

MASTER BALL JOINT ADAPTER / 14 PC

(FOR USE WITH 3-IN-1 SERVICE KIT - MODEL 38335)

Model 46389

OPERATING INFORMATION



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For technical questions please call 1-800-444-3353

SPECIFICATIONS TABLE

Item	Description
Product Applications	Most GM, Ford, and Dodge 2 & 4 WD Pickups, Vans, and SUV's through 1997
Product Compatibility	Use with "3-In-1 Service Kit" (Model 38335)
Material	Low & High Carbon Steel
Dimensions (w/Carrying Case)	12" W x 17-1/2" L x 3-3/8" H
Receiving Cup Sizes	1-3/4" I.D. x 2-1/8" O.D. x 1/2" Long 1-13/16" I.D. x 2-1/4" O.D. x 7/16" Long
Installing Tube Sizes	1-3/4" I.D. x 2" O.D. x 2-3/8" Long 1-3/4" I.D. x 2" O.D. x 3" Long
Screw Plug Size	7/8" O.D. x 3" Long
Remover/Installer Size	3/4" I.D. x 1-7/16" O.D. x 1" Long
Receiving Tube Sizes	2" I.D. x 2-1/4" O.D. x 2" Long 2-1/4" I.D. x 2-1/2" O.D. x 1-1/2" Long 2-1/4" I.D. x 2-1/2" O.D. x 3/4" Long 2-1/4" I.D. x 2-1/2" O.D. x 2-3/4" Long 2-3/4" I.D. x 3" O.D. x 2-1/4" Long 2-7/16" I.D. x 2-3/4" O.D. x 2-1/4" Long 2-5/8" I.D. x 2-7/8" O.D. x 2-7/8" Long 2-3/16" I.D. x 2-7/16" O.D. x 3-3/16" Long
Weight	12.8 Lbs.

SAVE THIS MANUAL

You will need this manual for the safety warnings and precautions, operating, inspection, maintenance, and cleaning procedures. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep this manual and invoice in a safe and dry place for future reference.

GENERAL SAFETY WARNINGS AND PRECAUTIONS

- KEEP WORK AREA CLEAN AND DRY.** Cluttered, damp or wet work areas invite injuries.

2. **KEEP CHILDREN AWAY FROM WORK AREA.** Do not allow children to handle this product.
3. **STORE IDLE EQUIPMENT.** When not in use, tools and equipment should be stored in a dry location to inhibit rust. Always lock up tools and equipment and keep out of reach of children.
4. **DO NOT USE THIS PRODUCT IF UNDER THE INFLUENCE OF ALCOHOL OR DRUGS.** Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not attempt to use this product.
5. **USE EYE PROTECTION.** Wear ANSI approved safety impact eye glasses when using this product. ANSI approved safety impact eye glasses are available from Harbor Freight Tools.
6. **DRESS SAFELY.** Non-skid footwear or safety shoes should be used when working with this product. Do not wear loose clothing or jewelry as they can become caught in moving parts. Wear a protective hair covering to prevent long hair from becoming caught in moving parts. If wearing a long-sleeve shirt, roll sleeves up above elbows.
7. **INDUSTRIAL APPLICATIONS MUST FOLLOW OSHA REQUIREMENTS.**
8. **DO NOT OVERREACH.** Keep proper footing and balance at all times to prevent tripping, falling, back injury, etcetera.
9. **STAY ALERT.** Watch what you are doing at all times. Use common sense. Do not use this product when you are tired or distracted from the job at hand.
10. **CHECK FOR DAMAGED PARTS.** Before using this product, carefully check that it will operate properly and perform its intended function. Check for damaged parts and any other conditions that may affect the operation of this product. Replace or repair damaged or worn parts immediately.
11. **REPLACEMENT PARTS AND ACCESSORIES.** When servicing, use only identical replacement parts. Only use accessories intended for use with this product. Approved accessories are available from Harbor Freight Tools.
12. **MAINTAIN THIS PRODUCT WITH CARE.** Keep this tool clean and dry for better and safer performance.
13. **MAINTENANCE:** For your safety, service and maintenance should be performed regularly by a qualified technician.

