

The Eaton logo is displayed in white on a blue background. It features the word "EATON" in a bold, sans-serif font, with a stylized "E" and "O" that are interconnected.The Weatherhead logo is displayed in white on a blue background. It features the word "Weatherhead" in a bold, sans-serif font.

**Air Conditioning Products**  
Technical Manual



**WEATHERHEAD®**

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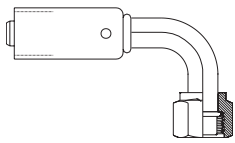
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## Hose

H757 Air Conditioning  
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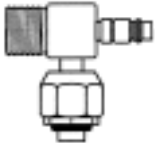
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## Hose Ends

757 'E' Series Coll-O-Crimp® Hose Ends

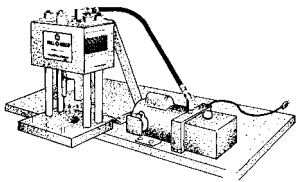
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# Application Data

## Important Safety Information



### WARNING

#### Selection of Hose

Selection of the proper Weatherhead hose for the application is essential to the proper operation and safe use of the hose and related equipment. Inadequate attention to selection of the hose for your application can result in hose leakage, bursting, or other failure which can cause serious bodily injury or property damage from spraying fluids or flying projectiles. In order to avoid serious bodily injury or property damage resulting from selection of the wrong hose, you should carefully review the information in this catalog. Some of the factors which are involved in the selection of the proper hose are:

- hose size
- hose length
- hose ends
- fluid conveyed
- bends
- temperature
- hose pressure
- static head pressure
- installation design

These factors and the other information in this catalog should be considered by you in selecting the proper hose for your application. Further information on proper hose selection is described in SAE Recommended Practice J1273.

If you have any questions regarding the proper hose for your application, please contact Eaton at 1-888-258-0222.

#### Proper Selection of Hose Ends

Selection of the proper Weatherhead end fittings for the hose end application is essential to the proper operation and safe use of the hose and related equipment. Inadequate attention to the selection of the end fittings for your application can result in hose leakage, bursting, or other failure which can cause serious bodily injury or property damage from spraying fluids or flying projectiles. In order to avoid serious bodily injury or property damage resulting from selection of the wrong end fitting, you should carefully review the information in this catalog. Some of the factors which are involved in the selection of the proper hose ends are:

- fluid compatibility
- temperature
- installation design
- hose size
- corrosion requirements
- fluid conveyed

These factors and the other information in this catalog should be considered by you in selecting the proper hose end fitting for your application.

If you have any questions regarding the proper hose end for your application, please contact Eaton at 1-888-258-0222.

#### Hose Installation

Proper installation of the hose is essential to the proper operation and safe use of the hose and related equipment. Improper installation of the hose can result in serious injury or property damage caused by spraying fluids or flying projectiles. In order to avoid serious bodily injury or property damage resulting from improper installation of the hose, you should carefully review the information in this catalog regarding hose installation. Some of the factors you must consider in installing the hose properly are:

- changes in length
- proper bend radius
- protection from
- elbows and adapters to relieve strain high temperature sources
- rubbing or abrasion
- twisting
- improper hose movement

These factors and the other information in this catalog regarding hose installation should be considered by you before installing the hose. Further information on proper hose installation is described in SAE Recommended Practice J1273.

If you have any questions regarding proper hose installation, please contact Eaton at 1-888-258-0222.

# Application Data

## Important Safety Information



### WARNING

#### Hose Maintenance

Proper maintenance of the hose is essential to the safe use of the hose and related equipment. Hose should be stored in a dry place. Hose should also be visually inspected. Any hose that has a cut or gouge in the cover that exposes the reinforcement should be retired from service. Hoses should also be inspected for kinking or broken reinforcement. If the outside diameter of the hose is reduced by 20% at the spot where it is kinked then the hose should be retired from service. Inadequate attention to maintenance of the hose can result in hose leakage, bursting, or other failure which can cause serious bodily injury or property damage from spraying fluids, flying projectiles, or other substances. Further information on proper hose maintenance is described in SAE Recommended Practice J1273.

#### Hose and Field Attachable Hose Ends

Weatherhead Hose and Field Attachable Hose Ends have been engineered and designed as a complete hose assembly system. Component compatibility along with the use of high quality components ensures the production of reliable hose assemblies when assembled properly. The use or intermixing of ends and hose not specifically engineered and designed for use with each other may result in the production of unsafe or unreliable hose assemblies. This can result in hose assembly leakage, hose separation or other failures which can cause serious bodily injury or property damage from spraying fluids, flying projectiles, or other substances. The Weatherhead warranty is limited to apply only when Weatherhead Field Attachable Hose Ends are used on compatible Weatherhead hose.

#### Coll-O-Crimp Hose, Hose Ends and Assembly Equipment Compatibility

The Coll-O-Crimp Equipment Package, Coll-O-Crimp Hose Ends and Coll-O-Crimp Hose have been engineered and designed as a complete hose assembly system. Each component of the Coll-O-Crimp hose assembly system is compatible with other Coll-O-Crimp components to which it relates. Component compatibility, along with the use of high quality components, ensures the production of reliable hose assemblies when assembled properly. The use or intermixing of fittings and hose not specifically engineered and designed for use with each other and Coll-O-Crimp equipment is not recommended and may result in the production of unsafe or unreliable hose assemblies. This can result in hose assembly leakage, hose separation or other failures which can cause serious bodily injury or property damage from spraying fluids, flying projectiles, or other substances. The Weatherhead warranty is limited to apply only when Coll-O-Crimp Hose Ends and compatible Coll-O-Crimp Hose are used with Coll-O-Crimp assembly equipment.

# Application

## Data

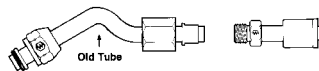
### Hose Assembly

The Coll-O-Crimp system can be used to make original equipment assemblies using factory replacement ends as listed on pages 5-9. If the required hose end is not found, our flareless hose end can be used. By following the instructions on this page, a new hose assembly can be made by combining the Weatherhead hose end with the original equipment end configuration.

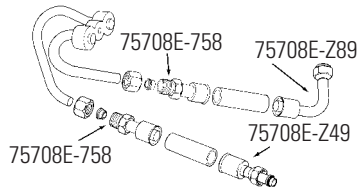
Typical original equipment assembly.



Typical assembly of a flareless hose end used with an old original equipment end configuration.



Weatherhead replacement assemblies using original equipment tubing with Weatherhead 757 'E' Series hose ends



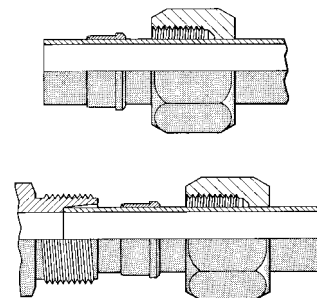
#### Preparation for Tube Repair

1. Cut tube squarely with a tube cutter as close to the hose connection as possible. Allow an adequate straight area for the presetting operation. Deburr the tubing with an inner-outer reamer.



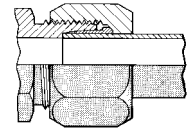
#### Presetting Operation

1. Slide nut and then sleeve onto tube. Shoulder of sleeve must be toward nut.
2. Insert tube into tube fitting or presetting tool. Be sure that tube is bottomed on fitting tube stop. Lubricate threads, seat of fitting and shoulder of sleeve with a good grade of lubricant.
3. Tighten nut slowly with wrench while turning tube with other hand. When the sleeve grips and can no longer be turned by hand – stop – and note position of the wrench. This is the 'ring grip' point. Tighten nut an additional 1 to 1-1/6 turns past the ring grip point.
4. If the presetting was done in the fitting body, the fitting assembly is ready for use. If the preset tool was used, follow the installation procedure below.



