International Aero Engines

SERVICE BULLETIN

Jan. 28/00

Subject: Transmittal of Revision 1 to Service Bulletin V2500-ENG-79-0070.

Service Bulletin Revision History:

Event	Date
Basic Issue	Apr.16/99.
Revision 1	Jan. 28/00.

Reason for Revision:

(1) To add engine serial number incorporation point in 1. A. (2).

(2) To add accomplishment instructions in 2. Accomplishment Instructions (and Figure 1 to 3)

(3) Editorial changes

Effect on Past Compliance:

None.

List of Effective Pages:

Page No.	Revision No.	Effective Date
1 to 13	Revision 1	Jan. 28/00.

International Aero Engines

SERVICE BULLETIN

OIL - PRESSURE OIL TUBES - ENGINE - INTRODUCTION OF REVISED OIL FEED SYSTEM RESTRICTORS

MODEL APPLICATION

V2500-A1

BULLETIN INDEX LOCATOR

79-21-00

Compliance Category Code	Internal Reference No.
4	EC98VR025

Apr. 16/99
Revision 1 Jan.28/00

V2500-ENG-79-0070

OIL - PRESSURE OIL TUBES - ENGINE - INTRODUCTION OF REVISED OIL FEED SYSTEM RESTRICTORS

1. Planning Information

A. Effectivity

(1) Aircraft:

(a) Airbus A320

(2) Engines:

R (a) V2500-A1 Engines prior to serial No. V0362.

B. Concurrent Requirements

(1) This Service Bulletin must be embodied after or at the same time as Service Bulletins
IAE V2500 ENG 79-0006 or ENG 79-0071. (Refer to 1. L).

C. Reason

(1) Problem

One of the causes of the HP Compressor shaft bowing on A1 engines, is low oil system pressure.

An engineering review has shown that the oil pressure to the bearing compartments in the A1 engine, can be increased to equal that of the A5 engine.

(2) Evidence

(Refer to (1) Problem).

(3) Substantiation

A satisfactory engineering analysis has been done on the changes introduced by this Service Bulletin. In addition, successful in-service experience has been achieved with an identical changes on A5 engines.

(4) Objective

The purpose of this Service Bulletin is to maintain reliability.

(5) Effect of Bulletin on:

(a) Operation

Not affected.

(b) Maintenance

Not affected.

(c) Overhaul

Affected.

(d) Repair Schemes

Not affected.

(e) Interchangeability

Not affected

(f) Fits and Clearances

Not affected.

D. Description

This Service Bulletin introduces the A5 standard of engine restrictors for the oil-feed system for the A1 engine, the changes are as follows:

(1) The filter assembly for the oil-feed tube assembly of the No.4 bearing has been revised, the orifice of the restrictor is reduced.

(2) The restrictor between the oil-feed tube assembly of the No.5 bearing and the oil-feed tube assembly to the 4-Way connector has been revised, the orifice of the restrictor is reduced.

(3) The restrictor between the disconnect to 5-Way oil tube assembly and the oil-feed to gearbox tube assembly has been revised, the orifice of the restrictor is reduced.

E. Compliance

Category Code 4

Accomplish at the first visit of an engine or module to a maintenance base that can comply with the accomplishment instruction. Accomplished regardless of the planned maintenance action or the reason for engine removal.

F. Approval

The part number changes and/or part modification are given in Section-2 and 3 of the Service Bulletin. They comply with the applicable Federal Aviation Regulations and are FAA-APPROVED for the engine models listed.

G. Manpower

Estimate of man-hours necessary to embody this Service Bulletin in full:

(1) In Service

(a) To gain access		16 Minutes
(b) To embody	1 Hour	00 Minutes
(c) To return engine to a serviceable condition		20 Minutes
TOTAL	1 Hour	36 Minutes

(2) At Overhaul

(a) To embody	1 Hour	00 Minutes

NOTE: It is possible to get access to the parts affected by this Service Bulletin at overhaul.

