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ALERT SERVICE BULLETIN

ASB No. AA-08055

Revision B

August 12, 2009

SUBJECT:

**High Landing Gear Forward Crosstubes
P/N 212-321-103**

MODELS AFFECTED:

Bell Helicopter Textron model 205A, 205A-1, 205B, 212, 412, 412EP and 412CF and Agusta S.p.A. model AB412, AB412EP helicopters with Aeronautical Accessories, Inc. P/N 212-321-103 High Forward Crosstubes installed in accordance with STC SR01052AT.

Garlick Helicopters, US Helicopters, Inc., Western International Aviation, Inc., Southwest Florida Aviation model UH-1B, UH-1H, SW204, SW205 helicopters with Aeronautical Accessories, Inc. P/N 212-321-103 High Forward Crosstubes installed in accordance with STC SR01924AT.

ECCN
9E991

205A, 205A-1, 205B, 212
412, 412EP, 412CF
AB412, AB412EP
UH-1B, UH-1H,
SW204, SW205

**ALERT SERVICE BULLETIN
HIGH FORWARD CROSSTUBE**

ASB No. AA-08055
Revision B

COMPLIANCE:

Part A: Within the next 50 flight hours, but not later than September 1, 2009, create an Historical Record to determine/track P/N 212-321-103 high forward crosstube takeoff/landing events.

Part B: 7500 or greater takeoff/landings.

High forward crosstubes with historical information establishing a number of takeoff/landings greater than 7500 must accomplish Part B within 25 flight hours or 200 takeoff/landings, whichever comes first, of the receipt of this bulletin.

Part C: Within 200 takeoff/landings after accomplishment of Part B, and every 200 takeoff/landings thereafter.

Part D: Prior to 10,000 takeoff/landings and every 12 months or 2500 takeoff/landings, whichever comes first, thereafter.

High forward crosstubes with historical information establishing a number of takeoff/landings greater than 10,000 must accomplish Part D within 1 month of the receipt of this bulletin.

Part E: Prior to 12,500 takeoff/landings and every 5000 takeoff/landings thereafter.

High forward crosstubes with historical information establishing a number of takeoff/landings greater than 12,500 must accomplish Part E within 3 months of the receipt of this bulletin.

205A, 205A-1, 205B, 212
412, 412EP, 412CF
AB412, AB412EP
UH-1B, UH-1H,
SW204, SW205

**ALERT SERVICE BULLETIN
HIGH FORWARD CROSSTUBE**

ASB No. AA-08055
Revision B

DESCRIPTION:

Aeronautical Accessories, Inc. has conducted a review of the high forward crosstube in response to two reported field failures. Our analysis indicates additional scheduled inspections must be conducted on P/N 212-321-103 high forward crosstubes.

Part A of this bulletin establishes a takeoff/landing history for P/N 212-321-103 high forward crosstubes. This bulletin provides the information necessary to calculate the number of takeoff/landings.

Part B of this bulletin provides instructions to clean and inspect two areas on the bottom of the high forward crosstube. Means to protect this area with primer and a clear coat are also included. P/N 212-321-103, serial number AA-1250 and subsequent, crosstubes are manufactured with the two inspection areas primed and clear-coated.

Part C of this bulletin provides instructions to conduct a recurring visual inspection of the two primed and clear coated areas of the high forward crosstube after the accomplishment of Part B.

Part D of this bulletin provides instructions to conduct a recurring dimensional inspection of the skid gear to identify permanent deformation of the crosstube.

Part E of this bulletin provides instructions to conduct a recurring fluorescent penetrant inspection of the high forward crosstube.

APPROVAL:

The engineering aspects of this bulletin are FAA/DER approved.

MANPOWER:

PART A: Approximately 0.5 hours.

PART B: Approximately 3.0 hours.

PART C: Approximately 0.5 hours

PART D: Approximately 1.0 hours.

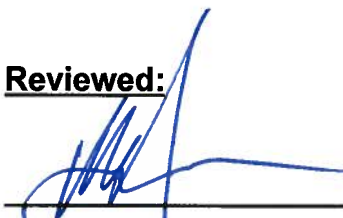
PART E: Approximately 24.0 hours.

Manhours are based on hands-on time and may vary with personnel or facilities available.