14. **USE THE RIGHT PRODUCT FOR THE RIGHT JOB.** There are certain applications for which this product was designed. Do not use small equipment, tools or attachments to do the work of larger industrial equipment, tools or attachments. Do not use this product for a purpose for which it was not intended.
15. **PRIOR TO USING THIS PRODUCT, MAKE SURE TO READ AND UNDERSTAND ALL INSTRUCTIONS AND SAFETY PRECAUTIONS AS OUTLINED IN THE VEHICLES MANUFACTURER'S MANUALS.**
16. **NEVER WORK UNDERNEATH A VEHICLE WITHOUT USING ADDITIONAL SAFETY SUPPORT DEVICES (I.E., JACK STANDS) TO SUPPORT THE WEIGHT OF THE VEHICLE.** Read and understand all safety warnings and instructions provided in the instruction manual of the vehicle as well as the jack stand being used to support the vehicle.
17. **WARNING:** This product contains or produces a chemical known to the State of California to cause cancer and birth defects (or other reproductive harm).
(California Health & Safety Code 25249.5 et seq.)

UNPACKING

When unpacking, check to make sure the parts shown on page 10 of this manual are included. If any parts are missing or broken, please call Harbor Freight Tools at the number shown on the cover of this manual as soon as possible.

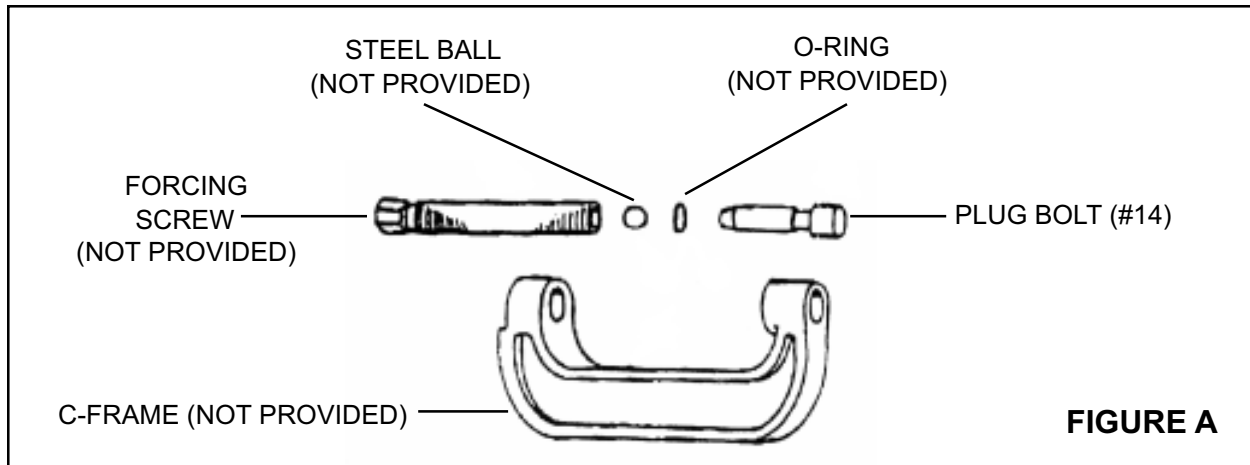
OPERATING INSTRUCTIONS

Note: All parts mentioned below refer to the parts listed and shown on page 10 of this manual.

NOTE: This Master Ball Joint Adapter Set is intended for use with the 3-In-1 Service Kit (Model 38335), which is available from Harbor Freight Tools. Read and understand all safety warnings and instructions provided in the instruction manual of the 3-In-1 Service Kit before using the kit.

