

DOCUMENT 407MM-001

Bell Cargo Rack

MAINTENANCE MANUAL

FOR

**BELL 407 AND 206L SERIES
HELICOPTERS**

STC NO: SR LA

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**TYLER CAMERA SYSTEMS
MAINTENANCE MANUAL
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1.0 GENERAL

1.1 INTRODUCTION

This Maintenance Manual is for the installation of the Tyler Camera Systems Cargo Rack for the Bell 407 and 206L Series Helicopters. The Tyler Cargo Rack consists of a welded steel structure with aluminum brackets. Figure 3.1 contains a photograph of the Tyler Cargo Rack with the components of the assembly called out.

The Cargo Rack attaches to the 407 and 206L Series Helicopters using the aluminum clamps on the fore and aft landing gear cross tube members at four locations. The method by which the clamps grip the landing gear is shown in Figure 3.1 (pg 4).

1.2 PURPOSE

The purpose of this document is to provide maintenance instructions to inspect the Tyler Camera Systems Bell 407 & 206L series Cargo Rack.

1.3 SCOPE

The scope of this document is limited to information, procedures, requirements and limitations for this Supplemental Type Certificate. When a requirement specified in the appendix to the regulations is not applicable to this Supplemental Type Certificate, the requirement will not be included in the Maintenance Manual.

1.4 APPLICABILITY

This Maintenance Manual is applicable to the Tyler Camera Systems Cargo Rack installed on the Bell 407 and 206L Series Helicopters.

1.5 UNITS OF MEASUREMENT

Units are in United States Standard Measurement for each measurement tolerance or torque value unless otherwise specified.

1.6 DOCUMENT CHANGE CONTROL

Changes to this document will be distributed to registered owners of the Tyler Camera Systems Cargo Rack within 10 days after the revision is approved. Changes to this document will be indicated by a revision number in the footer, vertical lines adjacent to the change, and in the Record of Revisions

2.0 AIRWORTHINESS LIMITATIONS

No airworthiness limitations associated with this type design change

3.0 INSPECTION REQUIREMENTS

Figure 3.1
Tyler Cargo Rack Installation on the Bell 407 and 206L Series Helicopters



- ① Rack Frame
- ② Forward Clamp Assembly
- ③ Rear Clamp Assembly
- ④ Foot Rest
- ⑤ Seat Belt (not shown)

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3.1 SCHEDULED INSPECTIONS

The scheduled inspections required by this Maintenance Manual are contained on the following checklists. This checklist, when completed, is to become a permanent part of the Tyler Cargo Racks records.

NOTE: There are no field repairs or overhaul allowed for the Tyler Cargo Rack.

If the mount fails the following inspections, the mount is to be removed from the helicopter and returned to Tyler Camera Systems.

3.1.1 100 HOUR INSPECTION INTERVALS

The 100 hour time in service periodic inspections consist of visually inspecting the critical areas of the Tyler Cargo Rack installation.

Due to the simplicity of the mount structure, all scheduled 100 hour inspections consist of the same items since the mount is inspected while installed on the helicopter.

The inspections per table 3.1.1 are required while the Tyler Cargo Rack is installed on the helicopter at the time in service interval as specified. The inspection is to be performed by maintenance personnel.

TABLE 3.1.1 100 HOUR TIME IN SERVICE INSPECTIONS

Refer to Item numbers in Table 3.1.1 and Figure 3.1 (p. 5)

INSP.	DESCRIPTION	INSPECTION	Maintenance Personnel Initial
1	Rack Frame	(1) Visually inspect welds for cracks. (2) Visually inspect tubes for dents, deep scratches, or cracks	
2	Forward Clamp Assembly	(1) Check for security of clamp on landing gear. (2) Visually inspect all components of clamp for dents, deep scratches, or cracks	
3	Aft Clamp Assembly	(1) Check for security and tightness of clamp on landing gear (2) Visually inspect all components of clamp for dents, deep scratches, or cracks,	
4	Foot Rest	(1) Visually inspect tube for dents, deep scratches, or cracks.	
5	Seat Belt	(1) Visually inspect all belts for tears in the belt material	

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3.2 1000 HOUR TIME IN SERVICE INSPECTION INTERVAL

The 1000 hour time in service inspection is to be performed as follows.
The rack must be removed from the helicopter and disassembled per Section 5.0.

TABLE 3.2.1 1000 HOUR TIME IN SERVICE INSPECTIONS

INSP.	DESCRIPTION	INSPECTION	MAINTENANCE PERSONNEL INITIAL
1	Rack Frame	(1) Visually inspect welds for cracks. (2) Visually inspect tubes for dents, deep scratches, or cracks.	
2	Forward Clamp Assembly	(1) Visually inspect all components of clamp for dents, deep scratches, or cracks.	
3	Aft Clamp Assembly	(1) Visually inspect all components of clamp for dents, deep scratches, or cracks	
4	Foot Rest	(1) Visually inspect tubes for dents, deep scratches, or cracks.	
5	Seat Belt	(1) Visually inspect all belts for tears in the belt material.	

3.3 INSPECTION LIMITS

The Tyler Cargo Rack is to be removed from service and returned to Tyler Camera Systems if the following inspection limits are exceeded.

Cracks:	Any indication
Bolt Hole elongation:	Any indication
Dents, scratches, or nicks:	Greater than 0.010 inches
Tube Dents:	Greater than 0.020 inches
Tube scratches	Greater than 0.010 inches
Seat Belt tears:	Any indication

4.0 INSTALLATION AND ASSEMBLY

4.1 INSTALLATION

Fig. 4.1.1



- 1. Open Skid Gear Clamps (both assemblies).

Fig 4.1.2



Fig 4.1.3



- 2. Turn rack over (top up) and position it over the skid gear. Place Skid Gear Clamps onto skid support tube.

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4.1 INSTALLATION (CONTINUED)

3. The clamp lock-arm (with strap) should be fully open. Swing rear of clamp up (Fig. 4.1.4), then place the barrel (on the threaded shaft) over clamp hook. Close and lock clamps.

Fig. 4.1.4



Fig 4.1.5



4. **IMPORTANT** - After adjusting and locking clamps, make sure all Pip-Pins are inserted (Fig. 4.1.5)

END OF INSTALLATION

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5.0 REMOVAL, DISASSEMBLY, REASSEMBLY AND INSTALLATION

5.1 REMOVAL AND DISASSEMBLY

Fig. 5.1.1



1. Remove Pip-Pins.

Fig. 5.1.2



2. Pull strap and loosen Clamp Lock Bracket.

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5.1 REMOVAL AND DISASSEMBLY (CONTINUED)

Fig. 5.1.3



3. Lift Rack off the Skid Support Tube (Fig 5.1.3)

END OF DISASSEMBLY

6.0 WEIGHT AND BALANCE

The weight and center of gravity location for the Tyler Cargo Rack is:

LEFT SIDE INSTALLATION

Wt = 66 lbs. (29.9 kg)
Station: 110 inches (279.4 cm)
BL: -42.0 inches (-106.7 cm)

RIGHT SIDE INSTALLATION

Wt = 66 lbs. (29.9 kg)
Station: 110 inches (279.4 cm)
BL: +42.0 inches (+106.7 cm)