



Nose Mounts

Astar / Twinstar

Instructions for Continued Airworthiness

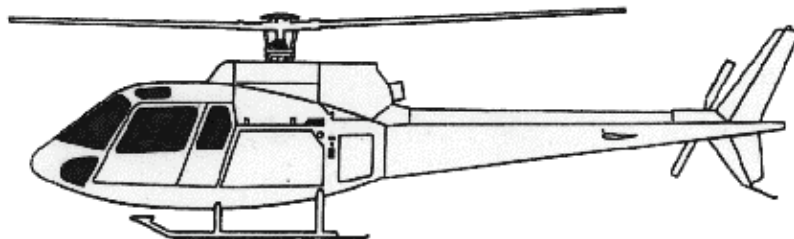


Nose Mount • Super Nose Mount • Multicam Nose Mount
National Grid Nose Mount • N.S.W.C. Nose Mount

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RECORD OF REVISIONS

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1	A	8-25-2008	Removal of Universal Ball Mount
2			
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7			

LIST OF PAGES

SECTION	TITLE	PAGE
	Record of Revisions	2
	List of Pages	3
1.0	General	4
1.1	Introduction	4
1.2	Purpose	4
1.3	Scope	4
1.4	Application	4
1.5	Units of Measure	4
1.6	Document Change Control	4
2.0	Airworthiness Limitations	4
3.0	Scheduled Inspections	5
3.1	100 Hour Inspection Intervals	5
3.1.1 Table	100 Hour Inspection Intervals	5
3.2	1000 Hour Inspection Intervals	6
3.2.1 Table	1000 Hour Inspection Intervals	6
3.3	Inspection Limits	7
4.0	Installation and Removal	7
4.1	Reference	7
5.0	Weight and Balance	7
5.1	Nose Mount / AS-350 Sample	8
5.2	Nose Mount / AS-355 Sample	9
5.3	Super - Nose Mount / AS-350 Sample	10
5.4	Super - Nose Mount / AS-355 Sample	11
5.5	Multicam - Nose Mount / AS-350 Sample	12
5.6	Multicam - Nose Mount / AS-355 Sample	13
5.7	National Grid - Nose Mount / AS-355 Sample	16
5.8	National Grid - Nose Mount / AS-355 Sample	17
5.9	N.S.W.C. - Nose Mount / AS-355 Sample	18
5.10	N.S.W.C. - Nose Mount / AS-355 Sample	19

1.0 GENERAL

1.1 INTRODUCTION

This Maintenance Manual is for the installation of the Tyler Camera Systems A-Star Nose Mounts for the Eurocopter 350 and 355 series Helicopter. The Tyler A-Star Nose Mount consists of a welded steel structure with aluminum brackets. Figure 3.0 contains photographs of the Tyler A-Star Nose Mounts & main jack points

The Nose Mount frame (figure 3.0) attaches to the 350 and 355 Series Helicopters using the Aluminum clamps on the vibration dampers and main jack point locations. The method by which the clamps and attachment function is shown in figure 3.0

1.2 PURPOSE

The purpose of this document is to provide maintenance instructions to inspect the Tyler A-Star Nose Mounts.

1.3 SCOPE

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

1.4 APPLICABILITY

This Maintenance Manual is applicable to the Tyler A-Star Nose Mounts installed on the Eurocopter 350 and 355 Series Helicopter.

1.5 UNITS OF MEASUREMENT

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

1.6 DOCUMENT CHANGE CONTROL

Changes to this document will be distributed to the Tyler Camera Systems dealers or Owners 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

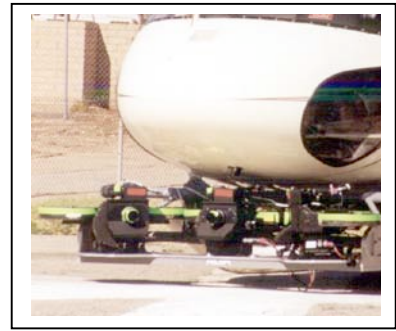
No airworthiness limitations associated with this type design change.



Nose Mount



Super Nose Mount



Multicam Nose Mount



National Grid Mount



N.S.W.C. Mount

3.0 SCHEDULED INSPECTIONS

The scheduled inspections required by this Maintenance Manual are contained on the following checklists. The checklists, when completed, are to become a permanent part of the Tyler A-Star Nose Mount records.

