

Colt Industries



Fairbanks Morse
Engine Division
701 Lawton Avenue
Beloit, Wisconsin 53511
608/364-4411

AM

PRIORITY ROUTING	
Mr. Moriarty	Second
Mr. [unclear]	Third
Mr. [unclear]	Fourth
Mr. [unclear]	Fifth
Mr. [unclear]	Sixth
Mr. [unclear]	Seventh
Mr. [unclear]	Eighth
Mr. [unclear]	Ninth
Mr. [unclear]	Tenth
Mr. [unclear]	Eleventh
Mr. [unclear]	Twelfth
Mr. [unclear]	Thirteenth
Mr. [unclear]	Fourteenth
Mr. [unclear]	Fifteenth
Mr. [unclear]	Sixteenth
Mr. [unclear]	Seventeenth
Mr. [unclear]	Eighteenth
Mr. [unclear]	Nineteenth
Mr. [unclear]	Twentieth
Mr. [unclear]	Twenty-first
Mr. [unclear]	Twenty-second
Mr. [unclear]	Twenty-third
Mr. [unclear]	Twenty-fourth
Mr. [unclear]	Twenty-fifth
Mr. [unclear]	Twenty-sixth
Mr. [unclear]	Twenty-seventh
Mr. [unclear]	Twenty-eighth
Mr. [unclear]	Twenty-ninth
Mr. [unclear]	Thirtieth
Mr. [unclear]	Thirty-first
Mr. [unclear]	Thirty-second
Mr. [unclear]	Thirty-third
Mr. [unclear]	Thirty-fourth
Mr. [unclear]	Thirty-fifth
Mr. [unclear]	Thirty-sixth
Mr. [unclear]	Thirty-seventh
Mr. [unclear]	Thirty-eighth
Mr. [unclear]	Thirty-ninth
Mr. [unclear]	Fortieth
Mr. [unclear]	Forty-first
Mr. [unclear]	Forty-second
Mr. [unclear]	Forty-third
Mr. [unclear]	Forty-fourth
Mr. [unclear]	Forty-fifth
Mr. [unclear]	Forty-sixth
Mr. [unclear]	Forty-seventh
Mr. [unclear]	Forty-eighth
Mr. [unclear]	Forty-ninth
Mr. [unclear]	Fiftieth
Mr. [unclear]	Fifty-first
Mr. [unclear]	Fifty-second
Mr. [unclear]	Fifty-third
Mr. [unclear]	Fifty-fourth
Mr. [unclear]	Fifty-fifth
Mr. [unclear]	Fifty-sixth
Mr. [unclear]	Fifty-seventh
Mr. [unclear]	Fifty-eighth
Mr. [unclear]	Fifty-ninth
Mr. [unclear]	Sixtieth
Mr. [unclear]	Sixty-first
Mr. [unclear]	Sixty-second
Mr. [unclear]	Sixty-third
Mr. [unclear]	Sixty-fourth
Mr. [unclear]	Sixty-fifth
Mr. [unclear]	Sixty-sixth
Mr. [unclear]	Sixty-seventh
Mr. [unclear]	Sixty-eighth
Mr. [unclear]	Sixty-ninth
Mr. [unclear]	Seventieth
Mr. [unclear]	Seventy-first
Mr. [unclear]	Seventy-second
Mr. [unclear]	Seventy-third
Mr. [unclear]	Seventy-fourth
Mr. [unclear]	Seventy-fifth
Mr. [unclear]	Seventy-sixth
Mr. [unclear]	Seventy-seventh
Mr. [unclear]	Seventy-eighth
Mr. [unclear]	Seventy-ninth
Mr. [unclear]	Eightieth
Mr. [unclear]	Eighty-first
Mr. [unclear]	Eighty-second
Mr. [unclear]	Eighty-third
Mr. [unclear]	Eighty-fourth
Mr. [unclear]	Eighty-fifth
Mr. [unclear]	Eighty-sixth
Mr. [unclear]	Eighty-seventh
Mr. [unclear]	Eighty-eighth
Mr. [unclear]	Eighty-ninth
Mr. [unclear]	Ninetieth
Mr. [unclear]	One hundred
Mr. [unclear]	One hundred one
Mr. [unclear]	One hundred two
Mr. [unclear]	One hundred three
Mr. [unclear]	One hundred four
Mr. [unclear]	One hundred five
Mr. [unclear]	One hundred six
Mr. [unclear]	One hundred seven
Mr. [unclear]	One hundred eight
Mr. [unclear]	One hundred nine
Mr. [unclear]	One hundred ten
Mr. [unclear]	One hundred eleven
Mr. [unclear]	One hundred twelve
Mr. [unclear]	One hundred thirteen
Mr. [unclear]	One hundred fourteen
Mr. [unclear]	One hundred fifteen
Mr. [unclear]	One hundred sixteen
Mr. [unclear]	One hundred seventeen
Mr. [unclear]	One hundred eighteen
