



STANDARD PRACTICES - ENGINE - INFORMATION - ENGINE - FUEL AND CONTROL - TO ANNOUNCE THE  
AVAILABILITY OF A FUEL DIVERTER AND RETURN VALVE WITH CHROME PLATING ON THE PISTON ROD  
- CATEGORY CODE 8 - MOD.ENG-70-0308

1. Planning Information

A. Effectivity

- (1) Aircraft: Airbus A320/A321  
Engine: V2500-A1/V2500-A5
- (2) Aircraft: McDonnell Douglas MD-90  
Engine: V2500-D5

B. Reason

To provide a more hardness of the surface of Fuel Diverter Valve piston rod.

C. Compliance

Category 8

Accomplish when supply of superseded parts has been depleted.

D. Approval

The part number transaction shown under the MATERIAL INFORMATION portion of this Bulletin has been shown to comply with the applicable Federal Aviation Regulations and are FAA-APPROVED for the Engine Model Listed.

E. References

- (1) Internal Reference No.

EC93VJ020

- (2) Other References

Ishikawajima-Harima Heavy Industries Co, Ltd. (IHI) Service Bulletin No. 13298-73-002(for A1) and No. 17300-73-002(for A5.D5), "Engine Fuel Control - Provide a Fuel Diverter and Return Valve with Chrome Plating on the Piston Rod".

F. General Information

- (1) The Material Information portion of this Bulletin provies the latest information concerning the availability of the new Fuel Diverter And Return Valve (FDRV).

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International Aero Engines  
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Printed in Great Britain

- (2) The existing FDRV can be reworked and reidentified to a new configuration with accomplishment instructions given in the IHI Service Bulletin No. 13298-73-002 and No. 17300-73-002.
- (3) The Removal/Installation of FDRV by the instructions given in the V2500 Aircraft Maintenance Manual, Chapter/Section 73-13-42 and Engine Manual, Chapter/Section 72-00-32.
- (4) Other Publications Affected:
- (a) The V2500 Power Plant Illustrated Parts Catalog, Chapter/Section 73-13-42.
- (b) The V2500 Engine Illustrated Parts Catalog, Chapter/Section 73-13-42.
- (c) The IHI Component Maintenance Manual, 73-13-42 and 73-18-52, Fuel Diverter and Return Valve 13298G11 and 17300G04.

G. Material Information

New Part No. (ATA No.)	Qty	Est'd Unit Price (\$)	Keyword	Old Part No. (IPC No.)	Supply Status
5L0055 (13298G12) (73-13-42)	1	-----	.Valve Fuel Diverter & Return (A1)	5L0031 (13298G11) (01-100)	(A)(B) (S1) (1D)
5L0056 (17300G05) (73-13-42)	1	-----	.Valve Fuel Diverter & Return (A5/D5)	5L0054 (17300G04) (01-100)	(A)(B) (S1) (1D)

(A) New part is currently available.

(B) Old part will no longer be available for sale.

(S1) Old and new part is freely and fully interchangeable, both physically and functionally.

(1D) Old part number can be reworked and reidentified to a new configuration.

NOTE: Contact the Ishikawajima - Harima Heavy Industry Co., Ltd.  
Product Support General Manager for information concerning  
firm prices.

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ISHIKAWAJIMA-HARIMA HEAVY INDUSTRIES CO., LTD.

# SERVICE BULLETIN

No. 17300-73-002

## ENGINE FUEL CONTROL - INTRODUCTION OF A NEW FUEL DIVERTER AND RETURN VALVE

### 1. PLANNING INFORMATION

#### A. EFFECTIVITY

This Service Bulletin is applicable to the Ishikawajima-Harima Heavy Industries Co., Ltd. (hereafter referred to as IHI) Fuel Diverter and Return Valve (hereafter referred to as FDRV) part number 17300G04 (IAE part number 5L0054) installed on the IAE V2500-A5/D5 engines and the spare FDRV part number 17300G04 (IAE part number 5L0054).

- (1) V2500-A5, all part number 17300G04 (IAE PN 5L0054). FDRV's prior to serial number 1027.
- (2) V2500-D5, all part number 17300G04 (IAE PN 5L0054). FDRV's prior to serial number 2014.

#### B. REASON

##### (1) Condition

Fuel leakage from drain port has been reported several times during customer flight use.