LOG OF REVISIONS

Date	Revision	Description	Affected Pages
03/20/09	NR	Original Release	All
07/28/09	A	Reformatted Title Page; added Log of Revisions; corrected document formatting errors; revised Figure 1	All
08/12/09	B	Revised BL 50 to BL 40 in Part B step 2 Revised dimensioning in View D – D, Figure 1	7 14

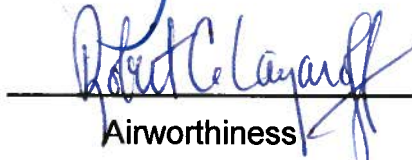
Reviewed:



Engineering

8/12/09

Date



Airworthiness

8-12-09

Date

205A, 205A-1, 205B, 212
412, 412EP, 412CF
AB412, AB412EP
UH-1B, UH-1H,
SW204, SW205

**ALERT SERVICE BULLETIN
HIGH FORWARD CROSSTUBE**

ASB No. AA-08055
Revision B

MATERIAL:

The following Customer supplied materials are required to comply with this bulletin:

**TABLE 1 – PARTS LIST
CUSTOMER SUPPLIED CONSUMABLE MATERIALS**

<u>Qty</u>	<u>Description</u>
AR	MIL-R-81294, Type I or II Chemical Paint Remover
AR	MIL-PRF-85582 Primer (PRC-DeSoto EWDE 072A/B)
AR	MIL-PRF-85285, Type I Gloss Clear Coat Paint (Deft 03X085)
AR	MIL-PRF-87937 Cleaning Compound, Aerospace Equipment

NOTE

The MIL-PRF-85582 primer (PRC-DeSoto EWDE 072A/B) [packaged as a 1-gallon, 1-qt (Parts A&B) kit (P/N EWDE072)] and the MIL-PRF-85285, Type I clear coat paint (Deft 03X085) [packaged as a 3-qt kit (P/N MIL-PRF-85285)] may be procured from a Bell Helicopter Supply Center. The primer and paint may also be procured [packaged in 1-qt, primer and paint, kits (P/N 1272K)] from Aerospace Products, Inc., 6413 Midway Road, Halton City, TX 76117 (817-332-1669).

SPECIAL TOOLS REQUIRED: 10X magnifying glass

WEIGHT AND BALANCE: Not affected

PUBLICATIONS AFFECTED:

Installation Instructions, report number AA-95005

Instructions for Continued Airworthiness, report number AA-01136

ADDITIONAL INFORMATION:

Any questions regarding this bulletin should be addressed to:

AERONAUTICAL ACCESSORIES, INC.

P.O. Box 3689

Bristol, 37625-3689 TN

PRODUCT SUPPORT

1-800-251-7094

techsupport@aero-access.com

ACCOMPLISHMENT INSTRUCTIONS

Upon receipt of this bulletin, determine by part number if affected high forward crosstube is installed. If affected crosstube is installed, perform the actions contained in this bulletin. Verify all high forward crosstubes, P/N 212-321-103, comply with the inspection criteria of Instructions for Continued Airworthiness report number AA-01136 and the applicable model Bell Helicopter Maintenance Manual. Any crosstube failing inspection shall be removed from service and replaced with an airworthy crosstube.

PART A HISTORICAL RECORDS

1. An Historical Record Form is provided (Figure 4) for recording of takeoff/landing operations for high forward crosstubes, P/N 212-321-103, per the compliance section of this bulletin.

NOTE

Helicopters with takeoff/landings that are higher than the average of 10 per hour must substitute the higher value in all estimated calculations.

2. If the actual takeoff/landing information is not available it is permissible to estimate the number. To determine the number of takeoff/landings on the crosstube, multiply the airframe hours by a factor of ten.
3. Place the calculated takeoff/landing information on the Historical Record form and track the applicable takeoff/landing events as per the compliance section of the bulletin.

**PART B INITIAL INSPECTION REQUIREMENT FOR P/N 212-321-103
CROSSTUBES**

NOTE

Crosstube visual inspection is conducted with aircraft at rest on skid landing gear; minimum gross weight at inspection is 9,000 pounds.

