SERVICE BULLETIN

IGNITION — SHROUD, LEAD PLUG END — INTRODUCTION OF A LONGER SHROUD TO IMPROVE COOLING

MODEL APPLICATION

V2500-A1, V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5, V2533-A5

BULLETIN ISSUE SEQUENCE

V2500 Series 70-1005

ATA NUMBER

74-21-43

Supplier Service Bulletin

Unison Service Bulletin 74-131

Compliance Category

7

Summary

The purpose of this Service Bulletin is to introduce a new ignition plug cooling shroud which increases the length to aid in assembly.

This Service Bulletin is the terminating action for Reference 7, Non-Modification Service Bulletin 74-0006.

Planning Information

Effectivity Data

Engine Models Applicable

V2500-A1
Engine Serial Nos. V0001 thru V0361

V2522-A5, V2524-A5, V2527M-A5, V2527-A5, V2527E-A5, V2530-A5, V2533-A5
Engine Serial Nos. V10001 thru V13190

V2522-A5, V2524-A5, V2527M-A5, V2527-A5, V2527E-A5, V2530-A5, V2533-A5
Engine Serial Nos. V15001 thru V16965
Engine Serial Nos. V16967 thru V16968

Concurrent Requirements

This Service Bulletin must be done at the same time or after Reference 6, Service Bulletin No. V2500-ENG-70-1004.

Reason

1. Condition: The Ignition Lead, PN 512090-1, with increased elbow length was introduced by Reference 6, Service Bulletin No. V2500-ENG-70-1004.
2. Background: Incorrect assembly of this ignition lead and the existing cooling shroud PN 9048444, which guides the cooling air exiting the lead over the ignition plug can lead to one of the following two conditions:
   A. Blocking the ignition lead cooling holes, hence both the ignition lead and plug are not cooled.
   B. Ignition lead cooling holes remain outside the cooling shroud, and hence the plug is not cooled.
3. Objective: The lack of ignition lead and plug cooling results in reduced reliability and durability. A detailed review of the ignition lead and cooling shroud assembly indicated that 0.177 in (4.50 mm) needed to be added to the stainless steel cooling shroud length to ensure correct alignment with the lead vent holes to ensure sufficient flow of cooling air through the lead and the plug.
4. Substantiation: The changes introduced by this Service Bulletin were the subject of satisfactory engineering analysis and test. This Service Bulletin complies with the applicable engine certification basis.
5. Effects of Bulletin on:

   Removal/Installation: Not affected.

   Disassembly/Assembly: Not affected.

   Cleaning: Not affected.

Inspection/Check: Not affected.

Repair: Not affected.

Testing: Not affected.

6. Supplemental Information

None.

Description

Install a new ignition plug cooling shroud to increase length to aid in assembly.

This SB is the terminating action for Reference 7, Non-Modification Service Bulletin 74-0006.

Compliance

Category 7

Accomplish when supply of superseded parts has been depleted.

Approval Data

The part number changes and/or part modifications specified in the Accomplishment Instructions and Material Information sections of this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulations and are FAA-APPROVED for the engine model(s) given.

The compliance statement and the procedures described in this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulations and are FAA-APPROVED for the engine model listed.

Manpower

1. In Service

..... Not Applicable.

2. At Overhaul

..... Not Applicable.

Weight and Balance

1. Weight Change

None.

2. Moment Arm

No Effect.

3. Datum

Engine Front Mount Centerline (Power Plant Station (PPS) 100)

Electrical Load Data

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

Software Accomplishment Summary

Not Applicable.

References

1. ATA Locator — 74-21-43.
2. V2500 Engine Illustrated Parts Catalogs (S-V2500-1IA), Chapter/Section 74-21-43.
3. V2500 Engine Illustrated Parts Catalogs (S-V2500-2IA, S-V2500-2IB, S-V2500-5IA, S-V2500-5IB, S-V2500-6IA, S-V2500-6IB, S-V2500-7IA, S-V2500-7IB), Chapter/Section 74-21-43.
4. V2500 Engine Illustrated Parts Catalogs (S-V2500-2SA, S-V2500-2SB, S-V2500-2NA, S-V2500-2NB, S-V2500-5SA, S-V2500-5SB, S-V2500-5NA, S-V2500-5NB, S-V2500-6SA, S-V2500-6SB, S-V2500-6NA, S-V2500-6NB, S-V2500-7SA, S-V2500-7SB, S-V2500-7NA, S-V2500-7NB), Chapter/Section 74-21-43.
5. V2500 Engine Component Maintenance Manual (E-V2500-1IA), Chapter/Section 74-21-43.
6. IAE V2500 Service Bulletin No. V2500-ENG-70-1004 (Information — Ignition — Introduction Of A Modified Ignition Lead To Address Insulation Degradation/Cracking).
7. IAE V2500 Non-Modification Service Bulletin No. V2500-ENG-74-0006 (Non-Modification Service Bulletin — Ignition — Installation Requirements For Igniter Plugs Of Service Bulletin V2500-ENG-70-1003 Standard).
8. Unison Service Bulletin 74-131 (Introduction Of New Plug End Cooling Shroud PN 514465 For Ignition Lead).
9. Airbus A319/A320/A321 Aircraft Maintenance Manual, Chapter/Section 74-21-43.

