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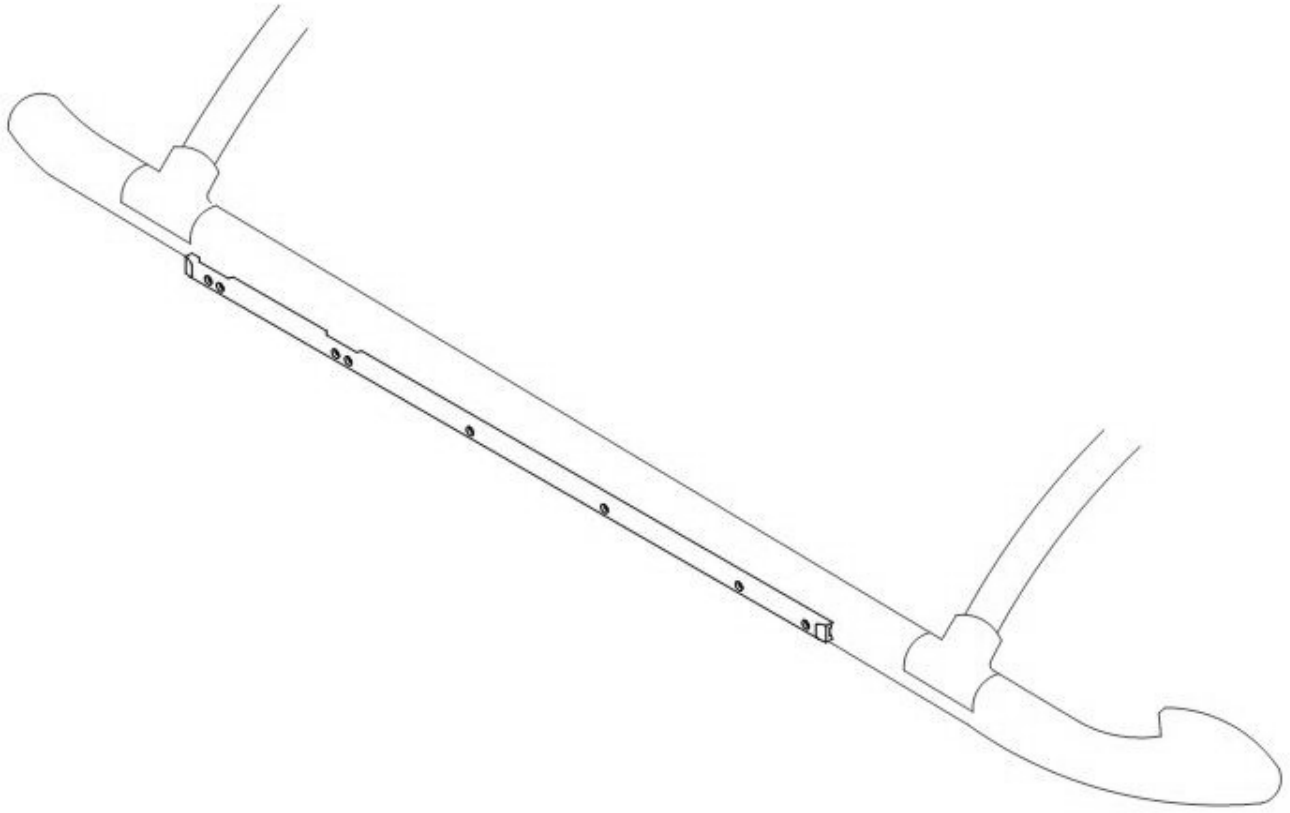

SKID TUBE RUB STRIP
INSTRUCTIONS FOR CONTINUING AIRWORTHINESS

MODELS: BELL 205A, 205A-1, 205B, 212, 214B, 214B-1 412, 412EP, 412CF

Read all of the Instructions for Continuing Airworthiness
thoroughly prior to performing any activities relating to this product

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Table of Contents

Notes

1. If changes to this document are required, Alpine Aerotech LP shall revise all pages and reissue the entire document.

2. Alpine Aerotech LP shall make any subsequent revisions of this document available free of charge upon request. Alpine Aerotech LP also recommends that the end user of this product periodically verify the revision level of this document.