H. Material - Price and Availability

(1) Modification kit MKV 802501 is necessary for this Service Bulletin.

(2) Modification kit MKV 802501 is available to all affected operators free of charge (FOC) between January 1999 and December 2000.

Operators must send a FOC Purchase Order (PO) for the applicable quantity.
R The serial number of the affected engines and the IAE Tracking No. S389UI must be put on all PO's.

Operators must send the PO's to:

IAE Spares division
400 Main Street
M/S 121-10
East Hartford CT 06108
USA

The purchase orders will be issued thirty days after they have been received.

(3) Refer to 2 Material Information, for the prices and availability of future spares.

I. Tooling - Price and Availability

Special tools are not necessary.

J. Weight and Balance

(1)	Weight Change	None.
(2)	Moment Arm	Not effected.
(3)	Datum	Engine front mount centreline (Power Plant Station (PPS) 100).

K. Electrical Load Data

This Service Bulletin does not affect the aircraft electrical load.

L References

(1) A1 Engine Manual (EM), Chapter/Sections 72-00-40, 72-00-50 and 72-00-60, Removal and Installation.

(2) A320 Aircraft Maintenance Manual (AMM), Chapter/Section 79-21-41, Adjustment/Test.

(3) A320 Aircraft Maintenance Manual (AMM), Chapter/Section 79-21-49, Removal/Installation.

(4) IAE V2500 Service Bulletins:

ENG 79-0006 OIL - ENGINE - TO INTRODUCE A NEW OIL PUMP WITH INCREASED FLOW RATE

ENG 79-0071 OIL - ENGINE - INTRODUCTION OF A NEW OIL PUMP WITH INCREASED PRESSURE AND FLOW.

ENG 79-0073 ENGINE - OIL - INTRODUCTION OF OIL RESTRICTOR OF FBC OIL LINE WITH REVISED THROAT SIZE.

(5) Airbus aircraft modification No. 28491.

M. Other Publications Affected

(1) Illustrated Parts Catalogue (IPC), Chapter/Section 79-21-49.

(2) A1 Engine Manual (EM), Chapter/Sections 72-00-40, 72-00-50 and 72-00-60, Removal and Installation.

(3) A320 Aircraft Maintenance Manual (AMM), Chapter/Section 71-00-00, Maintenance Practices.

(4) A320 Aircraft Maintenance Manual (AMM), Chapter/Section 79-21-49, Removal/Installation.

(5) Component Maintenance Manual (CMM) - Tubes, Hoses and Ducts (THD) - Chapter/Section 79-21-49, Cleaning, Inspection/Check and Repair

2. Accomplishment Instructions

R A. Pre-requisite Instructions

R WARNING: ALL ELECTRICAL POWER SUPPLY FROM THE ENGINE MUST BE
R DISCONNECTED

R (1) Disconnect the power supply from the engine by opening all applicable circuit breakers.

R (2) Open the fan cowl panels to gain access to the gearbox refer to Aircraft Maintenance
R Manual, 71-13-00.

R (3) Open the Thrust Reverser Halves to gain access to No.4 and No.5 bearing oil feed tubes
R Refer to Aircraft Maintenance Manual, 78-32-00.

R WARNING: DO NOT GET ENGINE OIL ON YOUR SKIN FOR LONG TIME. THE OIL IS
R POISONOUS AND CAN GO THROUGH YOUR SKIN AND IN TO YOUR BODY

R NOTE: Position a container to catch the oil spill during the removal of the tubes and accessories.

R (4) Disconnect the tube 112 from the tube 111 and remove the restrictor (Pre SB) and
R remove and discard the retaining ring Ref Figure 1.

R (5) Disconnect the tube 17 from the tube 24 and remove the restrictor (Pre SB) and remove
R and discard the retaining ring Ref Figure 2

R (6) Remove the tube 21 Ref Figure 3

R (a) Remove the bolt, the washer, the spacer, the clip and the spacer from the clip position 5591.