To Attach The Plug Bolt To The C-Frame:

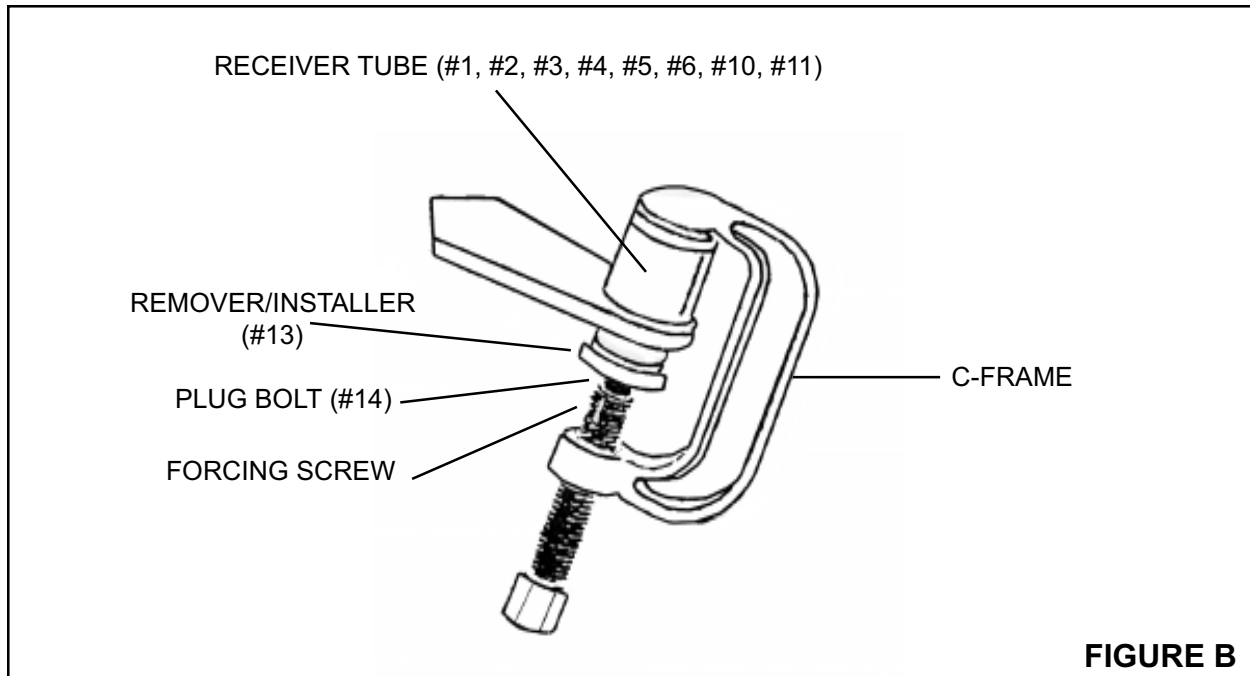
1. The illustration on the following page depicts a disassembled C-Frame, a tool that is part of the 3-In-1 Service Kit (Model 38335) and intended for use with this Master Ball Joint Adapter Set. **(See Figure A.)**



2. To operate the Master Ball Joint Adapter Set, it will be necessary to attach the Plug Bolt (part #14) contained in this Set to the C-Frame of the 3-In-1 Service Kit. **(See Figure A, and Assy. Diagram.)**
3. To do so, unscrew and remove the Forcing Screw, Steel Ball, and O-Ring from the C-Frame. **(See Figure A, and Assy. Diagram.)**
4. Make sure the Steel Ball and O-Ring remain inside the Forcing Screw. Then, insert the Plug Bolt (part #14) into the Forcing Screw.
5. Screw the threaded end of the Forcing Screw, with its Steel Ball, O-Ring, and attached Plug Bolt (part #14) back into the threaded end of the C-Frame toward the unthreaded hole of the C-Frame. **(See Figure A, and Assy. Diagram.)**

To Remove A Ball Joint:

1. **NOTE:** The following instructions apply to most GM, Ford, and Dodge 2 and 4 wheel drive pickups, vans, and SUV's through 1997 (see charts on pages 7 through 9). The instructions are intended to illustrate the process in general terms, not to be specific to any one make/model vehicle. A combination of Receiving Tubes (parts #1, #2, #3, #4, #5, #6, #10, #11), Receiving Cups (parts #7, #12), and Installing Tubes (parts #8, #9), will be necessary for different vehicles.
2. Remove all attaching hardware from the ball joint.
3. Mount the Remover/Installer (part #13) on the Forcing Screw assembly so that the *larger* diameter portion of the Remover/Installer faces the *threaded* hole of the C-Frame, and the *smaller* diameter portion faces the *unthreaded* side of the ball joint. **(See Figure B, and Assy. Diagram.)**



