

No 22 Group



AIR STAFF ORDERS

Edition 1 AL 15

Dated 04 Dec 23

HEADQUARTERS No 22 GROUP AIR STAFF ORDERS

Organisation	Addressee	Organisation	Addressee
EXTERNAL		INTERNAL	
HQ 1 Gp	PSO / AOC	HQ 22 Gp	PSO / AOC
HQ 2 GP	PSO / AOC		HFT
HQ 11 GP	PSO / AOC		DGT
Navy Command	FGen NAvn FT Cdr		AHFT
JHC	MA to Comd		FT COS
RAF Cosford	Stn Cdr		FT ASM
RAF Cranwell	Comdt RAFC		FT FJ SO1
	Comdt RAFAC		FT FW SO1
	Comdt CFS (SO (ODH)) (For CFS units)		FT RWAS SO1
	Comdt 3 FTS (For EFT and MEPT units)		
	Comdt 6FTS (For AEF and UAS units)		
	OC Ops Wg		
	OC 57 Sqn		
	Dep OC 57 Sqn		
	OC 45 Sqn		
	SO(DDH)		
	OC AFG		
	Ascent Operations		
RAF Barkston Heath	Ascent Operations		
RAF Halton	Stn Cdr		
	OC Ops Wg		
RAF Shawbury	Comdt 1 FTS		
	CO 2 MAW		
	CO 9 Regt AAC		
	OC Ops Wg		
RAF St Athan	Stn Cdr		
RAF Syerston	Comdt 2 FTS		

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	OC Ops Wg		
	OC VGS (through OC Ops Wg)		
RAF Valley	Comdt 4 FTS		
	OC IV(AC) Sqn		
	OC XXV(F) Sqn		
	OC 72 Sqn		
	OC Ops Wg		
	OC STANEVAL		
	OC 202 Sqn		
	Mil CAM / CAE DDH		
RAF Wittering	Stn Cdr		
	OC Ops Wg		
Various	DRS, Chairmen RAF Air Sports to distribute		
	RAFGSA		
	RAF SA		
	RAFMFA		
	RAFMAA		
	RAFHPA		

GASO Number	GASO Description	GASO	RA	GASO	FO
		Distribution List Contents Foreword Amendment Record Request for Change Form (RFC) Common Abbreviations			
1380	Performance Based Navigation	1380(1): Performance Based Navigation	X	X	X
1410	Occurrence Reporting	1410(1): Occurrence Reporting	X	X	
1440	Air Safety Training	1440(1): Air Safety Training 1440(T1): Air Safety Awards	X	X X	X X
2101	Aircrew Qualifications	2101(1): Entitlement to Conduct Flying Duties 2101(2): Certificate of Qualification on Type	X X	X X	X X
2102	Aircrew Competence in Role	2102(1): Certificate of Competence 2102(2): Periodicity of Assessment of Competency 2102(T1): Refresher Flying for Aircrew Under Training 2102(T2) Incidental Allowance for Aircrew Under Training	X X	X X X X	X X X X
2103	Currency and Continuation Training	2103(1): Currency Requirements 2103(2): Continuation Training	X X	X X	X X
2115	Aircraft Commanders	2115(1): Responsibilities of an Aircraft Commander 2115(2): Authority of an Aircraft Commander	X X	X X	
2120	Pilots' Instrument Rating Scheme	2120(1): Instrument Rating Requirements 2120(2): The Instrument Rating Test (IRT)	X X	X X	X
2125	Aircrew Instructor Training	2125(1): Aircrew Instructor Training	X	X	X
2130	Survival Equipment, Drills and Training	2130(1): Survival Training and Currency 2130(2): Wearing and Carriage of Aircrew Equipment Assemblies (AEA) and Survival Equipment (SE)	X X	X X	X X

GASO Number	GASO Description	GASO	RA	GASO	FO
		2130(3): Restraint Systems 2130(4): Aircraft Survival and Rescue Equipment 2130(5): Ejection Seat Anthropometrics 2130(6): Fire, Smoke and Fumes Training 2130(T1): Ejection Seat – Safety Procedures	X X X	X X X X	X X X
<u>2135</u>	Aircrew Medical Requirements	2135(1): Aircrew Medical Employment Standard 2135(2): Fitness-to-Fly 2135(3): Pilot Operations – Upper age limit 2135(4): Flying After an Accident or In-Flight Medical Incident 2135(5): Initial & Refresher Aviation Medical Training 2135(6): High G Training 2135(7): Temporary Medical Restrictions to Flying Duties	X X X X X X X	X X X X X X X	X X X X X
<u>2201</u>	Carriage of Maintenance Documents in UK Military Aircraft	2201(1): Documents to be Carried	X	X	X
<u>2210</u>	Preventative Maintenance and Continuous Charge Operations	2210(1): Preventative Maintenance Limitations 2210(2): Continuous Charge Operations	X X	X X	X X
<u>2211</u>	Authorization of Aircrew to Carry Out Maintenance Tasks	2211(1): Authorization of Aircrew to Carry Out Flight Servicing 2211(2): Authorization of Aircrew to Carry Out Aircraft Maintenance Work 2211(3): In-Flight Corrective Maintenance 2211(4): Training of Aircrew to Enter a Cockpit Containing Aircraft Assisted Escape Systems (AAES)	X X X X	X X X X	X X X X
<u>2220</u>	Maintenance Test Flights	2220(1): The Flight Test Schedule (FTS) 2220(2): Aircrew Authorisation for MTF / PTF	X X	X X	X X

GASO Number	GASO Description	GASO	RA	GASO	FO
2301	Responsibility for an Air System	2301(1): Transfer of Custody of Air Systems 2301(2): Flying Requirements Post Maintenance 2301(3): Aircraft Acceptance Checks 2301(4): Exceeding Parameters and Hazardous Incidents	X X X X	X X X X	
2302	Responsibilities in the Air	2302(1): Responsibilities in the Air	X	X	X
2305	Supervision of Flying	2305(1): Supervision of Flying 2305(2): Withdrawn incorporated into GASO 2309 2305(3): Withdrawn incorporated into GASO 2309 2305(4): Aircrew Briefing 2305(5): Withdrawn incorporated into GASO 2309 2305(6): Withdrawn incorporated into GASO 2309 2305(T1): Supervision of Cadets 2305(T2): Alcohol, Drugs and Flying – Guidance Only.	X X X X	X X X X	X
2306	Authorization of Flights	2306(1): Authorization of Flights	X	X	X
2307	Rules of the Air	2307(1): Rules of the Air	X	X	X

GASO Number	GASO Description	GASO	RA	GASO	FO		
2309	Flight Procedures	2309(1): Aircraft Limitations	X	X	X		
		2309(2): Smoking in or near Aircraft	X	X			
		2309(3): Taxiing of Aircraft					
		2309(4): Simulated and Practice Emergencies	X	X			
		2309(5): Handing over Control of Aircraft with Dual Flying Controls	X	X	X		
		2309(6): Oxygen and Cabin Pressure		X	X		
		2309(7): Altitude Limitations		X			
		2309(8): Night Vision Device Flying					
		2309(9): Carriage of Loose Articles and Stores		X	X		
		2309(10): Dropping or Jettisoning of Articles	X	X	X		
		2309(11): Fuel Jettison	X				
		2309(12): Flying in the Company of Civil Aircraft	X	X			
		2309(13): Aerobatics and Operational Training Manoeuvres	X	X	X		
		2309(14): Refuelling Aircraft – Engines and / or Rotors Running	X	X	X		
		2309(15): Air to Air Refuelling	X	X	X		
		2309(16): Electromagnetic and Cosmic Radiation		X			
		2309(17): Landing Away from Active Airfields	X	X	X		
		2309(18): Embarked Aviation Operations		X	X		
		2309(19): Air Exercise Planning and Airspace Integration		X	X		
		2309(T1): Military Use of Civil Airfields					
		2309(T2): Security					
		2309(T3): Night Flying					
		2309(T4): Glider, Prefect and Tutor Flying Over Open Water					
		2309(T5): Circuit Flying					
		2309(T6): Volcanic Ash Cloud					
		2309(T7): Flight Data Recorders					
		2310	Role Specific Fixed Wing	2310(1): Supersonic Flight	X	X	X
				2310(2): Withdrawn			
				2310(3): Spinning and Stalling	X	X	X
				2310(4): Asymmetric Power	X	X	X
2310(5): Single-Engine Aircraft Engine Shutdowns	X			X	X		
2310(T1): Minimum Landing Distance				X	X		
				X			

GASO Number	GASO Description	GASO	RA	GASO	FO
		2310(T2): Gliding Military Air Ground Communication Service (MAGCS)			
2315	Role Specific Rotary Wing	2315(1): Refuelling Helicopters Engines and Rotors Running – Withdrawn 2315(2): Helicopter Landing Sites (HLSs) - Withdrawn 2315(3): Use of Dispatcher Harness - Withdrawn 2315(4): Simulated Emergencies - Withdrawn 2315(5): Electromagnetic Radiation Hazards - Withdrawn 2315(6): Helicopter Ground Runs 2315(7): Oxygen and Cabin Pressure - Withdrawn 2315(T1): Training and Transit Flights Over Water 2315(T2): Landing on Roads 2315(T3): Search and Rescue 2315(T4): Flying Competitions	X	X X X X X	X X X X
2325	Air Weapons Carriage, Training and Demonstrations	2325(1): Carriage of Air Weapons 2325(2): Air Weapons Training and Demonstrations	X X	X X	X X
2327	Air Combat Manoeuvring, Basic Fighter Manoeuvres and Basic Helicopter Manoeuvres	2327(1): Air Combat Manoeuvring, Basic Fighter Manoeuvres and Basic Helicopter Manoeuvres 2327(T1): Target Aircraft Training	X	X X	X X
2330	Low Flying	2330(1): Low Flying	X	X	X
2335	Flying Displays and Flypasts	Definitions Relevant to this GASO 2335(1): Flying Display Organisation and Management 2335(2): Display Flying Role Demonstrations and Flypasts (Mil) 2335(3): Separation Distances, Minima and Restrictions Annex A: Specimen Graduation Event Order Annex B: Approval Process for Participation in Display Flying, Role	X X X X X X	X X X X X X	X X X

GASO Number	GASO Description	GASO	RA	GASO	FO
		Demonstrations and Flypasts and Static Displays Annex C: Specimen Flypast/Role Demo/Static Display Participation Order Annex D: Display Pilot Directive Annex E: Display Flying Currency Appendix 1 to Annex D: Brief to Display Organiser Appendix 2 to Annex D: Certificate from the Display Organiser Appendix 3 to Annex D: Accident / Incident Telephone Report Appendix 4 to Annex D: Singleton Display Flying – Pre-Sortie Briefing Aide Memoire Appendix 5 to Annex D: Display Sequence Data Sheet		X X X X X X	
2340	Supernumerary crew, supernumerary support crew and passengers	Definitions 2340(1): Supernumerary Crew 2340(2): Supernumerary support crew 2340(3): Passengers - General 2340(4): Routine Air Transport Passengers 2340(5): Tactical Passengers 2340(6): Familiarization Flight Passengers 2340(7): Air Experience Flight Passengers 2340(8): Carriage of VIP Passengers 2340(9): Carriage of Cadets as Passengers 2340(10): Carriage of Working Dogs Annex A: Approval Guide for Passenger Flying – Aide Mémoire Annex B: Passenger Flight Approval Form Annex C: Passenger Flight Standing Approval Form	X X X X X X X X X X X	X X X X X X X X X	 X X X X X X X
2345	Aircrew Fatigue Management	2345(1): Management of Aircrew Fatigue 2345(2): Use of Temazepam in the Management of Work and Rest in Aircrew.	X X	X X	X
2350	Aircraft Emergencies	2350(1): Aircraft Emergencies 2350(T1): Minimum Fuel	X	X X	

GASO Number	GASO Description	GASO	RA	GASO	FO
		2350(T2): Actual Forced Landing Off Base		X	X
2355	Static Line and Freefall Parachuting, Fast Roping and Abseiling	2355(1): Approval for Static Line and Freefall Parachuting, Fast Roping and Abseiling 2355(2): Procedures for Static Line and Freefall Parachuting 2355(3): Procedures for Fast Roping and Abseiling	X X X	X X X	 X
2360	Portable Electronic Devices	2360(1): Portable Electronic Devices	X	X	X
2370	Test and Evaluation	2370(1): Test and Evaluation Governance 2370(2): Test and Evaluation Personnel 2370(3): Test and Evaluation Activity	X	X X X	 X
2375	Qualification, Approval and Use of Flight Simulator Training Devices	2375(1): Qualification of Flight Simulator Training Devices 2375(2) Approval of Flight Simulator Training Devices 2375(3): Use of Flight Simulator Training Devices 2375(T1): Use of Other Training Devices	X X	X X X	 X X
2380	Performance based navigation	2380(1): Air system and pilot requirements 2380(2) Performance based navigation flight procedures	X X	X X	X X
2401	Document and Records	2401(1): Aircraft Document Set (ADS) 2401(2): Use and Carriage of Documents in the Aircraft 2401(3): Flying Logbooks and Recording of Flying Times 2401(4): Aviation Duty Holder/Accountable Manager (Military Flying) Orders 2401(5): Authorization Records 2401(6): Meteorological Records 2401(7): Training Records 2401(T1): Operations Record Book (F540) 2401(T2): Statistical Returns	X X X X X X X X	X X X X X X X	 X X X X X X

GASO Number	GASO Description	GASO	RA	GASO	FO
2415	Civil Use of Government Aerodromes	2415(1): Civil Use of Government Aerodromes 2415(T1): Recreational Flying 2415(T2): Recreational Gliding 2415(T3): Glider Towing	X X X X	X X X X	

RAF AIR SPORTS ANNEXES
RAF Sport Aircraft (RAFSA)
RAF Gliding & Soaring (JSAT and RAFGSA)
RAF Hang Gliding and Paragliding (JSAT and RAFHPA)
RAF Sports Parachuting (JSAT and RAFSPA)
RAF Microlight Flying Association (RAFMFA)
RAF Model Aircraft Association (RAFMAA)

Foreword

1. The Military Aviation Authority (MAA) is the single independent regulatory body for all Defence aviation activity. As the 'Regulator', Director MAA (D MAA) is accountable to SofS, through the Defence Safety Authority (DSA) for providing a regulatory framework, given effect by a certification, approvals and inspection process for the acquisition, operation and airworthiness of Air Systems within the Defence aviation environment. Through Director General (DG) DSA, D MAA is responsible for providing assurance to SofS that the appropriate standards of military Air Safety are maintained. DG DSA is the Convening Authority for Service Inquiries into aircraft occurrences.
2. D MAA is the owner of the MAA Regulatory Publications (MRP) and has the authority to issue them on behalf of the SofS. There are 3 MRP documentation levels: Overarching Documents; Regulatory Articles (RA); and MAA Manuals.
3. Unless specifically excluded, the FLY 2000 series of Regulatory Articles apply to flying operations by any personnel, be they civilian or military operating or flying on a civil or military registered aircraft, under MAA regulations. Where operations are taking part under a Military Flight Test Permit (MFTP) or Certificate of Usage (CofU), reference must also be made to the Manual of Flying Orders for Contractors.
4. Operating Duty Holder (ODH), AOC 22 Gp issues Air Staff Orders (GASOs) for all flying activity undertaken by 22 Gp units and platforms. GASOs are the subordinate documents to the MAA MRP and provide additional Orders and guidance. This issue represents a major structural change and re-write of GASOs with the devolution of some type-specific Orders to DDHs.
5. Aviation Delivery Duty Holder (DDH) Orders. Comdt FTS and Heads of Establishment (HoE) have the responsibility to ensure that any risks to life (RtL) associated with any activity within their AoR are at least As Low As Reasonably Practicable (ALARP) and Tolerable; to that end, they should produce their own local Flying Orders, which should never be less stringent than the orders on which they are based, and ensure "best practice" is achieved. An auditable change process for local Flying Orders should be administered and should be easily accessible.
6. Personal responsibilities. The Orders contained within GASOs do not absolve any person from using their best judgement to ensure the safety of Air Systems and personnel. Where safety or operational imperatives demand, the Orders may be deviated from provided that the persons involved can subsequently justify their actions as reasonable and necessary. Where authorised individuals issue their own amplifying orders or instructions, they must be based on the Regulations and they cannot be less restrictive.
7. Military and civil registered aircraft. Civil registered aircraft are regulated by ANO. However, if the Tutor is operated in accordance with MAA Regulatory Publication (MRP) and GASOs, compliance with the ANO will be achieved. Consequently, in the military flying training role the Tutor should, wherever possible, be operated in accordance with MRP and GASOs within the DH construct. In addition, where there are specific requirements for civil registered aircraft and aircrew, GASOs makes that provision or requires that the DDH specifies the requirement in local Flying Orders.

8. Wording conventions. GASOs are aligned with the MAA RA and, in that context, the following applies:

- a. **Orders.** The executive verb **shall** (highlighted in bold for visual impact) indicates a mandatory activity which must be followed without exception unless a dispensation / waiver to the order has been formally issued. Whenever possible, mandatory orders will be written in the positive sense. If this is not feasible, then where the provision states that an organization / individual '**shall not**' do something, they are prohibited from doing the specified act.
- b. **Acceptable Means of Compliance (AMC).** AMC are strongly recommended practices but are written in the permissive sense to allow the Regulated Entity the opportunity to consider alternative approaches. Consequently, the AMC contain the permissive verb **should** (highlighted in bold for visual impact): this is the only place where this particular permissive verb will be used. Any proposed Alternative AMC (AAMC) **shall** be submitted to the SO (ODH) and, if necessary, the MAA, for consideration prior to implementation. When an AAMC is proposed, the burden of proof that the RA / GASOs are being satisfied rests entirely with the Regulated Entity.
- c. **Multiple AMC.** In the event that multiple AMC are published for the same order and they are equally applicable, the Regulated Entity must agree with 22 Gp ASAR, SO2 Regs which option is to be followed
- d. Mandatory Orders may contain both orders (**shall**) and AMC (**should**) and should be interpreted appropriately.

9. Proposed Amendments to GASOs. The following process is to be used:

10. Request for change (RFC) Form. Proposed amendments, regardless of their level of urgency, shall be requested using the RFC form provided at the front of this document. A request for change will not be processed unless a 'Request for Change Form' is submitted.

11. Wording of the request. The exact wording required for the proposed change should be stated in the 'Requested Amendment' box and the reasons for the request should be stated clearly and concisely in the 'Rationale for Amendment' box.

12. DDH Senior Operator (SO) comment. On completion the RFC should be passed to the DDH SO for comment and approval prior to progression to the DDH.

13. DDH(s) approval. The DDH at the originating unit should review the DDH comments and approve the RFC prior to submission to HQ 22 Gp DFT. If another DDH is likely to be affected by the proposed amendment he should be consulted and approve prior to submission.

14. Submission to HQ 22 Gp DFT. Once fully approved, the form and any supporting documentation should be submitted to 22 Gp SO2 Regulations (or, in their absence, the appropriate Desk Officer) who will staff it to AHFT or SO(ODH) for

comment and / or approval as appropriate. When approved the unit will be notified and the change will be incorporated into the next update of the GASO.

15. Request for HQ 22 Gp approval and / or dispensation. Any request for approvals required by GASOs or dispensation from orders within GASOs should be submitted through the appropriate DFT Desk Officer in a timely manner. It is important that supporting information is provided to amplify the request and allow for staff consideration and response. This should include the nature of the request (e.g. SO(ODH) approval for Mixed Formation); the background to the request (concise summary of the reason for the submission); assessment of any additional risk; assessment of benefit and the DDH's approval/supporting statement. For dispensations, all means to comply with the order should have been pursued prior to request for dispensation; a clear statement of why compliance is not possible and the benefit / impact should be made. For AOC approvals / dispensations, sufficient time should be allocated for staffing to the AOC.

16. GASO master document. An electronic copy of these orders can be found at the HQ 22 Gp website and should be considered as the Master Document.

I J Townsend

AVM

AOC 22 Gp

04 Dec 23

Amendment Record

Change Number	Issuing Authority	Change Incorporated by (insert name)	Signature	Date Incorporated
Edition 1	22 (Trg) Gp, DFT	ASAR Regs SO2	Original Signed	30 Sep 16
Ed 1 AL1	22 (Trg) Gp, DFT	ASAR Regs SO2	Original Signed	30 Jan 17
Ed 1 AL 2	22 (Trg) Gp, DFT	ASAR Regs SO2	Original Signed	15 May 17
Ed 1 AL3	22 Gp, DFT	ASAR Regs SO2	Original Signed	11 Aug 17
Ed 1 AL4	22 Gp, DFT	ASAR SO3 FJ	Original Signed	12 Dec 17
Ed 1 AL5	22 Gp, DFT	ASAR SO3 FJ	Original Signed	05 Jun 18
Ed 1 AL6	22 Gp, DFT	ASAR SO3 FJ	Original Signed	31 Jan 19
Ed 1 AL7	22 Gp, DFT	ASAR SO3 FJ	Original Signed	5 Aug 19
Ed 1 AL8	22 Gp, DFT	ASAR Regs SO2	Original Signed	7 Feb 20
Ed 1 AL9	22 Gp, DFT	ASAR Regs SO2	Original Signed	31 Jul 20
Ed 1 AL10	22 Gp, DFT	ASAR Dep ASM	Original Signed	9 Nov 20
Ed 1 AL11	22 Gp, DFT	ASAR Regs SO2	Original Signed	14 May 21
Ed 1 AL12	22 Gp, DFT	ASAR Regs SO2	Original Signed	04 Oct 21
Ed 1 AL13	22 Gp, DFT	ASAR Regs SO2	Original Signed	03 May 22
Ed 1 AL14	22 Gp, DFT	ASAR Regs SO2	Original Signed	28 Nov 22
Ed 1 AL 14.1	22 Gp, DFT	ASAR Regs SO2	Original Signed	22 May 23
Ed 1 AL 15	22 Gp, DFT	ASAR Regs SO2	Original Signed	04 Dec 23

AMENDMENT

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22 Gp Air Staff Orders Request for Change Form		
Originator's Contact Details	Name:	Rank:
	Telephone Number:	Date:
	Unit:	
GASO/GASI No. and Title		
Section / Page / Paragraph		
Requested Amendment (Specific Wording):		
Rationale for Amendment:		
Air Safety Implications of Amendment:		
DDH SO and / or HQ DFT FT Desk SO1 Comment	Comment:	
	Signature:	Name:
	Date:	Rank:

DDH Approval	Comment:		
	Signature:	Name:	
	Date:	Rank:	
Other Affected DDH Approval A/R	Comment:		
	Signature:	Name:	
	Date:	Rank:	
AHFT Comment and Approval	Comment:		
	Signature:	Name:	
	Date:	Rank:	
SO ODH Comment and Approval	Comment:		
	Signature:	Name:	
	Date:	Rank:	
22 Gp FT Desk Officer	Name:	RFC: Year / No:	/

COMMON ABBREVIATIONS USED IN 22 GP AIR STAFF ORDERS

AACen	Army Aviation Centre
AAES	Aircraft Assisted Escape Systems
AAR	Air-to-Air Refuelling
AC	Airborne Check
ACAEFC	Air Cadet Air Experience Flying Course
ACM	Air Combat Manoeuvring
ACPNTS	Air Cadet Pilot Navigation Training Scheme
ACT	Air Combat Training
ADH	Aviation Duty Holder
AHFT	Assistant Head Flying Training (formerly ADFT)
ADS	Air System Document Set
AEA	Aircrew Equipment Assemblies
AEF	Air Experience Flight
AFT	Advanced Flying Training
AGL / AMSL	Above Ground Level/Above Mean Sea Level
AGT	Advanced Gliding Training
AI	Aircrew Instructor
ALARP	As Low As Reasonably Practicable
AOC	Air Officer Commanding
AM(MF)	Accountable Manager (Military Flying)
ANO	Air Navigation Order
AP	Air Publication
AS	Air Safety
ASM	Air Safety Manager also Air Safety Manual
ASMP	Air Safety Management Plan
BFJT	Basic Fast Jet Training
BFM	Basic Fighter Manoeuvres
BFT	Basic Flying Training
BHM	Basic Helicopter Manoeuvres
Blue ATP	Blue Wings Aviation Training Package
Bronze ATP	Bronze Wings Aviation Training Package
CAA / MAA	Civil Aviation Authority / Military Aviation Authority
CAP	CAA Air Publication
CEB	Customer Executive Board
CFMO	Command Flight Medical Officer
CFS	Central Flying School
CI	Chief Instructor
Comdt	Commandant
CofC	Certificate of Competence
CO / OC	Commanding Officer / Officer Commanding
COS	Chief of Staff
CQT	Certificate of Qualification on Type
CRF	Course Record Folder
C to I	Competent to Instruct
DA	Duty Authorizer
DAO	Duty Aircrew Officer

DACM	Dissimilar Air Combat Manoeuvring
DASM	Deputy Air Safety Manager
DASOR	Defence Aviation Safety Occurrence Report
DCI	Deputy Chief Instructor
DDH	Delivery Duty Holder
DFT	Directorate of Flying Training
DH	Delivery Holder
DI	Duty Instructor
DP	Duty Pilot
DPA	Data Protection Act
DSS	Duty Senior Supervisor
ECG	Electrocardiogram
EFATO	Engine Failure After Take-Off
EFT	Elementary Flying Training
EKQ	Essential Knowledge Quiz
ENT	Elementary Navigation Training
EOC	End of Course
ET	Evasion Training
FAT	Flying Ability Test
FE	Flexible Element (Additional Flying Hours)
FJ	Fast Jet
FJLIN	Fast Jet Lead-In
FOB	Flying Order Book
FoG	Fuel on the Ground
FTS	Flying Training School / Flight Test Schedule
FSTD	Flight Simulator Training Device
FTP	Flying Training Publication
FW	Fixed Wing
GASI	Group Air Staff Instruction
GWGP	Gold Wings Gliding Training
HF & EM	Human Factors and Error Management
HFT	Head Flying Training (formerly Director Flying Training)
HLS	Helicopter Landing Site
HoE	Head of Establishment
HP / PF	Handling Pilot / Pilot Flying
ICC	Instructional Competence Check
IDT	International Defence Training
IF	Instrument Flying
IFT	Introductory Flying Training
IR	Instrument Rating
IRE	Instrument Rating Examiner
IRS	Instrument Rating Scheme
IRT	Instrument Rating Test
JMES	Joint Medical Employment Standard
JSP	Joint Service Publication

LAFT	Light Aircraft Flying Training
LSJ / LP / LCJ	Life Saving Jacket / Life Preserver / Load Carrying Jerkin
MAGCS	Military Air Ground Communication Service
MAME	Military Aviation Medical Examiner
MDH	Minimum Descent Height
ME	Multi-Engine
MELIN	Multi-Engine Lead-In
MERW	Multi-Engined Rotary Wing
MMAI	Manual of Military Aircrew Instruction
MMATM	Manual of Military Air Traffic Management
MRP	MAA Regulatory Publication(s)
MSD	Minimum Separation Distance
MTF / PTF	Maintenance Test Flight / Partial Test Flight
NAAB	Naval Aircrew Advisory Board
NFSF	Naval Flying Standards Flight
NHP / PNF	Non-Handling Pilot / Pilot Non-Flying
OASC	Officer and Aircrew Selection Centre
OCU	Operational Conversion Unit
ODH	Operating Duty Holder
ODM	Operating Data Manual
OTM	Operational Training Manoeuvres
PBN	Performance Based Navigation
PFB	Preliminary Flying Badge
PFL	Practise Forced Landing
PME	Periodic Medical Examination
PTF	Partial Test Flight
PTT	Part Task Trainer
QFI	Qualified Flying Instructor
QGI	Qualified Gliding Instructor
QHI	Qualified Helicopter Instructor
QNI	Qualified Navigation Instructor
QR	Queen's Regulations
QUI	Qualified UAS Instructor
RA	Regulatory Article
RAFAC	RAF Air Cadet(s)
RAFAT	RAF Aerobatic Team – The Red Arrows
RAFCAM	RAF Centre of Aviation Medicine
RNAV	Area Navigation
RtL	Risk to Life
RTS	Release to Service
RW	Rotary Wing
RPS	Regional Pressure Setting
SCT	Staff Continuation Training
SDH	Senior Duty Holder
SE	Safety Equipment

SERE	Survival, Evasion, Resistance, Extraction
SERW	Single-Engined Rotary Wing
SFT	Syllabus of Flying Training
SGS	Silver Wings Gliding Scholarship
SNO	Senior Naval Officer
SO	Senior Operator
SQEP	Suitably Qualified and Experienced Person
SRF	Sortie Report Form
Stds	Standards
STANAG	(NATO) Standardization Agreement
T&E	Test & Evaluation
TMIS	Training Management Information System
TPS	Training Performance Standard
TQM	Training Quality Manual
TRF	Training Record Folder
UAS	University Air Squadron
UKMFTS	UK Military Flying Training System
VGS	Volunteer Gliding Squadron
VGSDE	Volunteer Gliding Squadron Duty Executive
WSO / WSO _p	Weapons Systems Officer / Operator

GASO 1380 – Performance Based Navigation

Rationale *The drive for improved operating efficiency has resulted in the development of the ICAO Performance Based Navigation (PBN) concept. This concept moves aviation away from traditional navigation using ground-based beacons to a system more reliant on airborne technologies utilising area navigation and Global Navigation Satellite Systems (GNSS), and aims to ensure global interoperability through the standardisation of PBN system performance through internationally agreed specifications. In order to fully exploit airspace worldwide there is a requirement to comply with the appropriate civil PBN standards either through equipage or the demonstration of equivalence.*

Contents

1380(1): Performance based navigation

Group Air Staff Order 1380(1)

Performance based navigation

1380(1) The DDH **shall** ensure that to operate in PBN airspace the UK military Air Systems for which they are responsible are eligible, capable and qualified to operate in the PBN designated airspace in which those Air Systems are operated iaw RA 1380.

Acceptable Means of Compliance 1380(1)

Performance based navigation

1. UK military Air Systems that regularly use the civil Air Traffic Service (ATS) structure as General Air Traffic **should** comply with or demonstrate equivalence to civil PBN regulatory requirements and standards of performance such as accuracy, integrity, continuity and **should** be interoperable with respect to aircraft functionality and the ability to conduct required PBN operations to the defined navigation specification.

Performance based navigation approval process

2. The DDH **should** ensure that the requisite PBN approval process has been followed iaw RA1380 and fully recorded in the respective Air System Release to Service (RtS), and include PBN specifications and systems across all Defence Lines of Development (DLOD) in their Air System Safety Cases (ASSC). CAA forms CAA SRG 1815 and CAA SRG 1813 **should** be used as templates to build evidence for approval for PBN operations. Completed approval requests should be staffed through SO(ODH).

3. To justify PBN operations the DDH **should**:

- a. Define Minimum Equipment Lists (MEL) for all Air Systems in their AoR to achieve the performance required by the area nav (RNAV) / required navigation performance (RNP) specifications demanded by the particular airspace controlling authorities.
- b. Ensure data for use in PBN systems is assured to appropriate international / national standards as demanded by airspace providers; and ensure that appropriate process exist for the handling and

configuration management of electronic navigation data. Navigation databases should be provided in line with the 28-day AIRAC cycle.

c. Ensure aircrew are qualified and competent both in the operation of aircraft PBN systems and in any other relevant procedures needed to achieve the performance required by the RNAV / RNP in the operating airspace.

d. Ensure crews articulate compliance to civil authorities against stipulated specifications through the Flight Plan.

Performance based navigation operations

4. The DDH **should** detail in Local Flying Orders:

a. The permitted PBN specifications for the Air Systems in their AoR and the MEL required to achieve this;

b. Contingency procedures for flight crews to follow in the event of not being able to notify ATC of an equipment failure or difficulties;

c. Specific training requirements for aircrew.

5. Prior to conducting PBN operations, pilots **should** have been assessed on PBN operations and procedures during an Instrument Rating Test iaw GASO 2120.

6. Pilots **should** be briefed and conversant in actions to be taken in the event of a navigation system failure.

Guidance Material 1380(1)

Performance based navigation

7. This order does not aim to detail the RNAV / RNP specifications required for particular platforms to meet their actual/anticipated modes of operation, nor does it aim to define the actual or likely specifications demanded by particular airspace controlling authorities.

8. PBN creates requirements for airworthiness certification and operational approval to use RNAV / RNP systems on routes/airspace notified for a given PBN application. RNAV / RNP system functionality as well as its navigation accuracy in a given NAVAID infrastructure environment must comply with the requirements stipulated for the routes/airspace.

9. When the relevant PBN approval process (Operating Duty Holder or AM(MF) specifics as per RA1380) has been completed then the respective UK military Air System can be considered as having achieved equivalence to PBN operational approval in the civilian domain.

10. When the appropriate Release to Service (RTS) and Safety Statement are in place Operating Duty Holders may assert compliance to civil authorities.

11. The ICAO PBN Manual (ICAO Doc 9613) defines PBN (RNAV / RNP) navigation specifications and performance requirements (technical and operational criteria). The manual also details: aircraft requirements and

operating procedures; specific aircrew knowledge and training where applicable; any requirements for control of navigation databases and oversight of operators; and provides practical guidance to States, regulatory authorities, air navigation service providers, manufacturers and airspace users on how to implement RNAV / RNP applications. The manual comprises two volumes: Volume I contains, *inter alia*, guidance on airborne RNAV / RNP systems and aeronautical data processes; Volume II provides the direct support for implementing RNAV and RNP navigation applications.

12. Further guidance on PBN policy can be found in RA1380 and EU Commission Regulation Number 965/2012¹.

13. For Aviation Duty Holders and AM(MF), CAA documents SRG 1813 and 1815 can be considered as templates to be followed towards operational approval and could be utilized as a basis for consistency across air systems and for evidence building.

¹<https://www.easa.europa.eu/document-library/regulations/commission-regulation-eu-no-9652012> The Civil Aviation Authority (CAA) is applying this regulation in UK airspace.

GASO 1410 – Occurrence Reporting

Rationale *Accurate and timely occurrence reporting and effective investigation is fundamental to identifying Air Safety risks and delivering effective mitigation.*

Contents **1410(1): Occurrence reporting**

**Group Air
Staff Order
1410(1)**

Occurrence reporting

1410(1) The DDH, Heads of Establishment (HoE), and Commanders within Duty Holder-Facing organisations (Cdrs within DH-facing orgs) **shall** ensure that all Air Safety reportable occurrences are reported, managed and that appropriate follow-up action is taken.

**Acceptable
Means of
Compliance
1410(1)**

Occurrence reporting

1. The DDH, HoE and Cdrs within DH-facing orgs **should** ensure that the requirements of RA 1410(1) are fulfilled.
2. RA 1410(1) Annex B provides a guide to reportable occurrences and, whilst the content is not exhaustive, it is considered to be mandatory.

**Guidance
Material
1410(1)**

Occurrence reporting

3. Additional 22 Gp-specific direction and guidance for the completion of Defence Air Safety Occurrence Report (DASOR) and In-Form reports can be found in the HQ 22 Gp DFT Air Safety Management Manual Part 2 Annex C.

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GASO 1440 – Air Safety Training

Rationale *Air Safety Training is a critical component in the mitigation of Risk to Life (RtL). It increases safety awareness and supports the establishment and maintenance of an engaged air safety culture. In particular, Human Factors (HF) continues to be identified as a major cause and / or contributory factor in aircraft incidents and accidents.*

Contents **1440(1): Air Safety Training**
1440(T1): Air Safety Awards

Group Air Staff Order
1440(1)

Air safety training

1440(1) The DDH **shall** ensure that personnel undertaking Air Safety related assignments are competent, qualified and current in accordance with RA 1440 and AP8000 Leaflet 8114.

Acceptable Means of Compliance
1440(1)

Air safety training

4. **General.** Qualification is defined as having undertaken a recognised pan-Defence Aviation Safety Course(s) at either the MAA Centre of Air Safety Training (CoAST), or other accredited centre of learning, appropriate to assignment held. The courses listed below are deemed to provide the appropriate qualifications and details **should** be recorded in an appropriate auditable document.

- a. **Aircraft Post-Crash Management Incident Officers' Course (APCMIOC).** Personnel nominated by the DDH to be a APCMIO **should** attend the MAA PCMIOC.
- b. **Duty Holder Air Safety Course (DHASC).** Comdt FTS, OC Ops Wg and Senior Operator (SO) **should** attend the MAA DHASC.
- c. **Flying Supervisors' Course (FSC).** Permanent FTS staff undertaking flying supervisory duties **should** attend the MAA Flying Supervisors' Course (FSC). VGS personnel **should** attend the VGS Flying Supervisors' Course (FSC).
- d. **Flying Authorizers' Course (FLAC) and Gliding Authorizers' Course (GLAC).** All individuals with powers of authorization **should** attend the MAA FLAC except where the previous paragraph applies. VGS personnel who become full-time 2 FTS staff may attend the MAA FSC without the FLAC qualification provided that they have completed the GLAC. VGS personnel **should** attend the GLAC.

5. **Minimum air safety training and currency requirements.** The DDH **should** ensure that Air Safety staff are appropriately trained and competent to undertake their duties in accordance with the requirements of AP8000 Leaflet 8114 and RA 1440. The minimum training and currency requirements are detailed in Annex A to RA 1440.

6. **Human Factors (HF) and Error Management (EM) Training.** Personnel **should** undertake HF and EM training in accordance with RA 1440(1) and a record of attendance should be maintained.

**Guidance
Material
1440(1)**

Air safety training

7. Nil.

**Group Air
Staff Order
1440(T1)**

Air safety awards

- 1440(T1) Flying supervisors **shall** ensure that outstanding performance is recognised by recommendation for a suitable award or endorsement.

**Acceptable
Means of
Compliance
1440(T1)**

Air safety awards

8. **General.** Air Safety awards are a means to reward individuals for conscientious observation and alerting of potential dangers and hazards, and to encourage aviation safety awareness and vigilance on the part of all personnel, both military and civilian, of all ranks.
9. **Recommendation for award.** A recommendation for an Air Safety award **should** be compiled and submitted to the RAF Safety Centre in accordance with AP8000 Leaflet 8011 and 22 Gp-FT ASAR DASM **should** be copied in on the nomination. In the case of cadets other than FSCs, 2 FTS SO2 CAPE **should** send a letter to the Squadron Commander authorizing an entry in the Record of Service Book.
10. **Green Endorsements.** A Green Endorsement can be awarded to personnel by the RAF SC iaw AP8000 Leaflet 8011. Recommendations should also be copied to 22Gp ASAR ASM SO1. A transcript of the endorsement **should** be sent to NAVY PERS-CM OF WAR P2SO2, COS HQAAC (Army) or Manning 22b (RAF) for inclusion in the subject's confidential report file.

**Guidance
Material
1440(T1)**

Air safety awards

11. AP8000 Leaflet 8011.

GASO 2101 – Aircrew Qualifications

Rationale *To minimise Risk to Life (RtL) during flying operations a baseline standard of ability and knowledge needs to be established and applied. Furthermore, it is necessary to demonstrate the application of this ability and knowledge on specific aircraft types flown, or operated.*

Contents **2101(1): Entitlement to Conduct Flying Duties**
2101(2): Certificate of Qualification on Type (CQT)

Group Air Staff Order
2101(1)

Entitlement to conduct flying duties

2101(1) To fly, or operate a 22 Gp air system, aircrew **shall** be qualified. Flying training **shall** be conducted in accordance with the Training Performance Statement (TPS) and Syllabus of Flying Training (SFT), supported by training and educational material in the Flying Training Publications (FTP) and AP 3456 RAF Manual of Flying.

Acceptable Means of Compliance
2101(1)

Entitlement to conduct flying duties

1. **Civilian pilot.** A civilian pilot, who has not previously been issued a UK military flying badge, or DDH approved foreign military flying badge and who is employed by Ascent within UKMFTS, **should** be considered qualified Aircrew¹, and therefore entitled to conduct flying duties iaw RA2101, provided that:

- a. They meet the required input standard, to be stipulated in DDH orders, upon commencement of employment with Ascent;
- b. They successfully complete the relevant conversion to type;
- c. They successfully complete the relevant Aircrew Instructor course;
- d. They are in possession of an HQ 22Gp Endorsed Certificate of Competence (ECoC), approved and signed by the relevant DDH;
- e. All civilian instructors flying military registered aircraft for UKMFTS purposes are made aware that they are subject to Service discipline under Schedule 15 of the Armed Forces Act 2006, as well as the criminal law of England and Wales, thus ensuring accountability for all flying conduct.

2. **Civilian rearcrew.** Civilian rearcrew who are employed by Ascent within UKMFTS, **should** have previously been awarded a military flying badge to be entitled to carry out flying duties iaw RA 2101.

3. **► 22 Gp trainee aircrew are considered to be “aircrew” as defined in RA 2101 from the time they commence the first stage of flying training until they commence their OCU. ADHs **should** stipulate in flying orders which duties they can perform (eg operation of flying controls), with whom they can fly and any competencies required for the sortie in question. However,**

authorisers retain the ability to classify trainee aircrew as passengers in accordance with RA 2340 if they consider it more appropriate. ◀

Conduct of flying training

4. **Training Performance Statement (TPS).** Flying training **should** be conducted in accordance with DSAT and the appropriate TPS supported by training and educational material in the FTP, JSP 822, AP3379 and AP 2345. Directorate of Flying Training (DFT), on behalf of AOC 22 Gp, approves all 22 Gp TPSs which **should not** be amended without the approval of the Customer Executive Board (CEB).

5. **Flying Training Publications (FTP).** Routine administrative amendments to FTPs may be made at HQ FTS level but DSAT-related policy changes **should** be coordinated with the appropriate desk officer at HQ 22 Gp DFT and will require endorsement by all Training Requirement Authority (TRA) representatives at the relevant CEB.

6. **Syllabus of Flying Training (SFT).** AHFT, on behalf of AOC 22 Gp, approves all 22 Gp SFTs which **should not** be amended without the approval of the Customer Executive Board (CEB). HQ DFT, HQ CFS and its Agents provide independent assurance of approved training courses in accordance with RA 2101(1).

7. Trainees **shall** only receive flying instruction and / or aircrew performance coaching from current, qualified instructors and CFS¹ during their flying training courses; this is applicable to both the live and synthetic environment. Trainees that are unsure of what constitutes aircrew performance coaching should seek permission for their activity through the chain of command.

Training for initial qualification

8. **Ab-Initio flying training.** Elementary Flying Training (EFT) and Elementary Navigation Training (ENT) are the initial training elements for ab-initio aircrew as they work towards the award of the appropriate flying badge. This training **should** follow an appropriate TPS and SFT. EFT and ENT syllabus development and control is delegated to Comdt 3 FTS and Ascent respectively. Any changes **should** be managed in accordance with JSP 822. Units **should**:

- a. Forward suggested EFT SFT amendments to HQ 3 FTS.
- b. Forward suggested ENT amendments to RN Observer Manager, Ascent Flight Training Ltd.
- c. Forward suggested FTP 3225 amendments to OC Tutor Standards Flight, 115 Sqn.

9. **Streaming boards.** Streaming **should** be conducted at the end of EFT to provide suitable candidates for further stream specific training. Streaming board procedures are detailed in 22 Gp Training Policy.

10. **Ab-Initio glider pilot training.** Comdt 2 FTS **should** specify in local Flying Orders the requirements for ab-initio glider pilot training.

¹ Including performance coaches from the Smith Barry Academy (SBA) or aircrew performance coaches who have been approved by SBA.

11. **Royal Navy observer training.** Royal Navy Observers undertake Introductory Flying Training (IFT) and ENT on the Tutor aircraft in accordance with TPS and SFT. Training is conducted by Ascent Flight Training Ltd as part of the UK Military Flying Training System (UKMFTS).

12. **University Air Squadron training.** UAS trainees **should** follow the UAS Flying Syllabus issued by HQ 6 FTS. UAS trainees who are members of a Volunteer Gliding Squadron (VGS) and continue to fly VGS gliders (Viking) **should** be restricted to flying on the Tutor as passengers on air experience sorties; they **should not** undergo the UAS SFT.

13. **AEF cadet training.** Cadets on Air Cadet Pilot Navigation Training Scheme (ACPNTS) and Air Cadet Air Experience Course (ACAEC) courses **should** follow the syllabus issued by HQ 6 FTS.

Allocation of Flexible Element (FE) flying hours for ab-initio students, students on return to flying packages and trainee aircrew instructors.

14. **General.** The standard FE allowance for 22 Gp training flying is 10% of the undertaken syllabus total. AHFT approval **should** be obtained prior to the allocation of FE flying hours in excess of 10% of the syllabus total for the course being undertaken. For EFT courses approval **should** be obtained prior to allocation of FE flying hours in excess of 15% of the syllabus total. This approval requirement **should** apply to ab-initio trainees, trainees on return to flying packages and trainee QFIs / QHIs / QHCIs with the exception of MEPT return to flying packages and those allocated courses with syllabus totals of 20hrs or less. MEPT return to flying packages do not include any FE allowance, AHFT approval should be obtained prior to the allocation of FE flying hours. For courses with syllabus totals of 20 hours or less, AHFT approval **should** be obtained prior to the allocation of FE flying hours in excess of 3 hrs. Comdt 2 FTS **should** specify the requirements for 2 FTS in local Flying Orders.

15. **Lead-in training.** For FJLIN and MELIN, AHFT approval **should** be obtained prior to the allocation of FE flying hours in excess of 3 hours.

Conversion training

16. **Qualified pilots.** Conversion training for qualified pilots, including trainee instructors and AEF pilots, **should** be in accordance with the appropriate SFT or the Light Aircraft Conversion Syllabus. Any proposed changes **should** be notified to AHFT.

Award of aircrew flying badges and special awards

17. Comdt FTS and Stn Cdr RAF Shawbury **should** detail the performance standards in each flying discipline, including airmanship, in order for an assessment of an individual trainee's suitability for the award of the aircrew flying badge to be made. The assessment **should** also include consideration of officer and personal qualities. The end of course report **should** include a definitive statement that the subject is deemed suitable (or otherwise) for the award of the aircrew flying badge. Consideration **should** be given to a trainee's suitability for a Special Award (which includes accelerated promotion and the Course Aerobatics Trophy) as detailed in the guidance material.

**Guidance
Material
2101(1)**

Special awards

18. **Special awards.** The following may be awarded to trainees before the award of their flying badge:

- a. **Pass with credit.** An overall assessment of high average at the end of either basic or advanced training may justify the award of a pass with credit.
- b. **Pass with distinction.** An overall assessment of above average at the end of either basic or advanced training may justify the award of pass with distinction.
- c. **Accelerated promotion.** Exceptionally deserving individuals may warrant accelerated promotion.

19. The Comdt FTS / Sqn Cdr may:

- a. Award a pass with credit to a trainee who achieves an overall assessment of high average at the end of either basic or advanced training.
- b. Forward to AOC 22 Gp, using the appropriate FT form, a recommendation for the award of a pass with distinction to a trainee who achieves an overall assessment of above average at each stage of training. BFJT / BFT / MEPT for pilots and each phase of training, including GST, for WSOps.

Additional guidance

20. QRJ727 and QRJ728.

21. [22Gp AAMC Endorsed Certificate of Competence](#)

**Group Air
Staff Order
2101(2)**

Certificate of Qualification on Type (CQT)

2101(2) To fly, or operate, an air system, aircrew **shall** be in possession of a valid Certificate of Qualification on Type (CQT) for that type.

**Acceptable
Means of
Compliance
2101(2)**

Certificate of Qualification on Type (CQT)

22. **Award of CQT.** The DDH **should** stipulate when a CQT for an approved training course is to be awarded. Aircrew trainees are permitted to fly, or operate, an aircraft without a CQT provided that the appropriate currency/competence is annotated and signed for in the individual's CRF.

23. **Rotary Wing (RW) CQT.** RW aircrew who are awarded their flying brevet **should** be given a Juno CQT.

24. **Gliding CQT.** U/T pilots undergoing GS and AGT **should not** be awarded a CQT and do not require a CQT to act as Aircraft Commander for syllabus solo sorties.

Recording of CQT

25. The CQT **should** be entered in an individual's logbook on initial qualification only. Thereafter, aircrew returning to the aircraft from another

tour or unit **should** become re-qualified on completion of a Conversion Check on type.

Lapse of CQT

26. A CQT **should** be deemed to be lapsed if aircrew have not flown the aircraft type in the previous 6 months.

Regain of CQT

27. The DDH **should** stipulate the training required to regain a CQT which **should** be given by a qualified AI.

Exemptions from CQT

28. Aircrew in any of the following categories are exempt from the requirements to hold a valid CQT:

- a. Aircrew under training on an approved training course when working towards a CQT.
- b. Central Flying School (CFS) Examiners when not acting as Aircraft Commander.
- c. Aircrew providing support to Operational Test and Evaluation (OT&E) when conducting specific trials or Test Pilots when QualEval flying. However, this **should not** apply to the delivery of OT&E training generally, for which the Aircraft Commander **should** hold a valid CQT
- d. Aircrew carried as Familiarization Flight Passengers iaw RA 2340.

Guidance Material 2101(2)

Additional guidance

29. Nil.

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GASO 2102 – Aircrew Competence in Role

Rationale *In addition to the award of Certificate of Qualification on Type (CQT), aircrew will need to achieve specific competencies to fly, or operate, UK Military air systems or civil air systems used to deliver military training in role – these need to be established and applied. To ensure that these role competencies are periodically demonstrated, a continuous rolling assessment process is required.*

Contents

2102(1): Certificate of Competence

2102(2): Periodicity of Assessment of Competence

2102(T1): Refresher Flying for Aircrew Under Training

2102(T2): Incidental Allowance for Aircrew Under Training

Group Air Staff Order
2102(1)

Certificate of Competence

2102(1) To fly, or operate, UK military Air Systems or civil Air Systems used to deliver military training in role, aircrew **shall** be in possession of an applicable Certificate of Competence (CofC). The DDH **shall** implement a process of training to support the award and maintenance of a CofC.

