



VIDEO INSTRUCTIONS

15013

Pin & Bushing Adapter

// Safety Warning

Read all instructions and safety warnings prior to operation.

Failure to do so could result in equipment damage, personal injury, or even death.

CAUTION: Keep hydraulic coupler protected when not in use. Dust caps should be used on couplers when not in use to avoid contaminants from entering the hydraulic cylinder and power source. This practice will help to extend the life of this product and ensure continued consistent operation.

- Stay Alert! Watch what you are doing and use common sense when operating this tool.
- Inspect product for damage prior to using; do not use if product is in unsafe condition.
- Do not operate tool while under the influence of drugs, alcohol, or medication.
- Always use safety equipment to prevent injuries. Approved face and eye protection must always be worn by the operator, as well as others in the work area.
- Do not overreach. Keep proper footing and balance at all times.
- Dress properly. Do not wear loose clothing or jewelry.
- Keep your hair, clothing and gloves away from moving parts.
- Keep hands clear of all pressurized hydraulic components.
- Always ensure hoses are free from sharp bends and kinks.
- Keep your work area clean and well lit.
- Cylinders are designed for 10,000 psi (700 bar) maximum working pressure. Do not connect to a pump with a higher rated pressure. Use a pressure gauge in the system at all times. Ensure all components in the system are rated for 10,000 psi (700 bar).

Tiger Tool International Incorporated Warranty and Limit of Liability Terms and Conditions. For more information, visit tigertool.com

Warranties - 1. Tiger Tool International Incorporated ("Tiger Tool") warrants to customers who purchase the tools from Tiger Tool or an authorized dealer of Tiger Tool that cast portions of the tools are free from defects in workmanship and materials at the time of sale and for as long as the original customer owns the tool pursuant to a contract of sale between the customer and Tiger Tool or its authorized dealer. 2. Tiger Tool warrants to its customers that threaded areas, bolts and machined components in or of the tools will not fail as a direct result of and caused solely due to defects in workmanship and materials not known at the time of purchase and not discovered by the purchaser or anyone on behalf of the purchaser for a period of two years from the date of original purchase. 3. Tiger Tool warrants to its customers that hydraulic components will not fail as a direct result of and caused solely by defects in workmanship and materials for a period of one year from the date of original purchase. 4. Tiger Tool makes no other warranty regarding the fitness for purpose, use, quality, merchantability, or functioning of the tools other than as stated in writing in these terms and conditions of warranty.

Claims on Warranty - 5. In order for Tiger Tool to assess any claim of warranty the customer of Tiger Tool agrees to deliver the tool to one of the addresses stated in paragraph 6 or such other place as Tiger Tool may designate, at the customer's sole expense such freight being fully pre-paid and insured by the customer to the addresses designated to the customer by Tiger Tool. 6. US returns: 115 first street PMB-T75520, Sumas, WA 98295, Canada returns: 160-34434 McConnell Road, Abbotsford, B.C., V2S 7P1