Mr. [unclear]	One hundred nineteen
Mr. [unclear]	One hundred twenty
Mr. [unclear]	One hundred twenty one
Mr. [unclear]	One hundred twenty two
Mr. [unclear]	One hundred twenty three
Mr. [unclear]	One hundred twenty four
Mr. [unclear]	One hundred twenty five
Mr. [unclear]	One hundred twenty six
Mr. [unclear]	One hundred twenty seven
Mr. [unclear]	One hundred twenty eight
Mr. [unclear]	One hundred twenty nine
Mr. [unclear]	One hundred thirty
Mr. [unclear]	One hundred thirty one
Mr. [unclear]	One hundred thirty two
Mr. [unclear]	One hundred thirty three
Mr. [unclear]	One hundred thirty four
Mr. [unclear]	One hundred thirty five
Mr. [unclear]	One hundred thirty six
Mr. [unclear]	One hundred thirty seven
Mr. [unclear]	One hundred thirty eight
Mr. [unclear]	One hundred thirty nine
Mr. [unclear]	One hundred forty
Mr. [unclear]	One hundred forty one
Mr. [unclear]	One hundred forty two
Mr. [unclear]	One hundred forty three
Mr. [unclear]	One hundred forty four
Mr. [unclear]	One hundred forty five
Mr. [unclear]	One hundred forty six
Mr. [unclear]	One hundred forty seven
Mr. [unclear]	One hundred forty eight
Mr. [unclear]	One hundred forty nine
Mr. [unclear]	One hundred fifty
Mr. [unclear]	One hundred fifty one
Mr. [unclear]	One hundred fifty two
Mr. [unclear]	One hundred fifty three
Mr. [unclear]	One hundred fifty four
Mr. [unclear]	One hundred fifty five
Mr. [unclear]	One hundred fifty six
Mr. [unclear]	One hundred fifty seven
Mr. [unclear]	One hundred fifty eight
Mr. [unclear]	One hundred fifty nine
Mr. [unclear]	One hundred sixty
Mr. [unclear]	One hundred sixty one
Mr. [unclear]	One hundred sixty two
Mr. [unclear]	One hundred sixty three
Mr. [unclear]	One hundred sixty four
Mr. [unclear]	One hundred sixty five
Mr. [unclear]	One hundred sixty six
Mr. [unclear]	One hundred sixty seven
Mr. [unclear]	One hundred sixty eight
Mr. [unclear]	One hundred sixty nine
Mr. [unclear]	One hundred seventy
Mr. [unclear]	One hundred seventy one
Mr. [unclear]	One hundred seventy two
Mr. [unclear]	One hundred seventy three
Mr. [unclear]	One hundred seventy four
Mr. [unclear]	One hundred seventy five
Mr. [unclear]	One hundred seventy six
Mr. [unclear]	One hundred seventy seven
Mr. [unclear]	One hundred seventy eight
Mr. [unclear]	One hundred seventy nine
Mr. [unclear]	One hundred eighty
Mr. [unclear]	One hundred eighty one
Mr. [unclear]	One hundred eighty two
Mr. [unclear]	One hundred eighty three
Mr. [unclear]	One hundred eighty four
Mr. [unclear]	One hundred eighty five
Mr. [unclear]	One hundred eighty six
Mr. [unclear]	One hundred eighty seven
Mr. [unclear]	One hundred eighty eight
Mr. [unclear]	One hundred eighty nine
Mr. [unclear]	One hundred ninety
Mr. [unclear]	One hundred ninety one
Mr. [unclear]	One hundred ninety two
Mr. [unclear]	One hundred ninety three
Mr. [unclear]	One hundred ninety four
Mr. [unclear]	One hundred ninety five
Mr. [unclear]	One hundred ninety six
Mr. [unclear]	One hundred ninety seven
Mr. [unclear]	One hundred ninety eight
Mr. [unclear]	One hundred ninety nine
Mr. [unclear]	Two hundred

