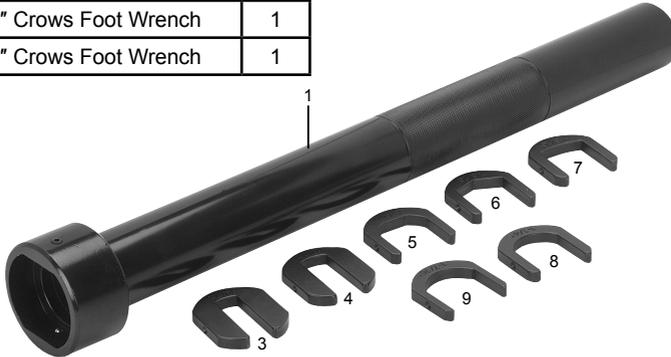
Record Serial Number Here:

If product has no serial number, record month and year of purchase instead.

Parts List and Diagram

Part	Description	Qty
1	Main Socket	1
2	Carrying Case (not shown)	1
3	1-3/16" Crows Foot Wrench	1
4	1-1/4" Crows Foot Wrench	1
5	1-5/16" Crows Foot Wrench	1
6	1-7/16" Crows Foot Wrench	1

Part	Description	Qty
7	14mm Crows Foot Wrench	1
8	17mm Crows Foot Wrench	1
9	33.6mm Crows Foot Wrench	1



90 Day Warranty

Harbor Freight Tools Co. makes every effort to assure 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 90 days 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.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. 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.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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3491 Mission Oaks Blvd. • PO Box 6009 •
Camarillo, CA 93011 • 1-888-866-5797