CAUTION

Chemical removers shall be used only in areas of adequate ventilation. Suitable goggles or face masks, chemical resistant gloves, boots and clothing shall be worn to avoid contact of chemical removers with eyes, skin and clothing. Chemical removers shall further be handled in accordance with applicable OSHA regulations, state and local safety codes, and company established safety standards and policies.

1. Use MIL-PRF-87937 cleaning compound prepared in accordance with the manufacturer's recommendations to clean all residue and dirt from the cross tube surfaces (left side and right side) shown in Figure 1.

NOTE

P/N 212-321-103 Crosstubes with serial number AA-1250 and subsequent are manufactured with the two inspection areas primed and clear-coated. Steps 2 thru 5, 7 and 8 of **Part B** may be skipped unless opaque paint has been applied to inspection area described below and in Figure 1.

2. Prepare crosstube inspection areas by chemically removing crosstube paint and primer from an area 2.0 ± 0.25 inches wide extending from BL 40 to BL 2.5 at the center-bottom surface of the crosstube on both the left and the right sides of the crosstube (see Figure 1).
3. Apply MIL-R-81294, Type I or II chemical paint remover with a brush and allow it to set from 15 to 45 minutes to soften paint.
4. Using a stiff fiber brush and clean water, rinse paint from crosstube. If required, use abrasive pad (Scotch-Brite, Type A) and MIL-R-81294, Type I or II chemical paint remover to aid in lifting paint. Brush crosstube with abrasive pad in the longitudinal direction, using care so as not to abrade crosstube metal surface.

WARNING

DO NOT SAND CROSSTUBE IN A CIRCUMFERENTIAL DIRECTION.

5. Rinse part clean with clean water and dry thoroughly.

NOTE

Reapplication of chemical paint remover may be required to ensure that paint and primer is completely removed so that the metal surface of the cross tube is clearly visible. If required, repeat steps 2 thru 5.

6. Using at least 10X magnification and a strong light source, visually inspect the stripped, or clear coated, areas for indications of cracking. If cracking is suspected, fluorescent penetrant inspect crosstube per ASTM E1417, Type I, Method B, C, or D, Level 2 in accordance with Bell Helicopter Standard Practices Manual (BHT-ALL-SPM).

WARNING

IF CRACKING IS DISCOVERED, THE CROSSTUBE IS NO LONGER AIRWORTHY AND MUST BE IMMEDIATELY REPLACED. REPLACE CROSSTUBE PER APPLICABLE INSTRUCTIONS IN INSTRUCTIONS FOR CONTINUED AIRWORTHINESS, REPORT NUMBER AA-01136.

7. Following crosstube inspection, coat the stripped crosstube area with MIL-PRF-85582 primer (.0006 – .0009 thick) by spraying in accordance with manufacturer's instructions. Allow primer to cure per manufacturer instructions.

NOTE

The MIL-PRF-85582 primer (PRC-DeSoto EWDE 072A/B) [packaged as a 1-gallon, 1-qt (Parts A&B) kit (P/N EWDE072)] and the MIL-PRF-85285, Type I clear coat paint (Deft 03X085) [packaged as a 3-qt kit (P/N MIL-PRF-85285)] may be procured from a Bell Helicopter Supply Center. The primer and paint may also be procured [packaged in 1-qt, primer and paint, kits (P/N 1272K)] from Aerospace Products, Inc., 6413 Midway Road, Halton City, TX 76117 (817-332-1669).

8. Following primer cure, paint the area with MIL-PRF-85285 polyurethane clear coat paint by spraying in accordance with manufacturer's instructions. Allow paint to cure per manufacturer instructions.
9. Annotate aircraft records that **Part B** of this bulletin has been accomplished.
10. Return aircraft to service.

**PART C SCHEDULED VISUAL INSPECTION REQUIREMENTS FOR
P/N 212-321-103**

NOTE

The following crosstube inspection is to be incorporated into the inspection intervals/methods identified in Instructions for Continued Airworthiness, report number AA-01136.

NOTE

Crosstube visual inspection is conducted with aircraft at rest on skid landing gear; minimum gross weight at inspection is 9,000 pounds.