December 20, 1984

Office of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Ill. 60137

Attention: Mr. James G. Keppler, Director, Region III

Subject: Colt Industries-Fairbanks Morse Engine Division
Colt PC-2 and PC-2.3 Emergency Diesel Generators
Fuel Injection Pump Delivery Valve Holder
Part 21 Report

Enclosure: 1) Colt's December 3, 1984 Form Letter

Gentlemen:

As explained in Enclosure 1, which has been distributed as indicated therein, Colt has experienced fatigue cracks on fuel injection pump delivery valve holders on Colt-Pielstick PC-2 and PC-2.3 engines creating a potentially dangerous situation.

Holders produced prior to January 27, 1982 have not been observed with this condition.

Utilities that have holders produced after January 27, 1982 or may have purchased spares are:

- 1) Alabama Power Co., Farley Units 1 & 2.
- 2) Public Service of Indiana, Marble Hill.
- 3) Public Service of New Hampshire, Seabrook 1 & 2.
- 4) Public Service Electric & Gas Co., Hope Creek.
- 5) Northeast Utilities, Millstone III.
- 6) South Carolina Electric & Gas Co., Summer Station.
- 7) Duquesne Light Co., Beaver Valley Unit 2.
- 8) Long Island Lighting Co., Shoreham Station.

50-322
50-348
50-364
50-443
50-444
50-354
50-423
50-395
50-412

A copy of this report and Enclosure 1 is being forwarded to the utilities involved.

Very truly yours,

J. M. Moriarty
J. M. Moriarty
MANAGER UTILITY SALES

JMM:jc

Encl. 8501070316 841220
PDR ADOCK 05000322
S PDR

DEC 24 1984

IEH

cc: U. S. Nuclear Regulatory Commission
c/o Document Management Branch
Washington, D.C. 20555

Bechtel Power Corp.
P. O. Box 3965
San Francisco, CA 94119
Attention: Hope Creek Project Engr.

Stone & Webster Engineering Corp.
P. O. Box 2325
Boston, Mass. 02107
Attention: Lead Electrical Engineer
J.O. No. 12179(Millstone III)

United Engineers & Constructors, Inc.
P. O. Box 8223
Philadelphia, PA 19101
Attention: Mr. D. H. Rhoads
Project Engr. Manager
(Seabrook)

South Carolina Electric & Gas Co.
P. O. Box 764
Columbia, South Carolina 29218
Attention: Mr. Dan Nauman
Manager, Q.A. & Security

Sargent & Lundy Engineers
55 E. Monroe Street
Chicago, IL 60603
Attention: P. L. Wattlelet
Marble Hill Project Manager

Stone & Webster Engineering Corp.
P. O. Box 2325
Boston, Mass. 02107
Attention: Project Engineer for
Duquesne J.O. 12241

Alabama Power Company
P. O. Drawer 470
Ashford, AL 36312
Attention: Mr. George Hairston

Stone & Webster Engineering Corp.
P. O. Box 2325
Boston, Mass. 02107
Attention: Project Engineer LILCO

December 3, 1984

(address)

Attention: (name)

Subject: Fuel Injection Pump Delivery Valve Holder

Dear (salutation):

We have become aware of a number of incidents involving the PC2.2, 2.3 and dual fuel engine, where a fatigue crack has occurred in the fuel injection pump delivery valve holder. The crack is initiated at the filter seat radius (shown on attachment) and progresses to the holder O.D. The crack results from an insufficient radius at the filter seat, causing a stress riser at this point. This may result in leakage of fuel oil under high pressure during the injection stroke, creating a potentially dangerous situation.

Holders produced prior to January 27, 1982 have not been observed with this condition.

To insure reliable operation of your injection equipment, we recommend the following:

1. Return all existing delivery valve holder shelf stock (Part No. P12606909) to our Beloit facility for inspection. All holders found with improper radius will be replaced.
2. Holders installed in new or rebuilt pumps after January 27, 1982 should be removed from pumps and returned for processing per No. 1 above.
3. All holders must be removed from pumps on engines built after January 27, 1982 and returned for processing per No. 1 above. A listing of your engines in this category is listed below.

To facilitate change-out, Fairbanks Morse will make available a pool of holders for replacement purposes. Please furnish your purchase order stating scheduled shipment requirements based upon your planned change-out schedule. Our invoice will be rendered with shipment. Upon receipt of new material from Fairbanks Morse, return suspect holders to Beloit for full credit.

Prior to returning any holders, please attach the enclosed Returned Goods tag and mark the shipment clearly with this identification number. Incoming

12/3/84

shipments should be made prepaid. Return shipments will be prepaid by Fairbanks Morse Industries. Labor for removal and reinstallation on the engine will be to the users account. Instructions will be provided with each shipment. This offer will be valid for shipments received through June 30, 1985. If you are in doubt regarding the age of a holder, please return for credit.