NOTE: There are no field repairs or overhaul allowed for the Tyler A-Star Nose Mounts.

If the mounts fail the following inspections, the mounts are to be removed from the helicopter and returned to Tyler Camera Systems.

3.1 100 HOUR INSPECTION INTERVALS

The 100 hour time in service periodic inspections consist of visually inspecting the critical areas of the Tyler A-Star Nose Mount 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 A-Star Nose Mount is installed on the helicopter at the time in service interval as specified. The inspection is to be performed by maintenance personnel.

3.1.1 TABLE 100 HOUR TIME IN SERVICE INSPECTIONS

Refer to item numbers in table 3.0.1- 2 - 3 - 4 - 5 AND FIGURE 3.0.1

	Description	Inspection	Maintenance Personnel Initial
1.	Camera Mount Framework	(1) Visually inspect welds for cracks. (2) Visually inspect tubes for dents, deep scratches, cracks.	_____
2.	Forward Tang Assembly	(1) Check for security of clamp on landing gear. (2) Visually inspect all components of clamps for deep scratches, cracks.	_____
3.	Aft Clamp Assembly	(1) Check for security of clamp on jack point. (2) Visually inspect all components of clamps for dents, deep Scratches, cracks.	_____
4.	Belly-pan	(1) Check for any de-lamination around belly pan holes.	_____

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 ?

TABLE 3.2.1 1000 HOUR TIME IN SERVICE INSPECTIONS

	Description	Inspection	Maintenance Personnel Initial
1.	Camera Mount Framework	(1) Visually inspect welds for cracks. (2) Visually inspect tubes for dents, deep scratches, cracks.	_____
2.	Forward Tang Assembly	(1) Check for security of clamp on landing gear. (2) Visually inspect all components of clamps for deep scratches, cracks.	_____
3.	Aft Clamp Assembly	(1) Check for security of clamp on jack point. (2) Visually inspect all components of clamps for dents, deep Scratches, cracks.	_____
4.	Belly-pan	(1) Check for any de-lamination around belly pan holes.	_____

3.3 INSPECTION LIMITS

The A-Star Nose Mount 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

4.0 INSTALLATION & REMOVAL

4.1 For instructions on installation and removal of the following camera mounts, refer to the *Tyler* Installation Manual “**Nose Mounts for Astar / Twinstar**” (Report # TMX 3-98).

- Nose Mount
- Super Nose Mount
- Multicam Nose Mount
- National Grid Nose Mount
- N.S.W.C. Nose Mount