1. Use MIL-PRF-87937 cleaning compound prepared in accordance with the manufacturer's recommendations to clean all residue and dirt from the cross tube surfaces shown in Figure 1.
2. Using at least 10X magnification and a strong light source, visually inspect the clear coated areas for indications of cracking.
3. If cracking is suspected, remove clear coat and primer per steps 2 thru 5 of **Part B**, and fluorescent penetrant inspect crosstube per ASTM E1417, Type I, Method B, C, or D, Level 2, in accordance with Bell Helicopter Standard Practices Manual (BHT-ALL-SPM). If cracking is not confirmed, reapply clear coat and primer per steps 7 and 8 of **Part B**. If cracking is confirmed, remove crosstube from service.

WARNING

IF CRACKING IS DISCOVERED, THE CROSSTUBE IS NO LONGER AIRWORTHY AND MUST BE IMMEDIATELY REPLACED. REPLACE CROSSTUBE PER APPLICABLE INSTRUCTIONS IN INSTRUCTIONS FOR CONTINUED AIRWORTHINESS, REPORT NUMBER AA-01136.

4. Annotate aircraft records to indicate that **Part C** of this bulletin has been accomplished; and return aircraft to service.

**PART D SCHEDULED LANDING GEAR DEFLECTION INSPECTION
REQUIREMENTS FOR P/N 212-321-103**

NOTE

The following crosstube inspection is to be incorporated into the inspection intervals/methods identified in Instructions for Continued Airworthiness, report number AA-01136.

1. Hoist or jack the helicopter until no weight is on the skid gear.
2. Measure the Crosstube horizontal deflection from the centerline of the helicopter, BL 0.00, to the outside of the skid tubes, as shown in Figure 2.
3. The Crosstube horizontal deflection as measured in step 2 must be within the limits as shown in Figure 2. Crosstubes that measure outside of the limits must be replaced.
4. Inspect landing gear assembly in accordance with Instructions for Continued Airworthiness report number AA-01136 and applicable model BHT maintenance manual damage limits.
5. Repair or replace components that are damaged in excess of repairable limits.
6. Annotate aircraft records to indicate that **Part D** of this bulletin has been accomplished; and return aircraft to service.

PART E COMPONENT OVERHAUL REQUIREMENTS FOR P/N 212-321-103

The Component Overhaul Schedule, Table 2, summarizes the overhaul interval for high forward crosstube components.

NOTE

Neither the assignment of a time period overhaul of a component nor failure to assign a time period for overhaul of a component constitutes a warranty of any kind. The only warranty applicable to the component is that warranty included in the Purchase Agreement for the component.

Time between overhauls and inspection periods is based upon experience, testing, and engineering judgment and is subject to change at the sole discretion of Aeronautical Accessories Inc. or an appropriate government agency.

WARNING

ALL PARTS REMOVED DUE TO REACHING THEIR LIMITS OR AS A RESULT OF AN ACCIDENT/INCIDENT AND DEEMED UNAIRWORTHY, SHALL BE PERMANENTLY MARKED AS SCRAP OR PHYSICALLY DESTROYED TO THE EXTENT THAT THERE IS NO CHANCE OF REPAIR OR INSTALLATION ON ANY HELICOPTER OR COMPONENT.

TABLE 2 – COMPONENT OVERHAUL SCHEDULE

PART NUMBER	NOMENCLATURE	OVERHAUL INTERVAL
212-321-103	Forward Crosstube, High Skid Gear	Prior to 12,500 Takeoff/Landings and every 5000 Takeoff/Landings thereafter

E.1 Disassembly Instructions

1. Remove fairings from Forward Crosstube Assembly, if installed.
2. Hoist or jack the helicopter until no weight is on the skid tubes.
3. Remove forward straps and associated hardware from forward fuselage fittings.
4. Remove aft straps and associated hardware from aft fuselage fittings.
5. Raise helicopter until it is clear of skid landing gear, and remove landing gear.
6. Remove crosstube supports from Forward Crosstube Assembly:
 - a. Remove support U-bolts securing each crosstube support to Forward Crosstube Assembly.

- b. Remove the Supports from the Crosstube Assembly. Use of a heat gun to soften the sealant may facilitate removal.

NOTE

Inspect the inner surface coating material for deterioration in accordance with Instructions for Continued Airworthiness AA-01136. Replace Supports if required.

E.2 Cleaning and Preparation

1. Remove aged sealant by scraping with a sharp piece of plastic. Finish by lightly sanding with 400 grit abrasive cloth or paper in the longitudinal direction of the crosstube.

