V2500 International Aero Engines

V2500 Propulsion System — Nacelle

SERVICE BULLETIN

NACELLE - EXHAUST - NO. 1 OPEN LATCH INDICATOR INSTALLATION, THRUST REVERSER - MODIFICATION OF

MODEL APPLICATION

V2500 - A1

BULLETIN INDEX LOCATOR

71-00-00
78-32-00

Compliance Category Code

6

Internal Reference No.

JG/LL 90VN030C/F/G

June 7, 1996

V2500-NAC-78-0054

SERVICE BULLETIN

NOTE:

This Service Bulletin is issued for part number progression history only. It is not intended to be incorporated or kit parts ordered from the manufacturer. The intent of this modification is accomplished by the incorporation of Service Bulletins V2500-NAC-71-0098 and V2500-NAC-78-0092.

1. Planning Information

A. Effectivity

(1) Airplane: Airbus A320

(2) Nacelle: V2500-A1 thrust reverser cum units (c/u) prior to 206.

B. Reason

(1) Condition

The No. 1 open latch indicator has excessive lateral movement.

The flag can pivot 20° which causes the flag to jam on the latch assembly.

(2) Background

Present open latch indicator can give false open indication.

(3) Objective

Install an open latch indicator assembly with a modified plunger on the engine and stainless steel guide pads on the thrust reverser to prevent the flag from jamming and giving false open indications.

(4) Substantiation

Not applicable.

(5) Impact of the Bulletin on Workshop Procedures:

Removal/Installation	Affected
Disassembly/Assembly	Not Affected
Cleaning	Not Affected
Inspection/Repair	Not Affected
Repair	Not Affected
Testing	Not Affected

(6) Supplemental Information

None.

C. Description

The change introduced by this Bulletin is as follows:

Part 1

Part 1 of this Service Bulletin is for all engines effected by this bulletin and instructs the installation of the 740-0137-511 forward open latch indicator assembly.

Part 2

Part 2 of this Service Bulletin is for those thrust reversers effected by this bulletin which have guide pads installed with two fasteners. Part 2 instructs the removal of the two-fastener guide pads and installation of new guide pads with one fastener each.

Part 3

Part 3 of this Service Bulletin is for those thrust reversers effected by this bulletin which do not have guide pads

installed. Part 3 instructs installation of stainless steel guide pads to provide a smooth guide path for the indicator assembly.

D. Approval

The part number changes and/or part modifications described in Paragraphs 2 and 3 of this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulations and are FAA approved for the equipment model(s) listed.

E. Compliance

Category 6

Accomplish when the Nacelle subassembly (i.e. accessories, components) is disassembled sufficiently to afford access to the affected part and to all affected spare parts.

F. Manpower

Estimated manhours to incorporate the full intent of this bulletin:

VENUE		ESTIMATED MANHOURS
Part 1		
(1) In Service		N/A
(2) In Shop		
(a) To Rework		0.75 M/Hrs.
	Total	0.75 M/Hrs

Part 2

(1)	In Service		N/A
(2)	In Shop		
	(a) To Rework		1.0 M/Hrs.
		Total	1.0 M/Hrs

Part 3

(1)	In Service		N/A
(2)	In Shop		
	(a) To Rework		1.0 M/Hrs.
		Total	1.0 M/Hrs

G. Material Cost and Availability

Modification kit not required. Parts are supplied as single line items (Refer to Section 3, Material Information).

H. Tooling Cost and Availability

None required.

I. Weight and Balance

(1) Weight change ..... Negligible

(2) Moment arm ..... No effect

(3) Datum ..... Engine Front Mount Centerline (Powerplant Station PPS 100.00)

J. Electrical Load Data

Not affected.

K. Reference

A320/A321 Aircraft Maintenance Manual	78-32-00
V2500 Standard Practices/Processes Manual (SPP-V2500-1IA)	70-09-00
Overhaul Processes and Consumable Index (PCI-V2500-1IA)	

L. Other Publications Affected

A320/V2500-A1 Engine Illustrated Parts Catalog (S-V2500-1IA)	71-00-23 78-32-01 78-32-02 78-32-03 78-32-04
A320/V2500A1 Power Plant Illustrated Parts Catalog (PIP-V2500-1IA)	71-00-23 78-32-01 78-32-02 78-32-03 78-32-04
A320/V2500A1 Power Plant Build-Up Manual (PPB-V2500-1IA)	71-00-02

2. Accomplishment Instructions

A. Pre-requisite Instructions

None.