5.0 WEIGHT & BALANCE

5.1 Nose Mount / AS-350 Sample

WEIGHT & BALANCE DATA AND EQUIPMENT LIST		STD. NOSE 350				
Weight x Arm = Moment						
6/1/1998		AIRCRAFT MODEL	REGISTRATION	AIRCRAFT S/N	PILOT	
SAMPLE SHEET		AS 350 BA	N31621	2130	N/A	
		LONGITUDINAL			LATERAL	
ITEM:		WEIGHT	ARM	MOMENT	ARM	MOMENT
AIRCRAFT EMPTY WEIGHT & C.G.		2885	139.07	401217	0.489	1410.765
PILOT (A+) FORWARD RIGHT		200	61.02	12204	14.17	2834
CO-PILOT (A-) FORWARD LEFT		200	61.02	12204	-14.17	-2834
PAX (B+) INSIDE RIGHT REAR		0	99.99	0	8.15	0
PAX (B-) INSIDE LEFT REAR		0	99.99	0	-8.15	0
PAX (C+) OUTSIDE RIGHT REAR		0	99.99	0	24.45	0
PAX (C-) OUTSIDE LEFT REAR		0	99.99	0	-24.45	0
STARBOARD BAGGAGE (R) MAX 220 LBS		0	125.98	0	21.89	0
PORT BAGGAGE (L) MAX 264 LBS		0	125.98	0	-21.89	0
REAR BAGGAGE MAX 170 LBS		0	181.1	0	0	0
FUEL (143 GALS MAX) X 6.8 GALS:	100	680	136.81	93030.8	0	0
SUBTOTAL:		3965	130.81	518655.8	0.36	1410.77
CAMERA EQUIPMENT	39#	39	10.5	409.5	0	0
FRONT FRAMEWORK	19#	19	26	494	0	0
FRAMEWORK (FACE PLATE)	19#	19	41.5	788.5	0	0
FRAMEWORK TRAILING ARMS (X) 2	19#	38	64	2432	0	0
TAIL CONE 20# MAX		0	398	0	0	0
TAIL BOOM 20# MAX.		0	0	0	0	0
LAP CONTROLLER		10	61.02	610.2	-14.17	-141.7
		0	0	0	0	0
EQUIPMENT SUBTOTAL:		125		610.2		-141.7
TOTAL AIRCRAFT WEIGHT:		4090	126.96	519265.95	0.31	1269.07
AIRCRAFT MAX GROSS WEIGHT:		4630		LATERAL C.G. LIMITS:		
NEW USEFUL LOAD:		540				
NEW CENTER OF GRAVITY (LONGITUDINAL)		126.96		L/H LIMIT: 7.08 IN. (0.18M) MINUS		
NEW CENTER OF GRAVITY (LATERAL)		0.31		R/H LIMIT: 5.51 IN. (0.14M) PLUS		
Note:		LONGITUDINAL C.G. LIMITS:				
STANDARD NOSE MOUNT SYSTEM w/Camera:						
		FORWARD LIMIT:				
Maximum Camera Wt. = 39lbs.		124.8 IN. (3.17M) @ 4410 LBS. (2000 KG)				
		125.3 IN. (3.185M) @ 4630 LBS. (2100 KG)				
		REARWARD LIMIT:				
		135.5 IN. (3.445M) @ 4360 LBS. (2100KG)				
		137.4 IN. (3.49M) @ 3858 LBS. (1750 KG)				
		137.8 IN. (3.50M) @ 2646 LBS. (1200 KG)				

5.3 SuperNose Mount / AS-350 Sample

WEIGHT & BALANCE DATA AND EQUIPMENT LIST		SUPER NOSE 350				
Weight x Arm = Moment						
5/29/1998		AIRCRAFT MODEL	REGISTRATION	AIRCRAFT S/N	PILOT	
SAMPLE SHEET		AS 350 BA	N31621	2130	N/A	
		LONGITUDINAL			LATERAL	
ITEM:		WEIGHT	ARM	MOMENT	ARM	MOMENT
AIRCRAFT EMPTY WEIGHT & C.G.		2885	139.07	401216.95	0.489	1410.77
PILOT (A+) FORWARD RIGHT		200	61.02	12204	14.17	2834
CO-PILOT (A-) FORWARD LEFT		100	61.02	6102	-14.17	-1417
PAX (B+) INSIDE RIGHT REAR		0	99.99	0	8.15	0
PAX (B-) INSIDE LEFT REAR		0	99.99	0	-8.15	0
PAX (C+) OUTSIDE RIGHT REAR		100	99.99	9999	24.45	2445
PAX (C-) OUTSIDE LEFT REAR		170	99.99	16998.3	-24.45	-4156.5
STARBOARD BAGGAGE (R) MAX 220 LBS		0	125.98	0	21.89	0
PORT BAGGAGE (L) MAX 264 LBS		0	125.98	0	-21.89	0
REAR BAGGAGE MAX 170 LBS		0	181.1	0	0	0
FUEL (143 GALS MAX) X 6.8 GALS:	110	748	136.81	102333.88	0	0
SUBTOTAL:		4203	130.5862788	548854.13	0.2655877	1116.27
CAMERA SYSTEM 120 max	0	120	7.5	900	0	0
CAMERA FRONT FRAME		98	17	1666	0	0
FRAMEWORK (FACE PLATE)		19	41.5	788.5	0	0
FRAMEWORK TRAILING ARMS (X) 2	19#	38	64	2432	0	0
FRAMEWORK (COUNTERWEIGHT ARMS 4EA.)	51#	51	231	11781	0	0
COUNTER WEIGHT BOX EMPTY	38#	38	266	10108	0	0
COUNTER WEIGHTS	20EA	40	266	10640	0	0
COUNTER WEIGHT TAIL CONE 20# MAX.		0	398	0	0	0
COUNTER WEIGHT TAIL BOOM 20# MAX.		0	390	0	0	0
LAP CONTROLLER		10	61.02	610.2	-14.17	-141.7
EQUIPMENT SUBTOTAL:		414		38925.7		-141.7
TOTAL AIRCRAFT WEIGHT:		4617	127.3077388	587779.83	0.2110819	974.565
AIRCRAFT MAX GROSS WEIGHT:		4630			LATERAL C.G. LIMITS:	
NEW USEFUL LOAD:		13				
NEW CENTER OF GRAVITY (LONGITUDINAL)		127.3077388			L/H LIMIT: 7.08 IN. (0.18M) MINUS	
NEW CENTER OF GRAVITY (LATERAL)		0.211081871			R/H LIMIT: 5.51 IN. (0.14M) PLUS	
		LONGITUDINAL C.G. LIMITS:				
		FORWARD LIMIT:				
		124.8 IN. (3.17M) @ 4410 LBS. (2000 KG)				
		125.3 IN. (3.185M) @ 4630 LBS. (2100 KG)				
		REARWARD LIMIT:				
		135.5 IN. (3.445M) @ 4360 LBS. (2100KG)				
		137.4 IN. (3.49M) @ 3858 LBS. (1750 KG)				
		137.8 IN. (3.50M) @ 2646 LBS. (1200 KG)				