Other Publications Affected

1. V2500 Engine Illustrated Parts Catalogs (S-V2500-1IA, S-V2500-2IA, S-V2500-2IB, S-V2500-3IA, S-V2500-3IB, S-V2500-5IA, S-V2500-5IB, S-V2500-6IA, S-V2500-6IB, S-V2500-7IA, and S-V2500-7IB), Chapter/Section 74-21-43.

Interchangeability of Parts

Old and new parts are interchangeable only in full sets.

Information in the Appendix

Alternate Accomplishment Instructions (No)

Progression Charts (No)

Added Data (Yes)

Revision to Table of Limits (No)

Inspection Procedures (No)

Material Information

Material — Price and Availability

1. The estimated price of new material to do this Service Bulletin using new replacement parts is $1,916.00.
2. There is no kit provided to do this Service Bulletin.
3. Part availability information is provided in material data Instructions — Disposition.

Industry Support Program

Not Applicable.

The material data that follows is for each engine.

For V2500-A1, V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5, V2533-A5 Engines:

New PN	Qty	Estimate of Unit Price ($)	Keyword	Old PN	Instructions — Disposition
514465	1	479.00	SHROUD, LEAD PLUG END A	5U0065 (74-21-43-01-070)	(2)(A)(C2)
514465	1	479.00	SHROUD, LEAD PLUG END B	5U0065 (74-21-43-01-075)	(2)(A)(C2)
514465	1	479.00	SHROUD, LEAD PLUG END A	5U0065 (74-21-43-02-070)	(2)(A)(C2)
514465	1	479.00	SHROUD, LEAD PLUG END B	5U0065 (74-21-43-02-075)	(2)(A)(C2)

Instructions/Disposition Code Statements:

Parts Modification Conditions

Estimated part prices are provided when they are available at time of publication. The Estimate of Unit Price is only for planning purposes and does not constitute a firm quotation. An asterisk (*) is shown where part pricing information was unavailable. In either case, contact IAE Spares for firm quotations.

(2) The new part is a replacement part only, and cannot be obtained by modification of the old part.

Spare Parts Availability

(A) The new part is available.

(C2) The old part will continue to be supplied for use in other engine models.

Vendor Services or Special Components/Materials

Vendor Service Bulletin Information

Ref. No.	Vendor Service Bulletin No.	Vendor Service Bulletin Title	Vendor Name & Address
8	74-131	Introduction Of New Plug End Cooling Shroud PN 514465 For Ignition Lead	Unison Industries 7575 Baymeadows Way Jacksonville, FL 32256-8514 U.S.A. Email Contact: benjamin.w.taylor@unisonindustries.com
Vendor Manufacturer's Code: 59501 See Illustrated Parts Catalog Vendor Manufacturer's Code List			

Tooling — Price and Availability

Special tools are not required to accomplish this Service Bulletin.

Reidentified Parts

Not Applicable.

Other Material Information Data

Not Applicable.

Accomplishment Instructions

NOTE: Service bulletin incorporation on engines installed on aircraft may be desirable and should be individually evaluated.

1. For engines installed on aircraft (on wing) do the following procedure. See Figures 1 and 2 for location of parts.

   A. Replace the Lead Plug End Shroud, PN 5U0065, with a new Shroud, PN 514465, on both leads using the following references based on engine configuration:

      (1) For V2500-A1 engines, see Reference 9, Aircraft Maintenance Manual, TASK 74-21-43-000-010-A REMOVAL and TASK 74-21-43-400-010-A INSTALLATION.

      (2) For V2500-A5 engines, see Reference 9, Aircraft Maintenance Manual, TASK 74-21-43-000-010-B REMOVAL and TASK 74-21-43-400-010-B INSTALLATION.

