

Memorandum

File
 TO : Through: Assoc. Exec. Director for C&E ^{AS} DATE 21 NOV 1979
 Through: Catherine, C. Cook, Director, CEPD ^{CCC}
 Through: Frank B. Pipkin, Chief, HDC/CEPD
 FROM : Through: Lynn Lichtenstein, Staff Attorney, CEPD ^{LL}
 Elizabeth Haught, Project Officer, HCB/CEPD ^{eh}
 SUBJECT: Corrective Action Plan, Masco Corporation, ID 79-172
 Gas Connectors

Action

Accept Corrective Action and Monitor

Summary

On June 6, 1979, Masco Corporation, Taylor, Michigan, reported a possible defect in its Ameri-Flex Model 4G Series gas connector manufactured between March 9, 1979 and April 17, 1979. According to Masco, the gas connector may be subject to shearing or weakening when the gas connector nut is tightened onto the adaptor. The damaged or weakened connector may result in gas leakage.

The company has implemented a recall/replacement program and a design change for future production. CEPD believes the corrective action is adequate.

Product

1. Description. The product consists of varying lengths of epoxy coated brass tubing with gold anodized 1/2 inch steel flare nuts attached to each end.
2. Brand Name: Ameri-Flex
3. Model Number: 4G
4. Unit Retail Value: Approximately \$3.76 - \$11.75

The cost varies depending upon the length of tubing supplied with the connectors.

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 This document contains PROPRIETARY
 data on page(s) 2 + 3
 Initial eh Date 11/29/79

5. Product Certification: American Gas Association
6. Geographic Limits of Distribution: Nationwide.
[REDACTED] of units were sold in Southern California
7. Number of Defective Products Distributed in Commerce:
 - a. Total [REDACTED]
 - b. No. with manufacturer [REDACTED]
 - c. No. with distributor [REDACTED]
 - d. No. with plumbing contractors or installed [REDACTED]

8. Date Defective Products Produced and How Determined:

The defect was discovered during routine installation by a plumbing contractor. The American Metal Products Company (AMP) examined the subject connector and determined that it was from a production run manufactured between March 9, 1979 and April 7, 1979. During this period a substitute 1/2 inch tapered steel flare nut had been used instead of a non-tapered steel flare nut.

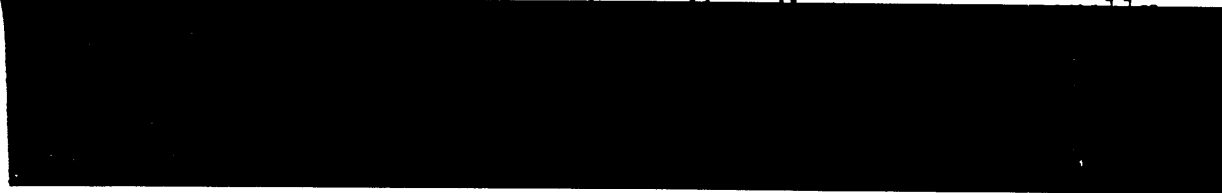
9. Proportion of Defective Products in Total Number Produced

It is possible that the defect is present in all [REDACTED] units.

Corrective Action

1. Pattern of Distribution

The product is manufactured by American Metal Products (AMP), a division of Masco Corporation. AMP sells to [REDACTED]



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AMP maintains the name, address and telephone number of its [REDACTED] independent distributors.

2. Notification

a. To Distribution Chain - Independent Distributors

- . June 6, 1979 - Letter informing of recall (attachment A)
- . June 6, 1979 - Product Recall Notice (attachment B)
- . Follow-up telephone call to [REDACTED] distributors requesting companies to inform their customers
- . AMP's sales representatives will contact customers within their territory to inform of recall
- . AMP's sales employees in Southern California directly examined some customers inventories

b. Plumbing and Heating Contractors

- . American Gas Association notice of recall (attachment C)
- . Plumbing contractors' unions in Southern California were requested to mail all members a copy of recall notice. Cooperation of plumbing contractors in other states has also been requested
- . When notified, AMP field inspectors will inspect a tract of houses or other buildings. If unable to gain entrance, a recall notice and preaddressed post card will be left at building for completion by occupant. (attachment D)
- . Gas utilities within 15 States have been notified of the recall either by mail or phone. The utilities will either replace or notify AMP by means of the card in attachment E.

c. To Consumers

- . Fact Sheet Used as Point of Purchase Poster (Attachment F)

- . Where records of over-the-counter sales have been maintained, each consumer will be contacted individually.