Acceptable Means of Compliance
2102(1)

Certificate of Competence (CofC)

1. **General.** A valid CofC allows aircrew to be authorized to conduct Unit Tasking.
2. **Qualifying requirements.** Prior to undertaking a CofC check to confirm competence, aircrew **should** hold:
 - a. The appropriate RN, Army or RAF Flying Badge or Brevet, or be considered qualified aircrew iaw GASO 2101(1); or
 - b. An equivalent qualification approved by the European Aviation Safety Agency (EASA).
3. **Competence levels.** The DDH **should** specify in local Flying Orders the competency levels required for the award of CofC for pilots within their AoR.
4. **Aircrew Instructors (AI).** Instructional aircrew who maintain a current instructional qualification on an aircraft type in accordance with GASO 2125 fulfil the requirements for award of a CofC on that type. For AIs, CofC corresponds to the CFS qualified AI category as defined in the Manual of Military Aircrew Instruction (MMAI) Part 3 Section 2 and Annex A to RA 2125(1).
5. **Endorsed Certificate of Competence.** Civilian aircrew who have not previously held a military flying badge that are working for Ascent and are considered qualified iaw GASO 2101(1) **should** be issued with a 22Gp HQ approved Endorsed Certificate of Competence.

Competence - supernumerary crew

6. The DDH **should** specify in local Flying Orders the qualifications required for personnel on flying courses who are temporarily attached to a sortie for the purpose of carrying out a specific duty not involved with the handling of the aircraft controls. For example, 'Supernumerary Crew – Tutor IF Safety Pilot'; or the equivalent for EFT, BFJT / BFT, AFT, MEPT and RW personnel. To fly as Supernumerary Crew personnel **should** be current. The validity of the competence **should** end on the completion of the syllabus of training during which the competence was awarded and does not require annual renewal. The award **should** be recorded in the individual's Course Record Folder (CRF) / Training Record Folder (TRF) as appropriate. For other Supernumerary Crew duties requirements of RA 2340(1) apply.

7. Qualified Observers, WSOs or WSOps may be awarded the CofC 'Supernumerary Crew – Tutor IF Safety Lookout' or 'Supernumerary Crew – Prefect IF Safety Pilot'. This CofC allows holders to act as Safety Lookout for Simulated IF sorties in accordance with RA 2307(1) Para 63. The DDH **should** define the SQEP requirements for Safety Lookout. Additional training **should** be undertaken which **should** include the roles and responsibilities of a Safety Lookout in the context of monitoring Simulated IF in the Prefect or Tutor.

Recording of competence

8. **Logbook entries.** The CofC **should** be entered in an individual's logbook on successful completion of the appropriate assessment sortie (with the exception of CofC - Supernumerary Crew which **should** be recorded in the trainee's CRF / TRF).

9. **Training Record Folders (TRF).** TRF (or civilian equivalent) **should** be opened and maintained for all aircrew and **should** include a record of all conversion training and supervisory checks. A record of FATs **should** be entered into the pilot's TRF.

10. **RAF F5200.** A record of the award of CofC may also be entered in the individual's F5200 or single-Service equivalent. CFS reports (F5363) **should** be inserted in the F5200 for all aircrew.

Temporary grounding of aircrew

11. **Accident or serious incident.** Following an accident or serious incident, where aircraft handling is involved, pilots **should** fly a supervisory check, ideally with the Sqn Cdr, before flying again as Aircraft Commander.

12. **Flight safety investigations.** Aircrew subject to Regulation 18 action **should not** be employed on flying duties without HQ 22 Gp authority.

Guidance Material 2102(1)

Certificate of Competence (CofC)

13. The terms Training Record Folder (TRF) and Course Record Folder (CRF) can be considered synonymous.

14. Annex A to RA 2125.

15. [22Gp AAMC Endorsed Certificate of Competence](#)

**Group Air
Staff Order
2102(2)**

Periodicity of assessment of competence

2102(2) Aircrew **shall** be periodically, independently assessed.

**Acceptable
Means of
Compliance
2102(2)**

Periodicity of assessment of competence

16. **Annual currency.** A continuous rolling assessment process **should** be activated from the initial award of CofC (with the exception of Competence - Supernumerary Crew). For most competencies the assessment **should** be confirmed at least annually by way of a check flight flown with an examining officer from an independent unit (Sqn Cdr from another unit qualified on type and role, Standards or CFS Exam Wing and, for AEF pilots, the Sqn Cdr or UAS QFI). Instructional staff will have their CofC renewed on successful completion of their annual assurance check in accordance with RA 2125(1).

17. **CofC after change of unit.** The following applies after change of unit:

- a. Aircrew in possession of a current CofC arriving on a new unit operating the same aircraft type in the same role **should** have their competence status confirmed before flying as aircrew on that unit.
- b. To achieve this, an assessment sortie **should** be flown with the Sqn CO/OC or a nominated deputy to confirm the required level of competence. Aircrew moving to a unit operating the same aircraft in a different role or operating a different type **should** be given the necessary training to fulfil the requirements of GASO 2102(1).
- c. On completion of the necessary training, individuals **should** successfully complete a CofC check with the Sqn CO/OC or a nominated deputy and **should** have their CofC renewed in their logbook.

18. **AEF pilot CFS standardization.** All AEF pilots **should** be standardised by CFS Exam Wing within 2 years of the award of CofC as AEF Pilot and 4-yearly thereafter, normally during CFS visits, with the competency check recorded in the individual's logbook. AEF pilots out of date for CFS standardization **should not** fly with cadets, passengers or undergraduate members of the UAS until CFS standardization has been carried out.

19. **G1 glider pilots.** G1 glider pilots **should** be standardised by CFS Exam Wing within 3 years of the award of CofC and every 3 years thereafter.

**Guidance
Material
2102(2)**

Periodicity of assessment of competence

20. Nil.

**Group Air
Staff Order
2102(T1)**

Refresher training for aircrew under training

Rationale

Aircrew under training may be required to have managed holds between courses during which time individual trainees could experience varying degrees of skill and knowledge fade.¹ These effects may be reduced through the allocation of Refresher Training², which can be used as a means of 'top-up training' following an extended period out of the air training environment.

Refresher training for aircrew under training

2102(T1) Aircrew under training **could** be allocated Refresher Training, where capacity permits, and prior to or as part of a follow-on flying training course.

**Acceptable
Means of
Compliance
2102(T1)**

Refresher training for aircrew under training

21. UKMFTS is not contracted to include refresher courses and there is no trainee entitlement to refresher training. However, provision of refresher training, where capacity exists, will be considered on a case-by-case basis, in order to return holding trainees to an appropriate output / input standard. The DFT Pipeline Manager Team are responsible for:

- a. Recording individual holding periods³.
- b. Identifying an individual's need for refresher training (see table below for guidance).

22. Aircrew under training **could** be considered for refresher training as follows:

Role	Stream	Holding period ⁴	Eligibility
Pilot	Elementary Flying Training (EFT) Stream	> 12 months ⁵	EFT Refresher
	Fast-Jet Stream ⁶	> 12 months between BFT and AJT	BFT Refresher
		> 12 months between AJT and OCU	AJT Refresher
	Multi-Engine Stream ⁷	> 12 months between ME AFT and OCU	ME AFT Refresher
	Rotary Wing Stream	> 12 months between ART and OCU	ART Refresher
	RPAS Stream	Nil	Nil
WSO / WSO _p	Mission Aircrew Stream	> 12 months between completion of Phase 2 training and OCU	RW Rearcrew pre-OCU Refresher

¹ TIN 2.057 Competence Retention Analysis User Guide details.

² Refresher Training is the collective term to treat competency retention i.e. refresh knowledge, skills and (if appropriate) currency, which may include synthetic or live flying.

³ Principally through the PRAMA data management tool. See Footnote 4. Note that PRAMA tracks course graduation dates.

⁴ Holding period is time between a trainee's last flight on one course and the start of ground school for the next flying stage.

⁵ Where capacity exists, refresher training could be provided prior to FJLIN/MELIN if the hold is greater >6 months.

⁶ Note that those streamed FJ should receive a FJ Lead-in-Course prior starting BFT.

⁷ Note that those streamed ME should receive a ME Lead-in-Course prior to starting MEPT.

23. Refresher training is discretionary and **could** be allocated on a case by case basis subject to the following:
- a. Hold length and where training system capacity exists.
 - b. Refresher training **should** return trainees to an appropriate course output / input entry standard only; refamiliarising trainees with the necessary elements of the airborne environment. Training is not considered pass / fail.
 - c. Syllabi **should** cover a range of knowledge and skills from the preceding flying course (Core Course) and address essential competency and currency requirements.⁸
 - d. Allocated live and synthetic flying hours will need to be agreed by the relevant SO1 Desk Officer and (if appropriate) approved by AHFT.
 - e. Training providers **should** exercise military judgement in order to competency progress trainees; adapt the training to the needs of the individual; be cognizant of different trainee experience levels and recency; and aware of the capacity of the system.
 - f. Refresher training can include live and / or synthetic flying to meet the required input / output competency standards.
 - g. Where appropriate, refresher training could be applied onto the new type conversion rather than demanding resource from the previous type.
24. When pre-OCU refresher training cannot be allocated by HQ DFT then this **should** be passed to the follow-on Force Command training unit as a deficiency.
25. Where an individual has been allocated refresher training it **should** aim to be completed not more than two months before the trainee's next flying training course. End of course reports **should** be completed in line with the extant guidance for the Core Courses. If performance concerns present that would suggest a trainee will fail to meet the required standard for their follow-on training, the appropriate 22 Gp DFT Desk Officer, in conjunction with AHFT, should determine whether to allocate additional hours or consider withdrawal action in accordance with extant 22 Gp Training Policy.

⁸ Of note, these courses are purposefully not DSAT compliant as they are considered on a case-by-case basis and tailored to trainees' key areas of weakness or development.

Guidance Material 2102(T1)	Refresher flying for aircrew under training 26. Nil.
Group Air Staff Order 2102(T2)	Incidental Allowance (IA) for Aircrew Under Training 2102(T2) Incidental allowance shall be allocated to aircrew under training when required.
Acceptable Means of Compliance 2102(T2)	Incidental allowance for aircrew under training 27. In the event that aircrew under training (trainee aircrew and instructors under training) have not completed a live flying event or a simulated flying event in an RA 2375 compliant Full Flight Simulator (FFS) in the previous 14 calendar days, they are entitled to an IA event comprising an unassessed live flying or RA 2375 ⁹ compliant FFS event prior to undertaking their next assessed event. The content and duration of the IA event is at the discretion of the relevant Squadron Commander.
Guidance Material 2102(T2)	Incidental allowance for aircrew under training 28. Nil.

⁹ FFS operating under an MAA approved RA 2375 waiver may be used for this purpose.

GASO 2103 – Currency and Continuation Training

Rationale *To enable continued maintenance of achieved aircrew competencies in role, a suitable level of flying currency and training activity is required.*

Contents **2103(1): Currency Requirements**
2103(2): Continuation Training

**Group Air
Staff Order
2103(1)**

Currency Requirements

2103(1) The DDH **shall** promulgate and manage flying currency requirements, by type and role, for the safe operation of *air systems* by aircrew in their Area of Responsibility (AoR) in accordance with RA 2103(1). Aircrew **shall not operate as air system** Commander unless they are in current flying practise except when undertaking a check to regain currency.

**Acceptable
Means of
Compliance
2103(1)**

Currency requirements

1. **Aircrew currency.** Aircrew are considered current if they have flown within the previous 31 days. In extremis, the DDH may grant an extension to a maximum of 60 days, **should** restrict the number of extensions to a minimum, and **should** notify their decision to SO (ODH) and AHFT.
2. **6 FTS aircrew currency.** 6 FTS Pilots that have not flown for more than 31 days, up to and including 45 days, **should** fly an SCT sortie of at least 45 minutes duration before flying with trainees, cadets or passengers.
3. **Currency requirements.** The DDH **should** promulgate flying currency requirements and manage currency flying/training for aircrew within their AoR. This should include the frequency and content of periodic flight, simulator and ground training events which **should** be recorded appropriately. Consideration should be given to Basic Training Requirements (BTR), the Annual FAT and specific currency requirements for disciplines such as Night Flying, Formation Flying, Low Flying, Operational Training Manoeuvres (OTM) and Weapons Training.
4. **Consecutive check sorties.** The DDH **should** stipulate the maximum number of consecutive check sorties allowable without regaining currency before an independent assessment or period of re-training is required.

Currency lapses

5. When Aircrew have been unable to remain in current flying practise they **should** receive a check sortie in order to permit them to return to flying or conduct the activity for which the currency has lapsed. The DDH **should** specify in local Flying Orders the requirements for, and the process by which currency is regained, following a lapse. Where possible Flying Supervisors and Authorizing Officers **should** manage lapses of currency appropriately to ensure that aircrew remain in current flying practise.

Multi-Type aircrew

6. Where not specified, the DDH **should** promulgate the applicability of hours and continuation training events flown across multiple types towards currency requirements.

**Guidance
Material****2103(1)****Currency requirements**

7. Local/Unit Flying Orders.
8. FTS Training Quality Manual.

**Group Air
Staff Order**
2103(2)**Continuation Training.**

- 2103(2) The DDH **shall** manage Staff Continuation Training (SCT) (including Simulator Training) and ensure that training events are appropriately recorded.

**Acceptable
Means of
Compliance**
2103(2)**Staff Continuation Training (SCT)**

9. **SCT Allocation.** The DDH **should** allocate an appropriate number of flying hours of SCT commensurate with the maintenance of instructional and flying skills. Aircrew in flying appointments **should** fly their full annual SCT allocation spread as evenly as possible over the year. Likewise, those pilots qualified on more than one aircraft type **should** endeavour to spread their SCT allocation as evenly as possible across all such types. Any hours flown on supervisory checks and to regain flying currency **should** be considered part of the SCT allocation.

10. **Prioritisation of SCT.** The DDH **should** consider the maintenance of instructional expertise a priority and ensure that instructors make full use of their SCT allowance.

11. **Pilots in non-flying appointments.** Nominated pilots in non-flying appointments (HQ staff pilots etc) can be allocated SCT. Solo flights by these pilots **should** only be authorized by the Sqn Cdr or appropriate Flt Cdr on the squadron to which they are allocated.

12. **Practice emergency drills.** The DDH **should** specify in local Flying Orders the requirements for the practise of emergency drills during SCT for aircrew within their AoR. This **should** include the use of the simulator, where provided, for aircraft emergencies that cannot easily be practised in the aircraft during SCT.

Aircrew currency records

13. **Recording of SCT hours and events.** A comprehensive record of individuals' SCT, BTRs and supervisory checks showing hours and exercises flown **should** be maintained for all aircrew. Where installed, FlightLog/STARS/TMIS may be used.

14. **Logging of SCT time for multi-crew.** When mutual SCT is flown both pilots may claim SCT time; however, the total SCT time recorded for both pilots **should not** exceed total flight time.
15. **Gliding SCT.** All staff **should** record SCT hours, launches / landings etc, and other flight checks in their logbooks using red ink. A check flight flown with a Flying Supervisor or Examiner **should** be recorded as SCT and underlined in red.

**Guidance
Material
2103(2)**

Continuation Training

16. GASO 2401(3).

GASO 2115 – Aircraft Commanders

Rationale *Aircraft Commanders need to understand their responsibilities and authority.*

Contents **2115(1): Responsibilities of an Aircraft Commander**
2115(2): Authority of an Aircraft Commander

**Group Air
Staff Order
2115(1)**

Responsibilities of an Aircraft Commander

2115(1) The Aircraft Commander **shall** be entirely responsible for the safety of the aircraft, its occupants and equipment, both in the air and on the ground, until it is handed over to the appropriate authority after flight.

**Acceptable
Means of
Compliance
2115(1)**

Responsibilities of an aircraft commander

1. **Captaincy.** Captaincy is the generic term used for the judgement and asset management skills of aircrew when performing their duties as Aircraft Commanders. The Aircraft Commander **should** be entirely responsible for the safety of the aircraft, its occupants and equipment, both in the air and on the ground until it is handed over to the appropriate authority after flight.

2. **Aircrew Instructors (AI).** When a QFI / QHI / QGI is flying in the capacity of an instructor they **should** be the Aircraft Commander.

3. **Formation leader / commander.** The formation leader/commander **should** be the aircrew member who has overall charge of, and responsibility for, a particular formation and is authorized as such. Individual Aircraft Commanders remain responsible for the safety of their own aircraft.

Specific responsibilities

4. **Non-operational flying.** The Aircraft Commander and/or formation leader **should** carry out the mission or alternate mission as briefed within the constraints of their orders or any other applicable orders issued by a subordinate authority. In addition, the formation leader, or if a single aircraft, the Aircraft Commander **should** ensure that:

- a. The flight can be safely undertaken, taking into account the latest information relating to the exercise to be flown, including meteorological data, airfield information and diversion options.
- b. The sortie is executed in a manner that minimizes the hazards to the aircraft, its occupants and equipment.
- c. The communication and airfield facilities at the place of departure, at the proposed destination, diversions and en route are adequate to complete the sortie as planned.
- d. The aircraft has the appropriate radio navigation equipment for the flight (or permission granted otherwise).

- e. Sufficient flight planning has been carried out to execute the sortie safely.
 - f. The aircraft is fit for the flight and has a valid Flight Servicing Certificate or civilian equivalent.
 - g. The load of the aircraft is within weight limits, and that it is distributed and secured safely.
 - h. Sufficient fuel and oil are carried, with a suitable margin for contingencies.
 - i. With regard to the performance of the aircraft in the expected conditions, the aircraft can safely take-off and reach a safe height, taking into account any obstructions, and make a safe landing at the destination.
 - j. Pre-flight checks have been complied with. Where the aircraft is being flown dual, the Aircraft Commander may delegate part or all of the pre-flight external checks to a second pilot qualified on type, including ab-initio trainees, although ultimate responsibility remains with the Aircraft Commander at all times.
 - k. Passengers are briefed on the safety equipment and emergency procedures for the aircraft.
5. **Operational flying and tasking.** The aircraft commander and / or formation leader **should** execute the mission as briefed within any constraints laid down by the tasking authority.
6. **Aircraft commander's acceptance certificate.** Before the start of each flight the aircraft commander of the aircraft **should** certify by signing the appropriate section of the Form 700 or equivalent civilian technical log, that he accepts the aircraft in the operating condition shown therein, and that he is aware of any limitations, which have been entered in the respective document. For aircraft supported by Logistics Information Technology Strategy (LITS) or SAPPHIRE, such certification may be completed either electronically or by signature on the appropriate LITS generated form.
7. **Status of armament.** The aircraft commander of the aircraft **should** ensure that their crew has ascertained the state of all weapons and explosive stores under their control. Safety devices removed from weapons before flight should be carried in the aircraft.
8. **Armament and ejection seats.** Where live armament, weapons or ejection seats are fitted to aircraft, the aircraft commander **should** ensure that all safety breaks are removed and all safety devices are fitted in the 'Safe' position before handing over the aircraft to the appropriate ground personnel.
9. **Aircraft serviceability report.** The aircraft commander **should** ensure that the serviceability state and any remarks concerning that state are correctly recorded in the Form 700 or equivalent civilian technical log for the aircraft or, if on a flight landing away from base, on the appropriate servicing form. For aircraft supported on LITS, the serviceability state

should be entered either directly onto LITS or on the appropriate LITS generated form.

10. **Changes of aircraft commander.** Changes of Aircraft Commander **should** only be authorized and effected on the ground. See also GASO 2302(1).

Pilots with a Restricted Joint Medical Employment Standard (JMES)¹.

11. 22 Gp pilots who have been given a restricted JMES by a Military Aviation Medical Examiner (MAME) are subject to restriction. For 22 Gp pilots with the restriction “unfit solo pilot”, when flying as Aircraft Commander, the sortie profile and weather conditions for the duration of the flight **should** be within the other pilot’s limits and qualifications; additionally where the other pilot is a trainee, the following restrictions apply:

a. **Texan and Hawk T2**

(1) **Ab-initio Trainees.** The trainee **should** have a signed Certificate of Competency for solo flight in their CRF and specific consideration **should** be given to the sortie profile and the ability of the trainee.

(2) **CFS and Conversion Flying:** The trainee **should** have a signed Certificate of Competency for solo flight in their CRF.

b. **Juno and Jupiter.** Juno and Jupiter pilots **should not** fly with passengers or air cadets but may fly as Aircraft Commander with staff pilots and trainees.

(1) **Ab-Initio trainees.** Ab initio pilots must have successfully completed their Basic Handling Check.

(2) **CFS and conversion flying.** Qualified pilots and QHIs must have completed the first conversion sortie on type.

c. **Tutor and Prefect.** Tutor and Prefect pilots **should not** fly with passengers or air cadets but may fly as Aircraft Commander with staff pilots and trainees.

(1) **Ab-Initio EFT trainees and UAS trainees.** Trainees **should** have completed first solo (3 FTS Trainees) or Solo Sector-Recce for UAS Trainees (Tutor). The DDH **should** stipulate in Local Orders which sorties profiles are appropriate for QFIs with limited JMES to conduct.

(2) **CFS and conversion flying.** Trainees **should** have been awarded, and have recorded in the flying logbook, a CQT on the Tutor or Prefect as appropriate.

d. **Phenom.**

(1) Ab-initio trainees must have achieved a successful Progress Check.

¹ Although the term JMES is used here, the content of this order is applicable to civilian pilots operating with a restriction on their CAA Class 1 medical and/or a restriction to their medical waiver.

(2) The DDH **should** stipulate an equivalence for QSPs.

e. **Glider.** Glider pilots **should not** fly with passengers or air cadets but may fly as Aircraft Commander with staff pilots including Flight Staff Cadets) qualified to at least G2 standard. For qualified G2 pilots, the sortie **should** only be conducted with the assurance that the P2 pilot is able to recover the aircraft to either the home base or diversion airfield from any part of the planned sortie; furthermore, the sortie **should not** expose the G2 pilot to any new flight regime such as spinning, aerobatics, navigation etc.

Glider pilots under the age of 18

12. Glider pilots under the age of 18, when operating as aircraft commander, **should not** carry passengers or fly with another individual under 18 years old.

Guidance Material 2115(1)

Definitions

13. **Aircraft commander.** The aircraft commander is defined as the aircrew member designated by the Aircraft Operating Authority as being in command of an aircraft and responsible for its safe operation and accomplishment of the assigned mission. At 22 Gp units, the aircraft commander is normally to be the pilot, or in the case of an aircraft with more than one pilot, the first pilot, unless some other crewmember is specifically detailed to be aircraft commander by the officer authorising the flight. In these Orders, the use of the term aircraft captain is synonymous with the term aircraft commander.

14. **Formation leader / commander.** The term formation leader / commander may also be taken to refer to a qualified leader acting as airborne supervisor within a formation.

Group Air Staff Order 2115(2)

Authority of an Aircraft Commander

2115(2) In matters of Air Safety, all persons on board, whatever their rank or status, **shall** be under the command of the Aircraft Commander.

Acceptable Means of Compliance 2115(2)

Authority of an aircraft commander

15. In accordance with RA 2115(2)

Guidance Material 2115(2)

Authority of an aircraft commander

16. Nil.

GASO 2120 – Pilots' Instrument Rating Scheme

Rationale *To carry out their tasks safely, where insufficient external visual references exist, pilots of UK Military Aircraft or civil aircraft used to deliver military flying training must be able to operate their aircraft solely by reference to instruments and within the limits of the aids available. A scheme is required that ensures that those pilots who may be required to fly an aircraft to specific limits on instruments have sufficient experience, knowledge and skill, and are current. Categorizations within a scheme would also provide a guide to Authorizing Officers of demonstrated competency in instrument flying.*

Contents **2120(1): Instrument Rating Requirements**
2120(2): The Instrument Rating Test (IRT)

**Group Air
Staff Order
2120(1)**

Instrument Rating Requirements

2120(1) All pilots who fly a UK Military Aircraft, or civil aircraft used to deliver military flying training, in Instrument Meteorological Conditions (IMC) or where insufficient external visual references exist **shall** hold a valid Instrument Rating. Pilots holding an Instrument Rating **shall** complete specified training and maintain instrument flying currency.

**Acceptable
Means of
Compliance
2120(1)**

Instrument Rating (IR) requirements

1. **Compliance with IR requirements.** The DDH **should** ensure that all pilots within their AoR adhere to the IR requirements that are laid down in RA 2120(1).
2. **Performance Based Navigation:** Where applicable the DDH **should** ensure pilots are assessed on PBN operations and procedures. An unrestricted IR should automatically include PBN privileges, with non-PBN ratings being restricted as such.
3. **Instrument Flying (IF) currency.** The DDH **should** promulgate the instrument flying currency minima by type and role within their AoR. See also GASO 2103(1).
4. **IF practise.** The DDH **should** ensure that all pilots complete sufficient IF practise to maintain competence.
5. **Restricted IR.** The IRE **should** issue a Restricted IR, suitably recorded in the F166 and the candidate's logbook, if any part of the IRT schedule is not flown. For example, where the candidate is unable for any reason to fly in Class A airspace, a possible restriction would be 'Not cleared to fly GAT in Class A airspace'. ► **DDHs should stipulate, in local flying orders, the procedure for removal of restrictions to an IR, including any time limitations.** ◀
6. **Extension to IR.** The DDH **should** only grant an extension to the 13 month validity period for IR in exceptional circumstances. Where an

extension is authorized it **should** be approved personally and in writing by the DDH.

7. **Pilots IR requirement.** QFI¹ / QHIs and staff pilots in flying appointments **should** obtain an IR as soon as practicable.

Limitations on unrated pilots

8. Pilots who do not hold a rating or are unrated through lapsed IR validity or currency **should** be authorized for VMC flight only.

9. **Pilots on a recognised training course.** Unrated pilots, operating as aircraft commander, on a recognised flying training course working towards the issues of an IR may fly IMC outside CAS. The DDH should stipulate in Orders the circumstances under which a pilot may fly in IMC without a valid IR to include:

- a. Maximum cloud depth that may be penetrated.
- b. Appropriate flight or flight simulator training device competency check requirements.
- c. Currency minima.

Simulator capability and fidelity

10. IF training and qualification in FSTD:

- a. At the DDHs discretion, IF conducted in FSTD that have been suitably approved in line with RA2375(2) can be considered actual IF, not simulated. DDHs **should** specify the periodicity and extent of IF conducted in the respective air system to be considered current.

Authority for approval and renewal of Instrument Rating categories

11. **Approval and renewal of IR category.** The authority for the approval and renewal of IR are:

- a. IR – IRE.
- b. IRE – DDH.
- c. CIRE – Comdt CFS.

Instrument Rating award

12. The award of an IR **should** be made in accordance with RA 2120(1) para 2. The DDH **should** specify in local Flying Orders the flying requirements for the award of the Amber, White, Green and Master Green ratings for aircraft type or types within their AoR.

Guidance Material 2120(1)

Instrument Rating requirements

13. See also GASO 2375(1) – Approval of Flight Simulator Training Devices (FSTD).

¹ This does not apply to part time UAS QFIs who operate within the provision of sub para 8.

**Group Air
Staff Order
2120(2)**

The Instrument Rating Test (IRT)

2120(2) The IRT **shall** be flown in accordance with the appropriate IRT schedule. The DDH **shall** promulgate in local Orders the CFS-approved schedule for aircraft types within their AoR.

**Acceptable
Means of
Compliance
2120(2)**

The Instrument Rating Test (IRT)

14. **Compliance with IRT requirements.** The DDH **should** promulgate in local Flying Orders the IRT Schedule for all aircraft types within their AoR; in addition, the DDH **should** ensure that all pilots are familiar with the IRT requirements that are laid down in RA 2120(2).

15. **Conduct of the IRT.** IRTs **should** be conducted in accordance with the type schedule as detailed by the DDH.

16. **Seating.** The candidate **should** normally occupy the primary seat; however, for Prefect and Tutor aircraft, those flying instructors who normally occupy the left seat for instructional duties **should** occupy the left seat.

17. **Instrument visor.** Where applicable, candidates **should** wear the IF visor.

**Guidance
Material
2120(2)**

The Instrument Rating Test (IRT)

18. Nil.

GASO 2125 – Aircrew Instructor Training

Rationale *Aircrew Instructors (AI) provide a training, checking and standardization function to Defence Aviation in order to facilitate the delivery of operationally qualified crews to the Front Line. Instructional ability can be built through both practical experience and training, and in the case of Defence Aviation the lead agency for such training is the Central Flying School (CFS). For those employed as airborne warfare instructors the respective lead school acts as the sponsor.*

Contents 2125(1): Aircrew Instructor Training**Group Air Staff Order 2125(1)****Aircrew Instructor Training**

2125(1) Personnel selected for aircrew instructional duties **shall** receive appropriate training and attain the instructional standards required to facilitate flying training instruction for all aircrew disciplines.

Acceptable Means of Compliance 2125(1)**CFS qualified Aircrew Instructors**

1. All procedures and regulations pertaining to CFS qualified Aircrew Instructors are detailed in the Manual of Military Aircrew Instruction (MMAI).

Non-CFS qualified Aircrew Instructors

2. CFS should conduct standardisation checks on all non-CFS qualified Aircrew Instructors every 2 years.

Guidance Material 2125(1)**Aircrew Instructor training**

3. CFS Manual of Military Aircrew Instruction (MMAI).

GASO 2130 – Survival Equipment, Drills and Training

Rationale *All personnel who fly or are flown in Air Systems are subject to a degree of risk. Without the correct safety equipment and survival training, personnel will be exposed to increased Risk to Life (RtL); therefore personnel operating in UK Military Aircraft or civil aircraft used to deliver military flying training need to have a thorough working knowledge of all safety equipment and survival drills appropriate to their aircraft type and role.*

Contents

- 2130(1): Survival Training and Currency
- 2130(2): Wearing and Carriage of Aircrew Equipment Assemblies (AEA) and Safety Equipment (SE)
- 2130(3): Restraint Systems
- 2130(4): Aircraft Survival and Rescue Equipment
- 2130(5): Ejection Seat Anthropometrics
- 2130(6): Fire, Smoke and Fumes Training
- 2130(T1): Ejection Seat – Safety Procedures

Group Air Staff Order
2130(1)

Safety and Survival Training

2130(1) Aircrew, supernumerary crew and passengers flying in 22Gp air systems **shall** complete, and be current for, the appropriate safety and survival drill training as mandated by RA2130; GASO2130 and as stipulated by the DDH in Local Flying Orders.

Acceptable Means of Compliance
2130(1)

Safety and survival training

1. **Safety and emergency drill training.** Initial safety and survival training drills detailed in RA 2130(1) (including the Defence SERE Training Organisation Permissive Land Survival (PLS) course for ab initio students) **should** be completed as early as practicable in flying training and on conversion to type as detailed in DDH local Flying Orders. Currency **should** then be maintained iaw RA2130 Annex A and this GASO. There is no currency requirement for PLS after initial training has been completed.
2. **Survival, Evasion, Resistance and Extraction (SERE) Officer.** Where appropriate, the DDH **should** appoint a suitably qualified station SERE Officer responsible for carrying out SERE training in accordance with JSP 911 Pt 2.
3. **SERE instructors.** Individuals delivering SERE training **should** be suitably qualified and maintain a record of training delivered.

Safety and survival training currency

4. **Periodicity of safety and survival drills.** The DDH **should** ensure that aircrew within their AoR comply with the currency requirements for safety and survival drills at Annex A to RA 2130.

5. **Aircrew Equipment Assemblies (AEA) and Safety Equipment (SE).** The DDH **should** specify in local orders the AEA and SE to be worn during safety and survival training.
6. **Aircrew not required to fly over water.** Those 22 Gp aircrew and trainees not required to conduct over-water operations and training sorties are exempt from life raft/life preserver and wet winching drills. Exempt aircrew **should not** be permitted to conduct sorties that include, or may include, over-water operation unless they complete the drills detailed in Annex A to RA 2130(2).
7. **Practical emergency ground egress drills.** For staff and trainees flying Texan T Mk 1, and Hawk T Mk 2, practical Emergency Ground Egress Drills **should** be conducted in the simulator, cockpit procedures trainer or ejection seat trainer. For Prefect (EFT) and Hawk T Mk 2 (AFT and TW phases) this training is valid for the duration of the course and any subsequent return to flying package, but not exceeding one year.
8. **Aircraft abandonment / ejection drill.** The DDH **should** specify in local Flying Orders the requirements for Aircraft Abandonment/Ejection Drills for the aircraft and aircrew within their AoR iaw RA2130(1) Para 4.
9. **Canopy jettison drill.** The DDH **should** specify in local Flying Orders the requirements for Canopy Jettison Drills for the aircraft and aircrew within their AoR.
10. **6-Monthly check of student strapping-in competency.** All ab-initio Hawk T Mk 2 and Texan T Mk1 student aircrew **should** demonstrate their ability to fully strap in correctly under one-to-one supervision of a QFI (any category) every 6 months. This strap-in check **should** be done in full AEA (including helmet) and **should** be conducted in the aircraft immediately prior to flight. Successful completion of the check should be recorded on Flight Log, Flight Pro or TMIS.
11. **Synthetic Parachute Training (SPT).** The DDH **should** specify in local Flying Orders the requirements for SPT for aircrew within their AoR.
► The content of the SPT **should**, as a minimum, include parachute flight drills, parachute landing drills and a briefing to cover ground dragging and harness release. Where facilities exist, the training **should** be conducted using a training rig and under the supervision of a Synthetic Parachut Instructor (SPI). Where trg rigs or SPIs are not available, DDHs **should** ensure that appropriate alternative SPT is conducted¹ and, if necessary, captured in the ASSC. In all cases the DDH must assure that any RtL remains ALARP and tolerable. ◀ Normally SPT is to be conducted wearing full AEA and SE appropriate to the aircraft type. The DDH may detail alternate AEA and SE where they assess the wearing of full AEA and SE to be inappropriate.
12. **Dry Life Saving Jackets (LSJ) / Life Preserver (LP) / Load Carrying Jerkin (LCJ) Training.** The DDH **should** specify in local Flying Orders the requirements for Dry LSJ / LP / LCJ Training for aircraft and aircrew within their AoR.

¹ This alternative SPT may be theoretical (eg safety video) but must comply with the requirements of [RA 2130](#).

13. Life raft drills, swimming competence and lifesaving training.

The DDH **should** ensure that the requirements for life raft drill and lifesaving training are fulfilled for the aircraft and aircrew within their AoR. Having successfully completed a Role-Related Swimming Test during Phase 1 Training, there is no requirement to maintain this currency. Pool training may be conducted at sea.

14. Parachute dragging training. The DDH **should** specify in local Flying Orders the requirements for parachute dragging training for aircraft and aircrew within their AoR.

15. Personal equipment serviceability. All aircrew **should** ensure that their personal flying clothing and equipment is serviced regularly.

16. Passenger flights. All passengers should be briefed on safety and survival drills iaw GASO 2340.

17. STASS drills. For platforms where STASS is cleared for use the DDH should specify in local orders the requirements for training. All personnel required to undertake wet STASS training **should** be medically screened prior to the training, using the medical screening questionnaire.

18. Miniflare WHT. The DDH **should** ensure aircrew in their AOR carrying 16mm miniflares in AEA / SE hold a current 16mm Miniflare WHT, and **should** detail associated training requirements in local flying orders.

Exemptions, dispensations and currency extensions

19. The DDH **should** only grant an exemption, dispensation or survival training currency extension for operational or exceptional circumstances. Sqn Cdrs **should** apply in writing to the DDH explaining the reasons for the request and only then after exploring all options (including the use of other base facilities) to maintain the periodicity of training as detailed at Annex A to RA 2130(2). Any such exemption, dispensation or currency extension granted by the DDH **should** be forwarded by the unit to the appropriate type-specific Desk Officer at HQ DFT.

**Guidance
Material
2130(1)**
Safety and survival training

20. JSP 911 Pt 1 and Pt 2.

21. DDH Local Flying Orders.

22. Annex A of RA 2130 details the periodicity of safety and survival drills.

23. STASS wet training Medical Screening Questionnaire.

24. Where miniflares are carried within AEA or SE but aircrew are not planning to fire except in emergency, ODH dispensation is granted to reduce the WHT requirement for aircrew to an annual demonstration and verbal brief delivered prior to commencement of flying duties.

**Group Air
Staff Order
2130(2)**

Wearing and Carriage of Aircrew Equipment Assemblies (AEA) and Safety Equipment (SE)

2130(3) The DDH **shall** ensure that aircrew, supernumerary crew and passengers wear and carry approved AEA and SE.

**Acceptable
Means of
Compliance
2130(2)**

Wearing and carriage of Aircrew Equipment Assemblies (AEA) and Safety Equipment (SE)

25. The DDH **should** ensure that all aircrew, supernumerary crew and passengers wear, and are trained or briefed in the use of AEA appropriate to: the aircraft type, type of sortie, duration of sortie and environmental conditions. Where an air system has a Release to Service, only AEA and SE approved in the Air System Document Set **should** be worn. For air systems without a Release to Service the DDH should list approved AEA and SE to be worn.

AEA and SE

26. **Powered aircraft.** Personnel **should** wear approved flying clothing as provided on the scales of entitlement. Cadets **should** wear a flying coverall where possible, or a buttonless type of coverall, and **should** wear aircrew flying gloves. Footwear **should** be sensible and **should not** have metal studs or deep tread soles.

27. **Gliders.** There is no mandatory requirement for personnel to wear specific items of flying clothing when operating on the airfield, but flying suits **should** be worn at all times by aircraft commanders when flying. Trainees **should**, where possible, wear a flying or buttonless coverall when flying. Footwear **should** be sensible and **should not** have metal studs or deep tread soles.

28. **Underclothing.** All non-Viking aircrew **should** wear, as a minimum, a FACS FR Vest / FR Undershirt with Long Johns or a Service-issue long-sleeve roll-neck with Long Johns (legacy flying clothing), under the minimum prescribed clothing detailed above. ► When unit commanders consider the risk of heat exhaustion to be greater than the risk of injury from burns, they **should** present a risk comparison to the DDH who is authorized to issue an exemption or temporary deviation from this order. ◀

29. **Headgear and hearing protection.** Protective flying helmets or appropriate headsets **should** be worn by all 22 Gp aircrew (not applicable to Viking). Instructors **should** ensure that trainees are familiar with the use of headgear and that sufficient headroom exists from the canopy. Hearing protection, where scaled, **should** be used in accordance with type-specific AEA and SE publications.

30. **Immersion coveralls.** Immersion coveralls offer protection against cold shock and hypothermia. The DDH **should** consider the use of immersion suits at sea temperatures of 15°C and below. The use of immersion coveralls **should** comply with the following:

- a. Aircrew and passengers of single-engine aircraft, who are not scaled for immersion coveralls **should** operate within gliding range of land when the sea temperature is 10°C and below except when carrying out a published airfield approach procedure.

b. When the sea temperature is 10°C and below, aircrew and passengers, who are scaled for immersion coveralls **should** wear them for all flights over the sea or when there is the possibility of a diversion that would involve a sea track; however; the DDH may waive this rule for specific day sorties after due consideration of the sortie content, environmental conditions and availability of SAR assets. For example, flights in which the only over-sea portion is wholly within the local instrument departure or recovery pattern are not considered to be 'flights over the sea' and may be subject to a waiver from the requirement to wear immersion coveralls at the discretion of the DDH.

c. Solo display pilots **should** be granted a waiver from this rule for displays or display rehearsals at the display venue and for transit flights to the display venue where it is not possible to change before the display, provided the over-sea track is relatively short, the flight is within SAR cover and the estimated survival time exceeds the expected rescue time.

31. **LSJ / LP / LCJ.** LSJ / LP / LCJ **should** be worn where scaled and appropriate.

32. **Parachutes.** Parachutes **should** be worn by all occupants of 22 Gp aircraft except where they are not scaled for type-specific use. DDHs **should** specify in local Orders the operating requirements and limitations for each aircraft type in their AoR.

33. **Aircrew emergency cutter.** Aircrew **should** have an Aircrew Emergency Cutter attached to their flying clothing/AEA.

Guidance Material

2130(2)

Wearing and Carriage of Aircrew Equipment Assemblies (AEA) and Safety Equipment (SE)

34. JSP 911- Survival, Evasion, Resistance and Extraction Part 2 Volume 1 Chapter 3.

35. DDH Local Flying Order

Group Air Staff Order 2130(3)

Restraint Systems

2130(4) All occupants of 22 Gp aircraft **shall** be suitably restrained in all phases of flight.

Acceptable Means of Compliance 2130(3)

Restraint systems

36. Safety / dispatcher harnesses **should** be worn at all times in 22 Gp aircraft. Instructors **should** ensure that passengers and cadets are familiar with harness operation and that the harness is correctly fitted over the shoulder straps of the parachute if worn. See also RA 2130(4).

**Guidance
Material
2130(3)****Restraint systems**

37. Specific guidance for use of the dispatcher harness can be found in RA 2130(4) GM.

**Group Air
Staff Order
2130(4)****Aircraft Survival and Rescue Equipment**

2130(5) Survival and rescue equipment of the appropriate type and scale **shall** be carried for all occupants of 22 Gp Aircraft.

**Acceptable
Means of
Compliance
2130(4)****Aircraft survival and rescue equipment**

38. **General.** The DDH **should** ensure that the requirements of RA 2130(5) are fulfilled for the aircraft types within their AoR. Particular consideration **should** be given to the number of life rafts, medical supplies and survival packs commensurate to the number of personnel carried and the operating environment.

39. **Use of SE for instructional purposes.** Items of SE used for flight **should not** be used for instructional purposes except in exceptional circumstances, when SE personnel **should** confirm its serviceability before it is next used for flight.

Flight over open water.

40. Unless properly authorized for flight over water and equipped with appropriate survival and rescue equipment, 22 Gp aircraft **should** remain within gliding range of land. Exceptionally, where Tutor aircraft are authorized for sea crossings outside gliding range of land, single seat life rafts (easily accessible in flight) **should** be carried for each occupant and, where the sea temperature is below 10°C, aircrew, passengers and cadets **should** wear immersion coveralls.

**Guidance
Material
2130(4)****Aircraft survival and rescue equipment**

41. DDH local Flying Orders.

**Group Air
Staff Order
2130(5)****Ejection Seat Anthropometrics**

2130(5) All personnel for whom ejection seats are provided **shall** be checked for size and weight to ensure that they fit within the seat design parameters. Aircrew **shall** ensure that they remain within the promulgated limits.

**Acceptable
Means of
Compliance
2130(5)****Ejection seat anthropometrics**

42. The DDH **should** ensure that the requirements for ejection seat anthropometrics as specified in RA 2130(5) are complied with for aircraft and aircrew within their AoR.

**Guidance
Material
2130(5)**

Ejection seat anthropometrics

43. DDH Local Orders.

**Group Air
Staff Order
2130(6)**

Fire, Smoke and Fumes Training

- 2130(6) All 22 Gp aircrew who operate aircraft with firefighting and / or smoke and fume equipment **shall** be appropriately trained and competent in the use of that equipment.

**Acceptable
Means of
Compliance
2130(6)**

Fire, smoke and fumes training

44. DDH orders **should** stipulate the training requirement for fire, smoke and fumes equipment. This training may be practical or classroom based. The orders **should** detail as a minimum:

- a. The periodicity and content of the fire, smoke and fumes training
- b. Any requirement for the use of representative live firefighting equipment.

**Guidance
Material
2130(6)**

Fire, smoke and fumes training

45. DDH Local Orders.

**Group Air
Staff Order
2130(T1)**

Ejection Seat – Safety Procedures

- 2130(T1) All personnel using ejection seat-equipped aircraft **shall** ensure that appropriate safety precautions are observed.

**Acceptable
Means of
Compliance
2130(T1)**

Ejection seat – safety procedures

46. The DDH **should** ensure that Aircrew Manual (ACM)/Aircrew Flying Manual (AFM) procedures for strapping into ejection-seat-equipped aircraft are followed. This **should** include measures for the avoidance of inadvertent ejection seat damage such as fouling by strap buckle, the headbox and the back pad.

Command ejection system

47. The DDH **should** specify in local Flying Orders the procedures for use of the Command Ejection System which **should** include the setting and use of the Command Ejection Lever both on the ground and in the air.

**Guidance
Material**

Ejection seat

48. DDH Local Orders.

2130(T1)

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GASO 2135 – Aircrew Medical Requirements

Rationale *Operating Air Systems is both physically and mentally demanding. Without the correct level of fitness and Aviation Medicine training, aircrew will place themselves, the Air System and the public at increased risk; consequently, all aircrew are required to be physically and mentally fit to carry out their duties as authorized. Aircrew fitness-to-fly is established during the selection process and is assessed on a routine basis by specialist Medical examiners; however, the most important person in assessment of fitness-to-fly is the individual. Aircrew are required to maintain an adequate level of physical health and fitness, and have appropriate Aviation Medicine knowledge and awareness.*

Contents

- 2135(1): Aircrew Medical Employment Standard**
- 2135(2): Fitness-to-Fly**
- 2135(3): Pilot Operations – Upper Age Limit**
- 2135(4): Flying After an Accident or In-Flight Medical Incident**
- 2135(5): Initial & Refresher Aviation Medicine Training**
- 2135(6): High G Training**
- 2135(7): Temporary Medical Restrictions to Flying Duties**

Group Air Staff Order 2135(1)

Aircrew Medical Employment Standard

2135(1) All 22 Gp Aircrew **shall** hold an appropriate and valid Joint Medical Employment Standard (JMES), or civilian equivalent.

Acceptable Means of Compliance 2135(1)

Aircrew Medical Employment Standard

1. **Periodic Medical Examination (PME).** The DDH **should** ensure that all aircrew within their AoR hold an appropriate and valid JMES, in accordance with the requirements of RA 2135(1); to achieve this, aircrew should undergo a Periodic Medical Examination (PME) annually. CGIs and FSCs **should** be medically assessed as 'Fit Gliding' or 'Fit Gliding Instructor'.
2. **Flying logbook medical certificate.** Aircrew **should** ensure that the Military Aviation Medical Examiner (MAME) signs their flying logbook on completion of the PME to signify the subject is fit to fly in their current duties.
3. **Extensions to medical categories.** The SMO **should** consult the Command Flight Medical Officer (CFMO) if the requirements of RA 2135 cannot be met.
4. **Enhanced cardiovascular screening.** Aircrew are subject to enhanced cardiovascular screening from the age of 60 as detailed in AP1269A Leaflet 3-01 Para 11d. Arrangements for this screening **should** be determined during the annual PME process.

5. **Medical requirements for AEF pilots.** AEF pilots **should** be fit to fly the full range of manoeuvres normally associated with cadet flying. AEF pilots **should** hold either a current Joint Medical Employment Standard (JMES) or a Medical Certificate pertaining to Part-FCL Licence. Comdt 6 FTS **should** specify in local Flying Orders the specific Medical requirements for AEF Pilots.

6. **Civilian instructors.** Civilian instructors holding a Medical Certificate pertaining to Part-FCL Licence **should not** be required to hold a JMES; however, Medical clearance to fly is required. Medical clearance to fly **should** be in accordance with AP1269A Leaflet 2-02 and 3-02.

7. **Flying clothing and equipment.** Aircrew who fly with helmets, including masks where required, **should** attend their PME with the equipment issued to them.

MES for supernumerary crew

8. The DDH **should** ensure that the requirements of RA 2135(1) are fulfilled.

Guidance Material 2135(1)

Aircrew medical certificate

9. **Command Flight Medical Officer (CFMO).** RAF Centre of Aviation Medicine, RAF Henlow, Beds, SG16 6DN.

10. AP 1269A – Assessment of Medicine Fitness.

Group Air Staff Order 2135(2)

Fitness-to-Fly

2135(2) Aircrew and Supernumerary Crew uncertain of their fitness to fly **shall** report to a Military Aviation Medical Examiner (MAME) or a Medical Practitioner before flying.

Acceptable Means of Compliance 2135(2)

Fitness-to-fly

11. **Flying supervision.** Supervisors and Authorizing Officers **should** ensure that aircrew assigned to flying tasks and supernumerary crew are medically and dentally fit to fly. Aircrew may declare themselves unfit to fly but, having done so, they should only return to flying duties when cleared by an MAME or Dental Officer.

Airsickness

12. **Treatment of airsickness.** Aircrew suffering from persistent airsickness **should** be referred to a MAME. Normal treatment will consist of a course of medication (Kwells). While under treatment trainees **should** continue to fly dual only.

13. **Referral for desensitization treatment.** Where airsickness persists and is debilitating, the MAME should refer the individual for airsickness desensitization after consultation with the DDH / Stn Cdr, FTS CI or Sqn Cdr. EFT, UAS and gliding aircrew **should not** normally be referred for desensitization training.

14. **Withdrawal from training.** A trainee **should** be withdrawn from training if airsickness is debilitating and untreatable. Such cases **should** be referred to the appropriate HQ 22 Gp DFT Desk Officer.

Notification of change to JMES

15. Aircrew **should** inform their Unit Cdr of any medical restriction on flying duties and / or change to their JMES or civilian equivalent.

Return to Flying Duties After Medical Treatment

16. Aircrew **should not** return to flying duties after medical treatment until cleared to do so by a MAME.

Guidance Material 2135(2)

Aircrew fitness-to-fly

17. **R&SDOM Medical Board.** R&SDOM Medical Board, Adastral Hall, PO Box 1000, RAF College Cranwell, Sleaford, Lincs, NG34 8GZ.