Limit of Liability of Tiger Tool - 7. The limit of liability of Tiger Tool for any claim of warranty made by any customer pursuant to these terms and conditions of warranty is that Tiger Tool may at its option, repair the tool, replace the tool or refund the purchase price for the tool to the customer. Tiger Tool is not liable for any damages or claims, monetary relief or any other damages or claims, including costs and legal costs except as set out in this paragraph. Tiger Tool is not liable for any economic loss, damages for bodily injury, or claims for property damages. The limit of the warranty and the liability of Tiger Tool to its customer is as set out in this warranty. The warranty does not extend into the secondary market and the limitation of liability set out in this warranty does extend into the secondary market for the tools of Tiger Tool. Tiger Tool is not responsible for any warranty of its tools to customers of its customer or those who otherwise come into possession or use of its tools through or by its original customer. Tiger Tool is not liable for any damages or claims, monetary relief or any other damages or claims, including costs and legal costs and Tiger Tool is not liable for any economic loss, damages for bodily injury, or claims for property damages to customers of its customer or those who otherwise come into possession or use of its tools through or by its original customer. 8. This warranty is null and void and is of no effect unless the tools purchased by the customer from Tiger Tool or its authorized representative are used in accordance with the terms and conditions of use and the instructions for use published by Tiger Tool in the instructions given with the tool and published on the website of Tiger Tool. 9. Tiger Tool does not warrant any of its tools that are subject to abnormal use, including without limitation misuse, accident, modification, unreasonable use, neglect, lack of maintenance or use after any portion of a tool is significantly worn. 10. In the case that Tiger Tool decides that the tools delivered to Tiger Tool pursuant to a claim made on this warranty do not meet the conditions for any liability of Tiger Tool to perform any obligation pursuant to this warranty, then the customer must at its own expense remove the tools from the premises of Tiger Tool. Tools that are subject to this paragraph and are rejected by Tiger Tool for any claim of warranty will be retained in Tiger Tool's warehouse facility for four months without any liability of Tiger Tool as a bailee or warehouse of the dealer or customer. These tools will be retained for pick up for four months in the warehouse of Tiger Tool at the sole risk of the dealer or customer, for insurance and loss howsoever caused including by the neglect of Tiger Tool or for anyone it is responsible. Tiger Tool will during the four month period make three attempts to contact the dealer or customer to pick up the tool, and after four months have expired from the first date that Tiger Tool gives notice to the dealer or customer that there is no valid warranty claim for the tools, then the dealer or customer agrees that Tiger Tool may dispose of the tools as it deems necessary, and the dealer or customer quit claims any property or other interest in the tools at the end of that four month period including any claim for refund of purchase price, loss or damage. 11. Without limiting anything in these terms and conditions of warranty, Tiger Tool shall not be liable for any indirect, consequential, exemplary, incidental, special or other similar damages incurred by a customer or any purchaser or user, or any person or entity who comes into possession of its tools, except for the warranties specifically between the customer and Tiger Tool as set out in paragraphs 1, 2 and 3 above. Tiger Tool is not in any case in any event in any circumstances whatsoever, liable for claims for lost profits, lost revenues, lost sales, lost business opportunities, lost or damaged goodwill, interruption of business or any other injury or damage to person or property howsoever connected to the possession or use of its tool(s). 12. The terms and conditions of warranties by Tiger Tool and the limits of liability as set out in these terms and conditions of warranty represent the sole and exclusive remedies of the customer and are in place of all other rights and remedies that the customer of Tiger Tool may have. 13. Tiger Tool reserves the right to change the design and construction of its tools at any time without any obligation to any customer who has purchased the tool or any user of the tool. Tiger Tool may in its sole discretion discontinue the sale or service of any tool at any time without obligation to any customer or user of the tool. 14. Any dispute, claim or other demand made by a customer or any party against Tiger Tool, arising out of this agreement, or regarding the sale, use, condition, or function of a tool sold by Tiger Tool shall be governed by the laws of British Columbia and such disputes, including any dispute brought by class or representative proceedings, shall be adjudicated in Vancouver, British Columbia by a sole arbitrator appointed pursuant to the provisions of the arbitration act R.S.B.C. 1996, C. 55, (As amended). Any party including any customer making any claim whatsoever against Tiger Tool arising of this warranty or otherwise hereby attorns to the jurisdiction of the province of British Columbia and agrees to the arbitration of those claims in Vancouver, British Columbia.



To make a return or to learn more about the Tiger Tool Return Policy, scan or visit tigertool.com/policies/refund-policy

TIGER TOOL

Canada
160-34434 McConnell Road,
Abbotsford, BC V2S 7P1

USA
115 First Street, PMB-T75520
Sumas, WA 98295



Did you know?
You can now call or text Technical Support.
1.800.661.4661

Operating Instructions

View the Pin & Bushing Adapter demonstration video online at tigertool.com

NOTE: Hammering this tool will void your warranty.

VIDEO
INSTRUCTIONS



Aluminum bushing housing (typically found on torque rods)

Removal

- 1 Insert the pull bar (15001-3 - from the Pin & Bushing Starter Kit) through the pull adaptor (15001-146) and place over the pulling side of the bushing pin and install the threaded pin (15001-147) through the adaptor and bushing pin. Tighten hand tight with supplied ¼" nut driver (15030-1). **(Figure 1)**
- 2 Place follower adaptor (15001-145) and appropriate face plate (see reference chart inside of case) over the opposite side of the bushing pin and install the other threaded pin (15001-147) through the follower adaptor and pin then tighten hand tight with supplied ¼" nut driver (15030-1). **(Figure 2)**
- 3 Connect your 10,000psi hydraulic pump to the hydraulic cylinder (17202) making sure the quick connect fitting is securely tightened. Thread on the cylinder adaptor (15001-143) to the hydraulic cylinder (17202). Connect the spacer tube (15001-57) to the previously installed cylinder adaptor (15001-143). Now install one of three supplied face plates (15001-79/-92/-56) on the end of the spacer tube (15001-57). Use the faceplate with the smallest possible ID that still fits over the bushing you are about to remove. Slide entire assembly (face plate first) over the pull bar (15001-3). Install trigon nut (15001-7) on to the protruding threads of the pull bar (15001-3) hand tight. **(Figure 3)**
- 4 Before applying hydraulic force, visually inspect to make sure that the tool is aligned with the pin/bushing. Apply hydraulic force. If the bushing is not removed in one stroke, release hydraulic pressure, tighten the trigon nut (15001-7) and repeat until bushing is removed. **(Figure 4)**
- 5 Break down tooling from pin/bushing.



