



REPORT NO. 10CFR21-0063  
JANUARY 25, 1993

10CFR21 REPORTING OF DEFECTS  
AND NON-COMPLIANCE

COMPONENT: Automatic Drain Float - Balston 21554-1  
Air Piping Filter Assembly - A912A-DX and A913A-DX

SYSTEM: All A912A-DX and A913A-DX Air Filters Manufactured  
prior to November 1989

CONCLUSION: Defect is reportable in accordance with 10CFR21.

PREPARED BY:

Donald D. Galeazzi  
Donald D. Galeazzi, Engineering Manager

DATE

1/25/93

APPROVED BY:

M. Vann Mitchell  
M. Vann Mitchell, Quality Manager

DATE

1/25/93

RECORD OF REVISIONS

REVISION

DATE

PREPARED BY

APPROVED BY

PAGES AFFECTED

### SUMMARY

This is a follow-up report to MKW Power Systems' notification to Mr. Thomas Murley of the NRC dated 9/24/92 (see Exhibit 1).

MKW Power Systems received notification on 9/24/92 from Duquesne Light Company, Beaver Valley Plant, which raised concern about the automatic drain float in the Balston air filter, part number A912A-DX. During routine maintenance, Duquesne Light replaced the air filters and noticed the automatic drain float had disintegrated. Pieces of the float were found in the bottom of the filter housing but did not get into the air piping. This report addresses the material composition issues relative to generic concerns. Users of Balston air filters with suspect automatic drain floats have been determined and will be notified accordingly.

### COMPONENTS

Balston air filters (P/N's A912A-DX and A913A-DX) manufactured before November, 1989, containing the 21554-1 automatic drain float.

### CUSTOMERS AFFECTED

The users affected by this notification are listed below:

<u>CUSTOMER</u>	<u>MKW ORDER NO.</u>
Duquesne Light Company - Beaver Valley	51414
Connecticut Yankee Atomic Power Company	500598

### DEFECT

The material that the drain float was made of disintegrated when exposed to the elements in the air start piping system.

### ANALYSIS

The maintenance engineers at Duquesne Light discovered the potential problem during routine maintenance, and it did not cause a start system failure. The particles were isolated in the filter housing which suggest that the material degradation was caused by contaminants in the air start system. These contaminants could possibly have an adverse effect on the material; causing the rubber to break down when exposed in the system. Balston implemented a material change to the drain float in November, 1989, where the material was changed from a rubber composition to plastic (see Exhibit 2). The new floats have been installed in the system and there have been no problems detected.

CORRECTIVE ACTION

Customers should order the air filters manufactured after November, 1989, which consists of the 21552-2 automatic drain float made of plastic. This design has been shown to withstand contaminants that enter in the air start system.

REPORT NO.: 10CFR21-0063  
DATE: January 25, 1993  
PAGE: 3 OF 4

EXHIBIT 1  
(1 page)

NOTIFICATION TO NRC DATED 9/24/92





September 24, 1992

Mr. Thomas Murley  
Director - Office of Nuclear Reactor Regulation  
11555 Rockville Pike  
Rockville, Maryland 20852

Subject: Potential 10CFR21 Finding  
Air Piping Filter Assembly  
Balston Part Numbers: A912A-DX and A913A-DX

Reference: 10CFR21-0063

Dear Mr. Murley:

This is to advise of a potential 10CFR21 finding regarding the starting air piping filter assembly, Balston P/Ns A912A-DX and A913A-DX, sold to the following customers by MKW Power Systems, Inc.:

Duquesne Light Company - Beaver Valley (A912-DX)  
Connecticut Yankee Atomic Power Company (A913-DX)

This filter is used in the air start piping to the diesel engine air starting motors. During routine maintenance, Duquesne Light replaced the filter and noticed the automatic drain float had disintegrated. Pieces of the float were found in the bottom of the filter housing which prompted an inspection of the air start system. The maintenance engineer reported that the float particles were isolated in the filter housing and did not get into the air piping. This condition was found during routine maintenance and did not cause a start system failure; however, system degradation could occur if this condition persists.

MKW Power Systems is currently investigating this potential defect with the filter manufacturer. A formal report will be issued when the inspection is complete.

If any additional information is required, please contact Vann Mitchell at (919) 977-2720.

Yours very truly,

MKW POWER SYSTEMS, INC.

