P U B L I C A T I O N T R A N S M I T T A L

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V2500-A1/A5/D5 PROPULSION SYSTEM SERVICE BULLETIN

This document transmits the Revision 7 of Service Bulletin V2500-ENG-75-0084.

Document History

Service Bulletin Revision Status

Initial Issue	Aug.12/00
Revision 1	Jul. 9/02
Revision 2	Jan. 7/03
Revision 3	Jul. 4/03
Revision 4	Jan.20/04
Revision 5	Feb.10/05
Revision 6	Dec.13/05

Service Bulletin Revision 7

Remove	Incorporate	Reason for change
All Pages of the Service Bulletin.	Pages 1 to 32 of the Service Bulletin.	To revise the effectivity. To update style and format. To update illustrations.
All pages of the Supplement.	Page 1 and 2.	To update the prices.

V2500-ENG-75-0084

CHECK THAT ALL PREVIOUS TRANSMITTALS HAVE BEEN INCORPORATED
If any have not been received please advise IAE International Aero Engines AG

SERVICE BULLETIN

ENGINE - AIR ACTIVE CLEARANCE CONTROL (ACC) - REPLACEMENT OF TITANIUM TUBES MADE FROM X10 MATERIAL FOR REWORK/REPAIR BY TUBE REPLACEMENT

1. Planning Information

A. Effectivity

(1) Airbus A319

R (a) All V2522-A5, V2524-A5 Engines.

(2) Airbus A320

R (a) All V2500-A1 Engines.

R (b) All V2527-A5, V2527E-A5, V2527M-A5 Engines.

(3) Airbus A321

R (a) All V2530-A5, V2533-A5 Engines.

R (4) Boeing MD-90

R (a) All V2525-D5, V2528-D5 Engines.

B. Concurrent Requirements

None.

C. Reason

R (1) Condition:

Service experience showed damage on different ACC tubes which require replacement of tubes.

R (2) Background:

The titanium replacement tubes for all titanium and hybrid ACC assemblies are non-standard diameter size. These tubes are made from titanium sheets with special tools. This manufacturing process is no longer available.

R (3) Objective:

The connector system to attach the steel tubes to the all-titanium ACC is the same as the connector system for the hybrid version (X10 duct/titanium tubes). This was the production standard for some years. The welding process to attach the new tubes with connectors is identical to the weld process in the Component Maintenance Manual (standard repair for titanium
R ACC's). The tubes for the rework of the hybrid version are identical to the production tubes actually used. The weld process to attach the tubes to the duct is the same as the weld process for X10 material.

R (4) Substantiation:

Introduction of replacement tubes made from X10 material for the all-titanium ACC version and also for the hybrid (X10 duct and tubes made from titanium) version of the ACC.

(5) Effect of Bulletin on:

(a) Operation

R Not affected.

(b) Maintenance

R Not affected.

(c) Overhaul

R Not affected.

(d) Repair Schemes

Affected.

(e) Interchangeability

Not affected.

(f) Fits and Clearances

Not affected.

R (6) Supplemental Information:

R None.

D. Description

(1) The changes introduced are:

(a) This Service Bulletin introduces a rework procedure which describes ACC assembly rework by tube replacement with a new spare tube made from X10 material.

(b) The reworked part will be re-identified by a new part number.

E. Compliance

Category Code 8

Accomplish based upon experience with the prior configuration.

F. Approval

The part number changes and/or part modification described in Sections 2 and 3 of this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulations and are FAA-APPROVED for the Engine Models listed.

G. Manpower

(1) In service

Not applicable.

(2) At overhaul

Estimated Manhours to incorporate the full intent of this Service Bulletin (Refer to 3. Accomplishment Instructions, Step A.):

(a) To embody modifications to repair/replace ACC tubes including visual and dye penetrant inspection, removal of damaged tubes, machine the tube ends, welding, heat treating, inspection and re-identification:

One tube	6 hours, 55 minutes

NOTE: Total times can not be given because it is not possible to predict how many tubes will be replaced at one time. The time above is given for one tube replacement. The following times indicate multiple tube replacement:

Two tubes	8 hours, 5 minutes
Three tubes	11 hours, 45 minutes
Four tubes	15 hours, 25 minutes
Five tubes	19 hours, 5 minutes
Six tubes	22 hours, 45 minutes
Seven tubes	26 hours, 25 minutes
Eight tubes	30 hours, 5 minutes

(3) At overhaul

Estimated Manhours to incorporate the full intent of this Service Bulletin (Refer to 3. Accomplishment Instructions, Step B.):

(a) To embody modifications to repair/replace ACC tubes including visual and dye penetrant inspection, removal of damaged tubes, machine the tube ends, welding, heat treating, inspection and re-identification:

One tube	6 hours, 55 minutes

NOTE: Total times can not be given because it is not possible to predict how many tubes will be replaced at one time. The time above is given for one tube replacement. The following times indicate multiple tube replacement:

Two tubes	8 hours, 5 minutes
Three tubes	11 hours, 45 minutes
Four tubes	15 hours, 25 minutes
Five tubes	19 hours, 5 minutes
Six tubes	22 hours, 45 minutes
Seven tubes	26 hours, 25 minutes
Eight tubes	30 hours, 5 minutes

NOTE: The parts affected by this Service Bulletin are accessible at overhaul.

H. Material Price and Availability

Modification kit not required.

R For prices and availability of future spares see Supplement to this Service
R Bulletin.

I. Tooling Price and Availability

R Special tools are not required to perform this Service Bulletin.

J. Industry Support Information

R Not applicable.

K. Weight and Balance

(1) Weight Change

None.

(2) Moment Arm

None.

(3) Datum

Engine front mount centreline (Power Plant Station - PPS 100).

L. Electrical Load Data

This Service Bulletin has no effect on the aircraft electrical load.

M. Software Accomplishment Summary

Not applicable.

N. References

R (1) Engineering Change 99VM006, 99VM006-01, 99VM006-02, 99VM006-03 and
R 99VM006-04.

R (2) V2500 Engine Illustrated Parts Catalog, Chapter 75-24-49.

(3) V2500 Component Maintenance Manual - Tubes, Hoses and Ducts.

O. Other Publications Affected

R (1) The V2500 Component Maintenance Manual (THD-V2500-1IA) Chapter/Section
R 75-24-49 Cleaning, Inspection, Repair to add the new part number.

R (2) The V2500 Component Maintenance Manual (THD-V2500-3IA) Chapter/Section
R 75-24-49 Cleaning, Inspection, Repair to add the new part number.

R (3) The V2500-A1/A5/D5 Engine Illustrated Parts Catalogs.

R (a) IAE V2500-A1/A5/D5 Engine Illustrated Parts Catalogs (S-V2500-1IA,
R S-V2500-2IA, S-V2500-2IB, S-V2500-3IA, S-V2500-3IB, S-V2500-5IA,
R S-V2500-5IB, S-V2500-6IA, S-V2500-6IB, S-V2500-7IA, S-V2500-7IB) will
R be revised to include the new part. Refer to Section 2. "Material
R Information" for ATA locations.

R (b) IAE V2500-A5, SelectOne™ Engine Illustrated Parts Catalogs
R (S-V2500-2SA, S-V2500-2SB, S-V2500-5SA, S-V2500-5SB, S-V2500-6SA,
R S-V2500-6SB, S-V2500-7SA, S-V2500-7SB) will be revised to include the
R new part. Refer to Section 2. "Material Information" for ATA
R locations.

(4) For replacement tubes refer to 2. (3) and 2. (4) Material Information and Fig.3 (Sheet 1 and 2) and Fig.4 (Sheet 1 and 2).

P. Interchangeability of Parts

Not affected.

2. Material Information

A. The kit required consists of the following parts:

None.

B. New production parts:

R Refer to the Supplement of this Service Bulletin.

C. Parts affected by this bulletin:

(1) Rework from 3A0678 in 3A2656

75-24-49

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
02010	3A2656	N/A	Duct, Assy Cooling Air Upper	-	3A0678	(B)(D) (1D)(E)
02880	3A2664	1	Tube A/O	-	3A1858	(A)(C)
02890	3A2642	1	Tube A/O	-	3A1859	(A)(C)
02900	3A2665	1	Tube A/O	-	3A1860	(A)(C)
02910	3A2666	1	Tube A/O	-	3A1861	(A)(C)
02920	3A2644	1	Tube A/O	-	3A1862	(A)(C)
02930	3A2646	1	Tube A/O	-	3A1863	(A)(C)
02940	3A2667	1	Tube A/O	-	3A1864	(A)(C)
02950	3A2573	1	Tube A/O	-	3A1865	(A)(C)
02800	3A2668	1	Tube A/O	-	3A1866	(A)(C)
02810	3A2640	1	Tube A/O	-	3A1867	(A)(C)
02820	3A2669	1	Tube A/O	-	3A1868	(A)(C)
02830	3A2670	1	Tube A/O	-	3A1869	(A)(C)
02840	3A2671	1	Tube A/O	-	3A1870	(A)(C)
02850	3A2672	1	Tube A/O	-	3A1871	(A)(C)
02860	3A2673	1	Tube A/O	-	3A1872	(A)(C)
02870	3A2674	1	Tube A/O	-	3A1873	(A)(C)

(2) Rework from 3A0698 in 3A2657

75-24-49

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
03010	3A2657	N/A	Duct, Assy Cooling Air Lower	-	3A0698	(B)(D) (1D)(F)
03870	3A2545	1	Tube A/O	-	3A1874	(A)(C)
03940	3A2561	1	Tube A/O	-	3A1875	(A)(C)

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
03880	3A2563	1	Tube A/O	-	3A1876	(A)(C)
03890	3A2565	1	Tube A/O	-	3A1877	(A)(C)
03900	3A2567	1	Tube A/O	-	3A1878	(A)(C)
03910	3A2569	1	Tube A/O	-	3A1879	(A)(C)
03920	3A2571	1	Tube A/O	-	3A1880	(A)(C)
03930	3A2675	1	Tube A/O	-	3A1881	(A)(C)
03800	3A2543	1	Tube A/O	-	3A1882	(A)(C)
03950	3A2547	1	Tube A/O	-	3A1883	(A)(C)
03810	3A2549	1	Tube A/O	-	3A1884	(A)(C)
03820	3A2551	1	Tube A/O	-	3A1885	(A)(C)
03830	3A2553	1	Tube A/O	-	3A1886	(A)(C)
03840	3A2555	1	Tube A/O	-	3A1887	(A)(C)
03850	3A2557	1	Tube A/O	-	3A1888	(A)(C)
03860	3A2559	1	Tube A/O	-	3A1889	(A)(C)

(3) Rework from 3A1662 in 3A2658

75-24-49

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
02010	3A2658	N/A	Duct, Assy Cooling Air Upper	-	3A1662	(B)(D) (1D)(E)
02880	3A2676	1	Tube A/O	-	3A1858	(A)(C)
02890	3A2650	1	Tube A/O	-	3A1859	(A)(C)
02900	3A2677	1	Tube A/O	-	3A1860	(A)(C)
02910	3A2678	1	Tube A/O	-	3A1861	(A)(C)
02920	3A2652	1	Tube A/O	-	3A1862	(A)(C)
02930	3A2654	1	Tube A/O	-	3A1863	(A)(C)
02940	3A2679	1	Tube A/O	-	3A1864	(A)(C)
02950	3A2680	1	Tube A/O	-	3A1865	(A)(C)
02800	3A2681	1	Tube A/O	-	3A1866	(A)(C)
02810	3A2648	1	Tube A/O	-	3A1867	(A)(C)
02820	3A2682	1	Tube A/O	-	3A1868	(A)(C)
02830	3A2683	1	Tube A/O	-	3A1869	(A)(C)
02840	3A2684	1	Tube A/O	-	3A1870	(A)(C)
02850	3A2685	1	Tube A/O	-	3A1871	(A)(C)
02860	3A2686	1	Tube A/O	-	3A1872	(A)(C)
02870	3A2687	1	Tube A/O	-	3A1873	(A)(C)

(4) Rework from 3A1666 in 3A2659

75-24-49

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
03010	3A2659	N/A	Duct, Assy Cooling Air Lower	-	3A1666	(B)(D) (1D)(F)
03870	3A2624	1	Tube A/O	-	3A1874	(A)(C)
03940	3A2626	1	Tube A/O	-	3A1875	(A)(C)
03880	3A2628	1	Tube A/O	-	3A1876	(A)(C)
03890	3A2630	1	Tube A/O	-	3A1877	(A)(C)
03900	3A2632	1	Tube A/O	-	3A1878	(A)(C)
03910	3A2634	1	Tube A/O	-	3A1879	(A)(C)
03920	3A2636	1	Tube A/O	-	3A1880	(A)(C)
03930	3A2638	1	Tube A/O	-	3A1881	(A)(C)
03800	3A2608	1	Tube A/O	-	3A1882	(A)(C)
03950	3A2610	1	Tube A/O	-	3A1883	(A)(C)
03810	3A2612	1	Tube A/O	-	3A1884	(A)(C)
03820	3A2614	1	Tube A/O	-	3A1885	(A)(C)
03830	3A2616	1	Tube A/O	-	3A1886	(A)(C)
03840	3A2618	1	Tube A/O	-	3A1887	(A)(C)
03850	3A2620	1	Tube A/O	-	3A1888	(A)(C)
03860	3A2622	1	Tube A/O	-	3A1889	(A)(C)

D. Instructions disposition codes:

(A) New part is available for sale.