4. Mount the proper size Receiver Tube (parts #1, #2, #3, #4, #5, #6, #10, #11) over the threaded side of the ball joint. **(See Figure B, and Assy. Diagram.)**
5. Align the mounted Remover/Installer (part #13), ball joint, and Receiver Tube (parts #1, #2, #3, #4, #5, #6, #10, #11) to allow removal of the ball joint.
6. Using a wrench, turn the Forcing Screw assembly clockwise to remove the ball joint.

To Install A Ball Joint:

1. Mount the Remover/Installer (part #13) on the Forcing Screw assembly so that the *larger* diameter portion of the Remover/Installer faces the *threaded* hole of the C-Frame, and the *smaller* diameter portion faces the *unthreaded* side of the ball joint. **(See Figure B, and Assy. Diagram.)**
2. Place the mounted Remover/Installer (part #13) on the *unthreaded* side of the ball joint. **(See Figure B, and Assy. Diagram.)**
3. Align the mounted Remover/Installer (part #13), ball joint, and proper size Receiver Tube (parts #1, #2, #3, #4, #5, #6, #10, #11) to allow installation of the ball joint. **(See Figure B, and Assy. Diagram.)**
4. Using a wrench, turn the Forcing Screw assembly clockwise to install the ball joint. **(See Figure B, and Assy. Diagram.)**

BALL JOINT ADAPTER APPLICATIONS CHART

R = Remove I = Install		MODEL 46389 (PART NUMBERS BELOW SHOWN ON PAGE 10)													
Ball Joint Upper/ Lower	Vehicle	10	8	7	1	2	5	9	12	13	4	3	6	11	1 4
DODGE / CHRYSLER / PLYMOUTH															
Lower	1987-97 Dakota 2WD 1972-93 1/2-, 3/4-ton 2WD Pickup 1974-93 1/2- ton 2WD Ramcharger 1979-97 1/2-, 3/4-, 1-ton 2WD van			I			RI			R					
Lower	1972-93 3/4-, 1-ton 2WD Pickup 1979-97 1-ton 2WD van									R			I		
Lower	1984-96 Caravan, Voyager, Town & Country									R					
Upper	1994 - 97 1/2-, 3/4-, 1-ton 2WD Pickup (IFS)			I											
Lower	1994-97 1/2-, 3/4-, 1-ton 2WD Pickup (IFS)												I		
Upper	1994-97 1-ton solid axle, 2WD; 3/4, 1-ton Dana 60 axle, 4WD		I	I											
Lower	1994-97 1-ton solid axle, 2WD; 3/4-, 1-ton Dana 60 axle, 4WD	I											I		RI
Lower	1994-97 1/2-, 3/4- Dana 44 axle, 4WD 1972-93 1/2-, 3/4-, 1-ton 4WD & Ramcharger						R	I	I	R					
Upper	1994-97 1/2-, 3/4-ton Dana 44 axle, 4WD						R	I	I	R					
Upper	1972-93 1/2-, 3/4-, 1-ton 4WD & Ramcharger	R	I	I											
JEEP															
Upper	1993-97 2WD Grand Cherokee 1993-95 4WD Grand Cherokee Grand Wagoneer 1987-97 4WD Wrangler 1984-95 4WD Wagoneer, Cherokee						R	I	I	R					
Lower	1993-97 2WD Grand Cherokee 1990-97 2WD Cherokee, Wagoneer, Comanche 1993-95 4WD Grand Cherokee, Grand Wagoneer 1990-97 4WD Wrangler 1990-95 2WD & 4WD Wagoneer, Comanche, Cherokee						R	I	I	R					
Upper	1984-97 2WD Cherokee, Wagoneer, Comanche						R	I	I	R					
Lower	1984-89 2WD Cherokee, Wagoneer Comanche 1987-89 4WD Wrangler 1984-89 4WD Wagoneer, Comanche Cherokee						R	I	I	R					
Upper	1984-92 full size 4WD Grand Wagoneer 1972-88 4WD Truck, CJ, full size Cherokee, Wagoneer	R	I	I											
Lower	1984-92 full size 4WD Grand Wagoneer 1972-88 4WD Truck, CJ, full size Cherokee, Wagoneer	R	I	I											