18. **Command Flight Medical Officer (CFMO).** RAF Centre of Aviation Medicine, RAF Henlow, Beds, SG16 6DN.

Group Air Staff Order 2135(3)

Pilot Operations – Upper Age Limit

2135(3) Pilots **shall not** operate an aircraft once they attain the age of 65 unless the aircraft is fitted with dual controls and is operated with a second pilot who has not yet attained the age of 65. Furthermore, the second pilot **shall** hold an appropriate qualification and JMES entitling him to act as pilot in command.

Acceptable Means of Compliance 2135(3)

Pilot operations – upper age limit

19. The second pilot **should be** appropriately trained, assessed and recorded as competent in order to recover from any manoeuvre or exercise that is being demonstrated or taught. The DDH **should** stipulate in Orders the qualifications to be held by the second pilot iaw RA2135(3).

Guidance Material 2135(3)

Pilot operations – upper age limit

20. Nil.

Group Air Staff Order 2135(4)

Flying After an Accident or In-Flight Medical Incident

2135(4) After being involved in a flying accident or an in-flight medical incident, aircrew and Supernumerary Crew **shall not** operate an aircraft without appropriate medical approval.

**Acceptable
Means of
Compliance
2135(4)**

Flying after an accident or in-flight medical incident

21. The DDH **should** ensure that the requirements of RA 2135(4) are fulfilled. Examples of in-flight medical incidents are G-LOC, smoke and fumes, spatial disorientation and oxygen system malfunctions etc.

G-Induced Loss of Consciousness (G-LOC)

22. In cases where an aircrew member is reported to have suffered from G-LOC in flight, the SMO **should** proceed as detailed in AP1269, Annex H to Lfl 12-06 'G-Induced Loss of Consciousness (G-LOC) in aircrew'.

**Guidance
Material
2135(4)**

Flying after an accident or in-flight medical incident

23. AP 1269 Leaflet 12-06 lists in-flight Medical incidents and provides guidance.

24. AP 1269A Leaflet 4-02 Annex I – The Management of Aircrew Following an Aircraft Accident or Incident.

**Group Air
Staff Order
2135(5)**

Initial & Refresher Aviation Medicine Training

2135(5) All aircrew **shall** complete an initial course of aviation medicine training before commencing basic flying training. All aircrew engaged on flying duties **shall** receive appropriate refresher aviation medicine training.

**Acceptable
Means of
Compliance
2135(5)**

Initial & refresher aviation medicine training

25. **Initial aviation medicine training.** The DDH **should** ensure that aircrew within their AoR undertake Initial Aviation Medicine training appropriate to the aircraft types and aircrew specialisation to which they are appointed.

26. **Refresher aviation medicine training.** The DDH **should** ensure that aircrew undertake refresher aviation medicine training on change of aircraft type or, if currently employed on flying duties, at intervals not exceeding 5 years in accordance with the requirements of RA 2135(5).

Dispensations and extensions

27. The DDH **should** consult CFMO(RAF), or the respective Consultant Advisor in Aviation Medicine (Royal Navy/Army), prior to any dispensation or extension to any aviation medicine training requirements. The outcome **should** be notified to the appropriate FT Desk Officers (FJ, MERC, EFT, RW, or Gliding).

Aircrew aviation medicine training

28. **Aircraft equipped with oxygen systems.** Aircrew who use oxygen systems in flight **should** be trained in the use of oxygen equipment and **should** be familiar with the symptoms and actions for hypoxia and hyperventilation.

29. **Decompression training.** Aircrew **should** receive decompression training before flying above 15000ft cabin altitude.

**Guidance
Material
2135(5)**

Initial & refresher aviation medicine training

30. STANAG 3114

**Group Air
Staff Order
2135(6)**

High G Training

2135(6) All aircrew whose employment exposes them to High G environments **shall** successfully complete High G training.

**Acceptable
Means of
Compliance
2135(6)**

High G training

31. All Hawk, Texan and Prefect aircrew **should** undertake RAFCAM-delivered High G training theoretical lessons. Centrifuge training **should** be undertaken as follows:

- a. **Centrifuge training.** Centrifuge training **should** be undertaken by:
 - (1) Hawk, Texan, and Prefect pilots, including Staff Pilots.
 - (2) Texan BFJT and Prefect students (and Hawk students who have not previously conducted centrifuge training).
 - (3) These aircrew should complete refresher training in the centrifuge at least every 5 years, or following a 3-year absence from the High G environment.
 - (4) RAF CAM Training Memorandum 37 details the assessment of training completion for High G centrifuge training. If a trainee fails to complete centrifuge training to the requisite standard the following limitations **should** apply:
 - (a) No solo flying.
 - (b) Limited to 4G, or the G-limit set on the advice of CFMO / CA AvMed until successful completion of centrifuge training.
 - (c) Referral for an assessment of progress in the Aircrew Conditioning Programme with additional exercises as necessary.
 - (5) The DDH **should** consult CFMO(RAF), or the respective Consultant Advisor in Aviation Medicine (Royal Navy/Army), prior to granting any extension or waiver (normally a maximum of 3 months) to the centrifuge training requirement. SO (ODH) **should** be informed through the DFT FJ Desk.
 - (6) After centrifuge exposure aircrew **should not** return to flying duties until 6 hours after exposure, and they are free of all residual symptoms.

**Guidance
Material
2135(6)**

High G training

32. [RAF CAM TM 37](#)

**Group Air
Staff Order
2135(7)**

Temporary Medical Restrictions to Flying Duties

- 2135(7) Aircrew and Supernumerary Crew **shall** comply with any restrictions placed upon them following exposure to conditions affecting their fitness to fly.

**Acceptable
Means of
Compliance
2135(7)**

Temporary medical restrictions to flying duties

33. DDHs **should** ensure that all aircrew and Supernumerary Crew within their AoR comply with the temporary medical restrictions that may be placed upon them by a MAME in accordance with the requirements of RA 2135(7).

Temporary medical restrictions to flying duties

34. **Surgical procedure.** Following any surgery, aircrew **should** be passed fit to resume flying duties by a MAME or Dental Officer.

35. **Anaesthetics.** Aircrew **should not** fly until at least 48 hours have elapsed following a general, spinal or epidural anaesthetic, or for 12 hours after a local or regional (dental) anaesthetic. This period may be extended at the discretion of the MAME or Dental Officer.

36. **Routine inoculations and vaccinations.** Inoculations and vaccinations may restrict flying for at least 12 hours. Aircrew **should** ascertain the duration of any restriction from the MAME.

37. **Blood donation.** Aircrew **should not** fly for 36 hours after donating blood.

38. **Blood test fasting.** Aircrew subject to a fasting prior to a blood test **should** eat before flying.

39. **Self-medication.** RA 2135(7) applies.

40. **Smoke or fumes in the aircraft.** The following applies:

- a. **Severe or persistent symptoms.** Aircrew suffering severe or persistent symptoms **should** report to an on-site MAME as soon as possible or, where the MAME is not on-site, attend the nearest A&E department. Where A&E attendance has been required, the CFMO **should** be informed immediately.
- b. **Mild symptoms or asymptomatic.** Aircrew who are asymptomatic or suffering only mild symptoms **should** contact the MAME as soon as possible. Where the MAME is not on-site, this can be completed by telephone.
- c. **Clearance to fly.** Following exposure, aircrew **should not** fly without medical clearance.

41. **Exposure to training chemical agents.** Aircrew **should** consult a MAME if they suffer a prolonged or severe reaction to training chemical agents.
42. **Eye examination - mydriatics.** Examination by an eye specialist may include the application of mydriatic agents, usually as eye drops. Aircrew **should not** fly for 24 hours after the application of mydriatics.
43. **Hypnotherapy.** Some of the stress relaxation techniques used in hypnotherapy may have a prolonged adverse effect on the flying task. Aircrew **should not** fly whilst undergoing treatment and **should** obtain clearance to resume flying duties by a MAME once the series of hypnotherapy treatment is complete.
44. **Acupuncture.** Acupuncture therapy may have either a relaxing or a stimulant effect on performance. Aircrew **should not** fly for 12 hours following treatment.
45. **Sports.** Strenuous or prolonged physical exercise may adversely affect an individual's ability to withstand the stress of flight. Aircrew **should** be aware of the possible consequences of such exercise and, if in doubt, consult a MAME. Additionally, specific controls **should** be applied to:
- a. **Underwater diving.** Personnel **should not** fly or undergo low-pressure chamber experience:
 - (1) Within 12 hours of swimming using compressed-air breathing apparatus aqualung equipment, or
 - (2) Within 24 hours, if a depth of 10m has been exceeded, or
 - (3) Within 12 hours of experiencing ground pressurization.
 - b. **Boxing.** Aircrew who have engaged in boxing (including sparring, but not including non-contact training) **should not** fly for 48 hours after a bout, and **should** be examined by a MAME before resuming flying duties.

**Guidance
Material
2135(7)**

Temporary medical restrictions to flying duties

46. Nil.

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GASO 2201 – Carriage of Maintenance Documents in UK Military Aircraft

Rationale *There is a need to carry maintenance documents to facilitate and record maintenance operations when aircraft land away from the parent unit.*

Contents **2201(1): Documents to be Carried**

**Group Air
Staff Order
2201(1)**

Documents to be Carried

2201(1) When an aircraft is planned to land away from the parent Station / Unit, appropriate maintenance documents and publications **shall** be carried in the aircraft.

**Acceptable
Means of
Compliance
2201(1)**

Documents to be carried

1. The DDH **should** specify the appropriate maintenance documents and publications to be carried in aircraft within their area of responsibility that are planned to land away in accordance with the requirements of RA 2201(1).

**Guidance
Material
2201(1)**

Documents to be carried

2. The expression 'UK Military Aircraft' also means civil aircraft used to deliver military flying training.

GASO 2210 – Preventative Maintenance and Continuous Charge Operations

Rationale *Preventative maintenance comprises scheduled maintenance, condition-based maintenance and flight servicing. There is a need to ensure that the aircraft is operated within the preventative maintenance regime limitations and that the correct procedures are followed during Continuous Charge Operations.*

Contents **2210(1): Preventative Maintenance Limitations**
2210(2): Continuous Charge Operations

Group Air Staff Order
2210(1)

Preventative Maintenance Limitations

2210(1) The Aircraft Commander **shall not** operate the air system beyond the validity period of preventative maintenance.

Acceptable Means of Compliance
2210(1)

Preventative maintenance limitations

1. Nil.

Guidance Material
2210(1)

Preventative maintenance limitations.

2. Manual of Airworthiness Maintenance – Process (MAM-P).

Group Air Staff Order
2210(2)

Continuous Charge Operations

2210(2) To conduct continuous charge operations aircrew **shall** be appropriately authorized and any personnel changes and faults **shall** be recorded.

Acceptable Means of Compliance
2210(2)

Continuous charge operations

3. **Conduct of continuous charge operations.** Aircraft commanders and aircrew **should** conduct continuous charge operations in accordance with the requirements specified in RA 2210(2) and type-specific SOPs.
4. **Crew responsibilities.** Particular attention **should** be paid to authorization to conduct flight servicing activities that may be expected within the period; the completion of the MOD Form 700 (or equivalent) and post-flight fault reporting. During the aircraft acceptance process, the aircraft commander **should** ensure that the aircraft external checks have been carried out in accordance with the aircraft document set. Where necessary, a suitably qualified member of the crew flying on that sortie may complete the checks although the ultimate responsibility always remains with the aircraft commander.

**Guidance
Material
2210(2)**

Continuous charge operations

5. Manual of Airworthiness Maintenance – Process (MAM-P).

GASO 2211 – Authorization of Aircrew to Carry Out Maintenance Tasks

Rationale *Flexibility of aircraft operations is improved if aircrew are authorized to undertake or participate in preventative and corrective maintenance activities and flight servicing on the aircraft type on which they are currently employed. These are activities that may be carried out solely by aircrew, or by aircrew supplementing the engineering organization.*

Contents

2211(1): Authorization of Aircrew to Carry Out Flight Servicing

2211(2): Authorization of Aircrew to Carry Out Aircraft Maintenance Work

2211(3): In-Flight Corrective Maintenance

2211(4): Training of Aircrew to Enter a Cockpit Containing Aircraft Assisted Escape Systems (AAES)

Group Air Staff Order
2211(1)

Authorization of Aircrew to Carry Out Flight Servicing

2211(1) Aircrew required to carry out Flight Servicing **shall** be authorized and competent.

Acceptable Means of Compliance
2211(1)

Authorization of aircrew to carry out flight servicing

1. Qualified pilots, and selected aircrew, serving in flying appointments who are required to flight service **should** be trained and examined annually in their aircraft's flight servicing schedule, or equivalent civil procedures, including Before Flight, After Flight and Turnaround procedures.
2. The DDH **should** ensure that a formal record of authorization is maintained in accordance with MAP-01 Chapter 4.7.1.
3. Aircrew **should** be certified on F4124, or equivalent, as competent to sign the appropriate maintenance documents in accordance with A101/2001-5B1 or equivalent.
4. Aircrew **should** retain a copy of F4124, or equivalent, for inspection when required.

Guidance Material
2211(1)

Authorization of aircrew to carry out flight servicing

5. Nil.

Group Air Staff Order
2211(2)

Authorization of Aircrew to Carry Out Maintenance Work

2211(2) Aircrew required to carry out a specific range of preventative and corrective maintenance activities pertinent to the type / mark of aircraft or aircraft equipment on which they are qualified **shall** be authorized and competent.

**Acceptable
Means of
Compliance
2211(2)**

Authorization of aircrew to carry out maintenance work

6. The DDH **should** ensure that those aircrew who are required to carry out maintenance work on aircraft are trained and competent and records of authorization are kept in accordance with the requirements of RA 2211(2).

**Guidance
Material
2211(2)**

Authorization of aircrew to carry out maintenance work

7. Nil.

**Group Air
Staff Order
2211(3)**

In-Flight Corrective Maintenance

2211(3) In-Flight corrective maintenance **shall** only be carried out at the specific request of the Aircraft Commander and **shall** be limited in scope.

**Acceptable
Means of
Compliance
2211(3)**

In-flight corrective maintenance

8. The DDH **should** ensure that In-Flight corrective maintenance is conducted and recorded in accordance with the requirements of RA 2211(3).

**Guidance
Material
2211(3)**

In-flight corrective maintenance

9. Nil.

**Group Air
Staff Order
2211(4)**

Training of Aircrew to Enter a Cockpit Containing Aircraft Assisted Escape Systems (AAES)

2211(4) Aircrew who require access to a cockpit containing AAES **shall** be appropriately trained.

**Acceptable
Means of
Compliance
2211(4)**

Training of aircrew to enter a cockpit containing Aircraft Assisted Escape Systems (AAES)

10. The DDH **should** ensure that the appropriate training is conducted for the particular aircraft type and cockpit prior to first entry, and 6-monthly thereafter. All training **should** be recorded on appropriate auditable training documents.

**Guidance
Material
2211(4)**

Training of aircrew to enter a cockpit containing Aircraft Assisted Escape Systems (AAES)

11. RA 4600 - Aircraft Assisted Escape Systems - Safety Precautions
12. MAP-01- Manual of Maintenance and Airworthiness Practices - Chapter 13.1.

GASO 2220 – Maintenance Test Flights

Rationale *Maintenance Test Flights (MTFs) and Partial Test Flights (PTFs) are conducted to check the overall performance or handling qualities of an aircraft or airborne equipment and to perform diagnostic analysis. This implies an increased risk associated with unserviceabilities and, therefore, to conduct a MTF/PTF requires specific qualifications and competency.*

Contents **2220(1): The Flight Test Schedule (FTS)**
2220(2): Aircrew Authorization for MTF/PTF

Group Air Staff Order **The Flight Test Schedule (FTS)**

2220(1)

2220(2) Flight Testing **shall** be carried out in accordance with the FTS and **shall** be appropriately programmed.

Acceptable Means of Compliance
2220(1)

The Flight Test Schedule (FTS)

1. DDHs **should** ensure that an MTF / PTF is conducted in accordance with the FTS and the requirements of RA 2220(1).

Guidance Material
2220(1)

Additional guidance

2. RA 4051 - Flight Testing of Aircraft.
3. MAP-01 - Manual of Maintenance and Airworthiness Processes - Chapter 2.2.

Group Air Staff Order
2220(2)

Aircrew Authorization for MTF / PTF

2220(1) The DDH **shall** nominate suitably qualified pilots, publish SQEP requirements and maintain a record of all SQEP pilots who are authorized to conduct MTF / PTF in accordance with the requirements of RA 2220(2).

Acceptable Means of Compliance
2220(2)

Aircrew authorization for MTF / PTF

4. **Nomination of SQEP pilots for Unit Test Pilots (UTP) duties.** The DDH **should** nominate suitably qualified pilots, publish SQEP requirements and maintain a record of appropriately qualified SQEP pilots to undertake MTF / PTF. Only nominated UTP and Flight Test Pilots **should** fly MTF / PTF.

Training and currency

5. **UTP training.** UTPs **should** undergo a formal syllabus of training prior to undertaking UTP duties as Aircraft Commander; this **should**

comprise airborne, simulator (not applicable to 2 FTS) and ground school training, and should be delivered by a current UTP.

6. **UTP currency.** Where a previously-qualified UTP has lapsed currency, for example through long-term absence or illness, then the Sqn Cdr / Flt Cdr / Chief Pilot **should** consider additional training prior to the next MTF / PTF sortie.

Supervision and conduct of MTF / PTF

7. The DDH **should** ensure that UTP activity is appropriately supervised by a Sqn Cdr, Flt Cdr, or approved Contractor and specify in local Flying Orders the process and limitations by which MTF / PTF are conducted for the aircraft types within their AoR.

Guidance Material 2220(2)

Definition of MTF / PTF

8. **MTF.** A MTF is conducted to confirm the performance and serviceability of an aircraft and will encompass the full FTS.

9. **PTF.** A PTF is conducted to confirm the performance and serviceability of an aircraft related to specific maintenance activity. The content of the PTF will involve selected elements of the FTS as required.

GASO 2301 – Responsibility for an Air System

Rationale *When an aircraft is released to and from flying operations or has a flying requirement or taxi check raised post maintenance, transfer of custody and responsibility is required to ensure an auditable record exists.*

Contents

2301(1): Transfer of Custody of Air Systems

2301(2): Flying Requirements Post Maintenance

2301(3): Aircraft Acceptance Checks

2301(4): Exceeding Parameters and Hazardous Incidents

Group Air Staff Order
2301(1)

Transfer of custody of air systems

2301(1) Custody of, and responsibility for, an aircraft **shall** transfer to the aircraft commander from the time the acceptance certificate is signed until the after-flight declaration is completed.

Acceptable Means of Compliance
2301(1)

Transfer of custody of air systems

1. See RA 2301(1).

Guidance Material
2301(1)

Transfer of custody of air systems

2. Nil.

Group Air Staff Order
2301(2)

Flying requirements post maintenance

2301(2) The aircraft commander **shall** familiarize himself with any flying requirements or taxi Checks raised as a result of maintenance conducted prior to flight.

Acceptable Means of Compliance
2301(2)

Airborne Checks (AC)

3. An AC is an engineering requirement not covered by the Flight Test Schedule (FTS). All instructors and staff pilots qualified and current on type may be authorised to conduct airborne checks, including as part of instructional sorties if required. ACs may be conducted during routine flying, with an additional requirement for the Aircraft Commander to receive a briefing from qualified engineering personnel on the conduct and implications of the specific check. The authorization sheets **should** be suitably annotated (e.g. 'Airborne Check' as briefed). The AC **should** precede the instructional portion of the sortie if conducted as part of an instructional sortie and, on satisfactory completion of the AC, the sortie may continue at the discretion of the aircraft commander. The following additional limitations **should** apply on Inverted Flight Checks:

- a. The minimum altitude for an inverted flight check is 5000ft AGL / AMSL, 3000ft AGL / AMSL for Tutor aircraft.
- b. The instructional portion of the sortie **should** continue only if the nominated loose article is recovered.

Taxi checks

4. A taxi check is an engineering requirement not covered by the FTS. Any qualified pilot, current on type, may be authorized to conduct a taxi check which must be properly recorded on the authorization sheet. A satisfactory taxi check may precede an airborne sortie in accordance with engineering regulations in MAP-01. The taxiing of jet and turboprop aircraft other than for flight (e.g. brake check, compass swing) **should** be conducted in accordance with the Release to Service, at the lightest weight practicable, the slowest speed practicable and over an appropriate distance for the minimum time commensurate with the task. Additionally:

- a. The crew **should** be specifically briefed and authorized for the task; the authorization sheets **should** be suitably annotated (e.g. 'Brake Check' or 'Compass Swing' as briefed).
- b. The aircraft commander **should** read and sign the aircraft's F700 or civilian equivalent / Aircraft Technical Log.
- c. If necessary, the sortie content **should** be agreed between the relevant engineering staff, the authorizing officer and the crew.

Ground runs

5. A ground run **should** be conducted in accordance with local Flying Orders.

Guidance
Material
2301(2)

Flying requirements post maintenance

6. RA 2220

Group Air
Staff Order
2301(3)

Aircraft acceptance checks

2301(3) The aircraft commander **shall** ensure that all necessary acceptance checks (walk-round) are carried out before flight.

Acceptable
Means of
Compliance
2301(3)

Aircraft acceptance checks

7. See RA 2301(3).

Guidance
Material
2301(3)

Aircraft acceptance checks

8. Nil.

**Group Air
Staff Order
2301(4)****Exceeding parameters and hazardous incidents**

- 2301(4) The aircraft commander **shall** inform the responsible maintenance organization when an aircraft in their custody has been exposed to an event that might adversely affect its serviceability.

**Acceptable
Means of
Compliance
2301(4)****Exceeding parameters and hazardous incidents**

9. See RA 2301(4).

**Guidance
Material
2301(4)****Exceeding parameters and hazardous incidents**

10. RA 2301(4) GM provides examples of 'events' that might be considered as adversely affecting an aircraft's serviceability.

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GASO 2302 – Responsibilities in the Air

Rationale *Aircrew need to be accountable for their conduct when flying in order to minimize the inherent hazard of flying operations as much as possible. Responsibilities in the air are prescribed in regulations, orders, instructions and law.*

Contents **2302(1): Responsibilities in the Air**

**Group Air
Staff Order
2302(1)**

Responsibilities in the air

2302(1) All aircrew **shall** ensure that the mission, sortie or task, for which they have been authorized, is executed in a manner that minimizes the risk and hazards to the aircraft, its occupants, ground crew, other airspace users or general public over which such aircraft are flown.

**Acceptable
Means of
Compliance
2302(1)**

Responsibilities in the air

1. **Staff aircrew and students.** The DDH **should** ensure that the requirements of RA 2302(1) are fulfilled.
2. **Minimum crew.** The DDH **should** specify in local Flying Orders the minimum crew to be carried in each type and/or mark of aircraft within their Area of Responsibility.
3. **Seating.** The DDH **should** specify in local Flying Orders the primary seating plan for each type and / or mark of aircraft within their Area of Responsibility including considerations for Aircrew Instructors, CFS Trainees, Simulated Instrument Flying Safety Pilots, AEF Pilots, Non-Handling Persons (as briefed by the Aircraft Commander) and Crewmen.
4. **Compliance with the ANO.** Military aircrew flying civil-registered aircraft should comply with the ANO in particular Rules of the Air Regulations. Military aircrew should be aware that the CAA (under CAP 393 Part 6) may prosecute individuals who are in breach of the ANO and that, where such a breach is deliberate or reckless, the MOD is unlikely to provide defence funding.
5. **Changes of aircraft commander.** Changes of aircraft commander **should** only be authorized and effected on the ground. The following local requirements apply:
 - a. **Prefect and Tutor.** The ab-initio trainee pilot's first solo on type **should** normally be authorized in advance; however, the authorizing officer may verbally authorize a first solo on type where the required standard of proficiency has been reached earlier than anticipated and pre-authorization was not completed.
 - b. **Glider.** An ab-initio trainee pilot's first solo does not need to be authorized in advance.
 - c. **RW.** Changes of aircraft commander between QHIs and / or trainee QHIs, current on type may be affected on the ground or in the

air. Positive statements relinquishing and assuming captaincy **should** be made.

6. **Lookout and monitoring of aircraft systems.** All members of the crew **should** contribute to the safety of the aircraft. If at any time a crew member considers that the safety of the aircraft is, or is likely to be, jeopardised, he **should** advise the aircraft commander accordingly and, if necessary, offer specific guidance to avoid the hazardous situation.

**Guidance
Material
2302(1)**

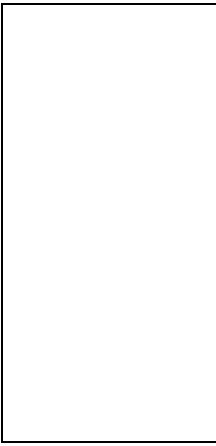
Responsibilities in the air

7. **Guidance on Situational Awareness (SA) maintenance and manoeuvre warnings.** When flying in a fast jet training aircraft, handling and non-handling aircrew **should** be aware of the possibility of high g manoeuvring at any time (medium level, low-level or transiting from one to the other). Furthermore, individuals **should** be aware that they have individual responsibility to be as ready as possible for such manoeuvring. In order to be prepared fully and to reduce the likelihood of disorientation and / or injury, it is essential to maintain good SA of the aircraft's position, energy, attitude and projected flightpath. In order to maintain good SA, aircrew **should** be heads up and looking out of the aircraft to the maximum extent possible. When not handling the aircraft, aircrew **should** avoid going head down (to look at maps, write notes, adjust instruments etc.) for longer than is absolutely necessary. If extended in-cockpit tasks are required, they **should** be interrupted with visual lookout in order to allow good SA to be maintained. If an extended period of 'heads-in' is unavoidable this **should** be called to the handling pilot. The handling pilot would then be aware that the other occupant may not have a good body position to cope with unexpected g. This would then need to be considered when deciding on the aggressiveness of manoeuvring to be flown and the need for a warning to be given.

8. When deciding upon the need for a warning, manoeuvres could be defined as follows:

a. **Emergency manoeuvres.** Required to ensure the immediate safety of the ac. Due to the urgent nature of an emergency manoeuvre, it would be unreasonable to expect a warning to be given in such circumstances. Indeed, delaying an emergency manoeuvre in order to provide a warning could increase the risk of injury.

b. **Expected manoeuvres.** Navigational turns, valley flying and evasion counters are examples of low-level manoeuvres, which **should** be expected due to planning, flightpath anticipation or R/T calls respectively. At medium level, the anticipation of manoeuvres relies heavily on the profile of the sortie, the position of other formation ac (ACT, tailchasing, re-joins etc) or routine in-cockpit communication (such as description of next planned event). In these circumstances, a specific warning of a manoeuvre **should not** generally be required. Non-handling aircrew **should** have sufficient SA to be aware of the impending manoeuvre and ensure that they achieve a suitable body position prior to initiation.



c. **Unexpected manoeuvres.** Unexpected manoeuvres are those which do not fall into either of the above 2 categories. If an unexpected manoeuvre is about to be flown for which the non-handling aircrew is likely to be unprepared, especially if a 'Heads-in' call has been made, then a warning **should** be given, when conditions permit. A simple warning of 'Pulling Left / Right / Up' (as required) may suffice, up to normal manoeuvring g limits (~ 4g); above this level, a call of 'G Coming On' **should** indicate that more g is about to be used and allow the non-handling aircrew the opportunity to prepare by getting the head / neck into a good position and bracing appropriately.

GASO 2305 – Supervision of Flying

Rationale *Across Defence Aviation activities, effective leadership is key to promulgating an active, effective Air Safety ethos. Without Commanders being personally accountable, Air Safety will be compromised; consequently, all flying of UK Military Aircraft or civil aircraft used to deliver military flying training is required to be under the continuous control of a designated Aviation Duty Holder or Accountable Manager (Military Flying) (AM/MF)).*

Contents

- 2305(1): Supervision of Flying**
- 2305(2): Withdrawn incorporated into GASO 2309**
- 2305(3): Withdrawn incorporated into GASO 2309**
- 2305(4): Aircrew Briefing**
- 2305(5): Withdrawn incorporated into GASO 2309**
- 2305(6): Withdrawn incorporated into GASO 2309**
- 2305(T1): Supervision of Cadets**
- 2305(T2): Alcohol, Drugs and Flying – Guidance Only**

Group Air Staff Order 2305(1)

Supervision of flying

2305(1) The DDH **shall** appoint officers to supervise the flying training for which they are responsible and promulgate appropriate Orders detailing their duties.

Acceptable Means of Compliance 2305(1)

Supervision of flying

1. **Local Flying Orders.** The DDH / HoE and / or Sqn / Unit Cdrs **should** issue local Flying Orders appropriate to their establishment and flying units.
2. **Supervisory roles.** The DDH and / or Aerodrome Operator (AO) **should** ensure that appropriate flying supervision is provided to cover flying training requirements.
3. **Supervision of flying training sorties.** Personnel appointed to supervisory or executive posts **should** be suitably competent and qualified. The training courses available and currency requirements are outlined in the Annexes to RA 1440(1).
4. **Terms of Reference (TOR).** The DDH **should** publish in local Flying Orders the TOR and / or responsibilities for personnel within their AoR who have been nominated as flying supervisors.
5. **Combined duties.** The duties of Duty Senior Supervisor (DSS), Duty Authorizer (DA), and Duty Instructor (DI) may be combined; however, in these circumstances, supervisors **should not** fly. Furthermore,

consideration **should** be given to the location of the flying supervisor when ab-initio solo student flying is taking place.

Aerodrome Rescue and Firefighting (ARFF) Services.

6. MOD Regulations For Aerodrome Rescue and Firefighting Services (JSP 426 Vol 3 Leaflet 2 dated April 16) defines the requirements for ARFF services including Levels of Protection, Aerodrome Response, Aerodrome Operations and Risk / Hazard Assessment Guidance and can be found here: [ARFF Response Standards](#) The HoE / DDH **should** ensure that appropriate ARFF cover is maintained during flying training operations. The DDH **should** also specify crash categories required for aircraft types mindful of singleton / stream take-off / landing, close formation take-off / landing and the number of persons on board (POB); where necessary, a Hazard Assessment **should** be conducted in accordance with JSP 426 Vol 3 Leaflet 2 Annex A. For RW operations there will be occasions when there is no ARFF cover at some HLS.

Detachments and landaways

7. **Detachment commander.** The Sqn Cdr **should** nominate a suitably qualified detachment commander who is responsible for the safe conduct of the detachment.

8. **Operation away from normal operating base.** Supervisors **should** apply the same Flying Phase criteria when planning and conducting flying operations away from their normal operating base.

9. **Flights to and from the UK.** With the exception of planned syllabus flying training sorties which are a DDH responsibility, AHFT's approval **should** be sought for any flights outside the UK FIR boundary. For all flights planned to land within or overfly foreign national airspace or territory, the Aircraft Commander **should** comply with RA 2305(1) and DDH requirements.

Trainee solo flying

10. The DDH **should** stipulate procedures and restrictions to ensure appropriate supervision of trainee solo flying within their AoR.

Recreational flying

11. For safety reasons, to reduce the possibility of the use of incorrect flying techniques during military flying training, all recreational flying (e.g. FW, RW and Gliding) is prohibited for all ab-initio students during the flying phase of flying training courses. In exceptional circumstances, DDH requests for waivers **should** be staffed through SO(ODH).

Supervisory checks

12. **Supervisory checks.** The DDH **should** promulgate the requirements for flying Supervisory Checks within their AoR. Unless otherwise stated, if an individual loses currency on any of the supervisory checks they **should not** fly as Aircraft Commander until the appropriate check sortie has been completed successfully.

Control of flying - weather minima and limitations.

13. **Airborne weather checks.** There is no requirement to conduct routine airborne weather checks; however, if there is any doubt as to the suitability of the weather, a weather check **should** be flown before trainee solo flying is authorized.
14. **Flying phases.** The DDH **should** promulgate the Flying Phase Chart in local Orders. Supervisors **should** notify the Flying Phase at the first daily briefing. Subsequent phase changes **should** be notified to sqn operations, Flight Line control and airborne aircraft (including DATIS if available). When weather conditions allow, an appropriate Flying Phase **should** be declared irrespective of whether flying is planned or possible.
15. **Minimum Runway Visual Range (RVR) for approach.** The absolute limits for military aircraft to conduct an approach are 550m (FW) and 300m (RW); however, more restrictive limits apply to civil registered aircraft and **should** be stated in DDH local Flying Orders.
16. **Training approaches.** 22 Gp aircraft may conduct training approaches with the intention to conduct a missed approach/go around in any weather conditions; however, civil regulations require appropriate approach minima to exist for any approach continued below 1000ft.
17. **Maximum wind speeds.** The DDH **should** promulgate in local Flying Orders the maximum wind speeds for aircraft within their AoR. The DDH may permit operations based on actual rather than forecast wind speeds.
18. **Gliding weather limitations.** Comdt 2 FTS **should** promulgate specific weather limitations for gliders taking into account Cadet Flying, Ungraded and G2 Pilots, G1 Pilots and Instructors.

Curtailment of flying in adverse weather conditions

19. **Sea state 5-6.** Sea state 5-6 reflects the point at which use of a single seat dinghy becomes impracticable; consequently, for single seat dinghy-equipped single-engine aircraft, training flights **should not** take place over the sea when Sea State 5-6 (as per Beaufort Scale) or higher is actual or forecast during the flying period. The DDH may permit transits to be conducted over areas of forecast or actual Sea State 5-6 or greater; however, when transiting through areas where the sea state is likely to exceed Sea State 5-6, aircraft **should** be flown at medium or high level where possible.
20. **Maximum wind speeds - DDH discretion.** When necessary the DDH may permit operations when the surface wind exceeds the maximum wind speeds for aircraft within their AoR but is within the limits of the RTS.

Selection of diversion airfields.

21. **General considerations.** Flying Supervisors **should** ensure that alternate landing options are available throughout the period of flight to account for deteriorating weather or runway obstruction.
22. **Civilian airfield met observations.** The requirement for civilian airfield met observations to change is considerably different to that at military airfields. Therefore, Supervisors **should** satisfy themselves (in close consultation with the Met Office) that the worst possible visibility and cloud base at a civilian diversion, throughout the period, meets the

diversion requirements and does not fall below the airfield's approach minima or the pilots' Instrument Rating limitations.

23. **Glider aircraft - outside of gliding range of base airfield.** For glider sorties outside gliding range of the base airfield, the Aircraft Commander should monitor the base airfield's weather. An alternative landing site should be selected before flight in case the base airfield prevents a return.

24. **Landaway flights.** Authorizing Officers **should** ensure that diversion airfields are available in accordance with the weather conditions at the destination airfield.

Fuel planning

25. **Minimum Fuels / Fuel on the Ground (FoG).** Flying Supervisors **should** specify minimum fuels / FoG appropriate to prevailing meteorological conditions and the availability of suitable diversion airfields. Aircrew **should** apply appropriate fuel planning criteria in order to comply with the DSS / Duty Aircrew Officer (DAO) promulgated fuel minimums. Authorizing Officers **should** ensure that sufficient fuel is carried including reserves.

26. **Landaway flights.** The Authorizing Officer **should** ensure that a FoG is nominated for landaway flights.

27. **Minimum landing fuel.** Except in an emergency, pilots **should not** remain airborne with less than the promulgated minimum landing fuel for their aircraft type. See also GASO 2350(T1).

28. **Aircraft fuel contents.** Aircrew **should** be familiar with fuel gauge inaccuracies and unusable fuel quantities in their aircraft. Indicated fuel contents **should** be checked regularly against expected fuel consumption.

29. **Contingency fuel planning.** The Aircraft Commander **should** ensure that contingency fuel, where appropriate, is factored into fuel/flight planning calculations.

Prohibited manoeuvres

30. Aircrew **should** operate the aircraft in accordance with the Release to Service (RTS), or civilian equivalent, and DDH local Flying Orders.

31. **22 Gp helicopters.** The following manoeuvres are prohibited in 22 Gp helicopters:

- a. **Aerobatics.** All forms of aerobatics, torque turns and deliberate entry into vortex ring.
- b. **Pedal turns.** Pedal turns, except when specifically authorized for display flying.
- c. **Practise double engine-off landings.**
- d. **Informal Air Combat Training (ACT).** ACT includes simulated air-to-air / air-to-ground combat, bouncing and dog-fighting between individuals or formations. See also GASO 2327(1).

Crew composition – couples with dependent children

32. **Couples with dependent children.** Couples (married or unmarried) with dependent children **should** only fly together in the same aircraft when authorized by the DDH or their nominated deputy. Such authorization **should** only be granted in exceptional circumstances.

**Guidance
Material
2305(1)**

Supervision of flying

33. **Supervisory roles.** Supervisory roles may include: Duty Senior Supervisor (DSS); Executive Flying Supervisor (EFS), VGS Duty Exec (VGSDE); Duty Pilot (DP) / Duty Aircrew Officer (DAO); Duty Authorizer (DA); Duty Instructor (DI); VGS Duty Instructor (DI), dependent on the requirements of the unit.

34. **Take-off weather minima.** For military registered aircraft, the authorizing Officer may permit take-offs provided:

- a. **Amber Instrument Rating.** The weather at the departure airfield does not require flight on instruments below a height equivalent to the pilot's approach minima.
- b. **White Instrument Rating.** The weather at the departure airfield is a minimum of 200ft cloud base and 600m met visibility.
- c. **Green Instrument Rating.** The visibility is sufficient for the pilot to take-off by visual reference with the exception of Phenom T1 ops which is 500m.

The Tutor should adhere to EASA regulations.

35. **Definitions.** The following definitions apply:

- a. **Detachment.** A detachment is a pre-arranged deployment of aircraft, crews and (in some cases) ground support personnel to a location other than the parent base or relief landing ground (RLG) where crews are given authority to run their own flying programme. A trained¹ Detachment Commander (DETCO) **should** be appointed and an Operation Order (OPORD)² is required for all detachments except short notice detachments.
- b. **Short-notice detachments.** A short-notice detachment is a detachment arranged within 48 hours of departure. An operation order is not required except in the case of overseas flights.
- c. **Landaway.** A landaway is a sortie to another location (not an RLG) for which the task is defined and authorized in advance. Several landaways to the same location may coincide but they will not comprise a detachment if aircraft activities are the responsibility of individual Aircraft Commanders. However, if a landaway extends overnight and includes multiple aircraft or multiple crews on the aircraft, the landaway becomes a detachment.

¹ A template for the Training Requirement for Detachment Commanders can be found in the DFT Forms Folder at:
http://defenceintranet.diif.r.mil.uk/Organisations/Orgs/RAF/Organisations/Orgs/HQAirCommand/Pages/DFT_Forms.aspx

² An example OPORD can be found in the DFT Forms Folder at:
http://defenceintranet.diif.r.mil.uk/Organisations/Orgs/RAF/Organisations/Orgs/HQAirCommand/Pages/DFT_Forms.aspx

36. **FoG.** FoG is the minimum fuel at touchdown at the planned destination airfield (generally the normal operating base), which will provide an allowance over Minimum Landing Fuel for unplanned diversion or hold-off, so as to ensure that aircraft have no less than Minimum Landing Fuel on final landing.

37. **FoG for VMC conditions at the diversion.** When weather conditions indicate that a VMC recovery would be possible at the nominated diversion airfield, the promulgated FoG **should** be sufficient to allow a transit from go around at the planned destination airfield to land from a visual recovery at the nominated diversion airfield with Minimum Landing Fuel.

38. **FoG for IMC conditions at the diversion.** When weather conditions indicate that an IMC recovery at the nominated diversion airfield is likely or mandatory, the promulgated FoG must be sufficient to allow pilots to transit from a go around at the planned destination airfield to the nominated diversion airfield, carry out an instrument approach and land with Minimum Landing Fuel. In determining IMC recovery fuels, supervisors will make due allowance for the following:

- a. Pilot's experience and Instrument Rating.
- b. Type of recovery to be flown at the planned weather diversion.

**Group Air
Staff Order
2305(2)**

Embarked aviation operations

2305(2) Withdrawn – incorporated into GASO 2309.

**Acceptable
Means of
Compliance
2305(2)**

Embarked aviation operations

39. Withdrawn – incorporated into GASO 2309.

**Guidance
Material
2305(2)**

Embarked aviation operations

40. Withdrawn – incorporated into GASO 2309.

**Group Air
Staff Order
2305(3)**

Aircraft limitations

2305(3) Withdrawn – incorporated into GASO 2309.

**Acceptable
Means of
Compliance
2305(3)**

Aircraft limitations

41. Withdrawn – incorporated into GASO 2309.

**Guidance
Material
2305(3)**

Aircraft limitations

42. Withdrawn – incorporated into GASO 2309.

**Group Air
Staff Order
2305(4)**

Aircrew briefing

2305(4) The DDH **shall** ensure that aircrew conduct appropriate flight planning and aircrew briefing prior to the conduct of flying training sorties.

**Acceptable
Means of
Compliance
2305(4)**

Flight planning and aircrew briefing

43. **Briefing topics.** Flight planning and aircrew briefing **should** be conducted in accordance with the requirements detailed in RA 2305(5). In addition to the required briefing topics, aircrew **should** consider any Royal Flights and Royal Low Level Corridors (RLLC) that may affect the sortie.

44. **Types of briefing.** The DDH **should** ensure that provision is made to allow all personnel undertaking or supporting flying training operations to attend planning and sortie-specific briefings as appropriate. These may include:

- a. **Formal briefs.** Where practicable, all aircrew programmed or expecting to fly **should** attend a formal Met and ATC Brief. These briefings **should** be given by a Met Officer and ATCO respectively; however, briefings may be conducted by individuals (including supervised trainees) using information provided by the Met Office and ATC.
- b. **Individual briefs.** Authorizing Officers **should** ensure that Aircraft Commanders who have been unable to attend a formal brief are correctly briefed on the met conditions and ATC requirements before flying (self-authorizing Aircraft Commanders may self-brief).
- c. **Night flying briefings.** Night flying briefings **should** be conducted in accordance with DDH local orders for those aircraft that undertake night flying training.
- d. **The 'Out-Brief'.** Following authorization, and prior to leaving the Ops Room to fly, Aircraft Commanders or, where appropriate, the Duty Authorizer, **should** conduct an Out-Brief. Ab-Initio trainees **should** be supervised by a flying instructor. DDHs **should** ensure that an appropriate 'Out-Brief' format is available and displayed prominently at the place where the authorization takes place.
- e. **The 'In-Brief'.** Following flight and prior to leaving the Ops Room to debrief, the Aircraft Commander or, where appropriate, Duty Authorizer, **should** conduct an In-Brief. Ab-Initio trainees **should** be supervised by a flying instructor. DDHs **should** ensure that an appropriate 'In-Brief' format is available and displayed prominently at the place where authorization takes place.

Flight planning and aircrew briefing facilities

45. **Deconfliction.** All sortie routings (including working airspace outside of a danger area) and timings should be entered onto the Centralised Aviation Data Service (CADS) prior to flight, iaw the direction in the UKMLFHB 06.02.01, with the following exceptions:

17. Where a sortie is entirely within CAS, an ATZ / MATZ (including published RLG Transits where they temporarily depart an ATZ / MATZ), or other segregated airspace where deconfliction procedures are extant. In addition, sorties departing an ATZ / MATZ en route to joining CAS (and vice versa) are not required to be entered on CADS.

18. Transitory height changes for PFL elements of Test, Composite, or LL Navigation sorties, where early knowledge of the event would detract from training benefit or test conditions.

19. Day RW sorties that remain entirely within the RAF Shawbury DUA³ and the Shawbury Instrument Flying Training Boxes. DDH 1 FTS should ensure a means of internal deconfliction is in place for the RAF Shawbury DUA.

46. Units are to ensure that information in CADs is corrected for any changes to the sortie prior to take off. In extremis, if CADS is not available, but other means of deconfliction can be employed, and subject to DDH agreement, sorties may proceed without use of CADS.

47. **Operations rooms.** The DDH **should** ensure that flight planning and aircrew briefing facilities are made available in accordance with the requirements RA 2305(4).

48. **Planning publications.** In addition, the following publications **should** be readily available in their latest updates either in hard or soft copy:

- a. MRP FLY 2000 and ATM 3000 Series.
- b. Manual of Military Air Traffic Management (MMATM).
- c. GASOs.
- d. Local Flying Order Books.
- e. Type-specific Flying Orders and Guidance.
- f. Military Aeronautical Planning Documents.
- g. Crash and Disaster Plan.
- h. Sqn Post-Crash / Incident Aide Memoire.

49. **Flight planning displays.** The following flight planning displays **should** be considered:

- a. Charts showing local NOTAMs, navigation warning and avoidance areas.
- b. Royal Flights / Royal Low Level Corridors (RLLC).
- c. Stop Press.

³ As defined in the RAF Shawbury DAM, Annex UU para 1.

- d. Flying Phase Chart.
- e. Wind Limits for take-off and landing.
- f. Diagrams showing the layout of the base airfield and any other local airfield in frequent use.
- g. Diagrams depicting EFATO options for each active runway at the base airfield.
- h. Climb-out and let-down lanes for local airfields.
- i. Operating Sectors.
- j. Deconfliction Procedures.

**Guidance
Material
2305(4)**

Flight planning and aircrew briefing

50. STANAG 3052 - Aeronautical Briefing Facilities.

**Group Air
Staff Order
2305(5)**

Air exercise planning and airspace integration

- 2305(5) Withdrawn – incorporated into GASO 2309.

**Acceptable
Means of
Compliance
2305(5)**

Air exercise planning and airspace integration

51. Withdrawn – incorporated into GASO 2309.

**Guidance
Material
2305(5)**

Air exercise planning and airspace integration

52. Withdrawn – incorporated into GASO 2309.

**Group Air
Staff Order
2305(6)**

Taxiing of aircraft

- 2305(6) Withdrawn – incorporated into GASO 2309.

**Acceptable
Means of
Compliance
2305(6)**

Taxiing of aircraft

53. Withdrawn – incorporated into GASO 2309.

**Guidance
Material**

Taxiing of aircraft

54. Withdrawn – incorporated into GASO 2309.

2305(6)**Group Air
Staff Order
2305(T1)****Supervision of cadets**

2305(T1) The HoE and / or DDH **shall** specify in local Orders the provisions for the safety and supervision of cadets whilst they are on unit.

**Acceptable
Means of
Compliance
2305(T1)****Supervision of cadets**

55. The HoE and / or DDH **should** be responsible for the safety and supervision of all cadets at all times while they are on their unit. Adults or senior cadets escorting parties of visiting cadets come under the control of the duty executive from their arrival until their departure from the unit.

**Guidance
Material
2305(T1)****Supervision of cadets**

56. Additional guidance can be found in:
- a. RAF GAI 1026 – RAF Support to the Air Cadet Organisation (ACO).
 - b. GASO 2340(8) – Cadet Flying.

**Group Air
Staff Order
2305(T2)****Alcohol, drugs and flying – guidance only**

2305(T2) All personnel **shall** be fit for duty at the commencement of their Crew Duty Period (CDP).

**Acceptable
Means of
Compliance
2305(T2)****Alcohol and flying**

57. All personnel involved in flying duties **should** be fit for duty at the commencement of their CDP. In the context of this order fit for duty refers to adherence to the maximum alcohol limits and an absence of self-medication. The CDP commences at the time of reporting to work, or such time as they adopt a readiness posture that may result in being required to report to work.

58. The Armed Forces Act 2011 (AFA 11) details absolute breath, blood and urine limitations that apply to personnel engaged in Safety Critical Duties. The AFA has introduced 2 relevant limits of alcohol permitted dependent on the criticality of the duty being undertaken. AFA 11 definitions of what constitutes a Safety Critical Duty and the maximum alcohol level applicable to that duty is additionally contained in DIN 2013DIN01-212 with further information available in JSP 835 Alcohol and Substance Misuse and Testing and JSP 830 Manual of Service Law.

59. All personnel involved in safety critical duties, or supporting flying operations **should not** be suffering from the effects or after effects of alcohol during their CDP. Individuals remain responsible for ensuring that they comply with the relevant limits as defined in the AFA.

**Guidance
Material
2305(T2)****Alcohol, drugs and flying**

60. Additional guidance can be found in:

- a. [The Armed Forces Act 2011 \(AFA 11\).](#)
- b. [DIN 2013DIN01-212.](#)
- c. [JSP 835 Alcohol and Substance Misuse and Testing.](#)
- d. [JSP 830 Manual of Service Law.](#)

GASO 2306 – Authorization of Flights

Rationale *Authorization is the authority given to an Aircraft Commander to fly a particular aircraft on a specified mission or duty. It provides an immediate level of assurance and direction.*

Contents **2306(1): Authorization of Flights**

Group Air Staff Order
2306(1)

Authorization of Flights

2306(1) All flights **shall** be authorized. The DDH **shall** promulgate a list of individuals who have Powers of Authorization, by name or appointment, and any limitations that apply. Flights **shall** normally be authorized in writing and the Aircraft Commander **shall** signify that he fully understands the mission or duty to be carried out.

Acceptable Means of Compliance
2306(1)

Powers of authorization

1. **Powers of authorization.** The DDH and / or Stn Cdr (as appropriate) have full powers of authorization to achieve the flying task. Comdt CFS has full powers of authorization for CFS Exam Wg and HQ CFS Air Staff Officers.
2. **Delegation of powers of authorization.** The DDH / Stn Cdr **should** delegate powers of authorization to subordinates according to rank, position, qualifications and experience as required to achieve the task.
3. **Personnel who hold powers of authorization.** The DDH **should** promulgate a list of individuals who have powers of authorization, by name or appointment, and any limitations that apply. RA 2306(1) details the Duties of the Authorizing Officer.
4. **Central Flying School (CFS).** CFS Exam Wing examiners may authorize their own flights within the terms of GAI 2042 and for SCT purposes provided that the examiner is current on type and has read and signed all relevant Station / Unit Flying Orders.