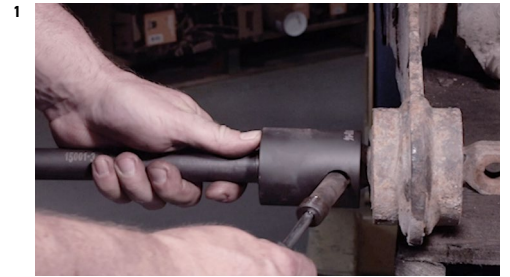
Operating Instructions

Steel bushing housing (typically found on sway bars)

Removal

NOTE: This removal process differs from the Aluminum bushing housing method. The Steel bushing housing method requires you to first remove the pin from the bushing/ rubber then secondly remove the outer bushing sleeve)

- 1 Insert the pull bar (15001-3 - from the Pin & Bushing Starter Kit) through the pull adaptor (15001-146) and place over the pulling side of the bushing pin and install the threaded pin (15001-147) through the pull adaptor and bushing pin. Tighten hand tight with supplied ¼" nut driver (15030-1). **(Figure 1)**
- 2 Connect your 10,000psi hydraulic pump to the hydraulic cylinder (17202) making sure the quick connect fitting is securely tightened. Thread on the cylinder adaptor (15001-143) to the hydraulic cylinder (17202). Connect the spacer tube (15001-57) to the previously installed cylinder adaptor (15001-143). Now install faceplate (15001-92) on the end of the spacer tube (15001-57). Slide entire assembly (face plate first) over the pull bar (15001-3). Install trignon nut (15001-7) on to the protruding threads of the pull bar (15001-3) hand tight. **(Figure 2)**
- 3 Before applying hydraulic force, visually inspect to make sure that the tool is aligned with the pin/bushing. Apply hydraulic force. If the pin is not removed in one stroke, release hydraulic pressure, tighten the trignon nut (15001-7) and repeat until bushing pin is removed.
- 4 Remove the threaded pin (15001-147) from the pull adaptor (15001-146) and bushing pin. **(Figure 3)**
- 5 Remove any remaining rubber or debris from the ID of the steel bushing sleeve.
- 6 Insert the sleeve remover (15001-144) into the bushing sleeve and slide the pull bar (15001-3) through the center of the sleeve remover (15001-144) and the bushing sleeve. **(Figure 4)**
- 7 Install only the cylinder adaptor (15001-143) on to the hydraulic cylinder (17202) and one of the three faceplates (15001-79/-92/-56) over the end of the cylinder adaptor. Use the faceplate with the smallest possible ID that still fits over the bushing sleeve you are about to remove. Slide hydraulic assembly over the threaded end of the pull bar (15001-3). Install trignon nut (15001-7) on to the protruding threads of the pull bar (15001-3) hand tight. **(Figure 5)**
- 8 Before applying hydraulic force, visually inspect to make sure that the tool is aligned with the bushing sleeve. Apply hydraulic force. If the sleeve does not break free from the housing, keep hydraulic force applied and strike the sleeve remove (15001-144) with a hammer, this should break the sleeve free. If the sleeve is not removed in one stroke, release hydraulic pressure, tighten the trignon nut (15001-7) and repeat until the sleeve is removed. **(Figure 6)**