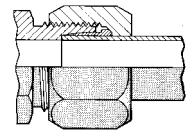
#### Installation

1. After sleeve and nut have been preset on the tubing as described, the assembly is ready for installation in the Ermeto® fitting seat.
2. Lubricate threads, seat of fitting and shoulder of sleeve with a good grade of lubricant compatible with system fluid.
3. Insert tube assembly into fitting and tighten nut until sharp rise in torque is felt.
4. Starting at the position of sharp torque rise, tighten nut 1/4 turn to complete assembly.



#### Re-Installation

1. Insert tube assembly into fitting and tighten nut until sharp rise in torque is felt.
2. Starting at the position of sharp torque rise, tighten nut 1/4 turn to complete assembly.



# Hose

## Air Conditioning

### H757 Air Conditioning Hose



#### SAE J2064 Type C Class I Typical Applications

A refrigerant hose recommended for R134a and R12 applications. Ideal for heavy duty truck use as well as industrial and automotive applications.

#### Inner Tube

Rubber/Nylon/Rubber

#### Reinforcement

1 Fiber Braid

#### Cover

Butyl (perforated)

#### Temperature Range

-22°F to +257°F  
(-30°C to +125°C)

#### Nominal Crimp Diameter Measurement

Measuring crimp diameters should be a part of the normal hose assembly procedure. To ensure a proper crimp diameter reading follow these steps:

1. Measure the diameter in the middle of crimped portion of the hose end.
2. Place the caliper in a position to allow a measurement across the pressed (flat) portion of the crimp.
3. See crimp diameters on chart to the right.

#### HOSE END AND TOOL SELECTOR CHART

Hose Catalog Number	Hose I.D.	Hose O.D.	Working Pressure (PSI)	Minimum Burst Pressure (PSI)	Minimum Bend Radii	Weight Per 100 Ft.	Available Lengths	Hose Ends
H75706	5/16	9/16	400	2000	2	10	50'	75706E
H75708	13/32	11/16	400	2000	2-1/2	12	50'	75708E
H75710	1/2	3/4	350	1750	3	13	50'	75710E
H75712	5/8	15/16	350	1750	4	23	50'	75712E



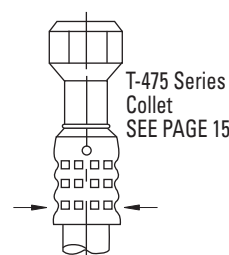
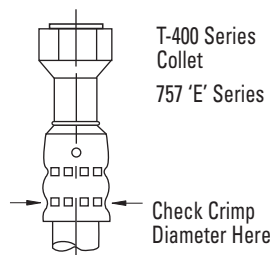
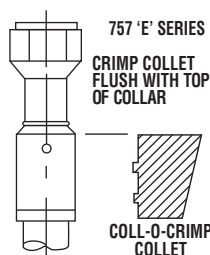
#### WARNING

Proper Selection of Hose Ends:  
See page 3 prior to assembling 757 'E' series hose ends to Weatherhead H757 hose.



#### WARNING

Coll-O-Crimp Hose, Hose Fittings and Assembly Equipment Compatibility:  
See page 4 prior to assembling 757 'E' series hose ends to Weatherhead H757 hose.



#### COLL-O-CRIMP CRIMPING PROCEDURE

Hose Type	Hose I.D.	Hose End Prefix	Collet Number	Spacer Ring Color	Flat Side	Nominal Crimp Diameter
H75706	5/16	75706E	T-400-105C	Black	Down	0.495
H75708	13/32	75708E	T-400-106C	Black	Down	0.595
H75710	1/2	75710E	T-400-107C	Black	Down	0.695
H75712	5/8	75712E	T-400-108C	Black	Down	0.850

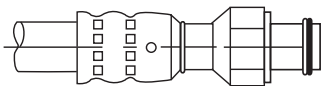
#### CRIMP SPECIFICATIONS WHEN USING T-475 CRIMP SYSTEM

Hose Type	Hose I.D.	Hose End Prefix	Collet Number	Die I.D. Marking	Collet Color	Nominal Crimp Diameter
H75706	5/16	75706E	T-475-105C	556	Brown	0.556
H75708	13/32	75708E	T-475-106C	640	Purple	0.640
H75710	1/2	75710E	T-475-107C	742	Almond	0.742
H75712	5/8	75712E	T-475-108C	897	White	0.897

When using T-475 system, the bubble style crimp will have three annular rings compared to two when crimped with the T-400 series collets. SEE PAGE 15

# Hose Ends

## 757 'E' Series



### Hose End Series

757 'E' Series

### Typical Applications

Used with R134a and R12 air conditioning and refrigerant applications. Ideal for heavy duty truck use as well as industrial and automotive applications.

### Compatible Hose

H757

### Pressure

Determined by hose burst pressure.

### Material

Carbon steel

### Plating

Black; zinc cobalt finish

### Advantages

Wide selection of hose ends which include the flareless ends, allowing use of existing tubing. Steel hose ends handle heavy duty demands.

### Assemble With

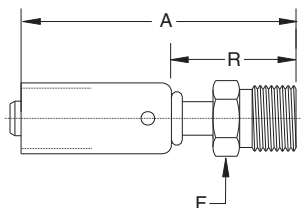
T-400-1, T-420-1, T-440-1, T-460, T-462, T-465-1, T-475-1, T-480.

### Ordering Information

Order individually by catalog number.

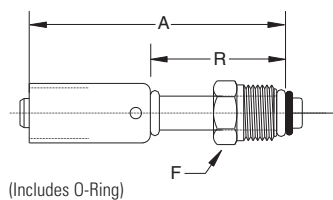
### Note

Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.



### BUMPED TUBE O-RING MALE RIGID

Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Run R	Cut-Off Factor†	Hex F
5/16	3/8	75706E-W06	5/8-18	2.94	1.54	1-5/8	5/8
13/32	1/2	75708E-W08	3/4-16	3.26	1.86	2	3/4
1/2	5/8	75710E-W10	7/8-14	3.35	1.95	2-1/8	7/8
5/8	5/8	75712E-W10	7/8-14	3.56	2.06	2-1/4	7/8
5/8	3/4	75712E-W12	1-1/16-14	3.56	2.06	2-1/4	1-1/16



### BUMPED TUBE O-RING MALE SWIVEL

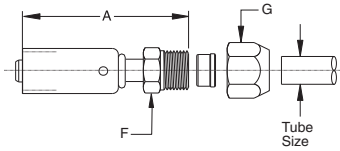
Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Run R	Hose Cut-Off Factor†	Hex F	O-Ring
5/16	3/8	75706E-Z06	5/8-18	2.94	1.54	1-5/8	5/8	ZW74706
5/16	1/2	75706E-Z08	3/4-18	3.15	1.75	1-7/8	3/4	ZW74708
13/32	1/2	75708E-Z08	3/4-18	3.26	1.86	2	3/4	ZW74708
1/2	5/8	75710E-Z10	7/8-18	3.35	1.95	2-1/8	7/8	ZW74710
1/2	3/4	75710E-Z12	1-1/16-16	3.46	2.06	2-1/4	1-1/16	ZW74712
5/8	5/8	75712E-Z10	7/8-18	3.56	2.06	2-1/4	7/8	ZW74710
5/8	3/4	75712E-Z12	1-1/16-16	3.56	2.06	2-1/4	1-1/16	ZW74712

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of the assembly. All dimensions shown in inches.