Methods of authorization

5. **Written authorization.** Authorization **should** normally be given in writing and the aircraft commander **should** signify that he understands the mission or duty by initialling the appropriate authorization record.
6. **Verbal authorization.** Exceptionally, if the aircraft commander is unable to carry out the procedure for written authorization, verbal authorization **should** be given instead.
7. **Electronic authorization.** Electronic authorization **should** only be used where it is at least as robust as written authorization and, in particular, it **should** be capable of immediate audit and hard copy reproduction.
8. **Authorization details.** All exercises to be undertaken in 22 Gp aircraft **should** be entered in the authorization sheet prior to the sortie. Furthermore, if an omission is discovered whilst airborne, the aircraft commander **should not** complete the non-authorized event unless he has

contacted Sqn Ops to ensure that the required authorization is entered in the authorization sheet. Specifically, the authorizing officer **should** ensure that the following procedures are followed:

- a. With the exception of those serials implicit in all sorties, which **should** be detailed in the local Flying Orders and instructions, the details of each sortie **should** be recorded in the authorization sheet prior to flight using one, or a combination of, the following:
 - (1) Syllabus sortie numbers.
 - (2) Specific Instructional Spec exercise reference number.
 - (3) Unambiguous wording.
 - (4) A code in which case the decode list **should** be promulgated in local Orders and displayed at the position where authorization takes place.
 - b. IA / FE sorties **should** refer to a specific syllabus sortie or exercise.
 - c. The abbreviations SCT (Staff Continuation Training); GH (General Handling); IF (Instrument Flying); Form (Formation); and LL (Low Level) (with appropriate caveats) are used for SCT sorties. A list detailing the SCT abbreviations and exercises **should** be promulgated in local Flying Orders and displayed at the position where authorization takes place.
 - d. The term 'as briefed' is entered alongside the exercise number when a collective briefing has been carried out.
 - e. The MSD / minimum AGL / MSC (iaw RA2330) and LFA designation are stated for all sorties conducted below 2000ft. ~~► LFA bookings and annotation in authorization sheets are not required for light aircraft or helicopters conducting practice forced landing exercises below 500ft.~~ Light propeller driven aircraft and rotary wing aircraft are considered to be low flying when operating below 500 ft. LFA bookings and annotation in authorization sheets are therefore required for all light aircraft or helicopter operations below 500 ft AGL including practice forced landing exercises¹. ◀
 - f. Aircraft serial letters and numbers are entered in the authorization or log sheet prior to flight.
 - g. Minimum base and attack heights are specified for ACT, AD and weapons sorties as appropriate.
9. **Attribution of flying hours.** The Sqn Cdr **should** ensure that flying hours are correctly recorded in the authorization sheet.

¹ 1 FTS aircraft operating from RAF Shawbury are only required to comply with this procedure when operating outside their Dedicated User Area (LFA 9).

**Guidance
Material
2306(1)****Authorization of flights**

10. **Attribution of flying hours.** Flying hours are recorded in the authorization sheet as follows:

- a. **Course flying.** Dual and solo syllabus sorties and rear crew functional training sorties.
- b. **Incidental Allowance (IA).** Additional hours flown for reasons not attributable to the trainee's performance (Medical, Weather, Aircraft Unserviceability).
- c. **Flexible Element (FE).** Additional hours flown for reasons attributable to the poor trainee performance.
- d. **Staff Continuation Training (SCT).** Hours flown by staff for flying or instructional practise or testing, including navigator practise. SCT may be claimed during an instructional sortie.
- e. **Other flying.** Hours flown that are neither instructional or SCT, including weather checks, air tests, display activities and transits including aircraft delivery.
- f. **Support flying.** Hours flown as formation lead in support of course flying.
- g. **Task flying.** Hours flown when tasked in support of the front line e.g. Typhoon Affil.

11. **Additional guidance.** Further guidance with respect to authorization can be found at RA 2306(1) GM.

GASO 2307 – Rules of the Air

Rationale

Military Rules of the Air will match, as much as possible, the Standardised European Rules of the Air (SERA¹). However, the UK Air Navigation Order (ANO) states at Article 160(3)(c) and 160(4) that it is lawful for specified provisions of SERA and the civilian Rules of the Air to be departed from to the extent necessary to comply with Military Flying Regulations. Therefore, any differences in the application of the rules resulting from the exemption for military aircrew need to be clearly stated.

Contents**2307(1): Rules of the Air**
**Group Air
Staff Order
2307(1)**
Rules of the Air

2307(1) The Aircraft Commander and / or Handling pilot **shall** follow the Rules of the Air.

**Acceptable
Means of
Compliance
2307(1)**
Rules of the air

1. The DDH **should** ensure that aircrew under their command operate in accordance with the Rules of the Air and the requirements of RA 2307(1).

Avoidance of collisions

2. The DDH **should** specify in local Flying Orders the airfield / airspace procedures to mitigate collision hazards such that they are As Low As Reasonably Practicable (ALARP).

3. **IFF procedures.** IFF offers a level of electronic conspicuity which is an important barrier to Loss of Safe Separation. The ANO permits flight across a range of circumstances without IFF, however, ODH has directed additional restrictions. 22 Gp aircraft **should not** be flown without a serviceable IFF transponder other than in exceptional circumstances. DDHs **should** promulgate in local Flying Orders the circumstances and conditions under which flight is permitted without a serviceable IFF transponder within existing ANO regulations including procedures for failure in flight. The following **should** be considered as a minimum:

- a. Flight permitted if operating the entire sortie 'day VFR' as an element of a standard formation where the IFF transponder would normally be placed in standby and the rest of the formation are operating with serviceable IFF transponders. All aircraft communication systems **should** be fully serviceable.
- b. Flight permitted with the permission of the DDH or nominated individuals, to transit in airspace permitted by relevant national procedures in order to recover the aircraft for repairs to the IFF transponder. The primary radar at both operating and diversion airfields **should** be fully serviceable with no planned maintenance for

¹ Implementing Regulation (EU) No 923/2012 (SERA).

the duration of the sortie and all aircraft communication systems **should** be fully serviceable.

c. This order applies equally for Air Systems fitted with FLARM as the sole means of displayed electronic conspicuity.

4. **Aircraft Collision Avoidance Systems (ACAS).** ACAS (e.g. TCAS, TAS and FLARM) **should** be used where available and operated in accordance with type-specific SOPs and RA 2307(1).

5. **Resolution Advisory (RA) procedures.** TCAS **should** be operated in 'Auto' mode within Controlled Airspace (Classes A-E) and when in receipt of a Deconfliction Service. All RAs **should** be actioned promptly and reported. At all other times it is advised for TCAS to remain in 'Auto' mode and operated in the 'TA Only' mode when inappropriate or nuisance RAs may occur, mindful that a degree of protection will have been lost.

Formation flying

6. **Standard section formations.** Only those standard section formations described in AP3456 are approved. Formation flying **should** be specifically briefed, authorized and flown in accordance with the requirements of RA 2307(1) and type-specific SOPs.

7. **Formation leaders.** The following applies:

- a. A staff pilot **should** act as formation leader only when certified competent by the CI or Sqn Cdr or when supervised by a formation leader in the same formation.
- b. Solo trainees may only lead formations under the supervision of a qualified formation leader flying in the same formation.

8. **Formation composition.** The DDH:

- a. May authorize sorties including formations of up to 9 aircraft.
- b. **Should** seek approval through SO(ODH) to authorize formations of greater than 9 aircraft.
- c. **Should** seek approval through SO(ODH) for formations involving dissimilar aircraft types or non 22 Gp aircraft.

9. **Formation authorization.** The authorizing Officer **should** attend the formation briefing.

10. **Authorizing Officer.** The authorizing Officer:

- a. **Should** ensure the maximum size of trainee close formation sorties is 3 aircraft except at CFS and tactical formations where the maximum is 4 aircraft.
- b. May permit aircraft to participate in larger formations in accordance with Air-to-air Training Rules (ATRs).

11. **Formation aerobatics.** Nominated 4 FTS QFIs may perform SCT close formation aerobatics in accordance with the workup and limitations detailed in the appropriate 4 FTS Orders.

12. **Formation limitations.** The maximum bank angle for all AJT and BJFT syllabus and SCT close formation sorties should not exceed 120°.

13. **Hawk formation at night.** Tactical formation is prohibited at night other than for those elements that allow a minimum of 1000ft vertical separation to be maintained. Comdt 4 FTS **should** specify in local Flying Orders the Hawk T Mk 2 night formation operating limitations.

Tactical flying

14. DDHs with responsibility for the delivery of tactical flying training **should** specify the rules and procedures for tactical flying in accordance with the requirements of RA 2307(1). Tactical flying **should** also be conducted in accordance with local Flying Orders and type-specific tactical flying SOPs.

Safety altitude

15. DDHs **should** issue orders concerning safety altitudes as necessary to ensure the safe navigation of Air Systems within their AOR.

Simulated Instrument Flying

16. Simulated Instrument Flying **should** be conducted under monitored conditions in accordance with DDH local Flying Orders, type-specific SOPs and the requirements of RA 2307(1).

Aircraft external lighting including navigation, landing / taxi and High Intensity Strobe Lights (HISL)

17. **Aircraft external lights.** The DDH **should** promulgate in local Flying Orders requirements for the use of aircraft external lights. This is to inform personnel of the state of an aircraft and to enhance conspicuity during operation, the selection of navigation, landing/taxi lights and HISLs during maintenance or flight operations.

18. Aircraft external lighting including HISLs **should** be operated in accordance with DDH local Flying Orders and RA 2307(1).

Guidance Material 2307(1)

Additional guidance

19. **TCAS.** ATM 3000 provides general guidance on TCAS II operating procedures including actions to be taken in response to a TA or RA and the relevant phraseology.

20. **Formation flying.** Comprehensive formation flying guidance, including the minimum briefing requirements, can be found in type specific Formation Flying SOP and AP3456 Vol 8 Chap 21.

21. [ANO](#).

22. [CAP413](#).

23. The UK Military Low Flying Handbook (UKMLFHB).

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GASO 2309 – Flight Procedures

Rationale *Across Defence Aviation activities, planning any sortie carries a degree of complexity. Without a clear understanding of the risks and hazards involved, aircrew will expose themselves, the Air System and the public to increased risk; consequently, it is the responsibility of all aircrew to ensure that the mission, sortie or task, for which they have been authorized, is executed in a manner that minimizes the risks and hazards to the Air System, its occupants, ground crew, other airspace users or general public over which such Air Systems are flown.*

Contents	2309(1): Aircraft Limitations
	2309(2): Smoking in or near Aircraft
	2309(3): Taxiing of Aircraft
	2309(4): Simulated and Practice Emergencies
	2309(5): Handing Over Control of Aircraft with Dual Flying Controls
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	2309(19): Air Exercise Planning and Airspace Integration
	2309(T1): Military Use of Civil Airfields
	2309(T2): Security
	2309(T3): Night Flying
	2309(T4): Glider, Prefect and Tutor Flying Over Open Water
	2309(T5): Circuit Flying
	2309(T6): Volcanic Ash Cloud (VAC)
	2309(T7): Flight Data Recorders

Group Air Staff Order 2309(1)	Aircraft limitations <p>2309(1) Except in an emergency, the pilot of an aircraft shall not exceed the engine, airframe or handling limitations quoted in the Release to Service (RTS), or civilian equivalent, for the aircraft as reflected in the Air System Document Set (ADS) or civilian equivalent, or, for non-RTS flying operations, the Military Flight Test Permit or Certificate of Usage.</p>
Acceptable Means of Compliance 2309(1)	Aircraft limitations <p>1. Aircraft commanders should operate their aircraft within the RTS and in accordance with RA 2309(1).</p>
Guidance Material 2309(1)	Aircraft limitations <p>2. Nil.</p>
Group Air Staff Order 2309(2)	Smoking in or near Aircraft <p>2309(2) Smoking in aircraft shall be prohibited and, as a precaution against fire, smoking-related items shall not be carried by occupants of, or by personnel working on, UK Military Aircraft or civil aircraft used to deliver military flying training.</p>
Acceptable Means of Compliance 2309(2)	Smoking in or near aircraft <p>3. The aircraft commander should ensure that the requirements of RA 2309(2) are fulfilled.</p> <p>4. Smoking-related items includes vaping devices (eCigarettes) and vaping-related items.</p>
Guidance Material 2309(2)	Smoking in or near aircraft <p>5. DSA03 DLSR – Movement and Transport Safety Regulations – Dangerous Goods Manual.</p> <p>6. Defence Instructions and Notices (DIN).</p>
Group Air Staff Order 2309(3)	Taxiing of aircraft <p>2309(3) The DDH shall define the training, authorization and certification required by personnel who, by the nature of their duties, are required to taxi an aircraft.</p>
Acceptable Means of Compliance	Taxiing of aircraft <p>7. In accordance with RA 2309(3) and GASO 2301.</p>

2309(3)

Guidance
Material
2309(3)

Taxiing of aircraft

8. Nil.

Group Air
Staff Order
2309(4)

Simulated and practice emergencies

2309(4) 2309(14) The DDH **shall** specify in local Flying Orders the requirements for simulated and practise emergencies when conducted on an Air System within their AoR.

Acceptable
Means of
Compliance
2309(4)

Simulated and practice emergencies

9. The DDH **should** promulgate Local Flying Orders iaw RA 2309(4) regarding the conduct, authorization, requirements and restrictions of simulated or practice emergencies for Air Systems in their AoR. These orders **should** include advice on what constitutes a simulated or practice emergency, and **should** specify any restrictions on practice or simulated emergencies in the aircraft on sorties immediately following the practice of synthetic emergencies. Consideration **should** be given to the major type-specific simulated emergencies including but not exclusively:

- a. Practice Forced Landings (PFL) including RW Autorotations.
- b. Engine Failures after Take-Off (EFATO) including Turnbacks.
- c. Engine(s) Failure including those leading to Asymmetric Flight.
- d. Flying Control Emergencies.
- e. Glider specific.
- f. Winch Failures.

10. During the conduct of a simulated emergency, a system **should not** be degraded such that it is not immediately available for use if required. During the conduct of a practise emergency, a system may be degraded such that it is not immediately available for use if required.

Guidance
Material
2309(4)

Simulated and practice emergencies

11. Type-specific SOPs. See RA 2310 for regulation concerning the conduct of asymmetric flight.

Group Air
Staff Order
2309(5)

Handing Over Control in Air Systems with Dual Flying Controls

2309(5) Handing over or taking over of an aircraft fitted with dual controls **shall** be conducted formally.

**Acceptable
Means of
Compliance
2309(5)**

Handing over control in air systems with dual flying controls

12. The DDH **should** ensure that the requirements of RA 2309(5) are fulfilled with respect to the formal handover and acceptance of control of an Air System with dual flying controls. In addition, the DDH **should** promulgate orders or instructions detailing actions in the event that verbal communication becomes impossible (e.g. intercom failure or suspected incapacitation).

**Guidance
Material
2309(5)**

Handing over control in air systems with dual flying controls

13. Nil.

**Group Air
Staff Order
2309(6)**

Oxygen and cabin pressure

2309(6) No aircraft **shall** be flown above FL100 unless it is fitted with serviceable oxygen equipment for all of the crew.

**Acceptable
Means of
Compliance
2309(6)**

Oxygen and cabin pressure

14. The DDH **should** ensure that the requirements of RA 2309(6) are fulfilled with regard to the use of aircraft oxygen systems and associated equipment where fitted.

15. Aircrew **should** be trained in the use of pressure breathing systems or partial pressure garments before they fly in aircraft so equipped.

16. All aircrew employed in a flying appointment within 22 Gp who are required to wear an oxygen mask (either during normal flight or during an in-flight emergency) **should** be clean-shaven to allow an airtight seal between the skin and the mask. Moustaches are permitted as long as they remain fully inside the mask and do not interfere with any area of the mask seal.

17. Aircrew, required to wear an oxygen mask who wish to grow facial hair for religious reasons **may** do so, but **should** modify the length and shape of facial hair to the degree necessary for wearing the appropriate equipment, with the length of their beard kept to the minimum that is culturally or religiously acceptable. Where facial hair is worn, the following restrictions apply:

- a. Operations where both occupants have facial hair **shall** be prohibited.
- b. Solo sorties for aircrew with facial hair **shall** be prohibited above FL250.
- c. Aircrew with facial hair **shall** be subject to weekly AEA helmet and mask fit check, and **should** receive a briefing to include the latest evidence and risks involved.

- d. Aircrew with facial hair must demonstrate they can satisfactorily complete the emergency drills associated with a lack of oxygen, depressurisation and smoke / fumes before flying solo.

18. Passengers carried in 22 Gp aircraft who do not form part of the operating crew and whose presence is not essential to the continued safe operation of the aircraft may fly with facial hair subject to them being made aware of the increased personal risk and only when approved by the appropriate DDH.

Glider limitations. Aircraft **should not** be flown above FL80.

**Guidance
Material
2309(6)**

Oxygen and cabin pressure

19. Nil.

**Group Air
Staff Order
2309(7)**

Altitude limitations

- 2309(7) Flight at altitude **shall** be confined to safe limits.

**Acceptable
Means of
Compliance
2309(7)**

Altitude limitations

20. The DDH **should** ensure that the requirements of RA 2309(7) are fulfilled with respect to altitude limitations for pressurized and unpressurized aircraft.

**Guidance
Material
2309(7)**

Altitude limitations

21. Nil.

**Group Air
Staff Order
2309(8)**

Night vision device flying

- 2309(8) The DDH **shall** specify local Flying Orders regarding the conduct of Night Vision Device (NVD) flying on Air Systems within their AoR.

**Acceptable
Means of
Compliance
2309(8)**

Night Vision Device flying

22. The DDH **shall** specify local Flying Orders regarding the conduct of NVD flying iaw RA2309(8).

23. Aircrew and Supernumerary Crew **should** attend the NVG Familiarisation Course, at the RAF Centre of Aviation Medicine, prior to operating / flying Air Systems.

24. For RW NVD Operations, Obstacle Plane Value (OPV) is defined as the height over a specified area above which obstacles should be known by reference to maps, charts, NOTAMS and amendment documentation. OPV

may be used to calculate Minimum Operating Height (MOH) and only applies to NVD flying in specified areas.

25. For RW NVD operations within NRR1 and NRR9 (when there is access to an assured Master Wires and Obstruction database), the minimum OPV shall be 200' agl. In all other instances, for NVD operations within the UKNLFS, the minimum OPV shall be 350' agl.

**Guidance
Material
2309(8)**

Night vision device flying

26. See RA 2309(8) para 27 for guidance on content of local orders.

**Group Air
Staff Order
2309(9)**

Carriage of loose articles and stores

2309(9) The Aircraft Commander **shall** be responsible for the custody and stowage of any loose articles and equipment.

**Acceptable
Means of
Compliance
2309(9)**

Carriage of loose articles and stores

27. The DDH and flying supervisors **should** ensure that the requirements of RA 2309(9) are fulfilled. Examples of loose articles are mobile telephones, cameras, personal baggage, coins and keys etc.

Cameras and photographic media

28. **Carriage and use of cameras.** The carriage and use of cameras **should** be strictly controlled and ideally used by an appropriately qualified and trained RAF Photographer, or with the express permission of the DDH. For RW, the Sqn Cdr may authorize the use of a camera for the photo recce of a field landing site. The following airborne restrictions apply to the use of the approved cameras:

- a. Use of smart phone cameras **should** be approved by aircraft type in DDH local Flying Orders and **should** be strictly controlled. The smart phone should be in 'Flight Mode' in accordance with GASO 2360(1).
 - b. Cameras **should** only be used by non-handling crew or passenger at times when directed by the aircraft captain.
 - c. The effort to take photographs **should not** impede the handling pilot's ability to fly the Air System and maintain safe flight.
 - d. Cameras **should** be securely stowed when not in use in a manner whereby they cannot become a loose article hazard during any manoeuvring.
29. Storage media and batteries **should not** be changed in flight.

Guidance Material 2309(9)	Official tasking 30. Where photographic equipment is carried to fulfil official tasking and a requirement exists to change ancillary equipment in flight, dispensation should be sought from the DDH. Photography and self-photography 31. Publication of photographic images, including self-photography, on social media or elsewhere, must not bring the reputation of the MOD, Single Services and MOD contractors into question.
Group Air Staff Order 2309(10)	Dropping or jettisoning of articles 2309(10) Unauthorized dropping of articles from aircraft shall be prohibited.
Acceptable Means of Compliance 2309(10)	Dropping or jettisoning of articles 32. The DDH should specify in local Flying Orders the procedures for dropping or jettisoning stores.
Guidance Material 2309(10)	Dropping or jettisoning of articles 33. Nil.
Group Air Staff Order 2309(11)	Fuel jettison 2309(11) Procedures for jettisoning fuel shall be clearly stated in flying orders.
Acceptable Means of Compliance 2309(11)	Fuel jettison 34. The DDH should specify in local flying orders the procedures for jettisoning fuel and subsequent reporting protocols.
Guidance Material 2309(11)	Fuel jettison 35. RA 2309(11)
Group Air Staff Order 2309(12)	Flying in the company of civil aircraft 2309(12) 22 Gp aircraft shall not be flown in the company of civil aircraft without specific approval and appropriate authorization. All such requests shall be staffed through AHFT.

Acceptable Means of Compliance 2309(12)	Flying in the company of civil aircraft 36. Nil
Guidance Material 2309(12)	Flying in the company of civil aircraft 37. Nil.
Group Air Staff Order 2309(13)	Aerobatics and Operational training manoeuvres 2309(13) Aircraft Commanders shall only undertake aerobatic manoeuvres permitted by the Air System Document Set or its civilian equivalent.
Acceptable Means of Compliance 2309(13)	Aerobatics 38. The DDH should ensure that aerobatic manoeuvres are conducted within the limitations of the aircraft RTS or civilian equivalent. The DDH should also specify in local Flying Orders the minimum heights and minimum clearance from cloud for aircraft and aircrew within their AoR. Aerobatic manoeuvres should not be carried out at less than 3000 ft above ground level or sea level unless specifically authorised by the ODH. 39. Avoidance of airsickness. Early experience of airsickness can be a serious de-motivating factor for ab-initio aircrew, often leading to apprehension or even fear of flying; instructors should be aware of this and use caution when introducing trainees to aerobatics. In general, aerobatics training should follow the appropriate syllabus; instructors should only conduct aerobatics, on earlier sorties, when they are confident that the exercise will not have an adverse effect on the trainee. Operational training manoeuvres 40. The DDH should specify in local Flying Orders the approved OTMs and any limitations / restrictions for aircraft and aircrew within their AoR. Aerobatic competitions for aircrew under training 41. BFJT / BFT / AFT Competitions. Selected trainees in 4 FTS may compete for the course aerobatic trophy. The Sqn Cdr, or an officer appointed by them, may select the winner by flying an aerobatic sortie with each competitor not below 5000ft AGL (4000ft AGL for Texan). 42. Trainee QFIs may compete in solo aerobatic competitions as follows: <ol style="list-style-type: none"> Clarkson Trophy –Texan. Folland Trophy – Hawk. Inter UAS competitions. Inter-UAS flying competitions flown by UAS students, such as the Cooper, De Havilland, Reid and Scone Competitions, require approval by HQ 6 FTS. The competitions should follow the guidelines issued by HQ 6 FTS.

**Guidance
Material
2309(13)**

Aerobatics and Operational Training Manoeuvres (OTM)

43. **Definition of aerobatic manoeuvres.** Intentionally performed manoeuvres which involve angles of pitch or bank greater than 90° to the horizon or yawing through angles greater than 20°. Exceptions to this definition are:

- a. Stalling and Spinning.
- b. OTM stipulated by FLEET COS Avn, Comd JHC or Air Officer Commanding-in-Chief.
- c. Yawing turns in helicopters.
- d. Trials or air weapons range manoeuvres stipulated by appropriate authorities.

Definition of OTM. An OTM is defined as an authorized manoeuvre performed in the execution of a specific training task which would otherwise be classified as 'aerobatic' e.g. > 90° of roll or pitch.

**Group Air
Staff Order
2309(14)**

Refuelling Aircraft – engines and / or rotors running

44. 2309(14) The DDH **shall** specify in local Flying Orders how and when the refuelling of aircraft with engines and / or rotors running is permitted. The DDH **shall** specify in local Flying Orders the requirements for simulated and practise emergencies when conducted on an Air System within their AoR.

**Acceptable
Means of
Compliance
2309(14)**

Refuelling aircraft - engines and / or rotors running

45. The DDH **should** ensure that the requirements of RA 2309(14) are fulfilled and specify in local Flying Orders the procedures for aircraft within their AoR.

RW aircraft permissions. Juno and Jupiter aircraft **should** be permitted to refuel with rotors turning.

**Guidance
Material
2309(14)**

Refuelling aircraft - engines and / or rotors running

46. Nil

**Group Air
Staff Order
2309(15)**

Air to air refuelling

2309(15) 22 Gp aircraft **shall not** be required to refuel in the air.

**Acceptable
Means of
Compliance
2309(15)****Air to air refuelling**

47. Not applicable to 22 Gp aircraft.

**Guidance
Material
2309(15)****Air to air refuelling**

48. Nil.

**Group Air
Staff Order
2309(16)****Electromagnetic and cosmic radiation**

2309(16) Aircraft **shall not** be intentionally exposed to electromagnetic radiation outside the limits specified in the ADS or, for non-Release to Service (RTS) flying operations, the Military Flight Test Permit or Certificate of Usage.

**Acceptable
Means of
Compliance
2309(16)****Electromagnetic and cosmic radiation**

49. Whilst it is unlikely that 22 Gp aircraft will be exposed to excess levels of electromagnetic and cosmic radiation, the DDH **should** ensure that the requirements of RA 2309(16) are fulfilled and HIRTA avoided in accordance with the UKMLFHB.

**Guidance
Material
2309(16)****Electromagnetic and cosmic radiation**

50. Military Low Flying Handbook (UKMLFHB).

**Group Air
Staff Order
2309(17)****Landing away from active airfields**

2309(17) Landing away from active airfields **shall** be authorised and, where necessary, permission **shall** be granted.

**Acceptable
Means of
Compliance
2309(17)****Landing away from active airfields**

51. The DDH **should** ensure that the requirements of RA 2309(17) are fulfilled.

**Guidance
Material
2309(17)****Landing away from active airfields**

52. Nil.

**Group Air
Staff Order
2309(18)****Embarked aviation operations**

2309(18) 22 Gp aircrew **shall not** be required to undertake embarked operations.

**Acceptable
Means of
Compliance
2309(18)****Embarked aviation operations**

53. Not applicable to 22 Gp flying training.

**Guidance
Material
2309(18)****Embarked aviation operations**

54. Nil

**Group Air
Staff Order
2309(19)****Air exercise planning and airspace integration**

2309(19) Units participating in air exercise planning that is of a complex nature, and / or has a high potential for interaction with other airspace users, **shall** obtain specialist airspace advice.

**Acceptable
Means of
Compliance
2309(19)****Air exercise planning and airspace integration**

55. In accordance with RA 2309(19).

**Guidance
Material
2309(19)****Air exercise planning and airspace integration**

56. MMATM chapter 7

**Group Air
Staff Order
2309(T1)****Military Use of Civil Airfields**

2309(T1) Information regarding support services for military aircraft using civil airfields is listed in the HQ Air Command [Airfield Location Directory](#)¹.

¹ The HQ Air Command Airfield Services Directory is available via the [RAF Publications](#) link on the RAF SharePoint homepage.

Acceptable Means of Compliance 2309(T1)	Military use of civil airfields <p>57. Support services for military aircraft at civil airfields are provided under the NATO Support and Procurement Agency (NSPA) contract. An <u>RAF Form 6840</u> is only required if the aircraft commander wishes to provide feedback on the services provided.</p> <p>58. Instrument approaches at civilian airfields. Instrument approaches for training may be flown at suitable civilian airfields when required by the training task. Instrument approaches at Heathrow, Gatwick, Stansted and Luton should only be flown with specific authorization from the DDH.</p>
Guidance Material 2309(T1)	Military use of civil airfields <p>59. HQ Air Command Airfield Location Directory.</p> <p>60. RAF Form 6840.</p>
Group Air Staff Order 2309(T2)	Security <p>2309(T2) The aircraft commander shall be responsible for the security of their aircraft. The risk to the aircraft shall be minimised in accordance with AP 1990 and the aircraft protected appropriately.</p>
Acceptable Means of Compliance 2309(T2)	Minimum aircraft physical security requirements <p>61. VIP Flights. The Aircraft Commander should:</p> <ol style="list-style-type: none"> Restrict access to the aircraft by non-Service personnel. Complete a security inspection of the aircraft before flight. <p>62. Parked aircraft away from military airfields. Whenever possible, aircraft should be kept in a secure hangar. If a secure hangar is not available, the aircraft commander should:</p> <ol style="list-style-type: none"> When the aircraft is parked in the open, ensure a recognised guard force checks it hourly or keeps it under continuous visual or electronic surveillance. Where there is doubt as to the effectiveness of local security arrangements, nominate a crewmember to guard the aircraft until appropriate security protection is available. For short term parking, nominate a crewmember to guard the aircraft. Secure and lock (if possible) the aircraft if it is to be left unattended. Complete a security inspection of the aircraft before flight. <p>Protection of classified material</p> <p>63. The aircraft commander should make suitable arrangements for the protection of classified material.</p>

Action on receipt of a bomb warning

64. **Target aircraft is specifically identified.** If the target aircraft is specifically identified:

- a. **Aircraft subject to pre-flight security procedures.** The aircraft commander **should** be informed of the warning. He may continue the sortie or land at their discretion.
- b. **Aircraft not subject to pre-flight security procedures.** The aircraft **should not** take off. If already airborne, the aircraft commander **should** be informed of the warning and ordered to land as soon as possible. When on the ground, the aircraft Commander **should**:

- (1) Evacuate the crew and passengers and inform the airfield authorities.
- (2) Ensure qualified EOD personnel carry out a search of the aircraft.

65. **Target aircraft is not specifically identified.** If the target aircraft cannot be identified, the warning must be taken as applying to all station aircraft except those that departed more than six hours before the warning was received; take action as above.

**Guidance
Material
2309(T2)**

Security

66. [AP 1990](#). Manual of Protective Security for Aircraft Systems & Air Transportation Security.

67. [JSP 440](#) Defence Manual of Security.

**Group Air
Staff Order
2309(T3)**

Night Flying

2309(T3) DDHs with responsibility for flying training at night **shall** specify in local Flying Orders the night flying procedures appropriate to the aircraft types and aircrew capabilities within their AoR.

**Acceptable
Means of
Compliance
2309(T3)**

Night flying

68. DDHs **should** promulgate in local Flying Orders procedures for night flying taking into consideration aircraft limitations, aircrew qualifications and equipment capabilities.

**Guidance
Material
2309(T3)**

Night flying

69. ATP 49 UK SUPP-1.

70. The UK Military Low Flying Handbook (UKMLFHB).

Group Air Staff Order 2309(T4)	Glider, Prefect and Tutor Flying Over Open Water <p>2309(T4) No aircraft shall be flown over open water except for the minimum period required to comply with local area arrival, departure and deconfliction procedures, or where the DDH has granted specific authority to do so.</p>
Acceptable Means of Compliance 2309(T4)	Glider, Prefect and Tutor flying over open water <p>71. All glider, Prefect and Tutor operations should be completed over land unless local arrival, departure or operating procedures apply. Where this occurs the DDH should ensure that appropriate air safety mitigation measures are applied.</p>
Guidance Material 2309(T4)	Glider, Prefect and Tutor flying over open water <p>72. Nil.</p>
Group Air Staff Order 2309(T5)	Circuit Flying <p>2309(T5) The DDH shall promulgate in local Flying Orders the maximum number of aircraft permitted in the visual circuit simultaneously with regard to type and mix of aircraft.</p>
Acceptable Means of Compliance 2309(T5)	Circuit flying <p>73. Repetitive trainee circuits. The DDH should specify in local Flying Orders the number of repetitive circuits permissible for aircraft and aircrew within their AoR.</p> <p>74. Circuit congestion. The DDH should promulgate in local Flying Orders the maximum number of aircraft permitted in the visual circuit simultaneously according to type and mix of aircraft, for FW aircraft up to a maximum of 5 aircraft by day with a 6th leaving or joining. A single formation of up to 3 aircraft recovering to land in close formation may be regarded as one aircraft. RW aircraft at RAF Shawbury should operate in accordance with DDH direction for the number of aircraft joining/departing the circuit and landing separation.</p> <p>75. Runway spacing – FW Only. The minimum spacing between aircraft at touchdown should be 3000ft (1500ft for qualified Tutor pilots) except for formation landings when the minimum runway spacing should be specified in Formation SOPs. An aircraft should not touch-and-go with an aircraft ahead unless the leading aircraft is airborne or has cleared the runway.</p>
Guidance Material 2309(T5)	Circuit flying <p>76. Nil.</p>

<p>Group Air Staff Order 2309(T6)</p>	<p>Volcanic Ash Cloud (VAC)</p> <p>2309(T6) 22 Gp flying units shall adhere to HQ Air Command directives and the DDH shall promulgate in local Flying Orders type-specific guidance for the operation of aircraft within their AoR in the event of a Volcanic event.</p>
<p>Acceptable Means of Compliance 2309(T6)</p>	<p>Volcanic ash cloud</p> <p>77. Volcanic eruption. In addition to extant HQ Air Command directives the following applies to the conduct of flying training:</p> <ul style="list-style-type: none"> a. 22 Gp should not fly in the High Concentration Zone (HCZ) or Medium Concentration Zone (MCZ). b. 22 Gp aircraft may be permitted to fly in the Low Concentration Zone (LCZ) subject to SO (ODH) approval prior to any such flight. c. 22 Gp flying operations may be conducted without restriction outside of the LCZ. d. If flight is permitted in the LCZ the aircraft operated will be designated as part of the 'sulphur fleet'. Further flights in the LCZ should be conducted with ac from the sulphur fleet. e. Any aircraft that lands with signs of contamination having flown in the unrestricted zone should be subject to the appropriate inspection regime for that fleet.
<p>Guidance Material 2309(T6)</p>	<p>Volcanic ash cloud.</p> <p>78. Nil.</p>
<p>Group Air Staff Order 2309(T7)</p>	<p>Flight Data Recorders</p> <p>2309(T7) Where fitted, a flight data recorder shall be operated in accordance with the RTS and local Flying Orders.</p>
<p>Acceptable Means of Compliance 2309(T7)</p>	<p>Flight data recorders</p> <p>79. Use of flight data recorders. Flight data recorders, or components thereof (including but not limited to Cockpit Voice Recorders), can prove invaluable to the analysis of aircraft accidents and incidents, no matter how minor. Aircraft commanders should ensure that, when fitted, flight data recording devices are switched on and that when an incident has occurred which may be subject to a formal investigation/inquiry, the recorded data is safeguarded for subsequent use.</p> <p>80. Unserviceability. Flight without a serviceable flight data recorder should be considered exceptional. The DDH should specify in local Flying Orders the occasions when an aircraft may be operated without a serviceable flight data recording system.</p>

**Guidance
Material
2309(T7)**

Flight data recorders

81. Nil.

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GASO 2310 – Role Specific Fixed Wing

Rationale *Aspects of Fixed Wing roles require discrete and specific regulation*

Contents

2310(1): Supersonic Flight

2310(2): Withdrawn – Content Incorporated into GASO 2309(9)

2310(3): Spinning and Stalling

2310(4): Asymmetric Power

2310(5): Single-Engine Aircraft Engine Shutdowns

2310(T1): Minimum Landing Distance

2310(T2): Gliding Military Air Ground Communication Service (MAGCS)

Group Air Staff Order
2310(1)

Supersonic Flight

2310(1) Supersonic flight **shall** be specifically approved when not for operations, training tests and trials.

Acceptable Means of Compliance
2310(1)

Supersonic flight

1. The DDH **should** ensure that all supersonic flight events are conducted and recorded in accordance with RA 2310(1).

Guidance Material
2310(1)

Supersonic flight

2. Nil.

Group Air Staff Order
2310(2)

Aerobatics

2310(2) Incorporated into GASO 2309(9).

Acceptable Means of Compliance
2310(2)

Aerobatics

3. Incorporated into GASO 2309(9).

Guidance Material
2310(2)

Aerobatics

4. Incorporated into GASO 2309(9).

**Group Air
Staff Order
2310(3)**

Spinning and Stalling

2310(3) Spinning and Stalling manoeuvres **shall** be conducted with sufficient height to permit the safe recovery of the aircraft from the intended manoeuvre or in the event of unintended loss of control. Spinning **shall** be prohibited in all aircraft unless specifically authorized.

**Acceptable
Means of
Compliance
2310(3)**

Spinning

5. The DDH **should** ensure that approved spinning manoeuvres are conducted within the limitations of the aircraft RTS or civilian equivalent. The DDH **should** also specify in local Flying Orders the minimum clearance from cloud for aircraft and aircrew within their AoR. All aircrew **should** be aware of the handling procedures and limitations governing the conduct of spinning for their aircraft type.

Stalling

6. The DDH **should** ensure that approved stalling manoeuvres are conducted within the limitations of the aircraft RTS or civilian equivalent. The DDH **should** also specify in local Flying Orders the minimum clearance from cloud for aircraft and aircrew within their AoR. All aircrew **should** be aware of the handling procedures and limitations governing the conduct of stalling for their aircraft type. Except for when it forms part of an approved syllabus, solo trainees **should not** stall the aircraft deliberately.

**Guidance
Material
2310(3)**

Spinning and stalling

7. DDH local Flying Orders.

**Group Air
Staff Order
2310(4)**

Asymmetric Power

2310(4) Airborne practice and simulated asymmetric flying **shall** be specifically approved and authorized.

**Acceptable
Means of
Compliance
2310(4)**

Asymmetric power

8. The DDH **should** promulgate local Flying Orders that apply to practise and simulated asymmetric flight. They **should** stipulate the minimum height for each aircraft type; the frequency of training; weather limitations; and operating conditions.

**Guidance
Material
2310(4)**

Asymmetric power

9. Nil.

**Group Air
Staff Order
2310(5)**

Single Engine Aircraft Engine Shutdowns

2310(5) Engine shutdowns and re-lights in single-engine aircraft **shall not** be carried out in the air, except where authorized for flight tests and trials.

**Acceptable
Means of
Compliance
2310(5)**

Single engine aircraft engine shutdowns

10. The DDH **should** ensure that aircrew adhere to the requirements of RA 2310(5).

**Guidance
Material
2310(5)**

Single engine aircraft engine shutdowns

11. Nil.

**Group Air
Staff Order
2310(T1)**

Minimum Landing Distance

2310(T1) Pilots **shall** ensure that they adhere to the Minimum LDA appropriate to the prevailing conditions of operation.

**Acceptable
Means of
Compliance
2310(T1)**

Minimum landing distance

12. **Minimum Landing Distance Available (LDA).** The DDH **should** specify in local Flying Orders a Minimum LDA below which the Operating Data Manual (ODM), or equivalent civilian documents, should be consulted to ensure that adequate landing distance is available for the prevailing conditions of operation.

**Guidance
Material
2310(T1)**

Minimum landing distance

13. Nil

**Group Air
Staff Order
2310(T2)**

Gliding Military Air Ground Communication Service (MAGCS)

2310(T2) Only A and B1 Category QGIs **shall** be approved by CGS / CFS GE to provide an Air / Ground Communication service.

**Acceptable
Means of
Compliance
2310(T2)**

Gliding Military Air Ground Communication Service (MAGCS)

14. **Regulations.** Military Air / Ground Communication Service (MAGCS) **should** be provided in accordance with CAP 413 and CAP 452.

15. **Type of service.** This is not an Air Traffic Control service but a management tool and a facility for the provision of traffic information intended to reduce the risk of an AIRPROX in the vicinity of a VGS airfield. Qualified VGS staff **should** ensure that they do not give the impression that they are operating an Air Traffic Control or Flight Information Service by

issuing clearances or instructions to aircraft other than those being operated by their VGS. Terms such as 'At Your Discretion' are Flight Information Service terms and **should not** be used. Any instructions to VGS aircraft should be prefixed with the phrase 'Your Operating Authority'.

16. **Qualifications required.** In order to provide a MAGCS, individuals **should** possess a Military Air Ground Radio Operators Certificate of Competence (MAGROCC). The minimum aircrew qualification to hold a MAGROCC should be B1 Category QGI.

17. **Initial training.** All initial training **should** be carried out by a MAGROCC Examiner and **should** be completed during a B1 Category QGI course. Successful completion of the MAGROCC course will lead to the award of a MAGROCC (RAF Form 7534) and a corresponding entry in the individual's flying logbook. The MAGROCC **should** be filed within the individual's training folder, and not F5200 folder; however, units may retain all RAF F7534 in a singular MAGROCC folder.

18. **Local training.** OC VGS **should** ensure that the MAGROCC holder has been appropriately trained and briefed in local, site specific and VGS procedures, including any local Station or Unit flying orders. As the accountable person for the MAGCS standards, the VGS OC signs Part 2 of the MAGROCC, once local training has been completed.

19. **Local validation.** The MAGROCC holder **should** undergo an observed local validation by a Flying Supervisor to ensure they are competent in all of the relevant operating and equipment procedures, before unsupervised operation. The Flying Supervisor annotates Part 3 of the MAGROCC accordingly.

20. **Currency.** Each individual **should** provide a MAGCS every rolling three months. Units **should** record the individual providing the MAGCS within the Duty Instructors Watch Log, including any changes throughout the day. Units **should** monitor currency at a local level through the use of a currency matrix or other suitable alternative (e.g. STARS). Individuals that fall out of currency **should** regain currency by undergoing a period of supervised operation, of no less than 30 minutes, by a Flying Supervisor. A record of this currency check **should** be annotated in Part 4 of the MAGROCC.

21. **Annual standardization.** Each individual providing a MAGCS **should** undergo an annual standardization and assessment of competence by a Flying Supervisor. The actual period of standardization being defined by the Flying Supervisor. Additionally, the assessment may be carried out audibly, i.e. from the air; however, the unit flying supervisors are responsible to the VGS OC, for the MAGCS standards, including any subsequent, currency or remedial training. Any subsequent training and standardizations **should** be completed in Part 4 of the MAGROCC.

22. **Subsequent training.** Once the MAGROCC (RAF Form 7534) is full, all subsequent training **should** be completed on the MAGROCC continuation form (RAF Form 7534A), which can be demanded through SPFS of each parent station.

23. **Assurance.** There are several levels of assurance associated with the MAGCS:

a. **Accountable individual.** Within the civil AGCS, each airfield has an accountable person to ensure that all personnel operating the radio are in possession of a civil ROCC and are competent in both the operation of the equipment and local procedures. This is a requirement of the Wireless Telephony (WT) Act. However, Government departments are not bound by the WT Act, but the VGS OC **should** be responsible for mirroring the purpose of the WT Act Licence and therefore accountable for the overall unit MAGCS standards.

b. **First Party (1P) Assurance.** 1P assurance **should** be conducted by unit Flying Supervisors in line with Para 21.

c. **Second Party (2P) Assurance.** The standard of the MAGCS will be assessed during CGS annual Standards, Assurance and Training Visit (SATV) and CFS GE annual audits. In either case, MAGCS standards **should** be formally assessed and annotated on visit reports.

d. **Third Party (3P) Assurance.** 3P assurance **should** be conducted by the Military Aviation Authority (MAA), but will form part of the wider assurance activity such as part of a 22 Gp audit.

24. **Military Air Ground Radio Operator (MAGRO).** The MAGRO **should** be a separate individual from the Duty Supervisor (DS), to assist the DS in monitoring the 'bigger picture'; however, the DS may fulfil both roles concurrently if the workload is appropriately low.

25. **Non-flying personnel.** Non-flying personnel may be considered for the role of a MAGRO, providing they have previously held a B1 QGI Category, a MAGROCC and have the approval of 2 FTS OC Ops Wg. Exceptions to this are to be approved by 2 FTS OC Ops Wg.

26. **Conversion of a civil ROCC.** Individuals that hold a civil ROCC **should** convert to a MAGROCC without any tests or examinations, providing they hold a B1 Category QGI and have undergone differences training for the MAGCS with a CGS or CFS GE Examiner.

Guidance
Material
2310(T2)

Military Air Ground Communication Service (MAGCS)

27. [CAP 413](#) and [CAP 452](#).

GASO 2315 – Type Specific Rotary Wing

Rationale *Aspects of Rotary Wing flying training roles require discrete and specific regulation.*

Contents

2315(1): Refuelling Helicopters Engines and Rotors Running - Withdrawn - Incorporated into GASO 2309(15)

2315(2): Helicopter Landing Sites (HLSs) - Withdrawn - Incorporated into GASO 2309(1)

2315(3): Use of Dispatcher Harness - Withdrawn - Incorporated into GASO 2130(4)

2315(4): Simulated Emergencies - Withdrawn - Incorporated into GASO 2309(14)

2315(5): Electromagnetic Radiation Hazards - Withdrawn - Incorporated into GASO 2309(11)

2315(6): Helicopter Ground Runs

2315(7): Oxygen and Cabin Pressure - Withdrawn - Incorporated into RA 2309(11)

2315(T1): Training and Transit Flights Over Water

2315(T2): Landing on Roads

2315(T3): Military Aid to the Civil Community (MACC) - Search and Rescue

2315(T4): Flying Competitions

**Group Air
Staff Order
2315(1)**

Refuelling Helicopters Engines and Rotors Running
2315(1) Withdrawn - Incorporated into GASO 2309(15).

**Acceptable
Means of
Compliance
2315(1)**

Refuelling helicopters engines and rotors running
1. Withdrawn - Incorporated into GASO 2309(15).

**Guidance
Material
2315(1)**

Refuelling helicopters engines and rotors running
2. Withdrawn - Incorporated into GASO 2309(15).

**Group Air
Staff Order
2315(2)**

Helicopter Landing Sites (HLS)
2315(2) Withdrawn - Incorporated into GASO 2309(1)

**Acceptable
Means of
Compliance
2315(2)****Helicopter Landing Sites (HLS)**

3. Withdrawn - Incorporated into GASO 2309(1)

**Guidance
Material
2315(2)****Helicopter Landing Sites (HLS)**

4. Withdrawn - Incorporated into GASO 2309(1)

**Group Air
Staff Order
2315(3)****Use of Dispatcher Harness**

- 2315(3) Withdrawn - Incorporated into GASO 2130(4)

**Acceptable
Means of
Compliance
2315(3)****Use of dispatcher harness**

5. Withdrawn - Incorporated into GASO 2130(4)

**Guidance
Material
2315(3)****Use of dispatcher harness**

6. Withdrawn - Incorporated into GASO 2130(4)

**Group Air
Staff Order
2315(4)****Simulated Emergencies**

- 2315(4) Withdrawn - Incorporated into GASO 2309(14)

**Acceptable
Means of
Compliance
2315(4)****Simulated emergencies**

7. Withdrawn - Incorporated into GASO 2309(14)

**Guidance
Material
2315(4)****Simulated emergencies**

8. Withdrawn - Incorporated into GASO 2309(14)

**Group Air
Staff Order
2315(5)****Electromagnetic Radiation Hazards**

- 2315(5) Withdrawn - Incorporated into GASO 2309(11)

**Acceptable
Means of
Compliance
2315(5)****Electromagnetic radiation hazards**

9. Withdrawn - Incorporated into GASO 2309(11)

**Guidance
Material
2315(5)****Electromagnetic radiation hazards**

10. Withdrawn - Incorporated into GASO 2309(11)

**Group Air
Staff Order
2315(6)****Helicopter Ground Runs**

- 2315(6) Ground runs of aircraft **shall** be correctly authorized and safely carried out.

**Acceptable
Means of
Compliance
2315(6)****Helicopter ground runs**

11. A helicopter with rotors turning on the ground is susceptible to ground resonance. Units **should** identify suitable locations for the various ground runs they are required to carry out, ideally to be in the direct line of sight of ATC; for simple ground runs the normal dispersal may suffice but for more complicated runs a remote site may be required.

12. **Authorization.** Ground runs carried out by unit test pilots (UTPs) and Contractor test pilots require written authorization. Authorizing officers for other ground runs **should** ensure that the pilot is suitably briefed and authorized in accordance with the Ground Run Outbrief Format pro forma. The ground run **should** be authorized as if the aircraft is expected to become airborne.

**Guidance
Material
2315(6)****Helicopter ground runs**

13. RAF Shawbury FOB.

**Group Air
Staff Order
2315(7)****Oxygen and Cabin Pressure**

- 2315(7) Withdrawn - Incorporated into RA 2309(12) and GASO 2309(12)

**Acceptable
Means of
Compliance
2315(7)****Oxygen and cabin pressure**

14. Withdrawn - Incorporated into RA 2309(12) and GASO 2309(12).

**Guidance
Material
2315(7)****Oxygen and cabin pressure**

15. Withdrawn - Incorporated into RA 2309(12) and GASO 2309(12).

**Group Air
Staff Order
2315(T1)****Training and Transit Flights Over Water**

- 2315(T1) Stn Cdr RAF Shawbury **shall** implement procedures to mitigate the hazards associated with training and transit flights over water.

**Acceptable
Means of
Compliance
2315(T1)****Training and transit flights over water**

16. Nil.

**Guidance
Material
2315(T1)****Training and transit flights over water**

17. RAF Shawbury FOB.

**Group Air
Staff Order
2315(T2)****Landing on Roads**

- 2315(T2) Stn Cdr RAF Shawbury **shall** implement procedures to mitigate the hazards associated with landing on roads.