##### (2) Background

With increasing service time of FDRV, the contamination possibly occurred in fuel between inside seal and rod. This caused very small scratches on rod surface. Very small scratches on the surface which contacted with inside seal and caused fuel leakage through seal. The engineering review has shown that the chrome plating is to be added on rod surface. This will avoid scratches on rod surface.

##### (3) Objective

Incorporation of changes introduced by this Service Bulletin (Modification) has been designed to increase reliability.

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## C. DESCRIPTION

- (1) The existing rod have been changed to chrome plated rod. (See Figure 1)
- (2) The existing FDRV can be reworked and reidentified to a new configuration from the existing 2411755, FDRV to a new 2411755-3, FDRV.
- (3) This Service Bulletin provides accomplishment instructions for reworking the rod, and also provides instruction for the reidentification of FDRV.
- (4) This Service Bulletin describes three options to accomplish the modification of the FDRV as follows:
  - (a) Option 1 : Operators who wish to have the modification accomplished by IHI.
  - (b) Option 2 : Operators who wish to accomplish the modification in the shop by replacing rod.
  - (c) Option 3 : Operators who wish to accomplish the modification in the shop by reworking the rod.

## D. COMPLIANCE

Category 8

Accomplish when the supply of superseded parts has been depleted.

## E. APPROVAL

The part number changes and/or part modifications described in this bulletin have been shown to comply with the appropriate Federal Aviation Regulations and are FAA approved for these units listed in this bulletin.

## F. MANPOWER

No additional man-hours are necessary to incorporate this Service Bulletin (modification) at component maintenance level.

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## **G. MATERIAL - COST AND AVAILABILITY**

- (1) Option 1: Operators who wish to have the modification accomplished by IHI.

Accomplishment of this Service Bulletin will be completed based on IHI standard terms, and prices of sale pertaining to commercial contract IHI's Product Support Manager for information concerning firm quotation.

- (2) Option 2: Operators who wish to accomplish the modification in the shop by replacing rod.

New parts required to accomplish this Service Bulletin are list in Section 3. Material Information and are available at prices and lead times indicated.

An order for spare parts should be addressed to:

Ishikawajima-Harima Heavy Industries Co., Ltd.  
229, Tonogaya mizuho-machi, Nishitama-gun  
Tokyo, 190-12 Japan.  
(For the attention of the Product Support Manager).

Rapifax: (0425) 68-7104  
Telephone: (0425) 68-7107

- (3) Option 3: Operators who wish to accomplish the modification in the shop by reworking the rod.

Old rod can be reworked, Refer to Material Information, Section 3.

## **H. TOOLING - PRICE AND AVAILABILITY**

- (1) Special Tools are not required to accomplish this Service Bulletin.

## **I. WEIGHT AND BALANCE**

Not affected.

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**J. ELECTRICAL LOAD DATA**

Not affected.

**K. REFERENCES**

- (1) IAE Service Bulletin No. V2500-ENG-70-0308, " Information - Fuel and Control - To announce the availability of a Fuel Diverter and Return Valve with Chrome Plating on the Piston Rod.
- (2) IHI Component Maintenance Manual, 73-18-52, Fuel Diverter and Return Valve , Part Number 17300G04.

**L. Other Publications Affected**

- (1) IHI Component Maintenance Manual, 73-18-52, Fuel Diverter and Return Valve , Part Number 17300G04.

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## 2. ACCOMPLISHMENT INSTRUCTIONS

### A. REWORK INSTRUCTION

- (1) Option 1: Operators who wish to have the modification accomplished by IHI.

- (a) Return the part number 17300G04 (IAE part number 5L0054).  
FDRV for modification and reidentification to:

Ishikawajima-Harima Heavy Industries Co., Ltd.  
229, Tonogaya mizuho-machi, Nishitama-gun  
Tokyo, 190-12 Japan.  
(For the attention of the Product Support Manager).

Rapifax: (0425) 68-7104  
Telephone: (0425) 68-7107

NOTE: All part number 17300G04, FDRV's which are accomplished the modification by IHI will be identified with the following on the new name plate:

IAE	P/N	5L0056
IHI	P/N	17300G05
SERIAL	No.	Same as existing serial number
MOD	No.	Unnecessary to identify

- (2) Option 2: Operators who wish to accomplish the modification in the shop by replacing rod.
- (a) Disassemble the 17300G04, FDRV and Removal of the 13713P1, Name Plate by the approved procedures in accordance with IHI Component Maintenance Manual, 73-18-52, Disassembly.
- (b) Replace the 2411755, rod with new 2411755-3, rod  
(Refer to Figure 1 and 2).
- (c) Assemble the FDRV and Installation of the name plate by the approved procedures in accordance with IHI Component Maintenance Manual, 73-18-52, Assembly.
- (d) Mark the new part number on the new 13713P1, name plate and identify as follows:  
Use the metal stamps by hand press (Refer to Figure 3).