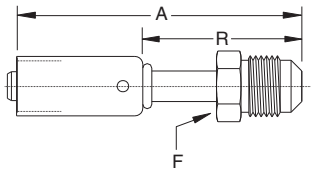
# Hose Ends

## 757 'E' Series



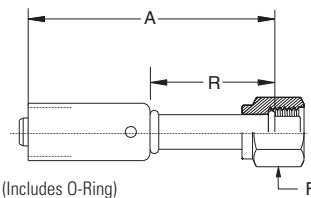
### FLARELESS TUBE RIGID (WITH NUT AND SLEEVE)

Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Hose Cut-Off Factor†	Hex F	Hex G
5/16	3/8	75706E-756	5/8-18	2.59	1-3/8	5/8	3/4
5/16	1/2	75706E-758	3/4-16	2.71	1-1/2	3/4	7/8
13/32	3/8	75708E-756	5/8-18	2.65	1-3/8	5/8	3/4
13/32	1/2	75708E-758	3/4-16	2.78	1-1/2	3/4	7/8
13/32	5/8	75708E-760	7/8-14	2.90	1-5/8	7/8	1-1/16
1/2	1/2	75710E-758	3/4-16	2.84	1-5/8	3/4	7/8
1/2	5/8	75710E-760	7/8-14	2.90	1-5/8	7/8	1-1/16
5/8	5/8	75712E-760	7/8-14	3.13	1-3/4	7/8	1-1/16
5/8	3/4	75712E-762	1-1/16-14	3.25	1-7/8	1-1/16	1-1/4



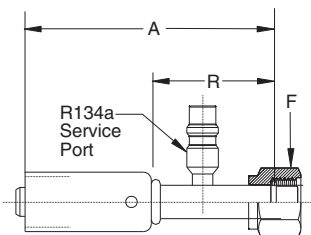
### SAE 45° MALE RIGID

Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Run R	Hose Cut-Off Factor†	Hex F
5/16	3/8	75706E-306	5/8-18	3.28	1.88	2	5/8
13/32	1/2	75708E-308	3/4-16	3.40	2.00	2-1/8	3/4
1/2	5/8	75710E-310	7/8-14	3.71	2.31	2-1/2	7/8
5/8	3/4	75712E-312	1-1/16-14	4.00	2.50	2-3/4	1-1/16



### BUMPED TUBE O-RING FEMALE SWIVEL

Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Run R	Hose Cut-Off Factor†	Hex F	O-Ring
5/16	3/8	75706E-Z47	5/8-18	2.78	1.38	1-1/2	3/4	ZW74706
5/16	1/2	75706E-Z49	3/4-16	2.90	1.50	1-5/8	7/8	ZW74708
13/32	1/2	75708E-Z49	3/4-16	3.06	1.66	1-3/4	7/8	ZW74708
13/32	5/8	75708E-Z51	7/8-14	3.09	1.69	1-7/8	1-1/16	ZW74710
1/2	5/8	75710E-Z51	7/8-14	3.09	1.69	1-7/8	1-1/16	ZW74710
1/2	3/4	75710E-Z53	1-1/16-14	3.21	1.81	2	1-1/4	ZW74712
5/8	5/8	75712E-Z51	7/8-14	3.31	1.81	2	1-1/16	ZW74710
5/8	3/4	75712E-Z53	1-1/16-14	3.31	1.81	2	1-1/4	ZW74712



### BUMPED TUBE O-RING FEMALE SWIVEL WITH R134a SERVICE PORT

Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Run R	Hose Cut-Off Factor†	Hex F	O-Ring
5/16	3/8	75706E-Z57*	5/8-18	4.28	1.88	3	3/4	ZW74706
13/32	1/2	75708E-Z59*	3/4-16	4.28	1.88	3	7/8	ZW74708
1/2	5/8	75710E-Z61**	7/8-14	4.52	2.12	3-1/4	1-1/16	ZW74710
5/8	3/4	75712E-Z61**	7/8-14	4.62	3.05	3-1/4	1-1/16	ZW74710

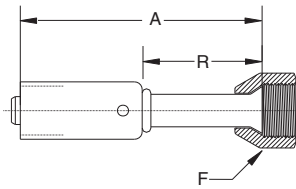
† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of the assembly.  
All dimensions shown in inches.

\* High Side Port \*\* Low Side Port



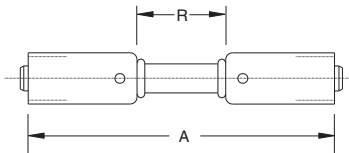
# Hose Ends

## 757 'E' Series



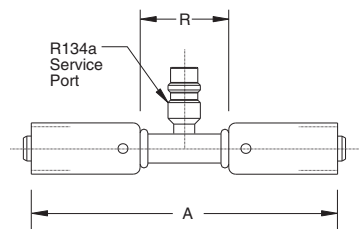
### SAE 45° FLARE FEMALE SWIVEL

Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Run R	Hose Cut-Off Factor†	Hex F
5/16	3/8	75706E-406	5/8-18	2.78	1.38	1-1/2	3/4
5/16	1/2	75706E-408	3/4-16	2.90	1.50	1-3/4	7/8
13/32	1/2	75708E-408	3/4-16	2.84	1.44	1-9/16	7/8
1/2	5/8	75710E-410	7/8-14	3.09	1.69	1-13/16	1-1/16
5/8	5/8	75712E-410	7/8-14	3.25	1.75	2	1-1/16
5/8	3/4	75712E-412	1-1/16-14	3.25	1.75	2	1-1/4



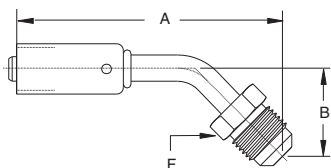
### HOSE SPLICER

Hose I.D.	Tube Size	Catalog Number	Length A	Run R	Hose Cut-Off Factor†
5/16	5/16	75706E-Y36	4.30	1.50	1-1/2
13/32	13/32	75706E-Y38	4.30	1.50	1-1/2
1/2	1/2	75710E-Y40	4.43	1.63	1-5/8
5/8	5/8	75712E-Y41	4.75	1.75	1-3/4
5/16	13/32	75706E-Y38	4.30	1.50	1-1/2
13/32	1/2	75708E-Y40	4.43	1.63	1-5/8
1/2	5/8	75710E-Y41	4.65	1.75	1-3/4



### HOSE SPLICER WITH R134a SERVICE PORT

Hose I.D.	Tube Size	Catalog Number	Length A	Run R	Hose Cut-Off Factor†
5/16	5/16	75706E-Y47*	5.42	2.62	1-1/2
13/32	13/32	75708E-Y48*	5.42	2.62	1-1/2
1/2	1/2	75710E-Y49**	5.42	2.62	1-5/8
5/8	5/8	75712E-Y50**	5.62	2.62	1-3/4



### SAE 45° FLARE MALE RIGID 45° TUBE ELBOW

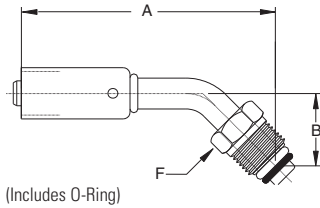
Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Run R	Drop B	Hose Cut-Off Factor†	Hex F
13/32	1/2	75708E-388	3/4-16	3.65	2.25	1.25	2-1/2	3/4
1/2	5/8	75710E-390	7/8-14	4.21	2.81	1.56	3	7/8

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of the assembly. All dimensions shown in inches.

