

- **AIR CONDITIONING—NEW O-RING APPLICATIONS—THICKER O-RINGS FOR SPRING LOCK FITTINGS—SERVICE TIP**

**Article No.
96-20-8**

- **AIR CONDITIONING—SPRING LOCK COUPLING CLEANING PROCEDURE—SERVICE TIP**

FORD: 1992-1993 FESTIVA
 1992-1994 TEMPO
 1992-1997 CROWN VICTORIA, ESCORT, MUSTANG, PROBE, TAURUS, THUNDERBIRD
 1994-1997 ASPIRE
 1995-1997 CONTOUR
 1992-1996 BRONCO
 1992-1997 AEROSTAR, ECONOLINE, EXPLORER, F SUPER DUTY, F-150-350 SERIES, F-47, RANGER
 1995-1997 WINDSTAR

LINCOLN: 1992 MARK VII
 1992-1997 CONTINENTAL, TOWN CAR
 1993-1997 MARK VIII

MERCURY: 1991-1994 CAPRI
 1992-1994 TOPAZ
 1992-1997 COUGAR, GRAND MARQUIS, SABLE, TRACER
 1995-1997 MYSTIQUE
 1993-1997 VILLAGER
 1997 MOUNTAINEER

ISSUE

A new air conditioning spring lock coupling cleaning procedure has been developed. This procedure is required for a thicker O-ring that has been released for servicing spring lock couplings. These O-rings have a larger cross-sectional diameter for improved sealing. The thicker O-ring is green in color and identifiable only by the part number. These are service only O-rings and will not be used in production.

ACTION

Clean the Spring Lock Coupling(s) (SLC), if their service is required, and install the new thicker O-rings by referring to the following Service Procedure for details.

SERVICE PROCEDURE

1. Recover refrigerant from the A/C system.

2. Disconnect SLC(s).
3. Remove old O-rings using a plastic O-ring tool and discard. Plastic O-ring Service Tools are available from Rotunda in the R-134a/R-12 Port Kit (164R2602) or the O-Ring Pick/Valve Core Removal Tool Kit (164R2604). These items can be ordered by calling 1-800-768-8632 (Mon-Fri, 8AM-5PM EST). When prompted, press choice 2 for dealership supply orders.
4. Check the female SLC O-ring sealing surface for scratches, corrosion, or debris from deteriorated O-rings. Clean any surface residue from the inside of the couplings by using the following procedure (Steps 4a-4j):

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- a. Obtain the following shop equipment and cleaning supplies locally:
 - 3-1/2" length of steel brazing rod
 - YN-9 (mineral) oil for R-12 systems or YN-12-B (PAG) oil for R-134a systems
 - Variable speed electric drill
 - Safety goggles or glasses
 - Lint free cloth
 - 12" length of natural fiber string (twine or kite string)
 - Abrasive material - maroon colored 3M "Scotch Brite" pad cut in strips as follows:

SLC Size	Abrasive Strip Dimension
3/8"	1" X 2"
1/2"	1" X 2"
5/8"	1" X 3"
3/4"	1" X 4"

- b. Fabricate a cleaning tool (Figure 1).
- c. Determine coupling size and select the appropriate length of abrasive strip from the Step 4a table.
- d. Insert abrasive strip into the cleaning tool (Figure 2).
- e. Insert completed assembly into drill and tighten chuck securely.
- f. Coat the abrasive strip in appropriate refrigerant oil.
- g. Roll abrasive strip around cleaning tool (Figure 3).

NOTE

DO NOT ALLOW THE DRILL SPEED TO EXCEED 1500 RPM AS TOOL SEPARATION MAY OCCUR.

- h. Using a variable speed drill set at a low speed, slowly insert cleaning assembly into the female coupling. Clean using a moderate speed for approximately 1 minute or until surface is clean. Maintain low speed drill rotation while removing the cleaning assembly to prevent axial scratches, which may cause future leaks.

NOTE

IT IS IMPORTANT TO USE A LINT FREE CLOTH TO PREVENT MATERIAL FIBERS FROM REMAINING ON THE O-RING SEALING SURFACE AND CAUSING FUTURE LEAKS.