B. Indicator Assembly Removal/Installation Instructions - Part 1

(1) Remove the 740-0137-509 indicator assembly.

(a) Remove the two NAS6304-3 bolts, two NAS6304-6 bolts, two AN960-416 washers, the 740-0137-509 indicator assembly, and the two 740-0136-27 shims from the engine. Discard the indicator assembly. Keep the shims, bolts, and washers for installation.

(2) Install the 740-0137-511 indicator assembly.

(a) Install the two 740-0136-27 shims, and the 740-0137-511 indicator assembly on the engine with the two NAS6304-3 bolts, two AN960-416 washers, and two NAS6304-6 bolts. Tighten the bolts to a torque of 50-70 lbfin (5.7-7.9 Nm).

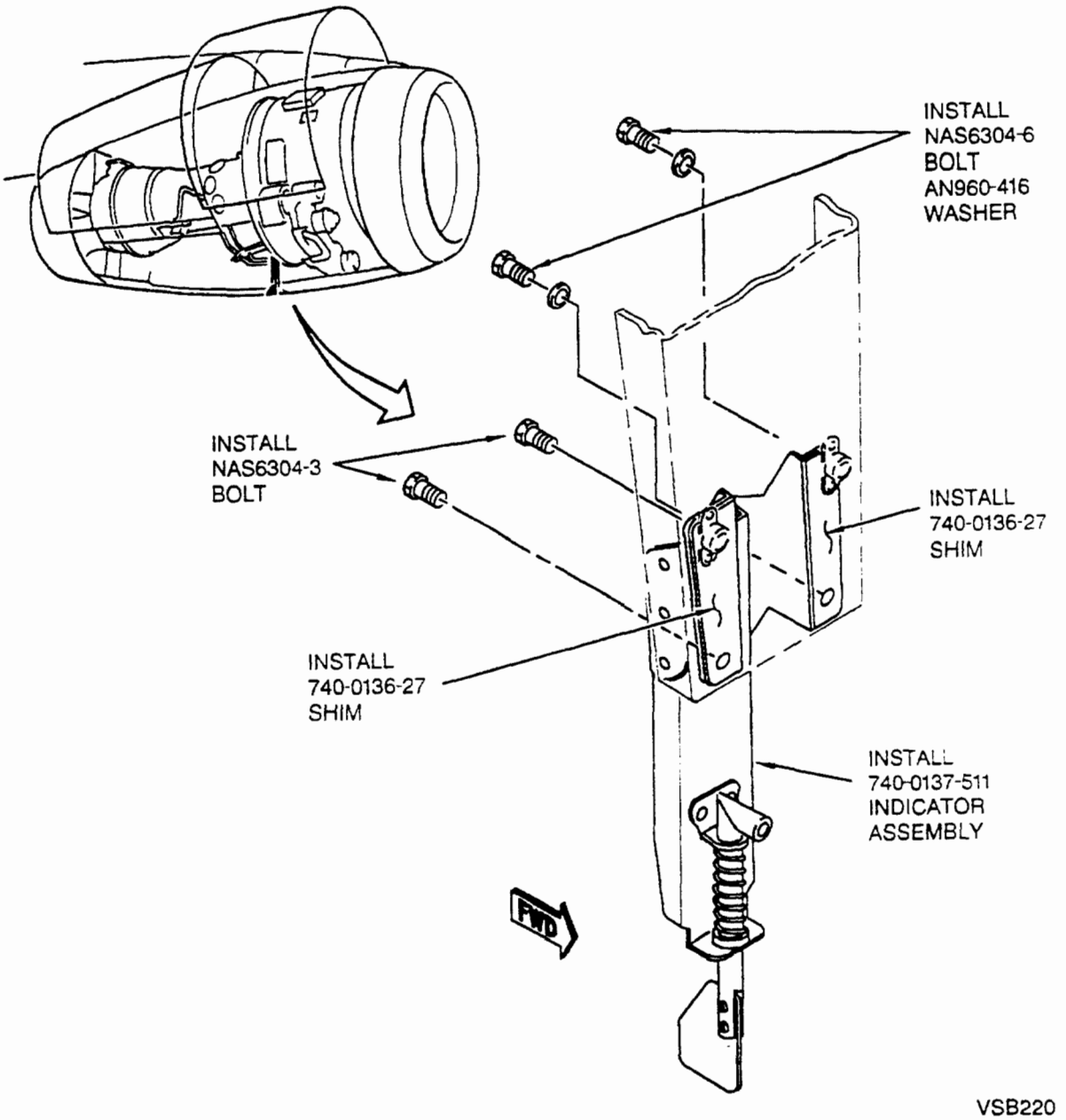
C. Thrust Reverser Guide Pads Removal/Installation - Part 2