SECTION 1: INTRODUCTION

The following information provides a functional description of the Skid Tube Rub Strip, Detail as defined in Alpine Aerotech LP authority dataset 94301 Rev. 4.

1.1 Scope

The following Instructions for Continued Airworthiness (ICA) satisfy the requirements of 14 CFR 29.1529, and provide the information necessary to complete the on-going maintenance and inspections required for rotorcraft embodying the Skid Tube Rub Strip as described herein.

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1.2 Distribution

Copies of this ICA and amendments shall be distributed to all known purchasers of the Skid Tube Rub Strip. Any changes will be sent to Transport Canada. All changes and revisions will be recorded in the Document Control List.

1.3 Compatibility

Prior to incorporating this modification, the installer shall establish that the inter-relationship between this change and any other modification(s) incorporated will not adversely affect the airworthiness of the helicopter.

This installation can only be applied to helicopters equipped with DART skid tubes, part number D-205-634-041 (skid tube only) or D205-634-011 (skid tube with saddles). Ground handling provisions can be removed if installed or they can be left on with the new revised Skid Tube Rub Strip 94301 Rev. 4.

1.4 General Description

During rappel, cargo deployment, and similar operations, ropes run over the outside edge of the skid tube. Government contracts require an abrasion guard to protect the ropes from damage on the skid tube. A rub strip is installed made of UHMW polyethylene plastic, and is attached with bolts through existing bushings in the skid tube.

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SECTION 2: MAINTENANCE MANUAL SUPPLEMENT

General Notes

1. The following information defines the instructions for continuing airworthiness, repair allowances and airworthiness limitations for the item(s) referenced within this document.

2. Refer to the current revisions of the Bell 205, 212, 214, 412, 412CF, 412EP Maintenance Manuals for Instructions on Maintenance/Inspections with respect to the item(s) referenced within this document.

3. Refer to the Section 3: Removal & Replacement Instructions and Section 4: Illustrated Parts Breakdown for the removal and/or replacement of the item(s) referenced within this section.

4. Scheduled inspection for the item(s) referenced within this document shall be accomplished in accordance with (IAW) the Inspection Procedures specified.

5. Repair allowances for the item(s) referenced within this document shall be accomplished IAW the Repair Procedures specified.

6. Limitations for the item(s) referenced within this document are IAW the Airworthiness Limitations specified.

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2.1 Airworthiness Limitations

The Airworthiness Limitations section is approved by the Minister and specifies maintenance required by any applicable airworthiness or operating rule unless an alternative program has been approved by the Minister.

The Airworthiness Limitations section is FAA approved and specifies maintenance required under Sections 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.

Supplement to applicable Maintenance Manual,
Chapter 4, Airworthiness Limitations Schedule

Notes

1. Refer to the applicable Maintenance Manual, Chapter 4-1, for general information on airworthiness limitations and airworthiness limitation schedules.

2. Item(s) **not** listed in the Scheduled Airworthiness Limitations section within this document have an unlimited airworthiness life.

Scheduled Airworthiness Limitations

1. There are no airworthiness limitations associated with the item(s) referenced within this document.

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2.2 Inspection Procedures

Supplement to applicable Maintenance Manual,
Chapter 5, Inspection and Component Overhaul Schedule

Notes

1. Refer to the applicable Maintenance Manual, Chapters 5-1, for general information on inspections, inspection definitions, inspection intervals, inspection methods and inspection schedules.

2. Detailed Inspections, as indicated within this document, are defined as visual and thorough, searching checks.

3. Perform 100 Hour/12 Month Inspections every 100 hours or every 12 months, whichever occurs first, prior to flight operation. If damage is detected, refer to the Repair Procedures section within this document.