(B) Old and new parts are freely and fully interchangeable.

(C) Old part can be used until stock is exhausted.

(D) New part spareable.

(1D) Old part can be modified and re-identified with new part number.

(E) If the original titanium tube is used, refer to CMM-THD, Repair VRS4253, TASK 75-24-49-300-009 (75-24-49, REPAIR 009, Page 901).

(F) If the original titanium tube is used, refer to CMM-THD, Repair VRS4254, TASK 75-24-49-300-010 (75-24-49, REPAIR 010, Page 901).

3. Accomplishment Instructions

A. Rework Instructions

Rework existing ACC made from titanium (3A0678 and 3A0698) (75-24-49)

(1) Tools

Ref para 1.I. of this Service Bulletin

(2) Consumable Materials

CoMat 03-246 Welding Material

	PROCEDURE	RELATED DATA
(3)	Inspect the ACC Assembly	Refer to CMM-THD TASK 75-24-49-200-100, Inspection/Check-00, PB 801.
	(a) Do not rework parts that do not satisfy serviceability requirements in the CMM except damaged tubes to be replaced in accordance with this section.	
(4)	Cut off damaged tubes	Refer to Fig.1 (Sheet 3) and Fig.2 (Sheet 3) for dimensions.
(5)	For replacement tubes refer to 2. (1) Material Information and Fig.1 (Sheet 1 and Sheet 2) and Fig.2 (Sheet 1 and Sheet 2)	
(6)	Machine tube end to attach replacement tube in position. Machine the tube end on the duct as required to get the tube in correct position	Refer to Fig.1 (Sheet 4) and Fig.2 (Sheet 4).
(7)	Visually examine the machined tube for cracks. Use a x10 magnifying glass	No cracks are permitted.
(8)	Clean the surface to be welded	Refer to CMM-THD, TASK 75-24-49-100-100, Cleaning-00, PB 601
(9)	Weld replacement tube into position. Refer to TASK 70-31-13-310-501. Protective atmosphere is required	Use CoMat 03-246 welding material. For purity of welds refer to TASK 70-31-13-310-501. Use applicable fixture to get correct weld repair. Refer to Fig.1 (Sheet 2) and Fig.2 (Sheet 2).

(10)	Examine weld quality	Refer to TASK 70-31-13-310-501.
(11)	Do the test for cracks	Refer to TASK 70-23-05-230-501. Use the medium sensitivity. No cracks are permitted.
(12)	Examine the areas dimensionally	Refer to Fig.1 (Sheet 4) and Fig.2 (Sheet 4).
(13)	Examine the air holes for blockage	One blocked hole for each tube is permitted.
(14)	Re-identify the ACC with new Part Number	Refer to TASK 70-09-00-400-501. Manually vibro-peen adjacent to the existing Part Number as specified below:

OLD PART No.	NEW PART No.
3A0678	3A2656
3A0698	3A2657

NOTE: Re-identification must be performed after the replacement of one single tube.

B. Rework Instructions

Rework existing ACC made from titanium (3A1662 and 3A1666) (75-24-49)

(1) Tools

Ref para 1.I. of this Service Bulletin

(2) Consumable Materials

CoMat 03-204 Welding Filler Wire

PROCEDURE		RELATED DATA
(3)	Inspect the ACC Assembly	Refer to CMM-THD TASK 75-24-49-200-100, Inspection/Check-00, PB 801.

(a) Do not rework parts that do not satisfy serviceability requirements in the CMM except damaged tubes to be replaced in accordance with this section.

(4)	Cut off damaged tubes	Refer to Fig.3 (Sheet 1) and Fig.4 (Sheet 3) for dimensions.

(5)	Machine tube end to attach replacement tube in position. Machine the tube end on the duct as required to get the tube in correct position	Refer to Fig.3 (Sheet 4) and Fig.4 (Sheet 4).
(6)	Visually examine the machined tube for cracks. Use a x10 magnifying glass	No cracks are permitted.
(7)	Clean the surface to be welded	Refer to CMM-THD, TASK 75-24-49-100-100, Cleaning-00, PB 601
(8)	Weld replacement tube into position. Refer to TASK 70-31-13-310-501. Protective atmosphere is required	Use CoMat 03-204 welding filler wire. For purity of welds refer to TASK 70-31-13-310-501. Use applicable fixture to get correct weld repair. Refer to Fig.3 (Sheet 2) and Fig.4 (Sheet 2).
(9)	Examine weld quality	Refer to TASK 70-31-13-310-501.
(10)	Do the test for cracks	Refer to TASK 70-23-05-230-501. Use the medium sensitivity. No cracks are permitted.
(11)	Examine the areas dimensionally	Refer to Fig.3 (Sheet 4) and Fig.4 (Sheet 4).
(12)	Examine the air holes for blockage	One blocked hole for each tube is permitted.
(13)	Re-identify the ACC with new Part Number	Refer to TASK 70-09-00-400-501. Manually vibro-peen adjacent to the existing Part Number as specified below:

OLD PART No.	NEW PART No.
3A1662	3A2658
3A1666	3A2659

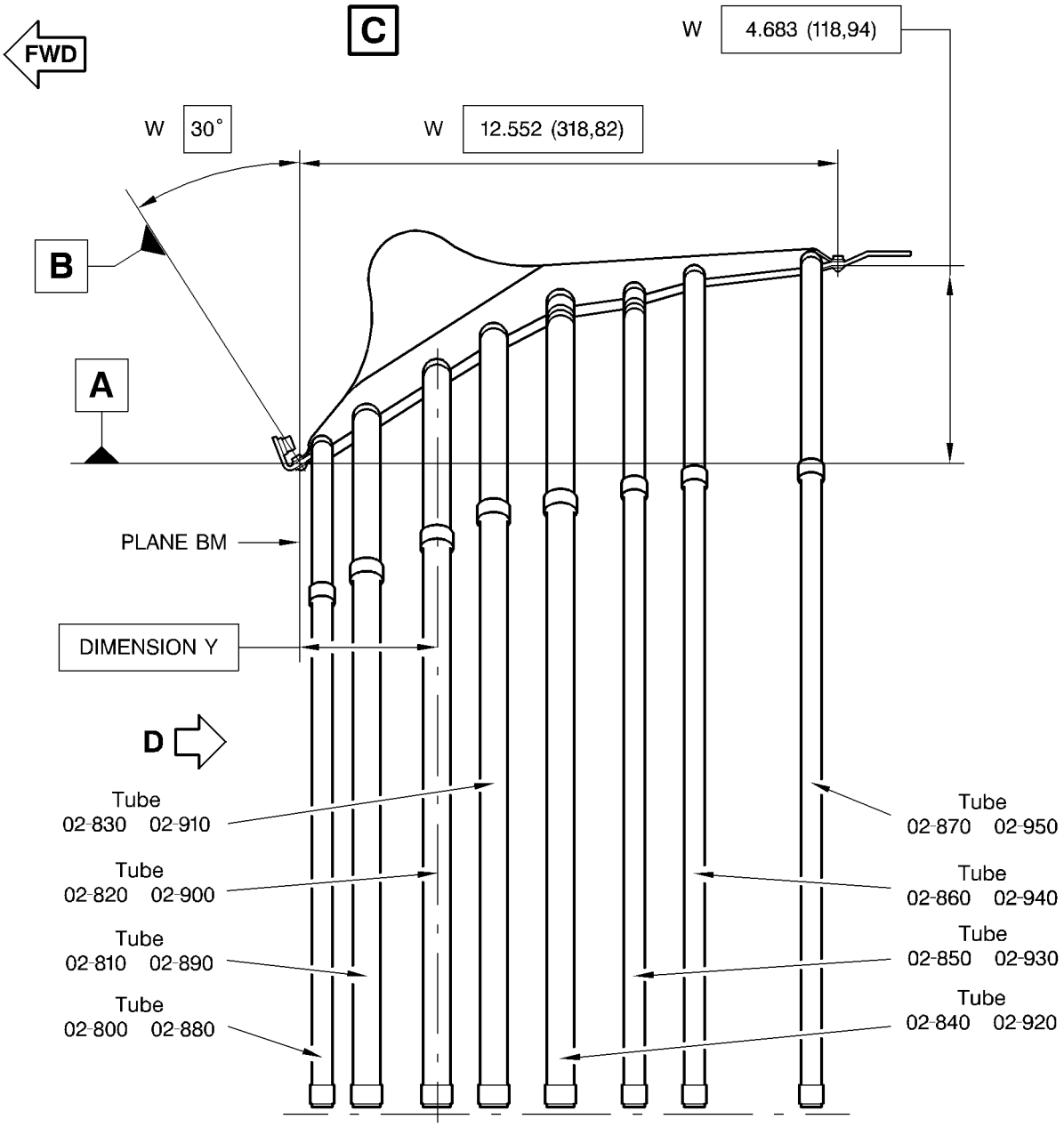
NOTE: Re-identification must be performed after the replacement of one single tube.

C. Assembly Instructions

Not applicable.

D. Recording Instructions

A record of accomplishment is required.