*J. Vann Mitchell* For  
M. Vann Mitchell  
Quality Manager

MVM:jb

REPORT NO.: 10CFR21-0063  
DATE: January 25, 1993  
PAGE: 4 OF 4

EXHIBIT 2  
(4 pages)

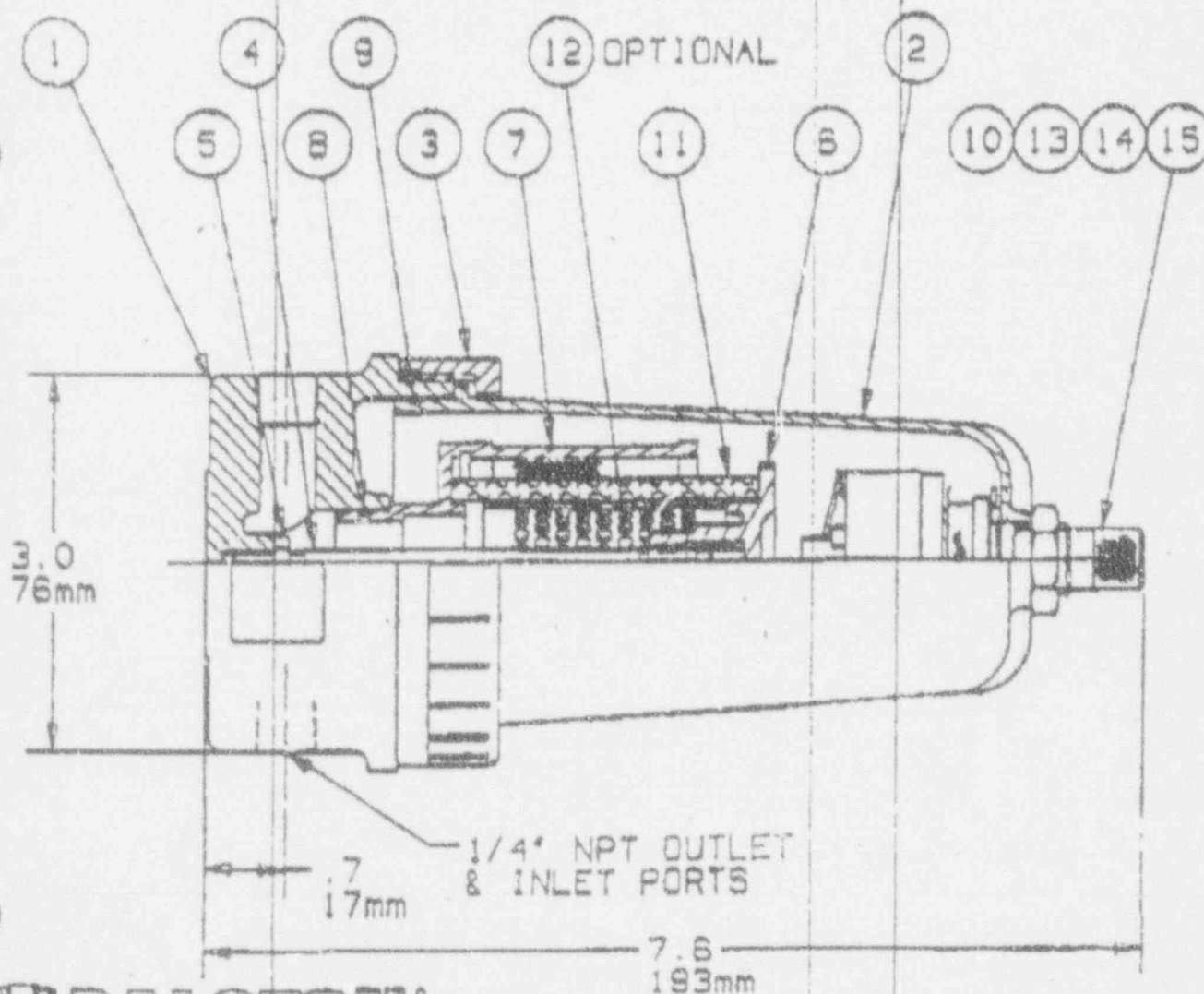
BALSTON AIR FILTER DRAWINGS - P/N A912A-DX  
- MARCH 1989 DESIGN  
- NOVEMBER 1989 DESIGN