5.5 Multicam Nose Mount / AS-350 Sample

WEIGHT & BALANCE DATA AND EQUIPMENT LIST		Multicam 350				
Weight x Arm = Moment						
5/29/1998		AIRCRAFT MODEL	REGISTRATION	AIRCRAFT S/N	PILOT	
SAMPLE SHEET		AS 350 BA	N31621	2130	N/A	
		LONGITUDINAL			LATERAL	
ITEM:		WEIGHT	ARM	MOMENT	ARM	MOMENT
AIRCRAFT EMPTY WEIGHT & C.G.		2885	139.1	401303.50	0.489	1410.8
PILOT (A+) FORWARD RIGHT		200	61.02	12204	14.17	2834
CO-PILOT (A-) FORWARD LEFT		200	61.02	12204	-14.17	-2834
PAX (B+) INSIDE RIGHT REAR		0	99.99	0	8.15	0
PAX (B-) INSIDE LEFT REAR		0	99.99	0	-8.15	0
PAX (C+) OUTSIDE RIGHT REAR		0	99.99	0	24.45	0
PAX (C-) OUTSIDE LEFT REAR		0	99.99	0	-24.45	0
STARBOARD BAGGAGE (R) MAX 220 LBS		0	125.98	0	21.89	0
PORT BAGGAGE (L) MAX 264 LBS		0	125.98	0	-21.89	0
REAR BAGGAGE MAX 170 LBS		0	181.1	0	0	0
FUEL (143 GALS MAX) X 6.8 GALS:	100	680	136.81	93030.8	0	0
SUBTOTAL:		3965	130.83034	518742.30	0.3558	1410.8
Camera Package not to exceed 140#						
CAMERA SYSTEM CENTER	0	35	23.25	813.75	0	0
CAMERA RIGHT SIDE	0	35	23.25	813.75	8	280
CAMERA LEFT SIDE	0	35	23.25	813.75	-8	-280
CAMERA FRONT FRAME	64#	64	29	1856	0	0
FRAMEWORK (FACE PLATE)	19#	19	41.5	788.5	0	0
FRAMEWORK TRAILING ARMS (X) 2	19#	38	64	2432	0	0
FRAMEWORK COUNTERWEIGHT ARMS	51#	97	231	22407	0	0
COUNTER WEIGHT BOX EMPTY	38#	38	266	10108	0	0
COUNTER WEIGHTS	20EA	40	266	10640	0	0
COUNTER WEIGHT TAIL CONE 20# MAX.		0	398	0	0	0
COUNTER WEIGHT TAIL BOOM 20# MAX.		0	390	0	0	0
LAP CONTROLLER		10	61.02	610.2	-14.17	-141.7
EQUIPMENT SUBTOTAL:		411		51282.95		-141.7
TOTAL AIRCRAFT WEIGHT:		4376	130.2617	570025.25	0.29	1269.1
AIRCRAFT MAX GROSS WEIGHT:		4630		LATERAL C.G. LIMITS:		
NEW USEFUL LOAD:		254				
NEW CENTER OF GRAVITY (LONGITUDINAL)		130.26		L/H LIMIT: 7.08 IN. (0.18M) MINUS		
NEW CENTER OF GRAVITY (LATERAL)		0.29		R/H LIMIT: 5.51 IN. (0.14M) PLUS		
		LONGITUDINAL C.G. LIMITS:				
		FORWARD LIMIT:				
		124.8 IN. (3.17M) @ 4410 LBS. (2000 KG)				
		125.3 IN. (3.185M) @ 4630 LBS. (2100 KG)				
		REARWARD LIMIT:				
		135.5 IN. (3.445M) @ 4360 LBS. (2100KG)				
		137.4 IN. (3.49M) @ 3858 LBS. (1750 KG)				
		137.8 IN. (3.50M) @ 2646 LBS. (1200 KG)				