R (b) Remove the bolt, the washer, the spacer, the clip and the spacer from the clip
R position 5569.

R (c) Remove the bolt, the washer, the spacer, the clip and the spacer from the clip
R position 5768.

R (d) Disconnect the tube 21 from the diffuser case adapter.

R (e) Remove the three nuts and the three bolts that attach the tube 21 to the tube 25
R together with the bracket (13-070).

R (f) Remove the tube 21.

R (g) Remove and discard the seal ring.

R (h) Remove the filter (Pre SB) from the tube 21.

R B. Rework Instructions

R None

R C. Assembly Instructions

R NOTE: Lubricate all threads, sealing rings and abutment faces of nuts and bolts with CoMat 10-077
R approved engine oils unless other lubricant are referred to in the procedure.

R (1) Install the restrictor (Post SB) (06-481) and a new (06-478) retaining ring 1 off in the tube
R 112 Ref Figure 1.

R (2) Connect the tube 112 to the tube 111. Torque the tube connector to 283 to 310 lbfin
R (32 to 35 Nm). Safety with CoMat 02-126 lockwire.

R (3) Install the restrictor (Post SB) (15-491) and a new (15-488) retaining ring 1 off in the tube
R 17 Ref Figure 2

R (4) Connect the tube 17 to the tube 24. Torque the tube connector to 283 to 310 lbfin
R (32 to 35 Nm). Safety with CoMat 02-126 lockwire.

R (5) Install the tube 21 Ref Figure 3

R (a) Attach the tube 21 to the diffuser case adapter. Attach the tube 21 to the diffuser case adapter.

R (b) Install the (Post SB) filter into the tube 21

R (c) Install a new seal ring into the tube 21

R (d) Install the clip, the spacer, the washer and the bolt at the clip position 5569.
R Torque the bolt to 36 to 45 lbfin (4 to 5 Nm).

R (e) Torque the diffuser case adapter nut to 159 to 177 lbfin (18 to 20 Nm).
R Safety with CoMat 02-126 lockwire.

R (f) Put a thin layer of CoMat 04-005 jointing compound on to the bracket (13-070)
R Where it touches tube 25.

R (g) Attach the tube 25 to the tube 21 with the bracket, the three bolts and the three nuts.
R Torque the nuts to 85 to 105 lbfin (10 to 12 Nm).

R (h) Install the clip, the spacer, the washer, the nut and the bolt at clip position
R Torque the bolt 5591 to 36 to 45 lbfin (4 to 5 Nm).

R (I) Install the clip, the washer, the nut and the bolt at clip position 5768. Torque
R the bolt to 36 to 45 lbfin (4 to 5 Nm).

R (6) Reconnect the power supply.

R (7) Prime the engine oil system, refer to Aircraft Maintenance Manual (AMM), Chapter/Section
R 12-13-79

R (8) Close the Thrust Reverser Halves refer to Aircraft Maintenance Manual (AMM),
R Chapter/Section 78-32-00.

R (9) Close the fan cowl panels, Refer to Aircraft Maintenance Manual (AMM), Chapter/Section
R 71-13-00

R (10) Do a leak check of the engine oil system after the first ground run.

R (11) For the correct removal/installation procedures refer to:

R (a) A1 Engine Manual (EM), Chapter/Sections 72-00-40, Removal-01,
R Config-01, Removal-03,Installation-08 and Installation-10,Config-01.
R 72-00-60, Removal-02, Config-01 and Installation-03,Config-01.