Scheduled Inspections

1. 100 Hour/12-Month Inspections

   Data Reference: Section 3: Removal & Replacement Instructions
   Section 4: Illustrated Parts Breakdown

   I. Perform a Detailed Inspection on all items to ensure proper condition and security.

   II. Perform a Detailed Inspection on all items/materials to ensure proper integrity.

   III. Perform a Detailed Inspection on the Skid Tube Rub Strip, Assy and fasteners to ensure that no parts have come loose.

   IV. Perform a Detailed Inspection on all surfaces to ensure no damage has occurred to the Skid Tube Rub Strip, Detail.

2. Conditional Inspections

   I. Following a hard landing or snag on landing gear during take off or landing, inspect the Skid Tube Rub Strip in accordance with the 100 Hour/12-month inspection above.

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2.3 Repair Procedures

If damage is found when doing regular inspections, repair in accordance with the instructions below.

1. Rub Strip

a) Cracks through the full thickness of the rub strip at attachment holes are not acceptable. Replace rub strip if cracks are found at the attachment holes.

b) Cracks, nicks, gouges or scratches between attachment holes that do not penetrate more than half the thickness of the Rub Strip are acceptable. Replace rub strip if it becomes damaged to a depth more than half the thickness of the Rub Strip.

c) Cracks, nicks, gouges or scratches may not have sharp protruding edges. Blend any cracks, nicks, gouges or scratches to a smooth profile using files or emery paper as required.

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SECTION 3: REMOVAL & REPLACEMENT INSTRUCTIONS

Weight & Balance

Bell 205, 212, 214, 412, all models

Part Number	Description	Weight	Long. Arm	Lat. Arm
94301-01-01	RH OB Rub Strip Installation	4.0*	120.0	57.0 RBL
94301-01-02	RH IB Rub Strip Installation	4.0*	120.0	53.0 RBL
94301-01-03	RH OB+IB Rub Strip Installation	7.3*	120.0	55.0 RBL
94301-02-01	LH OB Rub Strip Installation	4.0*	120.0	57.0 LBL
94301-02-02	LH IB Rub Strip Installation	4.0*	120.0	53.0 LBL
94301-02-03	LH OB+IB Rub Strip Installation	7.3*	120.0	55.0 LBL

Bear Paw Compatibility:

Part Number	Description	Weight	Long. Arm	Lat. Arm
94302-01	Modified Rub Strip Installation	-.30†	154.75	46.4**

* Total increase in weight to aircraft.
** RBL or LBL as applicable
† Reduction in weight from unmodified rub strip

General Notes

1. All Installation Instructions shall be accomplished in accordance with (IAW) standard aircraft practices. Refer to the current revision of the FAA manuals AC 43.13-1B and AC 43.13-2B for details on standard aircraft practices.

2. All Dimensions are in imperial measures (inches/pounds).

3. Refer to Section 2: Maintenance Manual Supplement for instructions on maintenance for the item(s) referenced within this section.

4. Refer to Section 4: Illustrated Parts Breakdown for the part numbers of the item(s) referenced within this section.

Installation Notes

△1 Typical item number for all like items in this view unless otherwise specified.

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3.1 Rub Strip Removal Instructions

1. Gain access to the aircraft and make it ready for maintenance.

2. Remove nuts, bolts, bushings and spacers from both sides of skid tube. Remove Rub Strip(s) from skid tube. Reference Figure 1.