(1) Remove the two-fastener thrust reverser guide pads.

(a) Remove the MS21043-04 nuts, NAS7500-04 bolts, 740-0136-39/41 pads, and the 740-0136-43/45 shims from the thrust reverser halves. Discard the pads and shims. Keep the bolts and nuts for installation of the new pads and shims.

(2) Install the one-fastener thrust reverser guide pads.

(a) Hold the 740-0136-47 pad and 740-0136-43 shim together. Make sure the shim is against the flat (not beveled) side of the pad. Backdrill the two 0.368-0.390 (9.35-9.91 mm) holes and one 0.127-0.133



No. 1 Open Latch Indicator Removal/Installation
(Service Bulletin Part 1)
Figure 1

inch (3.23-3.38 mm) hole through the shims. Refer to Figure 2.

(b) Hold the 740-0136-48 pad and 740-0136-43 shim together. Make sure the shim is against the flat (not beveled) side of the pad. Backdrill the two 0.368-0.390 inch (9.35-9.91 mm) holes and one 0.127-0.133 inch (3.23-3.38 mm) hole through the shims.

(c) Temporarily install the pads and shims with the NAS7500-04 bolts and MS21043-04 nuts. Adjust the clearance between the latch open indicator and the pads when the thrust reverser and engine are installed on the aircraft. Refer to the A320/A321 Aircraft Maintenance Manual, Chapters 78-32-01, -02, -03, and -04.