2. For engines removed from aircraft (off wing) do the following procedure. See Figures 1 and 2 for location of parts

   A. Replace the Lead Plug End Shroud, PN 5U0065, with a new Shroud, PN 514465, on both leads using the following references based on engine configuration:

      NOTE: The Engine Manual refers to the Ignition Lead as the High Energy Ignition Harness. It is the same part.

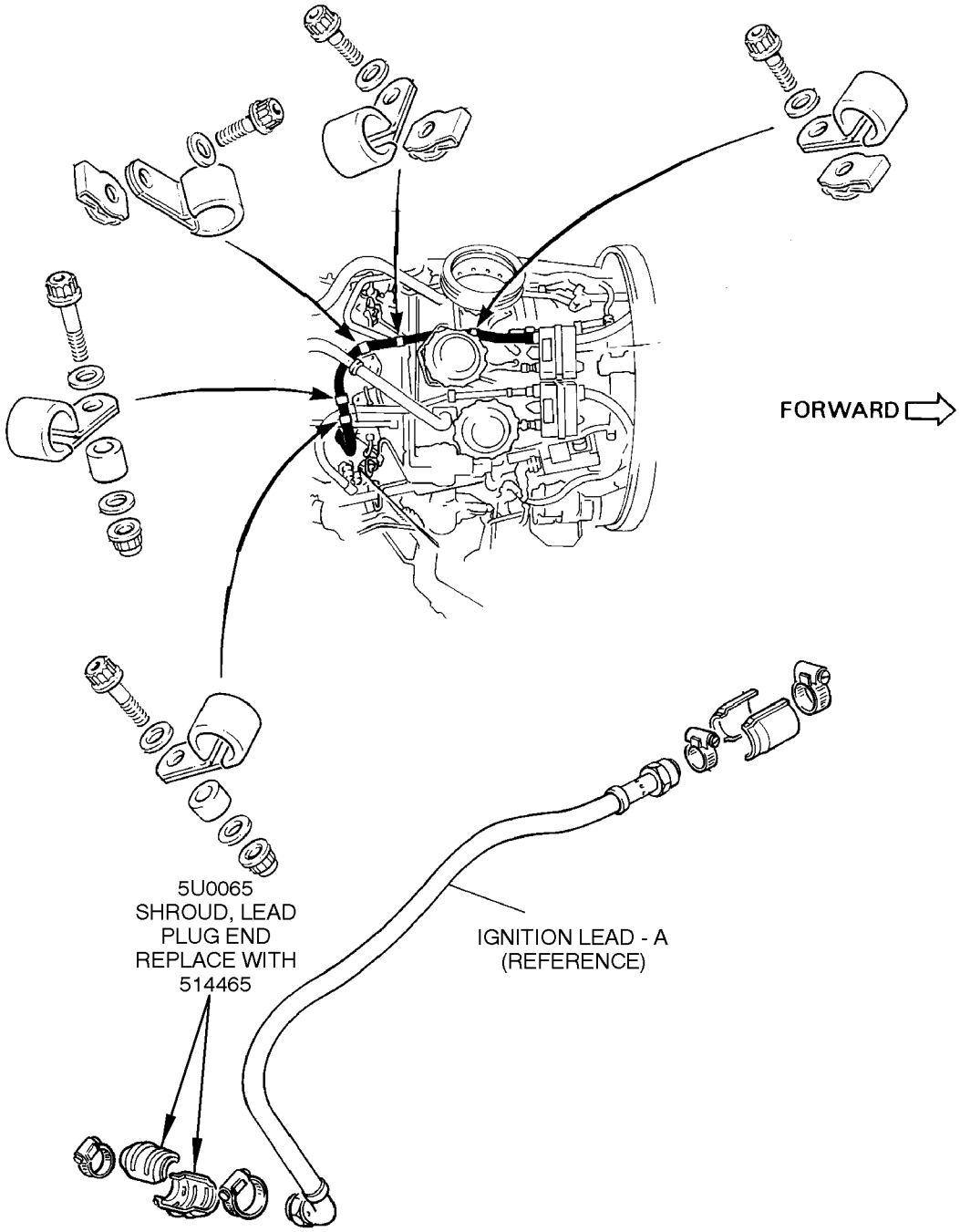
      NOTE: The torque specified in the references for the ignition lead is the same for both ends.

      (1) For V2500-A1 engines, see Reference 6, Engine Manual SUBTASK 72-00-40-020-089 REMOVAL and SUBTASK 72-00-40-420-296 INSTALLATION.