- i. Remove all cleaning residue from the coupling using a lint free cloth.
 - j. Inspect O-ring sealing surface for grooves. If grooves or scratches cannot be removed, replace the component.
5. Inspect the male SLC O-ring grooves for scratches, corrosion, or debris from O-ring deterioration. Remove any surface residue from the O-ring grooves by cleaning using the following procedure (Steps 5a-5b):
 - a. Loop the 12" length of natural fiber string around SLC and clean O-ring sealing surface (Figure 4).
 - b. Remove all cleaning residue using a lint free cloth.

NOTE

ONLY USE NEW GREEN O-RINGS. THE USE OF ANY O-RING SEALS OTHER THAN SPECIFIED MAY ALLOW CONNECTION TO LEAK INTERMITTENTLY DURING VEHICLE OPERATION.

6. Reassemble the SLC by referring to the following procedure (Steps 6a-6e):
 - a. Lubricate the new O-ring seal using appropriate refrigerant oil.
 - b. Install new O-rings.
 - c. Lubricate the inside of the female coupling with the appropriate refrigerant oil.
 - d. Install plastic indicator ring into cage opening if indicator ring is to be used.

NOTE

IF THE PLASTIC INDICATOR RING IS USED, IT WILL SNAP OUT OF THE CAGE OPENING WHEN THE COUPLING IS CONNECTED TO INDICATE ENGAGEMENT. IF THE INDICATOR RING IS NOT USED, CHECK THE COUPLING ENGAGEMENT BY VERIFYING THAT THE GARTER SPRING IS OVER THE FLARED END OF THE FEMALE COUPLING.

- e. Fit female coupling to male coupling and push with a twisting motion until the garter spring snaps over the flared end of the female fitting.

7. Repeat procedure as necessary for any remaining couplings. Verify seal integrity by leak testing the coupling. If coupling continues to leak, replace the component.

REPLACEMENT O-RINGS		
Old Part Number	New Part Number	Part Description
391302-S100	W701993-S	3/8" Spring Lock Coupling And Tube-O Fittings
391303-S100	W701992-S	1/2" Spring Lock Coupling And Tube-O Fittings
391304-S100	W701994-S	5/8" Spring Lock Coupling And Tube-O Fittings
391396-S100	W701993-S	3/8" Spring Lock Coupling And Tube-O Fittings
391397-S100	W701992-S	1/2" Spring Lock Coupling And Tube-O Fittings

PART NUMBER	PART NAME
W701993-S	3/8" Spring Lock Coupling And Tube-O Fittings
W701992-S	1/2" Spring Lock Coupling And Tube-O Fittings
W701994-S	5/8" Spring Lock Coupling And Tube-O Fittings
391305-S100	3/4" Spring Lock Coupling And Tube-O Fittings

