



OIL - TO INTRODUCE A NEW OIL PUMP WITH INCREASED FLOW RATE - CATEGORY CODE 8 -  
MOD.ENG-79-0006

Printed in Great Britain

1. Planning Information

A. Effectivity

- (1) Aircraft (a) Airbus A320
- (2) Engines (a) V2500-A1 Engines prior to Serial No. V0164

B. Concurrent Requirements

None.

C. Reason

(1) Problem

During engine acceptance tests under certain conditions, it was found that the oil pressure was less than the specified limits. This was a result of the flow capability of the original oil pump.

(2) Evidence

The condition has been found during engine tests.

(3) Substantiation

A new oil pump has successfully completed the high temperature endurance and performance tests.

(4) Objective

The purpose of this Service Bulletin is to improve the flow of oil from the oil pump.

(5) Effect of Bulletin on:

(a) Operation

Not affected.

(b) Maintenance

Not affected.

(c) Overhaul

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Affected.

(d) Repair Schemes

Affected.

(e) Interchangeability

Not affected.

(f) Fits and Clearances

Not affected.

D. Description

(1) The changes introduced by this Service Bulletin are as follows:

(a) To increase the flow of oil from the pump, the diameter of the oil pump gears has increased from 1.70 in. (43,32mm) to 1.73 in.(44,0mm).

E. Compliance

Category Code 8.

Embodiment of this Service Bulletin will be based on operators experience with the original configuration. IAE will not keep the old parts for spares.

F. Approval

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

G. Manpower

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

Venue	Estimated Manhours
(1) In Service	Not applicable
(2) At Overhaul	No additional time is necessary to embody this Service Bulletin

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

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H. Material Price and Availability

- (1) A modification kit is not necessary.
- (2) Refer to 3. 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

Not affected.

- (2) Moment Arm

Not affected.

- (3) Datum

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

K. Electrical Load Data

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

L. References

- (1) Internal Reference No.

EC88VF060

EC88VF060B

ECM88VF060-02

- (2) Other References

A1/A5 Component Maintenance Manual (CMM), Chapter/Section 79-21-41, Disassembly/Assembly.

M. Other Publications Affected

- (1) Illustrated Parts Catalogue (IPC), Chapter/Section 79-21-41.
- (2) Engine Illustrated Parts Catalogue (EIPC), Chapter/Section 79-21-41

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- (3) V2500 Component Maintenance Manual (CMM), Chapter/Section 79-21-41, Cleaning, Inspection/Check and Repair.

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## 2. Accomplishment Instructions

### A. Rework Instructions

- (1) Disassemble the oil pressure pump and filter assembly (4A7099). For the correct disassembly procedures refer to the A1/A5 Component Maintenance Manual (CMM), Chapter/Section 79-21-41.
- (2) Disassemble the casing (4B7256) and the cover (4B7227) of the oil pump assembly. For the correct disassembly procedures, refer to the A1/A5 Component Maintenance Manual (CMM), Chapter/Section 79-21-41. (Refer to Figure 1, Section AA-AA).
- (3) Remove the two bushes 4P7228 and the two pins 4P7225 from the casing (4B7256) of the oil pump assembly. (Refer to Figure 2, Sections AD-AD and AE-AE).
- (4) Remove the two bushes 4P7228 and the two pins 4P7225 from the cover (4B7227) of the oil pump assembly. (Refer to Figure 3, Sections AF-AF and AG-AG).
- (5) Machine the two bush seats of the casing 4B7256.
- (6) Machine the two bush seats of the cover 4B7227
- (7) Remove the two alignment pins (4T7918) from the casing 4B7256. Refer to Figure 6, Sections AH-AH and AL-AL.

CAUTION: WHEN YOU MACHINE DATUM-A, MAKE SURE THAT DIMENSION\* DOES NOT GO OUT OF LIMITS.

- (8) To get Datum-P of the casing (4B7256), machine Datum-A. Make sure that Dimension\* does not go out of limits. (Refer to Figure 7).
- (9) Install the two new bushes (4P7313) in the casing (4B7256). (Refer to Figure 7, Section AE-AE and Figure 8, detail AM).
- (10) Install the two new alignment pins (4T7918) in the casing (4B7256). (Refer to Figure 6, Sections AH-AH and HL-HL).
- (11) Machine the internal diameter of the two bushes (4P7313) and the internal surfaces of the case. (Refer to Figure 7, Section AD-AD).
- (12) Machine the bottom internal surface of the casing. (Refer to Figure 18, Section AP-AP and detail AM).
- (13) Install the two new bushes 4P7313 in the cover (4B7227), Refer to Figure 10, Section AF-AF.