\* High Side Port \*\* Low Side Port

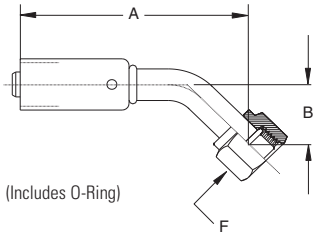
# Hose Ends

## 757 'E' Series



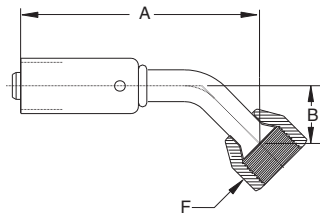
### BUMPED TUBE O-RING MALE SWIVEL 45° ELBOW

Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Run R	Hose Cut-Off Factor†	Hex F	O-Ring
5/16	3/8	75706E-Z26	5/8-18	3.09	0.88	1-7/8	5/8	ZW74706
13/32	1/2	75708E-Z28	3/4-18	3.59	1.03	2-3/8	3/4	ZW74708
1/2	5/8	75710E-Z30	7/8-18	3.71	1.06	2-1/2	7/8	ZW74710
5/8	5/8	75712E-Z30	7/8-18	4.19	1.19	2-7/8	7/8	ZW74710
5/8	3/4	75712E-Z32	1-1/16-16	4.19	1.19	2-7/8	1-1/16	ZW74712



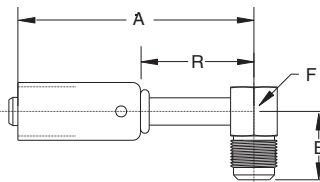
### BUMPED TUBE O-RING FEMALE SWIVEL 45° ELBOW

Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Run R	Hose Cut-Off Factor†	Hex F	O-Ring
5/16	3/8	75706E-W47	5/8-18	3.51	0.68	2-1/4	3/4	ZW74706
13/32	1/2	75708E-W49	3/4-16	3.63	1.05	2-1/4	7/8	ZW74708
1/2	5/8	75710E-W51	7/8-14	3.65	1.19	2-1/2	1-1/16	ZW74710
5/8	5/8	75712E-W51	7/8-14	4.00	1.29	2-3/4	1-1/16	ZW74710
5/8	3/4	75712E-W53	1-1/16-14	3.84	0.94	2-1/2	1-1/4	ZW74712



### SAE 45° FLARE FEMALE SWIVEL 45° ELBOW

Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Drop B	Hose Cut-Off Factor†	Hex F
5/16	3/8	75706E-486	5/8-18	3.42	0.55	2	3/4
13/32	1/2	75708E-488	3/4-16	3.72	0.58	2-1/2	7/8
1/2	5/8	75710E-490	7/8-14	4.34	0.72	3	1-1/16
5/8	5/8	75712E-490	7/8-14	5.00	1.00	3-1/2	1-1/16
5/8	3/4	75712E-492	1-1/16-14	4.44	0.72	3	1-1/4



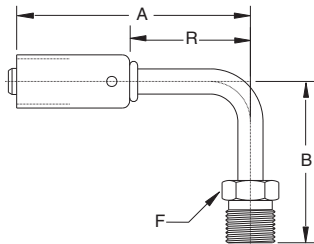
### SAE 45° MALE RIGID 90° ELBOW

Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Run R	Drop B	Hose Cut-Off Factor†	Hex F
5/16	3/8	75706E-X06	5/8-18	4.07	2.67	0.91	3	5/8
13/32	1/2	75708E-X08	3/4-16	4.14	2.74	1.47	3	7/8
1/2	5/8	75710E-X10	7/8-14	4.25	2.85	1.47	3	7/8
5/8	3/4	75712E-X12	1-1/16-14	4.45	2.95	1.56	3	1-1/16

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of the assembly.  
All dimensions shown in inches.

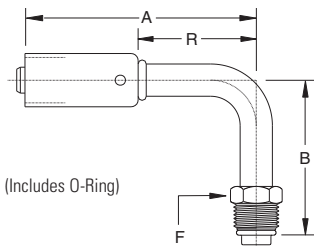
# Hose Ends

## 757 'E' Series



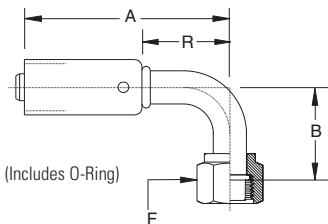
### BUMPED TUBE O-RING MALE RIGID 90° ELBOW (MATES WITH FEMALE SWIVEL)

Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Run R	Drop B	Hose Cut-Off Factor†	Hex F
5/16	3/8	75706E-WV66	5/8-18	4.00	2.60	1.53	2-3/4	5/8
13/32	1/2	75708E-WV68	3/4-16	4.07	2.67	2.12	2-3/4	3/4
1/2	5/8	75710E-WV70	7/8-14	4.15	2.75	2.21	2-7/8	7/8



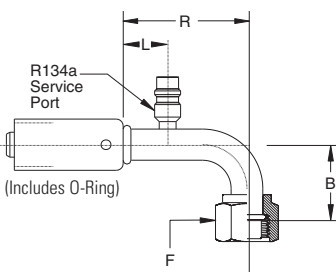
### BUMPED TUBE O-RING MALE SWIVEL 90° ELBOW

Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Run R	Drop B	Cut-Off Factor†	Hose Hex F	O-Ring
5/16	3/8	75706E-Z66	5/8-18	4.00	2.60	1.53	2-3/4	5/8	ZW74706
5/16	1/2	75706E-Z68	3/4-18	4.07	2.67	1.53	2-3/4	3/4	ZW74708
13/32	3/8	75708E-Z66	5/8-16	4.00	2.60	1.77	2-3/4	5/8	ZW74706
13/32	1/2	75708E-Z68	3/4-18	4.07	2.67	2.12	2-3/4	3/4	ZW74708
1/2	5/8	75710E-Z70	7/8-18	4.15	2.75	2.21	2-7/8	7/8	ZW74710
1/2	3/4	75710E-Z72	1-1/16-16	4.25	2.85	2.35	3	1-1/16	ZW74712
5/8	5/8	75712E-Z70	7/8-18	4.24	2.74	2.25	2-7/8	7/8	ZW74710
5/8	3/4	75712E-Z72	1-1/16-16	4.35	2.85	2.87	3	1-1/16	ZW74712



### BUMPED TUBE O-RING FEMALE SWIVEL 90° ELBOW

Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Run R	Drop B	Cut-Off Factor†	Hose Hex F	O-Ring
5/16	3/8	75706E-Z87	5/8-18	4.07	2.67	1.12	2-3/4	3/4	ZW74706
5/16	1/2	75706E-Z89	3/4-16	4.14	2.74	1.31	2-7/8	7/8	ZW74708
13/32	3/8	75708E-Z87	5/8-18	4.07	2.67	1.31	2-3/4	3/4	ZW74706
13/32	1/2	75708E-Z89	3/4-16	4.14	2.74	1.50	2-7/8	7/8	ZW74708
1/2	5/8	75710E-Z91	7/8-14	4.25	2.85	1.75	3	1-1/16	ZW74710
5/8	5/8	75712E-Z91	7/8-14	4.35	2.85	1.75	3	1-1/16	ZW74710
5/8	3/4	75712E-Z93	1-1/16-14	4.45	2.95	1.75	3-1/8	1-1/4	ZW74712



### BUMPED TUBE O-RING FEMALE SWIVEL 90° ELBOW WITH R134a SERVICE PORT

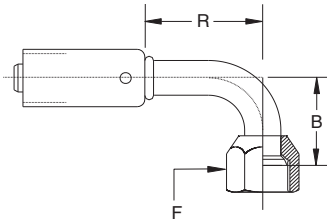
Hose I.D.	Tube Size	Catalog Number	Thread Size	Run R	Drop B	Cut-Off Factor†	Hose Hex F	Length L	O-Ring
5/16	3/8	75706E-Z97*	5/8-18	2.12	1.12	2-3/4	3/4	1.50	ZW74706
13/32	1/2	75708E-Z99*	3/4-16	2.75	1.68	2-7/8	7/8	1.50	ZW74708
1/2	5/8	75710E-Z01**	7/8-14	2.38	1.50	3	1-1/16	1.50	ZW74710
5/8	5/8	75712E-Z01**	7/8-14	3.11	1.95	3	1-1/16	1.50	ZW74710

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of the assembly.  
All dimensions shown in inches.