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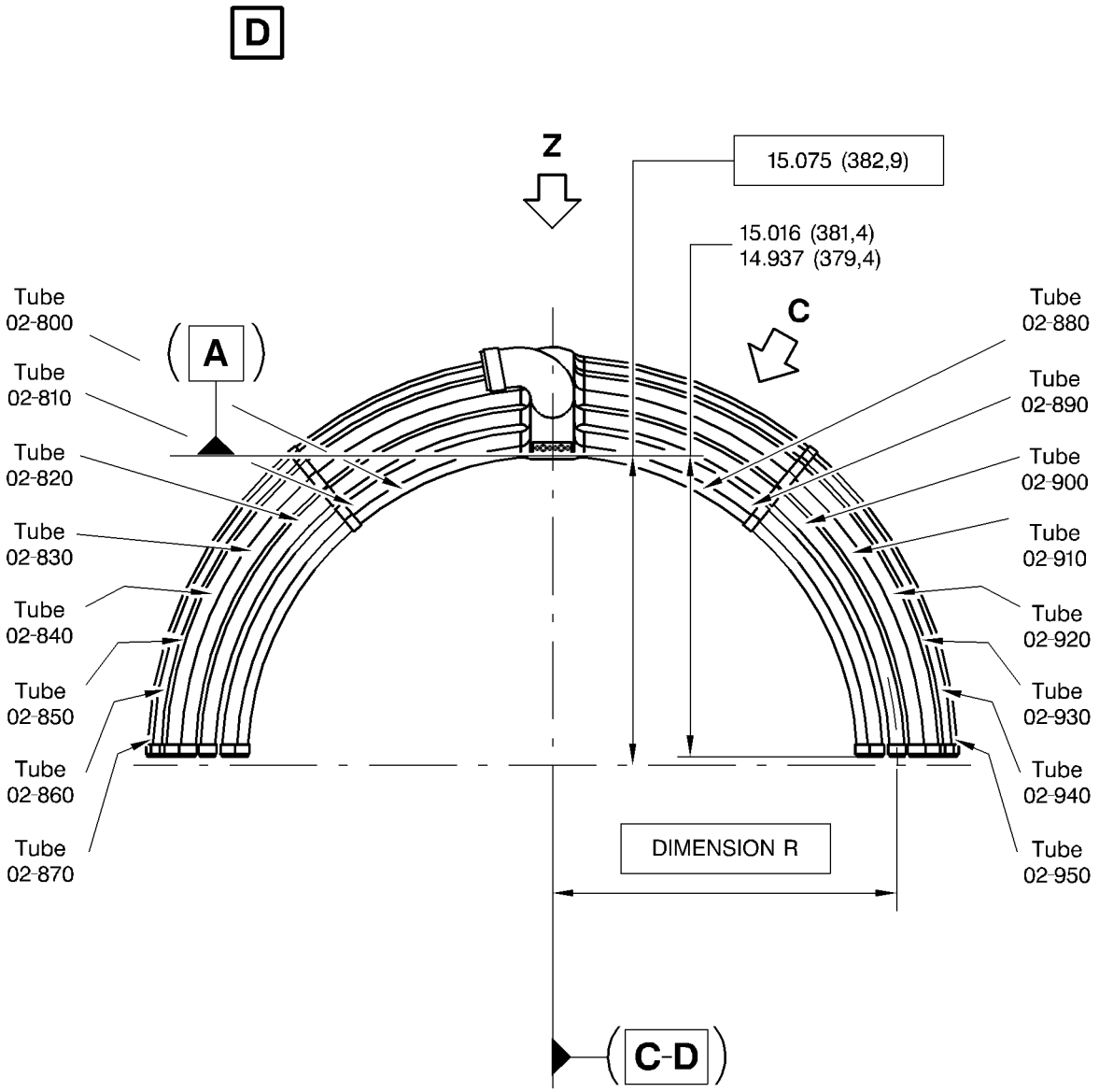
NOTE: 1. All EIPC Fig/Item numbers are 75-24-49 unless identified differently
2. Dimension Y refer to Fig 1, Sheet 5 of 5 (Rework from 3A0678 in 3A2656)
3. [A] & [B] Established by dimensions marked W
4. All dimensions are in in. and (mm)

Rework of active clearance control (ACC) made from titanium
Fig.1 (Sheet 1 of 5)



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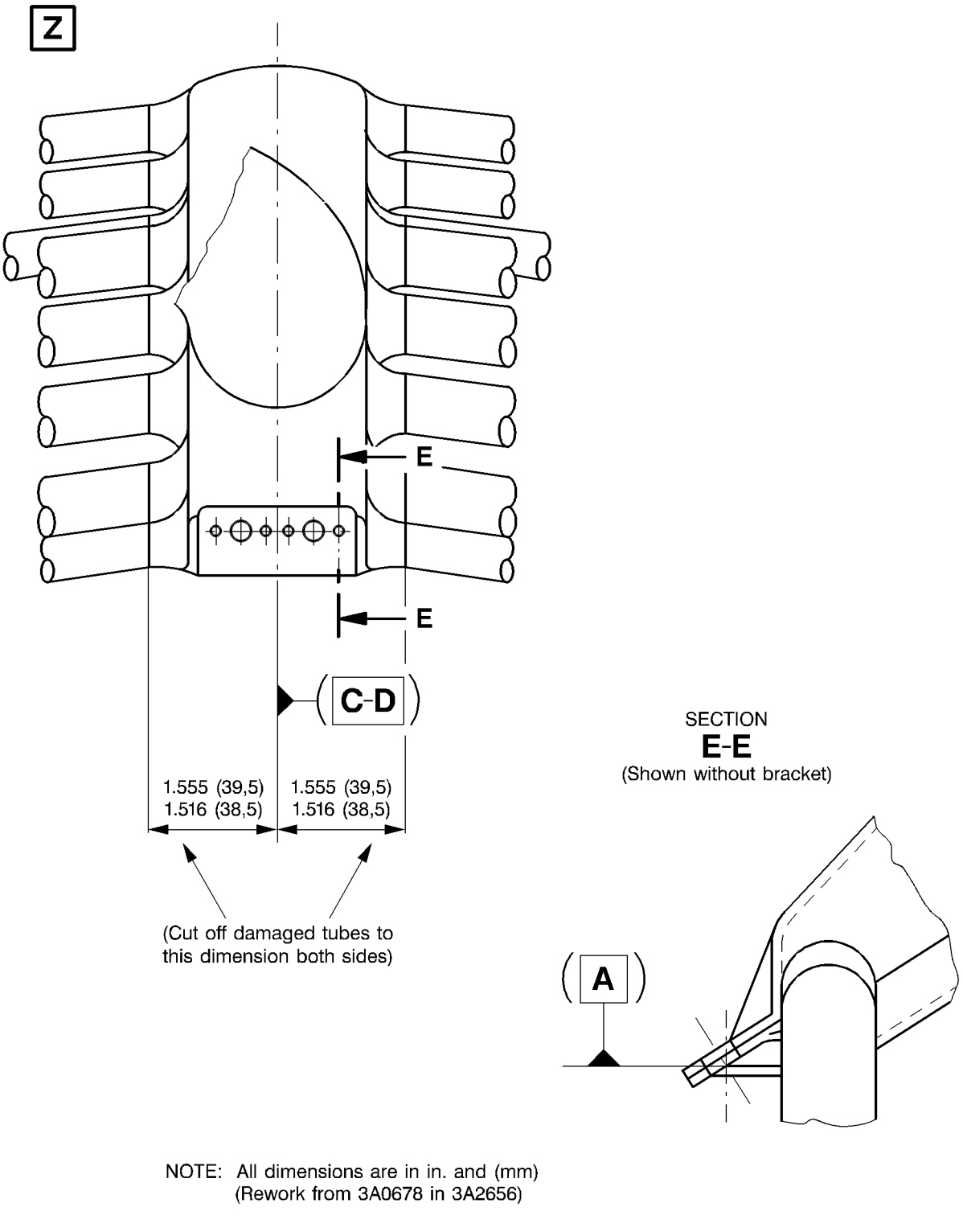
NOTE: 1. All EIPC Fig/Item numbers are 75-24-49 unless identified differently
2. Dimension R refer to Fig 1, Sheet 5 of 5 (Rework from 3A0678 in 3A2656)
3. All dimensions are in in. and (mm)

Rework of active clearance control (ACC) made from titanium
Fig.1 (Sheet 2 of 5)



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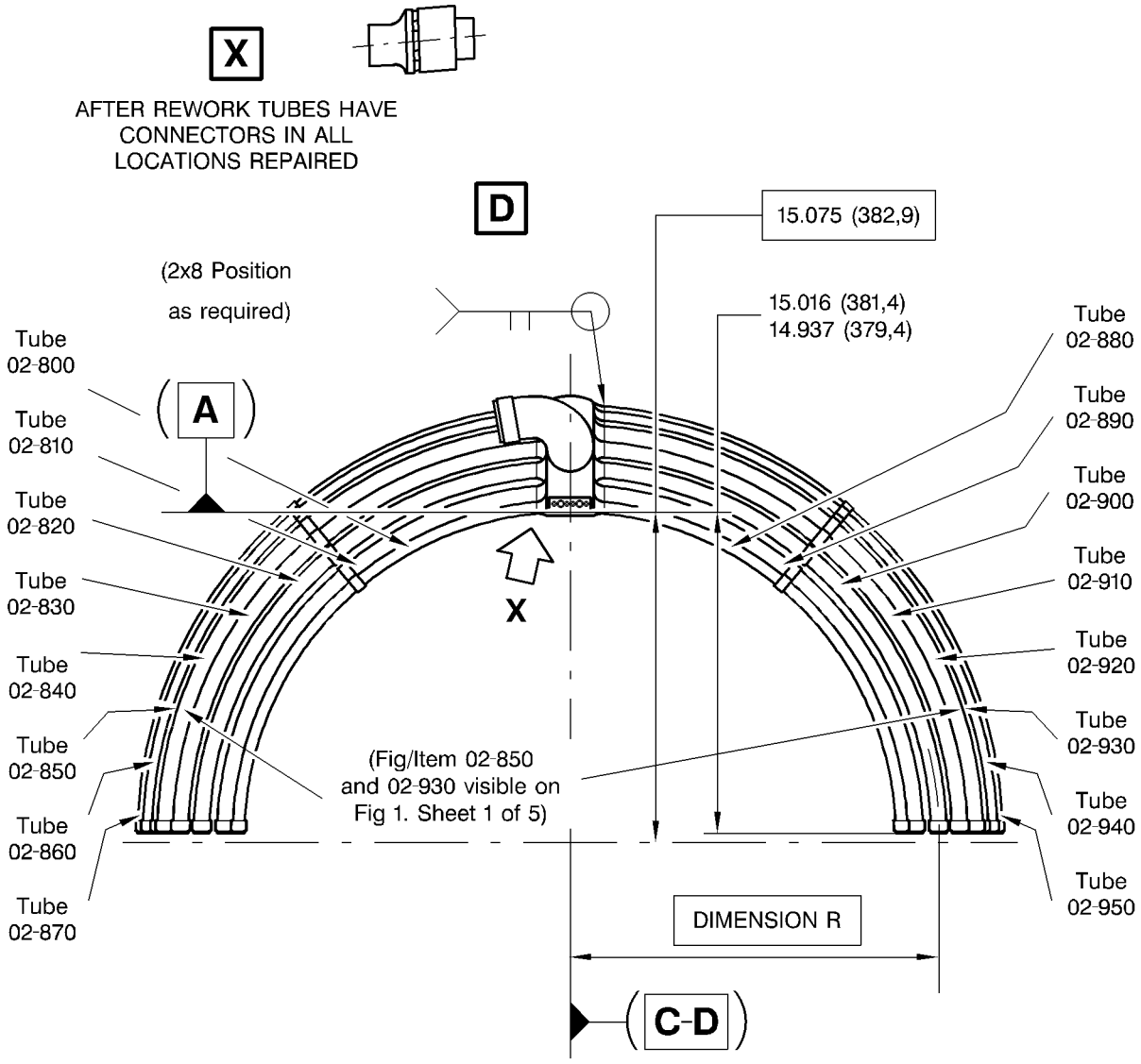
NOTE: All dimensions are in in. and (mm)
(Rework from 3A0678 in 3A2656)

Rework of active clearance control (ACC) made from titanium
Fig.1 (Sheet 3 of 5)



NOTE: 1. All dimensions are in in. and (mm)
2. Dimension R refer to Fig 1, Sheet 5 of 5
(Rework from 3A0678 in 3A2656)
3. All EIPC Fig/Item numbers are 75-24-49 unless identified differently
4. Valid for all tubes: ⌖ Ø0.078 (Ø2) A B C-D
Applies when all tube-ends are constrained in nominal positions.
Tubes Ø0.500 (Ø12,7): ⌖ Ø0.590 (Ø15) A B C-D in free state.
Tubes Ø0.689 (Ø17,5): ⌖ Ø0.394 (Ø10) A B C-D in free state.