      (2) For V2500-A5 engines, see Reference 6, Engine Manual SUBTASK 72-00-40-020-201 REMOVAL and SUBTASK 72-00-40-420-420 INSTALLATION.

3. Recording Instructions

   A. A record of accomplishment is required.



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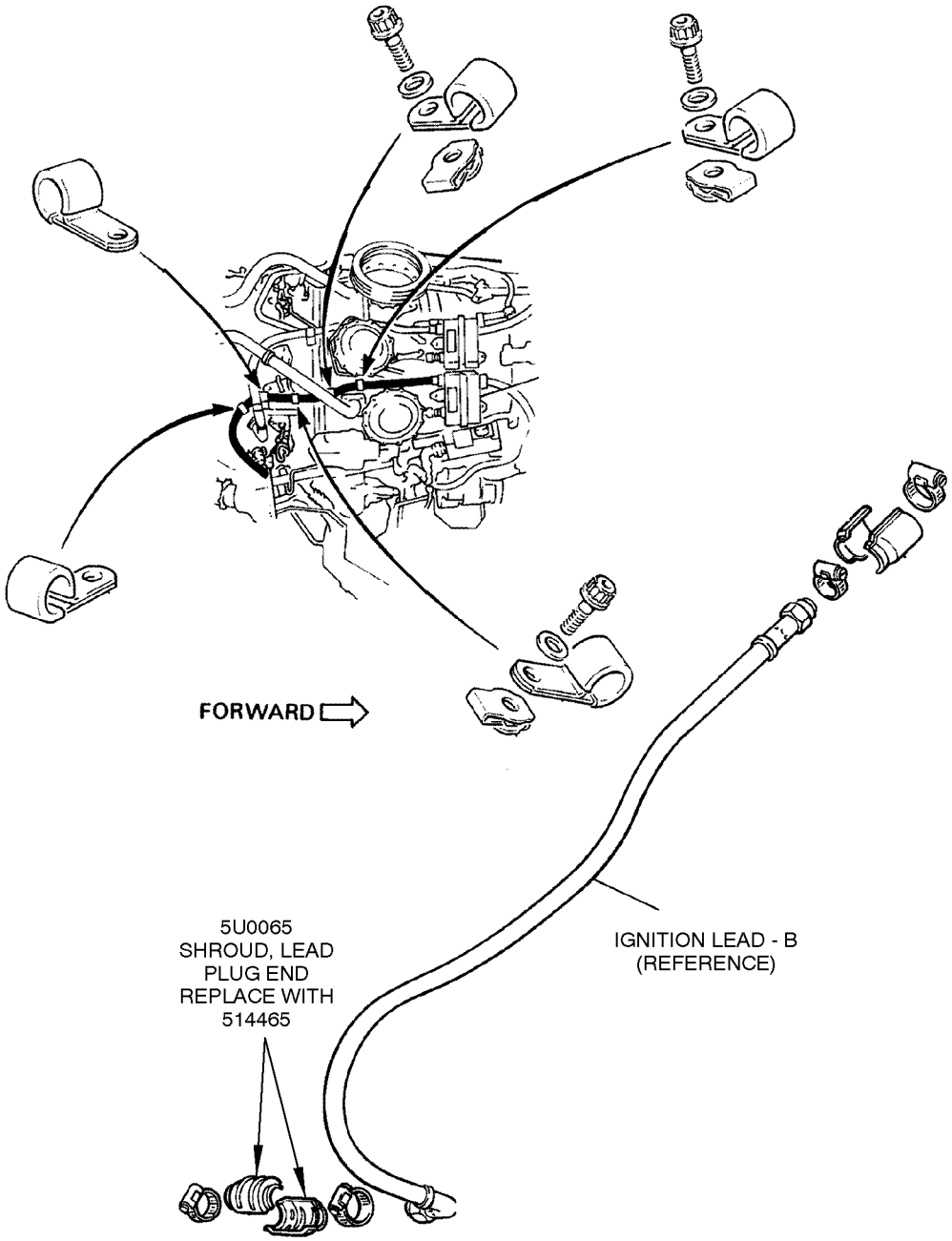
LOCATION OF SHROUD, LEAD PLUG END ON IGNITION LEAD — A
74-21-43-01
FIGURE 1



LOCATION OF SHROUD, LEAD PLUG END ON IGNITION LEAD — B
74-21-43-02
FIGURE 2

Appendix

Added Data

Internal Reference Information

Revision No.	Reference Document	Origination
Original	EC13VI003	JCM/CMS

Number values shown in parentheses adjacent to U.S. values are International System of units (SI) equivalents.