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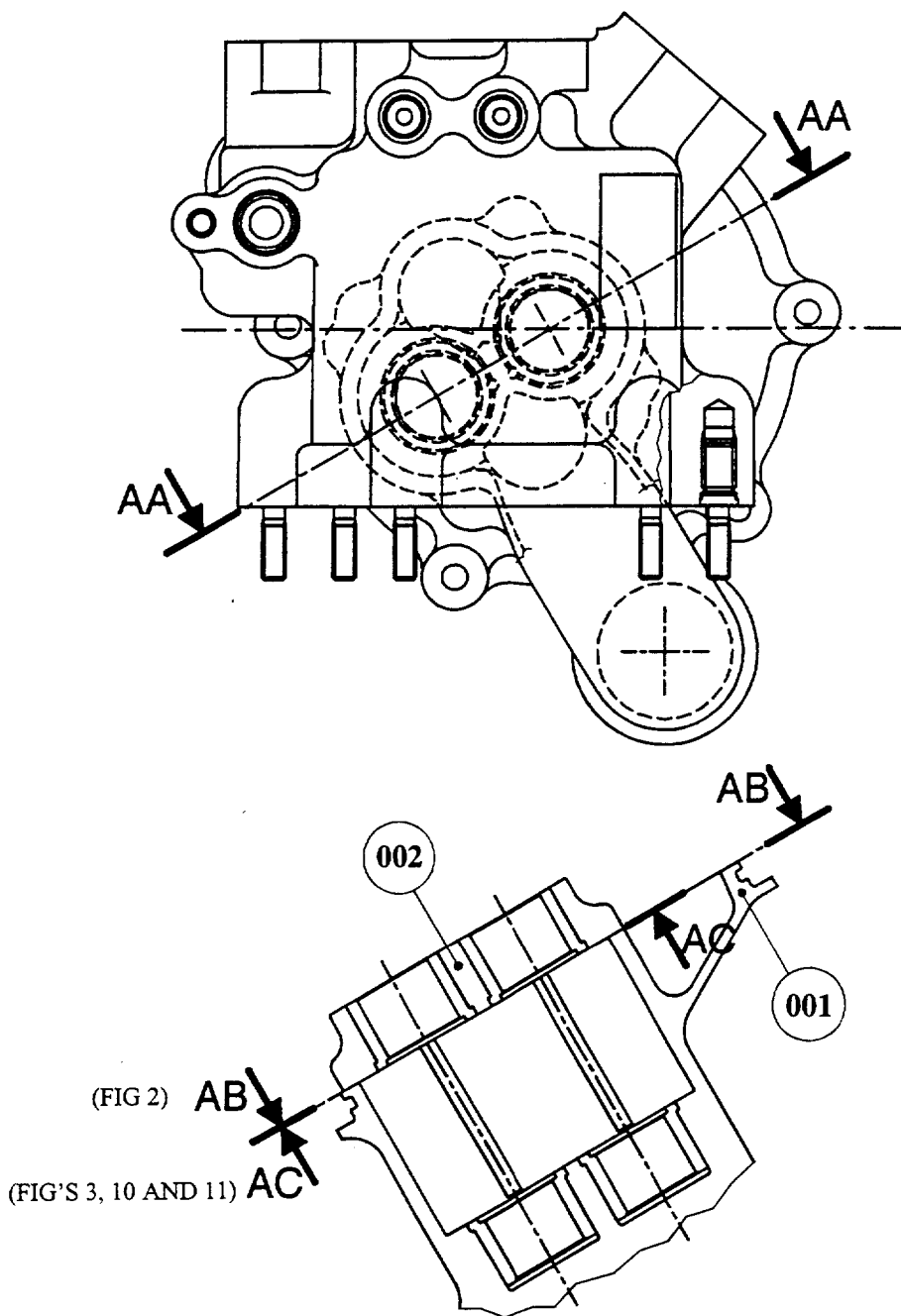
- (14) Drill two pin holes and install the two new pins 4P7311. (Refer to Figure 10, Section AG-AG. and Figure 11, Section AC-AC).
- (15) Flush-finish the two faces of the cover. (Refer to Figure 10, Sections AF-AF and AG-AG).
- (16) Machine the face of the cover that touches the casing. (Refer to Figure 11, Sections AC-AC, AT-AT and AU-AU).
- (17) Assemble the machined cover 4B7227 and the casing 4B7256. (Refer to Figure 12, Section AA-AA).
- (18) Machine the internal diameter of the two cover bushes 4P7313. (Refer to Figure 12, Section AA-AA).
- (19) Put 4A7083 adjacent to 4A7099 in two positions. Delete 4A7099 with a single line. (Refer to Figure 22, Section AA-AA).
- (20) Disassemble the cover 4B7227 and the casing 4B7256 of the oil pump assembly.
- (21) To remove any sharp edges, blend the grooves and the holes and internal edges of the bushes, (0.012 to 0.019 in.).
- (22) Inspect the internal surfaces of all the bushes and oil ducts. Damage or scratches to any surfaces are not acceptable.
- (23) Apply any protective coating of COMAT 07-028 where applicable.
- (24) Assemble the oil pressure-pump assembly with the changes that follow:
  - (a) Replace the casing 4A7099 with casing 4A7083.
  - (b) Replace gear 4P7165 with 4P7235.
  - (c) Replace gear 4B7164 with 4B7234
  - (d) Put 4A0852 on the identification plate.

#### B. Assembly Instructions

- (1) Replace the oil pressure pump and filter assembly 4A7076 with oil pressure pump and filter assembly 4A7077. For the correct assembly procedures, refer to the A1/A5 Component Maintenance Manual (CMM), Chapter/Section 79-21-41, Assembly.

#### C. Recording Instructions

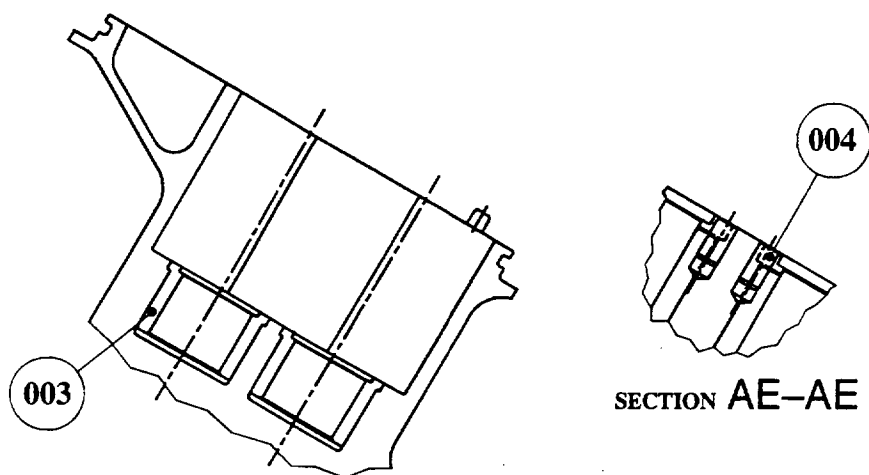
- (1) A record of accomplishment is necessary.