\* High Side Port \*\* Low Side Port

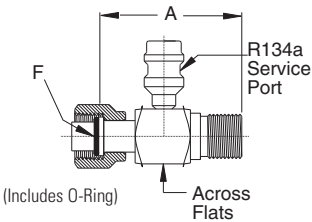
# Hose Ends

## 757 'E' Series



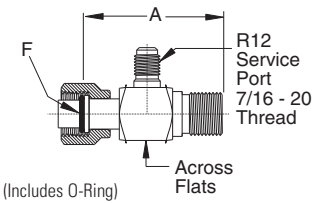
### SAE 45° FLARE FEMALE SWIVEL 90° ELBOW

Hose I.D.	Tube Size	Catalog Number	Thread Size	Run R	Drop B	Cut-Off Factor†	Hose Hex F
5/16	3/8	75706E-466	5/8-18	2.67	1.12	2-3/4	3/4
13/32	1/2	75708E-468	3/4-16	2.74	1.31	2-7/8	7/8
1/2	5/8	75710E-470	7/8-14	2.85	1.56	3	1-1/16
5/8	5/8	75712E-470	7/8-14	2.85	1.50	3	1-1/16
5/8	3/4	75712E-472	1-1/16-14	2.95	1.75	3-1/8	1-1/4



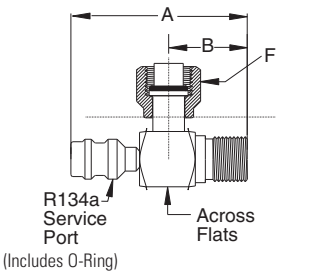
### BUMPED TUBE O-RING ADAPTER WITH R134a SERVICE PORT

Tube Size	Catalog Number	Thread Size	Length A	Across Flats	Hex F	O-Ring
3/8	75701*	5/8-18	2.02	5/8"	3/4	ZW74706
1/2	75702*	3/4-16	2.22	7/8	7/8	ZW74708
5/8	75704**	7/8-14	2.63	7/8	1-1/16	ZW74710
3/4	75706**	1-1/16-14	2.89	1-1/16	1-1/4	ZW74712



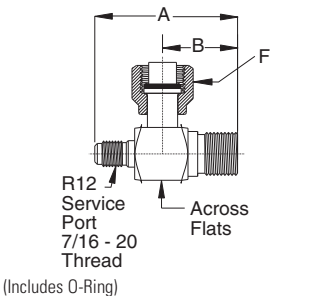
### BUMPED TUBE O-RING ADAPTER WITH R12 SERVICE PORT

Tube Size	Catalog Number	Thread Size	Length A	Across Flats	Hex F	O-Ring
3/8	R12-Z56	5/8-18	2.02	5/8"	3/4	ZW74706
1/2	R12-Z58	3/4-16	2.22	7/8	7/8	ZW74708
5/8	R12-Z60	7/8-14	2.63	7/8	1-1/16	ZW74710
3/4	R12-Z62	1-1/16-14	2.89	1-1/16	1-1/4	ZW74712



### 90° BUMPED TUBE O-RING ADAPTER WITH R134a SERVICE PORT

Tube Size	Catalog Number	Thread Size	Length A	Drop B	Across Flats	Hex F	O-Ring
3/8	75729*	5/8-18	2.46	1.05	5/8"	3/4	ZW74706
1/2	75730*	3/4-16	2.66	1.15	7/8	7/8	ZW74708
5/8	75731**	7/8-14	2.80	1.30	7/8	1-1/16	ZW74710
3/4	75732**	1-1/16-14	3.16	1.39	1-1/16"	1-1/4	ZW74712



### 90° BUMPED TUBE O-RING ADAPTER WITH R12 SERVICE PORT

Tube Size	Catalog Number	Thread Size	Length A	Drop B	Across Flats	Hex F	O-Ring
3/8	R12-Z96	5/8-18	2.07	1.05	5/8"	3/4	ZW74706
1/2	R12-Z97	3/4-16	2.27	1.15	7/8	7/8	ZW74708
5/8	R12-Z98	7/8-14	2.41	1.30	7/8	1-1/16	ZW74710
3/4	R12-Z99	1-1/16-16	2.77	1.39	1-1/16"	1-1/4	ZW74712

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of the assembly.

All dimensions shown in inches.

\* High Side Port \*\* Low Side Port †Has body machined from hex stock

# Hose Ends

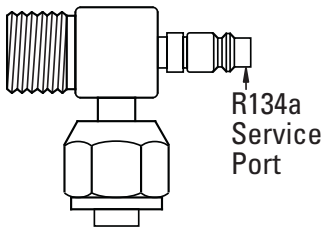
## 757 'E' Series



### REPLACEMENT O-RINGS

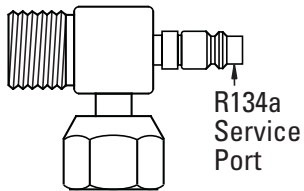
Tube O.D.	Catalog Number
3/8	ZW74706
1/2	ZW74708
5/8	ZW74710
3/4	ZW74712

Material: Nitrile, 70 Durometer. Temperature Range: -40°F to +250°F (-40°C to +121°C). Color: Green.