IAE	P/N	5L0056
IHI	P/N	17300G05
SERIAL	No.	Same as existing serial number
MOD	No.	Unnecessary to identify

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- (e) Identify with the new part number adjacent to old part number on the 2411793, existing name plate. Use the vibro peen method (Refer to Figure 3).
  - (f) Do a functional testing by the approved procedures in the IHI Component Maintenance Manual, 73-18-52, Testing and Fault Isolation.
- (3) Option 3: Operators who wish to accomplish the modification in the shop by reworking the rod.
- (a) Disassemble the 17300G04, FDRV and Remove of the 13713P1, name plate by the approved procedures in accordance with IHI Component Maintenance Manual, 73-18-52, Disassembly.
  - (b) Rework the 2411755, rod by the approved procedures in accordance with Rework instruction of the rod (Refer to Figure 4).
  - (c) Assemble the FDRV and Installation of the name plate by the approved procedures in accordance with IHI Component Maintenance Manual, 73-18-52, Assembly.
  - (d) Mark the new part number on the new 13713P1, name plate and identify as follows:  
Use the metal stamps by hand press (Refer to Figure 3).

IAE	P/N	5L0056
IHI	P/N	17300G05
SERIAL	No.	Same as existing number
MOD	No.	Unnecessary to identified

- (e) Identify with the new part number adjacent to old part number on the 2411793, existing name plate. Use the vibro peen method (Refer to Figure 3).
- (f) Do a functional testing by the approved procedures in the IHI Component Maintenance Manual, 73-18-52, Testing and Fault Isolation.