REPLACEMENT PARTS FOR TYPE A912A				
ITEM	DESCRIPTION	PART NO.	MAT'L	
1	HEAD	91100-1/4	ALUM	
2	BOWL	91810	ALUM	
3	COLLAR	91150	ALUM	
4	TIEROD	91012	304 SS	
5	M5 HEX NUT	12699	S STL	
6	ELEMENT RETAINER	91860	NYLON	
7	DEMISTER ASSY	91450	NYLON	
8, 9, 10	SEAL SET	22081	BUNA	
11	FILTER TUBE	100-12-11	-----	
12	SUPPORT CORE	99-100-12	S STL	⊕
10, 13 14, 15	AUTOMATIC DRAIN KIT	21554	-----	
--	MANUAL DRAIN KIT	21553	-----	⊕
--	MOUNTING BRACKET KIT	11037	STL/PLD	⊕

[1] SPECIFY FILTER TUBE GRADE

⊕ = OPTIONAL PARTS

ORDER BY PART NUMBER AND DESCRIPTION

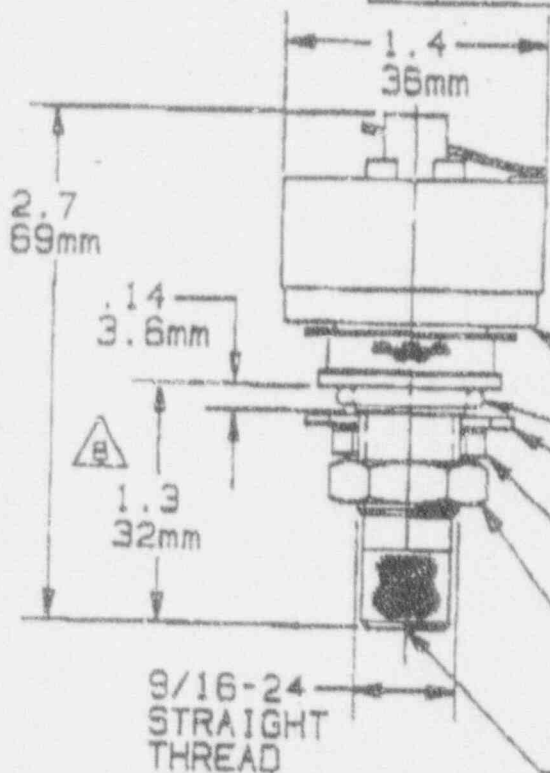




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CLOSED TO A THIRD PARTY  
WITHOUT WRITTEN CONSENT FROM  
BALSTON, INC.

# REVISIONS

REV	ECN.NO.	DESCRIPTION	NAME	DATE
A	0100	1) ADDED SPACER P/N 15990 2) HAS KNURLED NUT (ALUM)	D H	7-87
B	0117	HAS 1.20	D H	7-87
C	0200	1)ADDED 2)W-7 SHRINK PACK	PES	5-88
D	0202	1)ADDED 2)REVISED NOTE	DMN	10-88
E	0285	REWRITTEN TO EXCLUDE 900 SERIES	B.R.	3-89



## NOTES:

1. MATERIALS:  
BUNA, SILICONE, ACETAL,  
ALUMINUM, ST. STL., & BRASS

2. PRESSURE RATING:  
250 PSI @ 130°F

3. BUBBLE PACK IN CARTON  
#95000 WITH LABEL AND  
A COPY OF THIS DRAWING  
(-113) BUNA O-RING

2 LOCATED ON  
INSIDE OF BOWL

4 LOCATED ON BOWL EXTERIOR  
(NOT TO BE USED WITH 900  
SERIES HOUSINGS)

1/8 NPT FEMALE THREAD

NO	DESCRIPTION	PART NO	DWG NO	MAT'L	QTY
4	SPACER	15990	A-12346	NYLON	1
3	NUT	21551-1	A-12198	BRASS	1
2	O-RING RETAINER	21552-1	A-11991	NYLON	1
1	AUTOMATIC DRAIN	21554-1	A-12186	NOTE 1	1
PARTS LIST					

## TOLERANCES, EXCEPT AS NOTED

XX ± .015 ANGULAR ± 10  
XXmm ± .26mm

XXX ± .005  
XX.XXmm ± .13mm  
OR BETTER ON  
EXTERNAL SURFACES

**BALSTON**  
FILTER PRODUCTS  
Lexington, Massachusetts 02173

MAT'L: SEE TABLE	DRAWN BY: DATE: LRS 1/26/87	TITLE AUTOMATIC DRAIN KIT
FINISH: NONE	CKD BY: DATE: 3-10-89	LTD. P/N
WHERE USED: -----	SCALE: 1 : 1	LTD. DRG NO.
	INC. P/N 21554	INC. DRG NO. A-12187