### TUBE-O TO MALE BUMPED TUBE O-RING 90° ELBOW WITH R134a SERVICE PORT

Tube-O Thread	Tube Size	Catalog Number
1-14	1/2	75750
1-14	5/8	75751



### ROTALOK TO MALE BUMPED TUBE O-RING 90° ELBOW WITH R134a SERVICE PORT

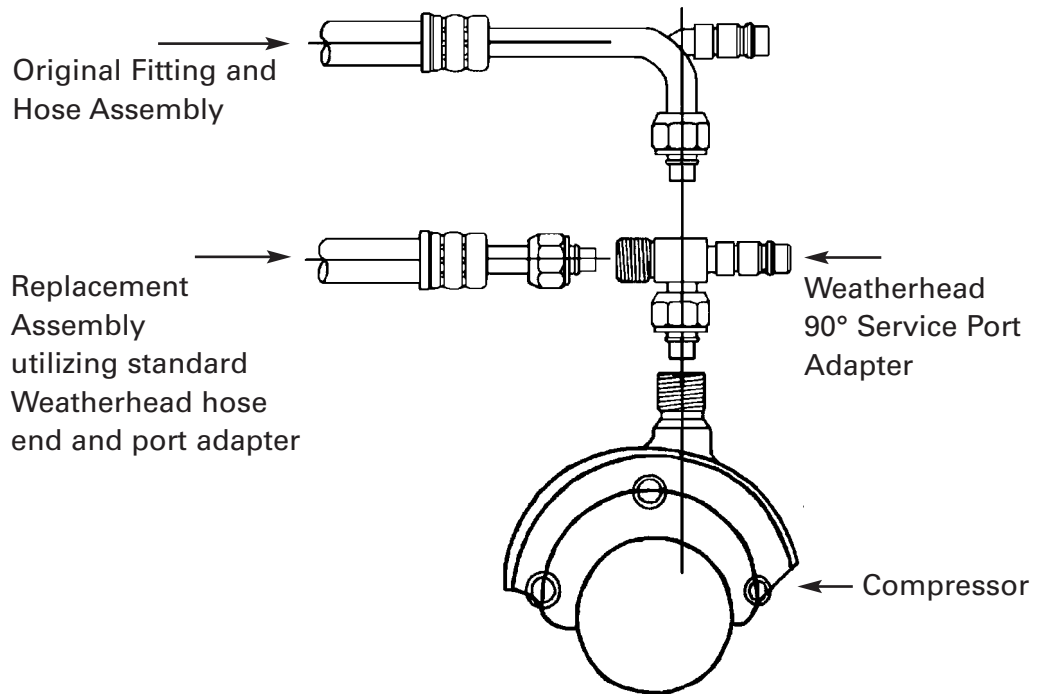
Rotalok Thread	Tube Size	Catalog Number
1-14	1/2	75760
1-14	5/8	75761

# Hose Ends

## 757 'E' Series Port Adapters

### Service Instructions for Replacement of Damaged O.E. Hose Assemblies

Weatherhead service port adapters offer an alternative to the high cost of replacement and time out of service which can occur when an air conditioning assembly is damaged. By using the Weatherhead adapter, service personnel can remove the damaged end and replace it with a standard Weatherhead 757 'E' series hose end used in conjunction with a Weatherhead service port adapter. This is a welcome solution to get your customer back on the road without special orders and long delays.



# Equipment

## Tubing and Hose Tools



### T-135 Plastic Tube and Hose Cutter

An economical alternative for high quality tube and hose cutting. This versatile tool is lightweight and durable for long service life.

### Replacement Blade

T-135B

### Note

Not for use with wire-reinforced hose.



### T-138 Hose and Tube Cutter

One-hand operation for quick, clean cuts through plastic or nylon tubing and solid or fiber-reinforced hose up to 1-1/2" O.D.

- Any wireless hose or tubing
- Power steering hose (H324)

- Air conditioning hose (H757)
- Air brake hose (H338).
- Air system nylon tubing (NT100)
- Thermoplastic hose (H435, H436)
- Low pressure plastic tubing (PT200, PT230, PT240)

### Replacement Blade

T-138B

### Note

Not for use with wire-reinforced hose.



### T-150 Utility Tube Cutter

Need to cut stainless steel tubing? This cutting tool is for you. It features an enclosed feed screw to eliminate clogging and jamming. Grooved rolls for close to flare cuts and a fold away reamer.

### Capacity

1/8" to 1-1/8" O.D. Cuts hard and soft copper, aluminum, brass, carbon steel and stainless steel tubing.

### Spare Parts

T-1422R Replacement Cutting Wheel



### T-1430 Inner-Outer Reamer

Reams both inside and outside edges of tube with three hollow ground tool steel cutters. Fluted body is shaped to fit comfortably in palm of hand.

### Capacity

3/16" to 1-1/2" O.D. Reams copper, brass, aluminum and other tubing.



# Equipment

## T-475-1 Crimping Procedure



### Model T-475 Portable Air Conditioning Hose Crimping Kit

- Engineered and designed specifically for use with 757 'E' Series Hose End Fittings
- Portable, hand operation
- OE style triple bubble crimp
- Heavy duty construction for use with air impact wrench
- Color coded, urethane encased dies
- Easy changeover from size to size
- Crimps 2 braid dimension nylon barrier or reduced diameter hose
- Four standard die sizes – #6, #8, #10, #12
- Capable of crimping under-hood applications
- Lightweight for easy handling (less than 6 lbs)
- Removable die holder accommodates complicated shapes
- Unit can be bench mounted
- Shipped in a custom carrying case with instructions
- No electrical requirements
- U.S. Patent No. 5257525
- Made in U.S.A.

### Operating Instructions for Model T-475-1 Air Conditioning Hose Crimper

#### General

The Model T-475-1 Crimper is a hand-operated hose end crimping unit specifically designed for use with Weatherhead 757 'E' Series hose ends. It is intended for use with Weatherhead H757 Air Conditioning hose.

The longer Weatherhead ferrule and triple bubble crimp of the T-475-1 ensures a superior interface between the hose and the end fittings. In addition, the removable die holder allows for easy access in confined under-hood areas as well as for complicated end shapes.

**Caution:** To ensure high quality crimped hoses, use only Weatherhead 757 'E' Series hose ends with this crimper.

The crimp dies included will crimp Weatherhead 757 'E' Series hose ends onto Weatherhead H757 Air Conditioning hose.

The dies are housed in replaceable, flexible, color-coded polyurethane carriers. (See following crimp die sets on page 21 for part numbers) for easy identification of crimp sizes.

**T-475-105C**  
H75706 Hose  
Brown  
(.556 Crimp Diameter)

**T-475-106C**  
H75708 Hose  
Purple  
(.640 Crimp Diameter)

**T-475-107C**  
H75710 Hose  
Almond  
(.742 Crimp Diameter)

**T-475-108C**  
H75712 Hose  
White  
(.897 Crimp Diameter)

# Equipment

## T-475-1 Crimping Procedure

### Description of Terms

The crimper can be operated with a 1/2" drive air-impact wrench, ratchet or breaker bar. It takes approximately 100 foot pounds of torque to fully close the jaws and achieve a satisfactory crimp. The crimper can be bench mounted using the flange and pipe nipple provided or it can be mounted in a bench vise to stabilize the unit. If the unit is used on the vehicle, it will be necessary to use a 12" minimum long extension to the pipe nipple to counteract the torque while closing the dies. This extension is not provided in the kit.

**Bench Mount:** Bolt the flange to a bench top. Screw the pipe nipple and crimper to the flange plate.

### Impact Wrench (1/2" Drive @ 100 psig max.):

Use a 1" impact socket to drive the movable die holder.

**Caution:** Do not exceed 100 PSIG air pressure on the impact wrench as damage to the wrench and the crimper may result.

**Caution:** Do not continue impacting after the dies are closed. This can cause damage to the crimper.

**Caution:** Care should be taken when reversing the impact so that the die holder does not slam into the crimper body (actuator bar, Item 2\*). Bumpers are provided to minimize damage.

### Ratchet or Breaker Bar:

Use a 1" socket to drive the movable die holder. It will take approximately 100 foot pounds of torque to achieve a full crimp.

### Removable die holder:

The bottom of the crimper can be removed to accommodate special shapes or under-hood crimping. Push the latch plate (Item 21\*) open while holding the removable die holder. Pull the holder off the strain rods.

**Die Change:** With the removable die holder removed, loosen two of the button head screws (Item 12\*) on one side of the die holder. The die will drop out of the holder. Apply grease (Item B\*) to the slide surfaces. Squeeze the outer segments of the die set together and insert the die into the holder **making sure that the woodruff key (Item 14\*) in the center segment snaps fully into the groove in the holder (Refer to Fig. 1)**. While holding the die securely in the slot, retighten the two button head screws. 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 for damaged guide block pad or dirt.

**Caution:** Retention of the woodruff key in the slot while tightening the screws is most important. Failure to do so will result in an irregular crimp and damage to the guide blocks and Woodruff Key (Refer to Fig 2).