**Acceptable
Means of
Compliance
2315(T2)****Landing on roads**

18. Nil.

**Guidance
Material
2315(T2)****Landing on roads**

19. RAF Shawbury FOB.

**Group Air
Staff Order
2315(T3)****Military Aid to the Civil Community (MACC) - Search and Rescue**

- 2315(T3) Stn Cdr RAF Shawbury **shall** establish local procedures for handling MACC SAR requests.

**Acceptable
Means of
Compliance
2315(T3)****ARCC requests**

20. Stn Cdr RAF Shawbury **should** specify in local Flying Orders the procedures for MACC with respect to Search and Rescue. AHFT **should** be notified of any participation in such events.

**Guidance
Material
2315(T3)**

Other considerations

21. The Contractor's compliance **should**, where time allows, be sought to ensure that insurance cover is not invalidated.

**Group Air
Staff Order
2315(T4)**

Flying Competitions

2315(T4) Stn Cdr RAF Shawbury **shall** supervise participation in flying competitions.

**Acceptable
Means of
Compliance
2315(T4)**

Participation

22. Once approved in accordance with GASO 2335, 1 FTS helicopters may participate in competitions that include exercises outside the scope of normal operations. Competition crews **should** be nominated by Stn Cdr RAF Shawbury.

Authorization

23. Powers of authorization for flying competitions may be delegated by Stn Cdr RAF Shawbury to the nominated Aircraft Commander.

Permitted exercises

24. The following exercises are permitted:

- a. **Slalom.** These exercises involve the carriage of objects suspended by a rope or chain that **should** be handheld in order to facilitate immediate release. On no account are objects to be attached to the aircraft. Aircraft **should** be manoeuvred at groundspeeds of no greater than 20kts and at heights not above 50ft AGL.
- b. **Bombing.** Small sandbags may be dropped by hand within designated competition areas at speeds of no greater than 60kts and heights not above 200ft AGL.
- c. **No-notice exercises.** Some competitions involve no-notice exercises designed to test crews' flight and planning skills without the benefit of practise. Once the content of an exercise is known, participation **should** be approved by Stn Cdr RAF Shawbury or their nominated deputy; approval may be given orally.

**Guidance
Material
2315(T4)**

General advice on types of event.

25. Where an event is open to the general public, paying or not, or the event is advertised with an expectation that the public will gather to witness the event, it is to be considered as a public Flying Display.

26. See GASO 2335 Flying Displays & Flypasts for additional information.

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GASO 2325 – Air Weapons Carriage, Training and Demonstrations

Rationale *The carriage, launch and jettison of Air Weapons from aircraft present additional risk to life for the general public and military personnel.*

Contents **2325(1): Carriage of Air Weapons**
2325(2): Air Weapons Training and Demonstrations

Group Air Staff Order
2325(1)

Carriage of Air Weapons

2325(1) Air Weapons **shall** be carried iaw the Release to Service (RTS) or, for non-RTS flying operations, the Military Permit to Fly or Certificate of Usage.

Acceptable Means of Compliance
2325(1)

Carriage of air weapons

1. DDHs with responsibility for 22 Gp aircraft that carry air weapons **should** specify in local Flying Orders the safety precautions to be observed and procedures to be followed when pyrotechnics are carried on, or released from, those aircraft.
2. DDHs with responsibility for 22 Gp aircraft that carry air weapons **should** ensure that warning notices detailing the dangers posed and precautions to be taken, are displayed at access points to any area where aircraft carrying weapons may be operating on the ground.

Guidance Material
2325(1)

Carriage of air weapons

3. RA 1350 - The Air Launched Weapon Release Certificate.

Group Air Staff Order
2325(2)

Air Weapons Training and Demonstrations

2325(2) Air Weapons training and demonstrations **shall** only be carried out within approved areas or ranges.

Acceptable Means of Compliance
2325(2)

Air weapons training and demonstrations

4. DDHs with responsibility for 22 Gp aircrew required to conduct Air Weapons training **should** specify in local Flying Orders the types of aircrew permitted to conduct training, the procedures to be followed and any limitations that may be imposed. This **should** cover attack minima; dive attacks; minimum attack separation; visual attack briefing and collision avoidance / deconfliction.
5. Air Weapons training and demonstrations **should** be conducted in accordance with the published Orders for the training area used.

**Guidance
Material
2325(2)****Air weapons training and demonstrations**

6. STANAG 3564 - Rules for Live Air Weapons.
7. Air Command Weapon and Electronic Warfare Range Orders (ACAWEWRO).

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GASO 2327 – Air Combat Manoeuvring, Basic Fighter Manoeuvres and Basic Helicopter Manoeuvres

Rationale *Due to the potentially hazardous nature of Air Combat Manoeuvres (ACM), Basic Fighter Manoeuvres and Basic Helicopter Manoeuvres (BHM), those engaged in the conduct and supervision of such training need to be appropriately qualified and need to apply the highest standards of flying discipline, pre-flight preparation and briefing.*

Contents **2327(1): Air Combat Manoeuvring, Basic Fighter Manoeuvres and Basic Helicopter Manoeuvres**
2327(T1): Target Aircraft Training

Group Air Staff Order
2327(1) **Air Combat Manoeuvring, Basic Fighter Manoeuvres and Basic Helicopter Manoeuvres**
 2327(1) Supervision and conduct of ACM and BFM **shall** be carried out by suitably qualified, competent and current aircrew that have been specifically authorized.

Acceptable Means of Compliance
2327(1) **Support to the front line - approval authority**
 1. The DDH or their nominated SME (of at least OF3 rank) may approve requests for support to the front line within the funded hours allocated by 22 Gp. Such requests **should** be afforded a lower priority than the core flying training task. Approval from AHFT is required for activities other than those outlined above and for those involving participation in multi-national exercises. If there is any doubt as to the requirements of the approval process, then the appropriate HQ Desk Officer **should** be consulted.

ACM, BFM and BHM

2. DDHs with responsibility for aircrew required to undertake ACM, BFM, BHM and / or support to the front line **should** issue local Flying Orders and instructions to fulfil the requirements of RA 2327(1).

Restrictions

3. **Helicopter prohibited manoeuvres.** 22 Gp helicopters **should not** participate in ACT which includes simulated air-to-air / air-to-ground combat, bouncing and dog-fighting between individuals or formations. Formal fighter evasion exercises may be specifically authorized and should be staffed through AHFT who will liaise with SO (ODH).

4. **Prefect and Tutor aircraft prohibited manoeuvres.** Prefect and Tutor aircraft **should not** participate in ACM, Dissimilar ACM (DACM) or BFM. Requests for Prefect and Tutor as a slow speed Target Aircraft may be made as outlined in GASO 2327(T1).

Guidance Material
2327(1) **ACM and BFM.**
 5. **Policy.** 4 FTS and CFS Exam Wing staff may conduct intercept training, ► ~~low-level evasion training~~ ◀, affiliation training, ACM and DACM

in accordance with Air-to-air Training Rules ([ATRs](#)) and ~~►International/Interservice Plan 4636~~ ~~◄~~ AM 75-2-1 “Fighting Edge”, as required by the Hawk T Mk 2 syllabus or for Staff Continuation Training.

**Group Air
Staff Order
2327(T1)**

Target Aircraft Training

2327(T1) 22 Gp aircraft acting as Target Aircraft for Fast Jet and RW aircraft conducting Fighter / Helicopter vs Fast / Slow Speed FW Affiliation **shall** do so in accordance with Air-to-air Training Rules (ATRs).

**Acceptable
Means of
Compliance
2327(T1)**

Target aircraft training

6. **Tasking.** 22 Gp aircraft may be tasked to participate with FJ / RW aircraft conducting Fighter / Helicopter vs Slow Speed Fixed Wing Affiliation, such participation will be limited to acting as a Target Aircraft. Requests for 22 Gp assets should be made by HQ 1 Gp to SO(ODH) 22 Gp who will liaise with the appropriate 1*¹ and DDH. Once approved, DIRLAUTH is granted between the relevant FTS DDH and relevant FJ / RW DDH. Unit Powers of Authorization **should** nominate those personnel who can authorize target training sorties.
7. **Crew selection and training requirements.** The DDH **should** nominate selected Aircraft Commanders to conduct fast / slow speed affiliation sorties as target aircraft only. Sorties **should** be flown in accordance with the appropriate Formation SOPs and ATRs. Prior to conducting Target Aircraft sorties, Aircraft Commanders **should** have successfully completed a Target Aircraft training package. A record of the training **should** be kept in the individual's training folder.
8. **Conduct of slow speed intercept training events.** Prefect and Tutor aircraft **should** transit at either medium level or low level and conduct pre-planned and briefed medium / navigation turns when acting as a slow speed target. The intercept training **shall not** develop into ~~►‘visual evasion’~~ ~~◄~~ (D)ACM / ACT or include any of the prohibited manoeuvres specified in GASO 2327(1) para 4.
9. **Planning and limitations.** Planning and sortie requirements and limitations are detailed in ATRs.

**Guidance
Material
2327(T1)**

Target aircraft training

[ATRs](#) are not hosted centrally and are distributed directly to units by 92 Sqn, ASWC.

¹ Comdt RAFC for Tutor and HFT for all other platforms.

GASO 2330 – Low Flying

Rationale *Flight at low level has historically been a factor in 46% of fatal accidents and 83% of mid-air collisions. It reduces the margin for error in aircraft operations and can cause unnecessary annoyance to the public. It is therefore essential that those engaged in the conduct and supervision of low flying ensure the highest standards of flying discipline, pre-flight preparation and briefing are maintained.*

Contents	2330(1): Low Flying
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Group Air Staff Order 2330(1)	<p>Low Flying</p> <p>2330(1) Low flying shall be specifically authorized and conducted in accordance with RA 2330(1) and the procedures contained in the UK Military Low Flying Handbook (UKLFHB).</p>
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Acceptable Means of Compliance 2330(1)	<p>Authorization</p> <p>1. The DDH should ensure that all low flying activity conducted in flying training and for aircraft transit are properly authorized. Flying Displays, Role Demonstrations and Flypasts should be authorized in accordance with the requirements of RA 2335(2) and GASO 2335(2).</p> <p>Supervision</p> <p>2. The DDH should ensure that all low flying activity is appropriately supervised paying particular attention to work-up requirements and crew limitations.</p> <p>Avoidance criteria</p> <p>3. In accordance with RA 2330(1) and DDH local Flying Orders.</p> <p>Minimum Separation Distances (MSD)</p> <p>4. The DDH should specify in local Flying Orders the MSD for all aircraft in their AoR.</p> <p>Bird avoidance</p> <p>5. Local bird hazards. The DDH should publish local procedures to be followed to minimise any local birdstrike hazard.</p> <p>6. Sunrise and sunset. Low flying should be confined to the period from 30 minutes (15 minutes for Gliding and RW) after sunrise to 30 minutes (15 minutes for Gliding and RW) before sunset, except for early morning weather checks (if required) when the minimum permitted height is 500ft MSD for FW aircraft</p> <p>7. Coastlines. FW aircraft should cross coastlines at a minimum height of 1000ft MSD and at 90° wherever possible.</p> <p>Descent to low level and Safety Altitude (SALT)</p> <p>8. The DDH should specify in local Flying Orders the procedures for descent to low level.</p>
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Descent over the sea IMC

9. Autonomous IMC descents below SALT over the sea **should** be avoided whenever possible. RA 2307(1) details the conditions for descent and operations below 3000ft IMC outside CAS.

Low level manoeuvre limits

10. The DDH **should** specify in local Flying Orders the low level manoeuvre limits for all aircraft in their AoR.

Low flying in the vicinity of ships and oil / gas installations at sea

11. Low flying in the vicinity of ships and oil / gas installations at sea **should** be conducted in accordance with the UKMLFHB unless required for type-specific flying training and specifically briefed and authorized.

12. Some warships, such as the RN Type 45, present a hazard through High Intensity Radio Transmission Area (HIRTA) and must be afforded avoidance according to aircraft susceptibility and HIRTA classifications.

Low flying at night.

13. The DDH **should** specify in local Flying Orders the additional criteria for low flying at night for aircraft and aircrew within their AoR in accordance with the requirements of RA 2330(1).

**Guidance
Material
2330(1)****Low flying**

14. UKMLFHB.

15. [CAP 393](#) - Air Navigation: The Order and the Regulations.

16. [SERA 3105](#) - Minimum Heights; [SERA 5005](#)(f) - Visual Flight Rules; and [SERA 5015](#)(b) – Instrument Flight Rules.

GASO 2335 – Flying Displays and Flypasts

Rationale

Military involvement in Flying Displays, Display Flying, Role Demonstrations and Flypasts play an important role in Defence engagement in the UK and abroad. These events also allow Heads of Establishment (HoE) to engage with the families and friends of serving military personnel, and Commanders to engage with their local communities.

Flying Displays, Display Flying, Role Demonstrations and Flypasts can involve Air Systems operating in close proximity to gatherings of people; this activity involves an increase in Risk to Life (RtL) over normal operating and if not managed effectively this risk could become intolerable.

This Regulatory Article (RA) regulates all UK military registered Air Systems (when conducting Display Flying, Role Demonstrations and Flypasts (Mil) worldwide) and non-UK military registered Air Systems (when conducting Display Flying in the UK); additionally it regulates all Flying Displays conducted at, or over MOD Occupied Property. It ensures that appropriate individuals are made responsible for all facets of planning, preparing, managing and conducting Flying Displays, Display Flying, Role Demonstrations and Flypasts to ensure RtL remains As Low As Reasonably Practicable (ALARP) and Tolerable.

Contents

Definitions Relevant to this GASO

2335(1): Flying Display Organization and Management

2335(2): Display Flying, Role Demonstrations and Flypast (Mil)

2335(3): Separation Distances, Minima and Restrictions

Annex A: Specimen Graduation Event Order

Annex B: Approval Process for Participation in Display Flying, Role Demonstrations, Flypasts and Static Displays

Annex C: Specimen Flypast / Role Demonstration/Static Display Aircraft Participation Order

Annex D: Display Pilot Directive

Appendix 1 to Annex D: Brief to Display Organiser

Appendix 2 to Annex D: Certificate from the Display Organiser

Appendix 3 to Annex D: Accident / Incident Telephone Report

Appendix 4 to Annex D: Singleton Display Flying – Pre-Sortie Briefing Aide Memoire

Appendix 5 to Annex D: Display Sequence Data Sheet

Annex E: Display Flying Currency

Definitions

Definitions relevant to this GASO

1. The definitions detailed in RA 2335 paras 1 to 12 apply throughout GASO 2335 and personnel **should** familiarise themselves thoroughly with their meaning.

**Group Air
Staff Order
2335(1)**

Flying Display Organization and Management

2335(1) All Flying Displays **shall** be managed, organised and delivered in order to reduce the RtL to ALARP and Tolerable.

**Acceptable
Means of
Compliance
2335(1)**

Flying display organization and management

2. **Responsibility of DDH / HoE.** The DDH / HoE **should** ensure that the requirements of RA 2335(1) are fulfilled. The following AMC amplifies the RA for 22 Gp Units and flying participants.
3. **Required reading.** All Event Organisers (EOs) **should** read and be fully aware of the content of the following documents:
 - a. RA 2335 – Flying Displays and Flypasts.
 - b. The MAA Display Flying Handbook (MAA DFH).
 - c. GAI 2022 – RAF Participation in Public Events (Flying Displays only).
 - d. STANAG 3533 – Flying and Static Displays.
 - e. AP1990 – Protective Security for Aircraft Systems (applicable sections only).
 - f. CAP 403 - Flying Displays and Special Events: Safety and Administrative Requirements and Guidance.
4. Where the above documents are in conflict, the most restrictive regulations **should** apply. In addition, EOs **should** be aware of the content of HSE Publication 'HSG 195 - The Event Safety Guide' which provides useful guidance and illustrates good practice but whose adherence is not compulsory.

Administration

5. **Event Organiser (EO).** An EO **should** be nominated by the DDH / HoE and be separate from the role of the Flying Display Director. The EO is responsible to the DDH / HoE for all matters pertaining to the safety of the general public and spectators, as well as the wider planning and execution of the Flying Display or event.
 6. **Flying Display Director (FDD).** A FDD **should** be appointed for all Display Flying events in accordance with RA 2335(1) para 16b. A Flying Control Committee **should** be established if required in accordance with RA 2335(1) para 30.
 7. **FDD and Duty Senior Supervisor (DSS).** The role of FDD **should** be separate from the role of the DSS (or equivalent). The FDD **should** either be present in the ATC visual control room or contactable via radio if supervising the flying from another location.
- Airborne FDD.** In accordance with RA 2335(1) para 27.
8. **Initial approval for an event.** Initial approval is required for units planning to hold a Flying Display or Flypast (Mil). The EO **should** seek approval, through the DDH / HoE, from HFT (for Flying Displays) or

SO(ODH) (for other events) at least 12 weeks in advance (6 weeks for a FTS graduation). The request **should** detail the Flying Display Categorization, the nominated EO, FDD, if required, and confirm the intention to appoint a Flying Control Committee (FCC) if required. The MAA **should** be informed of the approval to conduct a Flying Display over MOD Occupied Property in accordance with RA 2335(1) para 18.

9. **Event Order.** The Event Organiser **should** submit, through HoE / DDH, an Event Order to SO (ODH)) to arrive no later than 4 weeks prior to the Event (1 week for a FTS Graduation). A Specimen (Graduation) Event Order can be found at Annex A.

10. **PR / media approvals.** The need for local publicity and awareness **should** be considered. The EO **should** notify AIR DACOS Media & Comms (AIR-COS-Media DCOS@mod.uk) of any weekend flying activity. If the event is likely to attract national media attention, then Air M&C **should** be requested to advise the DMC RAF Press Officer.

11. **Notification of Unusual Aerial Activities (UAA).** UAA **should** be notified in accordance with UK AIP ENR 1.1 (Chapter 4.3), CAA Form SRG1303 **should** be submitted to the CAA at least 42 days prior to the event. The FDD **should** request Restricted Airspace (Temporary) (RA(T)) in accordance with CAP403.

12. **Post Event Reporting (PER).** A Post Event Report **should** be submitted as soon as practicably after the event and the following reporting requirements apply:

13. **HQ 22 Gp DFT.** The EO **should** submit a PER, through the DDH / HoE, to SO (ODH)) no later than 2 weeks after the event. A PER is only required after a FTS graduation by exception.

a. **MAA post event feedback.** The FDD **should** provide the MAA with timely written post event feedback on the RA 2335(1) Form 4.

Safety management

14. **General policy.** The DDH / HoE and EOs **should** give paramount consideration to the safety of all participants, spectators and 3rd Parties, who could be affected by the event, when planning and conducting a flying display or flypast (Mil). Categorisation as a flypast (Mil) **should not** imply a reduced level of supervision. The level of safety management will vary depending on the scale of the event and the EO **should** detail all measures to be taken in the Event Order.

15. **Contingency planning.** FDDs **should** ensure that contingency plans are in place to cover an aircraft accident or other major occurrence during the period of the event. The Event Order **should** specify when the stn crash plan was last exercised.

16. **Risk assessment.** EOs **should** ensure that a specific risk assessment is conducted and included in the Event Order. If it is predicted that the general public will gather in off-site viewing areas, the risk assessment **should** detail any additional mitigations to be imposed, i.e. no over-flight of the viewing area or notification of event to local police force.

By approving the Event Order signatories are accepting responsibility for the risk of the activity.

- a. **Visiting aircraft regulations.** All events **should** be conducted in accordance with the more restrictive of these GASOs and those regulations issued by a visiting aircraft's higher authority.

22 Gp training school graduations – additional considerations

17. **Initial approval.** Standing approval is given by AOC 22 Gp to mark training school graduations with a flying event involving display flying, role demonstrations and / or flypasts by resident and visiting aircraft (including civilian participants). However, initial approval (see para 9) **should** still be sought to confirm the event categorization, the nominated EO and FDD (if required), and FCC requirements (if required).

18. **Safety management.** 22 Gp training school graduations **should** be afforded the same level of safety management and supervision as other flying displays and flypasts (Mil). Guest numbers **should** be controlled. Hosting / spectator area arrangements **should** be in place and **should** be detailed in the Event Order. For training school graduations that do not have display flying participants a FDD is not required and the DDH may nominate an appropriate SQEP to supervise the flying activity.

19. **Risk assessment.** A generic 22 Gp training school graduation risk assessment is acceptable provided that an annex to the Event Order is produced on each occasion detailing the specific airborne activity of flying programme for that event. The DDH / HoE **should** review these generic risk assessments annually and the Event Order **should** specify when the risk assessment was last reviewed.

20. **Other FTS flying.** There **should** be no other FTS flying in the immediate vicinity of the graduation flying activity and the extent of this restriction **should** be outlined in the Event Order.

Visiting display crews

21. **Supervision of visiting display crews.** The following procedures **should** be followed:

- a. **Display practise.** The DDH / HoE may allow visiting display teams or solo display pilots to practise at their stn. The crews **should** be briefed by a suitably qualified officer on local operating and safety procedures.
- b. **Conduct of displays and display practises at 22 Gp airfields.** The DDH / HoE **should** limit display flying or display flying practises to the following:
 - (1) Established UK military display teams.
 - (2) UK military pilots / teams who have been approved by their AOA.
 - (3) Foreign military registered display participants in accordance with RA 2335(1) Para 23.
 - (4) Civilian display participants in accordance with RA 2335(1) Para 33.

22. **Foreign military registered flying display participants.** The requirements of RA 2335(1) paras 23, 24 and 25 **should** be fulfilled.

Event participation

23. Participation includes any display flying, role demonstration, flypast (Mil) or static aircraft display by UK military aircraft (including civil registered, military operated), which is performed at an event in the UK or abroad. Participation from crews other than the display crews **should** be limited to role demonstrations, flypast (Mil) and static displays.

Participation approval process

24. **Sources of requests.** There are 3 likely sources of a request for participation:

- a. Through the RAF Events Team as part of their annual planning cycle.
- b. Through 22 Gp HQ DFT.
- c. Through local engagement at stn level.

25. **Action on receipt of a participation request.** All requests for participation received at unit level **should** be passed to the RAF Events Team who will then liaise with the relevant DFT Desk Officer. The receiving unit or individual **should not** give any indication to the applicant that the request can be met until feedback is given by HQ DFT. The only 3 exceptions to this are:

- a. **Participation of 22 Gp assets at a 'Home Stn' event.** The DDH / HoE may approve the participation of their resident 22 Gp assets at an event taking place at their own stn without referring the request to the RAF Events Team. The DDH / HoE **should** pass their decision to AOC 22Gp via SO(ODH).
- b. **Low profile flypast (Mil).** The DDH / HoE may approve a local area flypast (up to a maximum of 4 single type aircraft) provided the flypast is flown as part of a routine training sortie without compromising the sortie training objectives. The DDH / HoE **should** pass their decision to AOC 22Gp via SO(ODH).
- c. **Static display.** Where participation at an event is limited to a static display the DDH may approve the activity. The DDH **should** pass their decision to SO(ODH).

26. **Approval for participation.** Approval for 22 Gp assets to participate, in principle, in an event **should** be first granted by the RAF Events Team and then forwarded to the DFT Desk Officer. Unless directed by higher authority, SO(ODH) **should** then decide if participation will be:

- a. A formal task that the tasked unit should undertake.
- b. Delivered at the DDH's discretion with no impact on trg delivery.

27. **Rejection from the RAF Events Team.** If the RAF Events Team decides not to approve participation of 22 Gp assets in support of an event, the DDH may appeal against the participation approval decision through

SO(ODH). If participation approval is subsequently granted, participation in that event will become a formal task.

28. **Summary of participation approval process.** The procedure for obtaining approval to participate in display flying, role demonstrations, flypasts and static displays is summarised at Annex B.

29. **Additional flying activity approvals.** Dependent on the nature of the specific flying activity, additional approval beyond that allowing mere participation at an event may also be required. Where any doubt exists approving officers **should** consult SO(ODH) prior to any commitment. The following additional approvals are examples of those typically required:

a. **SO(ODH) approval.** Additional approval **should** be sought from SO(ODH) for the following activities¹:

- (1) Mixed formations.
- (2) Formation flypasts of more than 9 aircraft.
- (3) Flypast (Mil) or role demonstration over a congested area.
- (4) Flypast (Mil) or role demonstration outside of the UK mainland.

30. **Pan-Gp flypasts approval.** Pan-gp flypasts need the agreement from all Gps involved, and one AOC will be nominated (through mutual agreement) as the Senior Responsible Officer (SRO).

31. **Senior level approvals.** The RAF Events team secures approval from DCom Ops for the season's flying display programme including high profile flypasts, normally by mid-Feb. Flying display participants **should** confirm that the appropriate level of approval has been secured prior to participation in events. Senior level approval is required for the following:

- a. Event of national importance (DCom Ops). Requests for approval from DCom Ops should be submitted through the nominated SRO in an Op Order.
- b. London (ACAS) or other major city flypasts (AOC 22Gp via SO(ODH)).
- c. Complex (i.e. containing 2 or more elements) pan-gp flypasts or multi / cross-command formations (AOC 22Gp via SO(ODH)). Separation of less than 5 minutes over the flypast location is defined as the same flypast.
- d. Major events where the PR focus is for external consumption or has an external connotation (AOC 22Gp via SO(ODH)).

32. **Flypast notifications.** Once a flypast has received participation and activity approval, it should be notified to AOC 22Gp or DCom Ops as per the table below:

¹ Whilst SO(ODH) will be the approval authority, the DDH will have to demonstrate to the ODH that risks to life pertaining to the formation activity are ALARP and Tolerable.

Level of Approval Required	Officer to be notified	Final Paperwork to be submitted no later than:
DDH / HoE	AOC 22Gp (submit through SO(ODH))	N/A
AOC 22Gp (submit through SO(ODH))	DCom Ops (submit through HQ 22Gp)	1 week prior to flypast
AOC 22Gp as SRO for pan-Gp (submit through SO(ODH))	DCom Ops and all involved AOCs (submit through HQ 22Gp)	2 weeks prior to flypast

33. DCom Ops is to be notified, through the AOC, for all overseas flypasts, or flypasts in the UK where the Service's reputation could be called into question.

Participation administration

34. **Participation Order.** Once PDA has been awarded, participation in RAF Events Team-approved display flying **should** be supervised at the DDH level and a copy of the administrative arrangement for each event **should** be sent to the appropriate DFT Desk Officer. For other, non-PDA, approved activity (flypasts, role demos and static displays) an Order detailing the participation in an event **should** be submitted to the relevant DFT Desk Officer, through the DDH, to arrive no later than one week prior to the event. Any additional approvals that have been given **should** be clearly stated. A specimen Participation Order can be found at Annex C.

35. **Risk assessment.** A specific risk assessment **should** be conducted by the DDH prior to the event and included in the Participation Order. A generic template is acceptable for the flypast or role demonstration risk assessment provided that an annex is produced for the Participation Order on each occasion detailing the specific risks for that flypast / role demonstration. DDHs **should** review the generic risk assessments annually. The Participation Order **should** specify when the generic risk assessment was last reviewed.

36. **Display flying participation.** Any 22 Gp display flying participants **should** ensure that the appropriate CAA permission / exemption is in place and that the MAA has been notified of the event if it takes place over a non-MOD area.

37. **Weekend activity.** Units are individually responsible for obtaining approval (normally 30 days in advance) from MOD DAS (Lower Airspace), for individual display flying, role demonstrations and flypast (Mil) planned to take place at weekends that are not flown as an invited participant at an organised flying display.

Standards of dress

38. Display aircrew and support personnel may wear approved team / display flying suits whilst those involved in the static display **should** wear standard RAF issue flying clothing with standard issue roll neck aircrew shirt or sqn t-shirt. Flying suits **should** be clean with correct rank tabs and

sqn patches; they **should not** bear unofficial badges and name badges **should not** include inappropriate nicknames.

Static displays

39. **Arrivals and departures at event locations.** Arrival and departure profiles **should** be conducted in accordance with the requirements of RA 2335(1) para 30. Where a circuit is required to be flown the minimum height **should** be 500ft AGL.

40. **Aircraft presentation.** The required standard of aircraft presentation is a good basic standard of cleanliness and appearance whilst acknowledging the aircraft is a working machine. Notice-boards giving leading particulars of the aircraft and / or equipment **should** be displayed whenever possible.

41. **Crewing.** At least one aircrew member or engineer **should** be present with the aircraft when a static park is open to spectators. Crews at the aircraft **should** be politely pro-active and position themselves so that members of the public are not deterred from speaking to them. During rest periods, crew members **should** leave the static park and make use of rest and refreshment areas provided.

42. **Security of aircraft.** The DDH / HoE **should** ensure that their crews are briefed on the minimum air show security standards and aircraft **should** be secured in accordance with AP 1990.

43. **Minimum security standards.** The following procedures **should** be followed:

a. **Aircraft on display when members of the public are present.**
The aircraft commander **should**:

- (1) Ensure the aircraft is parked within a rigid barrier that provides adequate protection of the aircraft from members of the public.
- (2) Ensure the aircraft is protected by a dedicated security guard force of military personnel or an approved civilian organisation.
- (3) Seek advice from their parent USyO if he considers the security arrangements to be inadequate.
- (4) Withdraw the aircraft from the display if they remain dissatisfied with the security arrangements, except where such action would endanger the aircraft, crew or members of the public, in which case they should seek military or civil police assistance.

b. **Access to aircraft by members of the public.** The following procedures **should** be followed:

- (1) The aircraft commander **should not** allow public access to aircraft that will be involved in Display Flying.
- (2) For static aircraft, the norm is that members of the public **should not** be permitted to enter the aircraft; furthermore, the aircraft commander is responsible for ensuring that physical security measures are in place to prevent the public from

tampering with the aircraft. However, where it is deemed appropriate, the aircraft commander may allow access by members of the public if they are escorted by either a member of the crew or an individual specifically briefed to do so.

(3) The aircraft commander **should** ensure that their aircraft is thoroughly searched and inspected before departure from the display venue.

44. **Sales stalls.** Stn or sqn stalls selling RAF and sqn memorabilia at display venues are permitted provided that they are properly controlled. They **should not** be positioned alongside Flying Display aircraft but may be established in other areas alongside Static Displays.

**Guidance
Material
2335(1)**

Open days and families' days – participation requests

45. If required, units organising open days and families days should make requests to the following as appropriate:

- a. The RAF Events Team, by 30 Sep of the previous year, for established RAF display teams (for example RAFAT, BBMF and RAF Falcons etc), other RAF flying displays, RAF flypasts, foreign and NATO aircraft and static displays.
- b. Joint Helicopter Command (JHC SO3 Tasking / Displays) for Support Helicopter Force aircraft including statics.
- c. FLEET ACOS (CSAV) for RN aircraft.
- d. AACCenHQ, Middle Wallop for Army aircraft.

**Group Air
Staff Order
2335(2)**

Display Flying, Role Demonstrations and Flypasts (Mil)

2335(2) The DDH **shall** ensure that crews involved in Display Flying, Role Demonstrations and Flypasts (Mil) are competent, appropriately trained, approved, authorized and supervised. Terms of Reference (TOR) **shall** be issued to display crews, display supervisors, deputy supervisors and display mentors.

**Acceptable
Means of
Compliance
2335(2)**

Display flying, role demonstrations and flypasts (Mil)

46. **General.** The DDH **should** ensure that the requirements of RA 2335(2) are fulfilled.

47. **Display flying approval.** 22 Gp display flying is generally only carried out by the current platform display crew as part of the season's display programme. HFT **should** be consulted before planning any other 22 Gp display flying routine.

48. **Training – pre and post-season flying display symposium.** Where practicable, all personnel involved, or potentially involved, in the conduct and supervision of display flying **should** attend both the pre and post-season UK Air Display Flying Symposium. Where this is not possible SO(ODH) **should** be informed and one member of the supervisory chain

should attend both events and personally brief all other supervisory personnel involved on the content of the symposium.

Additional approvals and authorization

Approving Officer. The DDH is empowered by AOC 22 Gp to act as the day-to-day Approving Officer throughout the work-up period and display season. However, AOC 22 Gp will personally approve the following:

The selection of display aircrew.

The first practise of a display sequence using an initial practise height.

Public Display Authority (PDA).

Authorization. Once PDA has been granted the DDH may delegate powers of authorization for displays and display practises to the display pilot. In all cases the powers of authorization **should** be clearly stated in TORs and the display crew folder.

Supervisory roles

Approving Officer responsibilities. The Approving Officer **should** as a minimum:

Appoint a Display Flying Supervisor prior to the work-up period (a deputy Display Flying Supervisor and a mentor may also be appointed – see guidance material).

Ensure timely nomination of the display crew to facilitate a safe display work-up.

Issue TORs to the display crew and Display Flying supervisor, Deputy Display Flying Supervisor and mentor if appointed.

Consider the overall display sequence in terms of difficulty and aircraft fatigue during the design phase.

Conduct a risk assessment for the display flying specific to aircraft type (to be completed prior to PDA).

Issue a Display Pilot Directive to the display pilot, an example of which is at Annex D.

Review all mitigations detailed in the risk assessment at least once during the display season to ensure that they can be achieved and are being implemented.

Review the workload of display aircrew and supervisors regularly to ensure that they have sufficient time to practise.

Supervise the display flying both during the work-up period and throughout the season.

Display Flying Supervisor. The Display Flying Supervisor **should** manage the preparation, training and in-season employment of the display crew on behalf of the Approving Officer. The Display Flying Supervisor **should**:

Be a senior flying supervisor of OF-4 rank or equivalent.

Be current on type.

Have a reasonable expectation of remaining in post for both the work-up and entirety of the display season.

Be responsible for only one display crew at a time.

Deputy Display Flying Supervisor. The Approving Officer **should** consider the selection of an individual to deputise as the Display Flying Supervisor to provide a level of redundancy in the direct supervision of their display crew. The deputy **should** be fully briefed by the Display Flying Supervisor prior to any periods of the Supervisor's absence. See guidance material.

Display mentor. The Approving Officer **should** consider the selection of a display mentor to provide the display crew, Display Flying Supervisors and Approving Officer with expertise and advice on displaying the aircraft type. See guidance material.

Selection of display aircrew

Nomination of display crew. Display crew **should** be volunteers. The DDH **should** instigate their own selection process to determine their nomination to include, as a minimum:

A practical assessment of flying ability.

An interview designed to assess the individual's suitability for display flying.

A review of the individual's F5000.

Approval of display crew. Nominations for display crew **should** be submitted no later than 5 working days prior to 1 Nov to the appropriate DFT Desk Officer. These **should** then be staffed by HQ DFT to AOC 22 Gp no later than 1 Nov for approval. The DDH nomination **should** include narrative assessments of the individual and the respective up-to-date F5000 series (including current and all previous AISs).

Display sequence content and safety

Sequence design and approval. Details of the full, rolling / limited and flat sequences **should** be submitted to the appropriate DFT role desk at least 4 weeks prior to the requirement to practise below 4000ft AGL (5000ft for Hawk, 3000ft for Tutor) for approval from AOC 22 Gp. An example display flying sequence data sheet is at Appendix 5 to Annex D. Following this initial approval by the AOC and only prior to PDA, the Approving Officer may approve changes to the sequences provided that no new manoeuvres are introduced.

Rolling and flat sequence limitations. Any aerobatic manoeuvre that is flown within the aircraft Release to Service, Aircraft Flight Manual or Pilot's Operating Handbook is permitted unless a more stringent limitation is stated elsewhere in MAA RA FLY 2000 or these GASOs. The following limitations also apply:

Rolling sequence. This **should not** contain any manoeuvres that achieve the pure vertical (or close to), for example the stall turn.

Flat sequence. This **should not** contain any manoeuvre with vertical extent although rolling manoeuvres may be conducted provided they are conducted in level flight.

Display complexity. In all cases the Approving Officer **should** ensure the rolling and flat / limited sequences demonstrate a decreasing level of complexity from the full sequence to allow for the demands of operating in deteriorating weather.

Conversion between sequences in flight. Display crews may convert from one sequence type to any other approved type to cater for weather changes or other local factors; although such a change **should** only be made once during a performance. Opportunities for sequence conversion **should** be clearly stated during the display sequence approval process at Para 55 and **should** be practised during training.

Gate heights and speeds. The display pilot **should** define a gate height and speed for each display manoeuvre with a vertical component (See guidance material). The following procedures **should** be adhered to:

Gate height. The display pilot **should** abandon the manoeuvre if he does not achieve the gate height for the manoeuvre.

Gate speed. The display pilot **should** abandon the manoeuvre if they are above the maximum gate speed or below the minimum gate speed for the manoeuvre.

Supervision of training

Display crew folder. The display crew folder **should** be a comprehensive record of all activity relating to the selection and supervision of display crews and **should** be maintained by the Display Flying Supervisor. See guidance material.

Display work-up. The Approving Officer (in consultation with their Display Supervisor) **should** decide on the exact PDA work-up and pre-PDA currency requirements for a display crew. It **should** include content and amount of synthetic training, based on the fidelity and utility of available synthetic training aids. The work-up **should** be submitted to HFT before the work-up is commenced. A record of proposed and actual training events **should** be maintained in the Display Crew Folder.

49. **Initial practise height.** The display work-up **should** start no lower than 'Initial Practise Height' which is defined as:

- a. 3000ft MSD for Tutor.
- b. 4000ft MSD for Texan and Prefect.
- c. 5000ft MSD for Hawk.

50. **Clearance below 'Initial Practise Height'.** Where possible, a dual check of the full sequence **should** be completed at initial practise height before a display crew is cleared to practise below that height. This check **should** be flown with the Approving Officer, Display Flying Supervisor, Deputy Display Flying Supervisor or mentor (if appointed), depending on who is more suitably qualified; the Approving Officer **should** determine who is to be the aircraft commander.

51. **Full sequence work up.** Both the Approving Officer and Display Flying Supervisor **should** sign clearances permitting the display crew to execute sequences using a lower base height than that previously cleared. Display Flying Supervisors **should** decide the specific training

requirements to take place at each base height subject to the minimum requirements stipulated below:

a. **Singleton displays by 22 Gp aircraft.** The Display Flying Supervisor may authorize the progressive lowering of the minimum base height after a minimum of 6 successful practises of the full display at each of the minimum heights listed below. Where a display pilot is cleared to perform the full sequence to a certain base height, they may also practise the rolling, limited or flat sequence to the same base height.

- (1) Initial Practise Height.
- (2) 1500ft MSD.
- (3) 1000ft MSD.
- (4) 500ft MSD (100ft for level flypasts as part of a flying display).
- (5) 300ft MSD (Tutor only and requires authority from AOC 22 Gp).

52. **Clearance below 500ft MSD (Tutor only).** A further dual check is required for clearance to practise below 500ft MSD. The sequence to be performed below 500ft MSD **should** be designed such that no energy depleting manoeuvres are included that would jeopardise chances of recovery should an engine failure occur.

53. **Display flying practises.** Prior to issue of PDA, either the Approving Officer or the Display Flying Supervisor or the Deputy Display Flying Supervisor (if appointed) **should** witness all display flying practises below 4000ft AGL (5000ft for Hawk, 3000ft for Tutor). Display flying practises **should** be monitored from the ground. Practises at 1500ft MSD and below **should** also be filmed from the ground and the film be reviewed during the debrief. If supervising from the ground, the nominated supervisor **should** have access to a radio selected to the display frequency during the practise. The supervisor **should** conduct a detailed debriefing after each practise sortie.

54. **Location of display flying practises.** Practises at 2000ft MSD and below **should** routinely take place over an active airfield. When display tasking has been accepted at non-airfield locations, such as coastal or grass sites, the Approving Officer may authorize practises at such locations, subject to being satisfied that all safety, ATC and supervisory measures are in place.

55. **HUD video recording equipment.** All practises and displays **should** be recorded by on-board HUD video recording equipment, or similar, when fitted.

56. **Dual checks.** Where the aircraft lends itself to on-board supervision, the Approving Officer **should** determine the requirement for dual checks and / or airborne supervisory checks at suitable points throughout the work-up. They **should** also determine who is to be the aircraft commander for these sorties and promulgate this policy prior to the start of the work-up. Once PDA has been given, the display pilot **should** be the aircraft

commander. Dual sorties with the display pilot **should** only be conducted by the Approving Officer, Display Flying Supervisor, Deputy Display Flying Supervisor, mentor, or HQ CFS pilot depending on who is most suitably qualified or deemed appropriate by the Approving Officer. Additionally, at least one dual check **should** be conducted mid-season. Dual sorties may also be conducted comprising the display pilot and the nominated display pilot for the following season.

57. **Periodic progress reports.** The Display Flying Supervisor **should** submit periodic reports to the Approving Officer, commenting on the progress of the display crew; the frequency of these reports **should** be stated in the Display Flying Supervisor's TOR.

58. **F5000 - record of training report.** When the Approving Officer is satisfied that the display crew is competent to undertake displays, usually in conjunction with the issue of PDA, they **should** produce and sign a record of training report for insertion in the crew's respective F5000 folder.

59. **Role demonstrations**

- a. **Display season role demonstration.** A role demonstration which is to be performed repeatedly at flying displays as part of a display season (possibly in lieu of a platform aerobatic display) requires careful crew selection, a work-up and PDA. It **should** therefore be categorised as a flying display routine within these orders and GASO 2335(3) applies.

Role demonstrations. Examples of typical 22 Gp flying activities that are categorised as role demonstrations for the purposes of this Order are listed below:

FTS graduation role demonstration. A flying demonstration flown to an approved sequence and performed at an FTS graduation. Initial approval of the proposed sequence **should** be obtained from HFT and **should** be subsequently re-submitted for review on an annual basis.

Simulated attack. A pairs simulated attack for a single overflight of the target by each aircraft.

60. **Repeated flypasts.** If a formation flypast is required to make multiple overflights of the same location or make formation changes, then it is to be categorised as a role demonstration.

Training and authorization.

61. **Work up and currency.** The DDH is responsible for the safe conduct and supervision of any role demonstration or flypast flying activity flown by crews under their command. The DDH **should** determine the qualification work-up and currency requirements for crews to be able to participate in a flypast or role demonstration and promulgate in local Flying Orders.

62. **Glider role demonstrations.** Viking role demonstrations and flypasts are infrequent and therefore **should** be subject to specific criteria defined by the DDH and approved by AOC 22 Gp.

63. **Public Display Authority.** A PDA is only required for a FW role demonstration if it is to be performed as a flying display. Otherwise, role

demonstrations and flypasts do not routinely require PDA; however, it may be demanded by the DDH / HoE or FDD at any time.

64. **Authorization.** The DDH **should** authorize all role demonstrations at flying displays. Powers of authorization may be delegated for role demonstrations at other events and for flypasts (Mil) at both flying displays and other events. Powers of Authorization **should** be clearly stated on the relevant authorization matrix.

PDA

65. **Changes to sequence.** Once PDA has been granted (RA2335(1) Para 58 and Annex A refer), no alterations **should** be made to the PDA display sequence or permitted variations except in the following circumstances:

66. When local prohibitions, geographical factors or weather affect some of the manoeuvres, then these individual manoeuvres may be left out of the sequence but the order of the remaining manoeuvres **should not** be changed. If manoeuvres are left out, the display crew **should** ensure that the entry criteria for the subsequent manoeuvre are met.

67. If a permanent amendment to the display sequence is required, the revised sequence **should** be witnessed by AOC 22 Gp and a new PDA, signed by AOC 22 Gp, should be issued.

68. **Pre-PDA preparation.** See guidance material at Para 90. Work-up documentation should be submitted to SO(ODH) for review 4 weeks prior to PDA.

Supervision during display season

69. **General.** The Display Flying Supervisor **should** witness a selection of in-season displays; however, the Approving Officer may permit the display crew to carry out in-season practises without the requirements at Para 65.

70. **Self-authorizer's pre-detachment briefing.** Self-authorizing display pilots **should** brief their Approving Officer or Display Flying Supervisor before each display period away from their home base. The brief **should** include, as a minimum, the following:

- a. Details of display venues, airspace and obstructions and the forecast weather.
- b. Any known issues that may affect the display (such as non-standard display sequencing and integration with other displays).
- c. Adverse weather options, including the last time the rolling / limited and flat show display sequences were flown/supervised (including actual weather conditions when they were last flown).
- d. Details of transit sorties, including spare aircraft.
- e. Aircraft security measures, to satisfy the requirements of AP1990.
- f. 'No go' items of equipment for display flying.
- g. The proposed timetable and itinerary for the detachment.

71. **Display flying currency.** The diagram at Annex E illustrates the requirements for a display crew to maintain and re-gain PDA currency. Display Flying Supervisors **should** determine the applicability of self-governed rolling / limited and flat sequence currency requirements. These additional requirements **should** be included in the display crew folder.
72. **Flying display report.** Flying display reports **should** be submitted to the RAF Events Team and SO(ODH) as soon as practicable after the display: see guidance material. GASO 1410(1) applies for all air safety reportable occurrences.
73. **End of season report.** An end of season display report **should** be submitted to the RAF Events Team and SO(ODH) within one month of the last formal display. See guidance material.

**Guidance
Material
2335(2)**

Supervisory roles

74. **Display Flying Supervisor.** The Display Flying Supervisor will be the display aircrew's Sqn Cdr and possess relevant experience of display flying, where possible.
75. **Deputy Display Flying Supervisor.** The Deputy Display Flying Supervisor will be qualified as a Flight Supervisor, current on type and have experience as a display pilot or have completed the MAA FDD course. Where possible, he should be senior in rank to the Display Pilot but in all cases should be at least an experienced OF-3 or equivalent.
76. **Display mentor.** The display mentor will be an appropriately experienced individual or crew. The role of the display mentor is of particular importance where the Display Flying Supervisor and / or Deputy Display Flying Supervisor do not possess relevant display flying experience.

Selection of display aircrew

77. **HQ 22 Gp flying competitions.** The Stn Cdr / DDH may appoint the display pilot or select the display pilot by means of a competition.

Display sequence content and safety

78. **Safety gate height and speeds.** A safety gate is a combination of height and speed that must be achieved at a particular point in a manoeuvre to allow safe completion of that manoeuvre by the minimum authorised height.

Supervision of training

79. **Display crew folder.** The display crew folder will record all necessary clearances, reports and de-briefs throughout the work-up period and display season. It will contain:
- Issued TORs.
 - A record of proposed and actual training events (including synthetic training).

- c. All clearances to perform at a reduced base height as they are awarded.
- d. Display sequence paperwork and approval.
- e. Details of powers of authorization.
- f. Additional currency requirements for rolling / limited and flat sequences.
- g. Items of aircraft equipment that are to be considered as “No go” items if they are unserviceable.

Pre-PDA preparation

80. In preparation for PDA the following actions should be taken:

- a. The appropriate 22 Gp Desk Officer **should** nominate, in consultation with the Approving Officer and AOC, the PDA date and location.
- b. The appropriate 22 Gp Desk Officer **should** arrange for HFT or SO(ODH) to conduct a pre-PDA visit to the relevant unit. The host unit **should** organise the visit which **should** include but not be limited to: a display practise flight with the display pilot, and an opportunity to meet with the supervisory team. The pre-PDA visit **should** be conducted at least 2 weeks prior to the main PDA event.
- c. Prior to PDA the appropriate 22 Gp Desk Officer **should** arrange to conduct an independent inspection of the procedures, documentary records and evidence supporting the display work up to confirm compliance with extant display flying orders and regulations. This inspection **should** also seek to highlight areas for improvement or good practice to facilitate continuous improvement. As a minimum the following documents / procedures will be inspected:
 - (1) Display pilot training folder (display specific and routine QFI folder).
 - (2) Display pilot F5200.
 - (3) Display pilot log book.
 - (4) Briefing / de-brief observation.
 - (5) Display schedule.
 - (6) Confirmation of adequate planning and personnel support.
 - (7) Informal interviews as required.

The independent procedures / documentary inspection may be conducted as part of the pre-PDA visit. Following the inspection, a written report **should** be prepared and submitted via HFT to the AOC no later than one week prior to PDA.

Supervision during the display season

81. **Flying display report.** If a display takes place over a prolonged period or at different locations, the report may be sent after each major phase. The report will include the following information:

- a. Aircraft commander's rank and name.
- b. Aircraft type and callsign.
- c. Date, location and type of display carried out.
- d. Estimate of success, with reasons for any failures or untoward occurrences.
- e. Additional remarks.

82. **End of season report.** The report will include any major problems encountered at venues, comments on the administrative, engineering support received, total number of displays flown and any recommendations and comments by the Display Flying Supervisor and Approving Officer.

83. **Wright Jubilee Trophy.** This trophy may be awarded by AOC 22 Gp following consideration of an individual's performance or display throughout the season. There will be no formal event to determine a winner of the Wright Jubilee Trophy.

**Group Air
Staff Order
2335(3)**

Flying Display Separation Distances, Minima and Restrictions

2335(3) Authorized minima and restrictions **shall** be complied with at all times during a Flying Display, Role Demonstration or a Flypast.

**Acceptable
Means of
Compliance
2335(3)**

General

84. **Minimum height.** The DDH **should** specifically consider the competencies of the crew when approving the minimum height for the sequence; however, they **should not** be less than the MSD specified in RA 2335(3).

85. **Weather minima for display flying.** The weather minima for display flying are as follows:

Type of Sequence	No of Aircraft	Min Visibility	Min Cloudbase *
Flat (Tutor)	1	3.7 Km	SCT at 1000ft
Rolling (Tutor)			SCT at 1200ft
Full (Tutor)			SCT at 1500ft
Flat (All except Tutor)		5 Km	SCT at 1000ft
Rolling (Hawk, Texan and Prefect)			SCT at 1300ft
Full (Texan and Prefect)			SCT at 1500ft
Full (Hawk)			SCT at 2000ft
			SCT at 3000ft
			SCT at 4000ft

*Note: Min cloudbase is above the highest ground or obstruction in the vicinity of the display venue.