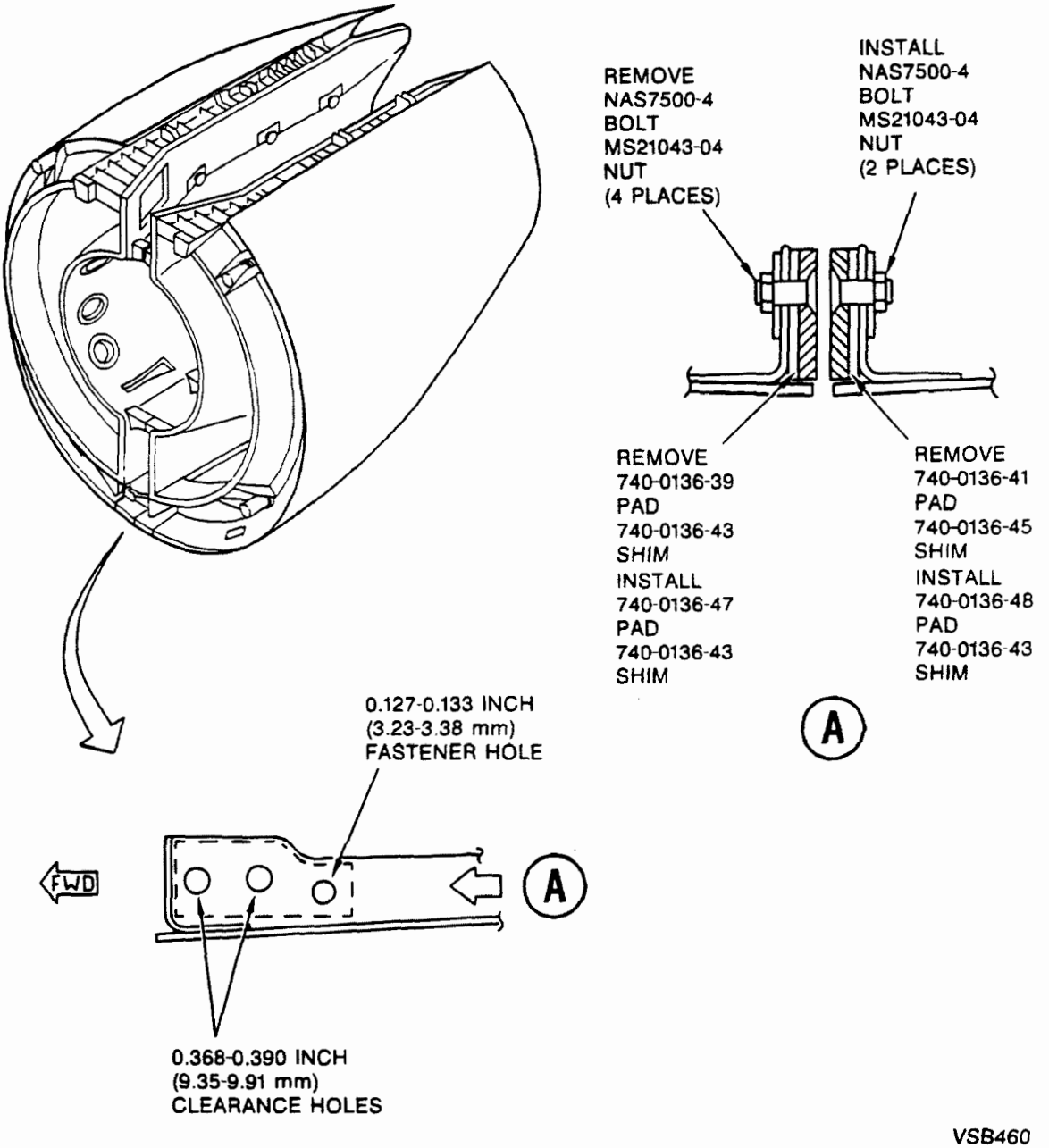
D. Thrust Reverser Guide Pads Installation - Part 3

(1) Hold the 740-0136-47 pad and 740-0136-43 shim together. Make sure the shim is against the flat (not beveled) side of the pad. Backdrill the two 0.368-0.390 (9.35-9.91 mm) holes and one 0.127-0.133 (3.23-3.38 mm) inch hole through the shims. Refer to Figure 2.