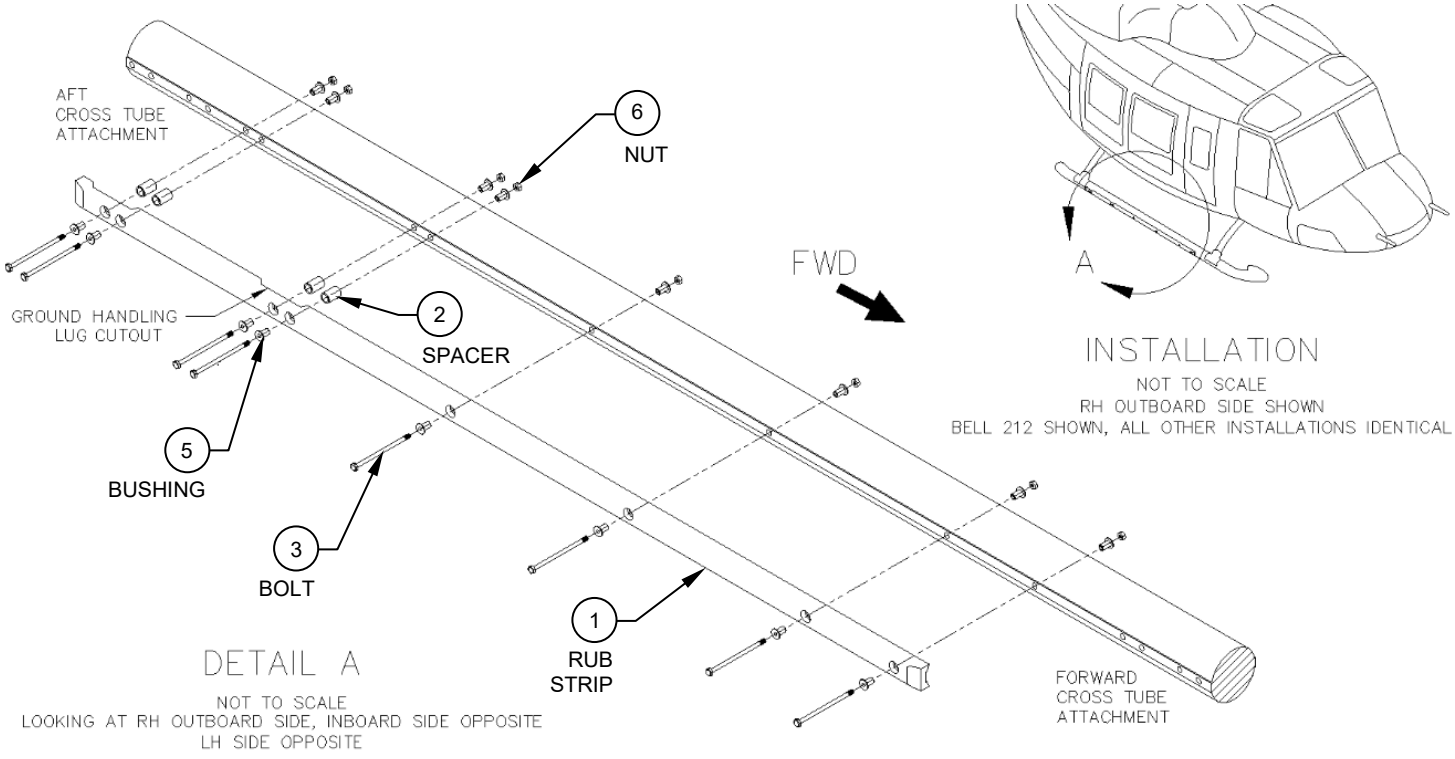

Figure 1
Some Items
Removed for
Clarity

3. Removal complete.

4. Perform a General Inspection of all items to ensure proper removal.

5. Update the aircraft logbook for the removal of the Skid Tube Rub Strip, Detail.

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3.2 Replacement Instructions

1. As there are no special considerations or additional steps to replace the Skid Tub Rub Strip for either inspections, or mission configuration, the replacement of the Skid Tube Rub Strip, Detail can be considered the opposite of removal.

2. Perform General Inspection of all items to ensure proper installation.

3. Update the aircraft logbook for the installation of the Skid Tube Rub Strip, Detail.

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3.3 Rub Strip Installation Instructions

Ground handling provisions can be removed if installed or they can be left on at the operator's discretion.