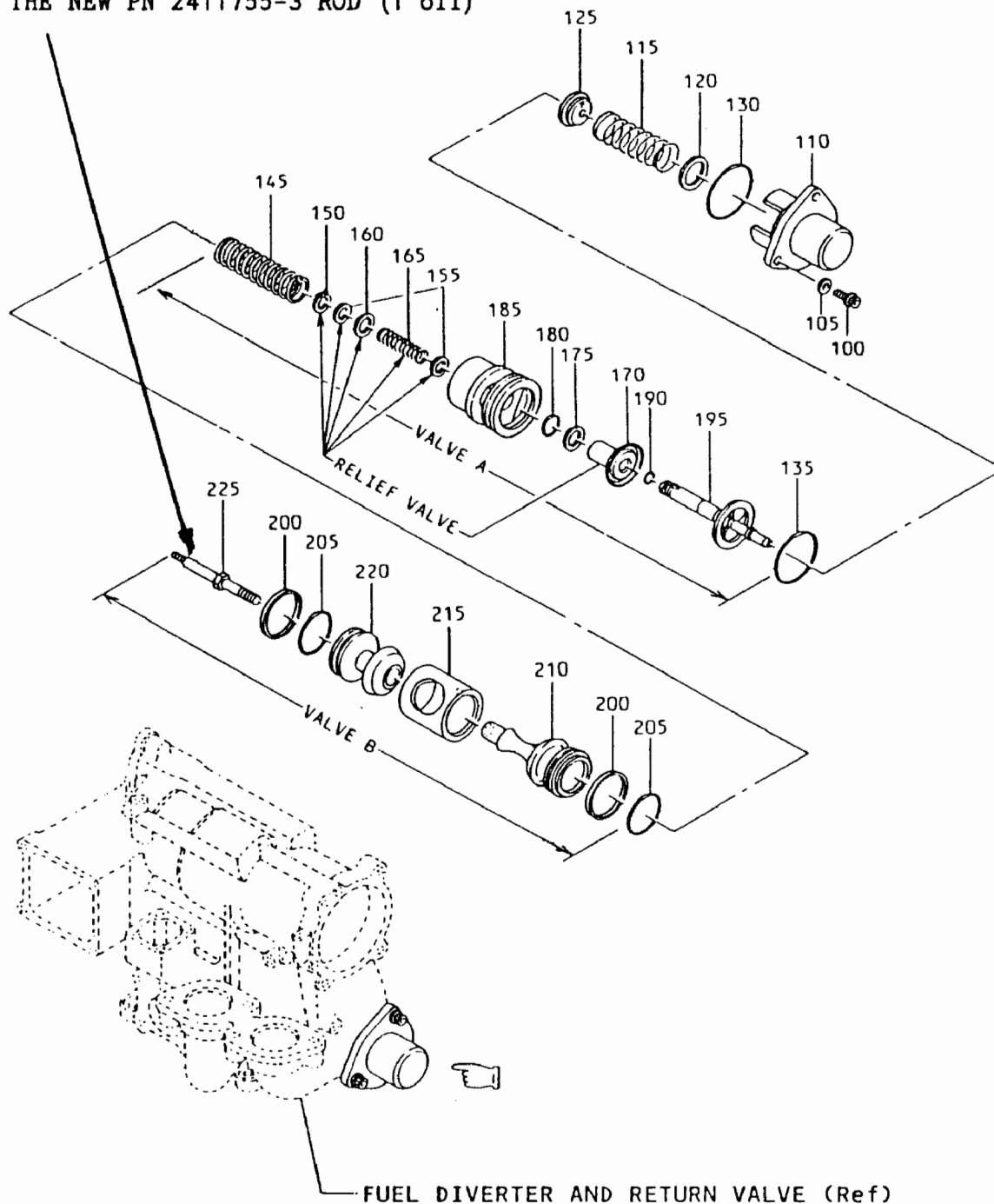
## B. Recording Instructions

- (1) A record of accomplishment in necessary.



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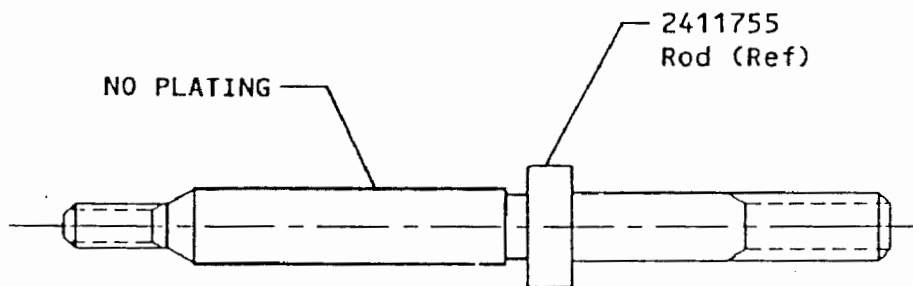
REPLACE THE EXISTING PN 2411755 ROD (1 off), WITH  
THE NEW PN 2411755-3 ROD (1 off)



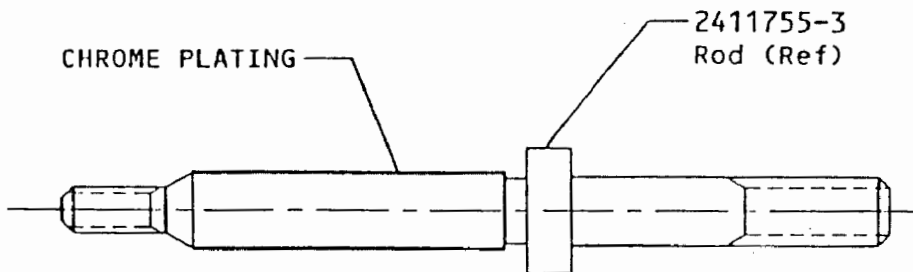
Location of the Rod (Old and New Part Configuration)  
Figure 1