5.9 NSWC Nose Mount / AS-350 Sample

WEIGHT & BALANCE DATA AND EQUIPMENT LIST						
Weight x Arm = Moment						
NSWC 350						
5/29/1998						
SAMPLE SHEET						
AIRCRAFT MODEL REGISTRATION AIRCRAFT S/N PILOT						
AS 350 BA N31621 2130 N/A						
LONGITUDINAL LATERAL						
ITEM:	WEIGHT	ARM	MOMENT	ARM	MOMENT	
AIRCRAFT EMPTY WEIGHT & C.G.	2885	139.07	401216.95	0.489	1410.765	
PILOT (A+) FORWARD RIGHT	200	61.02	12204	14.17	2834	
ELECT BOX (A-) FORWARD LEFT	100	61.02	6102	-14.17	-1417	
PAX (B+) INSIDE RIGHT REAR	0	99.99	0	8.15	0	
PAX (B-) INSIDE LEFT REAR	0	99.99	0	-8.15	0	
ELECT BOX (C+) OUTSIDE RIGHT REAR	100	99.99	9999	24.45	2445	
OPERATOR (C-) OUTSIDE LEFT REAR	200	99.99	19998	-24.45	-4890	
STARBOARD BAGGAGE (R) MAX 220 LBS	0	125.98	0	21.89	0	
PORT BAGGAGE (L) MAX 264 LBS	0	125.98	0	-21.89	0	
REAR BAGGAGE MAX 170 LBS	0	181.1	0	0	0	
FUEL (143 GALS MAX) X 6.8 GALS:	110	748	136.81	102333.88	0	0
SUBTOTAL:						
	4233	130.3694378	551853.83	0.09042	382.765	
NSWC GIMBAL	55#	55	-8.25	448.8	0	-1556.5
NSWC FRONT FRAME		60	17.9	1074	0	0
FRAMEWORK (FACE PLATE)		19	41.5	788.5	0	0
FRAMEWORK TRAILING ARMS (X) 2	19#	38	64	2432	0	0
FRAMEWORK COUNTERWEIGHT ARMS	51#	51	231	11781	0	0
COUNTER WEIGHT BOX EMPTY	38#	38	266	10108	0	0
COUNTER WEIGHTS EA	20#	40	266	10640	0	0
COUNTER WEIGHT TAIL CONE 20# MAX.		0	398	0	0	0
COUNTER WEIGHT TAIL BOOM 20# MAX.		0	390	0	0	0
LAP CONTROLLER		10	61.02	610.2	-14.17	-141.7
EQUIPMENT SUBTOTAL:						
	311		37882.5			-1698.2
TOTAL AIRCRAFT WEIGHT:						
	4544	129.7835233	589736.33	-0.28949		-1315.44
AIRCRAFT MAX GROSS WEIGHT:						
	4630			LATERAL C.G. LIMITS:		
NEW USEFUL LOAD:						
	86					
NEW CENTER OF GRAVITY (LONGITUDINAL)						
	129.7835233			L/H LIMIT: 7.08 IN. (0.18M) MINUS		
NEW CENTER OF GRAVITY (LATERAL)						
	-0.289488336			R/H LIMIT: 5.51 IN. (0.14M) PLUS		
LONGITUDINAL C.G. LIMITS:						
FORWARD LIMIT:						
	124.8 IN. (3.17M) @ 4410 LBS. (2000 KG)					
	125.3 IN. (3.185M) @ 4630 LBS. (2100 KG)					
REARWARD LIMIT:						
	135.5 IN. (3.445M) @ 4360 LBS. (2100KG)					
	137.4 IN. (3.49M) @ 3858 LBS. (1750 KG)					
	137.8 IN. (3.50M) @ 2646 LBS. (1200 KG)					