Inboard or Outboard:

1. Roughly locate Rub Strip (Item 1) on the skid tube. Remove and retain all plugs from skid tube that coordinate with rub strip mounting holes.

2. Install Rub Strip (Item 1), Bushings (Item 5), Spacers (Item 2), Bolts (Items 3 or 4 as applicable) and Nuts (Item 6) as detailed in Figure 1.

NOTE

Substitute Bolt (Item 3) for longer Bolt (Item 4) if rub strips are simultaneously installed on both INBD and OUTBD sides of skid tube (94301-01-03 or 94301-02-03 installations).

3. Ensure all nuts are torqued to 30-40 in-lbs. Installation complete.

4. Update the aircraft logbook for the installation of the Skid Tube Rub Strip, Detail.

3.4 Bear Paw Compatibility

The Rub Strip may be modified for compatibility with Alpine Aerotech bear paws, refer to drawing 94302. Modified Rub Strip part number 94302-01 may be used as a direct replacement for Rub Strip (Item 1) part number 94320-01. Removal and installation instructions are the same.

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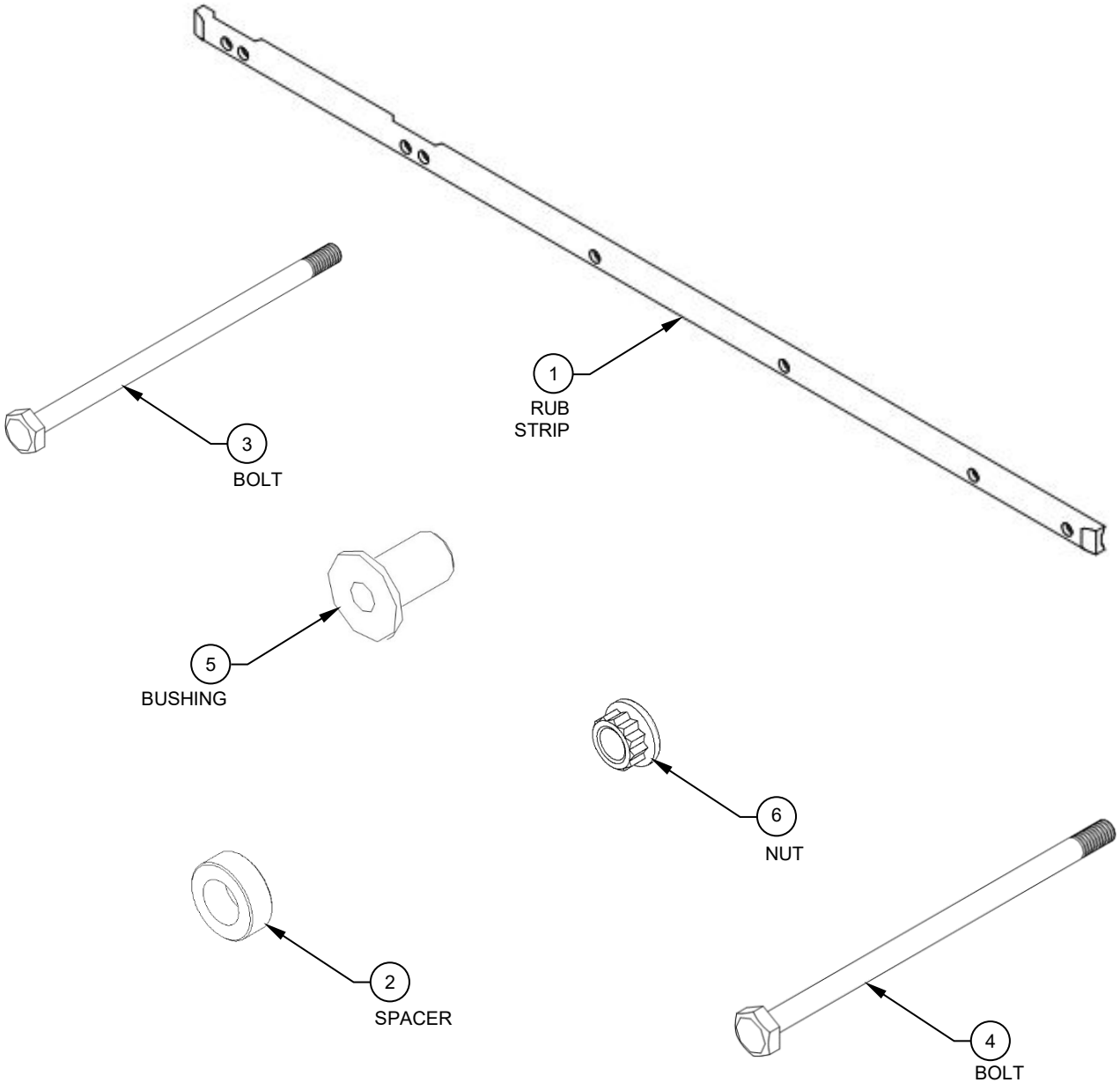
SECTION 4: ILLUSTRATED PARTS BREAKDOWN