86. In the case of a singleton display season role demonstration (see Para 71) the following weather limitations **should** be applied. Approving Officers **should** consider the requirement for, and may impose more restrictive weather limitations, depending on the complexity of the routine and the number of aircraft involved.

Type of Demonstration	Description	Min Visibility	Min Cloudbase*
Singleton Full Role Demonstration	Sequence involving 3D manoeuvring (Wingovers, OTMs, Pop Attacks etc)	5 Km	SCT at 1500ft
Singleton Limited Role Demonstration	Limited to level turns and Flypasts		SCT at 1000ft

*Note: Min cloudbase is above the highest ground or obstruction in the vicinity of the display venue.

87. **Carriage of passengers during display flying.** Passengers **should not** be flown on display flying sorties.

88. **Transit flying.** Transit sorties to display sites or mounting bases **should not** normally be flown below 2000ft MSD(FW) / 500ft MSD(RW) unless forced lower by adverse weather. Because of the limited information available on weekend aerial activity display crews **should** plan weekend transit sorties assuming that all airfields, glider sites and hang glider areas are active and avoid congested areas.

89. **Arrival / departure at a flying display.** Crews holding a display flying PDA arriving or departing a flying display or civilian special event (CAP 403) **should** restrict their manoeuvres to those normally flown within their primary flying training task unless their arrival or departure is directly into or from their display. The minimum height for visual arrivals and circuits is 500ft AGL.

90. **Display crew fatigue management.** The Display Supervisor **should** ensure the following:

- a. **Work-up and practise.** The display crew **should** fly:
 - (1) No more than 2 practise display sorties at 1500ft MSD or below during a single day.
 - (2) As aircraft commander on no more than one further non-display sortie and one transit sortie if 2 practice sorties are flown during a single day.
 - (3) As aircraft commander on no more than 2 further non-display sorties per day if a single display sortie is also flown on that day.

(4) No more than 2 practises of the display in a single sortie.

b. **In-season.** The display crew **should** fly a maximum of 3 displays during a single day. DDHs are to manage the display programme to ensure that transit flying is not excessive and that the risk due to fatigue is maintained ALARP and tolerable. The minimum number of stand down days per week during the display season **should** be promulgated in the relevant Display Pilot Directive a copy of which can be found at Annex D.

c. **Accommodation.** If the display pilot or accompanying aircrew require overnight accommodation at the display venue, they **should** be provided with single rooms that will permit an undisturbed night's sleep. Accompanying groundcrew **should** be allocated accommodation appropriate to their rank.

Role demonstration limitations

91. The following limitations **should** be adhered to when performing a Role Demonstration:

a. **FTS graduation sequence.** The sequence **should** include a maximum of:

- (1) 9 aircraft if performing close formation manoeuvring.
- (2) 6 aircraft if performing tactical formation (including simulated attack profile). A simulated attack **should** be limited to a single over-flight of the target by each aircraft.

b. **Minimum height.** The DDH **should** specifically consider the competencies of the crew when approving the minimum height for the sequence however, they **should not** be less than the MSD specified below:

- (1) **FW singleton only.** 250ft MSD (500ft for Tutor).
- (2) **FW formation role demonstration.** 500ft MSD. Demonstrations **should** be flown in a manner to ensure that all aircraft maintain 500ft MSD whilst in close formation.
- (3) **FTS graduation simulated attack.** 250ft MSD (not in close formation).
- (4) **Rotary Wing.** 100ft MSD Singleton and 250ft MSD Formation.

c. **Maximum speed.** 500kts.

d. **Weather limitations.** The following weather limitations **should** be adhered to. The DDH **should** consider the requirement for, and may impose more restrictive weather limitations, depending on the role demonstration and the number of aircraft involved.

Type of Demonstration	Description	Min Visibility	Min Cloud base*
Multiple Aircraft Role Demonstrations	FTS Graduation Sequence or Simulated Attack	5 Km	SCT at 1500ft

Rotary Wing		3.7 Km	500ft AGL
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- e. **Armament.** The aircraft **should not** be carrying any live or inert ordnance during a simulated attack.

92. **Carriage of passengers during role demonstrations.** Qualified RAF, RN, and AAC aircrew may fly as passengers during close formation graduation role demonstrations. In these particular cases the passenger need not be qualified on type or in current flying practise. All other passenger flying on Role Demonstration sorties **should** be approved by SO(ODH).

Flypast limitations

93. **Formation changes.** There **should** be no formation changes during a flypast.

94. **Non-display flypast minima.** Minima **should** take into account the formation size, aircrew experience and location of event. However, they **should not** be less than the MSD specified below:

- a. **Straight and level Flypast – Up to max 20° angle of bank:**

(1) **Singleton only:** 250ft MSD (500ft MSD) (RW 100ft MSD)

(2) **Formation Flypast:** 500ft MSD. (RW 250ft MSD)

- b. **Flypasts over congested areas and public assemblies.**

Flypasts **should** be flown at a height sufficient to ensure the aircraft clears the area in case of a forced landing or aircraft abandonment. In no case **should** this be less than 1000ft MSD.

95. **Maximum formation size.** The normal maximum number of aircraft in a formation flypast should be 9 aircraft. Requests for approval of formations of a greater size should be addressed to SO(ODH).

96. **Maximum speed.** The maximum speed for a flypast is 500kts unless more restrictive orders are applicable.

97. **Flypast summary of min height and weather limitations.** See table below:

Flypast	Aircraft Type	Non Built-Up Area	Congest ed Area	Min Visibilit y	Min Cloudbas e	
Singleton	Tutor	250ft MSD	1000ft MSD	3.7 Km	SCT at 1000ft	
	Texan/ Hawk/Prefe ct			5 Km		
		500ft MSD				
2 – 6 ac	All FW			5 Km	SCT at 1000ft	
7 - 16 ac					SCT at 1500ft	

Over 16 ac		500ft MSD		8 Km	SCT at 2000ft
RW	All	250ft MSD	1000ft MSD	3.7 Km	SCT at 1000ft

98. **Carriage of passengers during flypasts.** Passengers **should** be permitted to fly in flypasts at the DDH's discretion provided that the flypast is not conducted at a flying display in which case SO(ODH) approval is required.

**Guidance
Material
2335(3)**

Flying display separation distances, minima and restrictions

99. Nil.

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Annex A**SPECIMEN (TRAINING SCHOOL GRADUATION) EVENT ORDER**

Note: This Event Order should be sent to HQ DFT 4 weeks prior to the event (One week for a graduation).

EVENT ORDER NUMBER:

Time Zone Used Throughout the Order:

Task Organisation: ISSUING UNIT

Reference: Graduation Role Demonstration Sequence

SITUATION

1. *This paragraph describes the reason for the event and gives an outline including the date, start/finish time and location of the event. It should also clearly state the category of event (i.e. Flying Display, Role Demonstration or Flypast (Mil)) giving reasons to explain the category i/r.*

- a. **Enemy Forces.** *Usually Nil.*
- b. **Friendly Forces.** *List the parent units of all participating aircraft not under command, with brief details of the level of participation. Also list any units not under command who will provide ATC, engineering or admin services.*
- c. **Attachments and Detachments.** *Normally nil.*

MISSION

2. *To mount a Flying Display, Role Demonstration, Flypast (Mil) to (celebrate the graduation of No XX Course.)*

APPROVALS AND SUPERVISION

3. **Initial Approval.** *Initial approval for the event was given by (HFT/SO(ODH)) on (date).*

4. **Command and Control.** *All visiting participants will remain under the command and control of their AOA.*

5. **Flying Display Director (FDD).** *State the name of the Flying Display Director and state their location during the event. Consider the requirement to form a Flying Control Committee.*

6. **Airborne Control.** *If a smaller event with minimal flying programme but more than one element is taking part, specify either the overall leader or detail the responsibility of individual Aircraft Commanders for safe separation vs. FDD i/r.*

EXECUTION

7. **Event Organiser.** *State the name and contact details of the Event Organiser.*

8. **Concept of Operations.** *Include basic details of the format, aircraft types and slot times (in an Annex i/r). State date of last HFT review of graduation sequence if applicable.*

9. **Timings.** *Specify the period of the event and the specific timings for individual aircraft to enter and leave the hold, commence the run-in and TOT, with flexibility if appropriate (in an Annex i/r).*
10. **ATC Procedures.** *Specify ATC procedures, callsigns and frequencies.*
11. **Briefing.** *Detail the procedure and timing for briefing participating crews.*
12. **Arrival Procedures.** *Detail specific arrival procedures if required.*
13. **Holding Pattern.** *Detail holding and de-confliction procedures with a suitable map if required.*
14. **Run-In.** *Detail run-in procedures including the direction and height limitations. Aircraft conducting airfield attacks are not to be cleared down to attack height until within the airfield boundary.*
15. **Display Lines / Datum.** *Detail location of 450m/230m/150m lines (as appropriate), together with the Crowd Line and Display Datum, using a suitable map if required.*
16. **Departure Procedures.** *Detail specific departure procedures.*

RESTRICTIONS

17. **Flypasts.** *Detail Flypast max speed, heading, min height and use of reheat limitations, with instructions regarding the orientation of the flight path relative to the Flypast datum. Include suitable map or photograph as annex if required.*
18. **Displays.** *Detail any local restrictions and procedures for Display Flying.*
19. **Weather Minima.** *Specify the weather minima for the event.*
20. **Local Restrictions.** *Detail avoidance areas and limits, preferably plotted on a map.*
21. **Local Activity.** *Detail local ATC patterns which may be active during the Flypast period and include local activities that have been suspended for the duration of the event. Detail extent of local airspace restrictions.*
22. **NOTAMS.** *Detail any NOTAMS issued for the event.*
23. **Restricted Airspace (Temporary) (RA(T)).** *Detail the dimensions, preferably on a map, and duration of any RA(T) in force for the event.*

SAFETY MANAGEMENT

24. **Emergency Procedures.** *Detail emergency procedures including RT failure and pre-meditated ejection area. Detail crash and disaster response measures and date of last crash exercise.*
25. **Spectator Control.** *Include estimated numbers of invited spectators or public attendance and specific safety measures taken if the public are predicted to gather off-site.*
26. **Risk Assessment.** *A risk assessment for the event should be included as an Annex. If using a generic risk assessment (i.e. for a graduation) state the date of the last review.*

SERVICE SUPPORT

27. **Technical Support.** *Detail refuelling and turnaround facilities provided for visiting aircraft.*
28. **Administrative Support.** *For standing Op Orders, detail the procedure for activating the Op Order for specific events.*
29. **PR / Media Approvals.** *Give details of all notified parties.*

30. **Acknowledgement Instructions.** *As required.*

DDH / HoE signature block

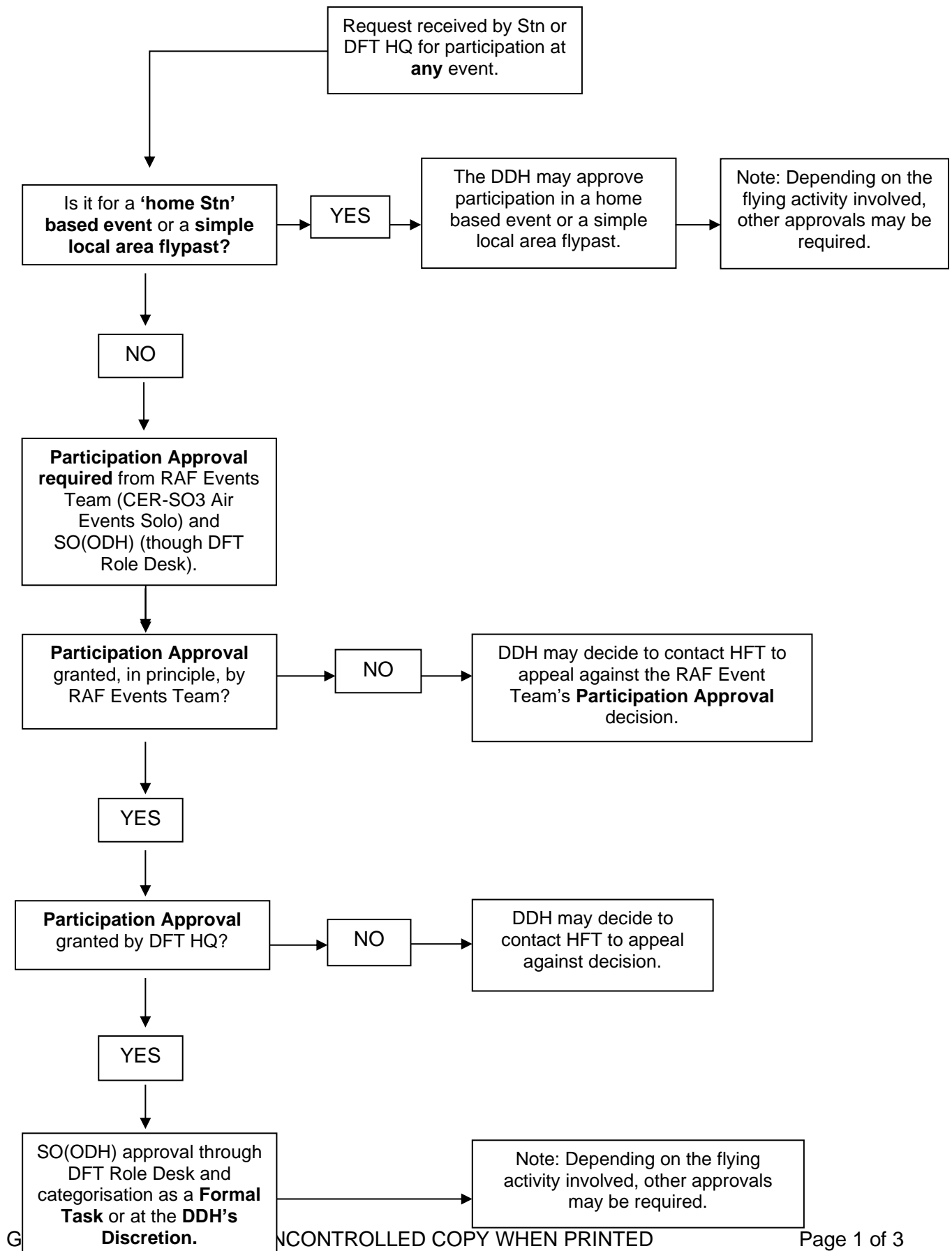
Distribution:

Internal: Within Training School HQ: A/R

External: SO(ODH), 22 Gp ASM, Relevant DFT Desk Officer

Annex B

APPROVAL PROCESS FOR PARTICIPATION IN DISPLAY FLYING, ROLE DEMONSTRATIONS, FLYPASTS AND STATIC DISPLAYS (NOT TO BE USED FOR APPROVAL OF EVENTS) – read in conjunction with GASO 2335(1)



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Annex C**SPECIMEN FLYPAST / ROLE DEMONSTRATION / STATIC DISPLAY AIRCRAFT PARTICIPATION ORDER**

Note: This Participation Order should be sent to HQ DFT One week prior to the task.

References: MRP RA2335

GASO 2335

Event / Admin Order for event (if applicable)

Generic Risk Assessment (if used)

Additional Approvals (if applicable)

1. **(Name)** is approved to carry out the following Flypast / Role Demonstration / Static Display (date).

2. **Occasion for Flypast / Role Demonstration / Static Display:**

3. **Request Task number:** *From RAF Events Team*

4. **Nominated Crew:**

5. **Flypast / Role Demonstration Details:** *Include suitable map or photograph as Annex.*

a. **Flypast / Role Demonstration Profile:** *e.g. S&L Flypast, Pairs Simulated Attack*

b. **Location:** *Lat / Long or OS Grid Reference and Description*

c. **Timings:** *TOT and Tolerance*

d. **Planned Height: Minimum Height:** *From GASOs / RA*

e. **Planned Speed: Maximum Speed:** *From GASOs / RA)*

f. **Other Participants:** *Give details of other participants directly preceding / following if applicable*

g. **FDD:** *Name, Contact Details and Location during event*

h. **Minimum Weather Minima:** **Vis:** **Cloudbase:**

i. **Emergency Procedures:** *Nearest suitable diversion*

6. **Static Aircraft Display Details**

a. **Location:**

b. **Timings:** *Arrival / Departure Slot Times)*

c. **Aircraft Security & Parking:** *Refer to Event Order A/R*

d. **Engineering support:** *If aircraft detached overnight*

7. **Additional Approvals:** *Include Mixed Formation, Congested Area, Outside UK Mainland, DCom Ops Approvals already secured with Name of Approving Officer and Reference No*

8. **Authorizing Officer:**

9. **Additional Information:** *Detail any additional Deconfliction, Airspace or Local Restrictions. Include Map in Annex.*

10. **Risk Assessment.** *A risk assessment for the activity should be included as an Annex. Reference the generic Risk Assessment if used and add detail for specific activity. Include date of last generic risk assessment review.*

DDH Signature block

Distribution:

Internal: A/R

External: SO(ODH) and DFT Desk Officer

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Annex D**DISPLAY PILOT DIRECTIVE**

1. **Introduction.** This directive specifies the operating procedures for your display. You **should** carry a copy of this directive and your Display Flying Clearance Form when operating away from base.
2. **Display Sequence.**
 - a. You are authorized to fly the display sequences on your Display Flying Clearance Form and **should not** vary them other than as permitted therein.
 - b. The minimum authorised altitudes are:
 - (1) 500ft MSD for aerobatic displays, 300ft MSD for non-aerobatic displays and 1000ft MSD at coastal sites where there is no clearly defined horizon or prominent coastline.
 - (2) 100ft MSD for straight and level Flypasts.
 - c. You **should not** fly the entry manoeuvre from behind the spectator line.
 - d. The minimum distance between your aircraft and the crowd line is 230m (150m for Tutor), but this is increased to 450m if your speed is above 300kts and you have a velocity vector towards the crowd.
3. **Authorization.** You may / may not authorize your own display sorties and positioning transit flights.
4. **Prohibited Display Manoeuvres.**
 - a. **Hawk, Texan, Prefect and Tutor:**
 - (1) Spinning.
 - (2) Looping manoeuvres with retractable undercarriage extended.
5. **Operations out of Normal Working Hours.** You **should**:
 - a. Inform the Station Duty Executive, when appropriate, of your planned movements by issuing an Op Order.
 - b. Obtain Royal Flight details from AUS RAF Northolt.
6. **Weather Limitations.** The weather minima for each display type are on your Display Flying Clearance Form. You **should not** fly any manoeuvre that risks entering cloud.
7. **Passengers.** You **should not** carry passengers during displays.
8. **Display Brief.** You **should** send a copy of Appendix 1, Appendix 2 and Appendix 3 to the Flying Display Director before each display and ensure you receive the signed certificate of agreement Appendix 2 from him before flying the display at the venue.
9. **Commentary Notes.** You **should** prepare short commentary notes for use by the Display Organiser to include details of the aircraft, aircraft role and your home base. You may include notes on yourself at your discretion.
10. **Pre-Display Briefing.** You **should** ensure that you are fully briefed by the Display Organiser on all display procedures before the display, in person or by telephone if necessary. You **should** complete a thorough pre-sortie self-brief using Appendix 4 as a guide to the minimum requirements.
11. **Negative G Check – Hawk, Texan, Prefect and Tutor.** You **should** fly an inverted negative G check for loose articles, security and engine performance immediately before

commencing your display sequence. The manoeuvre **should** be flown clear of cloud at a minimum height of 1000ft MSD. By exception, this check may be performed during the sortie before the display to allow for forecast poor weather on the day of the display, provided that the aircraft is secured between sorties and a comprehensive loose article check is carried out during walkround checks.

12. **Altimeter Setting.** You **should** set the QFE on the altimeter sub-scale when displaying over an active airfield. If the QFE is unavailable, you **should** calculate the QFE using the RPS and the display datum elevation. If possible, you **should** confirm the QFE with ATC on R/T before starting the display. A cross-check of barometric altimeters against radar altimeters **should** also be made for suitably equipped aircraft.

13. **Pre-Run-In Checklist.** You **should** complete your Pre-Run-In Checklist immediately before starting your display sequence, to include the following, according to aircraft type:

- c. Weather.
- d. Wind direction and speed.
- e. Airframe (Flaps, Airbrake, Landing Gear).
- f. Engine condition.
- g. Fuel contents and balance.
- h. Inverted flight/loose article check.
- i. POB.
- j. Altimeter setting.

Appendices:

- 1. Brief to Display Organiser
- 2. Certificate from the Display Organiser
- 3. Accident / Incident Telephone Report
- 4. Solo Display Flying – Pre-sortie Briefing Aide Memoire
- 5. Display Sequence Data Sheet template

Appendix 1 to Annex D

BRIEF TO DISPLAY ORGANISER

1. **Introduction.** This brief specifies the operating procedures and limitations for the display flown by..... Please complete and sign the certificate at Appendix 2 and return it to the sender if you agree with its content.
2. **Briefings.** You should take reasonable steps to ensure that the Display Pilot is fully briefed on local conditions and requirements. The Display Pilot is ultimately responsible for deciding whether the display will be flown.
3. **Other Participants.** You should provide the Display Pilot with details of all other aircraft participation at your event (to include all airborne events such as Flypasts, Aerobatic Displays, Role Demonstrations, Parachuting, Aircraft Arrivals/Departures or any other aerial activity that could conflict with a display). If civilian airborne participation is planned, please provide details of whether the CAA has been contacted and if ANO Article 86 approval has been given.
4. **Display Sequence.**
 - a. The Display Pilot is authorized to fly the display sequences detailed in their Display Flying Clearance Form and is not to vary them other than as permitted therein.
 - b. The minimum authorized altitudes are:
 - (1) 500ft MSD for aerobatic displays, 300ft MSD for non-aerobatic displays and 1000ft MSD at coastal sites where there is no clearly defined horizon or prominent coastline.
 - (2) 100ft MSD for straight and level Flypasts.
 - c. The Display Pilot is not to fly the entry manoeuvre from behind the spectator line.
 - d. The minimum distance between the display aircraft and the crowd line is 230m (150m Tutor), but this is increased to 450m when its speed is above 300kts with a velocity vector towards the crowd.
5. **Foreign Object Damage (FOD).** Aircraft are susceptible to FOD; in order to minimise the risk of FOD, you should take the following actions when display aircraft operate from your airfield:
 - a. Ensure the airfield operating surfaces are free of FOD hazards.
 - b. Ensure you publish and enforce anti-FOD operating procedures.
6. **Bird Activity.** Since birds can be a serious hazard to aircraft operations, you should brief the Display Pilot on local bird activity.
7. **NOTAMs.** You should take appropriate NOTAM action through the Aeronautical Information Service NOTAM office to cover the Flying Display.
8. **Flight Safety Reporting Action.** You should ensure the procedures detailed at Appendix 3 are followed as quickly as possible to enable a prompt response by the military authorities if the Display Pilot is unable to report a serious incident or accident that occurs to their aircraft during the event.

9. **Aircraft Security.** You should make provision, in consultation with the Display Pilot if necessary, for appropriate security arrangements for RAF aircraft attending your Flying Display.
10. **R/T Display Frequencies.** Whenever possible, you should allocate a discrete R/T frequency for use in emergency during the Flying Display.
11. **Aircraft Radio Fit.** The display aircraft is fitted with a radio capable of operating within the following frequency rangekHz.
12. **Accommodation.** If the Display Pilot or accompanying aircrew require overnight accommodation at the display venue, they should be each provided with a single room that will permit an undisturbed night's sleep. Accompanying groundcrew should be allocated accommodation appropriate to their rank.

Gp Capt

DDH

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Appendix 2 to Annex D

CERTIFICATE BY THE DISPLAY ORGANISER

To: (Insert name and address of Display Pilot.)

I accept the display format and agree to comply with the procedures and limitations laid down in the Brief to Display Organiser forwarded to me.

Other airborne activities at the event are:

The CAA has/has not¹ granted ANO Article 86 approval.

Signed:

Name:

Event:

Date:

¹ Delete as appropriate

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Appendix 3 to Annex D

ACCIDENT / INCIDENT TELEPHONE REPORT

1. Addressee.

- a. Defence Crisis Management Centre (DCMC) via DCDSO on 9621 88938 or +44(0)207 2188938.
- b. Duty officer at aircraft's parent unit.

2. Format.

- a. Your name and post.
- b. The display location.
- c. Your telephone number.
- d. Type of aircraft involved.
- e. The pilot's name.
- f. Parent unit of aircraft.
- g. Place of occurrence and map or grid reference (if possible).
- h. Date and time of occurrence.
- i. Brief details of occurrence.
- j. Particulars of damage to aircraft/civilian property.
- k. Details of any casualties.
- l. Weather conditions at the time of the occurrence.
- m. Whether civilian emergency services are in attendance.

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Appendix 4 to Annex D

SINGLETON DISPLAY FLYING – PRE-SORTIE BRIEFING AIDE MEMOIRE

1. Display and Training.

- a. Allocation of aircraft safety equipment.
- b. Type of display.
- c. R/T callsigns, frequencies and procedures.
- d. Start-up, taxi and take-off procedures.
- e. Datum and orientation.
- f. Local flying restrictions.
- g. Minimum heights and operating gates for all manoeuvres.
- h. QFE and altimeter procedures.
- i. Recovery, circuit joining and landing.
- j. Weather and diversions.
- k. Fuel.
- l. Emergencies.

2. Transit.

- a. Weather and diversions.
- b. Flight planning and navigation.
- c. Start-up, taxi, take-off and climb procedures.
- d. R/T and en-route procedures.
- e. Recovery, circuit and landing.
- f. Fuel.
- g. Emergencies.

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Appendix 5 to Annex D**DISPLAY SEQUENCE DATA SHEET TEMPLATE****ALL HEIGHTS ARE ADDED TO BASE HEIGHT**

#	Entry Speed	Min Entry Speed	Max Entry Speed	Manoeuvre	Gate Height (ft)	Min Pull From Vertical (ft)	Remarks
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							

Notes:

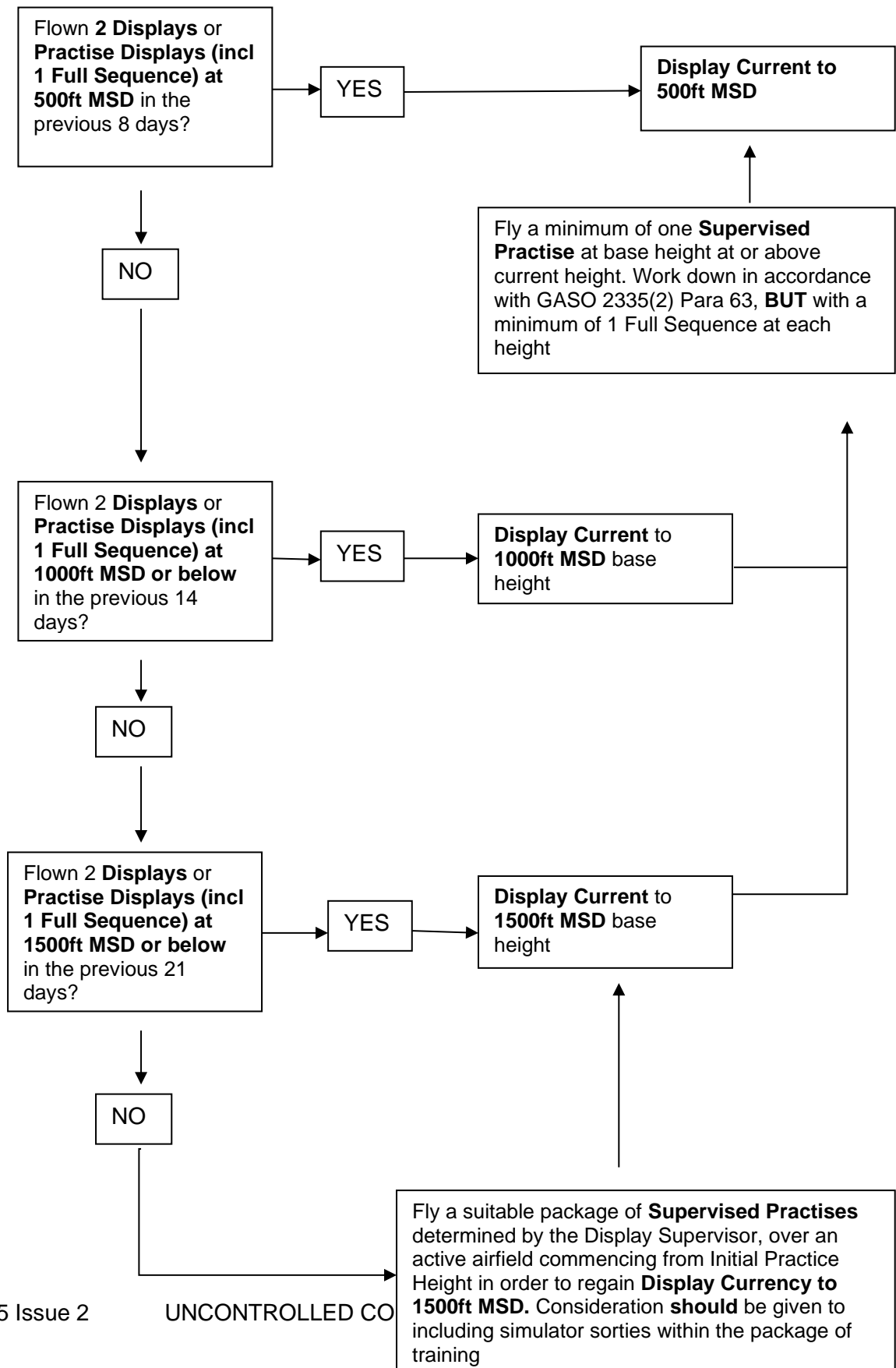
Explanatory notes should be provided to expand on the derivation of gate heights, nuances of manoeuvre, explanations of presentation to the crowd and any other pertinent information that will assist observers to fully understand the rationale and safety of the display design.

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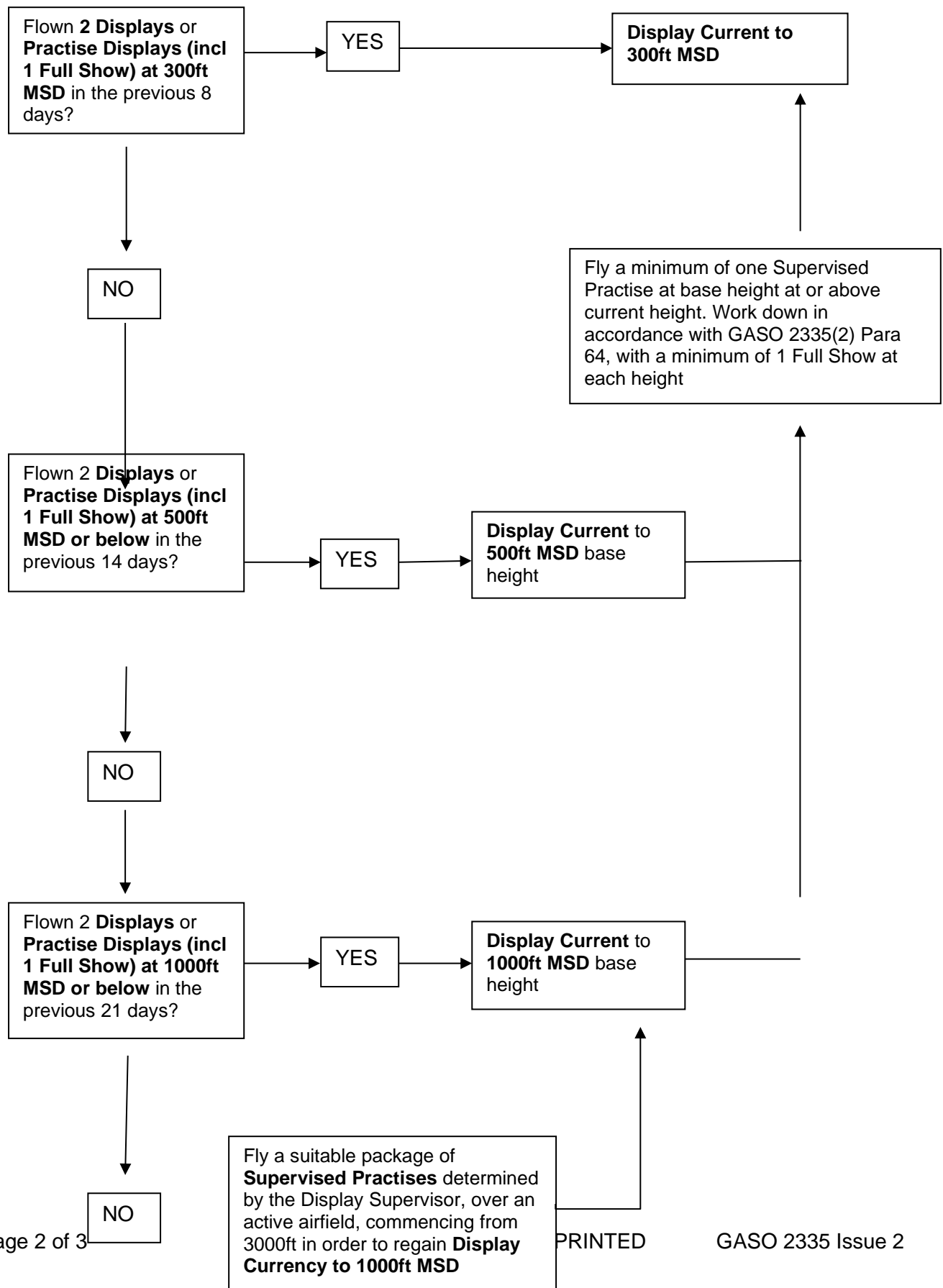
Annex E

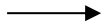
DISPLAY FLYING CURRENCY

The diagram below illustrates the requirements for a display crew or pilot to maintain and regain PDA display currency at 500ft MSD.



The diagram below illustrates the requirements for a display crew or pilot to maintain and regain 300ft MSD PDA display currency (Tutor only, if cleared by the AOC).





GASO 2340 – Supernumerary Crew, Supernumerary Support Crew and Passengers

Ratio9nale *Aviation Duty Holders are responsible for the safety of all passengers, including troops, who fly in Air Systems within their Area of Responsibility. Where passengers are carried on UK Military or civil Air Systems used to deliver military flying training, there is a need to ensure that passenger safety and duty of care is discharged.*

Contents**Definitions****2340(1): Supernumerary Crew****2340(2): Supernumerary Support Crew****2340(3): Passengers - General****2340(4): Routine Air Transport Passengers****2340(5): Tactical Passengers****2340(6): Familiarization Flight Passengers****2340(7): Air Experience Flight Passengers****2340(8): Carriage of VIP Passengers****2340(9): Carriage of Cadets as Passengers****Annexes:****2340(10): Carriage of Working Dogs****A. Approval Guidance for Passenger Flying Aide Memoire****B. Passenger Flight Approval Form****C. Passenger Flight Standing Approval Form****Definitions****Definitions Relevant to this GASO**

1. For the purpose of authorization of flights on military registered Air Systems in 22 Gp the definitions listed in RA 2340 apply.

**Group Air Staff Order
2340(1)****Supernumerary Crew**

2340(1) The DDH **shall** detail in Local Flying Orders the requirements regarding the employment of Supernumerary Crew on air systems within their AoR and ensure flying duties are conducted iaw RA 2340.

**Acceptable Means of Compliance
2340(1)****Supernumerary crew**

2. To fly as Supernumerary Crew personnel **should** hold a certificate of competence and be current. The validity of the competence **should** end on the completion of the syllabus of training during which the competence was awarded and does not require annual renewal. The award **should** be recorded in the individual's Course Record Folder (CRF) / Training Record Folder (TRF) as appropriate. The DDH **should** detail in local orders any

additional qualifications or competencies required for supernumerary crew roles.

3. Qualified Observers, WSOs or WSOps may be awarded the CofC 'Supernumerary Crew – Tutor IF Safety Lookout' or 'Supernumerary Crew – Prefect IF Safety Pilot'. This CofC allows holders to act as Safety Lookout for Simulated IF sorties in accordance with RA 2307(1) Para 77. The DDH **should** define the SQEP requirements for Safety Lookout. Additional training **should** be undertaken which **should** include the roles and responsibilities of a Safety Lookout in the context of monitoring Simulated IF in the Prefect or Tutor.

4. The DDH **should** issue local orders defining the Supernumerary Roles within their AoR, including the approval and authorisation process and any restrictions and prohibited activities.

5. The DDH **should** detail in local orders the safety and survival drill requirements and Aircrew Equipment Assemblies to be worn by supernumerary crew.

Medical Employment Standards for supernumerary crew

6. The DDH **should** stipulate in local orders the appropriate medical standard for Supernumerary Crew in their AoR based on the activity being conducted. Advice on minimum medical standards can be found in RA2340.

7. Military and civilian aircrew holding an appropriate and valid JMES may be employed as Supernumerary Crew without additional medical examination, subject to the anthropometric clearance required for the air system.

Guidance Material 2340(1)

Supernumerary crew

8. The DDH **should** detail in orders instances where Supernumerary Crew who are also appropriately qualified Aircrew are permitted to handle Air System flying controls, and any changes to the orders and instructions at RA 2101 para 2 a-e that apply. Other Supernumerary Crew should not handle Air System Flying Controls during flight or ground taxi.

Group Air Staff Order 2340(2)

Supernumerary support crew

2340(2) Supernumerary support crew

The DDH **shall** publish orders that detail the requirements regarding the carriage of Supernumerary Support Crew on military registered Air Systems within their AoR.

Acceptable Means of Compliance 2340(2)

9. Supernumerary support crew general.

An individual, military or civilian, **should** be categorized and authorized as Supernumerary Support Crew when they are carried¹ on an Air System to conduct specific duties essential to the execution of the Air System's mission or task, but are not required to carry out those duties while in flight or ground taxiing, and are not otherwise authorized as a Passenger iaw GASO 2340(3). The specific duty **should** not have an active role in achieving the purpose of the authorized flight but **should** contribute to its overall conduct through pre or post flight activity.

10. The DDH **should** publish orders that define the Supernumerary Support Crew roles within their AoR.

11. Supernumerary Support Crew **should** not be unnecessarily exposed to hazardous flight profiles.

12. The DDH **should** ensure that Supernumerary Support Crew are only carried on Air Systems within their AoR where there is a justifiable and valid Service or DCFO10 requirement.

13. The DDH **should** publish orders or instructions that detail, as a minimum:

- a. The required Supernumerary Support Crew qualifications and competence levels within their AoR;
- b. The approval and authorization process to be followed for Supernumerary Support Crew to be carried on Air Systems within their AoR;
- c. When Supernumerary Support Crew are prohibited from being carried on Air Systems within their AoR (they should not be carried during Simulated IF where no SQEP safety lookout is present)²;
- d. The minimum Aircrew qualifications, experience or currency required to carry Supernumerary Support Crew;
- e. Prohibited flight profiles, training events or manoeuvres for flights involving Supernumerary Support Crew;
- f. The safety and survival drill requirements³ for Supernumerary Support Crew;
- g. The wearing and carriage requirements of approved AEA and safety equipment including the level of survival equipment to be available to, or issued to, Supernumerary Support Crew according to the likely hazards that might be met in the event of an emergency.

14. To be authorized as Supernumerary Support Crew, the duty that an individual is performing on an Air System **should** not take place while the Air System is in flight or ground taxiing. An individual whose role or duty is associated with activity during flight or ground taxiing should be authorized as Supernumerary Crew iaw RA 2340(1).

¹ This order uses the term 'employed' on Air Systems as opposed to 'carried' to distinguish that Supernumerary Crew have a role on the Air System while Supernumerary Support Crew and Passengers are carried.

² Refer to RA 2307 – Rules of the Air.

³ Refer to RA 2130 – Safety Equipment, Survival Drills and Training.

15. Supernumerary Support Crew **should** not handle Air System flying controls during flight or ground taxi.

Approval and Authorization.

16. For all Supernumerary Support Crew flights, the DDH **should** appoint approving officers iaw Annex A.

17. Approving officers **should**, in the first instance, assure themselves that the flight is appropriate, before approving the flight iaw Annex A.

18. Medical approval for the flight **should**:

a. Be iaw Annex A and;

b. Take into account the Supernumerary Support Crew's anthropometric fitness for the Air System.

19. The Authorizing Officer or Aircraft Commander **should** seek medical advice from a Military Aviation Medical Examiner (MAME) for any Supernumerary Support Crew whose fitness is in doubt.

Physiological flight categories.

20. Physiological flight categories for all Supernumerary Support Crew should be iaw AP1269A – Assessment of Medical Fitness and RA 2340 Annex A.

**Guidance
Material
2340(2)**

Supernumerary support crew general

Due to the range of activity that takes place on military registered Air Systems, DDH orders will provide specific direction to their AoR as to how this GASO is to be applied and define the minimum requirements to ensure that the RtL associated with the carriage of Supernumerary Support Crew within their AoR remains ALARP and Tolerable.

**Group Air
Staff Order
2340(3)**

Passengers - General

2340(3) The DDH **shall** be responsible for the safety of passengers flying in 22 Gp aircraft within their Area of Responsibility (AoR). Before approving a passenger flight, Approving Officers **shall** consider the rationale for the requested flight, the type of passenger, and the reputational risk to the Service in the event of an accident.

**Acceptable
Means of
Compliance
2340(3)**

Passengers – general

21. **Policy.** The ability to fly passengers in Service aircraft is an important tool within the Engagement Strategy; however, the benefits must always be weighed against the inherent risks of military flying. All personnel not qualified and current as crew on type, or undergoing an approved Syllabus of Flying Training, **should** be considered passengers (excluding CFS

examiners operating under GASO 2101(2)), unless specifically designated as Supernumerary Crew.

22. **Minimum qualifications – aircraft commander.** Aircraft commanders **should** be qualified as follows:

- a. Aircraft commanders **shall** be approved by the DDH to conduct passenger flights.
- b. ▶ In all cases, the aircraft commander should be current and qualified for the sortie elements to be undertaken, including a valid instrument rating if applicable.
- c. ~~Tutor and gliders. In all cases, the aircraft commander should be current and qualified for the sortie elements to be undertaken.~~
- d. ~~Prefect. The aircraft commander should hold a current instructor category on type.~~
- e. ~~Texan and Hawk. Hold a current instructor or staff pilot⁴ category and Instrument Rating on type. Be certified as Rear Seat Captain for sorties where the passenger occupies the front seat.~~
- f. ~~Phenom T1. Hold a current instructor or staff pilot category and Instrument Rating on type.~~

23. ~~RW. Hold a Certificate of Competence (Limited Combat Ready).~~ ◀

Types of passenger and approving Officers

24. **Types of passenger and approving Officers.** Passenger Types, Approving Officers and guidance notes are detailed at Annex A. The Table at Annex A **should** be followed to determine whether a passenger flight is appropriate, and to ensure the correct level of approval.

25. **Specific events.** For specific events Annex A still applies; however, the details of bespoke events involving multiple passenger sorties, such as Family Flying Events, **should** be notified to the ODH via AHFT and the appropriate 22 Gp Desk, prior to any related flying activity. SO (ODH) **should** be informed of the activity.

26. **ODH approval.** For passenger requests that require ODH approval details **should** be staffed via the appropriate 22 Gp Desk and SO (ODH) informed. The completed form **should** be retained with the authorization sheets for the duration of the flight.

27. **Approval of Cadet passenger flying.** The approval process for cadets flying as passengers (not formal AEF / VGS flying) **should** be in accordance with Annex A. However, Cadet Flying is subject to additional restrictions. For full details see GASO 2340(9).

Authorization

28. **Authorization.** Passenger flights **should** be authorized in accordance with GASO 2306(1) – Authorization of Flights.

⁴ A staff pilot is defined as a pilot who holds a Certificate of Qualification on Type (CQT) but does not have a current instructional qualification.

29. **Delegated approval and authorization.** Where appropriate DDHs **should** delegate powers of approval and authorization for passenger flights to their subordinates according to position, qualifications, experience and rank. A list of names, appointments and powers of approval and authorization (Authorization Matrix) of all stn approving and authorizing officers **should** be displayed at the position where authorization takes place.

Administration

30. **Administration.** Guidance on GASO 2340 Annexes A, B and C:

a. **Passenger Briefing Form (PBF).** As defined by RA 2340(1), all Familiarization and Air Experience passengers require a PBF. The completed form **should** be retained with the authorization sheets for the duration of the flight. Passenger records **should** be kept as follows:

- (1) **Passenger personal details.** The details of all passengers **should** be entered in the Flight Authorization Sheets or passenger manifest.
- (2) **Flight in potentially hazardous environments.** Where the Approving Officer permits flight in a potentially hazardous environment the specific activities **should** be identified by exercise numbers in the 'Approval for Flight' section of the PBF.
- (3) **RW passengers from other locations.** When picking up passengers from other locations a PBF **should** still be completed as far as possible and left with the authorization sheets. The sections that need the passengers' signatures **should** be annotated "To be completed at pick-up location". A copy of the PBF **should** be carried in flight for completion on the ground prior to flight. This copy **should** be left with a responsible person at the pick-up point with instructions that it **should** be retained for 24 hours or until completion of the flight if longer.

b. **Multiple passenger flying manifests.** For sorties involving multiple passengers, other than cadets flying in accordance with GASO 2340(9), Annex B **should** be used to record Familiarization and Air Experience passenger details. Individual passengers are required to sign the form indicating they have received the brief and meet the medical requirements. The forms **should** be retained with the authorization sheets for the duration of the flight.

31. **RW support to RAFAT tasking.** RAFAT tasking is defined as 'Tactical' in accordance with RA 2340(1) AMC.

Standing approval

32. **General.** In certain circumstances, the appropriate Approving Officer may issue standing approval to permit passenger flying events that do not require individual scrutiny provided certain criteria are met. Standing approval will only be granted when the requesting unit can demonstrate a passenger flying requirement that:

- a. Provides a clear benefit to the Service.

- b. Is repetitive.
- c. Is applicable to a clearly defined passenger group(s).
- d. Can be achieved within defined sortie content boundaries.

33. **Standing approval form.** Units or squadrons wishing to submit an application for standing approval for passenger flights, **should** complete the form at Annex C to this order and forward it to the DDH for consideration.

34. **Frequent fliers.** Approving Officers may grant standing approval for nominated individuals to conduct an unlimited number of passenger flights in accordance with Annex A. Passengers who undertake regular flying, defined as more than 5 sorties in a given week and/or 12 sorties per year, should adhere to GASO 2130 (Safety Equipment, Survival Drills & Training) and GASO 2135 (Aircrew Medical Requirements) under the limitations imposed upon trainee aircrew. For those without an aircrew Joint Medical Employment Standard (JMES), the restrictions imposed by RA 2340(1) apply. Authorizing officers **should** satisfy themselves that frequent fliers are sufficiently familiar with the contents of GASO 2340 - Safety Management. This order is aimed at (but not limited to) personnel such as holding officers, Flight Test engineers, photographers and aircrew (that require SQEP status) in non-flying appointments.

Other considerations

35. **Flying with family members.** The DDH **should** approve flights involving dependants flying with related crew members.

36. **Parents.** Parents with children under the age of 18 years **should not** both be flown in the same aircraft as the other parent.

37. **Minimum / maximum age.** The minimum age for passengers is 13 years unless authorised. For any requests to fly passengers below this age, DDHs **should** seek ODH approval and inform SO (ODH). Whilst there is no specific upper age limit, an individual must be physically capable of embarking and disembarking the aircraft unaided.

Safety management

38. **Aircraft Equipment Assemblies (AEA) and Safety Equipment (SE).** Passengers and supernumerary crew **should** wear flying clothing, AEA and SE as appropriate to the aircraft type, as detailed in GASO 2130(3) and these **should** be fitted by a qualified SE Fitter or appropriately qualified personnel. The authorizing officer **should** determine the correct level of dress for passengers. For cadets see GASO 2340(8).

39. **Emergency and escape procedures.** The authorizing officer **should** ensure that passengers receive adequate training on emergency and escape procedures to maximize their chance of successful escape and immediate survival following an emergency landing. All passengers **should** be able to enter, exit and, if appropriate, abandon the aircraft un-assisted. This briefing should be given by Aircrew with a CQT or Certificate of Competence for the Air System.

40. **Cockpit familiarization.** Whenever possible, Aircraft Commanders **should** provide their passengers with a cockpit familiarization exercise

prior to the pre-sortie passenger briefing. This **should** take place using an actual aircraft or simulated cockpit. As a minimum, cockpit orientation **should** be achieved through use of specially prepared diagrams, photographs or briefing aids.