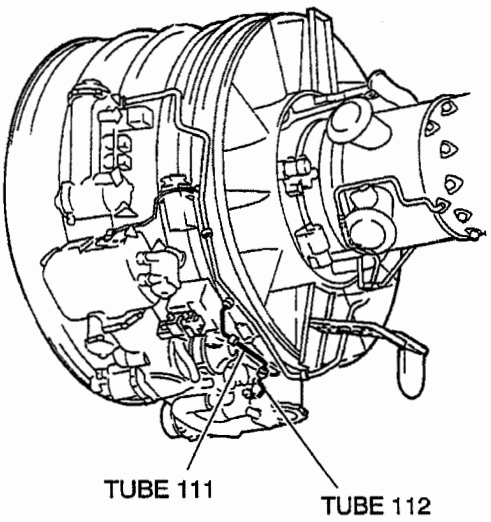
or

(b) A320 Aircraft Maintenance Manual (AMM), Chapter/Section 79-21-49, Removal/Installation.

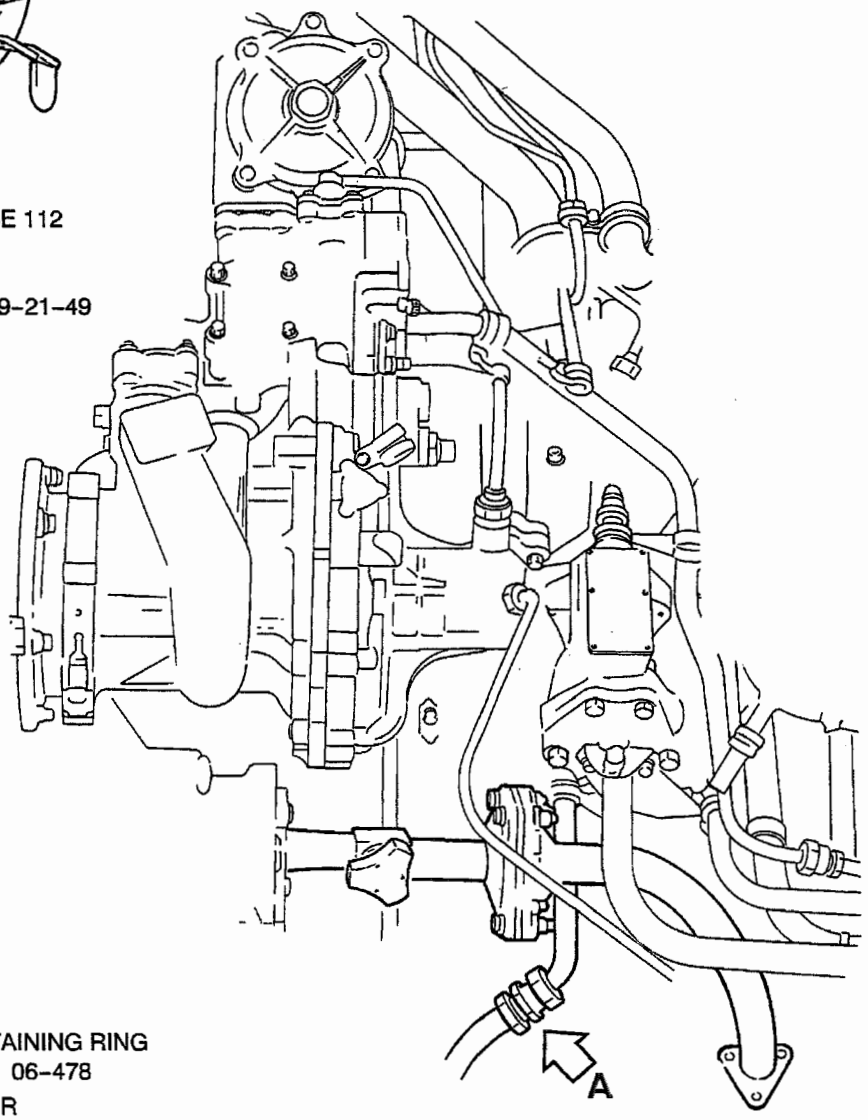
NOTE: After this Service Bulletin has been accomplished, the trim for the oil pressure pump must be set to 115 psi at engine idle. (Refer to the Aircraft Maintenance Manual (AMM), Chapter/Section 79-21-41, TASK 79-21-41-820-010, Adjustment of the Trim Valve).