3. Election as to Repair, Replacement or Refund

- a. Retrofit modification and future design changes to eliminate the defect.

A partial hex nut will be replaced by a full hex nut on all future production and units in the field. The design change consists of a non-tapered steel flare nut which will replace the recalled tapered flare nut. Revised quality control procedures include more frequent inspections during production. All recalled connectors will be returned to AMP. AMP will either replace the recalled connectors that are returned or issue a credit. Nuts removed from the recalled connectors will be destroyed. All reasonable costs incurred in the recall will be borne by AMP. Replacement connectors will be installed at no cost to consumers.

- b. Engineering evaluation

The company's proposed corrective action has been discussed with staff engineers and found to be adequate. By memo of September 26, 1979 our engineering staff states:

"The recall of all units using nuts with an internal flare seat angle of [REDACTED] and replacing them with a nut having an internal flare seat angle of [REDACTED] should eliminate the possibility of weakening the connection which caused the gas leak."

Conclusion

CEPD believes that Masco Corporation's corrective action plan adequately addresses the hazard presented by the subject product. The Los Angeles Area Office is monitoring the progress of the firm's corrective action program.

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American Metal Products Co.

Division of Masco Corporation

6100 Bandini Blvd., Los Angeles, CA 90040 • (213) 726-1941, (213) 723-9211

ATTACHMENT A

URGENT

URGENT

June 6, 1979

Dear Customer:

Subject: Voluntary field recall notice for certain Ameri-Flex
Gas Appliance Connectors—Model 4G Series

We have just discovered that some steel flare nuts used on our model 4G series gas connectors from March 9 through April 17, 1979, may cause the flared tubing to be sheared off or weakened when the nut is tightened onto the adaptor.

Our records show that you have purchased model 4G series connectors with steel flare nuts since March 9, 1979, and it is important that you examine your stock immediately for cartons stamped March 9, 1979 through April 17, 1979, and return all of these connectors for our inspection and credit.

If you have sold any Model 4G connectors from stock received after March 9, 1979, notify your customers of this recall immediately and require immediate replacement whether or not the flare tubing has been sheared.


Please see the attached Fact Sheet for the identification of the specific connectors being replaced. We suggest that you use this Fact Sheet in contacting your customers. Reasonable costs will be allowed by us for effected connectors which are replaced and returned to us.

Please check your stock, and call our 4G Customer Service Department at (800) 423-4270 or in California call collect (213) 726-1941 to advise us of the quantity and model numbers you have on hand. We are enclosing a copy of our shipper showing models and quantities and a return authorization form to expedite the return and to provide proper credit.

We are sorry for the inconvenience this may cause you.

Cordially,

AMERICAN METAL PRODUCTS CO.


Ray L. Finkle
General Manager
RLN/atm
Encl.

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American Metal Products Co.
Division of Masco Corporation
6100 Sandini Blvd., Los Angeles, CA 90040 • (213) 725-1941 • (213) 723-9211

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AMERI-FLEX GAS APPLIANCE CONNECTORS

CERTAIN MODEL 4G SERIES

FIELD RECALL NOTICE

FACT SHEET

June 6, 1979

The following information will assist you in identifying Model 4G Series gas connectors that are being recalled and must be returned.

1. Connector Model:

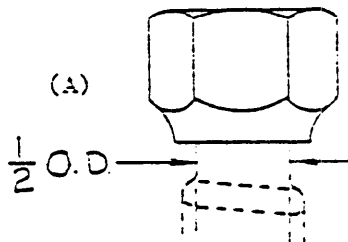
Model 4G series 1/2" O.D. x 3/8" I.D. epoxy coated brass tubing with 1/2" steel flare nuts. (Nuts are plated with a gold color).