**Caution:** It is not necessary to over-tighten the screws. Always use the short hex key wrench provided in order to avoid damage.

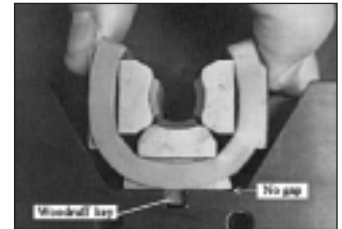


Fig. 1 – Die carrier properly inserted in holder.

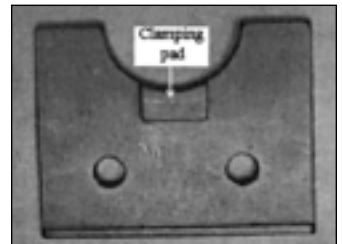


Fig. 2 – Undamaged Pad

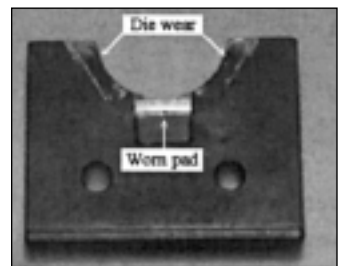


Fig. 2 – Damaged Pad

\* Refer to T-475-1 Crimper Parts List, pg. 22

# Equipment

## T-475-1 Crimping Procedure

### Description of Terms (cont.)

**Die Carrier:** The die carriers will become worn and produce unacceptable crimps with time. To replace the color coded die carriers, simply push the die segment out of the back of the carrier. Reverse the process to assemble die segments in the new carrier.

**Woodruff Key:** The woodruff key is bonded into the slot in the center die segment. It is used to align the dies in the die holders (Refer to Fig. 3).

**Caution:** If the woodruff key is not in the center segment of each half of the die set, an irregular crimp will be formed increasing the probability of leakage.



Fig. 3 – Dies with woodruff keys in place.

**Caution:** Never use dies without woodruff key engaged in the slot of the segment and holder.

To replace the woodruff key, use a screwdriver and hammer to remove the old key. Replace the key using a drop of adhesive such as Loctite® to hold the key securely.

**Locator Flag:** There is a locator flag on the crimper. It is spring loaded and movable to locate the end of the ferrule for proper crimp location. Swivel the flag to a position so that when the fitting is inserted into the crimper, the ferrule will stop in the proper location for crimping.

**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, divide by three to get the average. The average should be the target crimp diameter (+.015/-.005). Example: The #6 size is .556 target crimp diameter. The crimp should measure between .571 and .551 (Refer to Fig 4).

**Hose Wall Thickness:** The hose wall thicknesses for a one-braid dimension hose is listed below. It is important to check the hose wall thickness to make sure that the crimp will be leak free.

### HOSE DIMENSIONS

Hose Size I.D.	Hose O.D.
#6-5/16	9/16
#8-13/32	11/16
#10-1/2	3/4
#12-5/8	15/16



Fig. 4 – Position of tip of micrometer.

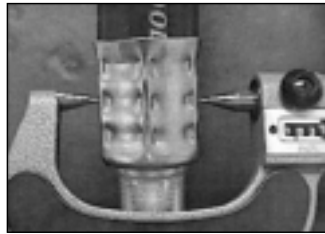


Fig. 4 - Measuring the crimp with a micrometer.

Loctite® is a registered trademark of Loctite Corporation.

# Equipment

## T-475-1 Crimping Procedure

### Operation

1. Mount the crimper as described previously unless it is necessary to crimp on the vehicle.
2. 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 .556 diameter crimp will be marked "556" (Refer to Fig. 3).
3. Lubricate the slides of the crimper die holders (Items 5\* and 17\*) and the screw thread (Item 1\*) with the Teflon® grease or equivalent.
4. Refer to die change outlined above for proper assembly of the dies into the crimper.
5. Position the locator flag (Item 8\*) so the ferrule of the fitting bumps it on the side when inserted into the crimper.

**Caution:** Do not locate from the bead on the fitting. This will result in the wrong crimp location.

6. 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.

7. Place the assembly into the crimper and hold it against the locator flag. Only the ferrule should touch the flag. Operate the screw (Item 1\*) to close the dies to the full closed position. This will provide the proper compression to achieve a leak free crimp. When the crimp dies are bottomed out, there will be a slight gap between the two die holders (Items 5\* & 17\*). This ensures that the dies are fully closed before the holders bottom out (Refer to Fig. 5).

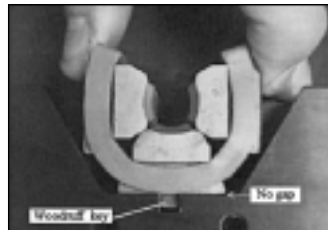


Fig. 5 – Crimp head completely closed.

8. Reverse the screw (Item 1\*) to release the crimper from the hose assembly. Take care not to drive the die holder (Item 5\*) against the actuator bar (Item 2\*) as damage to the crimper may result. The bumpers (Item 3\*) are provided as a cushion to help prevent this from occurring.
9. If the crimp is performed under-hood or the fitting is a complicated shape that requires disassembly of the crimper, open the latch plate (Item 21\*) and remove the die holder (Item 17\*)
10. 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 (Item B\*) or equivalent as needed when lubricating.
2. Inspect the strain rods and latch plate for wear around the contact points.
3. Make sure that actuator screw turns freely. Lubricate as noted above.
4. Check for worn or torn die carriers. Replace when crimp appears to go out of round.
5. Inspect woodruff keys. To ensure good crimps, replace if they are damaged or missing.

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\* Refer to T-475-1 Crimper Parts List, pg. 22

# Equipment

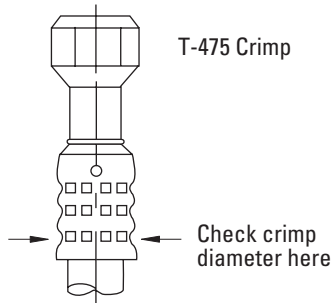
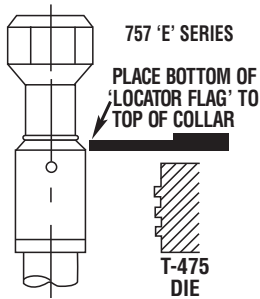
## T-475-1 Crimping Procedure