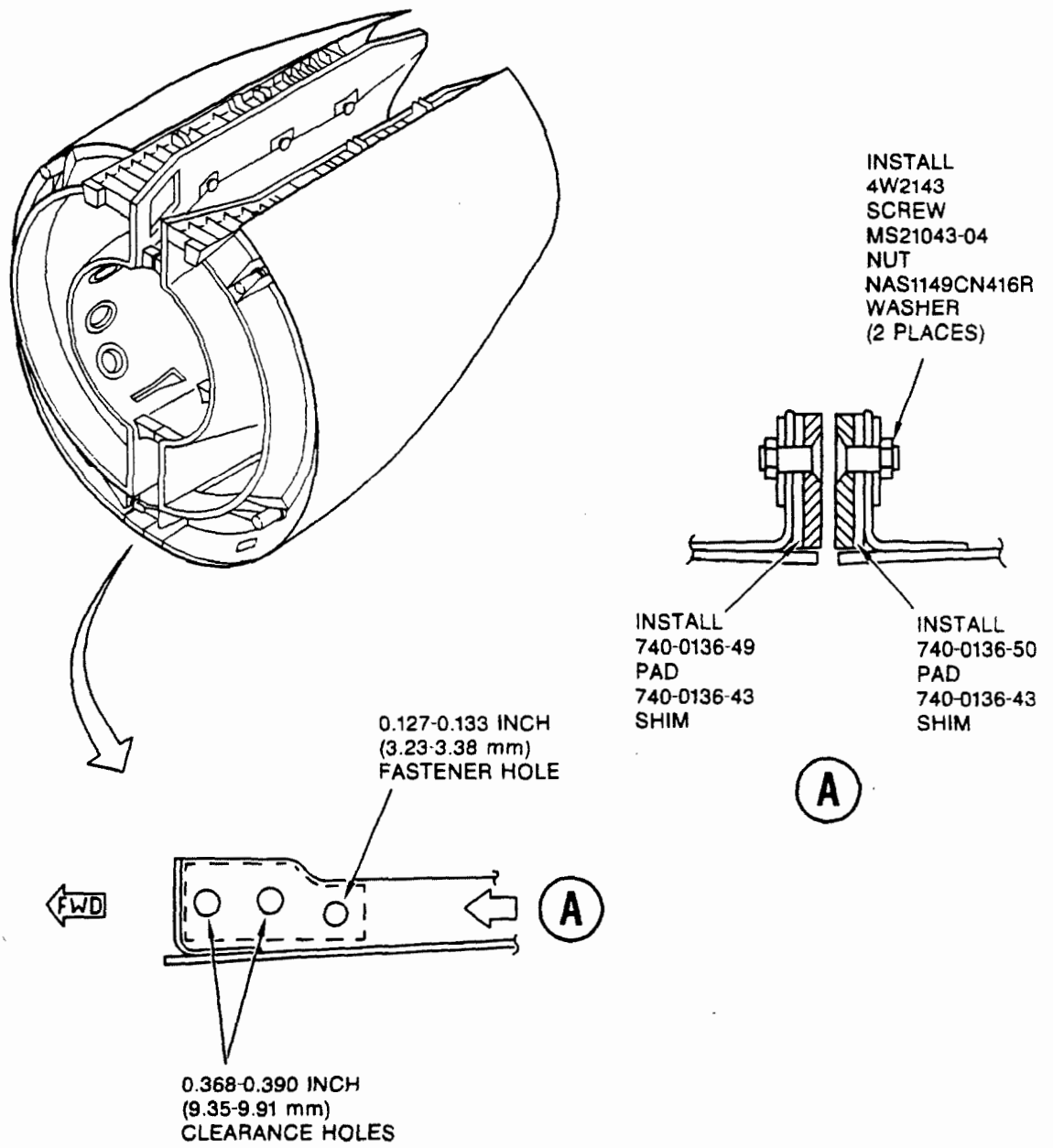
(2) Hold the 740-0136-48 pad and 740-0136-43 shim together. Make sure the shim is against the flat (not beveled) side of the pad. Backdrill the two 0.368-0.390 inch (9.35-9.91 mm) holes and one 0.127-0.133 inch (3.23-3.38 mm) hole through the shims.

(3) Put the pads and shims on the thrust reverser halves and back drill a 0.127-0.133 inch (3.23-3.38 mm) hole through the lower track.

(4) Temporarily install the pads and shims with NAS7500-04 bolts and MS21043-04 nuts. Adjust the clearance between the latch open indicator and the pads when the thrust reverser and engine are installed on the aircraft. Refer to



No. 1 Latch Open Indicator Pad Removal/Installation
(Service Bulletin Part 2)
Figure 2



No. 1 Latch Open Indicator Pad Installation
(Service Bulletin Part 3)
Figure 2

the A320/A321 Aircraft Maintenance Manual, Chapters 78-32-01, -02, -03, and -04.

C. Post-requisite Instructions

None.

D. Recording Instructions

(1) A record of accomplishment is necessary. Write in the applicable records and metal stamp, vibroetch, or electroetch on the thrust reverser data plate that Service Bulletin V2500-NAC-78-0054 has been done. Refer to IAE V2500 Standard Practices/Processes Manual, Chapter 70-09-00.

3. Material Information

Applicability: For each V2500-A1 thrust reverser to incorporate this Bulletin:

A. Kits associated with this Bulletin:

None.