2. Carton Identification:

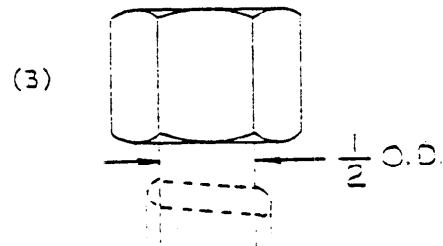
All Model 4G Series cartons stamped "March 9, 1979" through "April 17, 1979" on the yellow label.

3. Individual Connector Identification:

Connectors can be visually identified by the steel flare nut configuration "A" shown actual size below. Flare nuts of the "B" design are not involved in this recall.



Nut on recalled
connectors



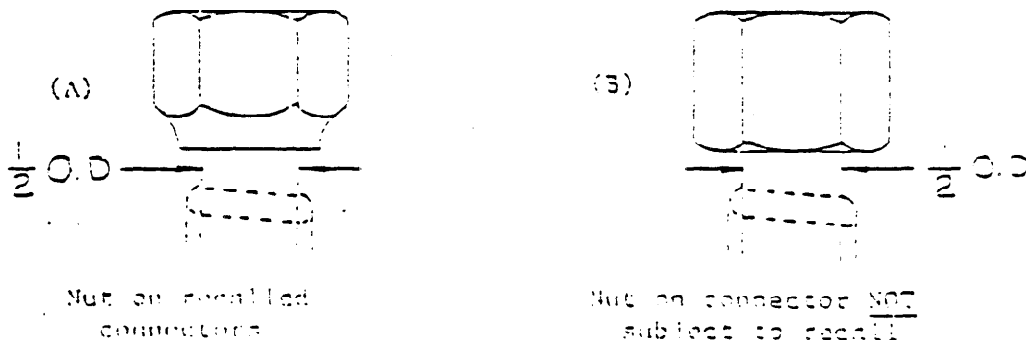
Nut on connector NOT
subject to recall

NOTE: All AMERI-FLEX connectors are identified with a label and a red ring.

NOTICE

The Laboratories have been informed by American Metal Products Co. (Division of Masco Corporation), Los Angeles, California, that 14,477 of their 3/8 in. size (catalog No. 4G) coated appliance connectors of flexible metal tubing and fittings shipped between March 9 and June 4, 1979 and equipped with steel flare nuts may result in a weakening or shearing of the flare portion of the connector when the nut is excessively tightened.

The connectors may be identified by observing that the marking band bears the numbers "79" indicating year of manufacture, and are equipped with a steel flare nut with the following configuration:



American Metal Products Co. has initiated a field recall program on these connectors. If any such connectors are encountered, it is requested that American Metal Products Co. be contacted immediately.

ATTACHMENT D

Sorry we could not find you at home.

We have attached a Fact Sheet describing our recalled gas connectors which may have been installed in your residence.

Name _____

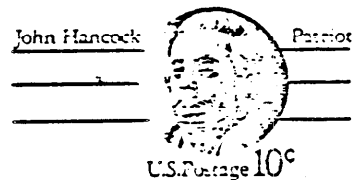
Address _____

City & State _____

Phone Number _____

Please check the appropriate box.

- I suspect the recalled connector is in my residence.
- I have checked all my gas appliance connectors and none of them fit the description of the recalled connectors on the Fact Sheet.



AMERICAN METAL PRODUCTS CO.
215 North Smith Avenue
Corona, California 91720

ATTENTION MARILYN LEON

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ATTACHMENT E

Residence Address _____

BUILDERS/CONTRACTORS Name _____

Address _____

Phone No. _____

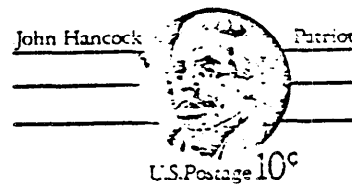
Installer's Name _____

Address _____

Phone No. _____

Please complete all information available and mail immediately.

For additional cards please contact Marilyn Leon,
714-735-4375.