WARNING

DO NOT SAND CROSSTUBE IN A CIRCUMFERENTIAL DIRECTION.

2. Prepare crosstube by chemically removing crosstube paint and primer to top of saddles. See Figure 3.
 - a. Apply MIL-R-81294, Type I or II chemical paint remover with a brush and allow it to set from 15 to 45 minutes to soften paint.
 - b. Using a stiff fiber brush and clean water, rinse paint from crosstube. If required, use abrasive pad (Scotch-Brite, Type A) and MIL-R-81294, Type I or II chemical paint remover to aid in lifting paint. Brush crosstube with abrasive pad in the longitudinal direction, using care so as not to abrade crosstube metal surface.

WARNING

DO NOT SAND CROSSTUBE IN A CIRCUMFERENTIAL DIRECTION.

- c. Rinse part clean with clean water and dry thoroughly. Reapplication of chemical paint remover may be required to ensure that paint and primer is completely removed so that the (bare) metal surface of the cross tube is clearly visible.
3. When parts are not to be processed immediately after cleaning, apply corrosion preventive oil, to all parts to protect against corrosion. Wrap parts in barrier material and secure with tape.

E.3 Inspection

1. Inspect crosstube using fluorescent penetrant method per ASTM E1417, Type I, Method B, C, or D, Level 2, in accordance with Bell Helicopter Standard Practices Manual (BHT-ALL-SPM). Refer to BHT-ALL-SPM for fluorescent penetrant inspection procedures.
2. Damage limits are specified in Instructions for Continued Airworthiness, report number AA-01136 and the applicable model Bell Helicopter Maintenance Manual.

E.4 Repair

1. Repair damage within repairable limits in accordance with Instructions for Continued Airworthiness report number AA-01136.
2. Refinish crosstube by applying MIL-PRF-85582 primer and MIL-PRF-85285 paint (or equivalent) per manufacturer instructions to the stripped areas. The areas to be inspected per **Part B** should be masked to omit MIL-PRF-85285 paint as shown in Figure 1. Paint inspection areas with MIL-PRF-85285 Type I Gloss Clear coat as described in **Part B** of this bulletin.