TYPE A912A-DX

DCP 1185

4/4

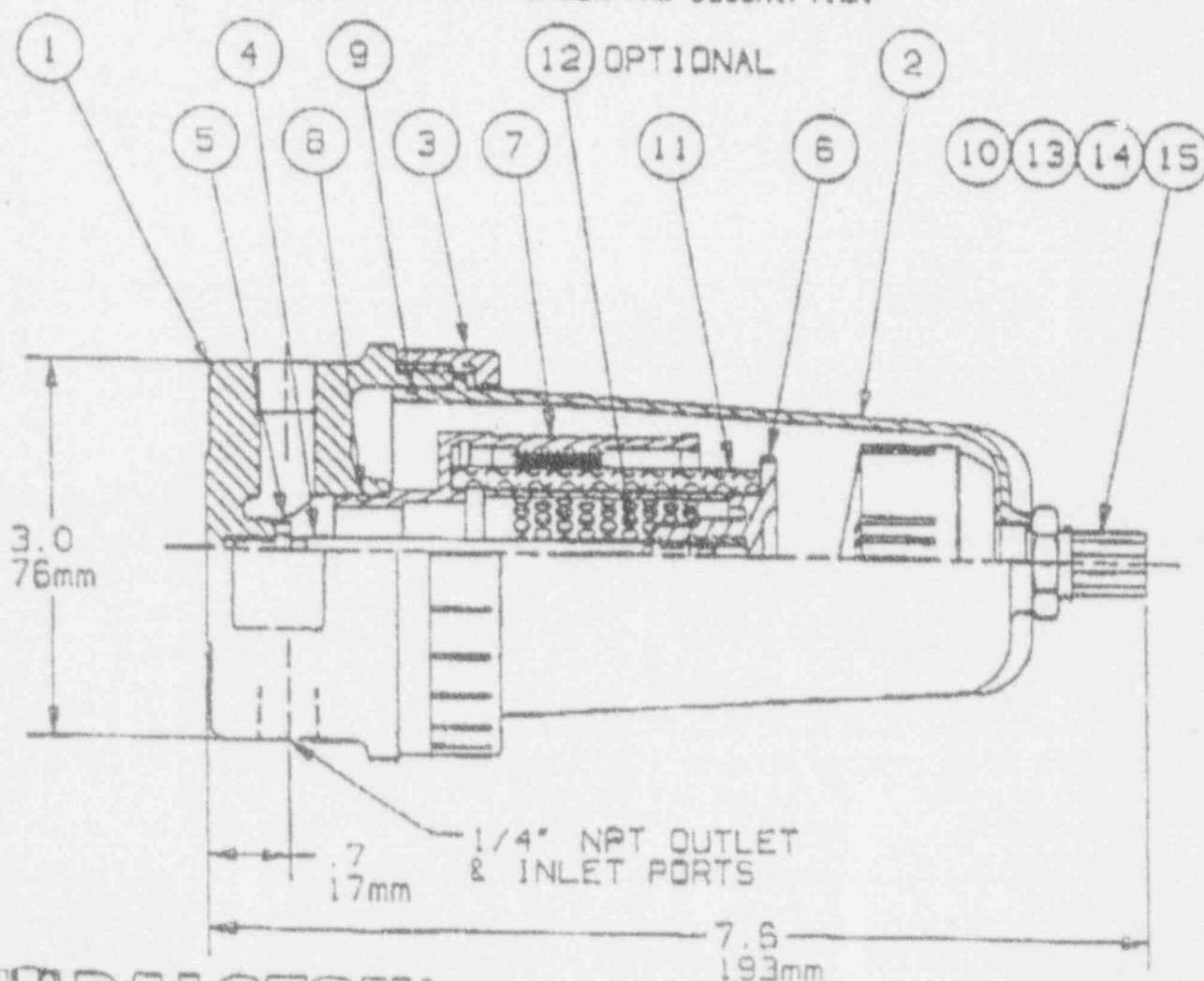
REPLACEMENT PARTS FOR TYPE A912A			
ITEM	DESCRIPTION	PART NO.	MAT'L
1	HEAD	91100-1/4	ALUM
2	BOWL	91918	ALUM
3	COLLAR	91150	ALUM
4	TIEROD	91012	304 SS
5	MS HEX NUT	12599	S STL
6	ELEMENT RETAINER	91960	NYLON
7	DEMISTER ASSY	91450	NYLON
8,9,10	SEAL SET	22091	BUNA
11	FILTER TUBE	100-12-11	-----
12	SUPPORT CORE	SS-100-12	S STL
10,13 14,15	AUTOMATIC DRAIN KIT	21552	-----
--	MANUAL DRAIN KIT	21553	-----
--	MOUNTING BRACKET KIT	11037	STL/PLD