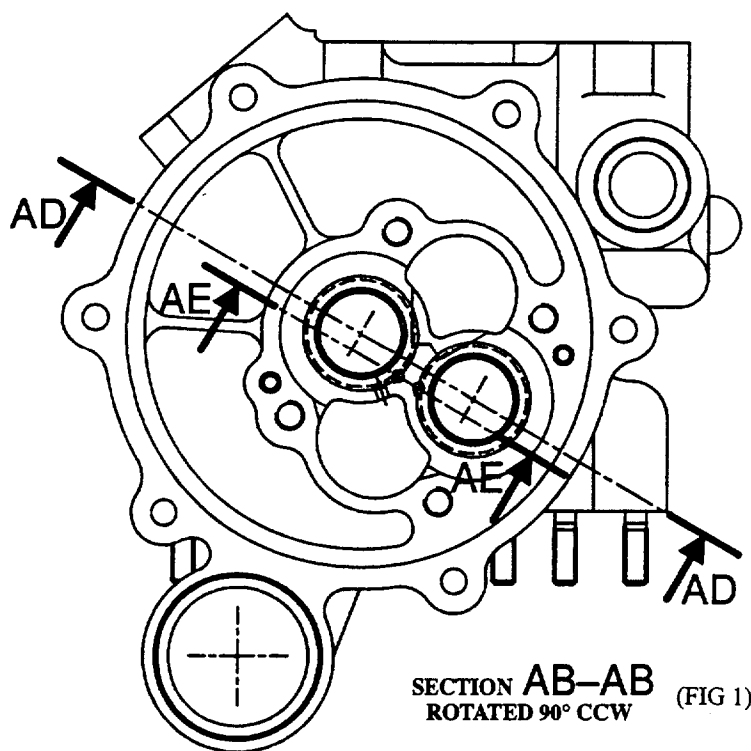
**SECTION AA-AA**

Oil pump casing assembly - 4A7099 - Sections AA, AB and AC  
Figure 1

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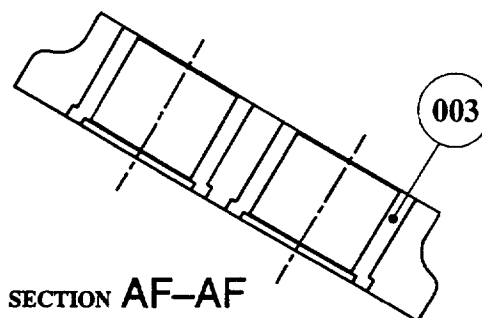
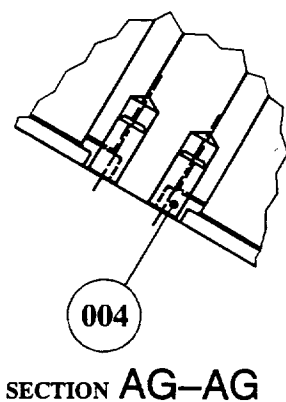
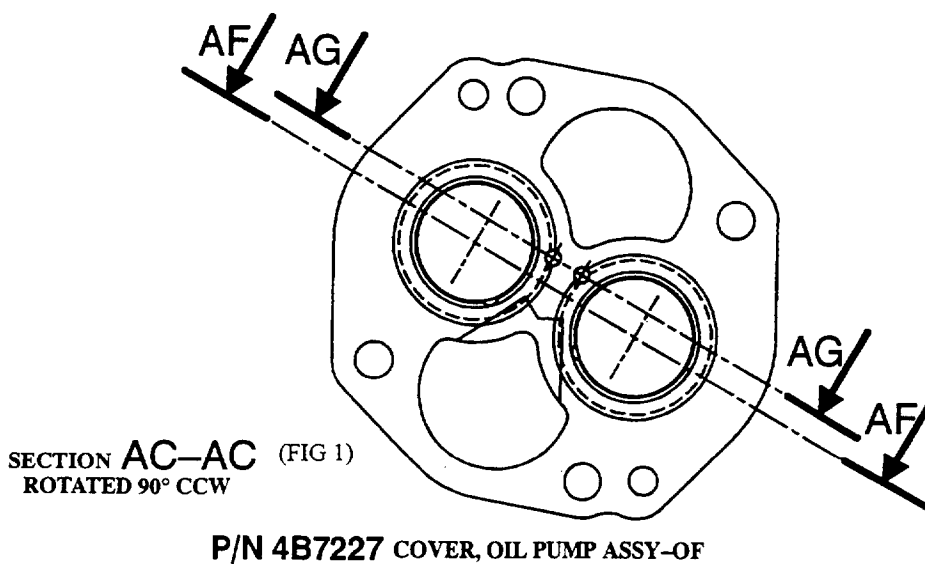
SECTION AD-AD



Oil pump casing assembly - 4B7256 - Section AB  
Figure 2

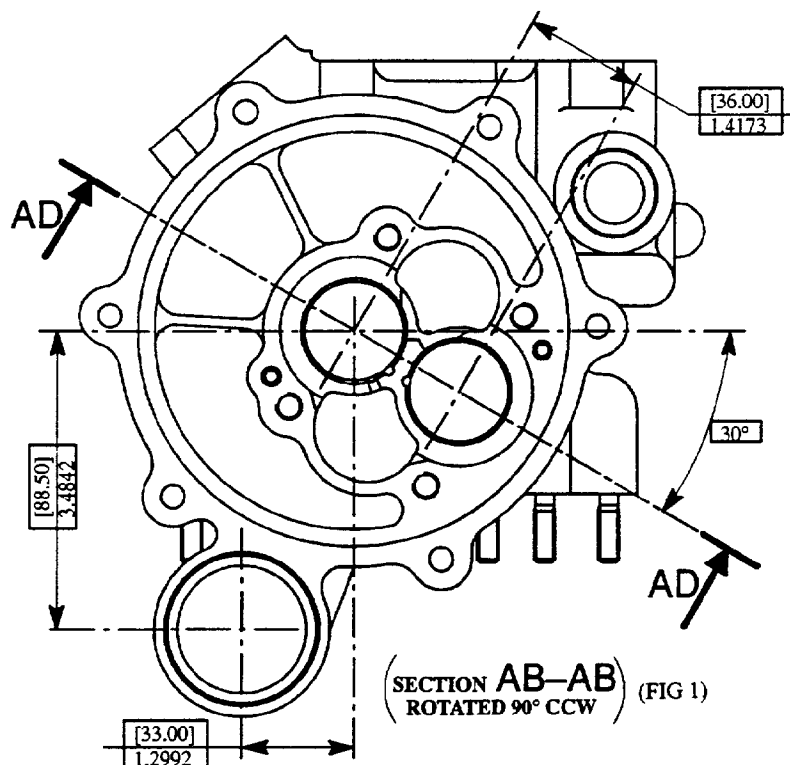
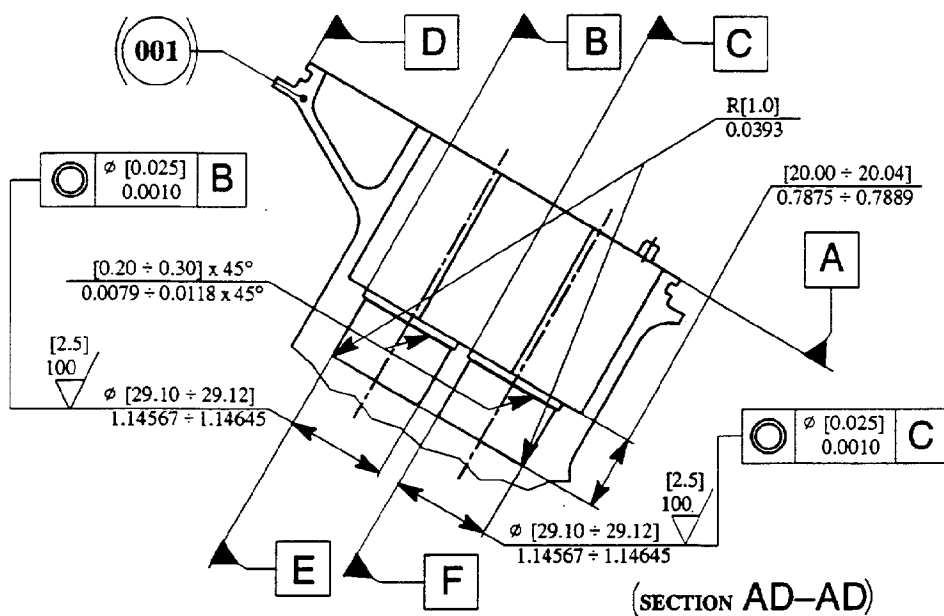
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Oil pump cover assembly - 4B7227 - Section AC  
Figure 3