E.5 Assembly Instructions

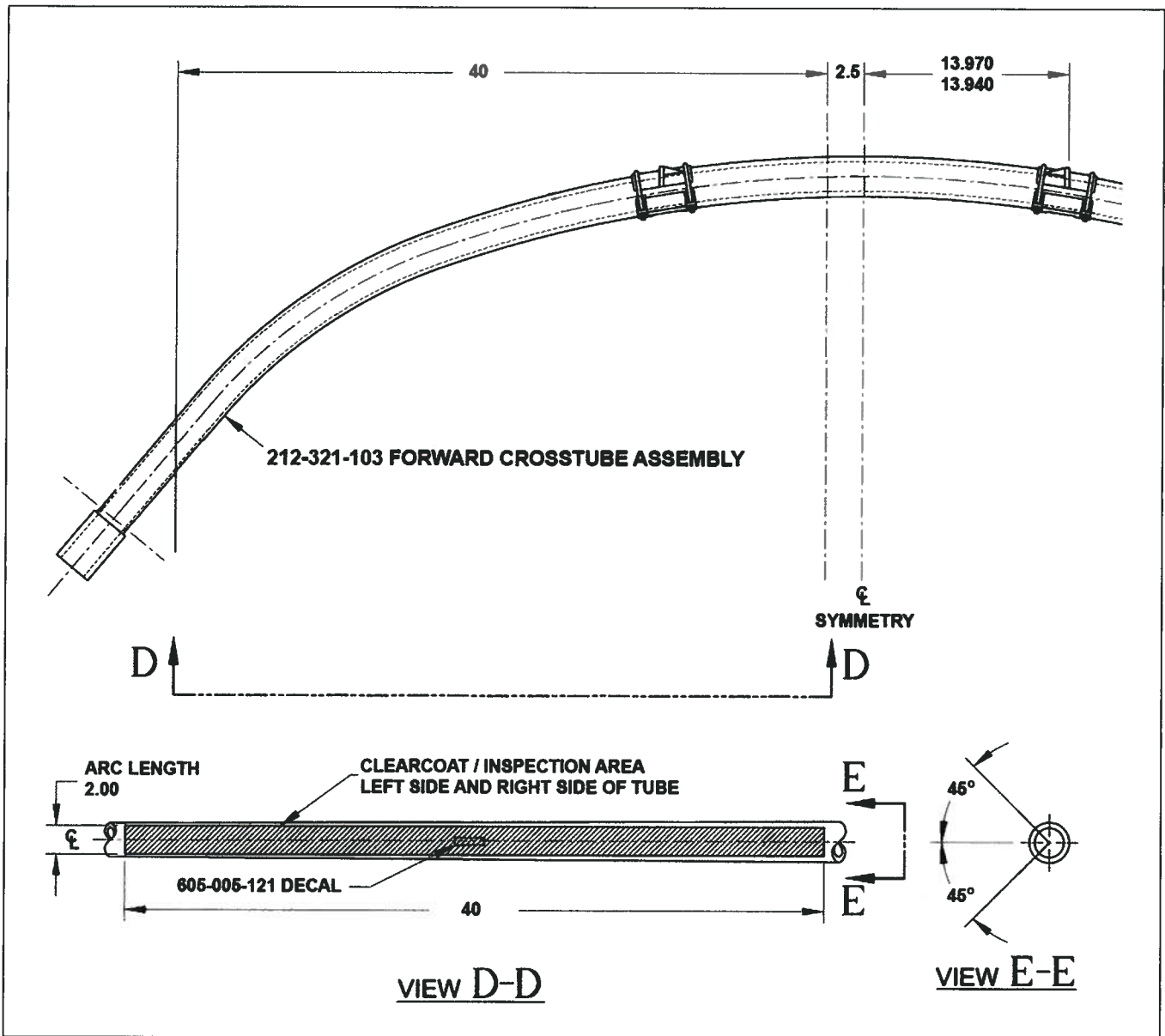
1. Assemble both Crosstube Clamp Assemblies in accordance with Instructions for Continued Airworthiness report number AA-01136.
2. Install Crosstube Assembly to aircraft in accordance with Instructions for Continued Airworthiness report number AA-01136.
3. Annotate aircraft records to indicate that **Part E** of this bulletin has been accomplished; and return aircraft to service.

PART F TOWING AIRCRAFT

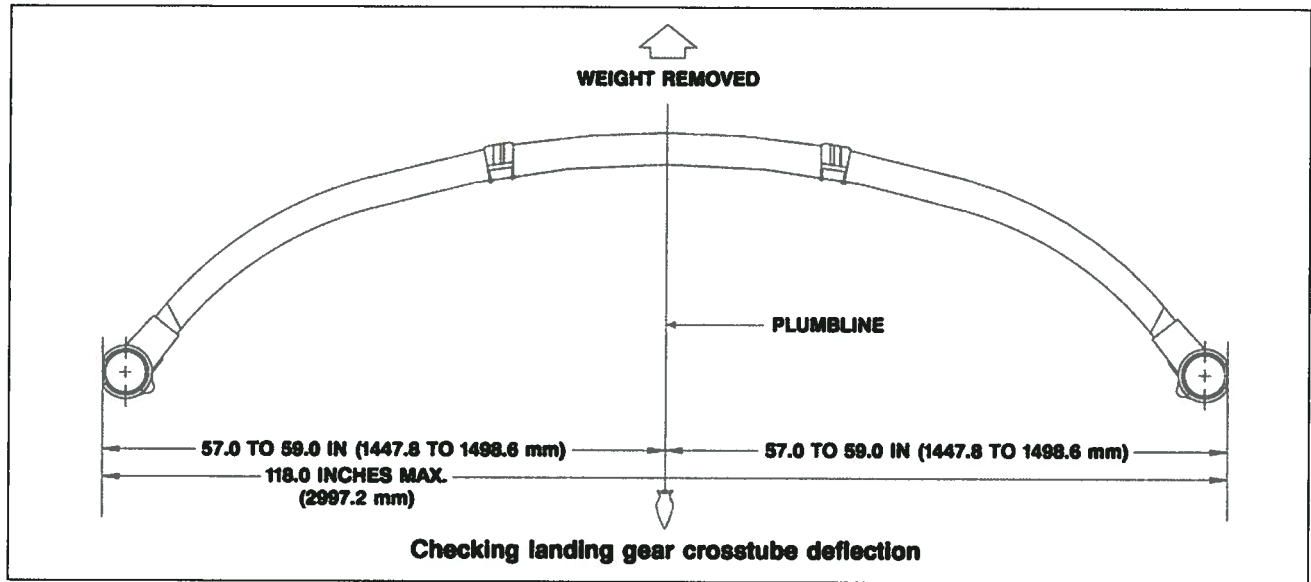
Helicopter towing operations must be conducted in accordance with applicable model Bell Helicopter Maintenance Manual. Manufacturer towing requirements are applicable to any aircraft being towed with weight on gear. This includes towing aircraft with ground handling wheels installed and aircraft resting on moveable platforms.