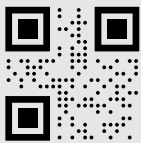


Operating Instructions

Aluminum & Steel housings

Installation

- 1 Clean any burrs or debris from the ID of the bushing housing.
- 2 Insert the pull bar (15001-3) through the pull adaptor (15001-146) and place over the new bushing pin and install the threaded pin (15001-147) through the pull adaptor and bushing pin. Tighten hand tight with supplied ¼" nut driver (15030-1). **(Figure 1 & 2)**
- 3 Slide the pull bar and bushing assembly threaded end first through the eye of the torque rod or sway bar positioning the bushing in the desired orientation.
- 4 Install only the cylinder adaptor (15001-143) on to the hydraulic cylinder (17202) and the face plate (15001-92) over the end of the cylinder adaptor. Slide hydraulic assembly over the threaded end of the pull bar (15001-3). Install trigon nut (15001-7) on to the protruding threads of the pull bar (15001-3) hand tight. **(Figure 3)**
- 5 Place follower adaptor (15001-145) and appropriate face plate (see reference chart) over the opposite side of the bushing pin and install the other threaded pin (15001-147) through the follower adaptor and bushing pin then hand tighten with supplied ¼" nut driver (15030-1). **(Figure 4)**
- 6 Double check bushing orientation then apply hydraulic force. If the bushing is not completely installed in one stroke, release hydraulic pressure, tighten the trigon nut (15001-7) and repeat. The bushing will not seat itself into the installed depth. The operator will have to stop the bushing at the desired depth. If the bushing is accidentally pulled in too far, remove the tooling and connect it to the opposite side and pull it back. **(Figure 5)**
- 7 Break down tooling from pin/bushing. Clean and inspect all parts for damage and replace if necessary.



Need some assistance with your Tiger Tool?

No worries! Scan this QR code with your phone to start texting with someone who can help out.

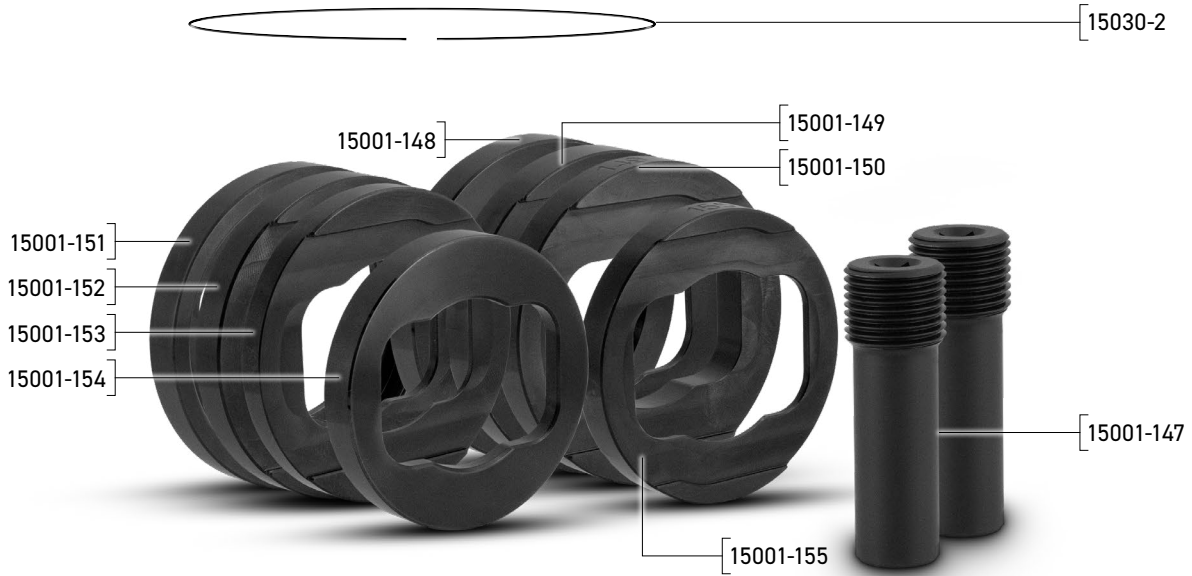
1.800.661.4661

Parts Breakdown



Part Number	Description	Qty.
15030-1	.25" Socket Driver	1
15001-57	3.25" Extension Tube	1
15001-79	Face Plate	1
15001-92	2.625" Face Plate	1
15001-56	Cylinder Tube Cap 3.25"	1
15001-144	Shell Puller	1
15001-143	3.25 Cylinder Tube L 4.063"	1
15001-156	D55 N42 Magnet	2
15001-145	Follower Adaptor	1
15001-146	Pull Adaptor	1

Parts Breakdown



Part Number	Description	Qty.
15001-155	Face Plate 8	1
15001-154	Face Plate 7	1
15001-153	Face Plate 6	1
15001-152	Face Plate 5	1
15001-151	Face Plate 4	1
15001-150	Face Plate 3	1
15001-149	Face Plate 2	1
15001-148	Face Plate 1	1
15030-2	External Snap Ring - 3.5"	2
15001-147	5/8 Threaded Pin	2