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Rework of active clearance control (ACC) made from titanium
Fig.1 (Sheet 4 of 5)

FIG / ITEM	DIMENSION R	DIMENSION Y
02-880 and 02-800	15.3855 (390,79)	0.4724 (12,0)
02-890 and 02-810	16.0036 (406,49)	1.5354 (39,0)
02-900 and 02-820	17.0706 (433,59)	3.1693 (80,5)
02-910 and 02-830	17.9131 (454,99)	4.4685 (113,5)
02-920 and 02-840	18.7005 (474,99)	6.0433 (153,5)
02-930 and 02-850	18.9761 (481,99)	7.6969 (195,5)
02-940 and 02-860	19.3698 (491,99)	9.0945 (231,0)
02-950 and 02-870	19.6533 (499,19)	11.8504 (301,0)

NOTE: 1. All dimensions are in in. and (mm)
2. Radius is equivalent to within 0.0003 (0,01) in value to the dimension R for each Fig/Item.

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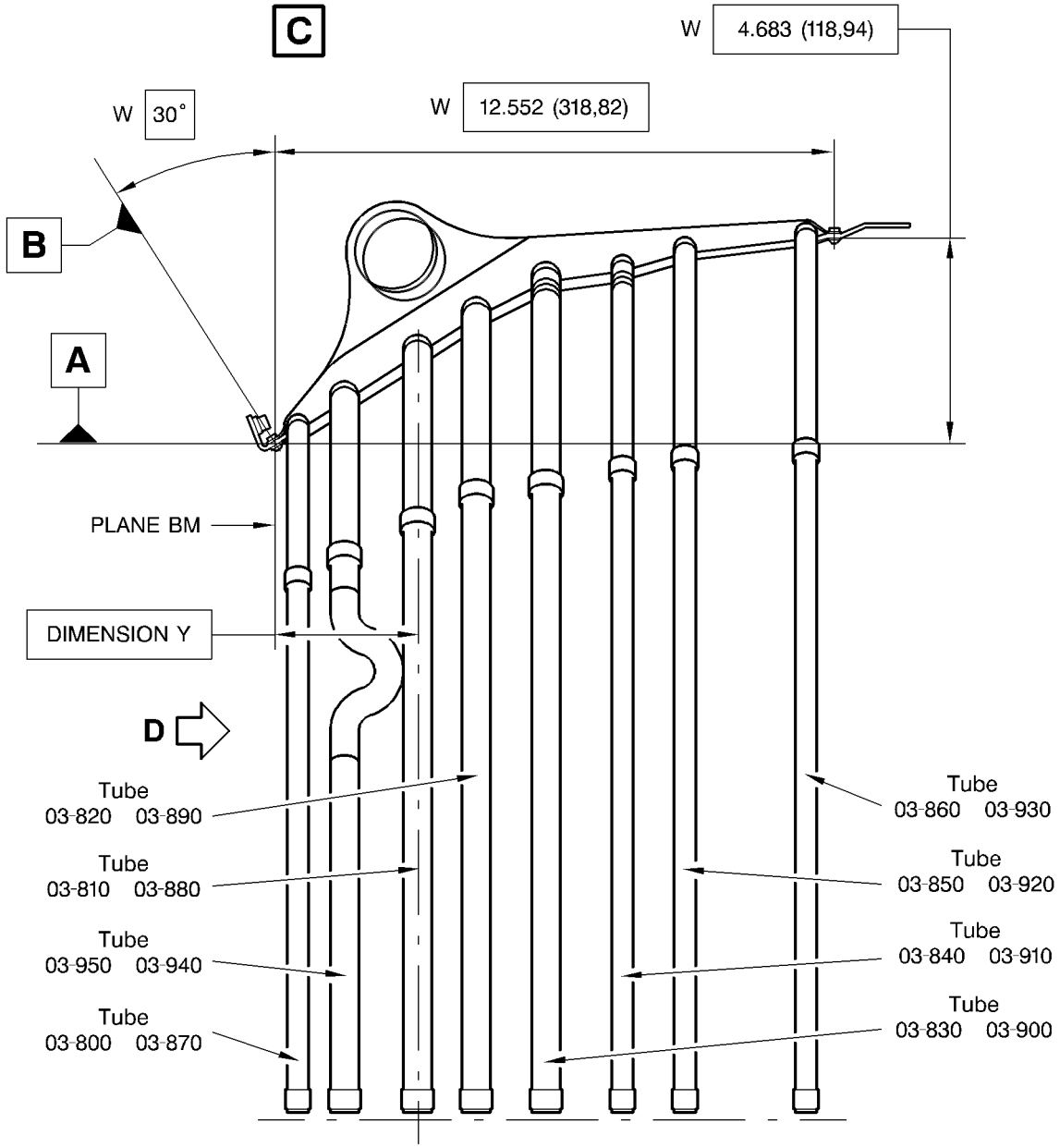
Rework of active clearance control (ACC) made from titanium
Fig.1 (Sheet 5 of 5)



NOTE: 1. All EIPC Fig/Item numbers are 75-24-49 unless identified differently
2. Dimension Y refer to Fig 2, Sheet 5 of 5 (Rework from 3A0698 in 3A2657)
3. [A] & [B] Established by dimensions marked W
4. All dimensions are in in. and (mm)

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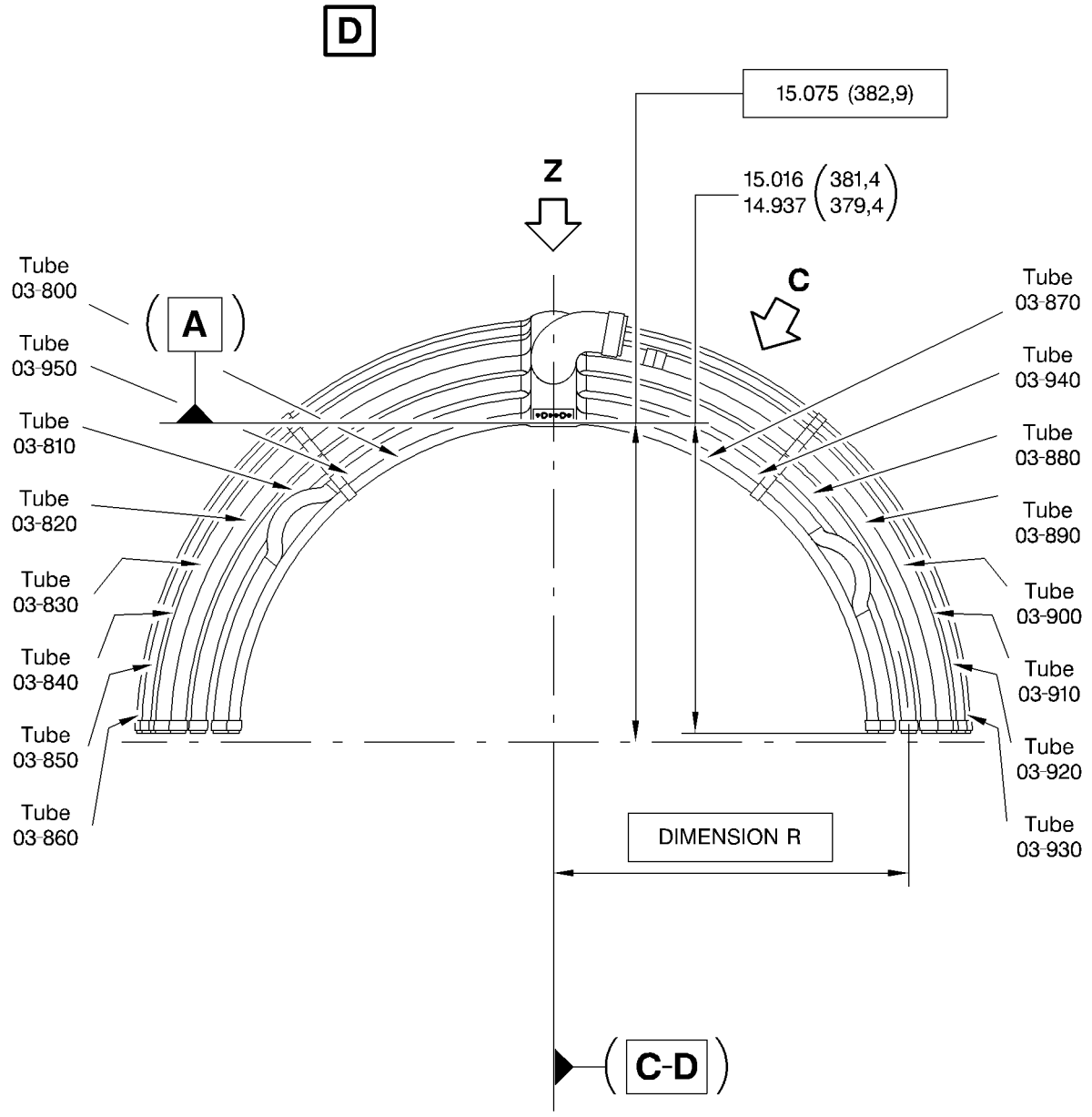
Rework of active clearance control (ACC) made from titanium
Fig.2 (Sheet 1 of 5)



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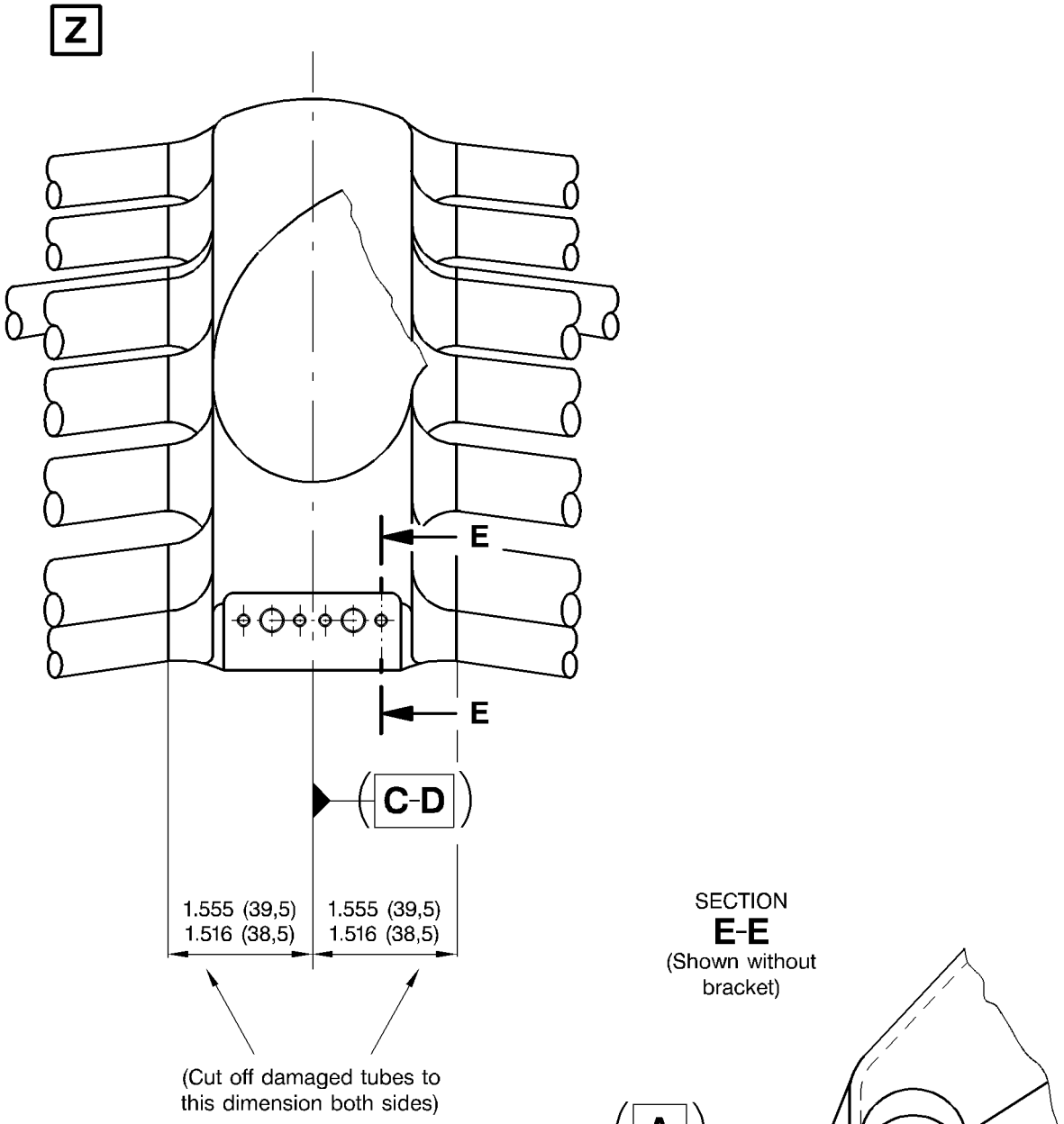
NOTE: 1. All EIPC Fig/Item numbers are 75-24-49 unless identified differently
2. Dimension R refer to Fig 2, Sheet 5 of 5 (Rework from 3A0698 in 3A2657)
3. All dimensions are in in. and (mm)