CAUTION

Failure to follow manufacturer towing instructions may result in crosstube damage and/or failure.



**FIGURE 1 – CLEAR COAT AND INSPECTION AREA
(NOT TO SCALE)**



Part Number	Forward Crosstube (High) Model Effectivity	MIN		MAX	
		in.	mm	in.	mm
212-321-103	205A, 205A-1, 205B, 212, 412, 412EP, 412CF, AB412, AB412EP, UH-1B, UH-1H, SW204, SW205	57.00	1448	59.00	1499

FIGURE 2 – HIGH LANDING GEAR DEFLECTION LIMITS

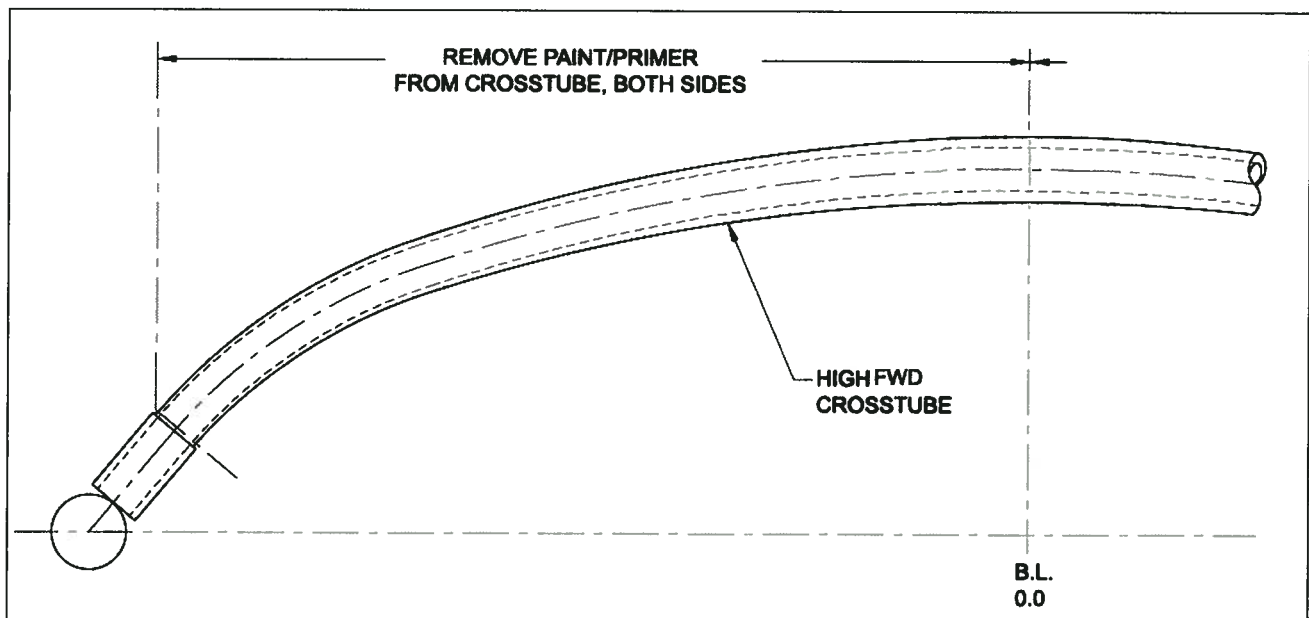


FIGURE 3 – PAINT REMOVAL AREA