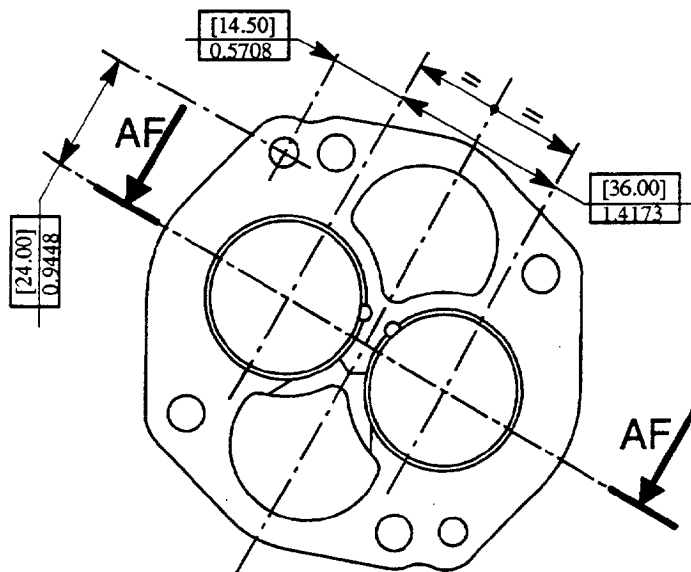
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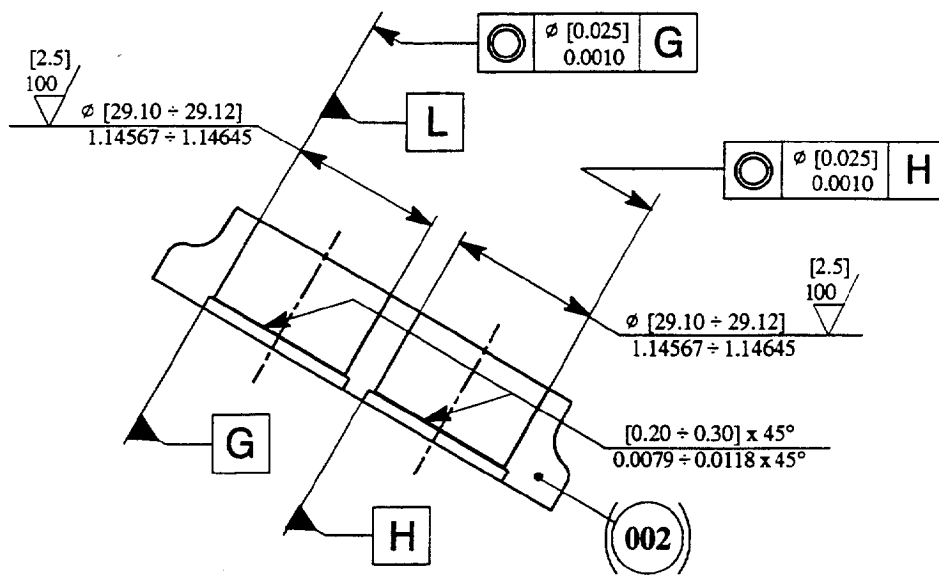
Oil pump casing assembly - 4B7256 - Sections AB and AD  
Figure 4

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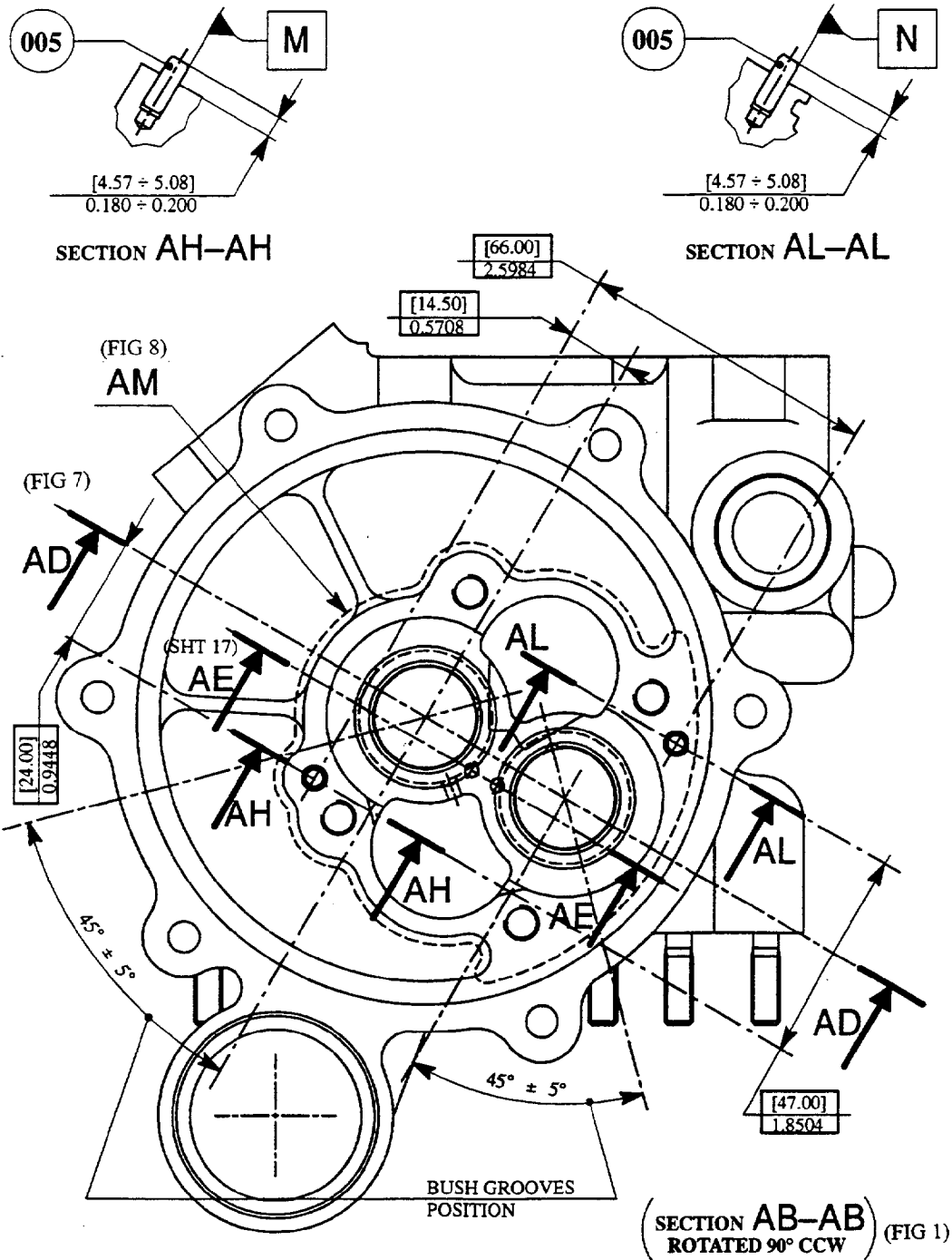
(SECTION AC-AC) (FIG 1)  
ROTATED 90° CCW