AMERICAN METAL PRODUCTS CO.

215 North Smith Avenue

Corona, California 91720

ATTENTION MARILYN LEON

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**American Metal Products Co.**

Division of Masco Corporation

6100 Bandini Blvd., Los Angeles, CA 90040 • (213) 726-1941, (213) 723-9211

URGENT

URGENT

AMERI-FLEX GAS APPLIANCE CONNECTORS

CERTAIN MODEL 4G SERIES

FIELD RECALL NOTICE

FACT SHEET

June 6, 1979

The following information will assist you in identifying Model 4G Series gas connectors that are being recalled and must be returned.

1. Connector Model:

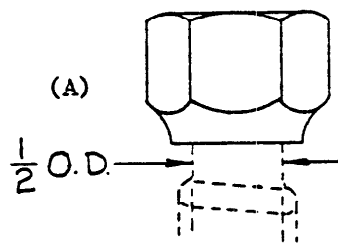
Model 4G series 1/2" O.D. x 3/8" I.D. epoxy coated brass tubing with 1/2" steel flare nuts. (Nuts are plated with a gold color).

2. Carton Identification:

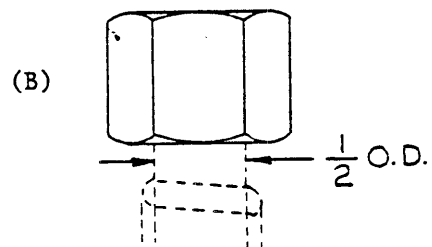
All Model 4G Series cartons stamped "March 9, 1979" through "April 17, 1979" on the yellow label.

3. Individual Connector Identification:

Connectors can be visually identified by the steel flare nut configuration "A" shown actual size below. Flare nuts of the "B" design are not involved in this recall.



Nut on recalled
connectors



Nut on connector NOT
subject to recall

NOTE: All AMERI-FLEX connectors are identified with a label and a red ring.

American Metal Products Co.

Division of Masco Corporation

8100 Bandini Blvd., Los Angeles, CA 90040 • (213) 725-1841, (213) 723-9211

INSTRUCTIONS FOR
RETURN MATERIAL AUTHORIZATION FORM
4G GAS APPLIANCE CONNECTOR RECALL PROGRAM

June 6, 1979

1. This form is to be used for Model 4G series gas connectors only.
Other types of merchandise listed on this form will not receive proper credit.
2. Fill in "quantity returned" and "catalog #" columns. (columns 1 and 3)
3. If you are not serviced by our trucks in the Los Angeles area, return the "gold" shipping copy with the connectors to our Corona, California plant. Address shown at the top of the Return Authorization Form.

All merchandise to be shipped Freight Collect using freight classification:
Hose, Metal, Flexible 10 lb. per cubic foot. NMFC-100-F, Item 100150.

Customers serviced by AMP's trucks should present the "shipping" copy to our driver along with return connectors. Or, call our Customer Service Dept. for a pick up.

4. Credit will be issued for all returned 4G connectors.

The problem with our 4G connectors has been corrected! Please reorder your requirements for 4G connectors on your next purchase order.

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Memorandum

TO : ROSS KOESER, FIELD OPERATIONS
THROUGH: ERIC B. AULT, S.C.S.O. *ABA*

FROM : Debra A. Krause, Investigator

SUBJECT: "COBRA" GAS APPLIANCE HOSES
MANUFACTURED BY D. K. MFG. CO.,
5059 S. KEDZIE AVE., CHICAGO, IL 60632

DATE: 12-4-79

The following is a summary of efforts made so far to locate key personnel of the above company. On 11-21-79, I went to the above address and found a vacant lot. I learned that the building where the firm had been located had been bought by Central Steel and Wire Company, 3000 W. 51st St., Chicago, IL 60632 (471-3800). Assistant Superintendent, Frank Troika, told me that they had purchased the buildings on that block approximately two years ago through the Edward M. Ray Building Account, 326 N. Michigan, Chicago, IL 60601. I went to that address and spoke to Kay Ray, Owner. She said she remembered the tenants but not their names. She explained that she was organizing old records and that it would be a minimum of one month before she would have information to respond to any questions.