41. **Passenger briefings.** It is the Aircraft Commander's responsibility to ensure passenger safety is managed. Aircraft Commanders **should** specifically brief passengers to avoid contact with the flying controls. Passengers **should not** be flown in the right hand seat of RW aircraft. Passengers **should** be briefed by a member of staff qualified on the aircraft type. As a minimum, passengers **should** be briefed on the following:

- a. An explanation of the authority of the Aircraft Commander.
- b. Passenger approach, boarding and departure procedures to include propeller hazards and the use of the wing walkway where appropriate.
- c. In dual control aircraft, the dangers associated with interference with the aircraft controls. In addition, if temporary handover of control is permitted then the standard procedures in RA 2309(5) - Handing Over Control in Aircraft with Dual Controls, should be briefed and confirmed.
- d. The use of switches or controls, including intercom, which the passenger may need to operate for their own comfort or for the safe operation of the aircraft.
- e. Any safety critical Air System equipment and systems that they might have cause to interact with either intentionally or unintentionally.
- f. Loose article hazards, including carriage and use of cameras as outlined in GASO 2309(3) – Carriage of Loose Articles and Stores.
- g. Forbidden items that are not to be carried or used in the Air System.
- h. Baggage handling and stowage.
- i. Use of protective clothing and safety and survival equipment including, where appropriate:
 - (1) Ejection seat and seat pin procedures including actions in the event of dropping the pin.
 - (2) Oxygen system operation and emergency procedures.
 - (3) Requirement to have at least one visor down at all times where flying helmets are worn.
- j. Actions in the event of air sickness.
- k. Physiological aspects relevant to the sortie profile including clearing the ears and the effects of g loading during manoeuvring.
- l. Emergency procedures.
- m. Sortie content and purpose.
- n. Strapping-in procedures and seat adjustment.
- o. The forecast weather for the flight.

- p. The importance of pilots lookout and how they, as passengers, can assist.
- q. The use of portable electronic devices.

42. **Manoeuvre warnings.** The following procedures should be adhered to:

- a. **Prefect, Texan and Hawk aircraft.** Passengers and supernumerary crew flying in Prefect, Texan and Hawk aircraft may have no experience of high g manoeuvring. Therefore, the aircraft commander **should** ensure that a pre-flight briefing is given to cover the potential risks of injury associated with high g, the need to adopt a good head and neck position and the need to brace before the onset of g. Additionally, it should also be stressed that the passenger has individual responsibility to be as ready as possible for such manoeuvring.
- b. During flight, the aircraft commander **should** assume that passengers and supernumerary crew may have little or no awareness of the aircraft's projected flightpath. To this end, the aircraft commander **should** be aware that unless a warning is given, the other occupant may not have adopted a good body position to cope with unexpected g. This limitation would then need to be considered when deciding on the aggressiveness of an unannounced manoeuvre, unless an emergency manoeuvre is required to ensure the immediate safety of the ac.
- c. For additional guidance see also GASO 2302(1) – Responsibilities in the Air.

43. **Aircraft weapons systems.** Passengers are prohibited from selecting or using any weapons systems or weapons release switches or buttons.

44. **Control of visitors and passengers near RW aircraft.** All visitors and passengers **should** be positively controlled by aircrew when in and around RW aircraft. Particular care should be taken when such personnel are standing or walking on the dispersal area when any aircraft in the vicinity have rotors turning. No more than 4 visitors or passengers should be supervised by each aircrew supervisor.

Aeromedical considerations

45. **Passenger fitness to fly.** The medical standards required by passengers for flights in UK Military aircraft are defined in RA 2340(1). The passenger must be medically fit to undertake the flight. Medical approval for carriage of Category 1 passengers **should** be in accordance with the requirements of RA 2340(1) Annex A. Medical examination is not necessary for Category 3 flights; however, some aircraft are capable of exceeding the g limits for a Category 3 flight, therefore, to enable passengers to meet the self-certification medical requirements for a Category 3 passenger flight, all such flights should be conducted under positive g, not exceeding +4g (+3.5g for gliders). Passengers who are obviously ill or unfit should be referred for medical assessment.

Familiarization and Air Experience passengers **should** 'self-certify' their medical fitness on the Passenger Briefing Form RA 2340 Annex B. Passengers may not be aware of the dangers of flying with a cold; consequently, aircraft commanders **should** confirm before the flight that the passenger is not suffering for a cold or its after-effects.

46. **Other aircrew passengers.** Trainee and qualified aircrew, both UK and foreign, holding an appropriate MES and current for appropriate aviation medicine training may fly to the full manoeuvre envelope of the aircraft. Their JMES **should** be entered on the Passenger Briefing Form. They **should** have an anthropometry and boarding weight check prior to flight conducted by a qualified medical examiner or, by exception, the aircraft commander and signed for on the Passenger Briefing Form. Foreign aircrew, current on an equivalent or higher performing aircraft type, may be assumed to hold appropriate JMES and aviation medicine training. Where any doubt exists about the validity of the passenger JMES or aviation medicine training, then the approving or authorizing officer **should** restrict the flight conditions to an appropriate passenger category.

47. **Ejection seat-equipped aircraft - anthropometric limits.** All passengers to be flown in the Hawk and Texan **should** undergo formal measurement to ensure they do not exceed the promulgated anthropometric limits. If an individual exceeds any anthropometric limit they **should not** be flown in the aircraft. See also RA 2130(6).

48. **Cockpit / aircraft checks for non ejection seat-equipped aircraft.** Passengers to be flown on 22 Gp aircraft that do not require defined anthropometric checks **should** undergo a cockpit / aircraft check prior to flying the aircraft to ensure that:

- a. They can evacuate the aircraft in an emergency.
- b. They do not impinge flying control movement or other aircraft system or structure while seated.

49. **Parachute and LSJ limits.** Aircraft commanders **should** ensure that passengers are within the parachute weight limits prior to flight. The parachute **should** only be used by personnel whose unclothed weight without parachute is 35-103kg inclusive (Gliders) or whose boarding weight is 35-122Kg inclusive (Tutor aircraft). Personnel whose boarding weight falls outside these limits **should not** fly. Additionally, with the exception of gliding personnel, passengers who are unable to be fitted with both parachute and LSJ in circumstances that require the wearing of LSJs **should not** fly.

50. **Over 16 years old.** Persons over the age of 16 are afforded medical confidence; it may be the case that parents or guardians are unaware of a medical condition that may preclude flying in 22 Gp aircraft. In all cases, authorizing officers **should** ensure that passengers over 16 years make a declaration of fitness to fly.

Control of aircraft fitted with dual controls

51. The approving or authorizing officer **should** decide whether or not handover of control is permitted during the sortie, and **should** ensure that any restrictions on handover of control are entered in the authorization sheets. The Aircraft Commander may impose additional restrictions as he

sees fit. As a default, the following restrictions **should** be assumed, and do not require an entry in the authorisation sheets:

- a. **Aircrew Instructors (except C to I (ACAEFC) and C to I (AEF)).** Als (except C to I (ACAEFC) and C to I (AEF)) may handover control to passengers in accordance with RA 2340(5) and RA2340(6).
- b. **QULs.** QULs may handover control to passengers in accordance with RA 2340(5) and RA2340(6) but only for those phases of flight for which they have been cleared to instruct. For those phases of flight for which QULs have no clearance to instruct, the carriage of passengers **should** comply with sub-para c below.
- c. **Staff pilots and Als who are C to I (ACAEFC) and C to I (AEF).** Staff pilots and Als who are C to I (ACAEFC) and C to I (AEF) may handover control to military (UK and foreign) qualified pilots not below 500ft MSD. They may handover control to all other passengers including cadets not below 1000ft AGL.
- d. **EFT / BFT / AFT staff pilots.** Staff pilots may handover control to military (UK and foreign) qualified pilots not below 500ft MSD. Staff pilots may handover control to all other passengers and supernumerary crew not below 2000ft AGL.
- e. **G1 pilots.** G1 pilots **should not** allow their passengers to handle the controls below 500ft. Above 500ft a G1 pilot may hand over control to their passenger provided he is authorized to do so at the pre-flight briefing by the authorizing officer.

Restrictions on the type of flight on which non-cadet passengers may be carried

52. **Prohibited and restricted manoeuvres.** Manoeuvres such as turnbacks; propeller feathering or practise engine shutdown in flight; spinning / incipient spinning; stalling in the turn; PFLs away from an active airfield; EFATO; formation flying; practise emergencies; aerobatic sequences; and manoeuvring that exceeds +4.5g and -1.0g (Category 1 Medical required) are prohibited or restricted during passenger flights. The DDH **should** specify in local Flying Orders the prohibitions and restrictions for manoeuvres on which passengers may be carried for the aircraft within their AoR. If the crew wish to include a restricted manoeuvre in a passenger flight, then DDH approval **should** be sought when submitting the passenger flight request.

53. **Hazardous flight regimes.** HQ DFT approves passenger flights for all flight regimes contained within the approved Syllabus of Flying Training, at the discretion of the aircraft commander, and subject to the following additional considerations:

- a. **Disorientation and airsickness.** Careful consideration **should** be given to manoeuvres that might lead to disorientation or airsickness.
- b. **General restrictions.** Civilian passengers **should not** be permitted to fly on sorties that contain **either UNLIMITED or LIMITED**

manoeuvring (D)ACM, BFM, BHM or ACT. ► ~~any of the following elements:~~

- (1) ~~Air combat training.~~
- (2) ~~Visual evasion training.~~
- (3) ~~Live weaponeering.~~ ◀

c. **Flight testing.** With the exception of engineering personnel specifically required for the flight, passengers **should not** be carried on maintenance check flights and maintenance test flights without the approval of SO(ODH) through the DDH. Further details of passenger flying during air tests can be found in GASO 2220 - Maintenance Test Flights.

d. **Aerobatic manoeuvres.** Aircraft commanders **should** ensure that passengers are not unnecessarily exposed to distress and alarm and **should** limit sortie content accordingly; in particular, aircraft commanders **should** guard against airsickness. The guiding principle for passengers unaccustomed to flight in light aerobatic aircraft, is to remember that the sortie is for the benefit of the passenger not the pilot. Aerobatics may be performed provided that:

- (1) The passenger asks for, and consents to, them.
- (2) Unless the passenger is current or trainee aircrew, each aerobatic manoeuvre **should** be followed by a period of straight and level flight; aerobatic sequences are restricted – see Para 38.
- (3) The passenger is briefed on where to look out and the sensations likely to be experienced.
- (4) The minimum heights for aerobatics are observed.

e. **Low flying.** If deemed appropriate in accordance with RA 2340, authorizing officers **should** restrict low level flight to the minimum required to satisfy the aims of the passenger flight. As a guide, a dedicated passenger flight for routine 'air experience' **should** be restricted to not more than 20 mins low flying. Passengers carried on sorties flown in support of flying training or SCT sorties may be exposed to low flying as required to achieve the objective of the student or SCT sortie

f. **Display flying.** Passengers, both military and civilian, **should not** be carried during Display Flying (see GASO 2335 for Role Demonstration passenger restrictions) and practises.

54. **Additional restrictions on cadet flying.** For additional restrictions on cadet passenger sorties see GASO 2340(8).

**Guidance
Material
2340(3)**

Passengers – general

55. Passengers may be carried on 22 Gp aircraft in accordance with the following documents:

- a. QR 733-741.

- b. JSP 800 – Defence Movements and Transportation Regulations, Volume 2, Passenger Travel Instructions.
- c. GASO 2335(3) – Carriage of Passenger (Role Demos and Flypasts).

56. RA2340(2).

57. Appendix 44 to Queen's Regulations for the Royal Air Force.

58. JSP 440 – MOD Manual of Security.

Safety management

59. **Manoeuvre warnings.** See GASO 2302(1). Guidance on Situation Awareness (SA) maintenance and manoeuvre warnings for further advice on manoeuvre warnings.

Group Air Staff Order 2340(4)

Routine Air Transport Passengers

2340(4) Requests for Air Transport Passengers **shall** only be made if other modes of transport are unavailable or deemed unsuitable for the task, and carriage **shall** be conducted iaw RA2340.

Acceptable Means of Compliance 2340(4)

Routine air transport passengers

60. **Command tasking.** Requests for use of the RAF Communications Fleet **should** be made in the first instance to the Communications Fleet Tasking Agency (CFTA) at HQ 2 Gp.

61. **Priorities.** If the CFTA is unable to assist, the request may be made to the appropriate desk at HQ DFT for the possible allocation of fixed wing or rotary wing aircraft. Such Command hours might be provided, should irreducible spare capacity exist using the following order of priority:

- a. 22 Gp training activities.
- b. Service Inquiry.
- c. MOD ad-hoc tasks.
- d. Other RAF operations.
- e. Other RAF tasks.

62. **Approval.** The use of Service resources **should** always be considered against their potential costs; therefore, flights will normally only be authorized for Government or Service reasons when time, route, destination, protocol or security factors preclude the use of other modes of transport. In making the decision, full consideration will be given to the status of the customer, the availability of other more cost-effective methods of transport and the efficient use of the aircraft.

63. **Exceptions.** Command Tasking is not applicable to Tutor, Prefect or VGS aircraft.

**Guidance
Material
2340(4)**

Routine air transport passengers

- 64. RA 2340.
- 65. GASO 2340(3).

**Group Air
Staff Order
2340(5)**

Tactical Passengers

- 2340(5) Tactical passengers **shall** be carried iaw GASO 2340(3) and RA 2340.

**Acceptable
Means of
Compliance
2340(5)**

Tactical passengers

- 66. The DDH **should** stipulate in local orders:
 - a. Any restrictions during carriage of tactical passengers in their AOR.
 - b. Any additional approval and authorisation to be applied when Tactical passengers are carried during:
 - (1) Test and Evaluation flying;
 - (2) Simulated or Practise emergencies;
 - (3) Post Maintenance test flights;
 - c. Reduced briefing requirements including when they may be applied, and who is able to deliver such briefings where Aircrew with CQT are unavailable.

**Guidance
Material
2340(5)**

Tactical passengers

- 67. RA 2340.
- 68. GASO 2340(3).

**Group Air
Staff Order
2340(6)**

Familiarization Flight Passengers

- 2340(6) Familiarization flights **shall** be carried out iaw GASO2340(3) and RA2340.

**Acceptable
Means of
Compliance
2340(6)**

Familiarization flight passengers

Familiarization sorties. Within 22 Gp, familiarization flights **should** be flown in accordance with regulations and orders in GASO 2340(3) (this order does not apply to CFS Examiners/Agents or flying training syllabus 'Familiarization' sorties). Familiarization Flight Passengers⁵ may be permitted to handle⁶ Air System controls or operate systems and occupy a

⁵ For the purposes of this order, Familiarization Flights also cover those activities often referred to as Passenger demonstration flights for industry or commercial purposes. From this point on in this order the phrase "Familiarization Flight" will be used.

⁶ For the purposes of this order, handling is the physical interaction between an individual and any Air System control that alters the Air System's flight path, height or speed.

crew position that routinely⁷ requires a CQT, provided that the Passenger is qualified Aircrew⁸.

69. Handling of an Air System's flying controls by a Familiarization Flight Passenger should only be undertaken when the characteristics of an Air System and / or its systems cannot be adequately demonstrated in a Flight Simulator Training Device. DDH orders should state when it is more appropriate for the characteristics of an Air System and / or its systems to be demonstrated in flight.

70. The DDH **should** list in Local Orders the flight profiles during which a Familiarization Flights Passenger may handle Air System flying controls, operate Air System systems, or occupy a CQT crew position. Handling of controls should be iaw RA2340.

**Guidance
Material
2340(6)**

Familiarization flight passengers

- 71. RA 2340.
- 72. GASO 2340(3).

**Group Air
Staff Order
2340(7)**

Air Experience Flight Passengers

- 2340(7) Air Experience Flight Passengers **shall** only be carried in 22Gp Air Systems in accordance with the requirements stipulated in GASO2340(3) and RA2340.

**Acceptable
Means of
Compliance
2340(7)**

Air Experience Flight passengers

- 73. The DDH **should** ensure through local Flying Orders that Air Experience passenger⁹ flights are conducted iaw GASO 2340 and RA 2340. Air experience passengers **should** only occupy a seat that does not demand an aircrew occupant, and handling of control should only be permitted in an Air System fitted with dual controls.

**Guidance
Material
2340(7)**

Air Experience Flight passengers

- 74. A list of profiles during which an Air Experience Flight passenger should not handle the controls is detailed in RA 2340(7).
- 75. RA 2340.
- 76. GASO 2340(3)

⁷ As per any applicable orders, instructions and rules such as the Air System Document Set, Release To Service, and any wider ADH or AM(MF) orders.

⁸ Refer to RA 2101 – Aircrew Qualifications para 2. a(1), b, c, d or e.

⁹ For the avoidance of doubt, this type of Passenger flight encompasses the carriage of Passengers of any age, whether military or civilian, Aircrew or non-Aircrew.

**Group Air
Staff Order
2340(8)**

Carriage of VIP Passengers

2340(8) VIPs **shall** only fly as passengers in 22 Gp Air Systems in accordance with the requirements stipulated in RA 2340(8) and GASO 2340(8).

**Acceptable
Means of
Compliance
2340(8)**

Carriage of VIP passengers

77. **Definition.** The definition of VIP can be found in JSP 800 Vol 2.

78. **Minimum qualifications for carriage of VIPs.** In addition to the minimum qualifications outlined in GASO 2340(3), aircrew required to carry VIP passengers **should** be ~~► qualified as follows: specially selected and appointed by the DDH. All planned VIP sorties should be notified to SO(ODH) in advance.~~

a. ~~**Aircraft commander.** The aircraft commander **should** be qualified, current on type and hold a Green Instrument Rating (except glider pilots). In addition:~~

(1) ~~**Prefect, Texan and Hawk.** An A category QFI, QWI or staff pilot certified by their Sqn Cdrs.~~

(2) ~~**Phenom T1.** The Aircraft Commander **should** be an A category QFI or a competent staff pilot but OC 45 Sqn may approve B1 category Phenom T1 QFIs.~~

(3) ~~**Rotary Wing pilots.** Be a minimum of B1 category QHI on type.~~

(4) ~~**Tutor.** Be an A, B1 or C to I category QFI.~~

(5) ~~**Gliders.** Be an A category Gliding Instructor.~~

b. ~~**Other crew members.** Other crew members **should** each have a minimum of 500 hours total flying experience and be current on type.~~

c. ~~**Crew constitution.** Aircrew on multi-crew aircraft **should**, where possible, have flown as a constituted crew on type. ◀~~

79. **Recording of Certificate of Competence or Qualification.**

Certification of competency or qualification **should** be recorded in the individual's Flying Logbook or Training Record Folder (TRF) as appropriate and **should** be signed by a minimum of one up in the command chain, no lower than OF4; recertification **should** be required on change of unit. Certifying officers **should** also consider previous VIP passenger flying experience on other types, attitude and wider defence and Service knowledge before awarding certification.

80. **Security.** The minimum aircraft security requirements for VIP flights are contained in JSP 440.

**Guidance
Material
2340(8)**

Carriage of VIP passengers

81. RA 2340(8)

**Group Air
Staff Order
2340(9)**

Carriage of RAF Air Cadets¹⁰ (RAFAC) as Passengers

2340(9) Cadets **shall** only fly as passengers in 22 Gp aircraft in accordance with the requirements stipulated in RA 2340 and GASO 2340(9).

**Acceptable
Means of
Compliance
2340(9)**

Carriage of RAF Air Cadets as passengers

82. **General.** General regulations pertaining to the carriage of RAFAC as passengers in aircraft are found in [JSP 814](#), [GAI 1011](#), [GAI 1026](#) and FLY 2000 RA 2340. Additional specific restrictions applicable to RAFAC flying in 22 Gp aircraft are provided in GASO 2340(3) and below. RAFAC, which includes CCF (RAF) Cadets, **should** provide suitable proof of qualification, including parental consent and medical fitness to fly, to the operating authority prior to flight.

83. **AEF / VGS flying.** AEF / VGS flying is an established task and has standing approval from AOC 22 Gp. RAFAC on individual / informal visits are not covered by this standing approval and must be approved by the DDH.

Authorisation

84. Powers of authorization **should** be in accordance with GASO 2306. In addition, authorizers **should** note that:

- a. **Minimum age.** The minimum age for RAFAC flying is 13 yrs.
- b. **Authorized duty.** RAFAC are deemed to be on Authorized Duty when they attend for flying in organized groups accompanied by an adult member of the RAFAC or when undertaking a formal RAFAC training course. Under all other circumstances RAFAC are not on Authorized Duty and requests to fly **should** be made in accordance with Annex A.
- c. **RAFAC Record of Service.** RAFAC **should not** fly on any sortie unless the requirements of Air Cadet Training Order (ACTO) 31, for AEF flying, or ACTO 32, for gliding training have been fulfilled.

85. **Recording of AEF / VGS flying.** There is no need to record AEF / VGS flying for those RAFAC on authorized duty on the form at Annex B, but AEF / VGSs **should** maintain a record of all AEF / VGS flying of RAFAC on authorized duty.

Safety management, restrictions & minima

86. **Aircraft Equipment Assemblies (AEA) and Safety Equipment (SE).** RAFAC **should** wear flying clothing, AEA and SE as appropriate to the aircraft type, as detailed in GASO 2130(3). The authorizing officer **should** determine the correct level of dress for RAFAC.

87. **Safety management.** RAFAC flying as passengers in 22 Gp aircraft **should** be subject to the same criteria in GASO 2340(3); additionally, the following exercises are prohibited:

¹⁰ 6 FTS orders may include flights for other cadet forces as detailed in [JSP 814](#). Whilst RAFAC flying is the most common activity, the provisions of this GASO are applicable to all cadet flying.

- a. Flight Tests.
- b. Spinning.
- c. Formation Flying (unless approved by ODH. SO (ODH) **should** be informed).
- d. Practise Emergencies.
- e. Low Flying.
- f. **UNLIMITED or LIMITED manoeuvring (D)ACM, BFM, BHM or ACT ► ~~Air Combat or Evasion Exercises.~~**
- g. **~~Live Weaponneering.~~ ◀**

88. **Management of risk.** RAFAC **should not** be exposed to unnecessary risks. Supervisors of AEF RAFAC flying and aircraft commanders **should** consider the safety of the RAFAC as paramount. Supervisors **should** make full use of available resources to assess overall risks and achieve safe separation from other traffic (including but not limited to: assessment of glider and ac activity in the local area; traffic density in the circuit; the availability of radar services; use of deconfliction procedures; and monitor changes in conditions carefully). Except to comply with arrival, departure and deconfliction procedures, RAFAC sorties **should** be flown at, or above, 1000ft AGL (500ft AGL RW) to allow for a forced landing or abandonment option in the event of a serious emergency.

89. RAFAC should receive briefings as detailed in GASO 2340(3) and the dispensation for reduced Tactical Passenger briefings at RA 2340(5) **should not** be used for the carriage of RAFAC.

Duty of care

90. **Reassurance.** It **should** always be borne in mind that the purpose of air experience flying is to stimulate the RAFAC's interest in the Service and flying in general. Many RAFAC will have not flown before and may naturally be a little apprehensive. No effort **should** be spared to reassure them and to encourage their interest and enthusiasm.

91. **AEF staff pilots.** Appointment and retention of AEF staff pilots is the responsibility of Comdt 6 FTS who **should** issue detailed procedures governing AEF staff pilots.

92. **DBS / Disclosure Scotland or Protecting Vulnerable Groups (PVG) in Scotland / Access Northern Ireland vetting – safeguarding of minors.** All Service personnel directly involved with RAFAC flying **should** be current for DBS / Disclosure Scotland / PVG or Access NI vetting. In addition, supervisors **should** ensure that:

- a. Personnel who have not been vetted do not have unsupervised access to minors.
- b. Minors are chaperoned by a suitably vetted adult when being kitted and fitted with safety equipment by contractor personnel.

**Guidance
Material
2340(9)**

Carriage of RAFAC as passengers

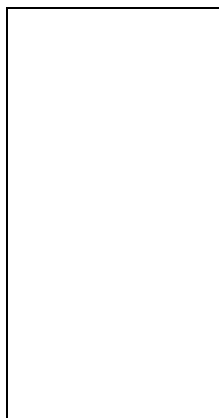
93. **Purpose.** The purpose of AEF (6 FTS) and VGS (2 FTS) flying is to inspire and enthuse the RAFAC and to teach the practical application of aviation principles by involving the RAFAC directly in the operation of the aircraft including handling the controls.

94. **Aviation Training Packages (ATP).** Both 2 FTS and 6 FTS provide a variety of courses and ATP to the RAFAC. 6 FTS offers a RAFAC Air Experience Flight (AEF) programme; a RAFAC Pilot Navigation Training Scheme (PNTS); and a RAFAC Air Experience Flying Course (AEFC). Specifically:

- a. **AEF programme.** AEFs will provide AEF sorties of approximately 25 mins duration, flown by 6 FTS Air Experience pilots, to teach the practical application of aviation principles taught in ground school and through Ground Based Training Equipment. HQ 6 FTS are to publish details of the Programme, approved by HQ RAFAC. Successful completion of AEF Sortie 1, will lead to the award of the Blue ATP Badge. The remaining syllabus sorties are to build upon aviation experience, but do not lead to the award of further qualifications.
- b. **PNTS.** This course builds on Pilot Navigation Techniques. The RAFAC Regional Aviation Officers (including CCF(RAF) representation) will award places on the ACPNTS. HQ 6 FTS are to publish details of the Scheme, approved by HQ RAFAC. Successful completion leads to award of the RAFAC Silver 'Navigation' Flying Badge.
- c. **AEFC.** An advanced programme which aims to build on the Blue ATP syllabus. The RAFAC Regional Aviation Officers (including CCF(RAF) representation) will award places on the ACAEFC. HQ 6 FTS are to publish details of the Course, approved by HQ RAFAC. Successful completion leads to award of the Bronze ATP Badge.

95. Gliding courses delivered by 2 FTS Grade 1 Pilots and Qualified Gliding Instructors (QGIs); these include:

- a. **Glider Induction Flight (GIF).** The GIF comprises a maximum of 2 x launches (or 20 minutes soaring from a single launch), to teach the practical application of aviation principles taught in ground school and through Ground Based Training Equipment. 2 FTS are to publish details of the programme, approved by HQ RAFAC. Successful completion of one launch will lead to the award of the Blue ATP Badge.
- b. **Gliding Scholarship (GS).** A course of up to 50 Viking launches to reach first solo. Successful completion (ie achieving first solo) leads to award of the RAFAC Silver Flying Badge. If first solo is not achieved, a Bronze ATP may be awarded.



- c. **Advanced Glider Training (AGT).** Up to 50 launches, with additional solo gliding opportunities. Normally reserved for Flight Staff Cadets as a pre-cursor to Graded Pilot training. Successful completion leads to award of the RAFAC Gold Flying Badge.

**Group Air
Staff Order
2340(10)**

Carriage of Working Dogs

- 2340(10) Working dogs **shall** only be carried in 22Gp Air Systems in accordance with the requirements stipulated in RA2340(10).

**Acceptable
Means of
Compliance
2340(10)**

Carriage of working dogs

96. Carriage of working dogs in 22Gp Air Systems **should** comply with the restrictions laid out in RA 2340(10).

**Guidance
Material
2340(10)**

Carriage of working dogs

97. RA 2340(10)

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Annex A to GASO 2340(3)

APPROVAL GUIDANCE FOR PASSENGER FLYING AIDE MEMOIRE

1. The ability to fly passengers in Service aircraft is an important tool within the Engagement Strategy, but the benefits must always be weighed against the inherent risks of military flying. The table below **should** be used to decide the appropriateness and required level of approval of a passenger flight request.

No	Type	Definition	Party	Reputational Risk	Rationale	Approving Officer
1	HM Regular and Reserve Forces	All Aircrew (including any UAS Officer Cadet)	1	Minimal	Promote Awareness / Enhance Morale	Sqn Cdr
2		Stn-Based Non-Aircrew	2			Sqn Cdr
3		All other Non-Aircrew	2,3			DDH
4	Foreign Military Personnel (Note 1)	Members of Foreign Naval, Army or Air Forces	2,3	Minimal - Undesirable	Promote Awareness / Influence Strategic Thinking	DDH
5	Cadet Passengers	Cadets on individual / informal visits not participating in formal AEF/VGS flying	3	Exceptional	Promote Awareness / Recruitment	DDH
6	Civilian Crown Servants and Fire Service / Civilian Rescue Agencies (Note 2)	Crown Servants are defined in the MAA Master Glossary	2,3	Minimal	Promote Awareness / Enhance safety / Influence Strategic Thinking	DDH
7	Aid to the Civil Community (Note 3)	Any Passenger Carried in Direct Support to the Civil Community	3	Major	Assist Civil Community / Positive Publicity for MOD	DDH

No	Type	Definition	Party	Reputational Risk	Rationale	Approving Officer
8	Sqn MOD Personnel / Contractors (Note4)	Sqn MOD Personnel / Contractors in support of Sqn output. (Engineering, admin staff etc).	2,3	Minimal	Promote Awareness / Influence Strategic Thinking	Sqn Cdr
9	All Other MOD Personnel / Contractors (Note 4)		3	Minimal	Promote Awareness / Influence Strategic Thinking	DDH
10	Media Representatives (Note 5)	Representatives of the Media	3	Significant	Promote Awareness / Influence Strategic Thinking	AOC 22 Gp
11	Work Experience (Note 6)	All Children on Work Experience at the Stn	3	Exceptional	Promote Awareness / Recruitment	DDH
12	Civilians Below the Age of 18 (Note 7)	All children not on work experience or CCF (RAF) / ATC Cadets not on Authorized Duty.	3	Exceptional	Promote Awareness / Recruitment	DDH
13	Civilian VIPs (Note 8)	VIPs are defined in FLY 2000 to RA 2340(8).	3	Major – Exceptional	Promote Awareness / Influence Strategic Thinking	AOC 22 Gp
14	Service Families (Note 9)	All individuals related by blood, marriage, civil partnership or cohabiting with a current Service man or woman.	3	Major	Promote Awareness	AOC 22 Gp
15	Civilians and Cadet Force volunteers (Note 10)	All Adults not covered above	3	Major	Promote Awareness	DDH

NOTES:

- Note 1. The carriage of Foreign Military Personnel must be in the national interest.
- Note 2. Police Force personnel fall within the Crown Servant definition.
- Note 3. Also notified to MOD in accordance with [JDP02](#)
- Note 4. The contractor's HQ must be notified for insurance purposes.
- Note 5. This includes freelance photographers and journalists gathering material which may be released to the media. Approval from Air Cmd Media & Comms is also required at least three working days prior to the sortie. When applications to fly members of the media are submitted, the reason for the media's request should be detailed to ensure that Wider Markets Initiative activity can be considered.
- Note 6. The written approval of parents is required and is to be retained with passenger form.
- Note 7. The written approval of parents is required and is to be retained with passenger form. If the request is for a flight during term time, the written permission of the Headmaster is also required.
- Note 8. The Approval of Air Command Media and Comms is required.
- Note 9. Families flying will only be approved during organized families flying days.
- Note 10. Must be of benefit to the Service.

Annex B to GASO 2340(3)**PASSENGER FLIGHT APPROVAL FORM**

Requests for passenger flights, other than cadets in accordance with GASO 2340(8), **should** be made using the following format which **should** be made available electronically to each unit. Each new request **should** be submitted on the complete document to the appropriate Approval Officer. The document **should** be used to record passenger flying on the unit and the Approvals.

XUAS

Jan – Mar 2023

No	Date	Passenger Name	GASO cat	Party	Approver	Justification	OC Approval	Comdt 6 FTS Approval	AOC 22 Gp Approval	Passenger type
01	01 Jan 23	Mr A Brown	15	3 rd	DDH	PR – local farmer.				Civilian.
02	01 Jan 23	Mrs B Brown	15	3 rd	DDH	PR – local farmer.				Civilian.
03	03 Jan 23	Cpl C Black	3	2 nd	DDH	Officers' Mess staff.				Other non-aircrew.
04	15 Jan 23	Flt Lt D White	1	1 st	Sqn Cdr	Aircrew.				All aircrew.
05	20 Jan 23	Cdt E Pink	12	3 rd	DDH	Non-auth duty flight.				Civilian below age 18.
06	01 Feb 23	Mrs Smith	14	3 rd	ODH	Families' day.				Service family.
07	01 Feb 23	Mrs Jones	14	3 rd	ODH	Families' day.				Service family.
08	15 Feb 23	Miss Green	11	3 rd	DDH	Stn visit – work experience				Work experience.
09	18 Feb 23	Lt Macron	4	2 nd	DDH	French Officer on stn visit.				Foreign military.
10	20 Feb 23	Mr F Red	6	2 nd	DDH	New stn firefighter.				Fire service.
11	21 Feb 23	Mr K Brown	9	3 rd	DDH	New stn photographer.				MOD contractor.
12	22 Feb 23	Flt Lt G Yellow	2	2 nd	Sqn Cdr	OC PSF.				Stn based non-aircrew
13										
14										
15										

To complete the form:

Enter the date of flight, passenger name and passenger category from the left-hand column of the table in Annex A to GASO 2340.

Enter the party of passenger. 1st parties are aircrew, 2nd parties are MOD personnel, employed civilians or non-UK military personnel working on aircraft, or as groundcrew, or flying as duty passengers. 3rd parties are the general public and MOD personnel who do not fall within the category of 1st or 2nd parties.

Enter the justification.

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GASO 2340 Annex B

Annex C to GASO 2340(3)

PASSENGER FLIGHT STANDING APPROVAL FORM

22 Gp Passenger Flight Standing Approval Form		
		Notes for completion
Unit / Sqn Requesting Approval		
Name and Contact Details of Unit POC		
Passenger Names		If names cannot be provided define the passenger 'group'. e.g. Sqn Engineering Personnel.
Rationale		Explain the reason for the request of Standing Approval.
Type of Flight		Confirm the range of sortie content to be permitted under the Standing Approval. e.g. Local area general handling.
Frequency		Estimate the number of flights to be flown under Standing Approval in a given time period.

Air Safety		<p>If this particular activity generates additional risk over and above current levels of DDH risk ownership explain the nature of the additional hazard and include risk assessment and associated documentation (e.g. Op Order, Trial Instruction etc). If not applicable enter 'Nil'.</p>
Approval Chain		
<p>Sqn Cdr Comment</p> <p>Approved / Not Approved Delete as applicable. Signature: _____ Date: _____</p>		
<p>DDH Comment Delete if not applicable.</p> <p>Approved / Not Approved Delete as applicable. Signature: _____ Date: _____</p>		

GASO 2345 – Aircrew Fatigue Management

Rationale *Fatigue poses a well-documented risk to aviation and is a significant factor in aircrew performance. Therefore, it is important to take into account aircrew maximum flying times and compulsory rest periods in order to manage fatigue.*

Contents **2345(1): Management of Aircrew Fatigue**
2345(2): Use of Temazepam in the Management of Aircrew Work and Rest

Group Air Staff Order 2345(1) **Management of Aircrew Fatigue**
 2345(1) Flying Supervisors **shall** be responsible for the management of Aircrew Fatigue. Individual Aircrew **shall** adhere to the Maximum Flying Rates, Crew Duty Time and Crew Rest Period requirements.

Acceptable Means of Compliance 2345(1) **Management of aircrew fatigue**

1. **Maximum flying rates.** The DDH **should** specify in local Flying Orders the maximum flying rates for the aircraft types and marks within their area of responsibility.
2. **Supervisory responsibility.** The Authorizing Officer and unit programmers **should** consider the factors affecting fitness to fly and fatigue when planning and conducting flying programmes. These include but are not limited to:
 - (1) Recent levels of flying activity.
 - (2) Impact of secondary duty workload.
 - (3) Any recent history of illness.
 - (4) Availability of meal / rest periods during the working day.
 - (5) Confirmation of adequate rest outside the work environment.
 - (6) Ensure that aircrew who are fasting as part of their religious beliefs fly no more than one sortie daily and land before 1200hrs.
3. **Crew Duty Time (CDT).** The maximum permitted aircrew CDT (including staff cadets) **should** be 12 hours and 9 hours for cadets. The following also applies:
 - a. For Command tasks, the DDH, or their nominated deputy, may authorize an increase of up to 2 hours in CDT on a case-by-case basis. AHFT and SO(ODH) **should** be notified by email of each occurrence.
 - b. CFS Exam Wg personnel operate routinely across DDH boundaries. CFS Examiners **should** be familiar, and comply with,

both the CDT and CRP regulations of the platforms from which they operate in the course of their duty.

Consideration **should** be given to the crew rest available to aircrew prior to and after the extended CDT.

4. **Crew Rest Periods (CRP).** The following limitations apply to crew rest:

- a. Each period of crew duty **should** be immediately preceded by a period of 11 hours off duty of which at least 8 hours **should** be available for uninterrupted sleep.
- b. Aircrew may begin a period of crew duty immediately following a period of station duty (e.g. SDO / OO / VGS cadet supervisors) provided that at least 8 hours were available for uninterrupted sleep during the duty period.

5. **Sleep hygiene.** Wherever possible aircrew **should** be accommodated in single rooms equipped with adequate temperature regulation, to ensure a comfortable sleeping environment during a CRP. Where single room accommodation is not available the DDH **should** give guidance on maximum room occupancy.

**Guidance
Material
2345(1)**

Management of aircrew fatigue

6. **CDT.** An individual's CDT is defined as a continuous period of duty that includes flying and begins when first reporting for duty and ends 30 minutes after the individual's last landing.

7. [CAP 371](#) – The avoidance of fatigue in aircrews.

**Group Air
Staff Order
2345(2)**

Use of Temazepam in the management of aircrew work and rest

2345(1) 22 Gp aircrew **shall not** use Temazepam in the management of work and rest schedules.

**Acceptable
Means of
Compliance
2345(2)**

Use of Temazepam in the management of aircrew work and rest

8. Nil.

**Guidance
Material
2345(2)**

Use of Temazepam in the management of aircrew work and rest

9. Nil.

GASO 2350 – Aircraft Emergencies

Rationale *Aircrew need to use a standard set of verbal or visual instructions during an emergency situation and require clarity on immediate actions in the event of an emergency.*

Contents

2350(1): Aircraft Emergencies

2350(T1): Minimum Fuel

2350(T2): Actual Forced Landing Off Base

Group Air Staff Order
2350(1)

Aircraft Emergencies

2350(1) Aircrew operating UK Military Aircraft **shall** have a thorough knowledge, appropriate to their aircrew specialization, of the emergency procedures and drills specific to the aircraft they are operating.

Acceptable Means of Compliance
2350(1)

Aircraft Emergencies

1. Aircrew **should** be familiar with the emergency procedures and codewords outlined in RA 2350(1).
2. The Aircraft Commander **should** ensure that the actions to be taken in the event of an emergency are briefed and understood.
3. Sqn Cdrs **should** ensure that trainees are briefed at appropriate periodic intervals on the major emergencies that they may encounter e.g. Monthly Briefing on EFATO procedures.

Guidance Material
2350(1)

Additional Guidance

4. Type-specific SOPs.
5. STANAG 3379 - In-Flight Visual Signals

Group Air Staff Order
2350(T1)

Minimum Fuel

2350(T1) The Aircraft Commander **shall** declare 'Minimum Fuel' as soon as it is apparent that their aircraft will land with the promulgated minimum fuel.

Acceptable Means of Compliance
2350(T1)

Minimum Fuel

6. **Minimum Fuel.** Aircraft commanders **should** declare 'Minimum Fuel' as soon as it is apparent that the aircraft will land with the promulgated minimum fuel. The aircraft commander **should** declare an emergency if it is likely that the next approach will be delayed or baulked.
7. **Declaration of Emergency.** An emergency **should** be declared as soon as it is apparent that the aircraft will land with less than the promulgated minimum fuel.

**Guidance
Material
2350(T1)**

Additional Guidance

8. **CAP 493 Definition.** Minimum fuel is the term used to describe a situation in which an aircraft's fuel supply has reached a state where the flight is committed to land at a specific aerodrome and no additional delay can be accepted. This is not an emergency situation but merely indicates that an emergency situation is possible, should any undue delay occur.
9. A list of Emergency Codewords can be found in RA 2350(1).

**Group Air
Staff Order
2350(T2)**

Actual Forced Landing Off Base

- 2350(T2) The DDH, Flying Supervisors and Aircraft Commanders **shall** ensure that the requirements of RA 1410, RA 1430 and the MAA Manual of Post-Crash Management are fulfilled.

**Acceptable
Means of
Compliance
2350(T2)**

Actual forced landing off base

10. Nil.

**Guidance
Material
2350(T2)**

Actual forced landing off base

11. RA 1410 – Occurrence Reporting.
12. RA 1430 - Aircraft Post-Crash Management and Significant Occurrence Management.
13. MAA Manual of Post-Crash Management

GASO 2355 – Static Line and Freefall Parachuting, Fast Roping and Abseiling

Rationale *Static Line and Freefall Parachuting, Fast Roping and Abseiling have resulted in numerous injuries and fatalities. The activity requires careful management, specific approvals and detailed procedures.*

Contents

2355(1): Approval for Static Line and Free Fall Parachuting, Fast Roping and Abseiling

2355(2): Procedures for Static Line and Free Fall Parachuting

2355(3): Procedures for Fast Roping and Abseiling

Group Air Staff Order

2355(1) **Approval for Static Line and Freefall Parachuting, Fast Roping and Abseiling**

2355(1) Static Line and Free Fall Parachuting, Fast Roping and Abseiling from UK Military Aircraft **shall** be approved in accordance with RA 2355(1).

Acceptable Means of Compliance

2355(1) **Approval for static line and freefall parachuting, fast roping and abseiling**

1. RA 2355(1).

Guidance Material

2355(1) **Additional guidance**

2. Aircraft Release to Service (RTS).

Group Air Staff Order

2355(2) **Procedures for Static Line and Freefall Parachuting**

2355(2) Static Line and Free Fall Parachuting for sports or training purposes **shall not** be permitted from 22 Gp platforms.

Acceptable Means of Compliance

2355(2) **Procedures for static line and freefall parachuting**

3. Nil.

Guidance Material

2355(2) **Additional guidance**

4. Nil.

**Group Air
Staff Order
2355(3)****Procedures for Fast Roping and Abseiling**

2355(3) All Fast Roping and Abseiling from UK military helicopters, whether for operations or trials **shall** be conducted in accordance with DAP 101A-1114-1, Air Transport Operations Manual - Roping from Helicopters.

**Acceptable
Means of
Compliance
2355(3)****Procedures for fast roping and abseiling**

5. Stn Cdr RAF Shawbury **should** specify in local Flying Orders the requirements Fast Roping and Abseiling in accordance with the requirements of RA 2355(3) and Aircraft RTS.

**Guidance
Material
2355(3)****Additional guidance**

6. Nil.

GASO 2360 – Portable Electronic Devices

Rationale *Portable Electronic Devices (PED) are portable information systems or devices with or without the capability of wireless local area network (WLAN) or wireless personal area network (WPAN) connectivity. These include, but are not limited to, mobiles telephones, pagers, personal digital assistants, laptops, memory sticks, thumb drives and two-way radios. PED may interfere with Air Systems by means of electro-magnetic interference or battery pack fire. Consequently, carriage and operation of PED within UK military Air Systems needs to be controlled.*

Contents 2360(1): Portable Electronic Devices

Group Air Staff Order 2360(1)

Portable Electronic Devices

2360(1) The DDH **shall** specify in local Flying Orders the requirements for the operation of PED in or near aircraft within their AoR in accordance with RA 2360(1) and GASO 2360(1).

Acceptable Means of Compliance 2360(1)

Portable Electronic Devices (PED)

1. The DDH **should** specify in local Flying Orders the requirements for the operation of PED in or near aircraft within their AoR. The PED authorized for use on 22 Gp aircraft, and the limitations on their use, are detailed in the aircraft Release to Service (RTS).

Categorisation of PED

2. PED fall into two main categories: intentional and unintentional transmitters, examples of which can be found in RA 2360(1). Aircraft commanders and authorizing officers **should** determine whether PED are unintentionally transmitting prior to flight.

Operating status of PED

3. A device, such as a mobile telephone, operated in 'Flight Mode' is classified as an unintentional transmitter. The DDH **should** specify in local Flying Orders when an unintentional transmitter can be used for the platforms within their AoR e.g. OFF for take-off and landing and Flight Mode for other stages of flight. If there is any doubt as to the operating status of a PED it **should** be switched OFF for the duration of the sortie.

Carriage of PED

4. Authorizing Officers **should** ensure that procedures for the carriage and use of PED are included in the pre-flight Out-Briefing and that all PED and associated ancillary equipment are accounted for during the post-flight In-Briefing.

5. The aircraft commander **should** ensure that all PED are operated safely and are stowed properly when not in use so that there is no possibility of fouling the flying controls, ejection seat mechanisms or other aircraft equipment.

6. PED **should not** be used by the handling pilot.
7. PED **should not** be used where there is any potential for distraction of the operating crew.
8. PED and all ancillary equipment **should** be removed from the aircraft after flight.

Power supply - batteries

9. Personal PED **should** only be operated using internal battery power and **should not** be connected to an aircraft power supply.
10. Personnel **should** be aware that discharged lithium batteries, particularly large capacity batteries associated with portable video equipment, can pose a fire hazard and that such batteries must be declared before flight and **should not** be stowed in baggage.

Electronic cigarettes (eCigarettes)

11. eCigarettes are Lithium-ion battery-powered PED and, as a smoking-related item, are prohibited items in accordance with GASO 2309(2).

Guidance Material 2360(1)

Formal clearance

12. Formal clearance for PED constitutes clearance by the appropriate RTSA or civilian equivalent.

Equipment required for operation of the aircraft

13. For further guidance on carry-on equipment required for the operation of the aircraft or its mission refer to RA 1340 - Equipment Not Basic to the Air System.

Mobile telephones

14. If mobile phones are carried in flight, they must be operated in accordance with DDH Orders and stowed appropriately.

Additional guidance

15. More technical information can be found in CAP 756 - Portable Electronic Device Generated Electro-magnetic Fields on Board a Large Transport Aeroplane.

GASO 2370 – Test and Evaluation

Rationale Test & Evaluation (T&E) activity¹ has the potential for risk above that seen in the routine operating environment. The evidence generated from T&E activity needs to be of a high enough fidelity to support Air Safety decision making and to underpin the Air System Safety Case (ASSC).

Contents **2370(1): Test and Evaluation Governance**
2370(2): Test and Evaluation Personnel
2370(3): Test and Evaluation Activity

Group Air Staff Order
2370(1)

Test and Evaluation Governance

2370(1) T&E activity **shall** be subject to governance by SQEP and only be conducted by competent organizations.

Acceptable Means of Compliance
2370(1)

Test and Evaluation governance

1. T&E activity approval & supervision. 22 Gp participation in T&E activity should be approved and supervised by SQEP from a MAA endorsed T&E organization.
2. **Operating Duty Holder T&E endorsement.** 22 Gp is endorsed by the MAA to participate in Cat 4 and 5 T&E. Cat 4 T&E is bounded to activity relating to AEA only.
3. **Approval and supervision.** 22 Gp support to T&E activity **should** be agreed by a competent T&E SQEP.

Guidance Material
2370(1)

Test and Evaluation governance

4. Nil.

Group Air Staff Order
2370(2)

Test and Evaluation Personnel

2370(2) T&E activity **shall** only be designed, planned, supervised and conducted by SQEP from a MAA endorsed T&E organisation. Support to competent organizations for T&E activity **shall** only be conducted by 22 Gp personnel that are considered competent and, if required, qualified on the air system.

¹ T&E activities are defined as flights, ground taxi, ground runs and / or other on-Air System assessments that generate evidence in support of the ASSC. Defence Contractor Flying Organisations, operating predominantly under CFAOS, will work to their equivalent definitions, encompassing: the aircraft release document (Military Permit to Fly (MTPF) or contractor's flight release) instead of RTS, and their equivalent to the in-service ASSC.

**Acceptable
Means of
Compliance
2370(2)**

Test and Evaluation personnel

Competent persons

5. The DDH **should** ensure that personnel nominated to support T&E activity are competent in accordance with the requirements of RA 2370(2) and **should** ensure at least one member of their Standards unit has completed the Introduction to Trials Management Course (ITMC).
6. Competent persons **should**:
 - a. Hold valid Certificates of Qualification on Type (CQT) and Certificates of Competence for the type(s) involved in T&E. Where other FTS / Contractor personnel are more appropriately qualified they may be deemed to be SQEP.
 - b. Be appointed by the DDH.

**Guidance
Material
2370(2)**

Test and Evaluation personnel

7. 22 Gp Standards personnel are nominated as SQEP in order to participate in T&E activity. Where other 22 Gp / Contractor personnel are more appropriately qualified they may be deemed to be SQEP.

**Group Air
Staff Order
2370(3)**

Test and Evaluation Activity

- 2370(3) The DDH **shall** specify in Orders how support to OT&E activity is to be conducted.

**Acceptable
Means of
Compliance
2370(3)**

Test and Evaluation activity

8. 22 Gp is endorsed by the MAA to support Cat 4 and 5 T&E under 22 Gp ADH / AOA governance. Category 4 T&E is bounded to activity relating to AEA only. Such Cat 4 and 5 T&E should be designed, planned and supervised by SQEP from a MAA endorsed T&E organization, although conducted under the 22 Gp ADH chain. 22 Gp units should not conduct T&E activity autonomously but, if nominated by the ODH, provide support to T&E conducted by an endorsed T&E organisation (i.e. ASWC (206 Sqn) and JHC (22 Sqn)) in accordance with RA 2370(1). Any Cat 1-4 T&E activity under 22 Gp ADH/AOA governance (other than Cat 4 T&E relating to AEA) should be specifically endorsed by the MAA.
9. The DDH **should** nominate in local Orders the personnel who are competent to participate in T&E activity and specify how such support will be undertaken under the direction of a T&E SQEP. Reports should be completed by the nominated MAA endorsed T&E organisation.

**Guidance
Material
2370(3)**

Conduct of T&E activity

10. Any agreement with a MAA endorsed T&E organization should be formalised by an MoU. 22 Gp MoUs are in place with ASWC for FW T&E



and JHC for RW T&E. These can be viewed within 22 Gp Air Safety SharePoint site in the Regulation area.