(SECTION AF-AF)

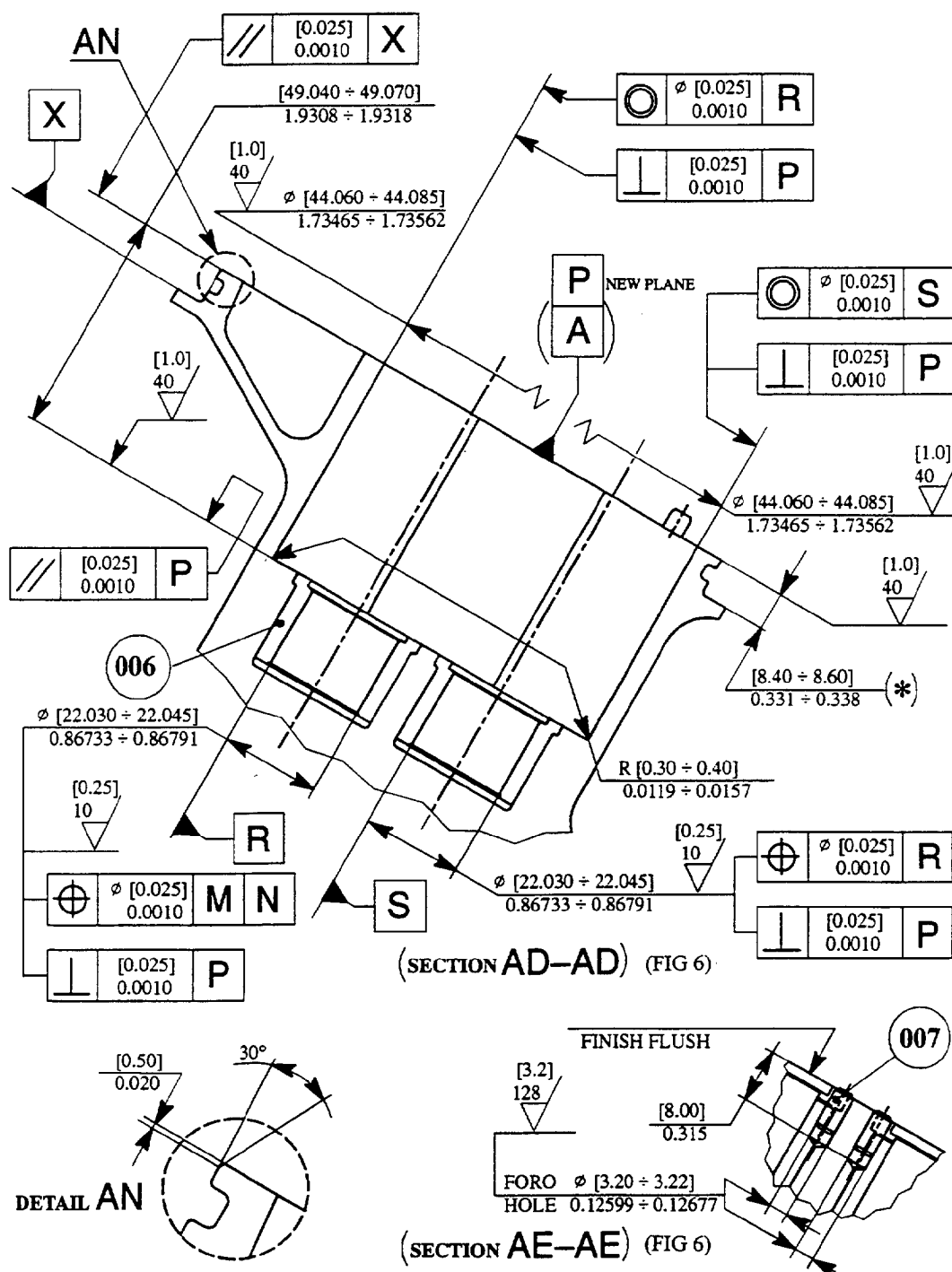
Oil pump cover assembly - 4B7227 - Sections AC and AF  
Figure 5