Rework of active clearance control (ACC) made from titanium
Fig.2 (Sheet 2 of 5)



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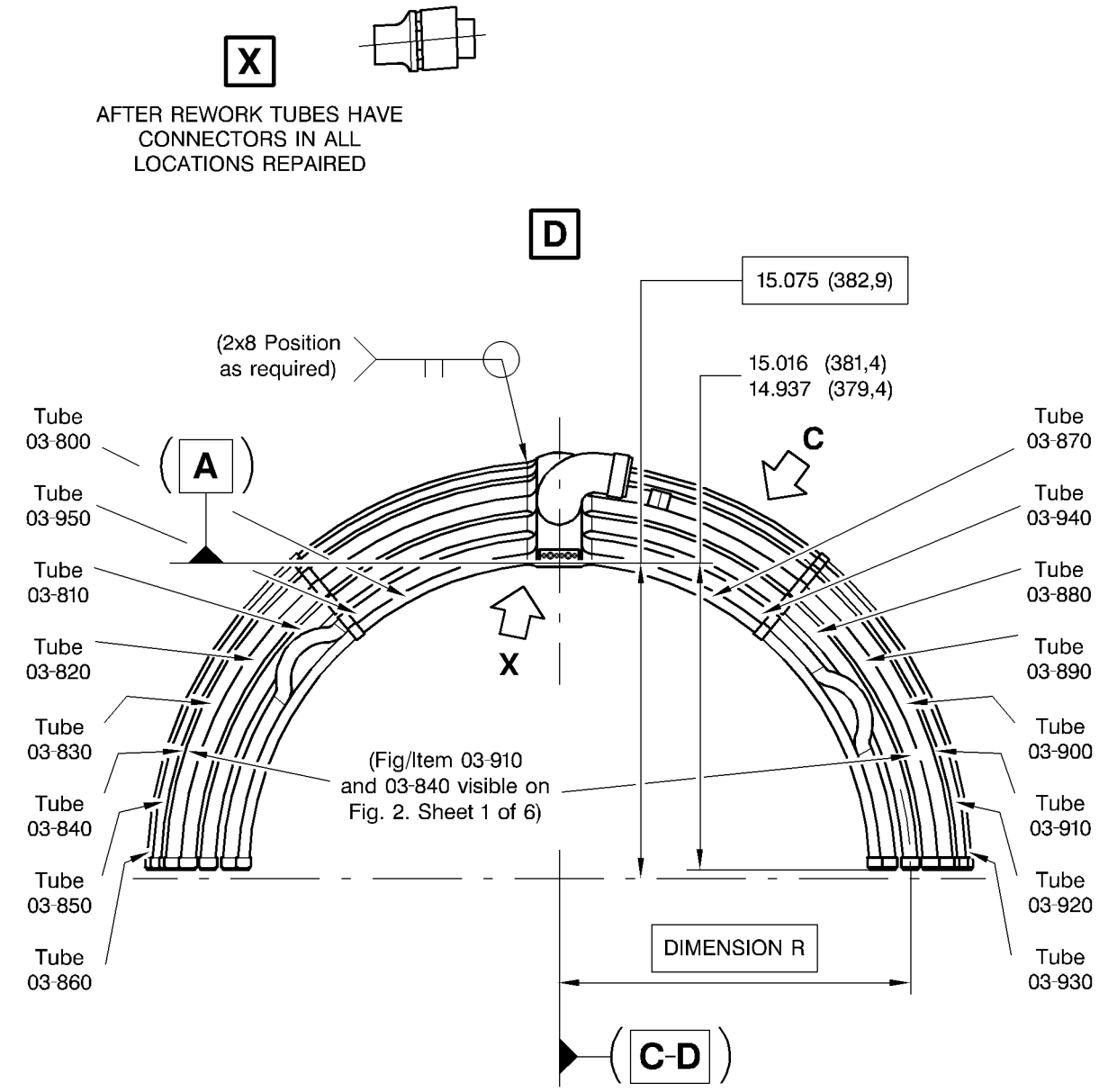
NOTE: All dimensions are in in. and (mm)
(Rework from 3A0698 in 3A2657)

Rework of active clearance control (ACC) made from titanium
Fig.2 (Sheet 3 of 5)



NOTE: 1. All dimensions are in in. and (mm)
2. Dimension R Fig 2. Sheet 5 of 5
3. All EIPC Fig/Item numbers are 75-24-49 unless identified differently
4. Valid for all tubes: ⌖ Ø0.078 (Ø2) | A | B | C-D
Applies when all tube-ends are constrained in nominal positions.
Tubes Ø0.500 (Ø12,7): ⌖ Ø0.590 (Ø15) | A | B | C-D in free state.
Tubes Ø0.689 (Ø17,5): ⌖ Ø0.394 (Ø10) | A | B | C-D in free state.

mu000b2547

Rework of active clearance control (ACC) made from titanium
Fig.2 (Sheet 4 of 5)

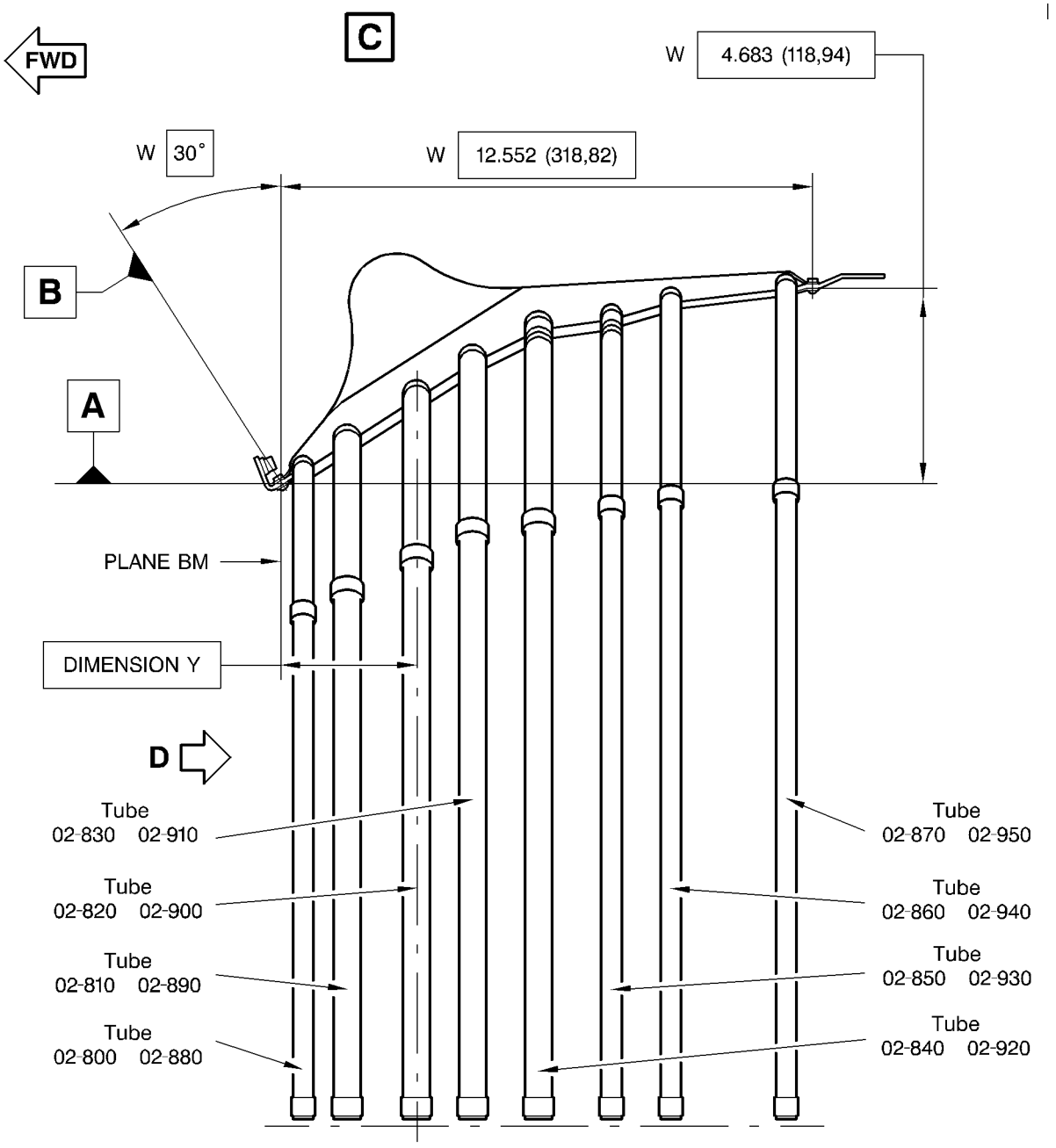
FIG / ITEM	DIMENSION R	DIMENSION Y
03-870 and 03-800	15.3855 (390,79)	0.4724 (12,0)
03-940 and 03-950	16.0036 (406,49)	1.5354 (39,0)
03-880 and 03-810	17.0706 (433,59)	3.1693 (80,5)
03-890 and 03-820	17.9131 (454,99)	4.4685 (113,5)
03-900 and 03-830	18.7005 (474,99)	6.0433 (153,5)
03-910 and 03-840	18.9761 (481,99)	7.6969 (195,5)
03-920 and 03-850	19.3698 (491,99)	9.0945 (231,0)
03-930 and 03-860	19.6533 (499,19)	11.8504 (301,0)

R

NOTE: 1. All dimensions are in in. and (mm)
2. For reference only: Radius is equivalent to within 0.0003 (0,01) in value to the dimension R for each Fig/Item.

