

INSTRUCTION MANUAL

MODEL 3600-P AND 3600-P-50

HYDRAULIC HOSE CRIMPER

SERIAL NUMBER _____

ATCO Products, Inc
P.O. Box 430
601 Interstate 45, South
Ferris, TX 75125

TEL: (972) 842-8178
Fax: (972) 544-2164
www.atcoproductsinc.com

MODEL 3600-P AND 3600-P-50 HYDRAULIC HOSE CRIMPER

DISCLAIMER

WARNING! Keep hands clear of the crimp jaws. This machine develops 10,000 pounds of force and can inflict serious personal injury if not used properly.

WARNING! Always wear eye protection when operating this crimper.

ATCO Products, Inc. shall not be held liable for any injuries incurred when using this equipment. ATCO Products, Inc. shall not be held responsible for any loss of materials or property due to misapplication or misuse of this equipment.

WARRANTY

ATCO Products, Inc. shall warrant this crimper to the original user against defects in materials or workmanship under normal use for a period of one (1) year after date of delivery. Any part, which is determined to be defective in material or workmanship, will be repaired or replaced at ATCO's option, as the sole remedy.

EXCEPT AS PROVIDED ABOVE, NO WARRANTY, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, IS MADE OR AUTHORIZED BY ATCO Products, Inc.

POWER REQUIREMENTS

Model 3600-P and 3600-P-50 crimpers are 1 horsepower, 115/220 volt, 50/60 Hertz units.

The **3600-P** is wired for 115 volt, 60 Hertz operation and comes with a three-prong plug for a standard electrical outlet.

The **3600-P-50** is wired for 220 volts, 50 Hertz and has a blank power cord to be wired by the end user.

NOTE: If wiring is changed in the field, both the motor and control box must be changed. Refer to ATCO EG-1032 for details.

GENERAL

The Model 3600-P Hydraulic Crimper is specifically designed for use with ATCO **Beadlock** fittings. It is intended for use with SAE J51 A2, two-braid dimension rubber and nylon barrier hose using the standard crimp dies provided with the unit. These hoses are typically used in R-12 (SAE J51) and R134a (SAE J2064) refrigerant systems. Other sizes of hose can be crimped using special size dies that are available upon request. Consult the factory for the specific application.

The longer ATCO ferrule and triple bubble crimp of the Model 3600-P insures a superior interface between the hose and the end fittings.

The standard dies supplied with this crimper will crimp 5/16", 13/32", 1/2" and 5/8" ID SAE J51 A2, two braid dimension air conditioning hose. There is no adjustment necessary. Other dies are available for tighter crimps on 2-braid hose (J series) and reduced barrier hose (SR series).

The dies are housed in replaceable, flexible, color-coded polyurethane carriers (see crimper parts list for part numbers) for easy identification of crimp sizes.

CRIMP DIAMETER MEASUREMENT: The crimp diameter can be measured by using a set of point micrometers or calipers with a point accessory kit installed. Standard measuring instruments will not reach to the crimp impression because of the pinch of the crimp. When measuring the crimp diameter, take three measurements around the center crimp ring, add the measurements and divide by three to get the average. The average should be the target crimp diameter (+.015"/-.005"). Example: The #6 size is .660" target crimp diameter. The crimp should measure between .675" and .655".

HOSE WALL THICKNESS: The wall thickness for two braid dimension hoses is listed below. It is important to check the hose wall thickness to make sure that the crimp will be leak free.

HOSE SIZE	CRIMP DIAMETER	WALL THICKNESS	TOLERANCE
#6 - 5/16" I.D.	.660"	.214"	+/- .023"
#8 - 13/32" I.D.	.830"	.244"	+/- .025"
#10 - 1/2" I.D.	.897"	.243"	+/- .028"
#12 - 5/8" I.D.	1.015"	.246"	+/- .025"

If the wall thickness falls below the minimum allowable thickness, the crimp should be adjusted by using undersize dies (J series).

OPERATION

WARNING: Always wear eye protection when operating this crimper.