### Trouble Shooting

<b>Problem</b>	<b>Cause</b>	<b>Action</b>
1. Oblong or irregular crimp	<ul style="list-style-type: none"><li>• Worn carriers</li><li>• One die segment in the set is the wrong size</li><li>• Woodruff key missing</li><li>• Guide blocks installed backwards</li></ul>	<ul style="list-style-type: none"><li>• Replace carriers</li><li>• Check all segments for correct size on back of die</li><li>• Replace key</li><li>• Turn guide blocks around so raised pad clamps on die</li></ul>
2. Crimp diameter too large	<ul style="list-style-type: none"><li>• Crimper not fully closed – refer to instructions</li><li>• Incorrect size dies</li></ul>	<ul style="list-style-type: none"><li>• Recrimp until dies fully close</li><li>• Replace with correct size</li></ul>
3. Crimp diameter too small	<ul style="list-style-type: none"><li>• Incorrect size dies</li></ul>	<ul style="list-style-type: none"><li>• Replace with correct size</li></ul>
4. Crimp location too close to closed end of ferrule	<ul style="list-style-type: none"><li>• Ferrule not inserted far enough into crimper</li></ul>	<ul style="list-style-type: none"><li>• Use locator flag to properly locate ferrule position</li></ul>
5. Crimp location too close to hose	<ul style="list-style-type: none"><li>• Ferrule inserted too far into crimper (past locator flag)</li></ul>	<ul style="list-style-type: none"><li>• Use locator flag to properly locate ferrule position</li></ul>
6. Crimped fitting leaks when tested with soap bubbles	<ul style="list-style-type: none"><li>• Air trapped in the hose during manufacture</li><li>• Insufficient crimp</li><li>• Hose wall thickness is undersize (see chart on page 18).</li><li>• Fitting is defective</li></ul>	<ul style="list-style-type: none"><li>• Recheck after system has been charged for one hour – air will bleed out of the hose</li><li>• Check crimp diameter</li><li>• Recrimp with .030 undersize die</li><li>• Replace fitting/recrimp</li></ul>
7. Crimped fitting leaks when tested with electronic leak detector	<ul style="list-style-type: none"><li>• Insufficient crimp</li><li>• Hose wall thickness is undersize (see chart)</li><li>• Fitting is defective</li></ul>	<ul style="list-style-type: none"><li>• Check crimp diameter</li><li>• Recrimp with .030 undersize die</li><li>• Replace fitting/recrimp</li></ul>

# Equipment

## T-475-1 Crimping Procedure



### Nominal Crimp Diameter Measurement

Measuring crimp diameters should be a part of the normal hose assembly procedure. To ensure a proper crimp diameter reading, follow these steps.

1. Measure the diameter in the middle of crimped portion of the hose end.
2. Place the caliper in a position to allow a measurement across the pressed (flat) portion of the crimp.
3. See crimp diameters on chart below.

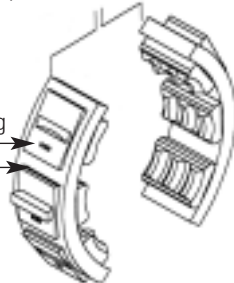
### CRIMP SPECIFICATIONS WHEN USING T-475-1 CRIMP SYSTEM

Hose Type	Hose I.D.	Hose End Prefix	Collet Number	Die I.D. Marking	Collet Color	Nominal Crimp Diameter
H75706	5/16	75706E	T-475-105C	556	Brown	0.556
H75708	13/32	75708E	T-475-106C	640	Purple	0.640
H75710	1/2	75710E	T-475-107C	742	Almond	0.742
H75712	5/8	75712E	T-475-108C	987	White	0.897

1. Assembly (Part Number)

2. Die Marking

3. Die Carrier Color

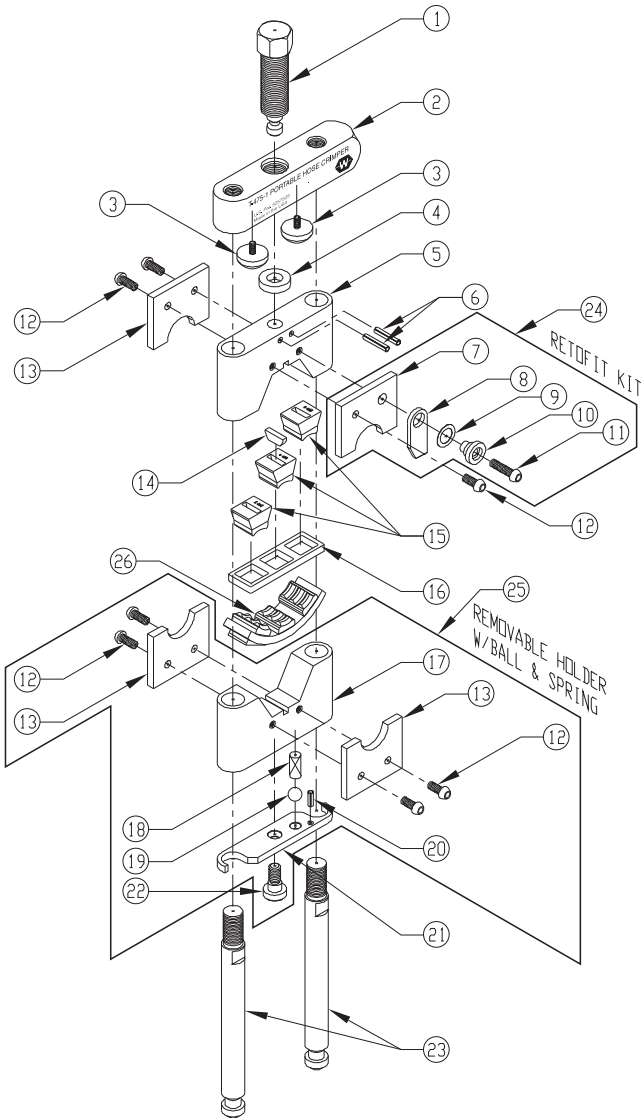


### T-475-1 DIE SETS (FOR USE WITH H757 HOSE AND 757 'E' SERIES HOSE ENDS)

Item	Description	Qty	6	8	10	12
1	Assembly Part Number	1 Set	T-475-105C	T-475-106C	T-475-107C	T-475-108C
2	Die Marking	—	556	640	742	897
3	Die Carrier Color	—	Brown	Purple	Almond	White

# Equipment

## T-475-1 Parts List



### T-475 CRIMPER PARTS LIST

Item	Part #	Description	Qty.
1	75013	Actuator Screw	1
2	75001	Actuator Bar	1
3	75012	Rubber Bumper	2
4	75011	Thrust Bushing	1
5	75005	Movable Die Holder	1
6	75010	3/16 x 1 Roll Pin	2
7	75099	Die Guide Block (Locator)*	1
8	75086	Locator Flag *	1
9	75088	Curved Disc Spring*	1
10	75087	Locator Bushing*	1
11	75113	1/4-20 x 1 Button Head Screw*	1
12	75003	1/4-20 x 5/8 Button Head Screw**(4)	7
13	75002	Die Guide Block**(2)	3
17	75075	Removable Die Holder**	1
18	75076	Spring-Compression**	1
19	75077	7/16 Dia. Ball**	1
20	75009	3/16 x 1/2 Roll Pin**	1
21	75074	Latch Plate**	1
22	75008	Lock Screw**	1
23	75020	Strain Rod	2
24	75116	Retrofit Kit For Flag	1
25	75081	Removable Holder w/Ball & Spring	1

### ITEMS NOT SHOWN

Item	Part #	Description	Qty.
A	71731	5/32 Short Arm Hex Key	1
B	75015	Teflon® Grease	1
C	75016	3/8 x 4 Pipe Nipple	1
D	90607	3/8 Floor Flange	1
E	75017	Carrying Case	1
F	3700-1	Crimper Only (No Dies)	1

\* Included in item 24 (Not assembled)

\*\* Included in item 25 (Assembled)

### T-475-1 DIE SETS (FOR USE WITH H757 HOSE AND 757 'E' SERIES HOSE ENDS)

Item	Description	Qty	6	8	10	12
—	Die Marking	—	556	640	742	897
26	Crimp Die Number	1 Set	T-475-105C	T-475-106C	T-475-107C	T-475-108C
—	Color	—	Brown	Purple	Almond	White
16	Cie Carrier	2	75134	75135	75136	75137
15	Die Segment	6	71741	75119	71743	71744
14	Woodruff Key	2	71671	71671	71671	71671

When ordering T-475-1 spare parts, contact: [www.atcoproductsinc.com](http://www.atcoproductsinc.com) or Email: [info@atcomail.com](mailto:info@atcomail.com) or call: 1-972-225-8178





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