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FASTENER SCHEDULE

REF	SIZE	GRADE	QTY	LOCATION	TORQUE	THREADLOCK
F1	M6 × 40 cap	A2-70	3	Cell collimation	HAND + spring	NONE — must adjust
F2	M4 × 12 cap	A2-70	3	Cell axial slots	2.0 N·m	medium (243)
F3	M4 × 10 button	A2-70	4	Fan to cell	1.2 N·m	low (222)
F4	M3 × 16 cap	A2-70	3	Mirror clips	FINGER ONLY	NONE — see note
F5	M10 × 60	A2-70	1	Secondary stalk	4.0 N·m	medium (243)
F6	M3 × 20 grub	A2-70	3	Secondary tilt	HAND + spring	NONE — must adjust
F7	M3 × 8 cap	A2-70	8	Vane to tube	1.0 N·m	low (222)
F8	M5 × 16 cap	A2-70	4	Focuser to board	5.0 N·m	medium (243)
F9	M5 × 20 cap	A2-70	4	Board to tube	5.0 N·m	medium (243)
F10	M6 × 25 cap	A2-70	8	Rings to dovetail	8.0 N·m	medium (243)

FASTENER NOTES

1.

F4 MIRROR CLIPS: FINGER TIGHT THEN BACK OFF UNTIL THE CLIP STANDS 0.30 PROUD OF THE GLASS. THE GLASS MUST RATTLE FAINTLY. A TORQUE FIGURE IS DELIBERATELY NOT GIVEN — ANY TORQUE AT ALL MEANS THE MIRROR IS PINCHED.

2.

F1 AND F6 ARE ADJUSTERS, NOT FIXINGS. THREADLOCK WOULD DEFEAT THEM. USE COMPRESSION SPRINGS UNDER F1 TO HOLD COLLIMATION AGAINST VIBRATION.

3.

ALL STAINLESS INTO ALUMINIUM: USE ANTI-SEIZE. GALVANIC PAIR IN A DEWY ENVIRONMENT WILL SEIZE WITHIN A SEASON IN CANBERRA.

4.

TORQUES ARE FOR DRY A2 STAINLESS INTO ALUMINIUM. REDUCE 25 % IF LUBRICATED.

REVISION HISTORY

REV	DESCRIPTION	DATE
A	First issue for manufacture	2026-08-16

FLOWMATIC · ASTROGRAPH PROGRAMME

200 mm f/4 NEWTONIAN ASTROGRAPH · CANBERRA ACT 35.28°S

FASTENER SCHEDULE AND TORQUE

DRAWING NUMBER FM-AST-P05	REVISION A	SHEET 5 OF 6
SCALE NTS	MATERIAL —	MASS —
PROJECTION FIRST ANGLE (ISO 128)	FINISH —	UNITS MILLIMETRES
GENERAL TOL ISO 2768-mK UNLESS STATED · DO NOT SCALE DRAWN NaXief's Claude CHECKED SELF-CHECK + VISUAL JUDGE, SEE SHEET 6 QA GATES DATE 2026-08-16 STATUS ISSUED FOR MANUFACTURE		