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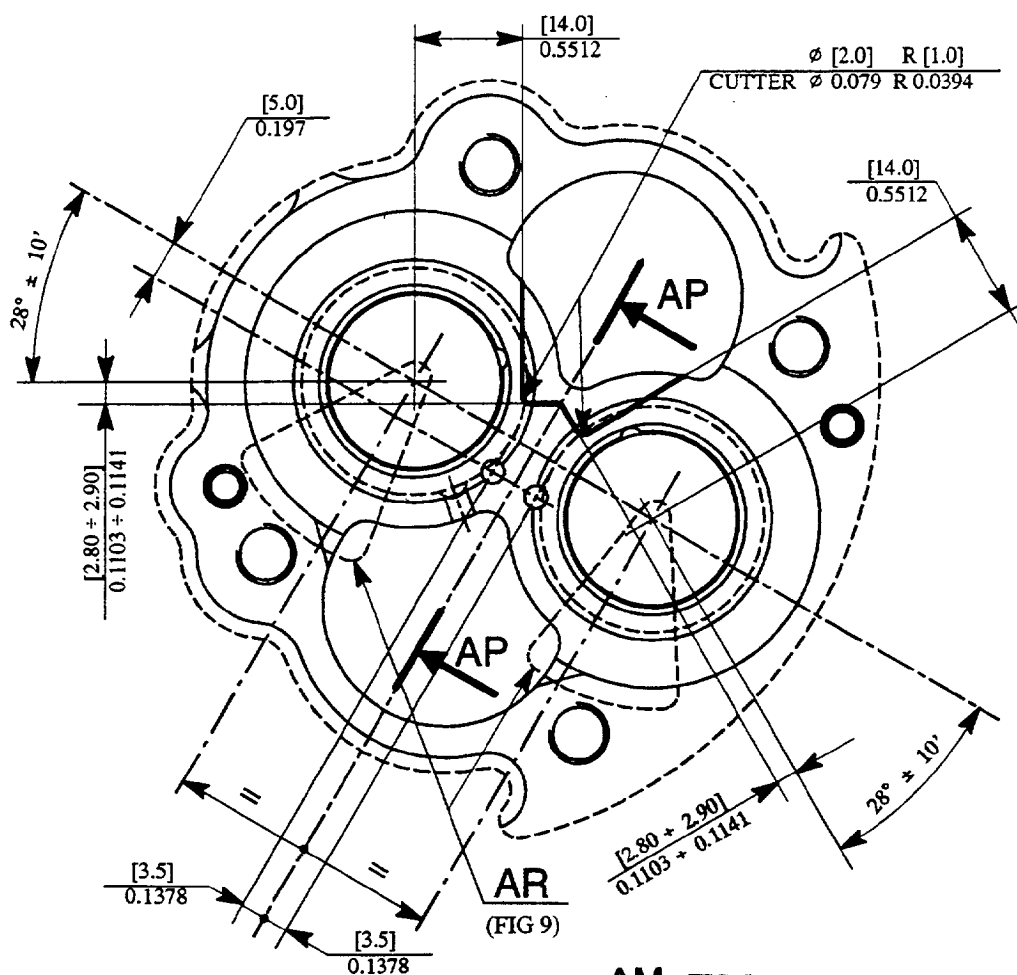
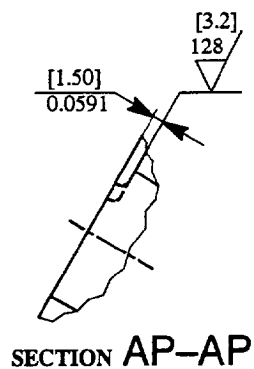


Oil pump casing assembly - 4B7256 - Section AB  
Figure 6

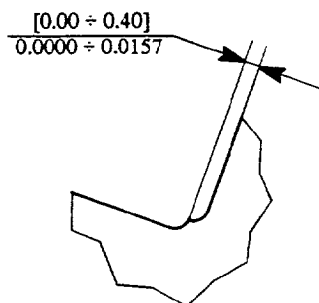
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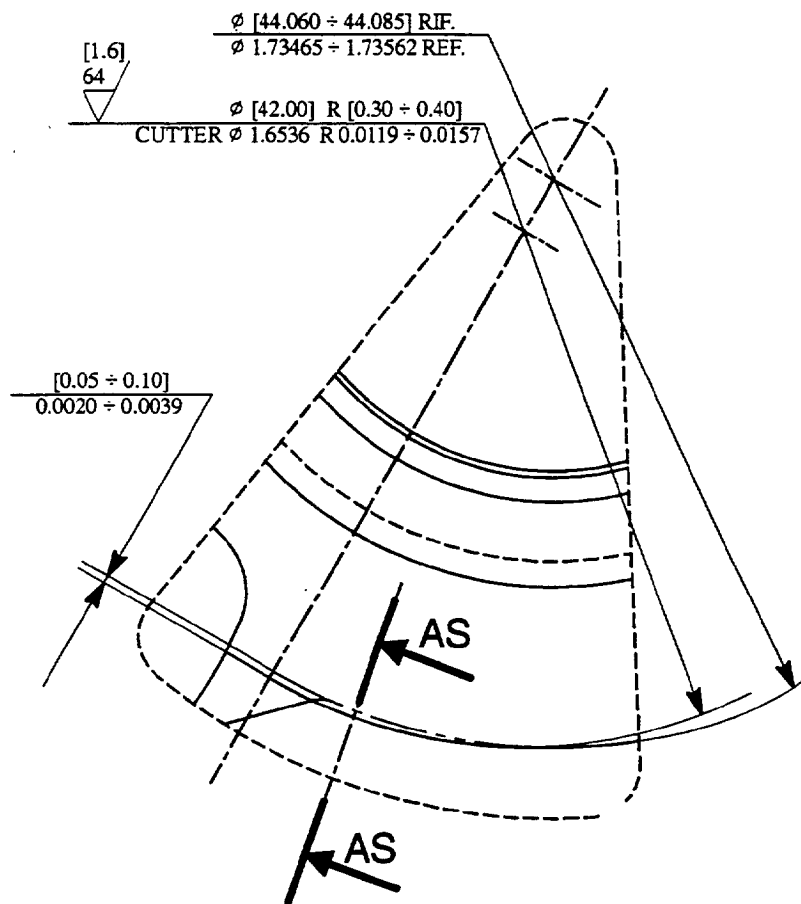
Oil pump casing assembly - 4B7256 - Sections AD and AE  
Figure 7