When I returned, I called the Chicago Public Library. They provided the following information via telephone. From the 1966 Chicago Cook County, Illinois Industrial Directory:

Paul J. Furring - President
Edward C. Berry - VP/Secretary
T. Kwsnik - Purchasing Agent.

From the 1964 Secretary of State listing of firms registered to do business in Illinois:

P. J. Furring, 207 N. Wood Rd., Riverside, IL 447-5 84
Edward C. Berry, 202 Pierce ST., Elburn, IL 365-9145
Paul J. Furring, 100 N. Island Ave., Batavia, IL
No listing.

Memorandum

TO: ROSS KOESER, FIELD OPERATIONS
THROUGH ERIC B. ADLT, Acting D.O.D.

DATE: 12-6-79

FROM: Debra A. Krause, Investigator *D. Krause*

SUBJECT: "COBRA" GAS APPLIANCE HOSES
MANUFACTURED BY D. K. MFG. CO.,
5059 E. REDZIE AVE., CHICAGO, IL 60632

This is a continuation of my 12-4-79 memo. Key personnel were not available on 12-5-79 as anticipated. On 12-6-79, I spoke to Ed Berry (263-4946), one time vice-president of D.K. Mfg. Co. He told me that he was never directly involved with Cobra hoses, but that Herbert Woodward would be the most knowledgeable person. He said they had followed the AGA Standard in making the hoses. He told me they were distributed nationwide. Since other manufacturers made hoses of similar design, he said he couldn't see why we would just zero in on Cobra. He said D. K. Manufacturing had been sold to some brass company in 1964 and that they may have continued to use the Cobra name. He said distribution records were probably not available unless they had been given to that company. He also told me that D. K. Manufacturing had since been completely liquidated in 1968.

TO: ROSS KOESER, FO

12-7-79

CHI-AO does not plan any further action at this time. We could make further contact with Essex International's Ft. Wayne, Indiana, headquarters if you so desire. However, if this is done it is almost certain to raise questions of liability with Essex. I do not feel that CHI-AO would be in a position to provide adequate answers to these questions and would, therefore, probably not receive any useful information from Essex. (It is not certain that Essex would still have any information which would allow us to determine specific distribution of the product.)

You may wish to have CEPD consider the problem. It could be handled like other problems called to that Division's attention. In those cases CEPD sends a preliminary letter to the firm requesting pertinent information which can then be used by a CEPD Hazard Assessment Committee to determine if a substantial hazard exists.

Eric B. Adlt
Eric B. Adlt,
Acting D.O.D.

Later this morning I talked to Herbert Woodward (263-4946). He said that he had been Chairman of the Board of D. K. Manufacturing from 1960-1964 and that he was probably the most knowledgeable about the legal aspects of the company. He explained that D. K. Manufacturing owned Cobra Division which made gas hoses for seven to eight years before the company was sold. He said that in 1964 D. K. Manufacturing was sold to Essex Wire a company wholly owned by Walter Probst. He said that he thought that Essex Wire was headquartered in Detroit and that they had a manufacturing plant in Edwardsville, IN. He said when this transaction was made they gave Essex their design, tools, the "Cobra" name, a small amount of inventory and that they probably gave them customer lists/distribution records at that time. He said that if the records still exist that is what may have happened to them. He said there were no main distribution areas but that they sold to distributors all over the United States including some public utilities. He said one major distributor was Reliance Products in Cleveland which was also purchased by Essex. Herbert Woodward told me that Essex Wire was bought out by Essex International which was, in turn, bought out several years ago by a firm whose name he couldn't remember.

Mr. Woodward also told me that D. K. Manufacturing no longer exists and was completely liquidated in 1968. He said Dunbar Kapple began in 1960 but never made hoses - only aerospace equipment and vacuators. Therefore, he indicated that Rogers Hart would not know about the hoses.