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BEFORE ALTERATION

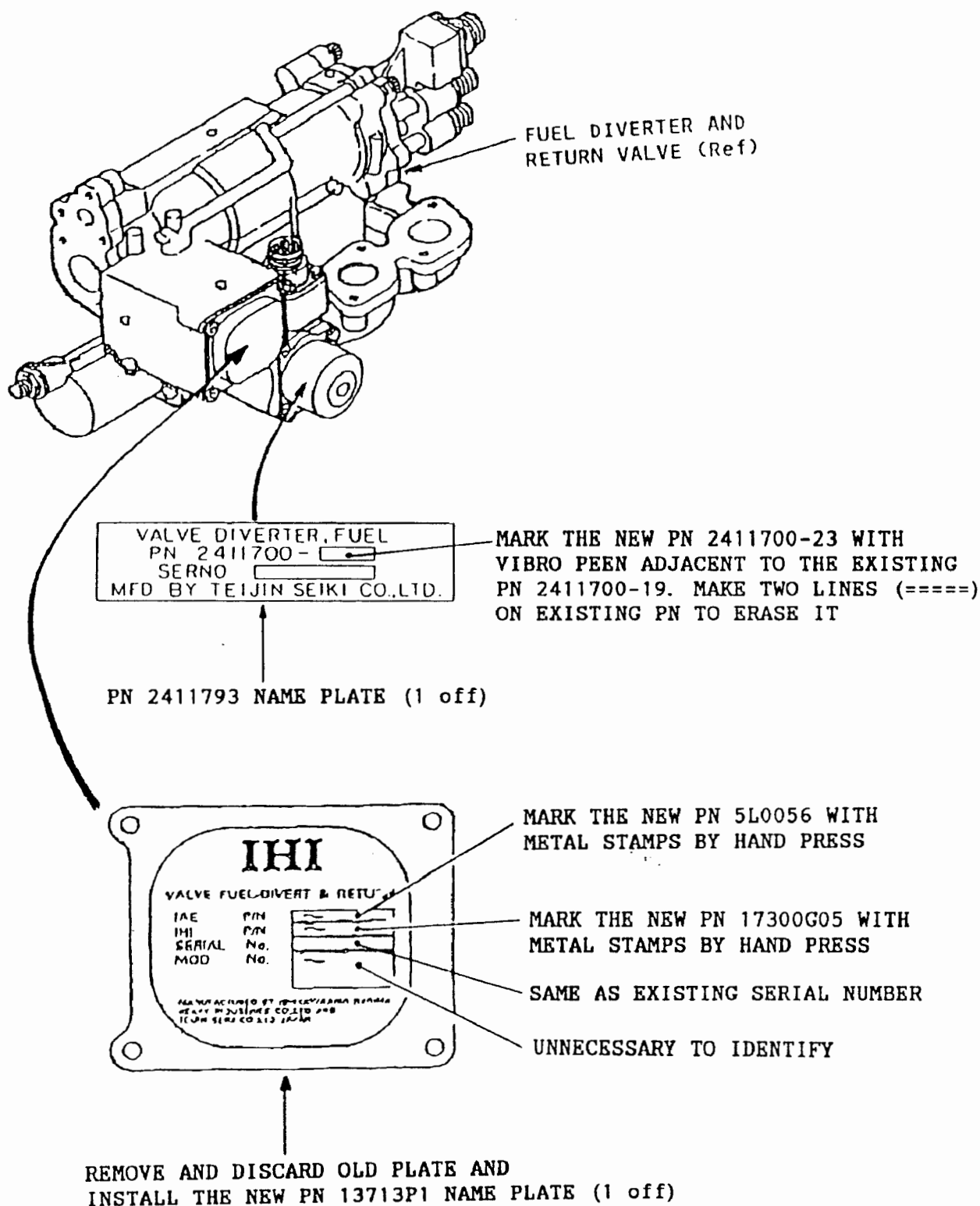


AFTER ALTERATION

Rod - Before and After Alteration  
Figure 2

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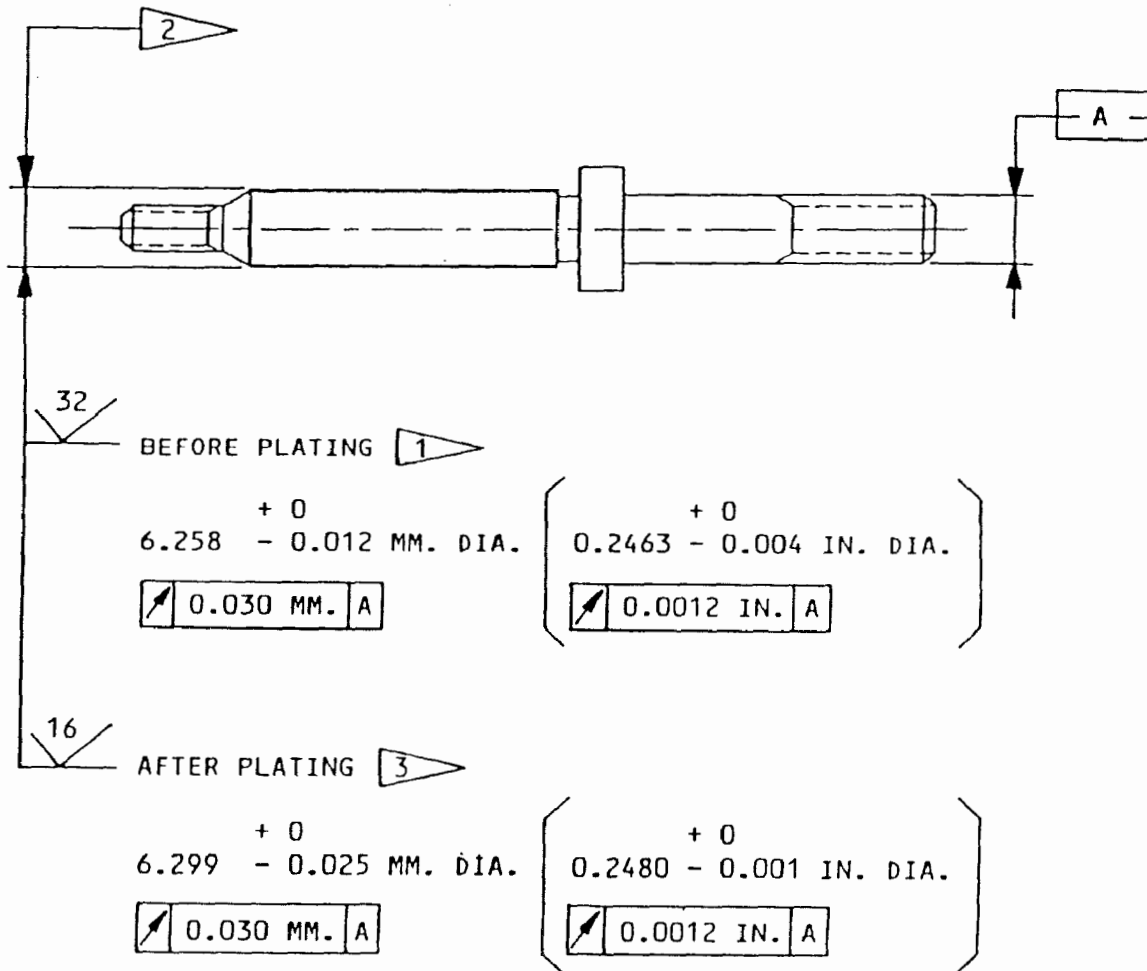
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Reidentification of Fuel Diverter and Return Valve  
Figure 3

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REWORK ROD, PN 2411755 TO NEW ROD, PN 2411755-3.

MATERIAL : 15-5PH PER AMS 5659

HEAT TREAT : MIL-H-6875 COND. H1050.

- 1 BEFORE CHROME PLATING
  - (1) GRIND OUTSIDE DIAMETER.
  - (2) MAGNETIC INSPECTION PER MIL-STD-1949 CLASS 3.
  - (3) PASSIVATE PER MIL-S-5002.
- 2 CHROME PLATING
 

CHROME PLATE PER QQ-C-320, THICKNESS 0.008 MM. (0.00032 IN.) MINIMUM.
- 3 AFTER CHROME PLATING
  - (1) GRIND OUTSIDE DIAMETER.
  - (2) MAGNETIC INSPECTION PER MIL-STD-1949 CLASS 3.

Rework Instruction of Old Rod  
Figure 4

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3. MATERIAL INFORMATION

Applicability: For each IHI 17300G04, (IAE PN 5L0054), FDRV. That is installed on V2500-A5/D5 engines and the spare FDRV to incorporate this Bulletin.

## A. Kits Associated with this Bulletin:

None.

## B. Parts affected by this Bulletin:

New Part No. (IPL No.)	Qty	Est'd (\$) Unit Price	Lead Time	Keyword	Old Part No.	Instruction Disposition
17300G05 (5L0056) ( 1-1 )	Ref	--	--	Valve, Fuel Dvt & Return	17300G04 (5L0054)	(S1) (1D)
2411755-3 (3-225)	1	*	90 days	Rod	2411755	(A) (B) (S1) (1D)
13713P1	1	*	--	Plate, name	13713P1	(A) (S1)

## C. Instruction/Disposition Code Statements:

(A) New part number will be available for sale.

(B) Old part number will no longer be available for sale.

(S1) Old and New part number is freely and fully interchangeable both physically and functionally.

(1D) Old part can be reworked and reidentified to a new part number.

NOTE: \* Contact the IHI's Product Support Manager for information concerning prices.