Oil pump casing assembly - 4B7256 - Section AP and detail AM  
Figure 8



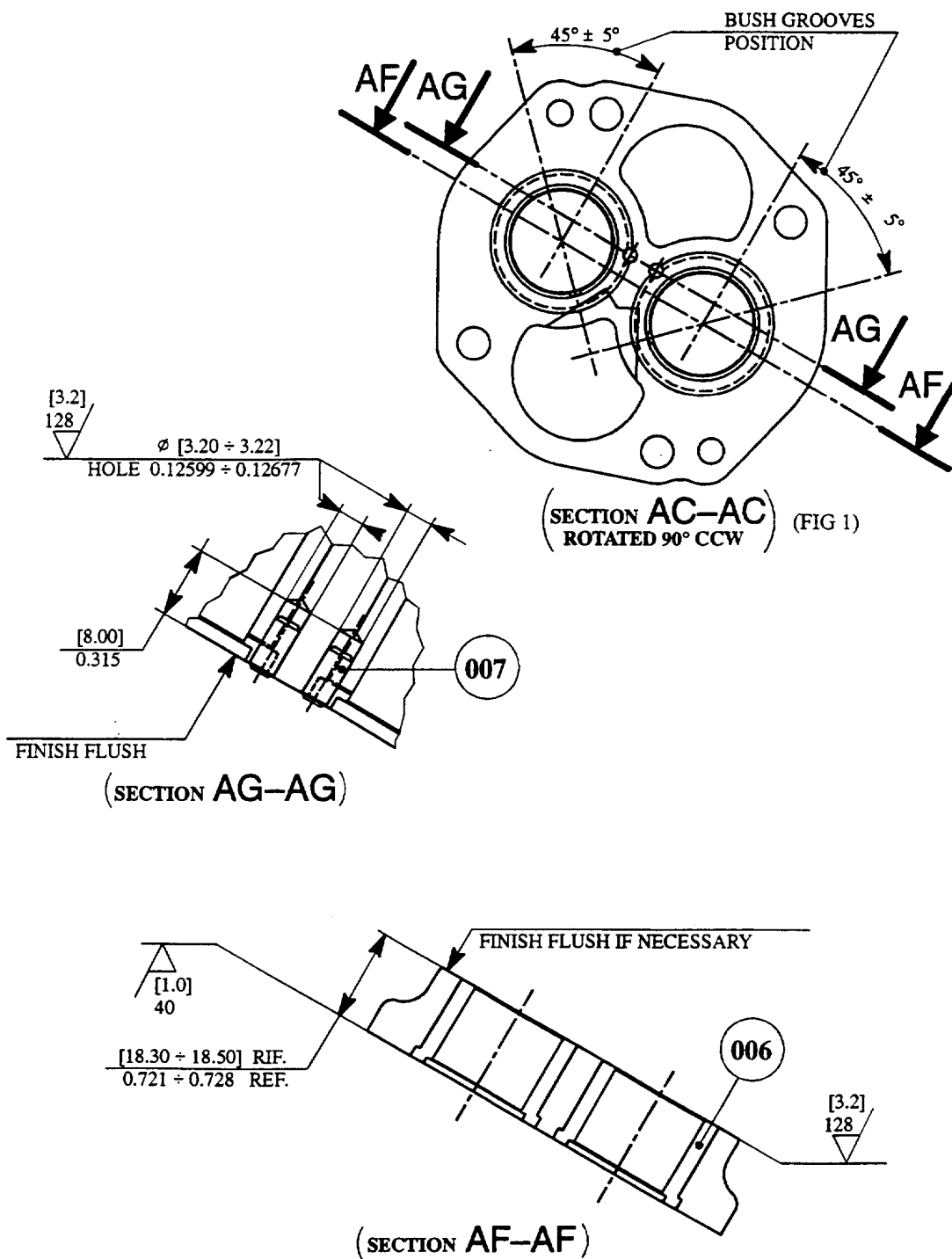
SECTION AS-AS



DETAIL AR (FIG 8)

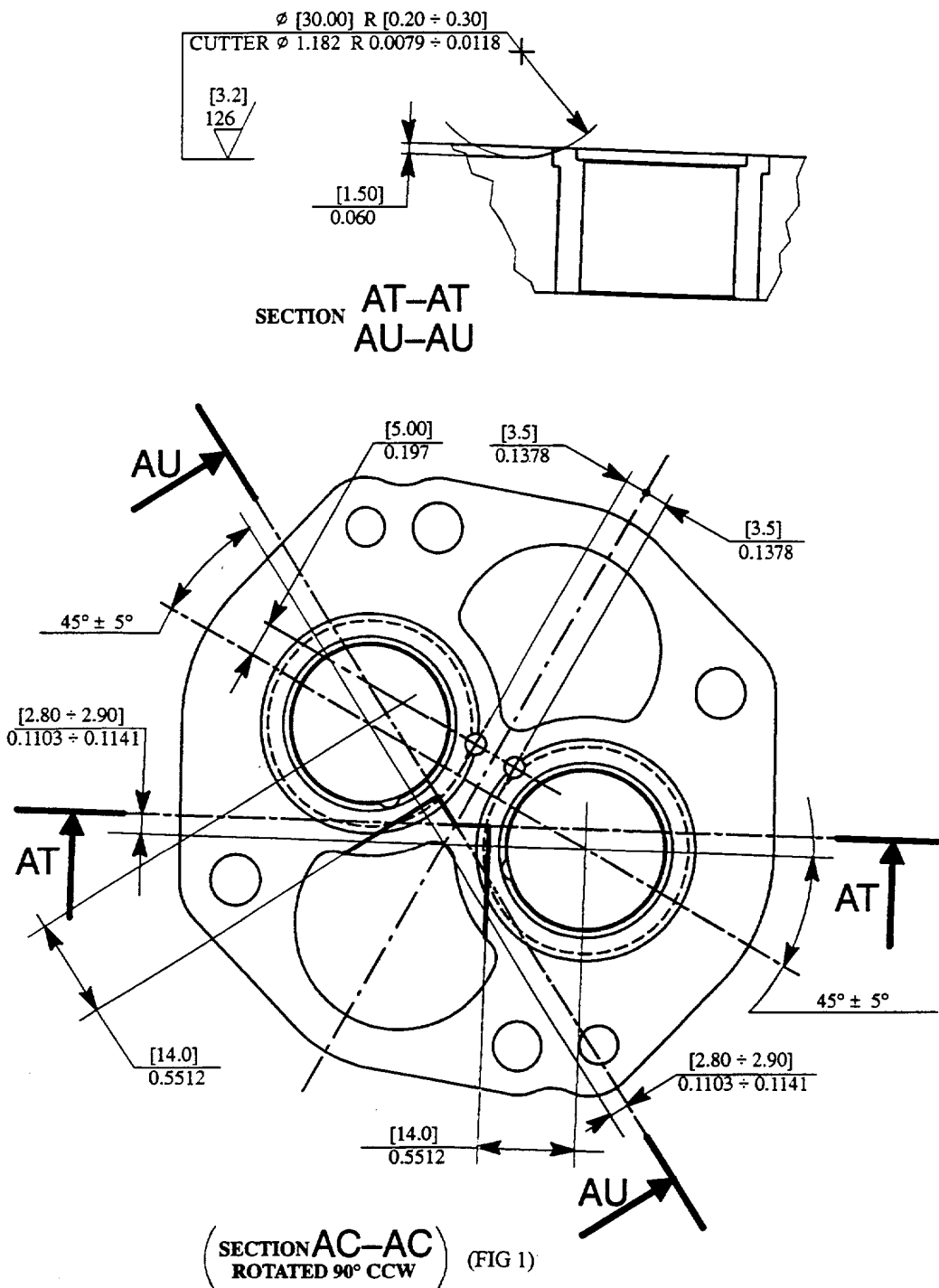
Oil pump casing assembly - 4B7256 - Section AS and detail AR  
Figure 9