mu00018832

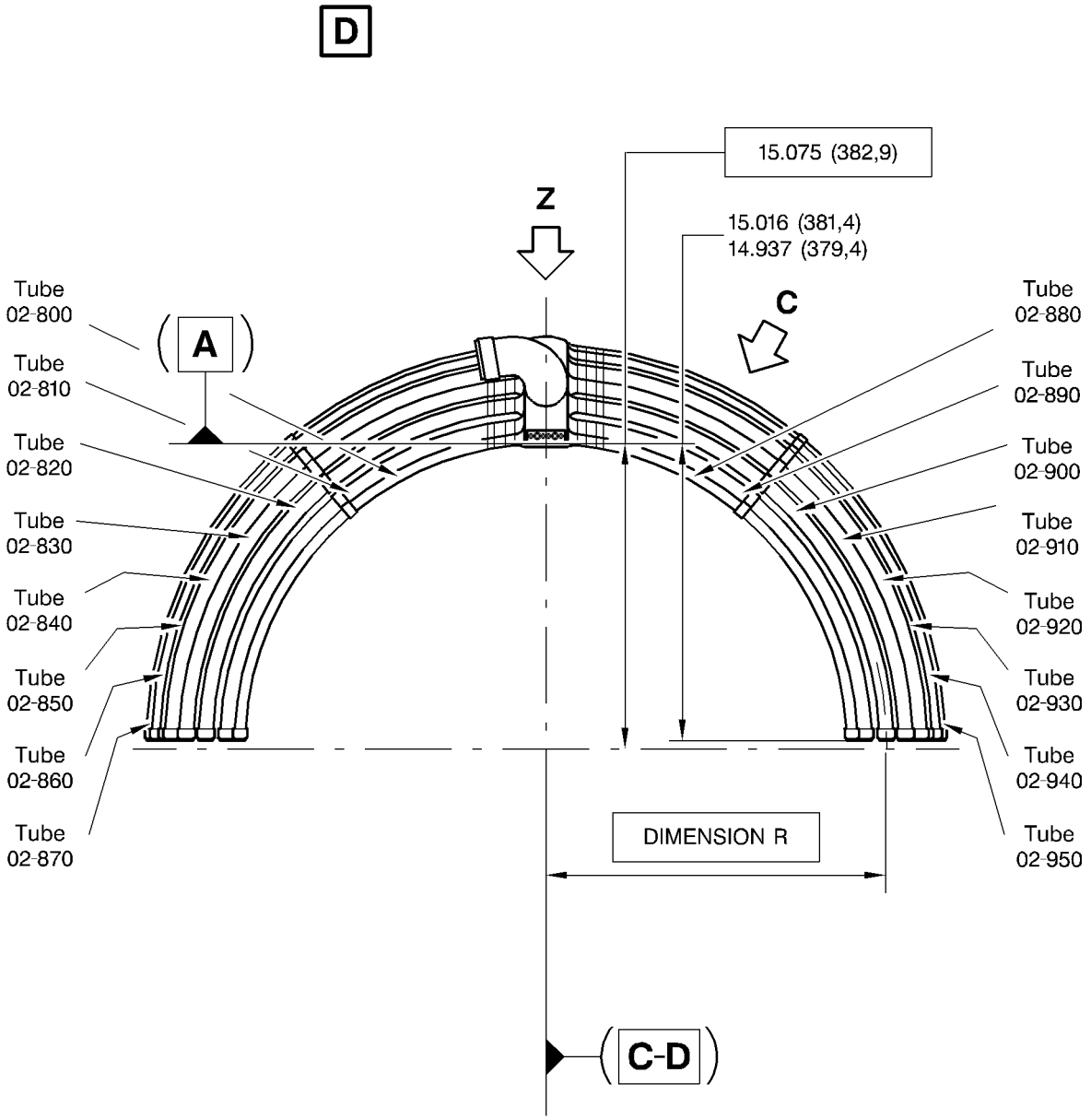
R Rework of active clearance control (ACC) made from titanium
R Fig.2 (Sheet 5 of 5)



mu000b2548

NOTE: 1. All EIPC Fig/Item numbers are 75-24-49 unless identified differently
2. Dimension Y refer to Fig 3, Sheet 5 of 5 (Rework from 3A1662 in 3A2658)
3. [A] & [B] Established by dimensions marked W
4. All dimensions are in in. and (mm)

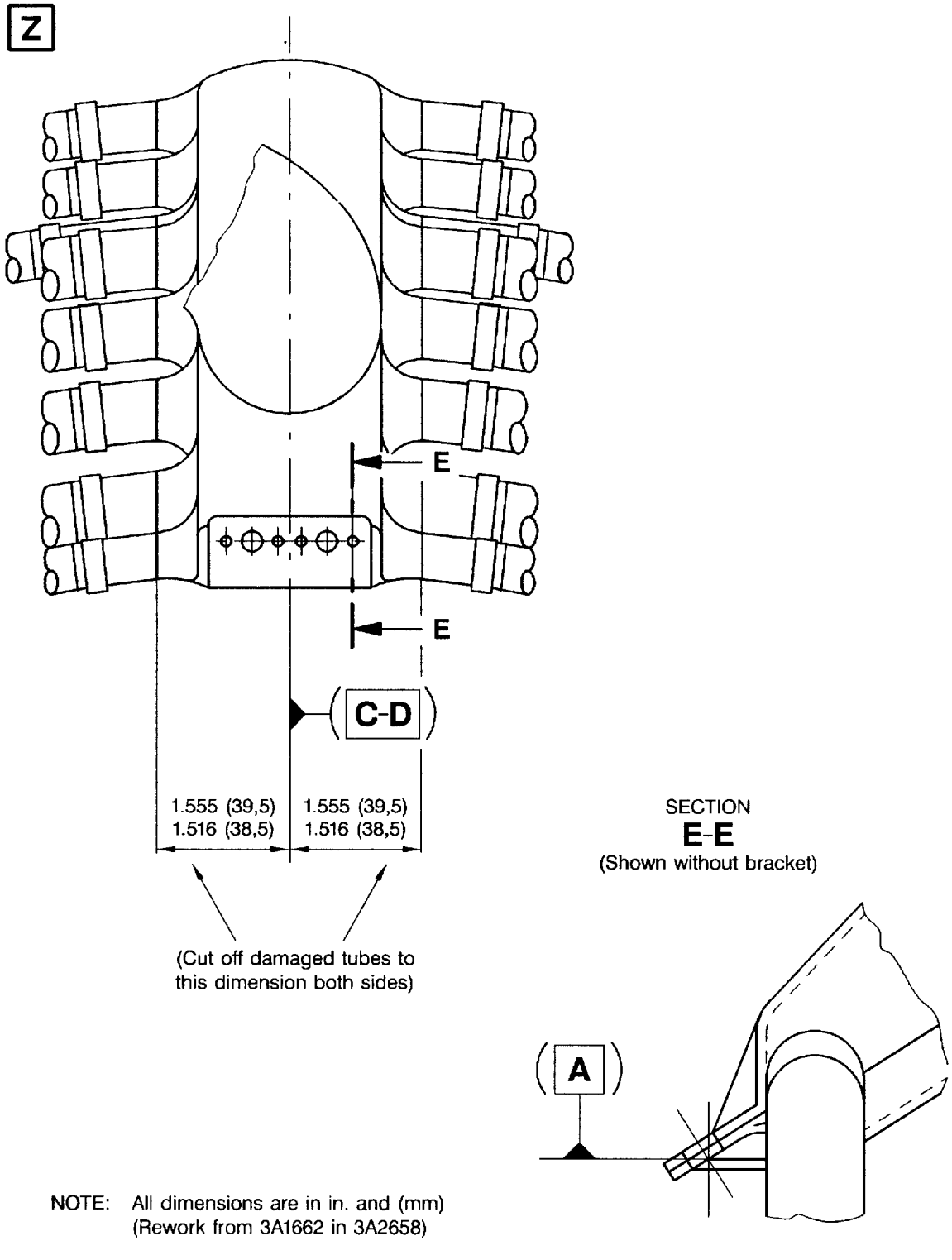
Rework of active clearance control (ACC) made from steel with titanium tubes
Fig.3 (Sheet 1 of 5)



mu000b2549

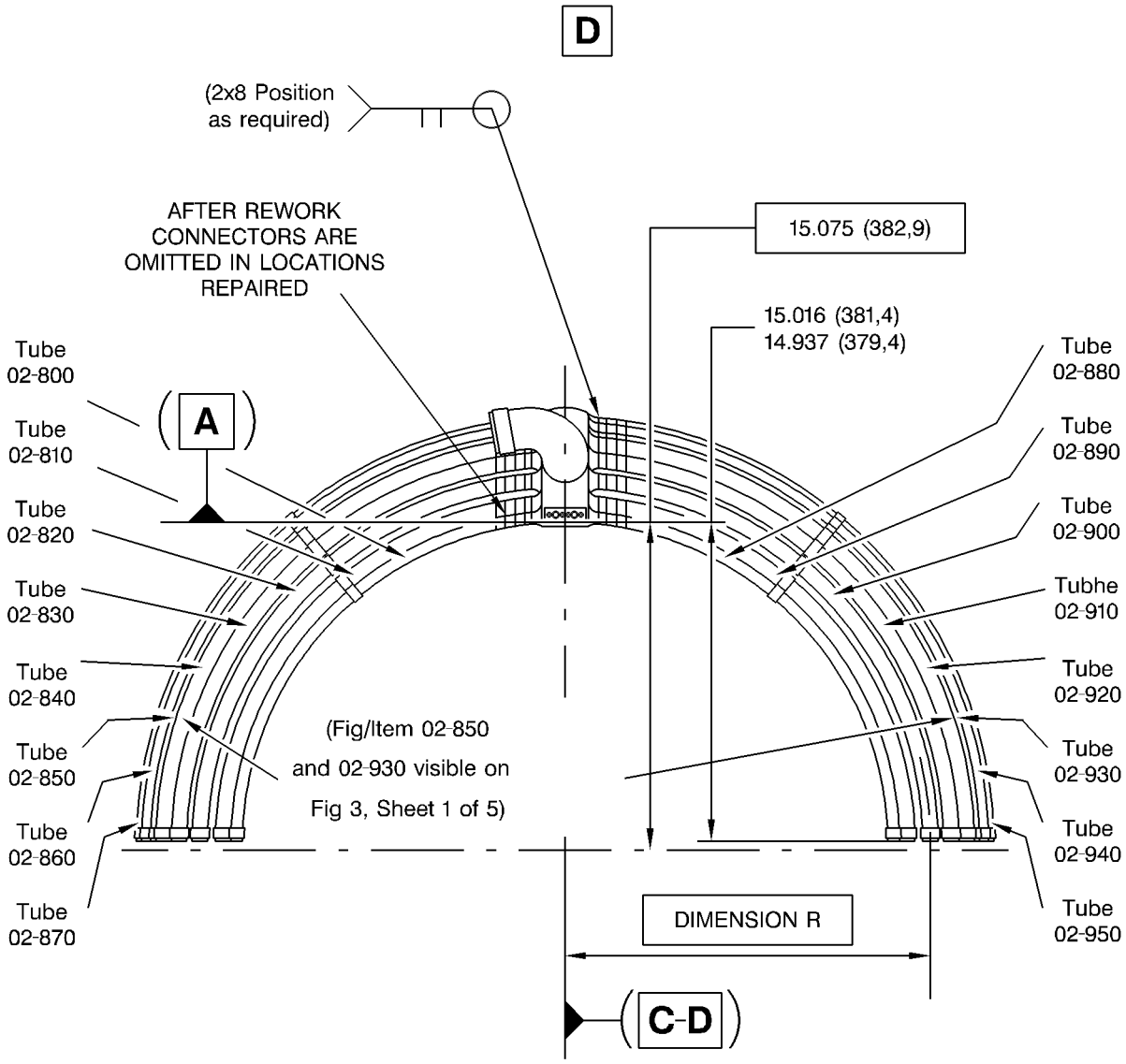
NOTE: 1. All EIPC Fig/Item numbers are 75-24-49 unless identified differently
2. Dimension R refer to Fig 3, Sheet 5 of 5 (Rework from 3A1662 in 3A2658)
3. All dimensions are in in. and (mm)

Rework of active clearance control (ACC) made from steel with titanium tubes
Fig.3 (Sheet 2 of 5)



NOTE: All dimensions are in in. and (mm)
(Rework from 3A1662 in 3A2658)

Rework of active clearance control (ACC) made from steel with titanium tubes
Fig.3 (Sheet 3 of 5)



NOTE: 1. All dimensions are in in. and (mm)
2. Dimension R refer to Fig 3, Sheet 5 of 5 (Rework from 3A1662 in 3A2658)
3. All EIPC Fig/Item numbers are 75-24-49 unless identified differently
4. Valid for all tubes: ⌖ Ø0.078 (Ø2) A B C-D
Applies when all tube ends are constrained in nominal positions.
Tubes Ø0.500 (Ø12,7): ⌖ Ø0.590 (Ø15) A B C-D in free state.
Tubes Ø0.689 (Ø17,5): ⌖ Ø0.394 (Ø10) A B C-D in free state.

mu000b2551

Rework of active clearance control (ACC) made from steel with titanium tubes
Fig.3 (Sheet 4 of 5)

FIG / ITEM	DIMENSION R	DIMENSION Y
02-880 and 02-800	15.3855 (390,79)	0.4724 (12,0)
02-890 and 02-810	16.0036 (406,49)	1.5354 (39,0)
02-900 and 02-820	17.0706 (433,59)	3.1693 (80,5)
02-910 and 02-830	17.9131 (454,99)	4.4685 (113,5)
02-920 and 02-840	18.7005 (474,99)	6.0433 (153,5)
02-930 and 02-850	18.9761 (481,99)	7.6969 (195,5)
02-940 and 02-860	19.3698 (491,99)	9.0945 (231,0)
02-950 and 02-870	19.6533 (499,19)	11.8504 (301,0)

NOTE: 1. All dimensions are in in. and (mm)
2. Radius is equivalent to within 0.0003 (0,01) in value to the dimension R for each Fig/Item.