BALL JOINT ADAPTER APPLICATIONS CHART

R = Remove I= Install		MODEL 46389 (PART NUMBERS SHOWN BELOW ON PAGE 10)														
Ball Joint Upper Lower	Vehicle	10	8	7	1	2	5	9	12	13	4	3	6	11	14	
FORD																
Lower	1986-97 Aerostar			I												
Upper	1989-90 2WD Bronco II 1991-94 2WD Explorer 1989-97 2WD Ranger		I	I												
Upper	1987-88 2WD Bronco II 1983-88 2WD Ranger			I												
Lower	1989-90 2WD Bronco II 1991-94 2WD Explorer 1989-97 2WD Ranger			I												
Lower	1987-88 2WD Bronco II 1983-88 2WD Ranger		I	I			R			R						
Lower	1997 1/2-ton Pickup, 2WD & 4WD											I		R	I	
Upper	1987-96 1/2-ton 2WD Pickup 1987-97 3/4-, 1-ton 2WD Pickup		I	I			R			R						
Lower	1987-96 1/2-ton 2WD Pickup															
Upper	1981-86 1/2-ton 2WD Pickup 1990 4WD Bronco II w/Dana 28 1984-89 4WD Bronco II 1991-94 4WD Explorer w/Dana 28 1991-97 4WD Ranger w/Dana 28 1983-89 4WD Ranger			I												
Lower	1981-86 1/2-ton 2WD Pickup 1980-96 4WD Bronco 1981 1-ton (3800 axle) 4WD 1980-96 1/2-, 3/4-ton 4WD	R	I	I												
Lower	1987-97 3/4-, 1-ton 2WD	I											I		RI	
Upper	1992-97 1/2-, 3/4-, 1-ton 2WD Van			I						R		R				
Lower	1992-97 3/4-, 1-ton 2WD Van			I							R		I	I		
Lower	1992-97 1/2-ton 2WD Van			I												
Upper	1990 4WD Bronco II w/Dana 35 1991-93 4WD Explorer w/Dana 35 1990-93 4WD Ranger 2/Dana 35												I			
Lower	1990 4WD Bronco II w/Dana 28 1984-89 4WD Bronco II 1990-97 4WD Explorer w/Dana 28 1990-97 4WD Ranger w/Dana 28												I			
Lower	1990 4WD Bronco II w/Dana 35 1991-93 4WD Explorer w/Dana 35 1990-93 4WD Ranger w/Dana 35												I			
Upper	1980-96 4WD Bronco 1992-97 1-ton 4WD 1980-96 1/2-, 3/4-, 1-ton 4WD (IFS)	R	I	I												
Upper	1993-94 4WD Explorer w/Dana 35 1993-97 4WD Ranger w/Dana 35												I			
Lower	1993-94 4WD Explorer w/Dana 35 1993-97 4WD Ranger w/Dana 35												I			
Lower	1996-97 1-ton 4WD w/solid axle	I											I		RI	
Lower	1980-95 3/4-, 1-ton 4WD spindle	I											I		RI	

BALL JOINT ADAPTER APPLICATIONS CHART

R = Remove I= Install		MODEL 46389 (PART NUMBERS SHOWN BELOW ON PAGE 10)													
Ball Joint Upper Lower	Vehicle	10	8	7	1	2	5	9	12	13	4	3	6	11	14
GM															
Lower	1982-97 2WD S-10 Blazer, Jimmy, & Pickup	I	R	I											
Lower	1993-97 2WD 1/2-, 3/4-, 1-ton Pickup; Suburban 1996-97 1/2-, 3/4-ton 2WD G Van														
Lower	1988-92 2WD 1/2-, 3/4-, 1 ton Pickup; Suburban														
Lower	1985-97 Astro Safari Van			I											
Lower	1973-95 1/2-, 3/4 ton 2WD G Van			I											
Lower	1996-97 1/2-, 3/4-, 1-ton 4x4			I	R	I									