1. Mount the crimper on a solid bench using the threaded holes in the bottom of the crimper body (3/8"-16 bolts not included).
2. Add oil to the pump reservoir.
3. Plug or hard-wire the hydraulic unit into the proper power source.
4. Turn the unit on and cycle the crimp head several times to make sure all the air is out of the hydraulic system.
5. Select the proper size dies. Check all segments to make sure that all of the segments have the same numbers on the back. Each segment will be marked identifying the hose size and crimp diameter. Example: 5/16 ID hose with a .660 diameter crimp will be marked "6-660".
6. Lubricate the slides of the crimper slide blocks with the Teflon grease or equivalent.
7. Loosen the two cap screws that hold the guide blocks to the slide block. It is not necessary to remove the guide blocks. Squeeze the outer segments of the die set together and insert the die into the slide block making sure that the woodruff key in the center segment snaps fully into the groove in the slide block. While holding the die securely in the slot, retighten the two cap screws. Repeat on the other slide block. Check to make sure that the two outer segments on each half are free to move. If they do not move freely, remove and inspect the guide blocks for damage.
NOTE: The guide blocks have a raised pad that clamps the center die segment. If the pad is damaged, the dies will not operate as intended. The pad side of the guide block must face the dies.
8. Install proper locator.
9. Insert the hose into the fitting making sure that the hose appears in the small inspection hole on the side or end of the ferrule.
CAUTION: If the hose does not appear in the inspection hole, a poor crimp may result.
WARNING: **Keep hands clear of the crimp jaws. This machine develops 10,000 pounds of force and can inflict serious personal injury if not used properly.**
10. Place the assembly into the crimper and hold it against the locator. When the crimp dies are bottomed out, there will be an audible change in the tone of the pump. This insures that the dies are fully closed before the slide blocks bottom out.

11. Inspect the first crimp to make sure that the correct dies were used, the crimp location is correct, the crimp is uniform and there is no internal deformation of the fitting.

NOTE: Some hose materials trap air in the hose layers during manufacture. When leak testing a newly pressurized hose using soap bubbles or water submersion, the air in the hose will bleed out at the fitting and hose interface indicating a false leaking condition. Leave the hose pressurized for one hour and retest. The residual air should completely bleed out and no leak will be visible.

CRIMPER MAINTENANCE

1. Clean and lubricate all moving parts. Use Teflon grease or equivalent as needed when lubricating.
2. Check hydraulic oil level in reservoir. Fill to within 1-2" of the top using 215 SSU @100 F. hydraulic oil.
3. Check for worn or torn die carriers. Replace when crimp appears to go out of round.
4. Inspect woodruff keys. Replace if they are damaged or missing to insure good crimps.

TROUBLE SHOOTING

PROBLEM	CAUSE	ACTION
1. Oblong or irregular crimp	<ul style="list-style-type: none"> * Worn carriers * One die segment in the set is the wrong size * Woodruff key missing * Guide blocks installed backwards 	<ul style="list-style-type: none"> * Replace carriers * Check all segments for correct size on back of die * Replace key * Turn guide blocks around so raised pad clamps on die
2. Crimp diameter too large	<ul style="list-style-type: none"> * Crimper not fully closed-refer to instructions * Incorrect size dies 	<ul style="list-style-type: none"> * Re-crimp until dies fully close * Replace with correct size
3. Crimp diameter too small	<ul style="list-style-type: none"> * Incorrect size dies 	<ul style="list-style-type: none"> * Replace with correct size
4. Crimp location too close to closed end of ferrule	<ul style="list-style-type: none"> * Ferrule not inserted far enough into crimper 	<ul style="list-style-type: none"> * Use locator to properly locate ferrule position
5. Crimp location too close to hose	<ul style="list-style-type: none"> * Ferrule inserted too far into crimper (past locator) 	<ul style="list-style-type: none"> * Use locator to properly locate ferrule position
6. Crimped fitting leaks when tested with soap bubbles	<ul style="list-style-type: none"> * Air trapped in the hose during manufacture * Insufficient crimp * Hose wall thickness is undersize (see chart) * Fitting is defective 	<ul style="list-style-type: none"> Recheck after system has been charged for one hour - air will bleed out of the hose * Check crimp diameter * Re-crimp with .020 undersize dies (-J series) * Replace fitting/recrimp
7. Crimped fitting leaks when tested with electronic leak detector	<ul style="list-style-type: none"> * Insufficient crimp * Hose wall thickness is undersize (see chart) * Fitting defective 	<ul style="list-style-type: none"> * Check crimp diameter * Re-crimp with .020 undersize dies (-J series) * Replace fitting/recrimp

Filename: 75173 Rev B.doc
Directory: F:\users\JKHANCOCK\ATCO PICTURES\Crimpers\3600
Crimper
Template: C:\Documents and Settings\ATCO Products\Application
Data\Microsoft\Templates\Normal.dot
Title: INSTRUCTION MANUAL
Subject:
Author: John Clarke
Keywords:
Comments:
Creation Date: 6/21/2005 12:43:00 PM
Change Number: 2
Last Saved On: 6/21/2005 12:43:00 PM
Last Saved By: Jennifer K. Hancock
Total Editing Time: 1 Minute
Last Printed On: 6/21/2005 12:43:00 PM
As of Last Complete Printing
Number of Pages: 5
Number of Words: 1,291 (approx.)
Number of Characters: 7,361 (approx.)