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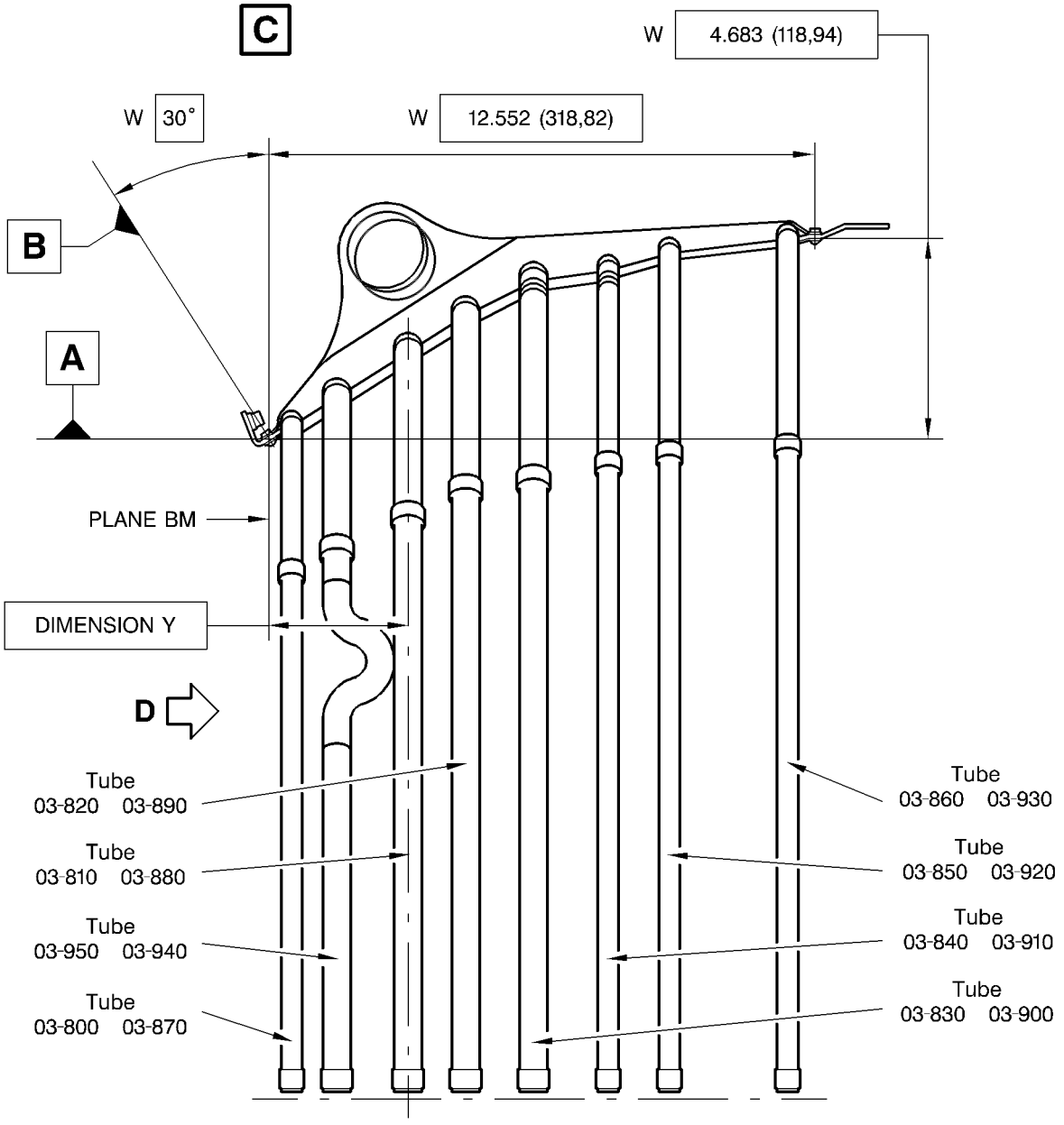
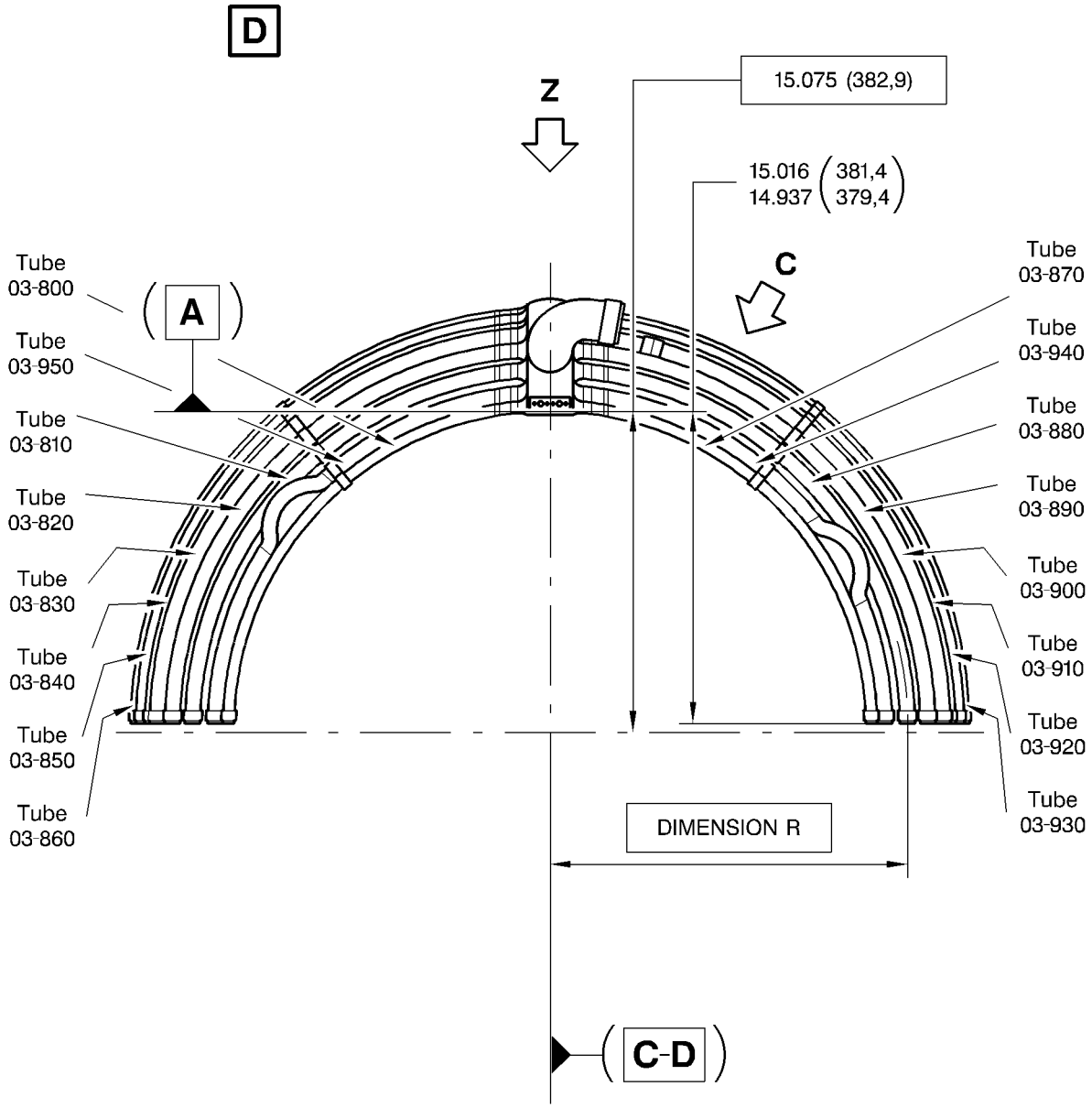
Rework of active clearance control (ACC) made from steel with titanium tubes
Fig.3 (Sheet 5 of 5)



NOTE: 1. All EIPC Fig/Item numbers are 75-24-49 unless identified differently
2. Dimension Y refer to Fig 4, Sheet 5 of 5 (Rework from 3A1666 in 3A2659)
3. [A] & [B] Established by dimensions marked W
4. All dimensions are in in. and (mm)

mu000b2552

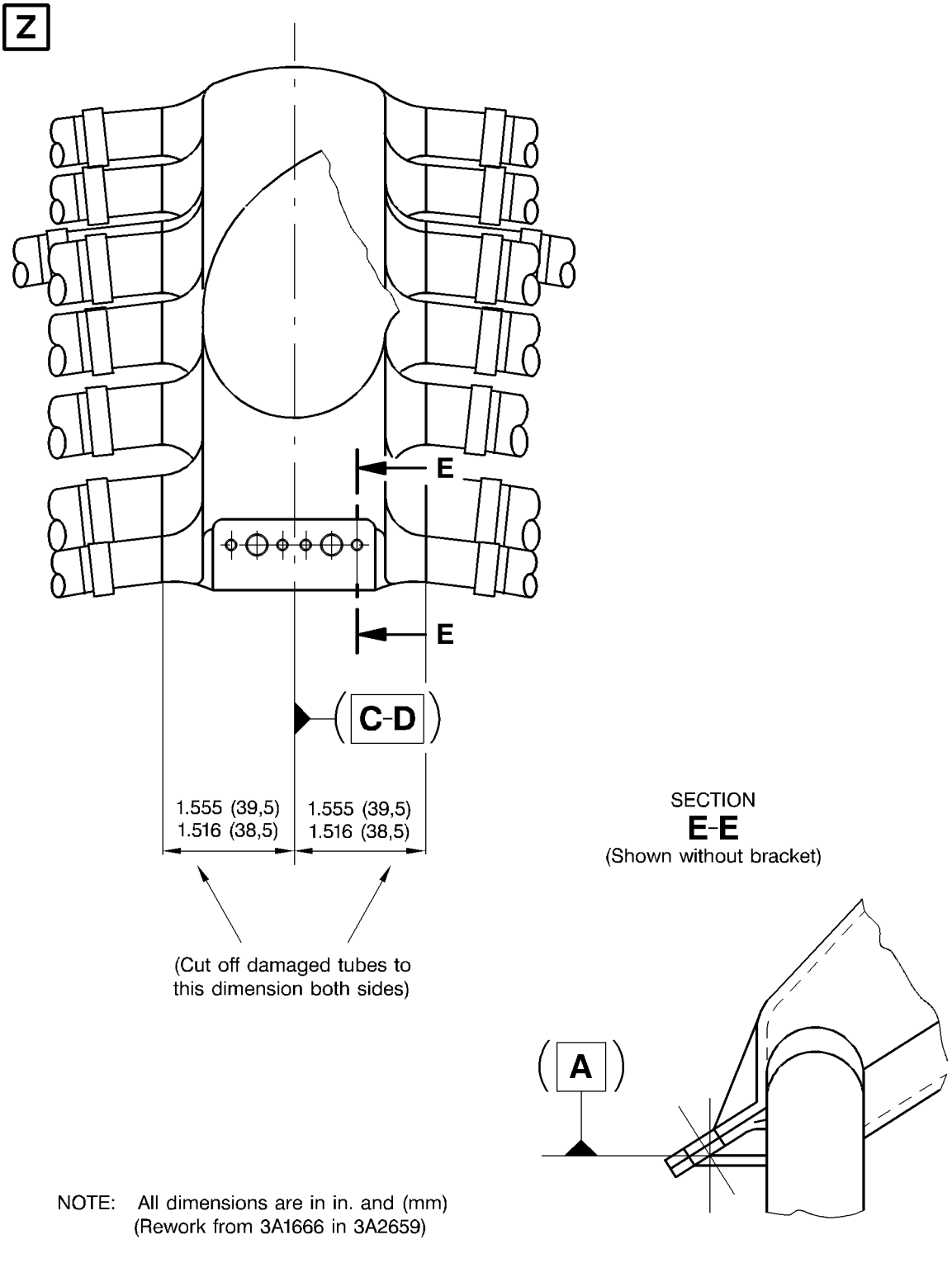
Rework of active clearance control (ACC) made from steel with titanium tubes
Fig.4 (Sheet 1 of 5)