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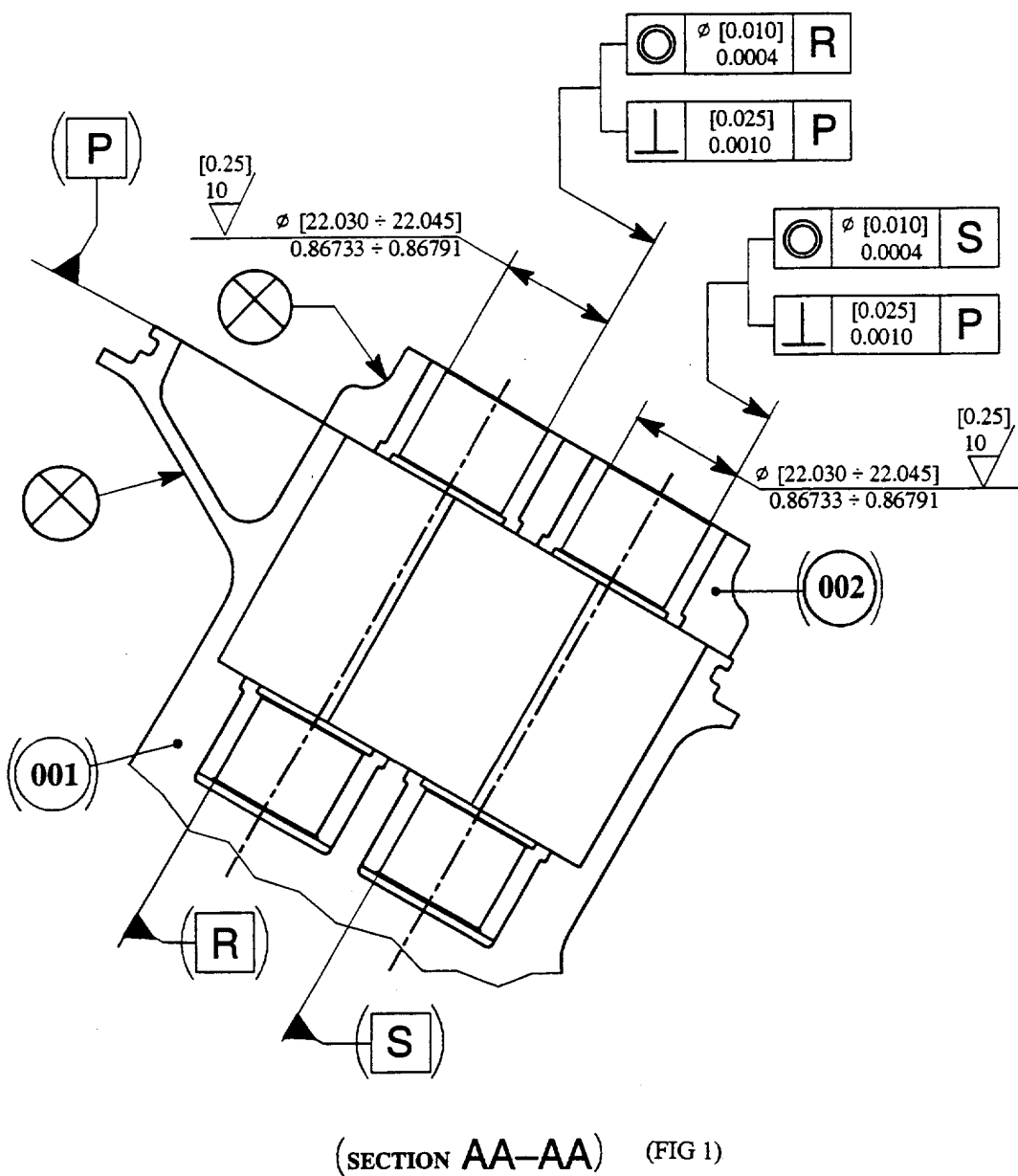


Oil pump cover assembly - 4B7227 - Sections AC, AF and AG  
Figure 10





Oil pump cover assembly - 4B7227 - Section AC, AT and AU  
Figure 11



Oil pump casing assembly - 4B7099 - Section AA  
Figure 12



## SERVICE BULLETIN

3. Material Information

Applicability: For each V2500 engine for which this Service Bulletin is applicable.

A. Kits necessary for this Service Bulletin:

None

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
4A7077 (79-21-41)	1		Pump and Filter, Assembly - Oil Pressure	4A7076 (01-100)	(A)(B)(D) (S1)
4A0852 (79-21-41)	1		Pump and Filter, Assembly - Oil Pressure	4A7076 (01-100)	(C)
4B7234 (79-21-41)	1		Gear Assembly of, Drive	4B7164 (01-200)	(A)(B)(D) (S2)
4P7235 (79-21-41)	1		Gear Driven	4P7165 (01-200)	(A)(B)(D) (S2)
4A7089 (79-21-41)	1		Casing, Assembly - Oil Pump Filter	4A7099 (01-750)	(A)(B)(D) (S2)
4A7083 (79-21-41)	1		Casing, Assembly - Oil Pump Filter	4A7099 (01-750)	(E)
4B7243 (79-21-41)	1		Casing, Assembly - Oil Pump Filter	4B7256 (01-790)	(A)(B)(D) (S1)

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

C. Instruction Disposition Codes:

- (A) New part is available.
- (B) Old part will not be available.

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- (C) New part number for reworked pump only. Refer to the rework instructions, step 2.A.(25)(d).
- (D) Old part must be returned to FIAT Avio.
- (E) New part number for reworked oil-pump filter casing only. Refer to rework instructions, step 2.A.(25)(d).
  
- (S1) Old and new parts coded (S1) are freely interchangeable.
  
- (S2) New parts coded (S2) must be installed as a set. The old and new parts must not be put together.