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Illustrated Parts Breakdown (Cont.)

ITEM	QTY	NUMBER	DESCRIPTION	MATERIAL	REF STOCK SIZE	SPEC	FINISH	MANUFACTURER	NCAGEC
		* SEE APPLICATION TABLES BELOW FOR QUANTITIES AND APPLICABILITY							
1	*	94320-01	RUB STRIP	SEE MFR	SEE MFR	NA	NA	ALPINE AEROTECH LP	L0171
1	*	94302-01 ‡	MODIFIED RUB STRIP (alternate) ‡	SEE MFR	SEE MFR	NA	NA	ALPINE AEROTECH LP	L0171
2	*	94322-01	SPACER, DETAIL	SEE MFR	SEE MFR	NA	SE MFR	ALPINE AEROTECH LP	L0171
3	*	AN4-47A	BOLT	SEE SPEC	SEE SPEC	NASM3 THRU NASM20	SEE SPEC	SOURCE AS REQUIRED	NA
4	*	AN4-52A	BOLT	SEE SPEC	SEE SPEC	NASM3 THRU NASM20	SEE SPEC	SOURCE AS REQUIRED	NA
5	*	D2570	BUSHING	SEE MFR	SEE MFR	NA	SEE MFR	DART	NA
5	*	94321-01	BUSHING (alternate)	SEE MFR	SEE MFR	NA	SEE MFR	ALPINE AEROTECH LP	L0171
6	*	NAS9926-4L	NUT	SEE SPEC	SEE SPEC	NAS9926	SEE SPEC	SOURCE AS REQUIRED	NA

‡ Ref Section 3.4, Bear Paw Compatibility

TABLE 1

RHS OUTBD INSTALLATION	
KIT P/N: 94301-01-01	
ITEM	QTY
1	1
2	4
3	8
4	-
5	16
6	8

TABLE 2

RHS INBD INSTALLATION	
KIT P/N: 94301-01-02	
ITEM	QTY
1	1
2	4
3	8
4	-
5	16
6	8

TABLE 3

RHS INBD & OUTBD INSTALLATION	
KIT P/N: 94301-01-03	
ITEM	QTY
1	2
2	8
3	-
4	8
5	16
6	8

TABLE 4

LHS OUTBD INSTALLATION	
KIT P/N: 94301-02-01	
ITEM	QTY
1	1
2	4
3	8
4	-
5	16
6	8

TABLE 5

LHS INBD INSTALLATION	
KIT P/N: 94301-02-02	
ITEM	QTY
1	1
2	4
3	8
4	-
5	16
6	8

TABLE 6

LHS INBD & OUTBD INSTALLATION	
KIT P/N: 94301-02-03	
ITEM	QTY
1	2
2	8
3	-
4	8
5	16
6	8