(1) SPECIFY FILTER TUBE GRADE

⊕ = OPTIONAL PARTS

[DX]

ORDER BY PART NUMBER AND DESCRIPTION



**BALSTON**  
FILTER PRODUCTS

LEXINGTON, MASSACHUSETTS 02173

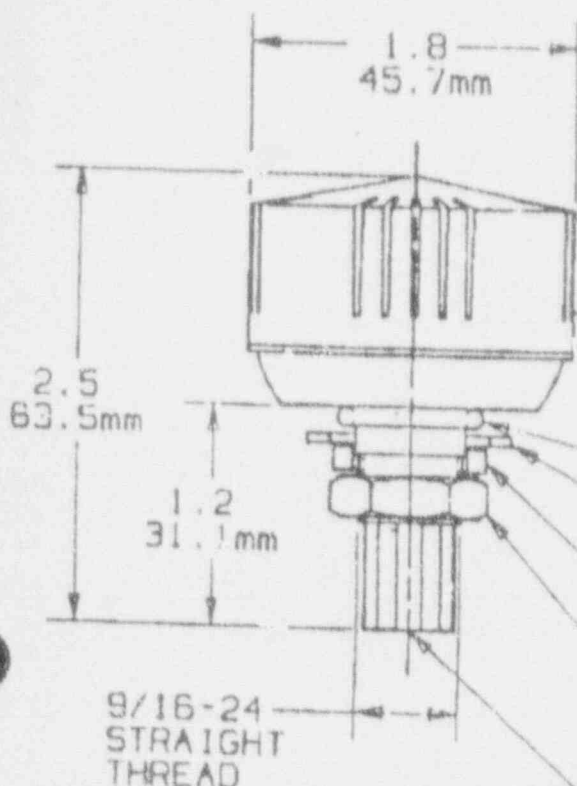
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BALSTON INC

# REVISIONS

REV	ECN. NO.	DESCRIPTION	NAME	DATE
A	0295	REVISED AND REDRAWN	DLH	9-89

## NOTES:

1. PRESSURE RATING:  
250 PSI @ 170°F  
10 PSI MIN. OPERATING  
PRESSURE
2. BUBBLE PACK IN CARTON  
#95000 WITH LABEL AND  
A COPY OF THIS DRAWING



(-113) BUNA O-RING

LOCATED ON  
INSIDE OF BOWL

LOCATED ON BOWL EXTERIOR  
(NOT TO BE USED WITH 900  
SERIES HOUSINGS)

1/8" NPT FEMALE THREAD

4	SPACER	15990	A-12346	NYLON	1
3	NUT	21551-1	A-12198	BRASS	1
2	O-RING RETAINER	21552-1	A-11991	NYLON	1
1	AUTOMATIC DRAIN	21552-2	A-11796	PLASTIC	1
NO	DESCRIPTION	PART NO	DWG NO	MAT'L	QT'Y
PARTS LIST					

## TOLERANCES, EXCEPT AS NOTED

XX	± .015	ANGULAR	± 1°
XXmm	± .25mm		
XXX	± .005	63	OR BETTER ON
XX.XXmm	± .13mm		EXTERNAL SURFACES

**BALSTON**  
FILTER PRODUCTS  
Lexington, Massachusetts 02173

MAT'L: PARTS LIST	DRAWN BY: DATE: DLH 9-15-89	TITLE: AUTOMATIC DRAIN KIT	LTD P/N	LTD DRG NO
SH: NONE	CKD BY: DATE: <i>[Signature]</i> 9-15-89	INC P/N: 21552	INC DRG NO: A-12200	
WHERE USED: -----	SCALE: 1 : 1			