OTHER APPLICABLE ARTICLES: NONE
WARRANTY STATUS: INFORMATION ONLY
OASIS CODES: 208000, 208200, 208999

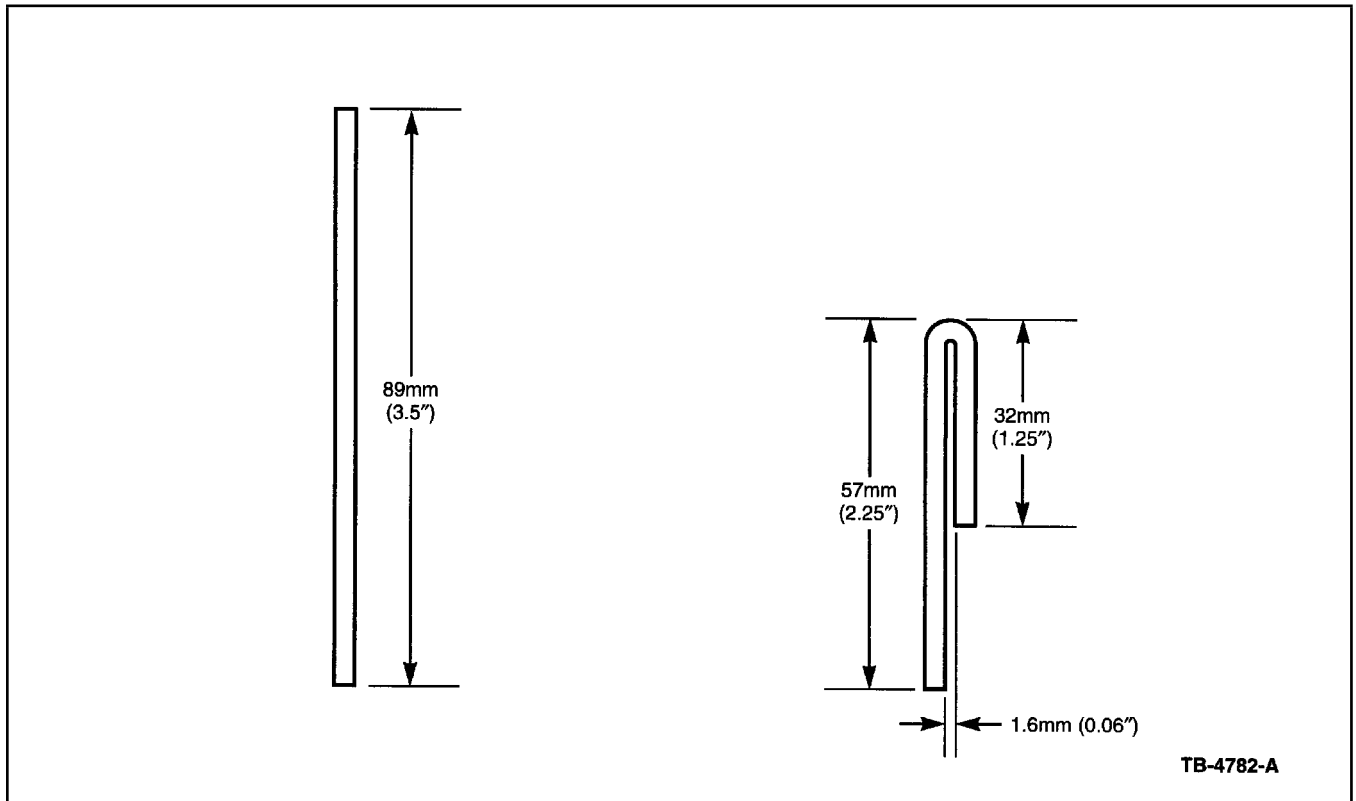


Figure 1 - Article 96-20-8

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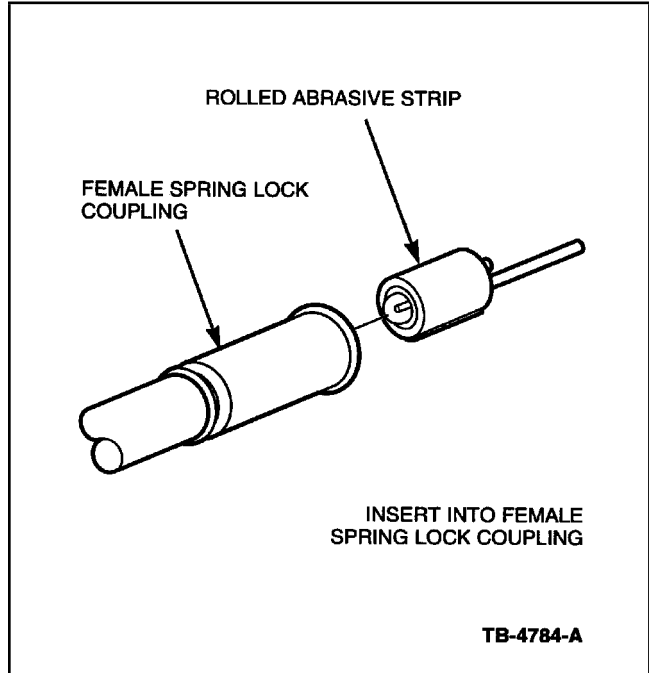
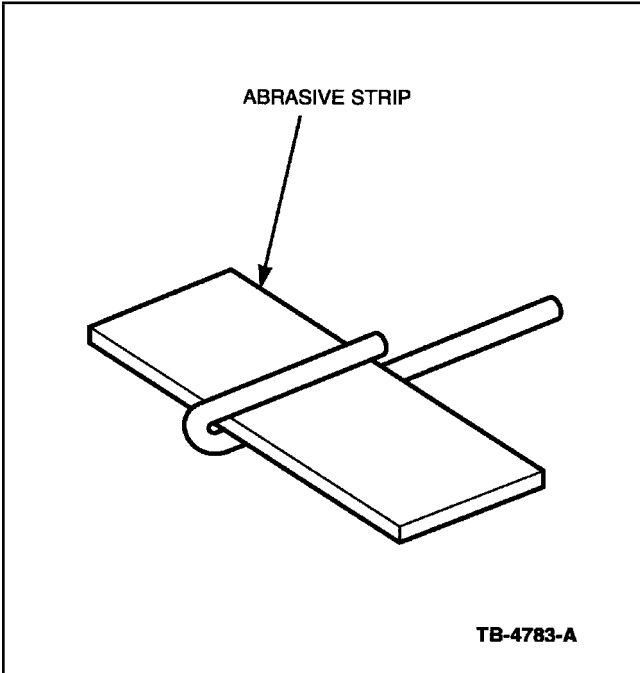