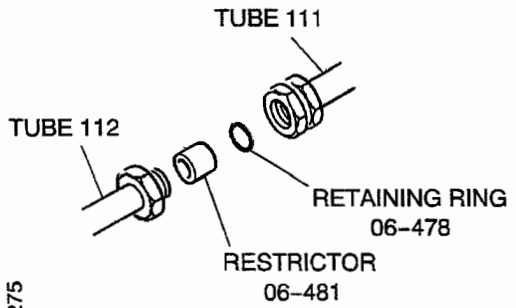
D. Recording Instructions

(1) record of accomplishment is necessary.



All EIPC Fig/Item numbers are 79–21–49





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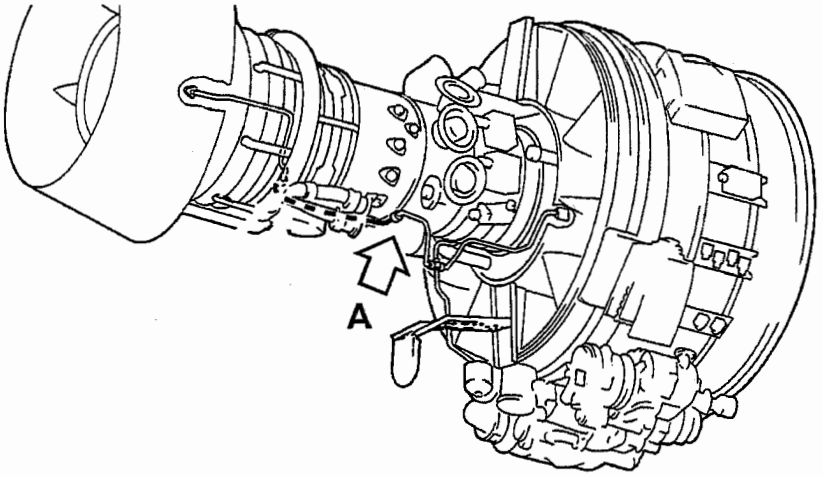
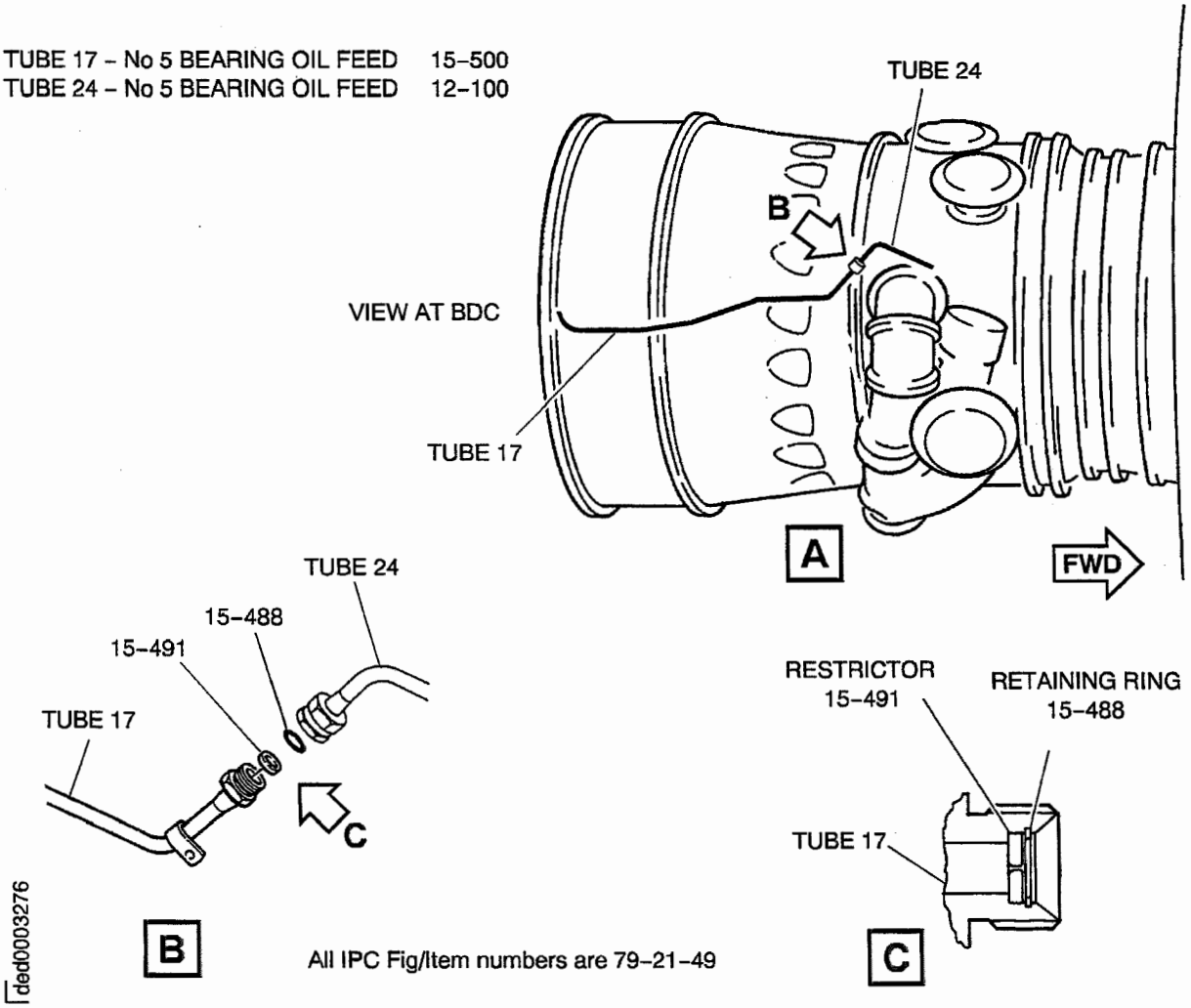
TUBE 111 – OIL DISTRIBUTION SUPPLY TUBE 06–100
TUBE 112 – OIL DISTRIBUTION SUPPLY TUBE 06–500