mu000b2553

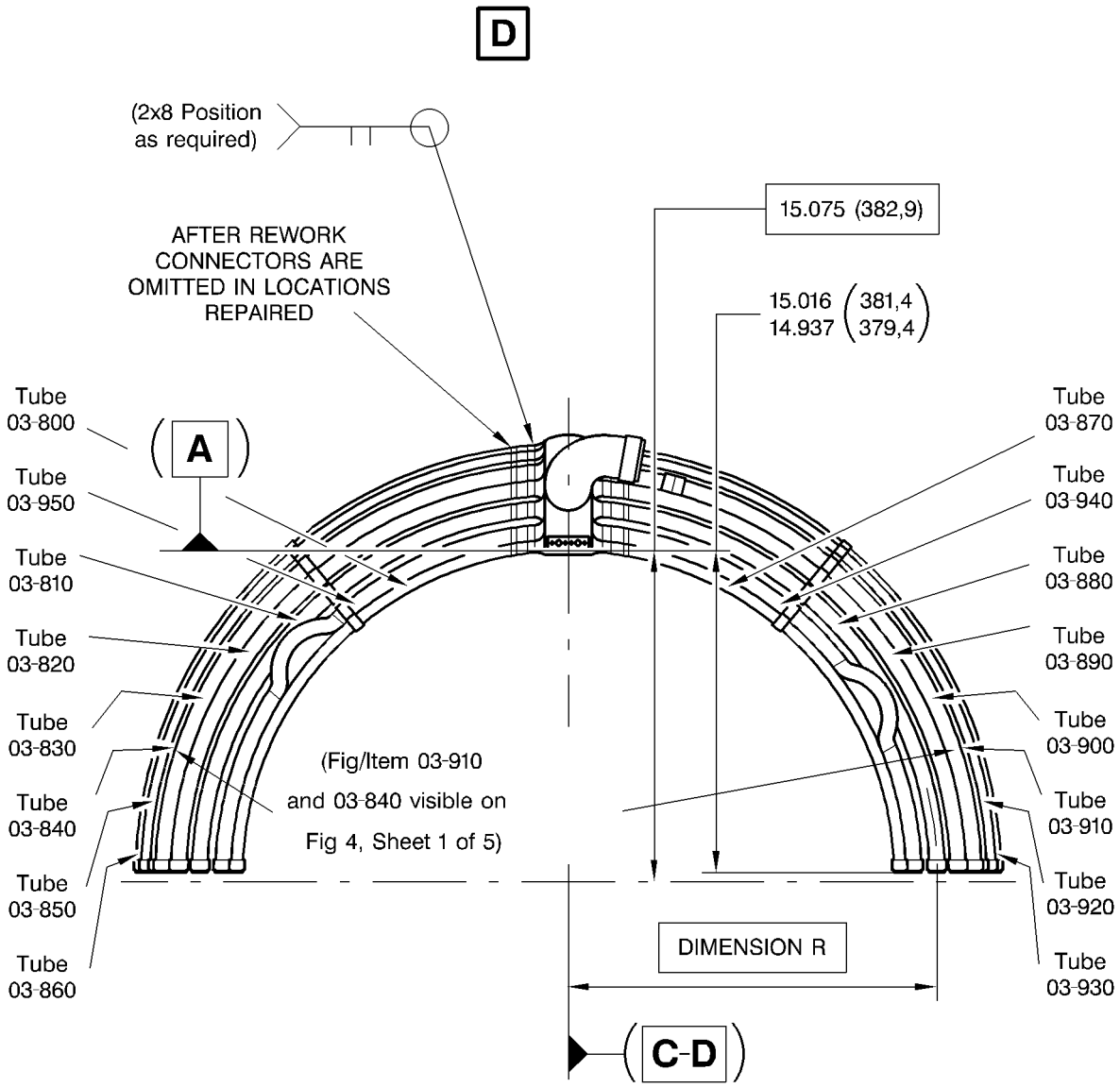
NOTE: 1. All EIPC Fig/Item numbers are 75-24-49 unless identified differently
2. Dimension R refer to Fig 4, Sheet 5 of 5 (Rework from 3A1666 in 3A2659)
3. All dimensions are in in. and (mm)

Rework of active clearance control (ACC) made from steel with titanium tubes
Fig.4 (Sheet 2 of 5)



NOTE: All dimensions are in in. and (mm)
(Rework from 3A1666 in 3A2659)

Rework of active clearance control (ACC) made from steel with titanium tubes
Fig.4 (Sheet 3 of 5)



NOTE: 1. All dimensions are in in. and (mm)
2. Dimension R refer to Fig 4, Sheet 5 of 5
(Rework from 3A1666 in 3A2659)
3. All EIPC Fig/Item numbers are 75-24-49 unless identified differently
4. Valid for all tubes: ⌖ Ø0.078 (Ø2) A B C-D
Applies when all tube ends are constrained in nominal positions.
Tubes Ø0.500 (Ø12,7): ⌖ Ø0.590 (Ø15) A B C-D in free state.
Tubes Ø0.689 (Ø17,5): ⌖ Ø0.394 (Ø10) A B C-D in free state.

mu000b2555

Rework of active clearance control (ACC) made from steel with titanium tubes
Fig.4 (Sheet 4 of 5)

FIG / ITEM	DIMENSION R	DIMENSION Y
03-870 and 03-800	15.3855 (390,79)	0.4724 (12,0)
03-940 and 03-950	16.0036 (406,49)	1.5354 (39,0)
03-880 and 03-810	17.0706 (433,59)	3.1693 (80,5)
03-890 and 03-820	17.9131 (454,99)	4.4685 (113,5)
03-900 and 03-830	18.7005 (474,99)	6.0433 (153,5)
03-910 and 03-840	18.9761 (481,99)	7.6969 (195,5)
03-920 and 03-850	19.3698 (491,99)	9.0945 (231,0)
03-930 and 03-860	19.6533 (499,19)	11.8504 (301,0)

R

mu00018832

NOTE: 1. All dimensions are in in. and (mm)
2. For reference only: Radius is equivalent to within 0.0003 (0,01) in value to the dimension R for each Fig/Item.

R Rework of active clearance control (ACC) made from steel with titanium tubes
R Fig.4 (Sheet 5 of 5)

ENGINE - AIR ACTIVE CLEARANCE CONTROL (ACC) - REPLACEMENT OF TITANIUM TUBES MADE FROM X10 MATERIAL FOR REWORK/REPAIR BY TUBE REPLACEMENT

SUPPLEMENT - PRICES AND AVAILABILITY

R The prices shown are for estimating purposes only and as such are given in good faith, without commercial liability for advanced planning purposes only. Refer to IAE Spares and/or current price catalogue for current prices.

1. Modification Kit:

Not applicable.

2. New Production Parts:

R	Part No.	Description	Unit Price (US Dollars)
R	3A2664	Tube A/O	1861.00R
R	3A2642	Tube A/O	1904.00R
R	3A2665	Tube A/O	1904.00R
R	3A2666	Tube A/O	1904.00R
R	3A2644	Tube A/O	1904.00R
R	3A2646	Tube A/O	1861.00R
R	3A2667	Tube A/O	1861.00R
R	3A2573	Tube A/O	1822.00R
R	3A2668	Tube A/O	1861.00R
R	3A2640	Tube A/O	1904.00R
R	3A2669	Tube A/O	1904.00R
R	3A2670	Tube A/O	1904.00R
R	3A2671	Tube A/O	1904.00R
R	3A2672	Tube A/O	1861.00R
R	3A2673	Tube A/O	1861.00R
R	3A2674	Tube A/O	1861.00R
R	3A2545	Tube A/O	1861.00R
R	3A2561	Tube A/O	2238.00R
R	3A2563	Tube A/O	1904.00R
R	3A2565	Tube A/O	1904.00R
R	3A2567	Tube A/O	1904.00R
R	3A2569	Tube A/O	1861.00R
R	3A2571	Tube A/O	1861.00R
R	3A2675	Tube A/O	1861.00R
R	3A2543	Tube A/O	1861.00R
R	3A2547	Tube A/O	2238.00R
R	3A2549	Tube A/O	1904.00R
R	3A2551	Tube A/O	1904.00R
R	3A2553	Tube A/O	1904.00R

R Parts are currently available for sale.

R	Part No.	DescriptionR	Unit PriceR
R		(US Dollars)	
R	3A2555	Tube A/OR	1861.00R
R	3A2557	Tube A/OR	1861.00R
R	3A2559	Tube A/OR	1861.00R
R	3A2676	Tube A/OR	1047.00R
R	3A2650	Tube A/OR	1105.00R
R	3A2677	Tube A/OR	1105.00R
R	3A2678	Tube A/OR	1105.00R
R	3A2652	Tube A/OR	1105.00R
R	3A2654	Tube A/OR	1047.00R
R	3A2679	Tube A/OR	1047.00R
R	3A2680	Tube A/OR	1822.00R
R	3A2681	Tube A/OR	1047.00R
R	3A2648	Tube A/OR	1105.00R
R	3A2682	Tube A/OR	1105.00R
R	3A2683	Tube A/OR	1105.00R
R	3A2684	Tube A/OR	1105.00R
R	3A2685	Tube A/OR	1047.00R
R	3A2686	Tube A/OR	1047.00R
R	3A2687	Tube A/OR	1047.00R
R	3A2624	Tube A/OR	1047.00R
R	3A2626	Tube A/OR	2238.00R
R	3A2628	Tube A/OR	1105.00R
R	3A2630	Tube A/OR	1105.00R
R	3A2632	Tube A/OR	1105.00R
R	3A2634	Tube A/OR	1105.00R
R	3A2636	Tube A/OR	1047.00R
R	3A2638	Tube A/OR	1047.00R
R	3A2608	Tube A/OR	1047.00R
R	3A2610	Tube A/OR	2238.00R
R	3A2612	Tube A/OR	1105.00R
R	3A2614	Tube A/OR	1105.00R
R	3A2616	Tube A/OR	1105.00R
R	3A2618	Tube A/OR	1047.00R
R	3A2620	Tube A/OR	1047.00R
R	3A2622	Tube A/OR	1047.00R

R Parts are currently available for sale.

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☐ 1.E.	☐ 1.M.	☐ 2.E.	☐ Test
☐ 1.F.	☐ 1.N.	☐ 2.F.	☐ Close the Access
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