Figure 2 - Article 96-20-8

Figure 3 - Article 96-20-8

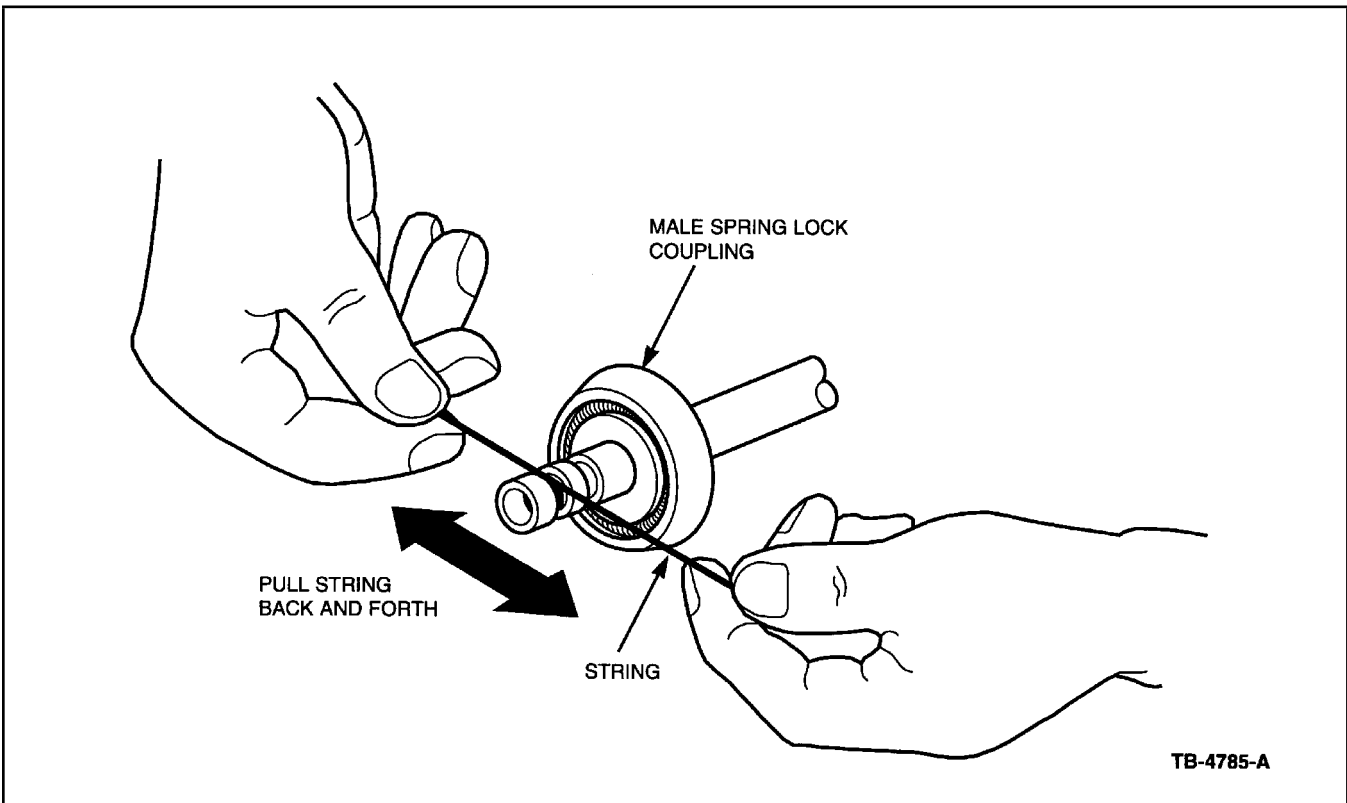


Figure 4 - Article 96-20-8