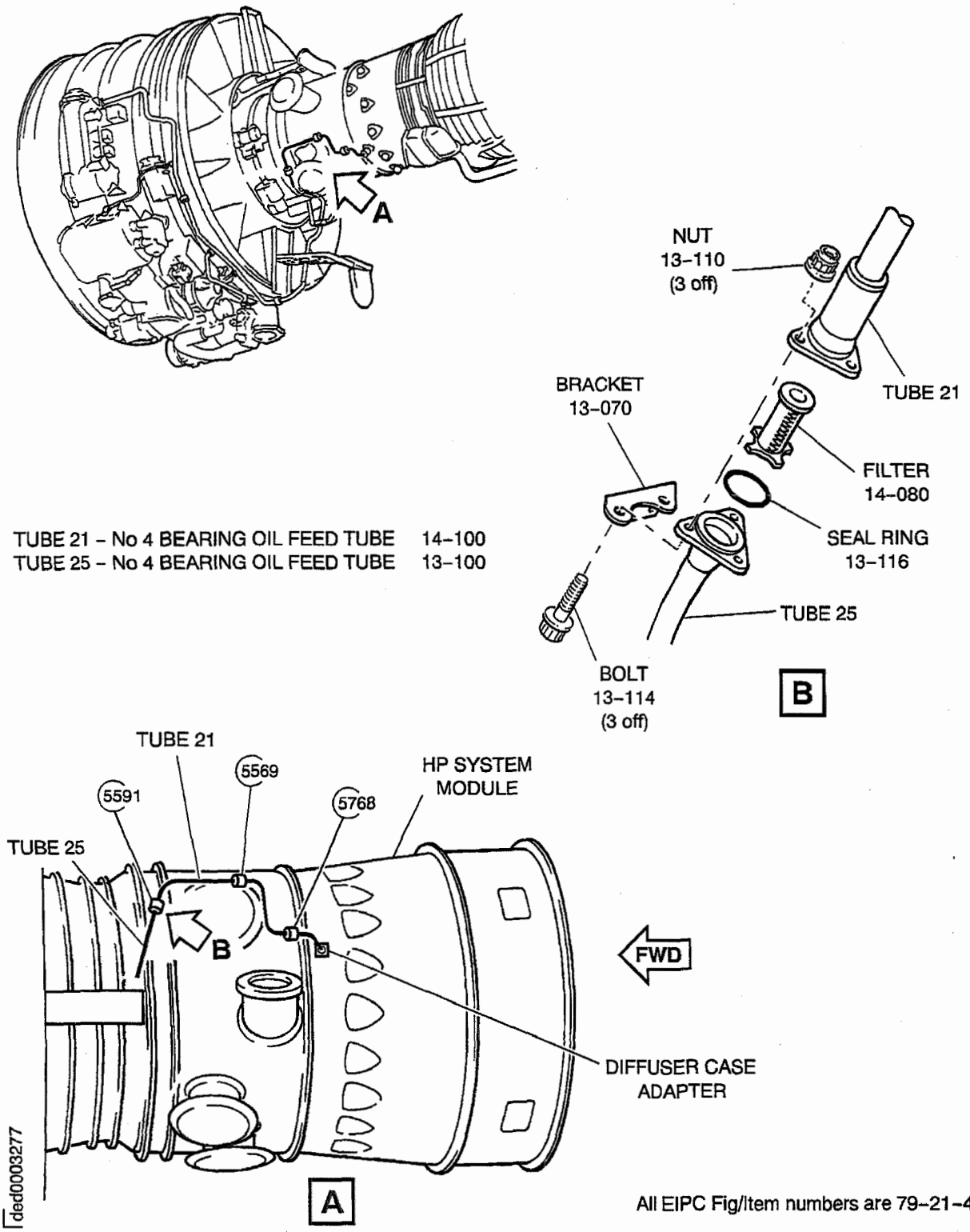
Scavenge tube assembly.
Figure 1



TUBE 17 – No 5 BEARING OIL FEED 15–500
TUBE 24 – No 5 BEARING OIL FEED 12–100



No.5 bearing oil feed assembly
Figure 2



TUBE 21 – No 4 BEARING OIL FEED TUBE 14-100
TUBE 25 – No 4 BEARING OIL FEED TUBE 13-100

All EIPC Fig/Item numbers are 79-21-49

No.4 bearing oil feed tube assembly
Figure 3

3. Material Information

A. Kits necessary for this Service Bulletin:

Modification Kit MKV802501

B. Parts affected by this Service Bulletin:

NEW PART No. (ATA No.)	QTY	EST'D UNIT PRICE ($)	PART TITLE	OLD PART No. (IPC No.)	INSTR DISP
6A5442 (79-21-49)	1	81.60	.Restrictor - Oil feed, Main gear box	5W8449 (06-481)	(A) (S1)
6A5453 (79-21-49)	1	338.00	.Filter, assembly of - Oil feed No.4 bearing	5T8065 (14-080)	(A) (S1)
6A5443 (79-21-49)	1	73.30	.Restrictor - Oil feed, No.5 bearing	5T8192 (15-491)	(A) (S1)

NOTE: The unit prices, if shown, are an estimate and they are given for the purpose of planning only. For actual prices, refer to IAE Price Catalog or contact IAE's spare parts sales department.

C. Instruction Disposition Codes

(1) (A) New part is available.

(2) (S1) New parts coded (S1) must replace old parts coded (S1) as a complete engine set.