- To summarize:
1. Estimate your requirements (include shelf stock).
 2. Furnish purchase order with schedule and "ship to" instructions.
 3. Arrange for replacement as soon as material is available.
 4. Return holders for credit.

We regret the inconvenience caused by the actions recommended above; however, we appreciate your assistance in correcting this matter.

Very truly yours,

T. J. Skinner
Manager, Product Support

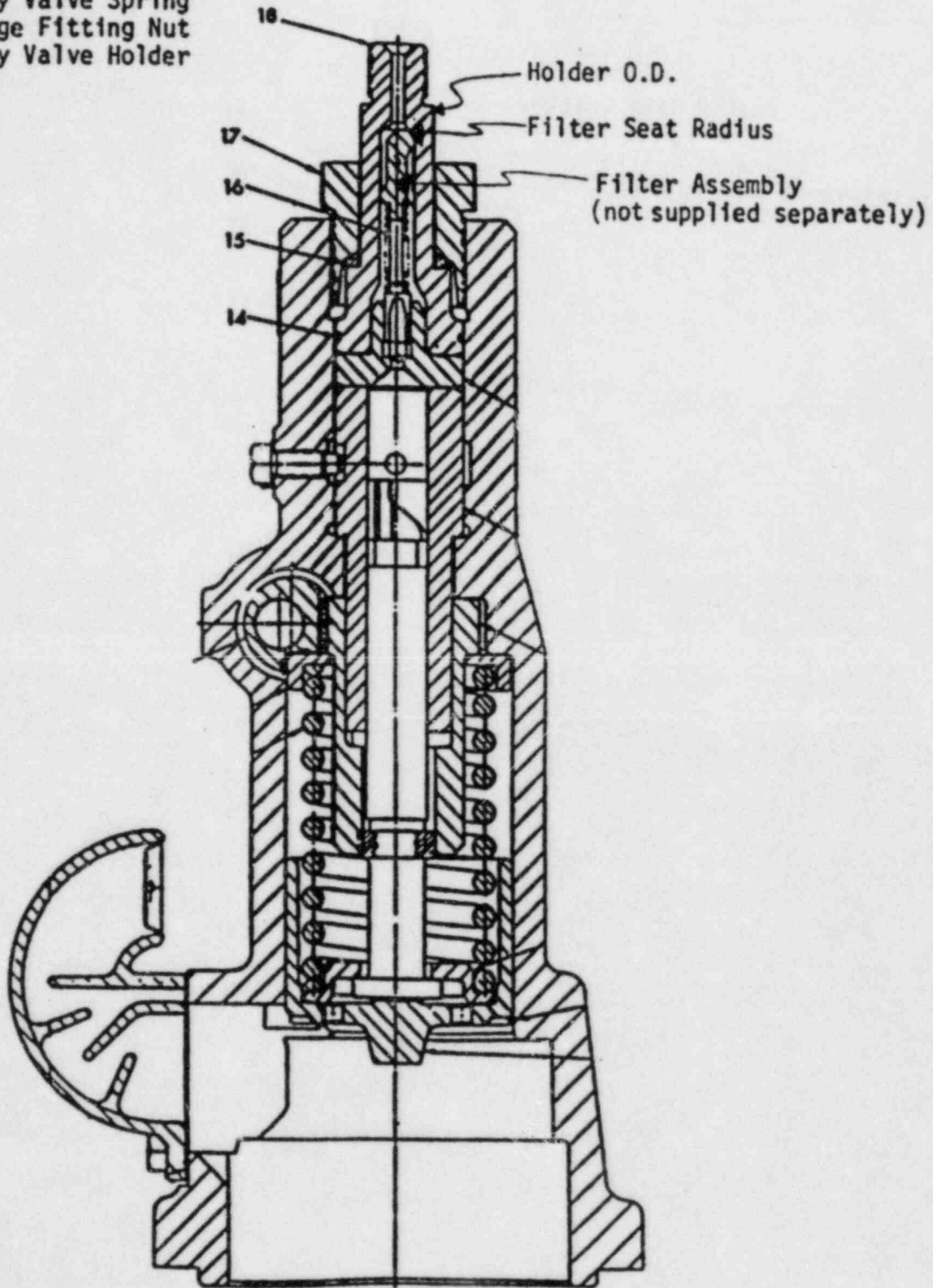
TJS/bkw

Engines Built After January 27, 1982 - (listing of engines)