I asked Mr. Woodward if he knew about any fire incidents or the like associated with Cobra hoses. He said they had no problems with the product while D. K. Manufacturing was in existence. Even so, he said they carried insurance a couple years after the company was liquidated. He told me he had heard of two fire incidents within the last five years - one in California and one in Illinois. He said the parties were looking for someone who had been involved with D. K. Manufacturing in an attempt to take action; however, they never proved that the hoses involved were Cobra hoses. He also mentioned that they were only one of several producers of gas hoses. He said they were a substantial producer at the time and that they were certified by AGA. He indicated that he thought their testing procedures had surpassed AGA requirements.

MEMORANDUM 12-7-79 DAK

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"COBRA" HOSES

I noticed a 3-15-79 complaint report signed by William T. Lang, Compliance Officer, DEN-AO, which references an ANSI Standard that went into effect in 1967 that made corrections to gas hose connectors. Note that Cobra Hose Div. was sold before that date although they said they followed AGA requirements.

Based upon my conversation with you today, no further action will be initiated regarding this topic by the CHI-AO unless additional instruction is received.

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December 7, 1979

Mr. Donald Mackay
Director - Voluntary Standards
Consumer Product Safety Commission
Washington, DC 20207

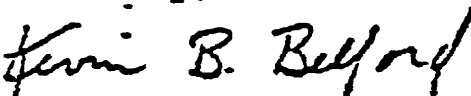
Dear Mr. Mackay:

Pursuant to your inquiry A.G.A. would transmit to its member companies recommendations made by the Consumer Product Safety Commission concerning potential defects in flexible metal connectors. We would also publish a similar notice in A.G.A.'s Directory of Certified Appliances and Accessories, which reaches code authorities, local building inspectors, gas company field representatives and other similar individuals. A.G.A. would recommend that member companies immediately consider whatever actions they would deem appropriate in order to comply with the recommendations.

We would also recommend that our members distribute, by letter, bill inserts or other appropriate methods a notice concerning proper procedures to be followed by the customer should the customer smell gas in the home. We would also be happy to consider any additional action the Consumer Product Safety Commission recommends, or cooperate in any manner within our ability.

Please contact me if I can be of any assistance to you in that matter.

Sincerely,



Kevin B. Belford
Deputy General Counsel

KBB:pl

cc: Doug King

COMMUNICATIONS CENTER

10 DEC 79 11:18

RECEIVED

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U.S. CONSUMER PRODUCT SAFETY COMMISSION
WASHINGTON, D.C. 20207

December 14, 1979

Mr. George Lawrence, President
American Gas Association
1515 Wilson Boulevard
Arlington, Va. 22209

Dear Mr. Lawrence:

The Consumer Product Safety Commission staff has learned of the failure of a corrugated metal connector (brand named "Cobra") which was produced between 1955 and 1965 by a Chicago-based manufacturer that is no longer in business. This connector was certified by the AGA Labs as conforming to the requirements of the then existing American National Standard issued by the ANSI Z-21 Committee. The failure of this connector has allegedly caused a number of fires in homes in one particular service area. We have reason to believe, however, that since this type of connector was used in other areas of the country, that similar problems could develop elsewhere.

In light of the above, the Commission staff requests the assistance and cooperation of the American Gas Association in notifying all of the gas utility companies and in recommending a course of action that will be appropriate to the degree of this potential hazard. We understand that this connector was not permitted to be installed in some jurisdictions and that this type of connector has been replaced in other areas. We believe, however, that many connectors of this type may still be in service, and therefore may be susceptible to creating a significant hazard to the occupants of those residences equipped with such connectors.

The staff of the Commission has developed a statement (enclosed) that is designed to inform the occupants of residences of the need to be aware of the potential for failure of this type of corrugated metal connector and to appropriately respond to any sign of a gas leak. We believe that such a statement should be issued to alert gas company customers to the hazard without causing undue alarm or encouraging homeowners to attempt to correct any problem by themselves.

If the gas utility companies choose not to issue such a notice, yet have reason to believe that these connectors are still in use in their service areas, we would recommend that they immediately provide the enclosed "If you smell gas" notice to all of their customers and perhaps take ads in the newspapers in their area similar to the one enclosed.

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