GASO 2375 – Qualification, Approval and Use of Flight Simulator Training Devices**Rationale**

Flight Simulation Training Devices (FSTD) are used across the Defence Air Environment as preparation, or substitution, for live flying. FSTD that misrepresent the real behaviour, performance or have significant material differences to the associated Air System could jeopardize the safe operation of the live Air System and increase Risk to Life (RtL). This GASO requires DDHs to ensure that FSTD within their Area of Responsibility (AoR) are fit for purpose for the approved use and ensure that they do not jeopardize the safe operation of the live Air System, or at least understand where it could.

Contents**Definitions relevant to this order**

2375(1): Qualification of Flight Simulator Training Devices

2375(2): Approval of Flight Simulator Training Devices

2375(3): Use of Flight Simulator Training Devices

2375(T1): Use of other training devices (OTDs)

Definitions**Definitions relevant to this order**

1. The formal definitions of FSTD intentionally align with civilian terminology, (amended to suit military application where appropriate), to assist industry partners. For a full list of FSTD definitions, refer to RA 2375.

**Group Air
Staff Order
2375(1)**
Qualification of flight simulator training devices

2375(1) Flight Simulators **shall** be qualified for use in support of Flying Training.

**Acceptable
Means of
Compliance
2375(1)**

2. FSTDs are delivered into service under the oversight of the SRO. Before being handed over for in-service employment, the SRO ensures that the device is formally assessed as fit for purpose and that a Qualification Statement (QS) is completed. The SRO also ensures that the FSTD Operator¹, produces a Qualification Test Guide (QTG) for future fidelity assessments.

3. The Master QTG should be maintained by the FSTD operator and should demonstrate compliance against the performance and tolerance criteria that has been agreed in the QS. This should include any objective and subjective tests that are required to evaluate specific military tasks and capabilities.

¹ FSTD operator is defined in RA 2375 as the contracted organization responsible for the provision of the FSTD availability, maintenance and testing.

**Guidance
Material
2375(1)**

4. RA 2375

**Group Air
Staff Order
2375(2)**

Approval of Flight Simulator Training Devices

2375(2) Flight Simulators **shall** be approved for use in support of Flying Training.

**Acceptable
Means of
Compliance
2375(2)**

Approval of flight simulator training devices

5. **FSTD approval requirements.** The DDH **shall** ensure that FSTDs which their aircrew operate, are approved in accordance with RA 2375(1). All FSTDs **shall** receive an annual formal validation check iaw the Master QTG.

6. The DDH **should** nominate suitably qualified and experienced Aircrew Instructors (AIs) who are permitted to conduct the fidelity assessment. In addition, the DDH **should** stipulate in local orders the procedures to be followed for the FSTD approval process.

7. Those simulators that are subject to a validation check as part of the contract with the FSTD operator may require Training Service Provider (TSP) contract personnel to carry out the validation. In these cases, suitably qualified service aircrew **should** be present during the validation and **should** comment on the report raised.

8. The DDH **should** ensure that the FSTD Operator can demonstrate that they have a suitable management system in place to demonstrate compliance with this order as part of the annual approval process. Where these orders cannot be applied because the simulator is provided under contract by a third party (eg foreign military), the DDH **should** document the processes in use to meet the intent of these orders.

9. **Fidelity assessment.** A written Fidelity Assessment Report **should** be staffed annually through the appropriate DDH and copied to the MFTS Supply Delivery Manager and the relevant HQ DFT Desk Officer. The following format **should** be used:

a. **Narrative.** This **should** include:

- (1) Considerations from RA 2375(1).
- (2) Statement of Use in accordance with RA 2375(2).
- (3) Recommendations.
- (4) Conclusion.

b. **Limitations and differences register.** This **should** be presented in tabular form as an Annex using the following column headings:

- (1) Observed Limitation / Difference.

- (2) Risk of negative training.
- (3) Limitation / Mitigation (including, where applicable, a timetable for rectification).
- (4) Where a limitation / difference is assessed to be to an unacceptable level, then use of the FSTD for training or currency for that particular capability **should** be prohibited in local flying orders.

Other training devices

10. Other aircrew training devices include Part Task Trainers (PTT) and Desktop Task Trainers (DTT). These devices are not subject to the full FSTD approval requirements but **should** adhere to the requirements of GASO 2375(T1).

Guidance Material 2375(2)

11. As part of the annual renewal of approval for use of the device, the evidence of both the objective and subjective Master QTG progressive testing provided by the FSTD Operator is to be compared with the baseline testing conducted for initial qualification (the QS).

12. Where there have been major modifications to the live Air System, or the FSTD, or its use, that have the potential to impact on the safe operation of the live Air System, the DDH **should** ensure that T&E aircrew² are used to complete a requalification of the device. Due to contractual differences between platforms, questions regarding FSTD modifications and QS should be directed to the UKMFTS DT.

Group Air Staff Order 2375(2)

Use of Flight Simulator Training Devices

2375(2) The DDH **shall** determine the extent that Flight Simulation can be used as a substitute for live flying based on the fidelity of the FSTD being used.

² Class A or B Test Pilot iaw RA 2370 – Test and Evaluation for handling qualities, pilot workload or Human Machine Interface (HMI) assessment and Evaluator Aircrew for other systems, including whole crew environment assessment and work station HMI. They should be assisted by an Aircrew Instructor who is deemed SQEP and current on type.

**Acceptable
Means of
Compliance
2375(3)**

Use of flight simulator training devices

13. The DDH **should** specify in local Flying Orders the balance and periodicity between live and synthetic flying in relation to aircrew qualification, competence and currency. Currency and training hours flown in the FSTD **should** be recorded in the relevant section of the aircrew flying logbook. Instrument Flying (IF) conducted in FSTD may be considered actual IF in line with GASO 2120(1) para 9.

14. The DDH should specify in local Flying Orders the amount of synthetic flying time and the training objectives that should be conducted in an FSTD, the periodicity that applies and how the training is to be recorded. FSTDs should only replace live flying with the prior approval of HQ 22 Gp. All such requests should be staffed via the appropriate HQ DFT Desk Officer.

15. Where a TSP has been contracted to provide an end to end training solution, this may include the requirements stipulated in para 13 and 14 but should be agreed by the DDH.

16. The DDH should specify in orders and instructions when incidents during the use of an FSTD should be reported iaw RA 1410.

**Guidance
Material
2375(3)**

17. Incident reporting is to be considered if an adverse outcome has resulted from incorrect procedures or poor handling in the FSTD. Equally, if there is value to other users from lessons identified, eg relevant material differences between the FSTD and the live Air System or incorrect procedures, reporting is to be considered.

**Group Air
Staff Order
2375(T1)**

Other training devices

2375(T1) Flying Training Units **shall** use Other Training Devices (OTDs), where they are available, to increase the effectiveness of training delivery.

**Acceptable
Means of
Compliance
2375(T1)**

Use of OTDs

18. The DDH should specify in local Flying Orders the approved use of OTDs in the conduct of flying training within their AoR. The DDH should maintain oversight of software modifications and exercise appropriate configuration control for all OTDs. A standardised training syllabus should be provided by the DDH chain to ensure coordination and standardisation. Flying training using OTDs should be delivered using standard CFS instructional techniques. The DDH should specify in local orders the qualification and approval process for OTD instructors who do not hold AI status.

**Guidance
Material
2375(T1)****Definitions of OTDs**

19. **Part Task Trainer (PTT).** A PTT is a training device that is designed to train aircrew on a particular task associated with the aircraft.
20. **Desk-top Task Trainer (DTT).** A DTT is a computer-based training (CBT) device used to deliver aircrew training.

GASO 2380 – Performance Based Navigation**Rationale**

Performance Based Navigation (PBN) is one of several enablers of an airspace concept that offers enhanced use of airspace and reduces reliance on legacy fixed navigation aid installations. It has been widely adopted by international military and civilian operators. Without appropriate oversight the use of PBN concepts, equipment and procedures could drive an increased Risk to Life (RtL) to all airspace users. This GASO requires that DDHs have robust orders and procedures in place to enable PBN.

**Group Air
Staff Order
2380 (1)****Air system and pilot requirements**

2380(1) The DDH shall ensure PBN operations are only conducted by Air Systems within their Area of Responsibility (AoR) that are certified in accordance with (iaw) the relevant navigation specification and by pilots who are appropriately qualified.

**Acceptable
Means of
Compliance
2380 (1)****Air system and pilot requirements**

1. Where there is a requirement to conduct PBN operations, the navigation specification **should** be detailed in the Air System Release To Service (RTS) or Military Permit to Fly (MPTF).
2. Where pilots are required to undertake PBN operations, their Instrument Rating profile **should** contain a defined PBN element.
3. For multi-crew aircraft, all flight deck pilots **should** hold the same PBN endorsement, unless pilots are under training and / or are being supervised by an appropriately Qualified Aircrew Instructor.

**Guidance
Material
2380 (1)**

4. More detailed guidance material for the operational use of PBN applications can be found in ICAO Doc 9613 Performance-Based Navigation (PBN) Manual.

**Group Air
Staff Order
2380 (2)****Performance based navigation flight procedures**

2380(2) The DDH **shall** publish orders that enable the safe conduct of PBN operations, where their Air Systems are so equipped.

**Acceptable
Means of
Compliance
2380 (2)****Performance based navigation system flight procedures****Pre-flight procedures**

5. The PBN database validity **should** be checked before flight and should be valid for the duration of the flight. The DDH **should** ensure that

local orders provide clear direction on use / modification of database waypoints and RAIM protocols.

Flight procedures

6. The DDH **should** ensure that local orders provide direction on cockpit system management for all stages of flight during PBN operations. These **should** include direction on (as a minimum):

- (a) Switch selection and use of cockpit displays;
- (b) Use of automation;
- (c) Altimeter setting procedures;
- (d) Temperature compensation (if required);
- (e) Contingency procedures in the event of nav system failure;
- (f) Use of ground based nav aids as a reversion; and
- (g) Absence of RAIM or Loss of Integrity (LOI) alert.

Approach procedures

7. UK military registered Air Systems **should** not conduct Required Navigation Performance (RNP) Authorization Required Approaches (AR APCH).

8. Where an RNP APCH is expected to be flown in IMC, crews **should** ensure that an alternative instrument approach system is available at the destination or a suitable alternate aerodrome, which is not dependent on GNSS data and for which the weather is forecast to be suitable to enable a landing.

Guidance Material 2380 (2)

Performance based navigation flight procedures

9. Where vertical guidance is lost while the Aircraft is still above 1000 ft AGL, the crew may decide to continue the approach to LNAV minima, when supported by the navigation system.

GASO 2401 – Documents and Records

Rationale *Documents pertaining to the operation of aircraft and associated systems form a fundamental part of the Air System Safety Case. They provide essential knowledge to personnel who operate and supervise military flying. Accurate records are required for the management of personnel and equipment, and allow analysis and exploitation of occurrence data to improve Air Safety.*

Contents

- 2401(1): Air System Document Set (ADS)
- 2401(2): Use and Carriage of Documents in Aircraft
- 2401(3): Flying Logbooks and Recording of Flying Times
- 2401(4): Aviation Delivery Duty Holder (DDH) Orders
- 2401(5): Authorization Records
- 2401(6): Meteorological Records
- 2401(7): Training Records
- 2401(T1): Operations Record Book (F540)
- 2401(T2): Statistical Returns

Group Air Staff Order 2401(1)

Air System Document Set (ADS)

2401(1) All aircrew **shall** be familiar with the elements of the ADS relevant to operation of the aircraft.

Acceptable Means of Compliance 2401(1)

Air System Document Set (ADS)

1. **General.** The DDH **should** ensure that the requirements of RA 2401(1) are fulfilled.
2. **Signature for key ADS items.** Before undertaking flying duties, staff and full-time students **should** sign a register to formally acknowledge that they are fully conversant with the documents (or their equivalents) listed below. Personnel **should** read and sign on arrival at a new unit and after each amendment thereafter. Commanders **should** keep a record of these signatures for at least 2 years. Signatures may be physical or electronic.

Ser	Orders / Document	Personnel
01	Release to Service	All aircrew
02	Aircrew Manual(s) / Pilots Notes / Aircraft Flight Manual / Rotorcraft Flight Manual.	All aircrew
03	Flight Reference Cards	All aircrew
04	Operating Data Manual (or equivalent document)	All aircrew
05	Flight Test Schedule	All Flight Test Crews

06	Relevant Technical Publications	All aircrew authorised to perform flight servicing
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Signing for Orders / Regulations

3. **Signing for Orders / Regulations.** Before undertaking flying duties staff and full-time students **should** sign a register to formally acknowledge that they understand all points relevant to their duties (applicable to the aircraft type and role) contained in the Orders and regulations listed in the table below. Personnel **should** read and sign on arrival at a new unit, after each amendment thereafter or periodically as directed by DDH or other regulatory publications. Commanders **should** keep a record of these signatures for at least 2 years. Signatures may be physical or electronic.

Ser	Orders / Regulations	Personnel
01	MAA Fly 2000 Series Regulatory Articles	All Aircrew
02	MAA ATM 3000 Series Regulatory Articles	All Aircrew
03	Manual of Military Air Traffic Management	All Aircrew
04	Group Air Staff Orders (GASOs)	All Aircrew
05	Station / Unit Flying Order Book	All Aircrew
06	CAP 774 (UK Flight Information Services)	All Aircrew
07	CAP 413 (Radiotelephony Manual)	All Aircrew
08	CAP 393 (Air Navigation Order and Regulations)	All Aircrew
09	UK Military Aeronautical Information Publication	All Aircrew
10	UK Civilian Aeronautical Information Publication	All Aircrew
11	Defence Aerodrome Manual (DAM) ¹	All Aircrew
12	Air Command Air Weapon and Electronic Warfare Range Orders	Aircrew liable to use Air Weapon or EW Ranges
13	Air-to-air Training Rules (ATRs)	Aircrew liable to engage in (D)ACM, BFM, BHM, ACT or Target Aircraft training
14	UK Military Low Flying Handbook (UKMLFHB)	All aircrew liable to engage in Low Flying

¹ Not Applicable if subservient to, or incorporated within, the Station / Unit Flying Order Book

15	Aviation Engineering Standing Orders (AESO)	VGS Personnel
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4. **Familiarity with full ADS.** All aircrew **should** be familiar with the contents of all ADS documents, but need only read those that directly concern them.
5. **Management of Orders / ADS.** Amendments to orders and ADS will be notified as follows:
- MAA Regulatory Publications.** FT ASAR SO1 **should** notify all DDH of all changes to MAA Regulatory Publications.
 - GASO.** FT ASAR Regulations SO2 and / or HQ DFT Desk Officers **should** notify all DDH of all changes to GASOs.
 - ADS.** Changes to ADS **should** be promulgated through SPFS.
 - Station/Unit Flying Order Book.** Sponsors of Stn / Unit orders **should** notify all affected DDH of all changes to Stn / Unit Flying Orders.

**Guidance
Material
2401(1)**

Air System Document Set (ADS)

6. Nil.

**Group Air
Staff Order
2401(2)**

Use and carriage of documents in aircraft

- 2401(2) All aircraft checks **shall** be completed in accordance with the relevant Aircrew Manual / Pilot's Notes / Rotorcraft Flight Manual and associated Flight Reference Cards. The DDH **shall** promulgate in local Flying Orders the appropriate Flight Reference documentation to be carried in aircraft within their AoR.

**Acceptable
Means of
Compliance
2401(2)**

Use and carriage of documents in aircraft

7. The DDH **should** specify the Flight Reference documentation that **should** be carried in the aircraft types within their AoR.
8. **FRCs and checklists - crew of one.** Aircrew **should**:
- Normal drills.** Complete normal drills from memory but refer to the FRCs or checklists if needed.
 - Emergency drills.**
 - Complete the Immediate Actions (IAs) from memory and the Subsequent Actions (SAs) from memory or the FRCs or checklists as required.
 - Check actions against the FRCs or checklists if circumstances permit.

9. **FRCs and checklists - minimum crew of two.** Aircrew **should**:
- a. **Normal drills.**
 - (1) Complete normal drills from memory.
 - (2) Complete the remaining normal drills by challenge and response, but QFIs may complete the After Take-off and Pre-Landing checks from memory when teaching or demonstrating circuits.
 - b. **Emergency drills.**
 - (1) Complete the IAs from memory and check them against the FRCs or checklist if circumstances permit.
 - (2) Complete the SAs by challenge and response.
10. **Glider.** For 2 FTS platforms Comdt 2 FTS **should** specify in local Flying Orders which drills may be conducted from memory.

**Guidance
Material
2401(2)**

Use and carriage of documents in aircraft

11. Nil.

**Group Air
Staff Order
2401(3)**

Flying Logbooks and Recording of Flying Times

- 2401(3) Accurate and detailed records of flying times **shall** be maintained by personnel who are required to fly regularly in the course of their duties. The DDH **shall** specify in local Flying Orders the requirements for the recording of flying times and checking of logbooks for the aircrew within their AoR.

**Acceptable
Means of
Compliance
2401(3)**

Flying logbooks and recording of flying times

12. **Flying logbooks.** Service flying logbooks **should** be clearly marked with the owner's name and completed in accordance with single-service requirements. The term 'flying logbook' refers to RAF Form 414 or F6748 (Pilot's Flying Log Book) or RAF Form 1767 (Aircrew Flying Log Book). Where an alternative flying record is used by other Services or civilian AIs, the DDH **should** ensure that, as far as possible, the requirements of RA 2401(3) are fulfilled.
13. **Replacement flying logbooks.** When an individual begins a new (replacement) flying logbook, they **should** carry over, as a minimum, all unexpired and relevant competencies and qualifications and complete Section 8, Record of Service or F6748 Section 7 for Gliders. Those entries **should** be validated and signed for by the Sqn Cdr and include the date that this action was carried out. Single service requirements may differ and are permissible. Only one flying logbook **should** be in use.
14. **Monthly flying entries.** The monthly flying summary (quarterly for VGS personnel, AEF pilots and Staff Pilots) in Section 5 of the flying logbook **should** start on the next consecutive line, with no lines left blank.

15. **Instrument Flying.** Instrument flying **should** be recorded as follows:
- IMC.** Both pilots **should** record Actual IF time and instrument approaches when a QFI / QHI monitors a student in IMC.
 - VMC.** Only the handling pilot **should** record simulated IF and instrument approaches when flown in VMC.
 - A Tacan or VOR approach leading to an ILS or GCA **should** be logged as a single approach (e.g. Tac / ILS x 1).
 - Only the formation leader **should** claim IF time when in close formation.
16. **Use of 2nd pilot column.** If two pilots, who are both qualified on type, fly together they **should** both log 1st Pilot time for the full duration of the flight, unless one pilot is under the instruction / direct supervision of the other, who is an AI. In this case, refer to RA 2401(3). 2nd pilot time is not routinely used.
17. **'Spare' column.** Columns 13 and 14 in the RAF Pilots Flying Log Book and Column 4 in the Aircrew Flying Log Book (Form 1767) may be used to record instructional or SCT flying times.
18. **Record of aircrew flight servicing training.** Aircrew qualified to conduct flight servicing **should** record the qualification in a document appropriate to their type-specific requirements. e.g. The F4124; the 'special qualification' section of the Flying Log Book; or the F6748 Section 4 - 'Non Flying Qualifications and Renewals' for VGS personnel.
19. **Certification.** The DDH **should** ensure that all flying logbook monthly (quarterly for VGS personnel, AEF pilots and Staff Pilots), annual and periodic summaries are completed and certified correct in accordance with the instructions detailed in the flying logbook, these orders and any local orders. Monthly certification **should** encompass a comprehensive check of all logbook entries.

**Guidance
Material
2401(3)**

Additional Guidance

20. BRd 767 Naval Air Orders 2401(3).

**Group Air
Staff Order
2401(4)**

Aviation Delivery Duty Holder (DDH) Orders

- 2401(4) Aviation Delivery Duty Holders **shall** issue Flying Orders.

**Acceptable
Means of
Compliance
2401(4)**

Aviation Delivery Duty Holder (DDH) Orders

21. The DDH **should** issue local Flying Orders for their AoR. Requests for change (RFC) to these Orders **should** be made in writing to the DDH to facilitate external audit.
22. In addition to the MRP all 22 Gp aircrew **should** comply with:

- a. Group Air Staff Orders (GASO).
- b. HoE Flying Order Book (FOB).
- c. DDH FOB and / or Flying Orders and Guidance (FOG).

**Guidance
Material
2401(4)**

Aviation Delivery Duty Holder (DDH) Orders

23. Nil.

**Group Air
Staff Order
2401(5)**

Authorization Records

- 2401(5) The DDH **shall** ensure that accurate and detailed records of flight are maintained within their AoR.

**Acceptable
Means of
Compliance
2401(5)**

Authorization records

24. **Retention for audit and disposal.** The DDH **should** ensure that completed authorization sheets are stored appropriately and are retained for audit for at least 12 months in accordance with RA 2401(5). After 12 months they may be destroyed, unless they are being used as evidence for a Service Inquiry (SI); Occurrence Safety Investigation (OSI); Non-Statutory Investigation (NSI); Police Investigation; Court Martial; or similar proceedings. Single Service requirements may also apply.

**Guidance
Material
2401(5)**

Authorization records

25. JSP441 – Defence Records Management Policy and Procedures.
26. RA 2401(5).
27. Single-Service requirements.

**Group Air
Staff Order
2401(6)**

Meteorological Records

- 2401(6) All relevant meteorological data **shall** be archived to assist in post-incident investigation.

**Acceptable
Means of
Compliance
2401(6)**

Meteorological records

28. The SMetO should ensure that meteorological data is archived in accordance with the Met Office Defence service Manual (DSM) – Archiving Policy for Front Line.

**Guidance
Material
2401(6)**

Meteorological records

29. Nil.

**Group Air
Staff Order
2401(7)**

Training Records

2401(7) The DDH **shall** ensure that Flying Training Records and Course Reports are maintained to enable accurate assessment and supervision of all aircrew within their AoR

**Acceptable
Means of
Compliance
2401(7)**

Data Protection Act

30. All personal records (manual or electronic) **should** be succinct, factual and properly protected. Authors of personal records or reports **should** be prepared to justify any comments. Private records **should not** be compiled.

Student training records

31. **Reports on progress.** With the exception of 2 FTS the Sqn Cdr **should** ensure that:

- a. A report is raised on the trainee's performance in the air² and on the ground covering progress, attitude, technique and officer (PATO form) / NCO qualities at either a monthly interval or at the culmination of a course phase. The period between reports **should** not exceed 6 weeks.
- b. Each trainee is interviewed to discuss progress, normally monthly but at least every 6 weeks
- c. Record each interview on the appropriate form.
- d. The completed report is inserted in the individual's Course Record Folder (CRF) and presented to the trainee's flight commander for consideration.
- e. CRFs are reviewed at least monthly.

32. The DDH for 2 FTS and 6 FTS **should** specify the periodicity at which interviews are conducted, which should not exceed 6 months. Interviews are to be recorded on an appropriate form and inserted into the individuals CRF.

33. **Course paperwork.** Sqn Cdrs **should** ensure that Flying Training Records and Course Reports are maintained to enable accurate assessment and supervision of trainees under their command.

- a. The trainee's F5201 (Course Report) and other summarising reports are placed in F5200 (or equivalent) for sending on to the next unit of training. A Training Pipeline Record sheet is to be placed on the left side of F5200 inside cover, which shall be completed to indicate the student's training pathway, including dates and locations. This table can be found [here](#)
- b. The F5201 (Course Report) template shall be used. Guidance for the completion of this form is included within the template and should be followed.

² For 6 FTS, this applies to students undertaking formal EFT only.

c. If a student requires supplementary or abbreviated training to account for their previous pathway, they shall be briefed prior to starting the course and their prospective course hours shall be annotated within Section C of their F5201. Any supplementary/ abbreviated flying training should follow the process below:

- (1) The receiving DDH should use their Training Specialist Advisors in the training gap analysis of non-baseline courses.
- (2) The amount / format of the supplementary or abbreviated flying training should be formalised between the relevant 22 Gp DFT Flying Training Desk Officer(s), CFS, the receiving DDH(s) and where applicable the Training Service Provider.
- (3) The supplementary flying training should be in addition to the baseline live and/or synthetic hours allocation to achieve the deltas in the previous training as highlighted in 34.c.(1).
- (4) The abbreviated flying training should be in deduction to the baseline live and/ or synthetic hours allocation to take into account previous training as highlighted in 34.c.(1).

34. **Disposal of CRF.** On completion of flying training the Sqn Cdr **should** ensure a trainee's completed CRF is forwarded to the Air Command Aircrew Archive (Restore Records Management, Swadlincote, Derbyshire) for storage.

Staff aircrew training records

35. The DDH **should** ensure that staff aircrew Qualifications (GASO 2101); Competencies (GASO 2102), SCT (GASO 2103); Instrument Ratings (GASO 2120); and Aircrew Instructor Training (GASO 2125) records are maintained in accordance with the requirements of RA 2401(7).

International Defence Training (IDT) trainees and exchange Officers

36. **IDT Trainees.** A F5200 **should** be raised either at RAF College Cranwell or at the first 22 Gp units receiving the IDT Trainee, marking the cover 'IDT Trainee'. RAF College Cranwell or the first 22 Gp units **should** raise a report in narrative form, which **should** be placed in the F5200. The contents of the report **should** include:

- a. **Personal history.** The trainee's background, education, career and flying training.
- b. **Course results.** An assessment of their ability and potential for future training.
- c. **Personal qualities.** To include:
 - (1) Attitude to training.
 - (2) Reaction to working under pressure.
 - (3) Motivation, particularly for military flying.
 - (4) Personality traits which affect either their ability to complete flying training or the selection of an instructor.

37. **IDT checklist.** The OC of the receiving unit **should** ensure that the items in the IDT Checklist have been fulfilled, and any shortcomings

identified, before the IDT trainee begins that stage of training. The despatching unit **should** ensure that the requisite training has been completed and the documentation is up-to-date before processing the student for the next stage of training.

38. **Exchange Officers.** The first 22 Gp unit receiving an exchange officer **should** raise a F5200 marking the cover 'Exchange Officer'. It **should** be used to file the following:

- a. The individual's pre-employment training questionnaire.
- b. Completed monthly report forms.
- c. Course reports.
- d. End of course critiques.

39. **Monthly reports.** The Sqn Cdr **should** ensure monthly reports detailing the progress of IDT trainees and exchange officers are raised and that these are filed on the individual's F5200. Copies of these reports **should** be sent to the appropriate HQ DFT Desk Officer for further distribution. Reports for exchange officers are only required whilst on a CFS training course.

40. **SRF / F5060 / F5200.** The Sqn Cdr should ensure:

- a. The Sortie Report Forms (SRFs) and F5060 are filed in the F5200.
- b. The F5200 is forwarded to the next unit or to IDT(RAF) for IDT trainees or the appropriate Air Manning Desk Officer for exchange officers on withdrawal.
- c. A covering letter is included with the F5200 explaining the SRFs or F5060.

41. **IDT and Exchange Officer course reports – distribution.** Reports **should** be distributed as follows:

- a. F5200 (one copy).
- b. Appropriate Embassy / High Commission (original plus one copy).
- c. HQ 22 Gp: one copy to IDT(RAF) for IDT trainees or to the appropriate Air Manning Desk Officer for exchange officers.
- d. One copy to the appropriate HQ DFT Desk Officer.

Inspection of personal records

42. The DDH **should** ensure that personal records are available for inspection by the subject in an auditable manner.

**Guidance
Material
2401(7)**

Training records

43. Flying training records and course reports include:
- a. CRFs and Sortie Report Forms (SRFs).

- b. F5200 (Individual Record of Service – Flying Personnel – transit folder)
- c. F5200A (Aircrew Flying Accident / Incident Record).
- d. F5201 (Flying Personnel Course Report or Withdrawal Report)
- e. F5214 / MOD Form 166 (Pilot's Instrument Rating Application and Test Form).
- f. F2020G (OJAR / SJAR – Aircrew Insert Slip (formerly F5250 Aircrew Appraisal Report)).
- g. F5279A (Re-selection Preference – Officers Suspended from Aircrew Training).
- h. F5291 (Flying Instructor's Report).
- i. F5363 (Standardization Test – Student / Pilot / Flying Instructor).

44. Direction on the minimum contents required in the RAF Form 5200 and the completion of individual forms is published in GAI 1042 at the following [link](#).

Current FT forms

45. Current FT Forms are available on the DFT Sharepoint at the following [link](#).

Group Air Staff Order 2401(T1)

Operations Record Book (F540)

2401(T1) The DDH **shall** ensure that a squadron Operations Record Book (F540) is compiled and managed for all flying units within their AoR in accordance with [AP 3040](#).

Acceptable Means of Compliance 2401(T1)

Operations Record Book (F540)

46. [AP 3040](#).

Guidance Material 2401(T1)

Operations Record Book (F540)

47. [QR2137](#) and [QR2138](#).

Group Air Staff Order 2401(T2)

Statistical Returns

2401(T2) The DDH **shall** ensure that statistical returns are compiled as required HQ DFT.

**Acceptable
Means of
Compliance
2401(T2)**

Statistical returns

48. The DDH **should** ensure the following statistical returns are compiled in accordance with the appropriate Notes for Compilation and forwarded to HQ 22 Gp as appropriate:

- a. 22 Gp Form Stats 2911: Monthly Return of Aircraft Flying Hours and Serviceability.
- b. 22 Gp Form Stats 2912: Monthly Return of Daily Serviceability.
- c. 22 Gp Form Stats 2914: Monthly Return of Completed Aircraft Scheduled Servicing.
- d. 22 Gp Form Stats 2915: Monthly Return of Aircrew Training Progress.
- e. 22 Gp Form Stats 2918: Daily Return of Aircraft Strength, Serviceability and Flying Effort.
- f. 22 Gp Form Stats 2922: Monthly Return of Simulator Utilization.
- g. 22 Gp Form Stats 2923: Monthly Return of Weather Operating Factor.
- h. 22 Gp Form Stats 2924: Monthly Return of Aircraft Holdings.
- i. 22 Gp Form Stats 5009: Nominal Roll of Trainees (Associated with 22 Gp Form Stats 2915).

**Guidance
Material
2401(T2)**

Statistical returns

49. Nil.

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GASO 2415 – Civil Use of Government Aerodromes

Rationale *Flying civil registered aircraft from Government Aerodromes¹ allows Heads of Establishment (HoE) to support Service sport associations and flying activity for their personnel. The operation of civil registered aircraft is not regulated by the Military Aviation Authority but by the Civil Aviation Authority; failure to adhere to civil regulation could increase the level of risk. This regulation ensures HoE understand the regulations that apply to civil registered aircraft flying from their establishment.*

Contents

2415(1): Civil Use of Government Aerodromes

2415(T1): Recreational Flying

2415(T2): Recreational Gliding

2415(T3): Glider Towing

Group Air Staff Order
2415(1)

Civil Use of Government Aerodromes

2415(1) Government Aerodromes **shall** only be available for use by civil aircraft with prior permission and when those aircraft comply with the [Air Navigation Order](#) (ANO) 2017.

Acceptable Means of Compliance
2415(1)

Civil use of Government aerodromes

1. The HoE **should** inform 22 Gp SASO, through the appropriate 22 Gp Desk Officer, when he becomes aware of enquiries for the use of their facility by civil users where the activity is likely to require a new contract or modification of an existing contract.
2. The HoE **should** co-ordinate with the HoE any 3rd Party Income Generation / Wider Markets enquiries for Service assets.

Guidance Material
2415(1)

Civil use of Government aerodromes

3. This Order does not apply to minor routine income such as landing fees.
4. Further information can be found in RA 2415(1), [JSP 360](#) and relevant contractual agreements

Group Air Staff Order
2415 (T1)

Recreational Flying

2415(2) All recreational flying on Government establishments **shall** be approved by the Commanding Officer or Head of Establishment. All flying clubs on Government establishments **shall** be under the control of a Chief Flying Instructor.

Acceptable Means of Compliance

Recreational flying

5. Civil flying and civilian flying clubs **should** operate in accordance with the Defence Aerodrome Manual.

2415 (T1)

6. Permission for recreational flying at Government facilities **should** be sought, in writing, from the HoE.
7. Civilian flying clubs **should** be under the control of a Chief Flying Instructor, who **should** hold the appropriate civilian qualifications, and who **should** be approved by the Station Commander or HoE.
8. Recreational flying **should not** compromise the requirements of the military flying task.

Guidance Material**2415 (T1)****Recreational flying**

9. Personnel flying privately owned aircraft must comply with civil air navigation regulations and hold a valid and current civil pilot's licence.
10. Personnel flying privately owned aircraft must comply with local Flying Orders.

Group Air Staff Order**2415 (T2)****Recreational Gliding**

- 2415(3) All recreational gliding undertaken on Government establishments **shall** be approved by the Commanding Officer or Head of Establishment. All flying clubs on Government establishments **shall** be under the control of a Gliding Club Chief Flying Instructor.

Acceptable Means of Compliance**2415 (T2)****Recreational gliding**

11. Permission for recreational gliding at RAF facilities **should** be sought, in writing, from the HoE.
12. Civil flying clubs **should** be under the control of a Chief Flying Instructor, who **should** hold the appropriate civilian qualifications, and who **should** be approved by the HoE.
13. The CFI of the club **should** hold a British Gliding Association's CFI category and **should** be approved by the HoE.
14. Gliding **should** only take place when a club instructor is present on the site. All instructors **should** be approved by the CFI.
15. Recreational gliding **should** not compromise the requirements of the military flying task.

Guidance Material**2415 (T2)****Recreational gliding**

16. Nil.

**Group Air
Staff Order
2415 (T3)****Glider Towing**

2415(4) Appropriate criteria **shall** be followed for the towing of RNGSA, AGA and RAFGSA gliders by privately owned aircraft at Government airfields / heliports.

**Acceptable
Means of
Compliance
2415 (T3)****Glider towing**

17. Nil.

**Guidance
Material
2415 (T3)****Glider towing**

18. Nil.

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RAF AIR SPORTS

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RAF SPORT AIRCRAFT (RAFSA)

Rationale *There is a need to ensure that all recreational and sports flying activity undertaken by Service personnel in RAFSA light aircraft is conducted safely in accordance with the appropriate regulatory set.*

Contents **RAF Sport Aircraft (RAFSA)**

Group Air Staff Order**RAF Sport Aircraft (RAFSA)**

All recreational and sports flying activity undertaken by Service personnel in RAFSA light aircraft **shall** be conducted in accordance with CAP 393 – Air Navigation Order: The Order and Regulations and, where appropriate, other more restrictive Orders.

Acceptable Means of Compliance**RAF Sport Aircraft (RAFSA)**

1. **Organisational aims.** The RAFSA is a Charitable Incorporated Organisation (CIO), with the Charitable Objectives to promote efficiency by fostering 'Esprit de Corps', raising morale, developing/enhancing mental resilience and encouraging airmanship, air-mindedness and aviation safety awareness to all members of the Royal Air Force through the provision of sport aircraft flying and training.
2. **Operational governance.** The Chairman of RAFSA is responsible to AOC 22 Gp for all RAFSA activities. In addition to the requirements of CAA Regulations, the RAFSA **should** operate in accordance with MAA Regulations whichever is the most restrictive where appropriate. The organisation operates within the Royal Air Force Sports Aircraft Safety Management System (RAFSASMS) and also upholds its own RAFSA Code of Good Practice for Service Flying Clubs which details Responsibility and Duty of Care; Supervision and Currency; Provision of Facilities (Rescue and Fire Fighting, Radio Communications, Flight Planning and Refuelling); Mandatory Reporting Requirements and Flight Safety; and Administration and Documentation. GAI 1032 covers administrative arrangements, constitutions and SQEP requirements to hold positions within the RAFSA.
3. **Duty of care.** The MOD has a duty of care to ensure that the risk of harm to Service personnel who are engaged in air sports whilst on duty is reduced to a level which is As Low As Reasonably Practicable, and that in relation to that activity any residual risk is tolerable. Even when personnel are not on duty there is a legal duty to take reasonable steps to ensure that activities carried out with a Service club do not expose them, or other third parties, to unnecessary harm. Consequently, individual OICs **should** ensure, as far as is reasonable in the circumstances, that aircraft and equipment utilised are operated and maintained in accordance with the standards required by the appropriate regulatory body (i.e. EASA, CAA, FAA) and as far as is reasonably practicable take any steps to reduce any identified risk to a level which is as low as possible and tolerable.
4. **Member clubs.** RAFSA **shall** maintain a record of member clubs.

**Guidance
Material****RAF Sport Aircraft (RAFSA)**

5. **Regulations.** UK Civil Aviation Authority (CAA) CAP 393 – Air Navigation Order: The Order and Regulations. EASA Part-FCL (Flight Crew Licencing, Part NCO (Non Complex Ops), Part-M/Part-145 (Maintenance and Continuing Airworthiness), Part-ORA (Organisational Requirements Aircrew) and Part-MED (Medical) regulations. The Single European Rules of the Air (SERA). National Governing Body Rules and Regulations such as the Light Aircraft Association (LAA), British Microlight Aircraft Association (BMAA) and the British Gliding Association (BGA).
6. **Additional advice.** RAFSA members are strongly advised to utilise Service engineering personnel to assist with 2nd party assurance activity. Specifically they may assist in determining, in a manner which is reasonable in the circumstances, whether Aircraft are being appropriately maintained and that engineering practises do not have the potential to increase risk for the Flying Club or other airfield users. What is reasonable will depend on the circumstances at the time, including but not limited to, level of access to ac, level of access to ac documentation, time and resource available. It is important however, that assurance documentation is maintained to provide an audit trail of decision making.
7. Associate RAFSA Clubs are not assured by RAFSA and RAF Sports holds no responsibility for their operation. This is purely an associated membership to share best practice and mutual support if visiting each others' facilities.
8. RA 2415(1).
9. GASO 2415(1) and GASO 2415(T1).

RAF GLIDING & SOARING

Rationale *There is a need to ensure that all recreational and sports gliding and soaring activity undertaken by Service personnel is conducted safely in accordance with the appropriate regulatory set.*

Contents **RAF Gliding & Soaring**

Group Air Staff Order**RAF Gliding & Soaring**

All recreational and sports gliding and soaring activity undertaken by Service personnel in RAFGSA aircraft **shall** be conducted in accordance with CAP 393 – Air Navigation Order: The Order and Regulations.

Acceptable Means of Compliance**RAF Gliding & Soaring**

1. **The RAF Gliding & Soaring Association (RAFGSA).** The Chairman of RAFGSA is responsible to AOC 22 Gp for all RAFGSA activities. The RAFGSA is a voluntary organisation providing structure and central direction to the gliding clubs which form the main membership, plus full time back-up, training and facilities in the form of the RAFGSA Chilterns Centre at RAF Halton. It is a registered company and charity and has close ties with the BGA. More information can be found at: www.raf.mod.uk/rafgliding/

2. **Duty of care.** The MOD has a duty of care to ensure that the risk of harm to Service personnel who are engaged in air sports whilst on duty is reduced to a level which is As Low As Reasonably Practicable, and that in relation to that activity any residual risk is tolerable. Even when personnel are not on duty there is a legal duty to take reasonable steps to ensure that activities carried out with a Service club do not expose them, or other third parties, to unnecessary harm. Consequently, individual OICs **should** ensure, as far as is reasonable in the circumstances, that aircraft and equipment utilised are operated and maintained in accordance with the standards required by the appropriate regulatory body (i.e. EASA, CAA, FAA) and as far as is reasonably practicable take any steps to reduce any identified risk to a level which is as low as possible and tolerable.

Guidance Material**RAF Gliding & Soaring**

3. **Additional advice.** The OIC and RAFGSA members are strongly advised to utilise appropriate and available Service personnel to assist with 2nd party assurance activity. Specifically they may assist in determining, in a manner which is reasonable in the circumstances, whether equipment is being appropriately maintained, personnel appropriately trained and that either of these areas, separately or together do not have the potential to increase risk for the members or other airfield users beyond a level which is As Low As Reasonably Practicable and tolerable. What is reasonable will depend on the circumstances at the time, including but not limited to, level of access to equipment, level of access to maintenance documentation,

time and resource available. It is important however, that assurance documentation is maintained to provide an audit trail of decision making.)

4. **British Gliding Association (BGA).** More information can be found at: <https://www.gliding.co.uk/>.
5. JSP 419 – Joint Service Adventurous Training Scheme.
6. AP 3415 Sport and Recreation in the Royal Air Force
7. RA 2415(1).
8. GASO 2415(1), GASO 2415(T2) and GASO 2415(T3).

RAF HANG GLIDING AND PARAGLIDING

Rationale *There is a need to ensure that all sports hang gliding and paragliding activity undertaken by Service personnel is conducted safely in accordance with the appropriate regulatory set.*

Contents **RAF Hang Gliding and Paragliding**

Group Air Staff Order**RAF Hang Gliding and Paragliding**

All flying activity undertaken by Service personnel in RAFHPA aircraft **shall** be conducted in accordance with CAP 393 – Air Navigation Order: The Order and Regulations.

Acceptable Means of Compliance**RAF Hang Gliding and Paragliding**

- 1. Joint Service Adventurous Training (JSAT) and Paragliding.** British Hang Gliding and Paragliding Association (BHPA – the National Governing Body for Hang Gliding and Paragliding) endorsed paragliding courses through the JSAT scheme are delivered from two dedicated locations; the RAF run Joint Service Paragliding Centre Crickhowell near the Brecon Beacons in SE Wales and the Army run Joint Service Mountain Training Centre in Obersdorf, Bavaria. Further information on courses in both locations can be found on the ATG(A) App within the Defence Gateway.
- 2. RAF Hang Gliding and Paragliding Association (RAFHPA).** The Chairman of the RAFHPA is appointed as the Responsible Person by AOC 22 Gp for all RAFHPA activities. The RAFHPA helps its members to safely develop their sporting skills and become more capable and confident pilots, achieving physical and mental personal development through participation in competitive free flying. This is achieved through the use of RAFHPA mentors, BHPA qualified club coach tuition and endorsed club membership, overseas visits, advanced flying courses and various levels of BHPA endorsed national and international competitions.
- 3. Duty of care.** The MOD has a duty of care to ensure that the risk of harm to Service personnel who are engaged in air sports whilst on duty is reduced to a level which is As Low As Reasonably Practicable, and that in relation to that activity any residual risk is tolerable. Even when personnel are not on duty there is a legal duty to take reasonable steps to ensure that activities carried out with a Service club do not expose them, or other third parties, to unnecessary harm. Consequently, individual OICs **should** ensure, as far as is reasonable in the circumstances, that aircraft and equipment utilised are operated and maintained in accordance with the standards required by the appropriate regulatory body (i.e. EASA, CAA, FAA) and as far as is reasonably practicable take any steps to reduce any identified risk to a level which is as low as possible and tolerable.

**Guidance
Material**

RAF Hang Gliding and Paragliding

4. Paragliding – JSP 419 – Joint Service Adventurous Training Scheme.
5. Paragliding - AP 3415 Sport in the RAF.
6. British Hang Gliding and Paragliding Association (BHPA) Technical Manual. More information on this document can be found at:
<https://www.bhpa.co.uk/>.

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RAF SPORTS PARACHUTE ASSOCIATION (RAFSPA)

Rationale *There is a need to ensure that all sports parachuting activity undertaken by Service personnel in RAFSPA light aircraft is conducted safely in accordance with the appropriate regulatory set.*

Contents **RAF Sports Parachute Association (RAFSPA)**

Group Air Staff Order**RAF Sports Parachute Association (RAFSPA)**

All sports parachuting activity undertaken by Service personnel in RAFSPA light aircraft **shall** be conducted in accordance with CAP 393 – Air Navigation Order: The Order and Regulations.

Acceptable Means of Compliance**RAF Sports Parachuting Association (RAFSPA)**

1. **Organisational governance.** The Chairman of RAFSPA is responsible to AOC 22 Gp for all RAFSPA activities. Sports parachuting is regulated in the UK by the Civil Aviation Authority (CAA) which has delegated much of its regulatory function to the British Parachute Association (BPA) under the terms of a Schedule of Approval. Consequently the BPA, in effect, regulates sport parachuting within the UK but does so under a system which is audited by the CAA to ensure that the regulatory functions are correctly carried out. Sports parachuting **should** be conducted in accordance with the requirements set in the Air Navigation Order. More information can be found at: www.raf.mod.uk/skydive/
2. **Duty of care.** The MOD has a duty of care to ensure that the risk of harm to Service personnel who are engaged in air sports whilst on duty is reduced to a level which is As Low As Reasonably Practicable, and that in relation to that activity any residual risk is tolerable. Even when personnel are not on duty there is a legal duty to take reasonable steps to ensure that activities carried out with a Service club do not expose them, or other third parties, to unnecessary harm. Consequently, individual OICs **should** ensure, as far as is reasonable in the circumstances, that aircraft and equipment utilised are operated and maintained in accordance with the standards required by the appropriate regulatory body (i.e. EASA, CAA, FAA) and as far as is reasonably practicable take any steps to reduce any identified risk to a level which is as low as possible and tolerable.

Guidance Material**RAF Sports Parachute Association (RAFSPA)**

3. [JSP 419](#) – Joint Service Adventurous Training Scheme.
4. [AP 3415](#) Sport and Recreation in the Royal Air Force.

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RAF MICROLIGHT FLYING ASSOCIATION (RAF MFA)

Rationale *There is a need to ensure that all sports flying activity undertaken by Service personnel in RAF MFA aircraft is conducted safely in accordance with the appropriate regulatory set.*

Contents **RAF Microlight Flying Association (RAF MFA)**

Group Air Staff Order

RAF Microlight Flying Association (RAF MFA)

All flying activity undertaken by Service personnel in RAF MFA microlight aircraft **shall** be conducted in accordance with CAP 393 – Air Navigation Order: The Order and Regulations.

Acceptable Means of Compliance

RAF Microlight Flying Association (RAF MFA)

- 1. Organisational aim.** The Chairman of the RAF MFA is responsible to AOC 22 Gp for all RAF MFA activities. The aim of the Association is to promote the efficiency of the Royal Air Force by providing opportunities to participate in the active sport of microlight flying with the intention of developing attributes that are vital to operational capability and the enhanced performance of Service personnel in time of peace and war leadership. More information can be found at: www.raf.mod.uk/rafmicrolight/
- 2. Duty of care.** The MOD has a duty of care to ensure that the risk of harm to Service personnel who are engaged in air sports whilst on duty is reduced to a level which is As Low As Reasonably Practicable, and that in relation to that activity any residual risk is tolerable. Even when personnel are not on duty there is a legal duty to take reasonable steps to ensure that activities carried out with a Service club do not expose them, or other third parties, to unnecessary harm. Consequently, individual OICs **should** ensure, as far as is reasonable in the circumstances, that aircraft and equipment utilised are operated and maintained in accordance with the standards required by the appropriate regulatory body (i.e. EASA, CAA, FAA) and as far as is reasonably practicable take any steps to reduce any identified risk to a level which is as low as possible and tolerable.

Guidance Material

RAF Microlight Flying Association (RAF MFA)

- 3. British Microlight Aircraft Association (BMAA).** The BMAA administers and regulates Microlight Flying on behalf of the CAA in accordance with the CAP 393. It looks after the interests of microlight pilots and enthusiasts in the UK. More information can be found at: www.bmaa.org/

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RAF MODEL AIRCRAFT ASSOCIATION (RAFMAA)

Rationale *There is a need to ensure that all model aircraft flying activity undertaken by RAFMAA members is conducted safely in accordance with the appropriate regulatory set.*

Contents **RAF Model Aircraft Association (RAFMAA)**

Group Air Staff Order**RAF Model Aircraft Association (RAFMAA)**

All model aircraft flying activity undertaken by RAFMAA members **shall** be conducted in accordance with CAP 393 - Air Navigation Order: The Order and Regulations and CAP 658 – CAP 658 - Model Aircraft: A Guide to Safe Flying – British Model Flying Association (BMFA) rules and regulations.

Acceptable Means of Compliance**RAF Model Aircraft Association (RAFMAA)**

1. **Organisational aim.** The Chairman of RAFMAA is responsible to AOC 22 Gp for all RAFMAA activities. The aim of the RAFMAA is to increase the knowledge of Service personnel by stimulating the interest in the science and art of flying. A 'model aircraft' is defined in CAP 658 as any 'Small Unmanned Aircraft (SUA)' (0-20 kg) used for sporting and recreational purposes and a 'large model aircraft' is defined as any 'Unmanned Aircraft' (over 20 kg) used for sporting and recreational purposes. More information can be found at: www.raf.mod.uk/rafmaa/.
2. **Model aircraft under 20 kg.** The ANO contains the regulations that apply to all aircraft including model aircraft and large model aircraft.
3. **Model aircraft over 20 kg.** All large model aircraft having a mass of more than 20 kg (mass of model and equipment, but excluding fuel) require an exemption to fly. A large model aircraft can only be operated under the terms of an Exemption issued by the CAA.
4. **Duty of care.** The MOD has a duty of care to ensure that the risk of harm to Service personnel who are engaged in air sports whilst on duty is reduced to a level which is As Low As Reasonably Practicable, and that in relation to that activity any residual risk is tolerable. Even when personnel are not on duty there is a legal duty to take reasonable steps to ensure that activities carried out with a Service club do not expose them, or other third parties, to unnecessary harm. Consequently, individual OICs **should** ensure, as far as is reasonable in the circumstances, that aircraft and equipment utilised are operated and maintained in accordance with the standards required by the appropriate regulatory body (i.e. EASA, CAA, FAA) and as far as is reasonably practicable take any steps to reduce any identified risk to a level which is as low as possible and tolerable.

Guidance Material**RAF Model Aircraft Association (RAFMAA)**

5. **UK Civil Aviation Authority (CAA).** More information can be found at: <https://www.caa.co.uk/>



6. **British Model Flying Association (BMFA).** More information can be found at: <https://bmfa.org/>

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