<u>ENGINE TYPE</u>	<u>CUSTOMER</u>	<u>SHIP DATE</u>
<u>PC2.2/2.3 :</u>		
NUCLEAR	ALABAMA POWER	10/31/73
NUCLEAR	ALABAMA POWER	02/23/74
NUCLEAR	ALABAMA POWER	04/25/75
DIESEL	PROLER	12/17/76
DIESEL	MAUI ELECTRIC	02/25/77
NUCLEAR	SOUTH CAROLINA ELEC. & GAS	05/31/77
NUCLEAR	SOUTH CAROLINA ELEC. & GAS	06/30/77
DIESEL	MAUI ELECTRIC	12/20/77
HEAVY FUEL	EMPRESSA ELECTRICA	09/14/78
NUCLEAR	PUBLIC SERV. OF N.H.	06/29/79
NUCLEAR	PUBLIC SERV. OF N.H.	12/28/79
NUCLEAR	DUQUESNE LIGHT & POWER	08/08/80
NUCLEAR	DUQUESNE LIGHT & POWER	08/12/80
NUCLEAR	PUBLIC SERV. OF N.H.	12/12/80
NUCLEAR	PUBLIC SERV. OF N.H.	12/24/80
NUCLEAR	PUBLIC SERV. OF INDIANA	06/25/81
NUCLEAR	NORTHEAST UTILITIES	10/30/81
NUCLEAR	NORTHEAST UTILITIES	10/30/81
NUCLEAR	PUBLIC SERV. OF INDIANA	12/16/81
NUCLEAR	PUBLIC SERV. OF NEW JERSEY	04/02/82
NUCLEAR	PUBLIC SERV. OF NEW JERSEY	07/01/82
NUCLEAR	PUBLIC SERV. OF NEW JERSEY	11/11/82
NUCLEAR	PUBLIC SERV. OF NEW JERSEY	12/21/82
NUCLEAR	PUBLIC SERV. OF INDIANA	06/10/83
NUCLEAR	PUBLIC SERV. OF INDIANA	09/30/83
NUCLEAR	LILCO	05/04/84
NUCLEAR	LILCO	05/24/84
NUCLEAR	LILCO	06/22/84
<u>DUAL FUEL:</u>		
	HERINGTON, KS	08/73
	MADLIA (MINNESOTA)	05/73
	GOODLAND, KS	09/74
	RAYVILLE (LOUISIANA)	03/74
	MALDEN (MISSOURI)	08/73
	SULLIVAN (ILLINOIS)	12/74
	HOLTON, KS	10/75
	YANKTON (SOUTH DAKOTA)	06/75
	RENSSELAER (INDIANA)	05/75
	LARNED, KS	12/76
	TANK-CARMEN (MEXICO)	12/78
	SAINT CLOUD (FLORIDA)	07/77
	MARSHALL (MICHIGAN)	05/78
	GOODLAND II, KS	12/78
	LAKE MILLS, IOWA	05/78
	HOMESTEAD, FLA.	06/81
	BAY CITY, MI	11/21/80
	HUGOTON, KS	10/22/82

<u>ENGINE TYPE</u>	<u>CUSTOMER</u>	<u>SHIP DATE</u>
PC2	USNS COLUMBIA 205728	03/71
PC2	USNS NECHES 205728	07/71
PC2	USNS SUSQUEHANA 205728	01/72
PC2	USNS HUDSON 205728	04/72
PC2	M/V ROGER BLOUGH 205729	07/72
PC2	M/V SUGAR ISLANDER 205876	08/18/73
PC2	M/V SEABULK CHALLENGER 205923	08/18/74
PC2	M/V SEALIFT PACIFIC 205870	08/14/74
PC2	USNS SEALIFT ARABIAN SEA 205870	02/06/75
PC2	USNS SEALIFT CHINA SEA 205870	05/19/75
PC2	USNS SEALIFT INDIAN OCEAN 205870	09/21/75
PC2	M/V SEABULK MAGNACHEM 205012	11/30/76
PC2	M/V OGDEN PATRIOT 205943	04/02/76
PC2	M/V OGDEN RANGER 205943	07/27/76
PC2	M/V OGDEN ROVER 205943	01/28/77
PC2	M/V OGDEN COURIER 205943	01/25/77
PC2	M/V JAMES R. BARKER 206047	08/07/76
PC2	M/V MESABE MINER 206047	06/06/77
PC2	M/V GEORGE A. STINSON 206060	10/14/78
PC2	M/V EDGAR SPEER 206200	09/19/80
PC2	M/V WILLIAM J. DE LANCEY 206234	05/18/81
PC2	M/V MOKU PAHU 206039/206436	10/25/82

- 14. O-Ring (93-009 150)
- 15. Discharge Fitting Ring
- 16. Delivery Valve Spring
- 17. Discharge Fitting Nut
- 18. Delivery Valve Holder



FUEL INJECTION PUMP ASSEMBLY