INSPECTION, MAINTENANCE, AND CLEANING

1. Before each use, inspect the general condition of the Master Ball Joint Adapter set. Check for cracks, breaks, or bends in the tool, and any other condition that may affect its safe operation. If a problem occurs with the tool, immediately discontinue its use and have the problem corrected before further use. Do not use damaged equipment.

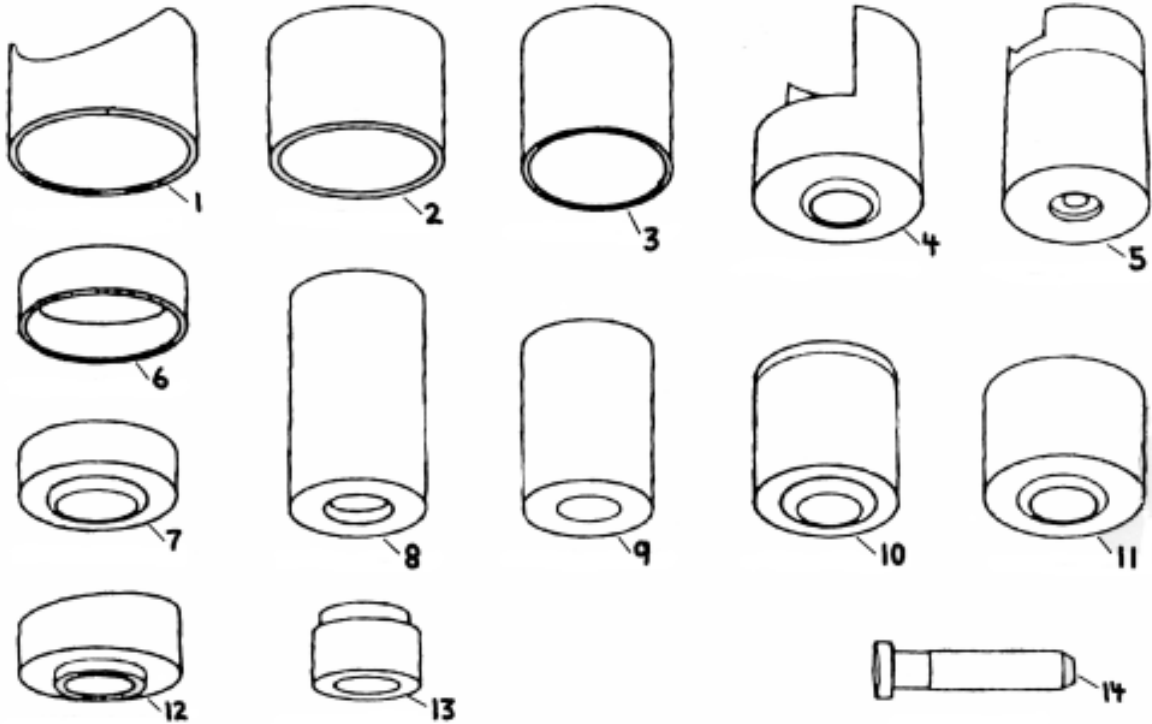
2. To clean, wipe with a damp cloth. You may use a mild detergent or mild solvent.

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER NOR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

PARTS LIST / ASSEMBLY DIAGRAM

Part #	Description	Qty.
1	Receiving Tube	1
2	Receiving Tube	1
3	Receiving Tube	1
4	Receiving Tube	1
5	Receiving Tube	1
6	Receiving Tube	1
7	Receiving Cup	1
8	Installing Tube	1
9	Installing Tube	1
10	Receiving Tube	1
11	Receiving Tube	1
12	Receiving Cup	1
13	Remover/Installer	1
14	Plug Bolt	1
15	Carrying Case (Not Shown)	1



NOTE: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.