B. Parts affected by this Bulletin:

NEW PART NO (ATA NO)	QTY	EST'D UNIT PRICE	KEYWORD	OLD PART NO (IPC NO)	INSTR/ DISPOS
Part 1					
740-0137-511 (71-00-23)	1		Indicator	740-0137-509 (01-010)	(A)(B)
Part 2					
MS21043-04 (78-32-01)	1		Nut	MS21043-04 (01-140)	(C)
NAS75004-04 (78-32-01)	1		Bolt	NAS75004-04 (01-145)	(A)(B)(C) (S1)
740-0136-43 (78-32-01)	1		Shim	740-0136-43 (01-155)	(C)
740-0136-47 (78-32-01)	1		Pad	740-0136-39 (01-160)	(A)(B)(C) (S1)
MS21043-04 (78-32-02)	1		Nut	MS21043-04 (01-145)	(C)
NAS75004-04 (78-32-02)	1		Bolt	NAS7500-04 (01-150)	(A)(B)(C) (S1)

NEW PART NO (ATA NO)	QTY	EST'D UNIT PRICE	KEYWORD	OLD PART NO (IPC NO)	INSTR/ DISPOS
740-0136-43 (78-32-02)	1		Shim	740-0136-43 (01-160)	(C)
740-0136-47 (78-32-02)	1		Pad	740-0136-39 (01-165)	(A)(B)(C) (S1)
MS21043-04 (78-32-03)	1		Nut	MS21043-04 (01-145)	(C)
NAS75004-04 (78-32-03)	1		Screw	NAS7500-04 (01-150)	(A)(B)(C) (S1)
740-0136-43 (78-32-03)	1		Shim	740-0136-43 (01-160)	(C)
740-0136-48 (78-32-03)	1		Pad	740-0136-41 (01-165)	(A)(B)(C) (S1)
MS21043-04 (78-32-04)	1		Nut	MS21043-04 (01-145)	(C)
NAS75004-04 (78-32-04)	1		Screw	NAS75004-04 (01-150)	(A)(B)(C) (S1)
740-0136-43 (78-32-04)	1		Shim	740-0136-43 (01-160)	(C)
740-0136-48 (78-32-04)	1		Pad	740-0136-41 (01-165)	(A)(B)(C) (S1)
Part 3					
MS21043-04 (78-32-01)	1		Nut	- - - (01-0140)	(C)
NAS75004-04 (78-32-01)	1		Bolt	- - - (01-145)	(C)

NEW PART NO (ATA NO)	QTY	EST'D UNIT PRICE	KEYWORD	OLD PART NO (IPC NO)	INSTR/ DISPOS
740-0136-43 (78-32-01)	1		Shim	- - - (01-155)	(C)
740-0136-47 (78-32-01)	1		Pad	- - - (01-160)	(C)
MS21043-04 (78-32-02)	1		Nut	- - - (01-0145)	(C)
NAS75004-04 (78-32-02)	1		Bolt	- - - (01-150)	(C)
740-0136-43 (78-32-02)	1		Shim	- - - (01-155)	(C)
740-0136-47 (78-32-02)	1		Pad	- - - (01-165)	(C)
MS21043-04 (78-32-03)	1		Nut	- - - (01-145)	(C)
NAS75004-04 (78-32-03)	1		Bolt	- - - (01-150)	(C)
740-0136-43 (78-32-03)	1		Shim	- - - (01-160)	(C)
740-0136-48 (78-32-03)	1		Pad	- - - (01-165)	(C)
MS21043-04 (78-32-04)	1		Nut	- - - (01-145)	(C)
NAS75004-04 (78-32-04)	1		Screw	- - - (01-150)	(C)

NEW PART NO (ATA NO)	QTY	EST'D UNIT PRICE	KEYWORD	OLD PART NO (IPC NO)	INSTR/ DISPOS
740-0136-43 (78-32-04)	1		Shim	- - - (01-160)	(C)
740-0136-48 (78-32-04)	1		Pad	- - - (01-165)	(C)

C. Instruction/Disposition Code Statements

(A) Old part is no longer available.

(B) New part is available.

(C) Part has been moved from ATA section 71-00-23.

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